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W. P. GISSKE

1,984,016

CONNECTER

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Fig. 1

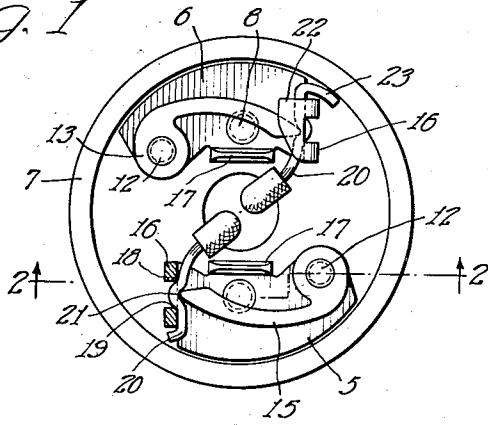


Fig. 2

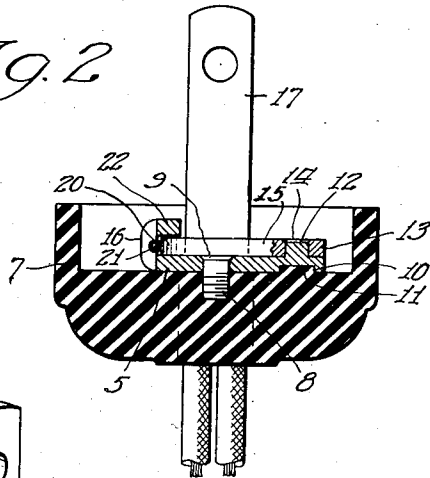
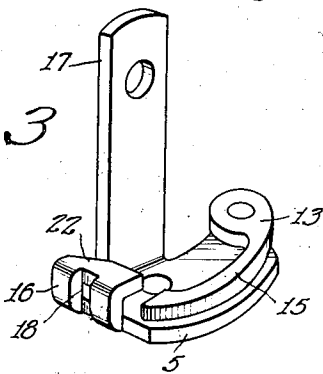


Fig. 3



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UNITED STATES PATENT OFFICE

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CONNECTER

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5 Claims. (Cl. 173—361)

My invention relates to electrical connectors and more particularly to a means for fastening electrical conductors to terminal connectors such for example as the plug-in type of terminals so commonly used on electrical appliance cords for plugging into wall sockets and the like.

My invention contemplates the provision of a device of this character in which the conductors are merely laid in place and then, by the use of a screw driver or other similar tool, a yielding locking member forces the wire to bend between two shoulders and locks itself within the bend made in the wire.

I will describe the preferred form of my invention by reference to the accompanying drawing wherein—

Fig. 1 is a view of the prong face of a plug embodying my invention;

Fig. 2 is a section substantially on the line 2—2 of Fig. 1; and

Fig. 3 is a perspective view of the prong carrying unit which also carries the locking device.

In the ordinary plug as now constructed, the prong carrying unit has a screw threaded opening to receive a terminal screw which secures the conductor to the prong. My invention contemplates a structure which avoids the use of screws and the attendant difficulty of twisting a wire around them and which also gives a maximum spacing of the conductors where they are secured to the prong carrying members.

Referring now to the drawing, the two prong carrying members 5 and 6 are each fixed in the insulating body 7, for example, by being secured to the pin 8 which is molded in the insulating body 7 and which is upset as indicated at 9 to hold the member 5 in place. The member 5 also has a recess at 10 receiving the lug 11 molded in the insulated body 7. Directly opposite the recess 10, the member 5 is provided with a pin 12 which holds the locking member 13 on the member 5. This locking prong or member 13 is pivoted by means of the pin 12 which may be upset at the outer end 14 so that the member 13 may swing about the pin 12 as an axis. This locking prong 13 is preferably made of resilient material so that it can be bowed at the reduced portion 15 intermediate its ends in the locking operation.

