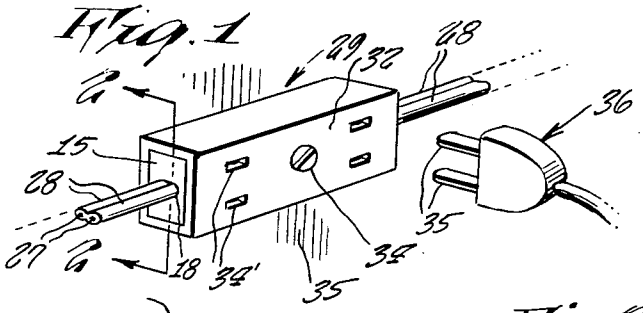
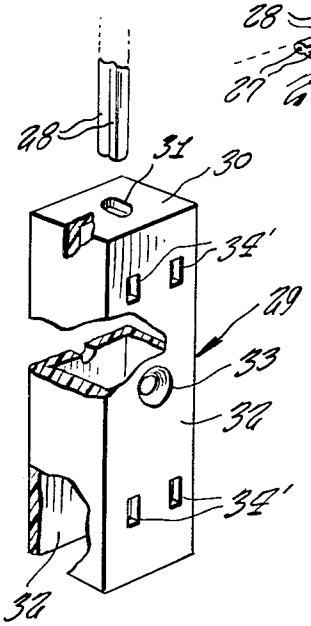
Oct. 11, 1955 J. ODEGAARD 2,720,635

ELECTRICAL OUTLET HAVING INSULATION PIERCING MEANS FOR CONTACTING THE CONDUCTOR OF AN ELECTRIC CORD

Filed Dec. 13, 1954

Fig. 1





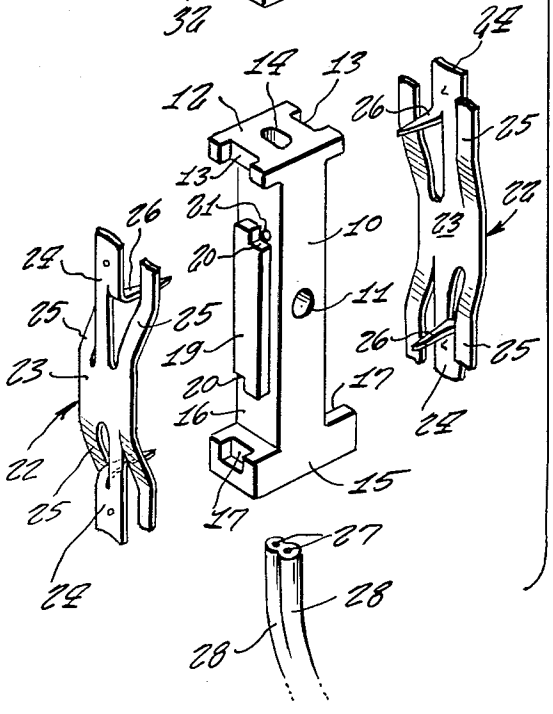
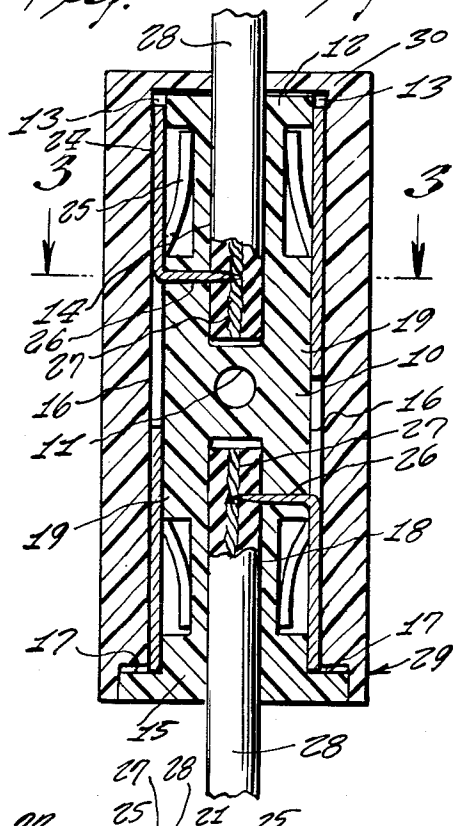


