SWITCH ENCLOSEMENT WITH MULTIPLE SWITCH AND DOOR INTERLOCKS

Filed Dec. 21, 1962

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Fig. 6.

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Filed Dec. 21, 1962, Ser. No. 246,630
9 Claims. (Cl. 200—50)

This invention relates to disconnect switch and enclosure combinations of the general type disclosed in Mekelburg et al. U.S. Letters Patent No. 3,059,072, issued October 16, 1962, and entitled Dust Proof Switch Enclosure With Switch and Door Interlock.

As more fully described in the above patent, the switch operating mechanism is mounted on the interior of the casing or enclosure for operation by a handle on the front wall margin of the enclosure. In the present switch, the switch operating mechanism is mounted on the switch supporting base and is added by a self-adjusting link for proper alignment with an operating handle mechanism on the front wall margin of the enclosure.

Further, in the patent, by operating the handle, the switch can be thrown,
(a) to Off position regardless of whether the door is latched, unlatched, open, or closed;
(b) to an On position with the door open only by deliberate manipulation of a defater accessible within the cabinet; and
(c) to On and Off positions readily when the door is closed and latched.

If the door handle is not fully latched, the switch cannot be turned on.

Again, in the patent, with the door closed and sealed, the door cannot be opened with the switch On, except by manipulation of two separately operable defenders, one for partially releasing the door latch and the other for operation after the door latch is partially released and the door held slightly ajar for finally releasing the latch.

If the door latch is inadvertently left in latching position with the door open, slamming of the door will cause it to close and latch, but in non-sealing relation.

Thus at least two defender mechanisms must be operated to open the door with the switch On.

The present operating mechanism and door latching mechanism are arranged so that, even with the operating handle and switch in Off position, a defender must be operated by a tool before the door can be opened. On the other hand, if the switch is On, three defender mechanisms, each operated by a separate tool, must be operated; one to be operated to release the door operating handle for rotation, a second connected to the door and switch operating handle and to be operated if the switch handle is in On position, and a third to release the door latch to permit its turning by the door handle to disengage the door latch from the enclosure.

Various and advantages will become apparent from the following description wherein reference is made to the drawings, in which:

FIG. 1 is a front elevation of the switch cabinet embodying the invention, with the door closed and the switch in the Off position;
FIG. 2 is a front elevation similar to FIG. 1 showing the switch door open with the switch Off and the door latching mechanism in unlatched position;
FIG. 3 is a vertical sectional view through the cabinet, taken on line 3—3 of FIG. 1; the switch being omitted for clearness in illustration;
FIG. 4 is a horizontal sectional view taken on the line 4—4 of FIG. 3;
FIG. 5 is an enlarged fragmentary sectional view simi-
operate with a defeater to prevent operation of the handle for retracting the rollers 24 and 29. For this purpose, a support 37 is secured to the inner face of the wall 7 of the cabinet by bolts 39, as illustrated in FIG. 5. Mounted on the support by a horizontal pivot 40 is a handle latch 41. At its lower end the latch 41 has a head 42 with an upwardly facing latch shoulder 43. In the On position of the switch 30, the shoulder 43 is adapted to engage the top of the handle 35 and thus prevent the portion 36 from movement downwardly, thereby constraining the handle 15 from movement to unlocked or door releasing position.

When the switch is in its Off position, as illustrated in FIG. 5, the handle 15 must be released from the shoulder 43. Consequently, means are provided for swinging the latch 41 to dispose the shoulder 43 inwardly from beneath the portion 36 when the switch 30 is Off. For this purpose, the latch 41 is provided at a location above its pivot 40 with the finger 44 which, when downward pressure is exerted on the finger, to the right of the pivot 40 in FIG. 5, swings the latch 41 clockwise to the releasing position illustrated in FIG. 5, wherein the shoulder 43 is clear of the path of the portion 36.

In order to operate the switch 30, a switch operating handle 50 is mounted in a suitable housing 51 which in turn is mounted on the front wall flange 7 of the cabinet. The switch operating handle 50 is pivotally mounted in the housing 51 for swinging about a horizontal pivot from a lower Off position, as illustrated in FIG. 5, upwardly to an On position, illustrated in FIG. 7. Mounted on the lever for oscillation therewith is a cam plate 53. A link 54 is pivotally mounted at 55 in the cam plate and at its opposite end, indicated at 56, to a link 57. The link 57 is connected at one end by a pin 58 to an oscillating disc 59 which is oscillatory about a horizontal pivot 60 on a supporting bracket. The disc 59 is provided with circumferentially spaced lug 61 and 62 which upon oscillation of the disc in opposite directions about the axis of the pivot 60, respectively, engage the bale 32 of the switch 30, swinging the bale and its associated contact carrier to and from open and closed position, respectively, of the switch.

