Dec. 13, 1927. 1,652,531

O. S. JENNINGS

SWITCH BOX

Filed Nov. 20, 1919 2 Sheets-Sheet 1

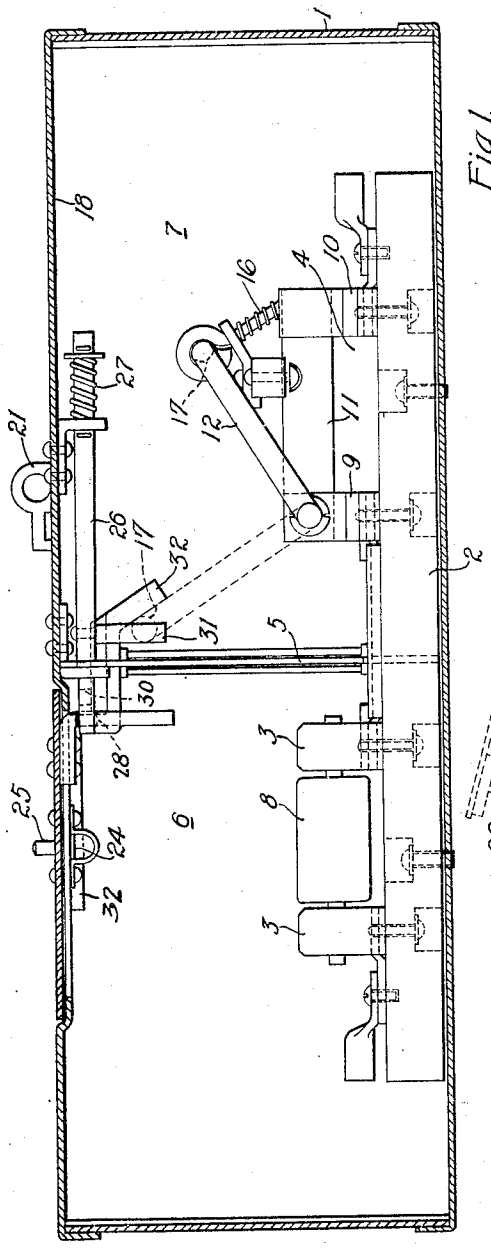


Fig. 1.

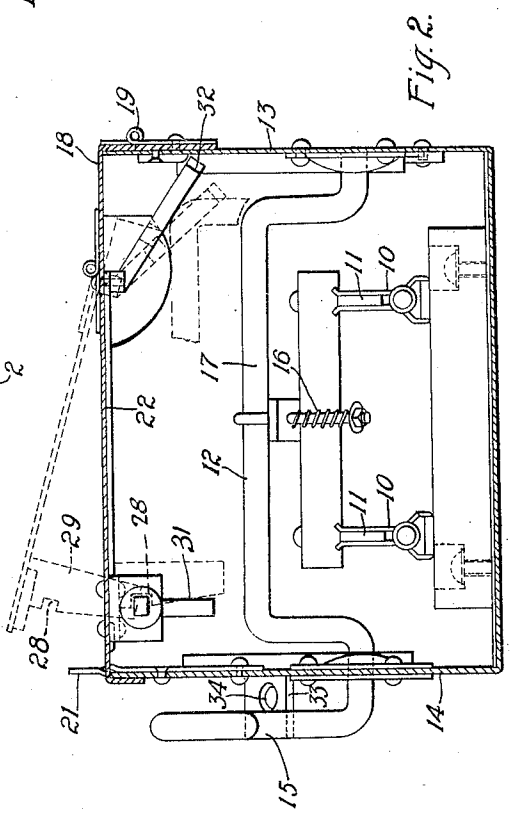


Fig. 2.

WITNESSES:

