April 17, 1956 J. ODEGAARD ET AL 2,742,623

COMBINED MALE PLUG AND FEMALE OUTLET

Filed March 21, 1955

Fig. 1

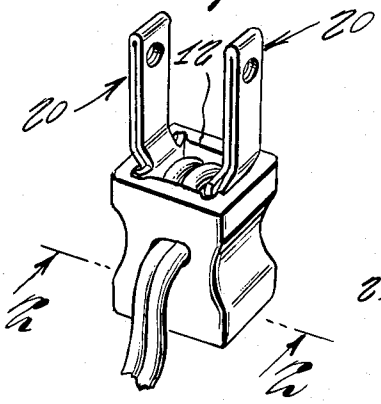


Fig. 2

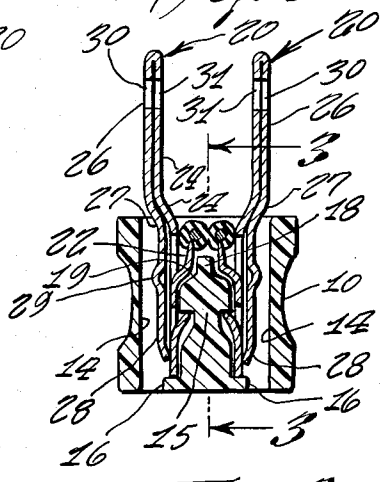


Fig. 5

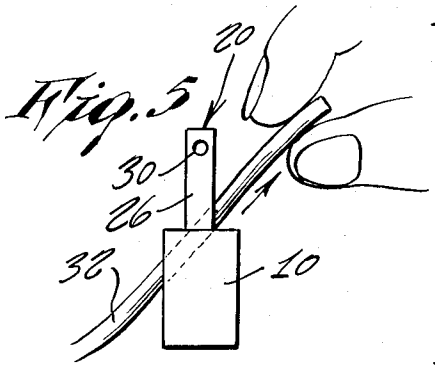


Fig. 3

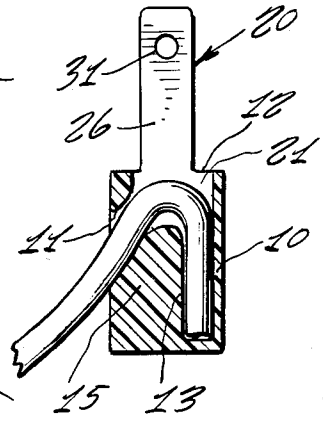
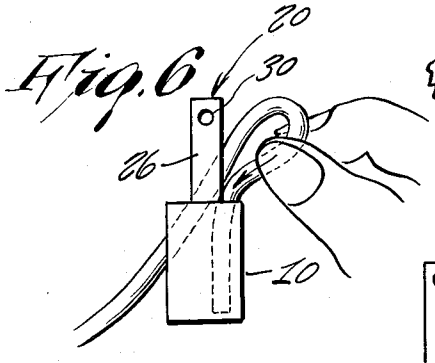


Fig. 6



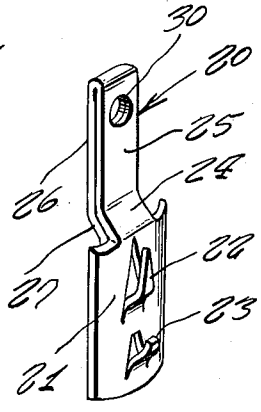
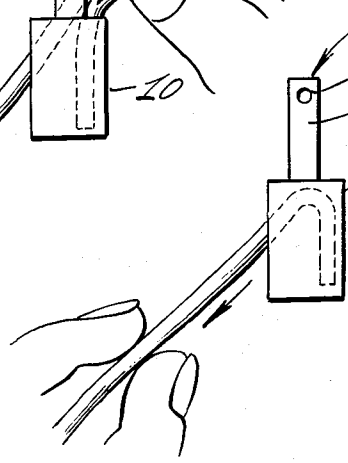


Fig. 4

Fig. 7



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COMBINED MALE PLUG AND FEMALE OUTLET

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2 Claims. (Cl. 339—97)

This invention relates to combined electrical plugs and outlets.

It is an object of the present invention to provide a combined electrical plug and outlet.

It is another object of the present invention to provide a combined electrical male plug and female outlet wherein an electrical cord may be inserted directly therein without denuding the cord and without employment of any special tools, the electrical cord insulation being pierced by contact points carried by the separable conductors or prongs forming a part of the plug and outlet and insertible therewithin.

It is another object of the present invention to provide a combined male plug and female outlet of the above type into which a conventional male plug may be inserted, the contacts of the invention being provided with beads adapted to be engaged by the opening in the conventional male plug contacts.

