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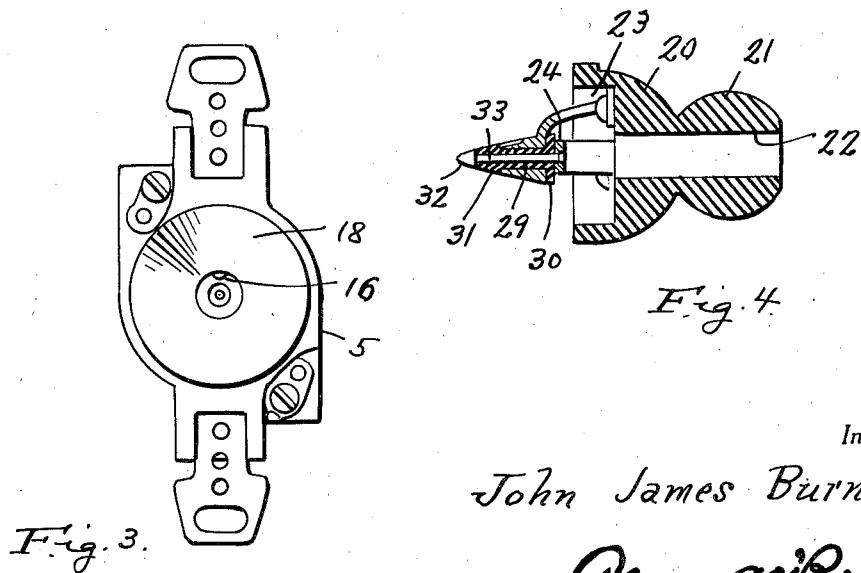
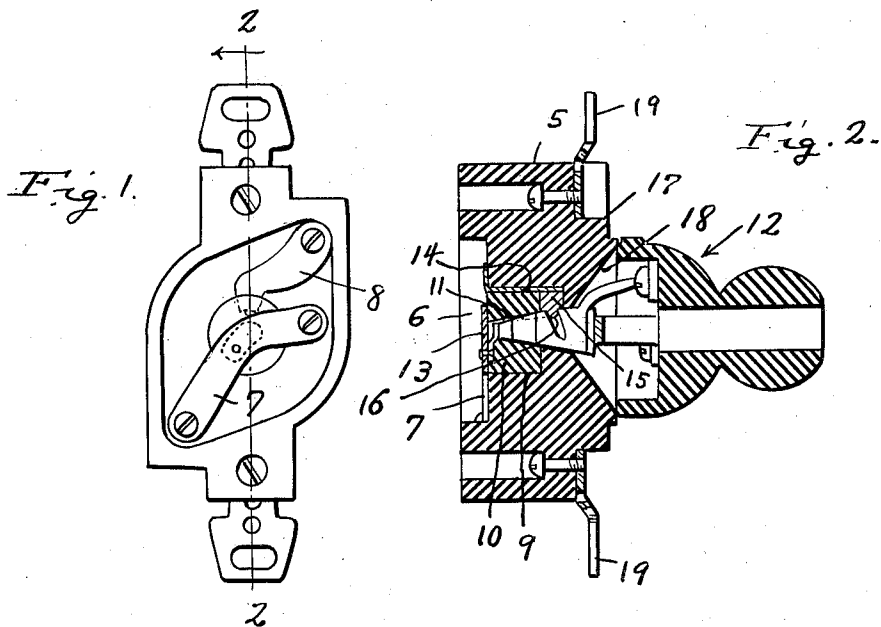
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2,129,044

ELECTRICAL CONNECTER

Filed Nov. 3, 1937

3 Sheets-Sheet 1



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3 Sheets-Sheet 2

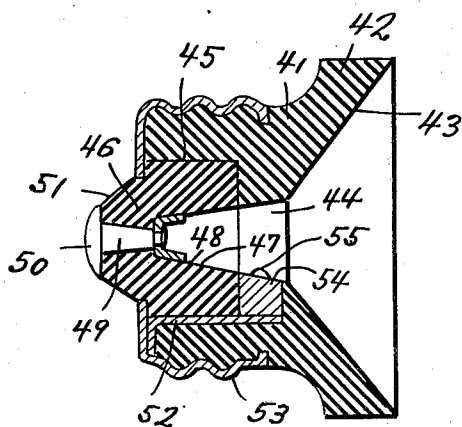
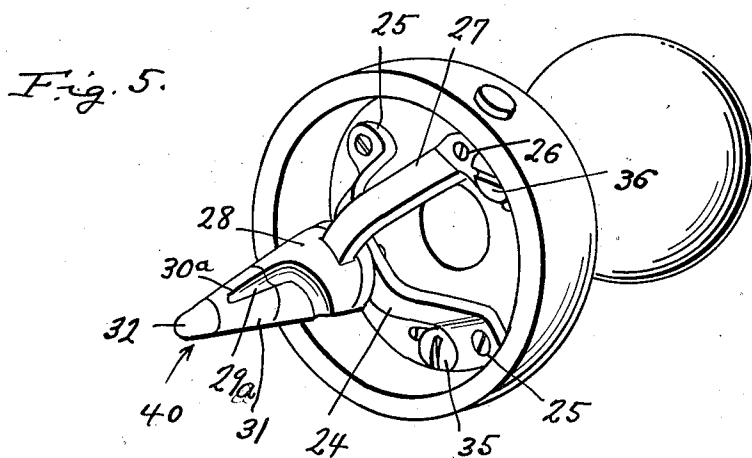