Fig. 4

Fig. 2



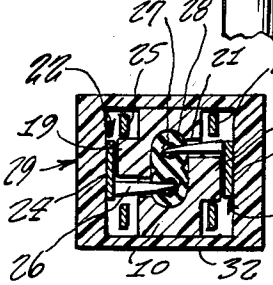


Fig. 3

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ELECTRICAL OUTLET HAVING INSULATION PIERCING MEANS FOR CONTACTING THE CONDUCTOR OF AN ELECTRIC CORD

John Odegaard, Brooklyn, N. Y.

Application December 13, 1954, Serial No. 474,894

5 Claims. (Cl. 339—99)

This invention relates to electrical outlets.

It is an object of the present invention to provide a sealed plastic electrical outlet.

It is another object of the present invention to provide an electrical outlet including a plastic housing into which is press fitted by a wedging action a plastic core which receives therewithin longitudinally the electrical cord and wherein conductor members are positioned on the core and include piercing contact points which pass inwardly through the cord to penetrate the conductors in the electrical cord, the piercing contact points being further urged into engagement with the electrical cord by the wedging action of the housing.

It is still another object of the present invention to provide an electrical outlet of the above type which includes a plurality of outlets so as to make contact for two sets of wires for a continuation to another outlet.

Other objects of the invention are to provide an electrical outlet bearing the above objects in mind which is of simple construction, has a minimum number of parts, is easy to use, and efficient in operation.

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 longitudinal sectional view thereof taken along the line 2—2 of Fig. 1;

Fig. 3 is a transverse sectional view thereof taken along the line 3—3 of Fig. 2; and

Fig. 4 is an exploded perspective view shown partly broken away of the parts comprising the invention.

Referring now more in detail to the drawing, **10** represents an elongated core of substantially square cross section formed of plastic having a transverse central mounting opening **11** therethrough, substantially as illustrated.

The core member **10** at one end is integrally formed with the laterally extending flange **12** having the oppositely disposed rectangular cutouts **13**, the core **10** having an inwardly extending bore **14** extending inwardly from one end through flange **12** and elongated laterally, as shown in Fig. 4. The bore **14** terminates short of the transverse bore **11** (Fig. 2). The core member **10** at the other end thereof is integrally formed with a second flange **15** of greater width and thickness than flange **12** and furthermore, the opposite sides **16** of the core member converge towards the flange **12** for a purpose which will hereinafter become clear. The sides and inner face of the flange **15** are provided with the rectangular recesses **17** which are aligned longitudinally with the slots **13** and flange **12**. The core **10** is provided with a second inwardly extending bore **18** which extends inwardly through the flange **15** and terminates short of the transverse mounting opening **11**.

The opposite sides **16** of the core **10** are integrally formed with the rectangular ridges **19** having the diagonally opposed corner cutouts **20** and which communicate

with lateral bores **21** which extend into the bores **14**, **18**, (Fig. 3).

A pair of resilient strips of conductive material indicated generally at **22** are provided including the central portions **23**. Each of the strips **22** at the opposite ends thereof is provided with a pair of inwardly extending slots which define the central terminal portions **24** and the outer portions **25**, the outer portions **25** being bent inwardly and terminating in end portions parallel to the central portions **24** and spaced inwardly therefrom. It will be noted that the ridges **19** are of sufficient width to support the central terminal portions **24** while not underlying the outer portions **25** to permit the latter to be bent inwardly. The central terminal portions **24** on opposite sides are formed with the inwardly struck contact points **26** which are adapted to pass inwardly through cutouts **20** and bores **21** and into the bores **18** and **14** whereby to embed themselves in the conductors **27** of the electrical cord elements **28**.

