S. B. WAY & J. L. FAY.

SAFETY FUSE AND LINE DISCONNECTING SWITCH.

APPLICATION FILED APR. 12, 1909.

986,034. Patented Mar. 7, 1911.

Fig. 1.

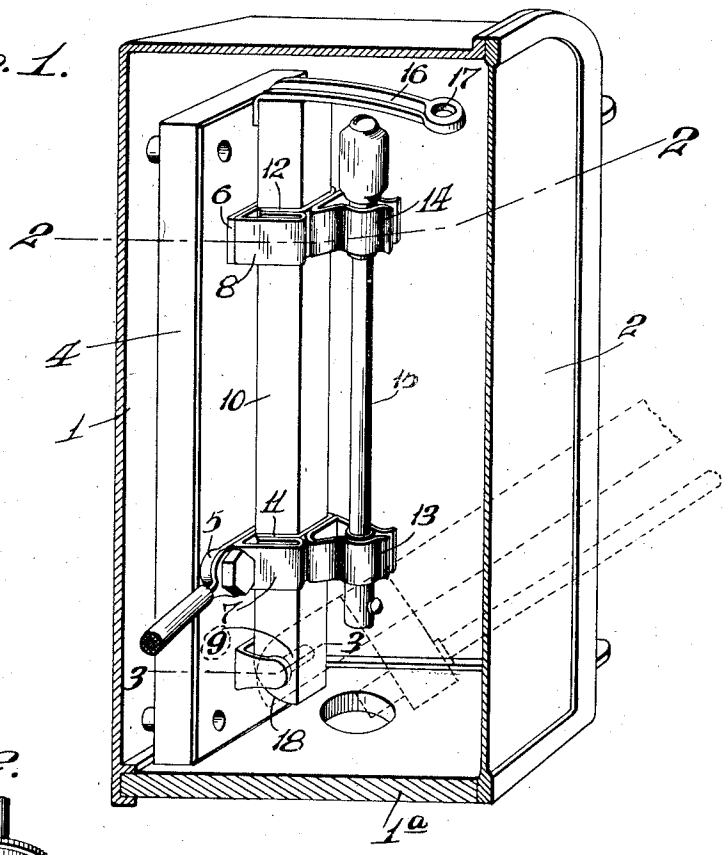


Fig. 2.

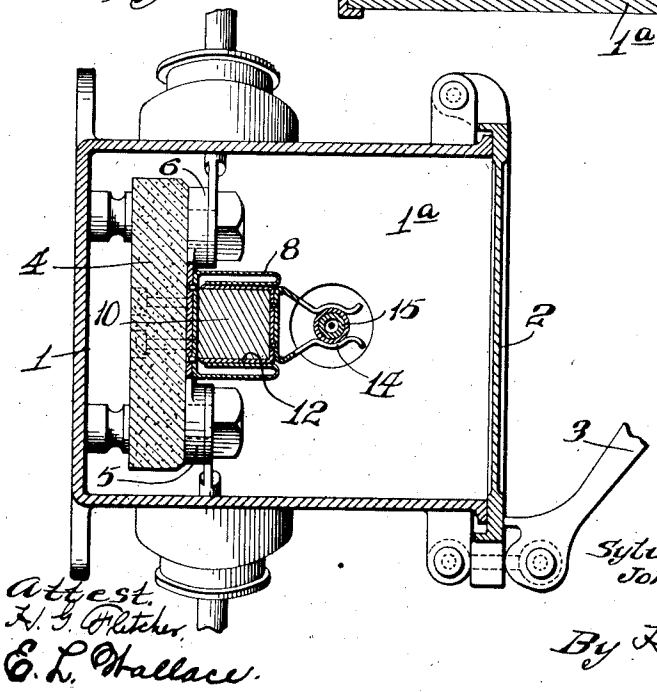
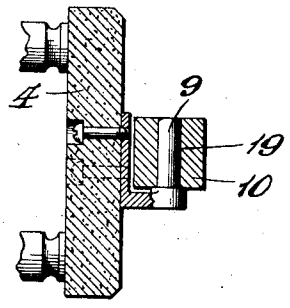


Fig. 3.



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UNITED STATES PATENT OFFICE.

SYLVESTER B. WAY AND JOHN L. FAY, OF ST. LOUIS, MISSOURI.

SAFETY-FUSE AND LINE-DISCONNECTING SWITCH.

986,034. Specification of Letters Patent. Patented Mar. 7, 1911.

Application filed April 12, 1909. Serial No. 489,379.

To all whom it may concern:

Be it known that we, SYLVESTER B. WAY and JOHN L. FAY, citizens of the United States, and residents of St. Louis, Missouri, have invented certain new and useful Improvements in Safety-Fuses and Line-Disconnecting Switches, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention relates generally to safety fuses and line disconnecting switches, and particularly to a disconnecting switch wherein is used the expulsion or non-arcing type of fuses.

To the above purposes, our invention consists in certain novel features of construction and arrangement of parts which will be hereinafter more fully set forth, pointed out in the claims, and illustrated in the accompanying drawings, in which:

Figure 1 is a perspective view of our invention with the metal box in section; Fig. 2 is a section taken on the line 2—2 of Fig. 1; and Fig. 3 is a section taken on the line 3—3 of Fig. 1.