Fig. 6



Fig. 8.

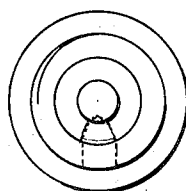


Fig. 7.

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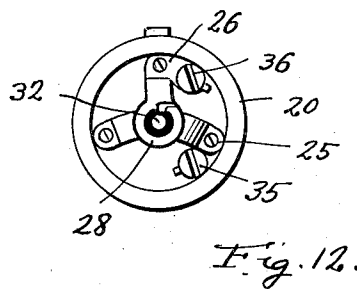
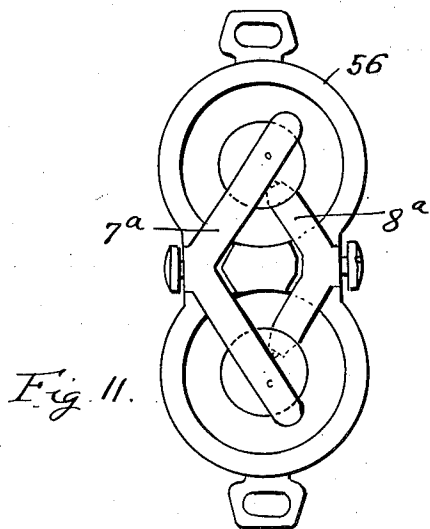
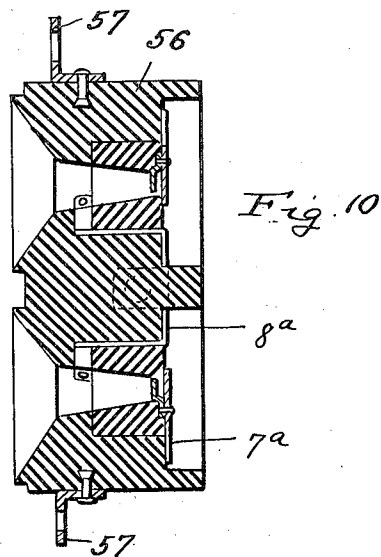
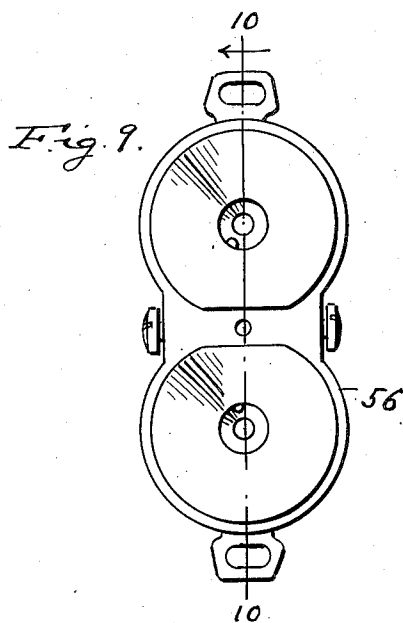
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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,129,044

ELECTRICAL CONNECTER

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Application November 3, 1937, Serial No. 172,612

2 Claims. (Cl. 173—330)

This invention appertains to new and useful improvements in electrical connections and more particularly to a novel plug-socket construction.

The principal object of the present invention is to provide a plug and socket construction into which the plug can be rotated with the result that the plug will become wedged in place in a quick and positive manner.

Another important object of the invention is to provide a plug and socket construction which will be of simple construction and which in use will insure good electrical connection.

These and various other important objects and advantages of the invention will become apparent to the reader of the following specification.

In the drawings:—

Figure 1 represents a rear elevational view of the single light wall receptacle.

Figure 2 is a vertical sectional view taken substantially on the line 2—2 of Figure 1 and also showing the plug.

Figure 3 is a front elevational view of the receptacle shown in Figure 1.

Figure 4 is a longitudinal sectional view of the plug shown in Figure 2.

Figure 5 is an enlarged perspective view of the plug.

Figure 6 is a longitudinal sectional view through a screw type socket.

Figure 7 is an end elevational view of the socket structure shown in Figure 6.

Figure 8 is a perspective view of the contact shown in Figure 6.