H. T. Shelhamer

J. M. Procter

INVENTOR

Oliver S. Jennings

BY

Wesley G. Carr

ATTORNEY

Dec. 13, 1927. 1,652,531

O. S. JENNINGS

SWITCH BOX

Filed Nov. 20, 1919 2 Sheets-Sheet 2

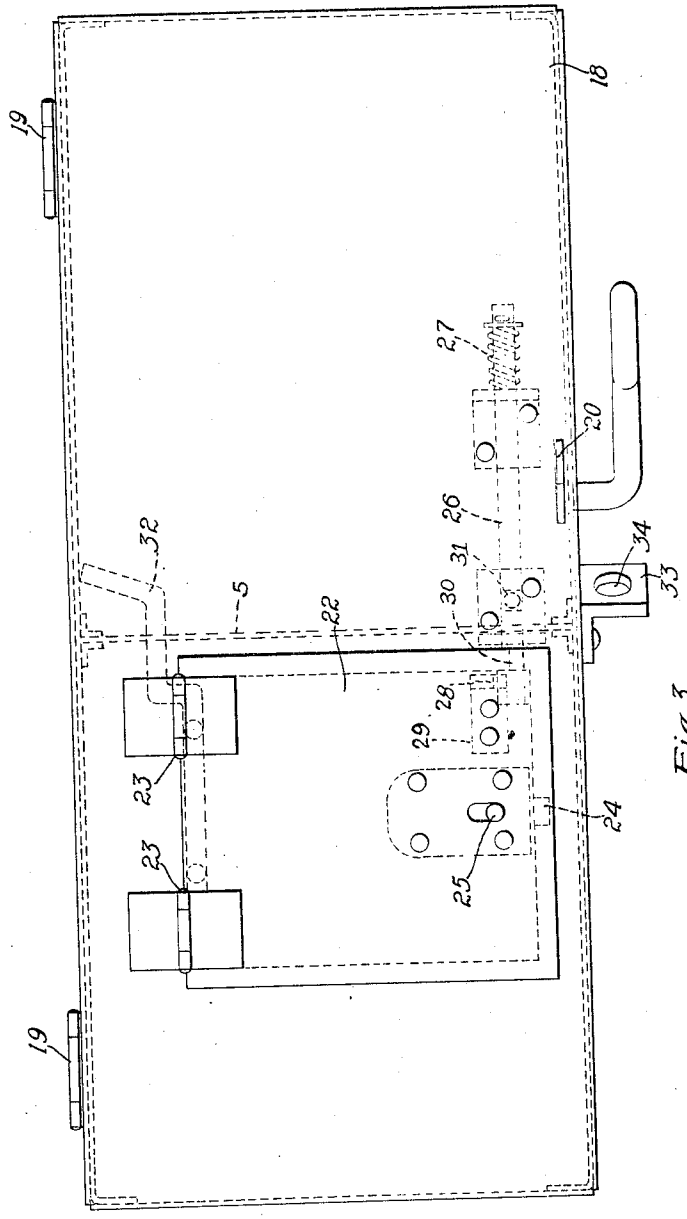



Fig. 3.

WITNESSES:
H. T. Shelhamer
J. A. Procter

INVENTOR
Oliver S. Jennings
BY
Wesley G. Carr
ATTORNEY

Patented Dec. 13, 1927. 1,652,531

# UNITED STATES PATENT OFFICE.

OLIVER S. JENNINGS, OF BROOKLYN, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, A CORPORATION OF PENNSYLVANIA.

## SWITCH BOX.

Application filed November 20, 1919. Serial No. 339,453.

My invention relates to switch boxes and particularly to safety switch boxes.

One object of my invention is to provide a safety switch box that shall have means for permitting access to the fuse compartment only when the switch is open and that shall permit access to the switch compartment only by authorized parties.

A further object of my invention is to provide a double-door switch box of the above indicated character that shall be simple and inexpensive to construct and effective in its operation.

In practicing my invention, I provide a casing having a fuse compartment and a switch compartment therein separated by a barrier. A main hinged cover is provided for both compartments, and an auxiliary cover is hinged to the main cover to provide access to the fuse compartment only. A bolt is disposed on the main hinged cover to normally hold the auxiliary cover in its closed position. The bolt is interlocked with the switch to prevent the opening of the auxiliary cover so long as the switch is closed, and the auxiliary door is also interlocked with the switch to prevent closure of the switch so long as the door is open. The main cover to both compartments may be provided with a padlock which can be opened only by authorized persons. With this arrangement, fuses may be replaced only when the switch is open and it is possible to come into contact with live parts of the switch only when the main door is opened by an authorized person.

Figure 1 of the accompanying drawings is a side view, partially in elevation, and partially in section, of a switch box embodying my invention; Fig. 2 is an end view, partially in elevation and partially in section, of the switch box shown in Fig. 1, and Fig. 3 is a top plan view of the switch box shown in Figs. 1 and 2.

A rectangular casing 1, of sheet steel or other suitable material, is provided with an insulating member 2 in the bottom thereof upon which is mounted terminal members 3, for the reception of fuses, and a switch member 4. A barrier 5 divides the casing 1 into two compartments 6 and 7, in the compartment 6 of which is disposed fuses 8 and in the compartment 7 of which is disposed the switch 4.

The switch 4 comprises stationary jaw members 9 and 10, knife-blade members 11 and a rod 12 that is journaled in the sides 13 and 14 of the casing 1 to constitute a fulcrumed lever arm having a handle 15 for actuating the switch 4. The blade members 11 of the switch 4 are operatively connected, through a resilient member 16, to the straight transversely disposed portion 17 of the rod 12.

