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A. R. GOLDRICK
ELECTRIC PLUG CONNECTER

Filed Dec. 1, 1921

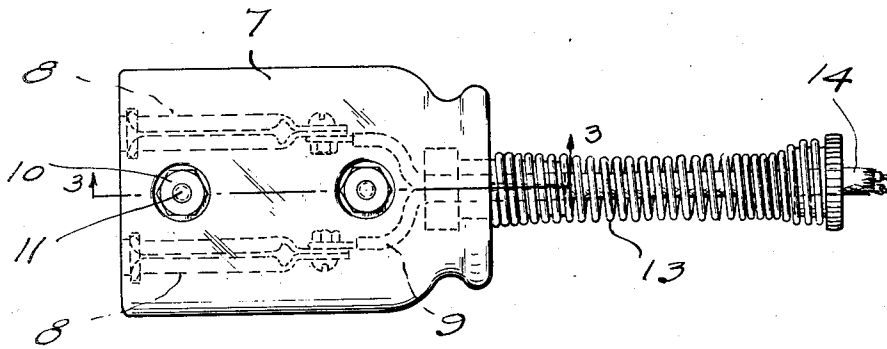


FIG. 1

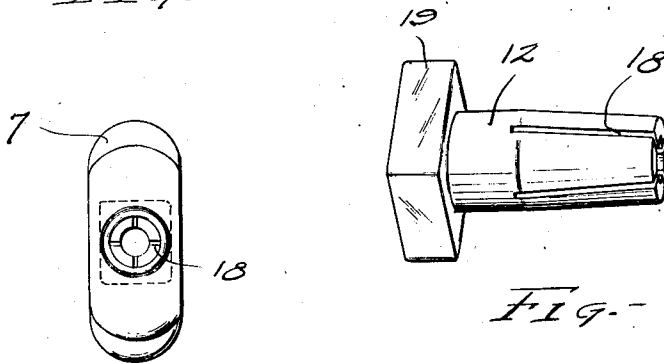


FIG. 2

FIG. 4

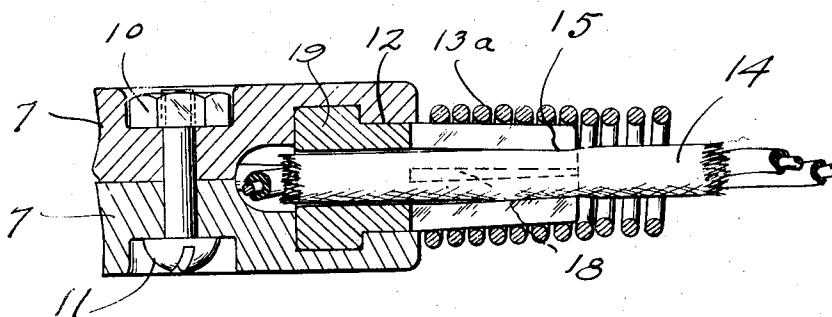


FIG. 3

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ELECTRIC PLUG CONNECTER.

Application filed December 1, 1921. Serial No. 519,097.

This invention is directed to improvements in electrical connectors and is particularly concerned with socket plugs.

Considerable annoyance has been experienced when using socket plug connectors which are connected to a flexible electric cord. Such socket plugs are in general use in connection with electrical flat irons and cooking utensils. The continuous use of the plug eventually results in the breaking of the cord conductors at the point where the conductors are connected to the individual socket contacts.

The object of the present invention therefore, is the provision of a simple plug connector which may conform to the accepted manufacturing standards and in which novel means are incorporated for the prevention of the occurrence of breaks at the point where the conductors are connected to the socket contacts.

Other objects will become apparent from the following description of a preferred embodiment of my invention which is illustrated in the accompanying drawings. The essential characteristics will be summarized in the claims.

In the drawings, Fig. 1 is a plan view of my device; Fig. 2 is an end view looking at the cord end of the plug body with the cord removed; Fig. 3 is a cross section substantially along the line 3—3 of Fig. 1; while Fig. 4, is a perspective view of a means for positively gripping the outer surfaces of the cord.