It is still another object of the present invention to provide a combined male plug and female outlet of the above type wherein means are provided intermediate the contacts for preventing shorting and wobbling movement of the same relative to the plug proper.

For other objects and a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing, in which:

Figure 1 is a perspective view of a preferred embodiment of the present invention;

Fig. 2 is a vertical sectional view thereof taken along the line 2—2 of Fig. 1;

Fig. 3 is a vertical sectional view taken along the line 3—3 of Fig. 2;

Fig. 4 is a perspective view shown alone of one of the separable contacts or conductors;

Figs. 5, 6 and 7 are side elevational views showing the successive steps in connecting the insulated wire to the invention.

Referring now more in detail to the drawing, and more particularly to Figs. 1 through 7, 10 represents a body member of plastic or other suitable non-conductive material, substantially as illustrated. The body 10 is provided at one side with an elongated opening 11 which extends upwardly and communicates with a top opening 12, the body 10 also being provided with a downwardly extending, substantially vertical opening 13 which communicates with the opening 11, Fig. 3.

The body 10 is also provided with a pair of laterally spaced, elongated openings 14 extending from end to end. The openings 14 define a central core 15 integrally formed at its lower end with the lateral enlargements 16. The core 15 is provided on opposite sides with the recesses 17 and is provided with the reduced upper end 18, connecting with the core along the inclined shoulders 19 (Fig. 2).

A pair of separable conductors 20 are provided (Fig. 4) and include the curved body portions 21 having the

outwardly struck contact points 22 and the outwardly struck prongs 23, the prongs 23 being received within the recesses 17 with the lower edges of the body portions 21 resting on the lateral enlargements 16, while the prongs or contact points 22 extend inwardly and upwardly along the inclined shoulders 19 (Fig. 2). Each of the body portions 21 along its upper edge is integrally formed with the reduced, outwardly bent portions 24 which continue upwardly in the integrally formed extensions 25 which are doubled back along the portions 26 which are folded inwardly adjacent the outwardly bent portion 24 along the inwardly bent portion 27 and extend downwardly alongside the body portions 21 and the depending portions 28, the depending portions 28 being formed with beads 29. The overlapping portions 25, 26 are provided with laterally aligned openings 30, 31.

In operation, with the conductors 20 in position as shown in Fig. 1, the insulated cord 32 (Fig. 5) is passed upwardly through opening 11 and top opening 12, whereupon the upper end of the cord 32 is doubled up (Fig. 6) and inserted downwardly into the opening 13. The body portion of the cord 32 is then pulled downwardly (Fig. 7), forcing the conductor at the bend against the contacts 22 and establishing contact with the interior conductors, as shown in Fig. 2. If desired, a male plug may be inserted through the other end of the body 10 with the male prongs thereof being received within openings 14. In such a case the beads 29 will be received within corresponding openings in the prongs of the male plug so inserted.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claims.

Having thus set forth and disclosed the nature of our invention, what is claimed is:

1. An article of the class described comprising a plug body of insulated material, having a bore extending inwardly through one side and upwardly through the open top thereof, a pair of longitudinal bores extending from end to end of said plug body on opposite sides of said inwardly and upwardly extending bore, said body having a downwardly extending bore intermediate said longitudinal bores and communicating with said inwardly and upwardly extending bore, said downwardly extending bore terminating short of the bottom of said body whereby to permit an insulated cord to be passed upwardly through said upwardly extending bore with the free end of said cord doubled up and passed downwardly into said downwardly extending bore, separable conductors insertible within said longitudinal bores, and means carried by said conductors for piercing said electrical cord within said upwardly inclined bore upon pulling said cord downwardly away from said body, said longitudinal bores defining a central core, each of said conductors comprising a flat body portion adapted to be inserted downwardly within said longitudinal bores, said core having lateral enlargements at the lower end thereof adapted to support the lower ends of each of said flat body portions, said core having oppositely disposed recesses, each of said flat body portions having inwardly struck prongs adapted to receive within said recesses, said core at the upper end thereof having reduced inclined shoulders terminating in a reduced upper portion.

2. An article according to claim 1, each of said conductors further including an outwardly extending portion connecting with an upwardly extending portion integrally formed at its upper end with a downwardly overlapping extending portion continuing inwardly along said outwardly extending portion and extending downwardly alongside said body portion, said overlapping por-

tions having laterally aligned openings and adapted to be inserted into a female outlet, said downwardly extending portion having outwardly stamped beads thereon adapted to engage corresponding openings in the male prongs of a plug inserted through the lower end of said body.

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