A cover 18 is hinged at the points 19 of the casing 1 and extends over both compartments 6 and 7. An opening 20 is provided in the cover 18, through which projects an eye member 21 that is adapted to receive a padlock or other sealing device (not shown). A door 22 is hinged at points 23 of the door 18, adjacent the fuse compartment 6, and is provided with a spring latch 24 and a knob 25 for actuating the same. A bolt 26 is slidably mounted on the inner side of the cover 18 and is provided with a spring 27 for normally holding the same in such position that it engages a notch 28 in a projection 29 on the inner side of the door 22. The bolt 26 has a notch 30 therein which, when it registers with the notch 28 in the projection 29, permits the door 22 to be opened. A projection 31 is disposed on the bolt 26 and is adapted to be engaged by the transversely disposed portion 17 of the rod 12 when the switch is opened for compressing the spring 27, and thus moving the notch 30 into registering engagement with the notch 28, thereby permitting the door 22 to be opened only when the switch 4 is fully open. An arm 32 is mounted at the hinged end of the door 22 and extends into the compartment 7 in such manner that, when the switch 4 is open, the portion 17 of the rod 12 is disposed between the barrier 5 and the arm 32, as shown in Figs. 1 and 2 of the drawings, to thus prevent closure of the switch 4 so long as the door 22 is open.

With the arrangement herein set forth, the fuses 8 may be replaced with safety by any person, and no special skill is necessary. However, if it is desired to inspect the switch to observe the alignment of the contact members or to repair the same, which must essentially be performed by an authorized person, it is only necessary to remove the padlock or seal, if one be employed, from the eye 21 to open the cover to the casing 1.

A projection 33, having an opening 34 therein, is provided on the casing 1 to receive a padlock (not shown), or other sealing device, in order that the handle 15 may be locked in its open position if it is desired.

My invention is not limited to the specific structure illustrated, as it may be variously modified without departing from the spirit and scope of the invention, as set forth in the appended claims.

I claim as my invention:

1. A safety switch box comprising a casing having a barrier therein, a fuse in one portion of the casing and a switch in the other portion, a main hinged door for both portions of the casing, an auxiliary hinged door on the main hinged door adjacent the fuse portion of the casing, a latch for the auxiliary door biased to its closed position, means whereby the opening of the switch opens the latching device, and a projection on the auxiliary door for precluding the closure of the switch so long as the door is open.

2. A safety switch box comprising a casing, a switch within the casing, a main movable door for the casing, an auxiliary door hinged to the main door at one end thereof, a latch mounted on the main door for retaining the auxiliary door closed when the switch is closed.

3. A safety switch box comprising a casing divided into a switch and a fuse compartment, a switch within the switch compartment, a main door for both compartments, an auxiliary door hinged to the main door adjacent the fuse compartment, a bolt mounted on the main door for precluding the opening of the auxiliary door and a projection on the bolt adapted to be engaged by the switch to actuate the bolt when the switch is opened.

4. A safety switch box comprising a casing divided into a switch and a fuse compartment, a switch in the switch compartment, a main hinged door for both compartments, an auxiliary door hinged to the main door adjacent the fuse compartment, a bolt mounted on the main door for precluding the opening of the auxiliary door and a projection on the bolt adapted to be engaged by the switch to actuate the bolt when the switch is opened and a projection on the auxiliary door for so engaging the switch as to preclude the closure of the switch so long as the auxiliary door is open.

5. Switch mechanism comprising a housing open on one side, a movable switch within the housing accessible from the open side of the housing and having actuating means operable from the exterior of the housing, a door provided with an opening and hinged to the housing for substantially closing the entire open side of the housing and movable independently of the position of the switch, an auxiliary door movably attached to the main door for closing the said opening and means interlocking the auxiliary door with the switch.

6. Switch mechanism comprising a housing open on one side, a movable switch within the housing accessible from the open side of the housing and having actuating means operable from the exterior of the housing, a door provided with an opening and hinged to the housing for substantially closing the entire open side of the housing and movable independently of the position of the switch, an auxiliary door movably attached to the main door for closing the said opening and means interlocking the auxiliary door with the switch and separable from the switch to permit opening movement of the main door independently of the switch.

7. Switch mechanism comprising a housing open on one side, a movable switch within the housing accessible from the open side of the housing and having actuating means operable from the exterior of the housing, a door provided with an opening and movably attached to the housing for substantially closing the entire open side of the housing and movable independently of the position of the switch, an auxiliary door movably attached to the main door for closing the said opening, means for sealing the main door in closed position and means interlocking the auxiliary door with the switch.

In testimony whereof, I have hereunto subscribed my name this 5th day of Nov., 1919.

OLIVER S. JENNINGS.