July 19, 1949. F. C. GRECO 2,476,365

CONTACT PLUG FOR ELECTRIC CORDS

Filed June 5, 1947

Fig. 1.

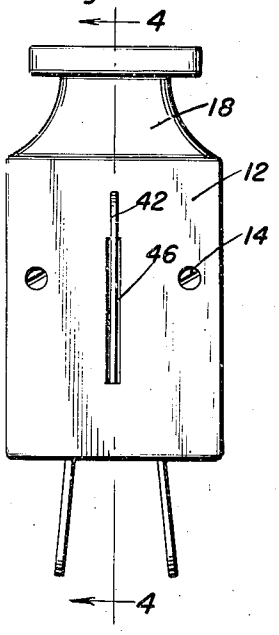


Fig. 2.

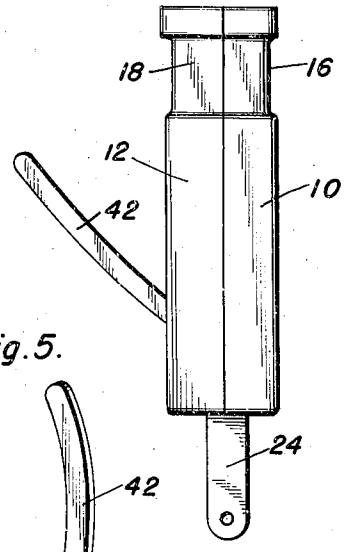


Fig. 5.

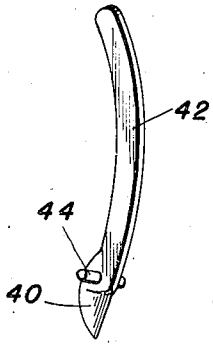


Fig. 3.

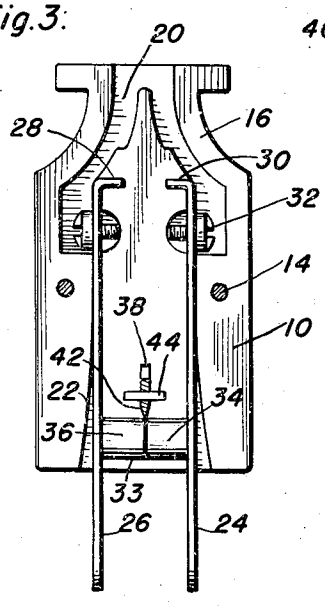
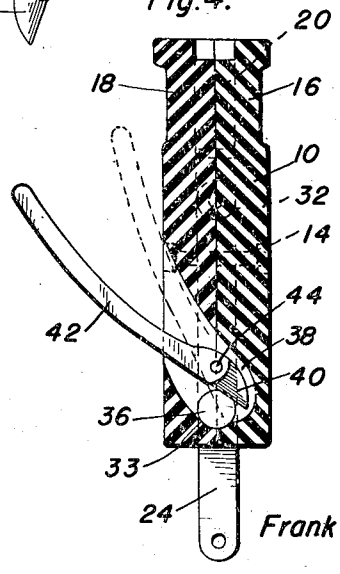


Fig. 4.



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CONTACT PLUG FOR ELECTRIC CORDS

Frank C. Greco, Lorain, Ohio

Application June 5, 1947, Serial No. 752,580

2 Claims. (Cl. 173—361)

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This invention relates to new and useful improvements in contact plugs for electric cords and the primary object of the present invention is to provide a plug having a pair of resilient contact fingers and including means whereby the fingers may be selectively spread to engage the slots of various sizes of sockets.

Another important object of the present invention is to provide a plug including a single lever means for simultaneously spreading the contact fingers of the plug.

A further object of the present invention is to provide a plug including novel and improved means for retaining the contact fingers in a locked position to a socket.

A still further aim of the present invention is to provide a plug that is simple and practical in construction, efficient and reliable in use, relatively inexpensive to manufacture, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a front elevational view of the present plug showing the contact fingers in a spread position;

Figure 2 is a side elevational view of Figure 1 showing the contact fingers in a normal position;

Figure 3 is a front elevational view of the body of the plug the cover removed therefrom and with parts of the actuator lever broken away and shown in section;

Figure 4 is a longitudinal vertical sectional view taken substantially on the plane of section line 4—4 of Figure 1, and showing in dotted lines the position of the actuator lever for spreading the contact fingers; and,

Figure 5 is a perspective view of the actuator lever.