Directly opposite the pivot point of the prong 13, the member 5 is turned up as indicated at 16, and the line along which it is turned up is preferably substantially on a tangent of a circle about the pin 12 as center, the line starting on a radius which extends from the pin 12 parallel to the

connecting prong 17. The upturned portion 16 is so formed as to provide a pair of shoulders at 18 and 19 (see Fig. 1), and between the shoulders 18 and 19 space is provided so that the conductor 20 may bend outwardly away from the locking prong 13 in the manner shown at 21. The free end of the locking member 13 approaches so close to the upturned portion 16 of the member 5 that it must flatten the conductor strands 20 in swinging past shoulder 19 into the space between the two shoulders 18 and 19. Being resilient, this locking prong can be sprung sufficiently to force it into place, and, in case it is desired to remove the conductor, the prong can be sprung enough to snap it out from between the shoulders again. The portion 16 of the member 5 which is turned up has the extension 22 which extends over the shoulders 19 and 18 so that the conductor 20 when placed between the flat bottom of the member 5 and the portion 22 cannot become displaced while the member 13 is being forced into locking position. The contact making prongs 17 are of the usual type and, being integral with the base member 5, they are rigidly attached to the insulating body 7. The free ends of the conductors 20 naturally are directed away from the central portion of the plug, and, if the free end is too long, it may bend around as shown at 23 in Fig. 1.

When the conductors are locked in place in the manner shown in Fig. 1, it is evident that the possibility of their becoming frayed and contacting with each other to cause a short circuit is very remote owing to the positions they are left in. Furthermore, if the conductors are pulled as for example by grasping a cord to remove the plug from the socket, this pull only tends to draw the prong 13 more tightly against the wire so that no slipping can take place. A plug constructed in this fashion eliminates the necessity of using screws in fastening the conductors in place and makes a cheaper and stronger connection than the usual connection made by winding a conductor around a terminal screw.

Having thus described one specific form of my invention, what I claim as new and desire to secure by Letters Patent is:

1. A connector comprising a base having a seat for receiving a wire and having in said seat two spaced apart shoulders with space between the shoulders for a wire in the seat to bend and a locking member on said base movable against a wire in said seat to bend it between said shoulders and lock it in position, said locking member comprising a prong member pivoted on said base

directly opposite said shoulders said prong being offset between its ends.

2. A plug-in connecter for electric cords having a body of insulating material apertured to receive electric conductors, a pair of metal members mounted on said body and having connecting prongs projecting therefrom, and means for connecting the conductors to said members comprising upturned portions on said members cut away to provide a pair of spaced shoulders with a hollow therebetween, a lock member mounted opposite said shoulders and having a point swingable past said shoulders into the hollow to force a conductor placed across said shoulders to bend into the hollow.

3. A plug-in connecter for electric cords having a body of insulating material apertured to receive electric conductors, a pair of metal members mounted on said body and having connecting prongs projecting therefrom, and means for connecting the conductors to said members comprising upturned portions on said members cut away to provide a pair of spaced shoulders with a hollow therebetween, a lock member pivoted opposite said shoulders and having a point swingable past said shoulders into the hollow to force a conductor placed across said shoulders to bend into the hollow, said locking member comprising a resilient curved prong.

4. A connecter comprising a base plate having an upturned portion at one edge thereof, said portion being cut away to provide a pair of spaced shoulders on one side of the base plate with a hollow therebetween, a lock member pivoted on said base opposite said shoulders and having a point swingable past said shoulders into the hollow to force a conductor placed across said shoulders to bend into the hollow, said locking member comprising a resilient prong offset between its ends in its plane of rotation about its pivot.

5. A connecter comprising a base plate having an upturned portion at one edge thereof, said portion being cut away to provide a pair of spaced shoulders on one side of the base plate with a hollow therebetween, a lock member pivoted on said base opposite said shoulders and having a point swingable past said shoulders into the hollow to force a conductor placed across said shoulders to bend into the hollow, said locking member comprising a resilient prong offset between its ends in its plane of rotation about its pivot said upturned portion being extended toward the pivot of the prong over said shoulders to provide a trough for the conductor.

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