In Fig. 1, I have illustrated the usual socket plug and cord therefor which may be comprised of an articulated insulating body member 7 housing the usual socket contacts 8 which are positioned in suitable cavities formed in the body. The inner ends of the contact members 8 are usually connected to the conductors 9 of the cord 14. The connections are made before the sockets 8 are placed in position between the articulated portions of the body member 7. These portions may be held in proper superposed position to retain the socket contacts by any convenient means such as a bolt 11 and nut 10. The plug connector as described, has construction characteristics which are common to the plug connectors now in use. In such constructions, the section of the cord 14 adjacent the articulated body member 7 is prevented from developing sharp bends by a

spring having the general appearance of the spring 13, but any twists which develop in the cord are permitted to travel along the cord until the weakened part of the cord at 9 is affected, with the result that the cord conductors break at this point due to the fact that the stripped ends of the conductors are considerably weaker than the other portions of the cord.

To prevent the twists from accumulating at the point 9, I have provided a sleeve member 12 at the cord end of the plug body which may have an enlarged end 19 of square or rectangular cross section as illustrated in Fig. 4. The articulated member 7 may have cavities complementary to the shape of the end 19 by which the plug body may engage the sleeve. Thus the sleeve may be prevented from rotating when the end 19 thereof is positioned between the members of the body. The cord may pass through a suitable opening formed in the center of the sleeve 12 to the interior of the plug body.

The outer end of the sleeve 12 may be constructed somewhat in the manner of a chuck collet. To obtain such a construction, the sleeve 12 may be composed of fibre or other insulating material having a fair degree of tensile strength and having the outer end thereof tapered. This tapered portion may have a series of slots 18, whereby one end of the spring 13 may be screwed upon the said tapered surfaces and cause an inward depression of the split portions of the sleeve.

Hence, as the coils 13 are screwed onto the outer surface of the sleeve, the ends of the sleeve will firmly grip the cord as illustrated at 15 in Fig. 3.

The twists cannot therefore advance along the cord toward the plug beyond the point 15, but may accumulate in the free portions of the cord. As the free portions of the cord are considerably stronger than the inner or plug end thereof, the life of the cord is greatly increased.

Having thus described my invention, I claim:—

1. A device for positioning and gripping an electric cord for a flatiron connector having two complementary body members, said device comprising a sleeve having a non-cylindrical head portion adapted to be engaged by the connector body members and

held against rotatable movement thereby, and having a split end portion extending beyond the body of the connector adapted to grip the electric cord, and an electric cord protecting spring engaging the split end of the sleeve whereby the sleeve may be contracted into firm engagement with the cord.

2. A device for holding an electric cord for a flat iron plug connector of the type wherein the connector comprises a pair of complementary members adapted to be clamped together, said device comprising a sleeve having a non-cylindrical head engaging in suitable cavities formed in the complementary members, whereby the sleeve becomes positively non-rotatable when the members are clamped together, said sleeve having a portion extending through an end opening formed in the complementary members, the extension being slotted and the external surface thereof being tapered and a helical cord guarding spring having the coils of one end thereof engaging the tapered surface of the slotted end of the sleeve extension whereby when the coils are advanced or screwed upon the tapered portion of the sleeve, the slotted portions may be compressed into firm engagement with an electric cord.

3. In a flat iron plug connector wherein there is a pair of oppositely recessed complementary contact holding members, an electric cord sustaining and gripping device comprising a hollow sleeve through which the cord is adapted to extend to within the holding members, an enlargement on said sleeve having a substantially planular external perimetral surface formed thereon, the recess of the adjacent contact holding member presenting a planular surface closely engaging said surface of the sleeve to prevent turning of the sleeve, the end surfaces of the enlargement engaging adjacent

surfaces defining the recesses of the contact holding members to prevent longitudinal shifting of the sleeve in either direction, and means externally of the holding members arranged to engage the sleeve with a wedging action to thereby tightly embrace and grip the cord.

4. In a flat iron plug connector having two oppositely recessed complementary body members, a device for positioning and gripping an electric cord, comprising a sleeve having an integral non-cylindrical head seated in the recess of the body members and positively engaged by the internal surfaces thereof to prevent turning movement of the sleeve, the sleeve having an opening extending therethrough affording passage for an electric cord, said sleeve having a body portion provided with a split end having a male taper extending beyond the body members of the connector and adapted to grip the electric cord, and means for contracting the said split end of the sleeve to effect the gripping of the cord.

5. In a flat iron plug connector having two complementary body members, a sleeve for holding an electric cord, said sleeve having an integral flange provided with flat perimetral and abutment faces to form a non-rotating and substantially non-shiftable head adapted to engage in complementary cavities formed in said body members of the connector, said sleeve having a passage formed therethrough whereby an electric cord may extend into the plug connector, and having a split end extending beyond the body of the connector and adapted to be forced into firm engagement with an electric cord therein.

In testimony whereof, I hereunto affix my signature.

ALBERT R. GOLDRICK.