It is desirable that the bale operate the carrier with a snap action in response to the lever 50, so as to operate the switch with a snap action. For this purpose, the link 58 of the link 57 operates in a slot 64 in the disc 59. The slot 64 is elongated generally circumferentially relative to the axis of the pivot 60. A spring 65 is connected at one of its ends to the link 57 and at the other end to the disc supporting bracket urges the pin 58 downwardly in FIG. 5.

Also connected to the disc 59 is a cam mechanism including a rod 66 and a dead-center spring 67. The rod 66 carries at one end a pin 68 which operates in an elongated slot 69 in the disc 59. The other end of the rod 66 extends through a suitable guide and spring retaining bracket 70, for axial movement relative thereto.

In FIG. 5, in which the switch operating handle 50 is in Off position, the dead-center spring 67 has snapped the disc 59 clockwise to the Off position of the switch. When the handle 50 is swung upwardly to the On position, the disc 59 is moved by pin 58 and link 57 counterclockwise, imparted to the position illustrated in FIG. 7, whereupon the dead-center spring 67, having passed dead-center, snaps the disc 59 fully to the position in FIG. 7. Since the bale is between the two projections 61 and 62, it is moved with a snap action to On and Off positions, all as more fully described in the above identified patent.

Able to require the defeater operation in order to release the handle 15 for releasing the rollers 24 and 29 for opening the door even when the handle 50 and the switch are in Off position. For this purpose, a first defeater mechanism is provided. The mechanism comprises a rotatable detent arm 75 which is connected to the rod 76 which, in turn, is rotatably mounted in a housing 77, as shown in FIG. 5 secured to the wall of the door. The outer end 78 of the rod, which is exposed at front of the door, has a transverse slot 79 which is adapted to receive a screwdriver for rotating the rod about its axis. The detent arm 75 is biased by a spring 80 in FIG. 6 wherein it is operative to prevent rotation of the handle 15. In order to render the defeater effective in this position, a complementary arm 81 is mounted rigidly on plate 21 and has an outer end portion disposed beneath the detent arm 75. Thus when the detent arm 75 is in the normal position, illustrated in FIG. 6, its lower end is in position to engage the upper edge of the arm 81 and prevent the rotation of the plate 21 by the handle 15 in the unlatching direction, which is counterclockwise in FIG. 6. On the other hand, if the screwdriver is inserted in the notch 79, the detent arm 75 can be swung counterclockwise, in FIG. 6, into a position which permits the arm 81 to pass the arm 75, and thereby permits the plate 21 to turn in a counterclockwise direction in FIG. 6. This assumption causes the arm 35 to swing downwardly. Assuming the arm 35 is free to swing downwardly because the shoulder 43 of the bracket 41 is held out of operating locking position therebetween, then as the arm 81 swings upwardly it engages the detent arm 75 and holds the arm disengaged so that the defeater is inactive. Thus, the handle 15 can be swung sufficiently to cause the plate 21 to rotate, in a counterclockwise direction in FIG. 6, to release rollers 24 and 29.

Upon turning the handle 15 back to the original position, the arm 81 releases the detent arm 75, whereupon the spring restores it to the unlocking position as illustrated in FIG. 6, so that the handle 15 cannot be turned again for releasing the door until the first defeater is rendered inoperative by a tool.

