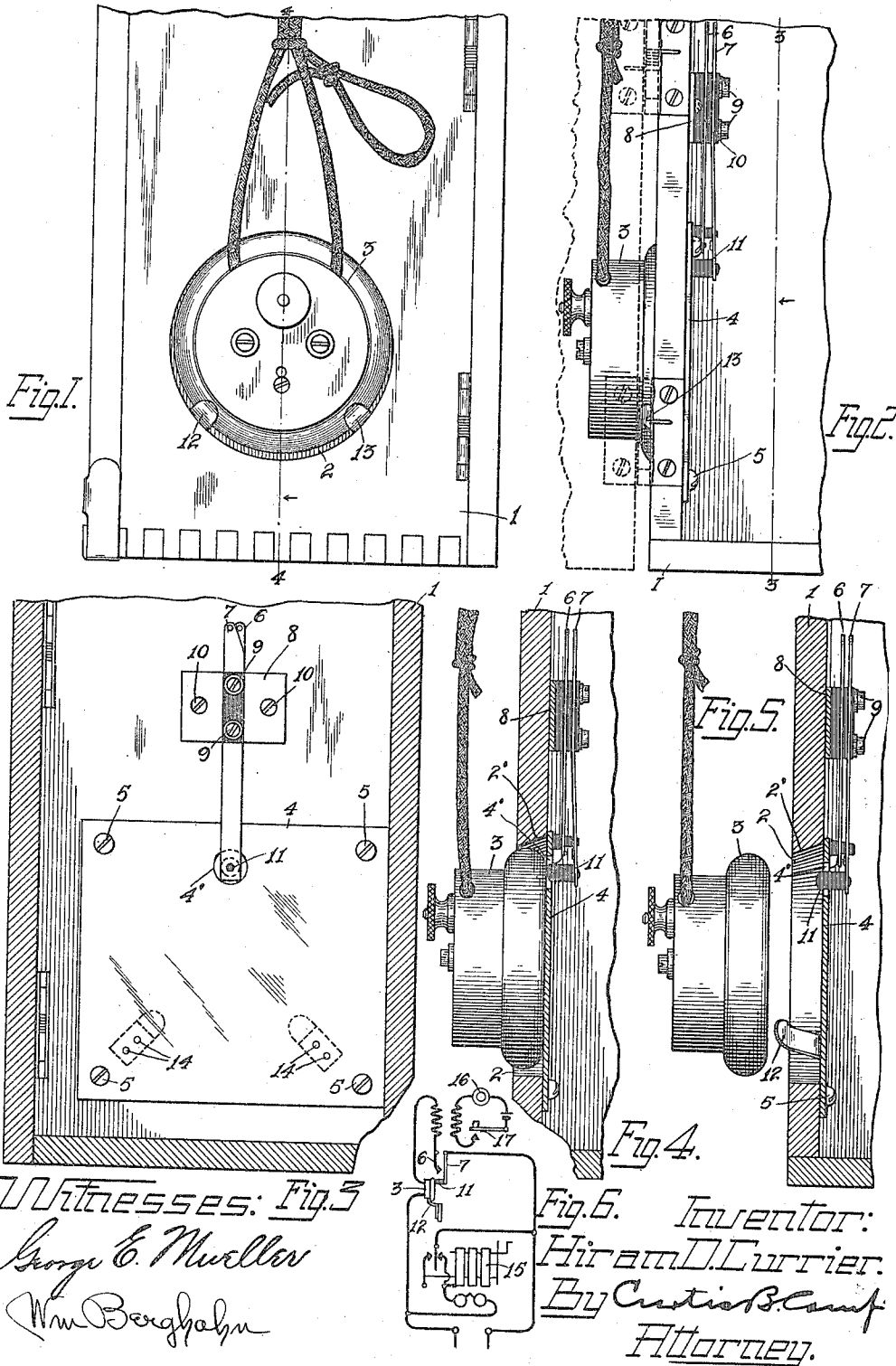


H. D. CURRIER.
RECEIVER OPERATED SWITCH FOR TELEPHONES.
APPLICATION FILED DEC. 8, 1913.

1,196,340.

