May 16, 1933. L. E. AUSTIN 1,909,648

ELECTRIC CORD PLUG-IN CONNECTION

Filed Sept. 25, 1931

Fig. 1.

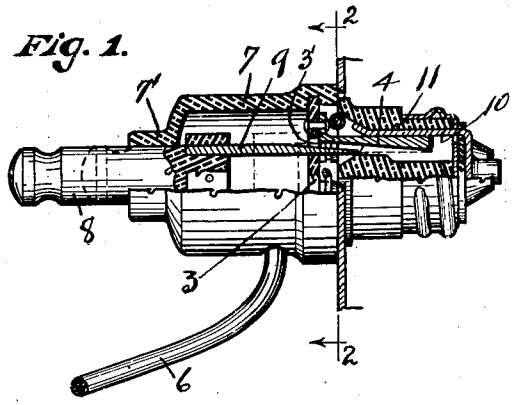
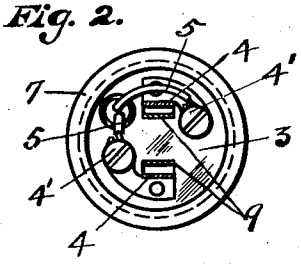


Fig. 2.



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UNITED STATES PATENT OFFICE

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ELECTRIC CORD PLUG-IN CONNECTION

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My invention relates particularly to an improved connecting means for connecting an electric cord to a terminal socket, and it has among its salient objects to provide a plug-in connecting means which can be inserted into a terminal socket member and interlocked therewith so as to prevent accidental removal thereof during the use of an electric appliance at the other end of the electric cord; to provide a connecting device which can be inserted in the usual manner into a terminal socket and with means thereon for frictionally locking said device in place to prevent accidental removal, said means being telescopically movable axially into said device as the device is inserted into the terminal socket; to provide in a device of the character referred to a body or housing for an insert piece having the projecting prongs, with means through the side of the body for the connection of the cord to said insert piece, and with the plunger and friction-increasing means axially mounted and movable as the device is inserted into the terminal socket.

In order to further explain my invention, I have illustrated one practical embodiment thereof on the accompanying sheet of drawing, which I will now describe.

Figure 1 is a side elevation, partly in longitudinal section, showing my improved electric cord plug-in connecting device; and

Figure 2 is an end view, taken at line 2—2, of Fig. 1, looking into the device detached, with the prongs in section.

Referring now in detail to the drawing, my invention as here shown for illustrative purposes, comprises an insert member 3, of disc like form, and of insulating material, such as fiber or other suitable material, having two insert prongs 4, 4, secured thereto, and each provided with means at 4′, 4′ for attaching wires 5, 5, of a cord 6. Said insert member 3, is secured within a body member 7, which may be of rubber, or other suitable material, with its outer end reduced in diameter, as at 7′, to receive a plunger element or member 8, also made of suitable insulating material, and provided with two expander prongs, as 9, only one of which is seen in Fig. 1, the ends of which are wedge shape. These expander prongs 9, 9, slide through corresponding slots 3′ in the insert member 3, and between the inner faces of the insert prongs 4, 4, and as said plunger member is moved inwardly telescopically, the expander prongs 9, 9, frictionally engage and expand the insert prongs 4, 4, and force them into frictional engagement with the contact members, as 10, in a terminal plug or socket, 11. This terminal member 11, may be set in a wall, or other place to constitute the terminal receiving socket into which the insert member may be inserted as shown.

The device, as shown in full lines in Fig. 1, is put in place with the prongs 4, 4, inserted into the terminal socket 11, after which the plunger element 8 is pushed inwardly to the position indicated in light broken lines, which forces its expander prongs 9, 9, between the insert prongs 4, 4, and forces said insert prongs into frictional engagement with the contact members of the terminal socket 11, as will be readily understood. This frictional engagement prevents accidental disconnection, but at the same time makes it possible in case of a pull sufficiently hard to injure the device to permit the device to be detached. The cord 6, it will be seen is passed through the side of the body 7, and the plunger is thus in axial alinement with the body of the device and can be pushed inwardly as the device is inserted into the terminal socket.

I am aware that changes in details can be made without departing from the spirit of my invention, and I do not, therefore, limit the invention to the showing made, except as I may be limited by the hereto appended claims.

I claim:

1. A plug-in connection for an electric cord consisting of an insert piece having two prongs to be inserted into an electric socket, an expander piece telescopically mounted through said insert piece and having two expanding prongs between said first prongs on said insert piece and adapted to wedge between said first prongs to expand them into frictional engagement with said electric socket, and a plunger member for manually

moving said expander piece inwardly and outwardly.

2. A plug-in connection for connecting an electric cord with an electric terminal socket and consisting of an insert piece having two prongs to be inserted into said terminal socket, an expander piece telescopically movable through said insert piece and having two expander prongs bearing against the inner sides of said first prongs and adapted to expand said first prongs apart as moved toward the ends of said first prongs, means for connecting an electric cord through the side of said device, and a plunger member for manually moving said insert piece inwardly and outwardly.

3. A plug-in connection for electric cords consisting of an insert piece having two prongs to be inserted into a terminal socket, a body for holding said insert piece, means for connecting a cord through the side of said body to said insert piece and said prongs, a plunger element movable axially through said body, and an expander piece on the inner end of said plunger element with parts bearing against the inner faces of said prongs on said insert piece and adapted to expand said prongs into frictional engagement with the terminal socket as said plunger and its inner end parts are moved inwardly.

4. A plug-in connection for electric cords consisting of an insert piece having two prongs to be inserted into a terminal socket, a body for holding said insert piece, means for connecting a cord through said body to said insert piece, a plunger element movable axially through said body, and prong-engaging members on the inner end of said plunger and adapted to engage and press said prongs into frictional engagement with said terminal socket to prevent accidental disconnection.

Signed at Los Angeles, Los Angeles County, California, this 19th day of September, 1931.

LEONARD E. AUSTIN.