In order to prevent opening of the door when the switch is On, a second defeater is provided. As illustrated in FIG. 7, the door is provided with a latching element 85 which is rigid with the door. This element projects inwardly into the interior of the cabinet when the door is closed. As more fully described in the above identified patent, a defeater lever 86 is pivotally mounted by a pivot 87 in the housing 51, extends inwardly into the enclosure. The lever 86 is urged upwardly by a spring 88 so as to be in position to be engaged by the latch element 85, as illustrated in FIG. 7, when the lever 86 has been swung downwardly by spring 88. The cam plate 53 is provided with cam surface 89, which, in the Off position of the lever 86, is aligned with a detent 90 on the defeater lever 86. Thus, when the handle 50 is in the Off position of the switch, the cam surface 89, by its engagement with the detent 90, holds the lever 86 depressed and so that it is a dead-center spring 67 of the mechanism and hence this defeater does not interfere with opening or closing the door if the switch is Off. The cam plate 53 has a notch 91, which, if the handle 50 is moved partway toward On position with the door released or open, receives the detent 90, thereby locking the handle 50 to prevent its movement to On position. When the handle 50 is in a fully On position, the notch is beyond the detent in the counterclockwise direction of rotation of the handle 50. Upon rotation of the handle 50 out of On position, and thereafter entirely to Off position, the cam plate 53 engages the detent 90 and depresses the lever 86, and releasing it from the latch element 85. When the handle 50 has moved far enough to open the switch, the notch 91 becomes effective to prevent reverse movement of the handle 50 to On position, so that the defeater is in the raised position and hence in latching engagement with the element 85. Thus, the door cannot be opened when the handle 50 is in the On position because of the engagement of the defeater lever 86 with the latch 85.

The pivot of the defeater lever 86 is rotatable with the lever and is provided with a screwdriver slot 92 so that when the handle 50 is in the On position, a screwdriver can be inserted in the slot 92 and turned so as to swing the lever 86 counterclockwise, in FIG. 5, thus releasing it from the latch 85 permitting opening of the
It is desirable also that the door handle 15 be latched against turning out of latching position of the door at all times when the switch is Off, but that it be released for operation when the switch is On. For this purpose, a third defeater is provided. It comprises a rod 95, in two portions 95a and 95b connected together by a turn-buckle 95c so that the rod can be adjusted effectively for length. The rod portion 95b is slidable mounted at its lower end for axial movement in the bracket 37. The rod portion 95b is slidable mounted for axial movement with the rod portion 95b, in a suitable bracket 96 on the wall 7. Fixedly mounted on the link 57 is a step 97 which, in the Off position of the handle 50, rests against the upper end of the rod 95 and holds it in a downward position. In this position, the lower portion 95b of the rod 95 bears against the finger 44 of the handle latch 41 holding it in a lowered and thereby holding the handle latch 41 in the unlatching position shown in FIG. 5.

This holds the shoulder 43 out of the way of the member 35. Thus, when the switch is Off, due to the handle 50 being in Off position, the shoulder 43 releases the handle 15 for rotation, insofar as the shoulder is concerned. However, to rotate the handle 15 to release the door the detent arm 75 of the first defeater must also be released of the door. On the other hand, when the handle 50 is moved to the On position, this releases the lock 5 of link 54 moves upwardly and to the left, thus lifting the step 97 from the rod 95. When this occurs, the rod is lifted by the spring 99 clear of the finger 44. Therefore, a tension spring 100 swings the hand latch 41 toward the door, thereby disposing the shoulder 43 in latching relation beneath the portion 36 of the latching bar 35.

Mounted in suitable brackets on the door is a vertically moveable rod 105 having at its lower end a foot 106 which, when the handle 15 is in latching position, rests on the member 35 and cannot be moved downwardly until the release of the foot by the member 35. A suitable spring 107, between the foot 106 and the bracket 108 on the bracket 37, urges the rod 105 downwardly. Assuming the door is being opened, handle 15 is rotated so as to remove the member 35 from beneath the foot 106, whereupon the spring 107 moves the rod 105 downwardly. The upper end of the rod 105 is connected to a rocking lever 110 which is mounted by a pivot 111 on the stationary bracket 96. When the rod 105 is moved downwardly by the spring 107, lever 110 is caused to swing in a counterclockwise direction about its pivot 111, so that its lower end 113, as shown in FIG. 4, disengages the lever 86, thus preventing swinging the handle 50 to the On position while the door is unlatched.

From the drawings, it is apparent that if the switch handle 50 is in the Off position, as illustrated in FIG. 5, the door is free to be opened, except for releasing the detent 75 of the first defeater, simply by turning the door handle 15. This is because the defeater lever 86 is held depressed by detent 90 and the cam 53 so that it does not engage the stationary latch 85 on the door. At the same time, the step 97 is in lowered position, hence holding the rod 95 depressed which, in turn, by bearing downwardly on the finger 44, is holding the handle latch 41 in the releasing position shown in FIG. 5, wherein the shoulder 43 is out of the path of the member 35. Thus, all that is necessary in order to turn the handle 15 in the door opening position to withdraw the rollers 24 and 29 from the inner face of the flange of the cabinet is to insert a screwdriver into the slot 79 and rotate the detent 75 in the first defeater out of position above the arm 81. Thus, when the switch is in Off position, only the first defeater must be operated.