Patented Aug. 29, 1916.



UNITED STATES PATENT OFFICE.

HIRAM D. CURRIER, OF CHICAGO, ILLINOIS, ASSIGNOR TO KELLOGG SWITCHBOARD AND SUPPLY COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

RECEIVER-OPERATED SWITCH FOR TELEPHONES.

1,196,340.

Specification of Letters Patent. Patented Aug. 29, 1916.

Application filed December 8, 1913. Serial No. 805,222.

To all whom it may concern:

Be it known that I, HIRAM D. CURRIER, a citizen of the United States of America, residing in Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Receiver-Operated Switches for Telephones, of which the following is a specification.

My invention relates to receiver operated switches for telephones and has to do more particularly with switch devices adapted to be associated with the wall of a telephone box and so arranged that the removal or replacing of a so-called operator's or head receiver will actuate the contacts of the switch. Certain types of test sets such as are generally used by linemen are adapted for securely holding the receiver outside the casing by means of externally positioned holding members, and an object of my invention is to provide a device of the above character having an improved and simplified arrangement of switch parts, and also such parts in combination with an opening or orifice in the wall of the box whereby a more compact device results, and one which is also simple in construction and cheap to manufacture.

For a more complete understanding of my invention reference may be had to the accompanying drawing in which like reference characters denote like parts and in which—

Figure 1 is a side elevation of a test set with the receiver in its normal position in the orifice or opening in the casing; Fig. 2 is a front view of the test set with the cover removed showing the receiver switch contacts; Fig. 3 is a sectional view on the line 3, 3 of Fig. 2 looking in the direction of the arrow indicated thereon; Fig. 4 is a sectional view on the line 4, 4 of Fig. 1 showing the receiver setting in the orifice and also showing the switch contacts; Fig. 5 is the same as Fig. 4 but with the receiver removed from the orifice; and Fig. 6 is a circuit diagram of a well-known form of test set.

Referring now more in detail to my invention as illustrated, it comprises a support or box 1 having a circular orifice 2 in one of its sides, said orifice being of such a size as to hold the head receiver 3 in its normal position, which is when the said head receiver is not in use. A metal plate 4 is fastened to the inside of the box containing the orifice 2 by means of the screws 5, the plate 4 acting

as a bottom for the orifice and as a check when the receiver 3 is placed therein. I preferably use this plate construction but it is evident the box side itself may serve this purpose by simply boring a hole part way through the wall.

A set of switch contact springs 6 and 7 is insulatively mounted on a metal strip 8 by means of the screws 9, the metal strip 8 being fastened to the side of the box by means of the screws 10. The switch contacts 6 and 7 are preferably directly operated by the head receiver 3, the free end of spring 7 being provided with a buffer 11 of any suitable insulating material, which may be attached to the spring 7 in any desired manner. The buffer 11 extends through an opening 4¹ in the plate 4 into cooperation with the head receiver 3, said head receiver 3 holding the switch contacts 6 and 7 normally open when the head receiver is in its normal position in the orifice 2. When the receiver 3 is laterally moved from the orifice 2, the contact 7 moves into engagement with contact 6 to place the head receiver in circuit.

Holding members in the form of yielding elements, 12, 13 are provided, being angularly formed and suitably fastened to the plate 4, preferably by means of the rivets 14. One portion of the spring members 12 and 13 extends outwardly through the orifice 2, the extended ends being preferably shaped so as to conform to the rounded surface of the ear piece of the receiver. The springs 12 and 13 are tensioned so that when the head receiver 3 is being placed in the orifice 2 the springs are forced against their normal tension and when the upper portion of the head receiver passes the outer edge of the orifice 2 the said springs 12 and 13 force the receiver up against the angular surface 2¹ thus securely holding it in place.

