April 27, 1926. 1,582,064

W. J. MADDOX

ELECTRIC SWITCH

Filed June 19, 1925

Fig. 1

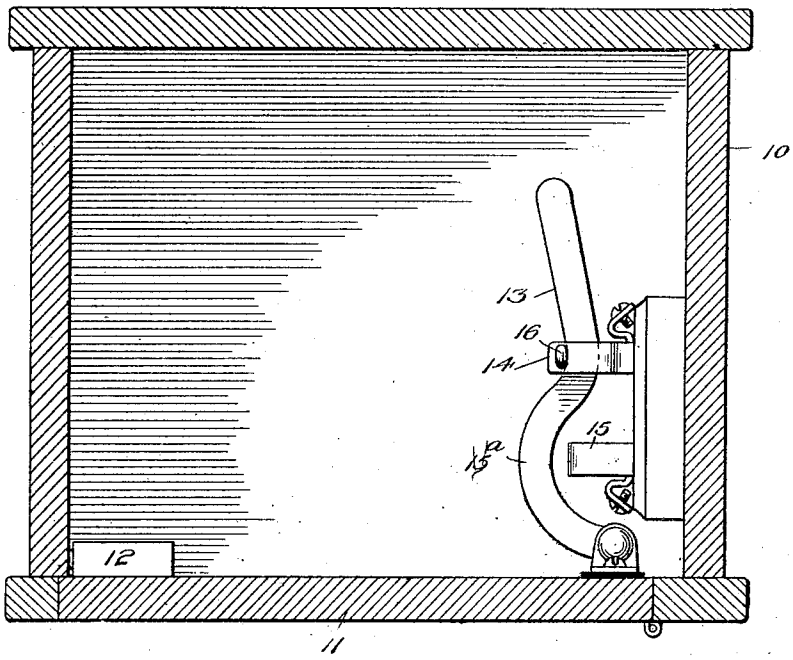


Fig. 3

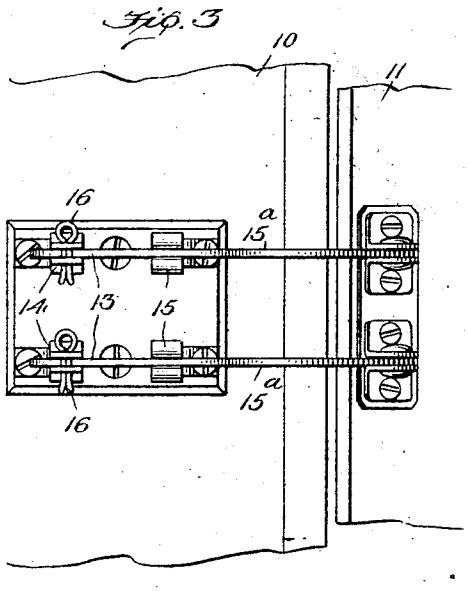
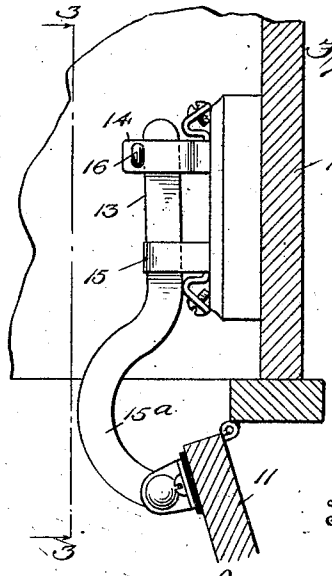


Fig. 2



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UNITED STATES PATENT OFFICE.

WILLIAM J. MADDOX, OF JAMESTOWN, NEW YORK.

ELECTRIC SWITCH.

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To all whom it may concern:

Be it known that I, WILLIAM J. MADDOX, a citizen of the United States, residing at Jamestown, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Electric Switches; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to electric switches and particularly to a knife blade switch especially adapted for use in telephone boxes or the like.