Figure 9 is a front elevational view of a duplex type wall socket.

Figure 10 is a section on the line 10—10 of Figure 9.

Figure 11 is a rear elevational view of the structure shown in Figure 10.

Figure 12 is a contact end elevational view of the plug shown in Figure 5.

Referring to the drawings wherein like numerals designate like parts, it can be seen in Figures 1 and 2, that the single type wall socket consists of the block 5 of insulating material having the depression 6 in the back thereof, to the back wall of which is secured the conductor springs 7—8. A pocket 9 is formed in the back wall of this depression 6 and in this is located the plug 10 of insulation having the conical-shaped opening 11 therein for receiving the tip end portion of the contact end of the plug generally referred to by numeral 12.

The contact finger 7 carries a small offset contact element 13 which projects into the reduced

end of the conical shaped opening 11, while an arm 14 extends from the conductor finger 8 and between the plug 10 and the body 5 to connect with the contact head 15 which has a small ball or teat 16 thereon.

The forward side of the body 5 has the protruding part 17 in which is the conical-shaped guideway 18 merging at its reduced end with the opening of the body 5 leading to the conical-shaped opening 11 in the plug 10.

The body 5 is provided with upper and lower brackets 19 whereby the receptacle can be suitably supported in a wall structure.

The plug consists of the shell 20 having the hand knob 21 extending therefrom. A conductor cord bore 22 extends through the shell 20 and knob 21. The shell 20 is provided with the pocket 23 to the back wall of which is secured the U-shaped bracket 24, this being secured in place by screws 25. Extending from a binding post base 26 on the back wall of this pocket 23 is the arm 27 which connects to and assists in supporting the tapered ring structure 28 through which the sleeve 29 of insulation extends and merges with the washer 30 of insulation which insulates the ring 28 from the U-shaped bridge member 24.

A tapering sleeve 31 is interposed between the tapered ring 28 and the tip 32 and from the tip 32 extends the conductor shank 33 which extends through the sleeve 31 and sleeve 29 as well as the washer 30 to connect to the bridge member 24. Wires from a core disposed through the bore 22 connect to the binding screws 35—36.

A groove 29a starts as at 30a on the sleeve 31 and extends longitudinally thereof and merges with the spirally disposed groove 29b portion on the ring 28.

Obviously, when the projecting portion 40 is inserted into the receptacle, the groove 29a will receive the teat 16 and as the plug is rotated the projecting portion 40 will be fitted inwardly so that the tip 32 will engage the contact member 13. The engagement of the teat 16 with the sleeve 28 will establish the other connection.

Figure 6 discloses a screw type receptacle wherein the body 41 has an enlarged head portion 42 provided with the conical-shaped guideway 43 merging with the opening 44. The other end of the body 41 has a pocket 45 therein for receiving the plug 46 which has a conical-shaped recess 47 therein in which fits the cup-shaped contact 48 held in place by the shank 49 of the external contact button 50, which is located on the protruding portion 51 of the plug 46.

A connecting strip 52 extends from the screw-formed jacket 53 on the outside of the body 41 to the insert 54 of conductive material on which is the teat 55 for engagement in the groove-way
 5 29a of a plug 12.

A double type or duplex type wall socket is shown in Figures 9, 10 and 11 and consists of the elongated body 56 having the brackets 57 at its upper and lower ends.

10 This double type of receptacle is constructed in substantially the same manner as the single type of receptacle shown in Figures 1 and 2 with the exception that the conductor fingers 7-8 of the single type are changed to Y-shaped contact
 15 structures 7a-8a and carry contact 13 and teats 16 respectively in the manner of the conductor fingers 7-8. Otherwise the duplex type of plug is constructed in substantially the same manner in details as the single type of receptacle.

20 While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as
 25 claimed hereinafter.

Having described the invention, what is claimed as new is:—

1. In combination, an electrical socket having

a contact member and a pocket therein in which the contact member is located, a plug having a contact on its end for engagement with the contact of the socket, a teat in the socket, said teat being of current conductive material and forming one electrical side of the socket, a ring contact on the plug spaced from the contact on the end thereof, said plug including a body of insulation on which the end contact and ring are mounted, said plug and ring being deformed to
 5 10 define a spiral groove-way for receiving the teat of the socket.

2. In combination, an electrical socket having a contact member and a pocket therein in which the contact member is located, a plug having a
 15 contact on its end for engagement with the contact of the socket, a teat in the socket, said teat being of current conductive material and forming one electrical side of the socket, a ring contact on the plug spaced from the contact on the
 20 end thereof, said plug including a body of insulation on which the end contact and ring are mounted, said plug and ring being deformed to define a spiral groove-way for receiving the teat of the socket, said plug being of conical shape for
 25 ready disposition into the pocket of the socket.

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