Referring now to Fig. 6, I illustrate a circuit arrangement adapted to be used for the particular spring arrangement shown, like parts being indicated by like reference characters. A generator 15 is bridged across the line for signaling purposes and a transmitter 16 is placed in circuit when the contacts of the key 17 are closed for talking purposes. These contacts 17 may be operated by the receiver, or independently.

While I have shown a particular switch spring arrangement to place the receiver in

circuit, I do not wish to be limited to this particular arrangement because different combinations of switch spring contacts can be used without departing from the spirit of the invention. Neither do I wish to be limited to the exact structure as shown, and I aim to cover all such changes and modifications as come within the scope of the appended claims.

10 Having described my invention what I now claim as new and desire to secure by United States Letters Patent is:

1. A device of the character described comprising a casing having an opening or orifice in a wall thereof, said opening being adapted to hold a telephone receiver, a plate secured to the inside of said wall and covering said opening or orifice, means for yieldingly holding the receiver in said opening against the said plate, and switch contacts operable by the removal or replacing of the receiver.

2. A device of the character described comprising a casing having an opening or orifice in the wall thereof, a plate secured to the inside of said wall and covering said opening or orifice, said opening being adapted to hold a telephone receiver, yielding members for removably holding the receiver in said opening, and switch contacts operable by the removal or replacing of the receiver.

3. A device of the character described comprising a flat wall of a casing, an orifice in said casing covered by a plate secured to the inside of said wall, contact springs supported upon the inside of said wall and having an operating element extending through a hole in said plate, and means for removably supporting a telephone receiver against the outside of said plate and in operative relation to said contact operating element.

4. A device of the character described comprising a casing having an opening or orifice in the wall thereof, a plate secured to the inside of the wall, contact springs supported upon the inside of said wall and having an operating element extending through a hole in said plate, and means for removably supporting a telephone receiver against the outside of said plate with the face of its ear piece in operative relation to said contact operating element.

55 5. A device of the character described comprising the wall of a casing, an orifice or opening therein, a plate secured to the inside of said wall and covering said orifice

or opening, means for supporting a telephone receiver against the outside of said plate so that it may be laterally removed and replaced, and contacts supported upon the inside of said wall and operable by the receiver when so laterally moved.

6. A device of the character described comprising the wall of a casing, a circular recess or orifice therein, a plate secured to the inside of said wall and covering the said orifice, yielding members for holding a telephone receiver in said orifice, and switch springs mounted upon the inside of said wall and having an operating element extending through a hole in the said plate into operative relation with the face of said telephone receiver.

7. A device of the character described comprising a plate member, a circular orifice therein said orifice having a diameter slightly larger than the diameter of a telephone receiver, which is adapted to be inserted into the said orifice, a second plate secured to the inside of said first plate, a pair of spring members attached to said second plate for removably holding the said receiver in said orifice, and switch springs secured to the inside of said first plate and having an operating element operable by the removal or replacing of said receiver.

8. A device of the character described comprising a wall of a casing, a circular opening or orifice therein, a plate secured to the inside of the casing, a contact spring mounted upon the inside of the wall of said casing and having an operating element extending through a hole in said plate, yielding members for removably holding a telephone receiver in said orifice whereby the said receiver is held in operative relation with said operating element.

9. A device of the character described comprising the wall of a casing, a recess in said wall adapted to receive a telephone receiver, a plate secured to the inside of said wall, a pair of spring members secured to said plate for yieldingly holding the said receiver in said recess and against the said wall, and switch contacts operable by the removal and replacing of the said receiver.

Signed by me at Chicago, county of Cook and State of Illinois, in the presence of two witnesses.

HIRAM D. CURRIER.

Witnesses:

GEORGE E. MUELLER,
M. R. ROCHFORD.