Referring now to the drawings in detail, wherein for the purpose of illustration, there is disclosed a preferred embodiment of the present invention, the numeral 10 represents a substantially rectangular insulating body or casing provided with an insulating cover plate 12 of preferably the same size and thickness as the body. This cover plate is removably secured to the body preferably by bolts and nuts 14, with the heads of the bolts and the nuts respectively recessed in the cover and the body.

Projecting from the rear ends of the body 10

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and the cover plate 12 are similar necks 16 and 18 of reduced size. Opposed substantially V-shaped channels 20 are provided in the inner faces of the respective necks and receive the free end of an electric cord (not shown).

Frictionally retained in a pair of spaced longitudinal recesses 22 in the inner faces of the cover and the body is a pair of contact fingers 24 and 26, having one of their terminal portions projecting outwardly from the end of the body and cover to engage a socket (not shown).

The inner ends of these fingers are turned inwardly as at 28 to engage recesses 30 provided in both the cover and the body thereby preventing longitudinal movement of the fingers relative to the body and cover.

Screws or the like 32 carried by the fingers engage the respective ends of the cord for holding the same in contact with the fingers.

Extending transversely between the recesses 22 in both the cover and body, is a channel 33 in which is slidably mounted a pair of cylindrical members 34 and 36, the outer faces of which normally oppose the fingers 24 and 26.

A longitudinal recess 38 is provided in the body and communicates at right angles with channel 33 in the forward end of the body and between the opposing faces of the members 24 and 26.

The wedge shaped or bevelled end 40 of an arcuate lever 42 is slidably mounted in recess 38 to extend between the members 24 and 26.

A pivot pin or fulcrum 44 carried by the lever adjacent the end 40, is recessed in the body between the fingers 24 and 26.

The free end of lever 42 extends outwardly through a longitudinal slot 46 provided in the cover.

In practical use of the device, when the free end of the lever 42 is extended inwardly toward the cover 12, as shown by dotted lines in Figure 4, the wedge shaped end 40 of the lever extends between the members 34 and 36 to spread the said members and also spread the outer terminal portions of the contact fingers 24 and 26. The recesses 22 being slightly enlarged at their outer ends to permit the spreading of the fingers.

By thus spreading the fingers the device may be applied to a socket having slots spaced apart greater than the normal spacing of the fingers. In this case, by releasing the lever, the plug thus described will be frictionally retained to the socket.

Should the fingers in a normal position engage the slot in the socket, the lever may then be low-

ered toward the cover which will spread the fingers with the wedge shaped end 40 of the lever binding between the members 34 and 36 to cause the fingers to be retained in a slightly spread position for holding the plug in position to the socket.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the construction, operation and advantages of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

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

1. In a contact plug for electric cords, an insulated casing of two elements having abutting inner faces, a pair of resilient contact fingers having their rear ends seated in the casing, spaced parallel longitudinal grooves formed within the casing receiving the contact fingers, said grooves terminating in flared end portions for loosely receiving the fingers, a transverse channel in the casing communicating with the flared end portions of the grooves, a pair of finger engaging members slidably mounted in the channel, a recess in the casing at right angles to the channel and communicating therewith, a lever disposed exteriorly of the casing and having an inner end slidably positioned in the recess, a wedge integrally formed with the inner end of the lever for spreading the finger engaging members, and a fulcrum pin carried by the inner end of the lever adjacent the wedge and recessed in the inner faces of said elements adjacent the finger engaging elements.

2. In a contact plug including a pair of contact fingers; means for spreading the contact fingers comprising a pair of coaxial cylindrical members disposed transversely of and between the fingers, a lever mounted on the plug for pivotal movement, and a wedge at one end of said lever engaged between said cylindrical members for spreading the cylindrical members upon pivotal movement of the lever in one direction.

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