On the other hand, with the switch in the On position, not only must the defeater be operated, but also the defeater lever 86 must be operated by a tool in the slot 92, 76 inasmuch as has been released by the notch 91 so that it has risen into a position where it is engaged by the latch member 85. In this position, however, lever 105 is in releasing position relative to the bar 35, and it is necessary to operate it to remove the shoulder from beneath the bar 35. For this purpose, a suitable hole 114 is provided in the wall in a position such that a suitable tool can be inserted therethrough and caused to engage the head 42 of the latch 41 and push it rearwardly and remove the shoulder 43 from the slot 40. This releases the bar for downward rotation, which is the direction of rotation caused by rotation of the handle 15 for unlatching the door.

Thus, to open the door, the first defeater, including detent 75, must be released by a tool even though the switch is Off.

The second detent, including lever 86, and the third detent, including the door handle latch 41, must be released also if the switch is On.

Also, while the door is unlatched, the lever 110 is released from the lever 86 so that the lever 86 constrains the handle from being moved from Off to On position. The switch supporting plate 31 of the switch 35 may be connected to the back wall 2 of the cabinet, or on a panel 115 secured thereon. The support of the disc 59 may be in the form of a bracket, carried on a support 116 bolted to the plate 31 and hence in fixed position relative to the switch. The link 57 is adjustable in length, as illustrated, and is connected sufficiently loosely to the link 54, cam plate 53, and disc 59 to compensate for slight misalignment of the switch and handle plate 50.

Having thus described my invention, I claim:

1. A switch and cabinet combination comprising: a cabinet having side walls, a rear wall, and a front wall having an access opening which is spaced laterally of the front wall from one side wall, a door having a front face and rear face and hingedly connected to the cabinet for movement to open and closed positions relative to the opening, said front wall having a marginal portion which extends from said one side wall laterally of the cabinet to the adjacent side of the opening and which is disposed, laterally of the cabinet, between said one side wall to the adjacent side of the door in the closed position of the door; complementary releasable latching means carried on the rear face of the door and on the inside of the cabinet, respectively, and interengageable when the door is closed for latching the door in closed position; a door handle mounted on the door for movement manually relative thereto and accessible for manual operation at the front face thereof; operating mechanism interconnecting the door handle and the releasable latching means on the door for moving the latching means upon movement of the door handle relative to the door to and from latching position, respectively;
a unitary switch device in the cabinet including a switch mounted in fixed position in the cabinet, a switch carried by the support, and snap actuating mechanism mounted on the support for moving the switch to On and Off positions, respectively, upon movement of the snap actuating mechanism in opposite directions, respectively;
a switch handle mounted on the cabinet at said marginal portion of the front wall for movement relative to said portion in opposite directions to On and Off positions, respectively, and extending forwardly from said marginal portion of the front wall for access for manual operation;
motion transmitting means connecting the switch handle to the snap actuating mechanism for moving the snap actuating mechanism so as to cause it to move
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7 the switch to On and Off positions, respectively, con-
sequent upon movement of the switch handle to On and Off positions, respectively;
a deflector mounted in the cabinet for movement to de-
feating and releasing positions, respectively, said de-
feater having a latch portion which, in the defeating
position, engages said operating mechanism for de-
feating movement of the operating mechanism to un-
latching position by the door handle;
means yieldably urging the deflector to, and for yield-
ably holding the deflector in, said defeating position,
and means connecting the motion transmitting means
to the defector for moving the defector to the releas-
ing position, by the motion transmitting means, when
the motion transmitting means is operated by the
switch handle to move the switch to Off position.
2. The structure according to claim 1 wherein
said operating mechanism includes a latch bar mova-
ble by the door handle in fixed relation thereto along a
predetermined path;
said deflector comprises a rocking bracket mounted
on said marginal portion of the front wall of the cabinet
for swinging to and from defeating positions, respec-
tively, and said latch portion of the deflector is a
latch shoulder, which, in the defeating position, ob-
structs the path of the latch bar so as to prevent
movement of the door handle to unlatching position;
the means connecting the motion transmitting means
to the defector is a push rod slidably mounted in the