A plastic housing indicated generally at **29** is provided of substantially rectangular cross section open at one end and integrally formed at the other with an end closure **30** having an elongated opening **31** adapted to be aligned with the bore **14** of the core member when the latter is inserted within the housing (Fig. 1). The side walls **32** of the housing are provided with a countersunk opening **33** adapted to be aligned with the transverse opening **11** in the core to facilitate the insertion therethrough of a mounting screw **34** whereby the device may be suitably mounted upon a wall **35** or the like. The inner faces of the sides **32** converge toward the slot **31** and effect a wedging action upon the contact points **26** as the core and contact elements are inserted within the housing **29** through the open end thereof whereby to further embed the contact points in the conductors **27** of the electrical cord elements **28**. The side wall **32** having the countersunk opening **33** is also provided at each end with laterally spaced slots **34'** which are aligned with the spaces intermediate the outer portions **25** and the central portions **24** (Fig. 2) whereby to permit the insertion through the housing therebetween of the male elements **35** of a male plug indicated generally at **36**.

The sharp contact points **26** will pierce the insulation **28** and make sure contact with the conductors therewithin **27**, this contact or piercing action being further augmented by the wedging of the sides of the housing **29** as the core is inserted therewithin.

In operation, the insulated cords **28** are inserted into the bores **14**, **18** and the resilient conductors **22** are then placed in position on the ridges **19** to permit the contact points **26** to pierce the insulation. The assembly is then pushed through the open end of the housing **29**, the sloping inner sides of the housing by a wedging action further piercing the insulation and securing the contact points **26** in operative position. It will be noted that the device has two piercing contacts on each side and can make contact with two sets of wires **28** for a continuation to another outlet. After the core is inserted within the housing the mounting screw **34** is then brought into position to secure the assembly.

While various changes may be made in the detail construction, 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 my invention, what is claimed is:

1. An electrical outlet comprising an elongated core member of insulation material, a pair of oppositely disposed resilient conductors adapted to be positioned on opposite sides of said core member, positioning means for said resilient members, said core having inwardly extending bores from the opposite ends thereof, said core member having transverse bores communicating with said inwardly extending bores at opposite ends thereof, said

transverse bores being provided on opposite sides, contact points struck inwardly from said resilient conductors passing through said transverse bores and into said inwardly extending bores, and a housing of insulation material closed at one end and having an opening therethrough adapted to receive the electrical cord, said core at the other end thereof being enlarged whereby to form a closure for the other end of said housing, said housing on one side thereof at opposite ends having laterally aligned slots communicating with said resilient contact members and adapted to receive therethrough the dual elements of a male plug.

2. An electrical outlet according to claim 1, each of said resilient contact members comprising a substantially rectangular strip having a pair of laterally spaced slits extending inwardly from the opposite ends thereof to define central terminal portions and outer terminal portions on each side thereof, said outer terminal portions being bent inwardly and terminating in end portions substantially parallel to said central portions and inwardly spaced therefrom, said contact points being inwardly struck from said central portions intermediate the ends thereof, said positioning means comprising elongated ridges on opposite sides of said core adapted to support said central portions while permitting the inward bending of said outer portions, each

of said ridges at diagonally opposite corners having cutout portions communicating with said transverse bores.

3. An electrical outlet according to claim 2, said second enlargements being of less width than said first enlargement, the sides of said bore converging toward said second enlargements whereby to form a wedging action with said housing the inner faces of said housing adjacent said converging sides converging towards the closed end thereof.

4. An electrical outlet according to claim 3, said inwardly extending bores terminating short of the midpoint of said bore, said core having a transverse bore therethrough, said housing having a countersunk opening at one side aligned with said transverse bore and a second opening aligned therewith whereby to receive a mounting screw therethrough when said core is positioned within said housing.

5. An electrical outlet according to claim 4, said first enlargement having cutouts on the sides and inner faces thereof receiving the ends of said central portions.

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