In recent years the constantly increasing numbers of automobile tourists has brought into existence clubs or associations organized for the purpose of rendering assistance to tourists who encounter difficulties at more or less isolated points along the highways. These organizations maintain garages or repair shops at various points throughout the territory in which they function and in order that a motorist may communicate with some one of such shops, telephone service is provided at regular intervals along the highways over which the greater portion of traffic travels. As a rule, telephone stations are provided every few miles along the roads so that the motorist, regardless of the point at which he breaks down, will be comparatively close to one of the stations from which he can communicate with the shop in the nearest village. It is to be understood, of course, that the benefits of this telephone service and this repair service, is to be had only by those persons in good standing in the organization and for this reason the telephones provided along the highways are maintained in securely locked boxes to which access may be had by the proper persons, each of whom are provided with keys for said boxes. Realizing that conditions might be such that the motorist is apt to be excited at the time he makes use of the telephone the present invention has for one of its objects the provision of means for throwing the instrument in circuit upon the box being opened and for throwing the instrument out of circuit when the door of the box is shut.

A further object is to provide a switch of simple and rugged construction which will stand up under hard usage and which will be sure to function properly at all times.

In the accompanying drawings,—

Figure 1 is a horizontal sectional view through the box or housing with the door or closure of the box shut.

Fig. 2 is a similar view with the door open; and

Fig. 3 is a vertical sectional view on the line 3—3 of Fig. 2.

It will be appreciated that the switch of the present invention is susceptible of use in various circumstances but one of the principal uses contemplated is that hereinbefore set forth and for this reason the preferred construction of the switch is illustrated in the present instance in connection with a box or other suitable housing 10 for a telephone instrument (not shown) which is rendered accessible through a door or other closure section 11 which may be provided with a lock 12 to prevent unauthorized persons making use of the instrument.

In the preferred form of switch there are a pair of knife blades 13 each adapted to bridge a pair of contacts 14, 15 mounted in box 10 but as the two blades are duplicates and operate in identically the same way the present description will be limited to one blade and one pair of contacts for purposes of conciseness and clarity.

The blade is pivotally connected at one end to the closure 11 and its opposite end portion is positioned between the members constituting contact 14. This end portion is of sufficient length to bridge the space between contacts 14, 15 when the door 11 is opened, as shown in Fig. 3 but when the door 11 is opened, as shown in Fig. 3 but when the door is shut, as shown in Fig. 2, the blade is adapted to be moved out of engagement with the contact 15 preferably by the intermediate portion thereof being offset as at 15^a.

It will be noted that the blade moves deeper into the contact 15 as the door is opened and the free end of said blade is held from moving out of the contact 14 as by an ordinary cotter pin 16. In this way, the opening of the door 11 is limited by the straight portion of the blade jamming, so to speak, against the cotter pin and the inner surface of contact 15.

The entire switch is of simple and sturdy construction so that it is not likely to get

out of order and will stand rather hard usage. Furthermore, it is sure in operation and the circuit cannot possibly remain closed when the door 11 is shut.

What I claim is:

1. In a switch for boxes and the like, a pair of contacts mounted on the interior of the box, and a conductor connected to the box closure having a portion for bridging the space between the contacts when said closure is opened, said conductor having a portion slidably secured in one contact and another portion of the conductor being offset and adapted to be spaced from the other contact when the closure is closed.

2. In a knife switch for boxes and the like, a pair of contacts mounted on the wall of the box, a knife blade pivotally connected at one end to the door or closure of the box, and the opposite end of said blade being slidably secured in one of the contacts, the last mentioned end of said blade being substantially straight and adapted to be moved into engagement with the other contact to bridge the space between the two contacts when said door is opened and the intermediate portion of said blade being shaped to move out of contact with one of the contacts when said door is shut.

3. In a knife switch for boxes and the like, a pair of contacts mounted on the wall of the box, a knife blade pivotally connected at one end to the door or closure of the box, the other end of said blade being slidably secured in one of the contacts and the intermediate portion of said blade being offset, the offset portion of the blade being spaced from one of the contacts when the closure of the box is shut whereby the circuit through the contacts will be broken and the slidably secured end of said blade being movable into engagement with the said contact by an opening movement of the closure whereby the space between the two contacts will be bridged and the circuit closed when said closure is open.

4. In a switch for boxes and the like, a box or housing having a pivoted closure section, a knife blade conductor pivotally connected at one end to said closure, a pair of contacts fixed to one side of the box, said blade having a free end portion adapted to engage and bridge said contacts when the closure is open and having an offset portion whereby the blade will disengage from one of said contacts when the closure is shut, and means for preventing movement of the free end section away from the side wall of the box, the free end portion being movable toward said wall when the closure is opened whereby its movement into the contact and the opening movement of the closure will be limited.

WILLIAM J. MADDOX.