Referring by numerals to the accompanying drawings: 1 indicates a metal box or housing which is of the usual construction, only it is provided with a removable bottom portion 1^a, said metal box or housing being provided with a door 2, which door is fastened by the usual handle 3. Properly secured in the box or housing 1 is an insulating base 4, of marble or any other suitable insulating material, and mounted on said base are terminal binding posts 5 and 6.

7 and 8 indicate the contact clips, which are secured to the base 4 in any suitable mechanical manner, and are electrically connected to the binding or terminal posts 5 and 6. Said contact clips are practically U-shaped. Located below the contact 7 and in proper relation thereto, and properly secured to the base 4, is a stud 9, the object of which will be hereinafter more fully described.

10 indicates an insulated fuse-carrying block or holder for the fuse, which block may be constructed of any proper insulating material and may be of any shape, but is constructed preferably of wood and practically square in cross section. Said fuse-carrying block is provided adjacent one end with a contact 11, which is adapted to engage or contact with the contacts 7 carried by the base 4, and with a similar contact 12 carried adjacent the opposite end of said fuse-carrying block or holder, which is adapted to engage with the contact 8, the contacts 11 and 12 being insulated from each other and secured in any suitable manner to the block 10. Secured to the contact 11 is a spring contact 13, and secured to the contact 12 is a similar spring contact 14. The contacts 13 and 14 are for the purpose of carrying and holding the fuse cartridge, 15, which fuse cartridge is of the well known expulsion type of fuse as shown, but other forms of fuses may be employed. Secured to the upper end of the fuse block 10 is an arm 16, having in its free end an opening 17. The lower end of the block is rounded, as at 18, and provided with a transverse opening 19, in which the stud 9 may be inserted. In other words, the block 10 which carries the fuse cartridge, is pivoted to and removable from the base 4.

In order to disconnect the line, or in order to insert a new fuse, it is only necessary for the operator to take a piece of wood, or other insulating material, having a hook or prong, and insert the same in the hole 17 of the arm 16, and by pulling downwardly or forwardly on said arm the fuse block will assume a position as shown by dotted lines in Fig. 1, and may be disconnected from the block 4.

When the fuse block 10 has assumed the position as shown in Fig. 1 in dotted lines, wherein it is entirely disconnected from the contacts, the block may be removed laterally from the stud 9, the cartridge chamber 15 removed and a new fuse inserted, and the fuse block may be inserted back onto the stud and swung into the proper connected position. The position of the stud 9 is such with relation to the contact 7 that the block 10 cannot be removed from the stud 9 until it has been entirely disengaged from the contacts.

By the use of a disconnecting switch as heretofore described, it is practically impossible for the operator to be hurt in the renewing and replacing of the fuses and putting the line in service, as, as heretofore described, the insulated fuse block carrying the fuse chamber can be swung out of connection with the circuit and can be readily

removed, and all that is necessary in carrying out this operation is the use of an appliance as heretofore stated.

It will be seen from the foregoing that our invention really constitutes a line fuse and line switch in one structure, and permits the removal of the switch member, disconnecting it from the heavily charged conductors, and then its bodily removal from the casing in which it is mounted for the examination and renewal of the fuse cartridge. By our improved construction the operator can pull down the switch member, which disconnects it from the line, remove the switch member from the box and then remove the fuse.

If the bottom of the box 1^a should become burned by the explosion of the vaporized fuse, it may be readily replaced.

We claim:

1. A line fuse and switch, comprising a casing having a removable bottom, an insulated base fixed to said casing, contacts secured to said base, a stud secured to said base below the contacts, an insulated fuse-carrying block pivotally and removably mounted on said stud, whereby said block may be first swung into a position at right angles to the base, disconnecting it from the electrically charged conductors, and then bodily removed from the casing for the replacement of the fuse cartridge on the fuse carrying block, and contacts mounted on said fuse-carrying block.

2. A line fuse and switch, comprising a casing provided with a removable bottom having an opening therein, an insulated base, contacts secured to said base, a stud secured to said base beyond the contacts, an insulated fuse-carrying block pivotally and removably mounted on said stud, whereby said block may be first swung into a position at right angles to the base, disconnecting it from the electrically charged conductors, and then bodily removed from the casing for the replacement of the fuse cartridge on the fuse carrying block, resilient contacts secured to said fuse-carrying block, and a perforated arm secured to said fuse-carrying block.

3. A line fuse and switch, comprising a casing, an insulated base mounted in said casing, contacts secured to said base, a laterally projecting stud secured to said base beyond the contacts, an insulated block provided with a cut-away corner, pivotally and laterally removably mounted on said stud, whereby said block may be swung in a position and at an angle not greater than a right angle to the base, and resilient contacts insulated from each other mounted on said block for receiving the fuse.

4. A line fuse and switch comprising a casing, an insulated base mounted in said casing, contacts secured to said base, a bearing secured to said base beyond the contacts, an insulated fuse-carrying block pivotally and removably mounted on said bearing, whereby said block may be first swung into a position at an angle to the base and maintained in said position by said bearing, disconnecting it from the electrically charged conductors, and then may be bodily removed from the casing for the replacement of the fuse cartridge on the fuse-carrying block, and contacts mounted on said fuse-carrying block.

In testimony whereof, we have signed our names to this specification, in presence of two subscribing witnesses.

SYLVESTER B. WAY.
JOHN L. FAY.

Witnesses:
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E. L. WALLACE.