cabinet for movement endwise and is operatively
connected to the rocking bracket for rocking the
rocking bracket out of defeating position when the
rod is moved endwise in one direction and for releas-
ing the rocking bracket when the rod is moved in
the opposite direction, and means interconnecting
the rod and motion transmitting means for moving
the rod in its said one direction when the switch
handle is moved to Off position and for releasing the
rod when the handle is moved to On position, and
means to move the rod in its said opposite direction
when the handle is moved to On position.
3. A cabinet having side walls, a rear wall, and a front
wall having an access opening which is spaced lateral-
ly of the front wall from one side wall, a door having a front
face and rear face and hingedly connected to the cabinet
for movement to open and closed positions relative to
the opening, said front wall having a marginal portion
which extends from said one side wall laterally of the
cabinet to the adjacent side of the opening and which
is disposed outwardly, laterally of the cabinet, between
said one side wall and the adjacent side of the in-
closed position of the door;
complementary releasable latching means carried on the
rear face of the door and on the inside of the cabinet,
respectively, and interengageable when the door is
closed for latching the door in closed position;
a door handle mounted on the door for movement
manually relative thereto and accessible for manual
operation at the front face thereof;
operating mechanism interconnecting the door handle
and the releasable latching means on the door and
for moving the latching means on the door to latch-
ing and unlatching positions upon movement of the
handle relative to the door to and from latching position,
respectively;
a switch in the cabinet;
a switch handle mounted on the said marginal portion
of the front wall for movement relative to the front
wall in opposite directions, respectively, to On and
Off positions, respectively, and extending forwardly
from said marginal portion for access for manual
operation;
switch actuating mechanism connected to the switch;
means connecting the switch handle to the switch ac-
tuating mechanism for operation of the switch actuat-
ing mechanism by the switch handle, as the switch
handle is moved to said positions, respectively, for
moving the switch to On and Off positions, respect-
ively;
switch defector means carried by the cabinet and mov-
able into and out of defeating positions when moved
into defeating position to prevent movement of the
switch handle from Off to On position;
means yieldably urging the switch defector means to un-
latching position by the door handle;
means interconnecting the rock lever and switch defector
means for moving the switch defector means out of
defeating position in the opposite position of the rock
lever and for releasing the switch defector means for
movement to defeating position in the inactive posi-
tion of the rock lever;
a slide rod;
means supporting the slide rod for movement endwise in
opposite directions, to active and inactive positions,
respectively;
means connecting the slide rod and rock lever for rock-
ing the rock lever to its said active position to render
the deflector means inoperative when the slide rod
is moved to its active position, and for releasing the
rock lever to its inactive position when the slide rod
is moved to its inactive position to render the
defector means operative;
said operating mechanism including a latch bar and
means connecting the latch bar to the door handle
for movement by the door handle to latching and
unlatching positions, respectively;
means connecting the slide rod to the latch bar for
moving the slide rod to its active position when the
latch bar is moved to latching position, and to release
the slide rod for movement to its inactive position
when the door handle is moved to unlatching posi-
tion;
and means for moving the rod to inactive position when
it is released by the latch bar, thereby to render the
switch defector means operative.
4. A switch and cabinet combination comprising:
a cabinet having a front wall with an access opening
therein, a door hingedly connected to the cabinet for
movement to open and closed position relative to
the opening;
complementary latch means on the door and cabinet;
a handle mounted on the door for movement relative
thereof;
operating means drivingly connecting the handle to
the complementary latch means for latching and
unlatching the latch means, selectively, by the hand-
de;
a pair of independently operable deflectors mounted on
the door and cabinet, respectively;
abutment means mounted on the operating means,
respectively, for movement thereby upon movement of
the handle, and engageable by the deflectors, respec-
tively, each when its associated deflector is in defeat-
ing position and the door is latched, to prevent
release of the complementary latch means by the
handle;
means respective to the deflectors and biasing each to
its defeating position; and
separate tripping means for the deflectors, each of said
tripping means being accessible to a tool from the
exterior of the cabinet independently of the other
and operable thereby for moving the deflectors out of
defeating position.
5. The device according to claim 4 wherein a switch
-mounted on the cabinet at the inside thereof;
a switch operating handle is mounted on the cabinet
for movement to On and Off positions, and has a
portion at the outside of the cabinet for manual op-
eration from the exterior of the cabinet;
an additional latch element is mounted on said door;
a third defeater is mounted in the casing and is movable into engagement with the additional latch element when the door is closed for latching the door in closed positions independently of the defeaters of said pair;
yieldable means urge the third defeater to defeating position;
means connect the third defeater to the switch operating handle for moving the third defeater out of defeating position when the handle is in Off position, and for releasing the third defeater for movement into defeating position when the switch handle is in On position;
and tool accessible means, accessible by the tool from the outside of the cabinet, connected to the third defeater for moving the third defeater to inoperative positive independently of said defeaters of said pair when the handle is in On position.

6. A switch and cabinet combination comprising:
a cabinet having side walls, a rear wall, and a front wall having an access opening which is spaced laterally of the front wall from one side wall, a door having a front face and rear face and hingedly connected to the cabinet for movement to open and closed positions relative to the opening, said front wall having a marginal portion which extends from said one side wall laterally of the cabinet to the adjacent side of the opening and which is disposed laterally of the cabinet, between said one side wall and the adjacent side of the door in the closed position of the door;
complementary releasable latching means on the door and cabinet, respectively;
movable door handle on the door;
operating mechanism mounted on the door for oscillation about a fixed axis, means connecting the handle to the mechanism for oscillating the operating mechanism by the door handle;
means connecting the operating mechanism to the complementary releasable latching means for releasing the same when the handle is moved to unlatching position and for latching the same when the handle is moved to latching position;
a latch bar on the operating mechanism and movable thereby about the axis of oscillation of the operating mechanism;
a defeater latch bracket mounted on the inside of the front wall for swinging forwardly toward the front wall to operative position, and rearwardly from the front wall to inoperative position;
said defeater latch bracket having a shoulder which, in the operative position of the defeater latch bracket, with the handle in latching position, is in a deflecting position wherein it defeats movement of the latch bar, and thereby the operating mechanism and door handle, to unlatching position;
and said cabinet having an aperture in said marginal portion for admitting a tool for pushing the defeater latch bracket in a direction away from the front wall for moving its shoulder out of defeating position with respect to the latch bar.

7. The structure according to claim 6 and further including:
a switch mounted in the cabinet;
a switch handle carried by said portion of the cabinet and movable to On and Off positions and having a portion exposed in front of the front wall of the cabinet for manipulation from outside the cabinet; switch actuating mechanism in the cabinet;
means connecting the switch actuating mechanism to the switch;
means connecting the handle to the switch actuating mechanism for operating the switch actuating mechanism as the handle is moved to said positions, respectively, for thereby moving the switch to On and Off positions, respectively;
a push rod;
means supporting the push rod for endwise movement;
means operatively connecting the rod and the defeater latch bracket for swinging the defeater latch bracket away from said wall portion out of defeating position with respect to the latch bar upon endwise movement of the rod in one direction, and for releasing from the defeater latch bracket upon movement of the rod in the opposite direction;
means connecting the rod and switch handle for moving the rod in said one direction when the switch handle is moved to Off position and for releasing the rod for movement in the opposite direction when the switch handle is moved to On position;
means for moving the rod in the opposite direction when the rod is released; and
means connected to the defeater latch bracket for releasing the defeater latch bracket to operative position when the rod is moved in said opposite direction.

8. The structure according to claim 6 wherein, a second latch bar is provided;
means connect the second latch bar to the operating mechanism for oscillation therewith;
a spring biased defeater is carried by the door and normally engages said second latch bar for preventing movement of the door handle to unlatching position; and
means are provided on the spring biased defeater which are accessible for operation by a tool from the exterior of the cabinet and manipulatable thereby for disengaging the spring biased defeater from the second latch bar.

9. The structure according to claim 8 wherein a switch is provided in the cabinet;
a switch operating handle is mounted on the cabinet and has a portion extending forwardly from the cabinet for manual movement to On and Off positions;
means drivingly connect the switch handle and switch; a third defeater is mounted on the cabinet at the inside thereof and operatively connected to the switch handle for preventing movement of the switch handle to On position when the door handle is in unlatched position;
means are provided which are operated by movement of the door handle to render the third defeater inactive when the door handle is moved into latched position; and
means are connected to the third defeater and accessible by a tool from the exterior of the cabinet to move the third defeater to inoperative position.

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KATHLEEN H. CLAFFY, Primary Examiner.
BERNARD A. GILHEANY, Examiner.
UNIVERS STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,229,056 January 11, 1966

Merlin Y. Turnbull

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 6, line 61, after "switch" insert -- support --;
column 9, line 17, for "positive" read -- position --.

Signed and sealed this 6th day of December 1966.

(SEAL)
Attest:

ERNEST W. SWIDER
Attesting Officer

EDWARD J. BRENNER
Commissioner of Patents