

[54] **LOCKING ELECTRIC PLUG**

[76] Inventors: **Joseph W. Warner; Richard J. Warner**, both of P.O. Box 222, Terrebonne, Oreg. 97760

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[51] Int. Cl. **H01r 13/54, H01r 13/62**

[58] Field of Search **339/74-79, 82, 339/114, 116**

[56] **References Cited**

FOREIGN PATENTS OR APPLICATIONS

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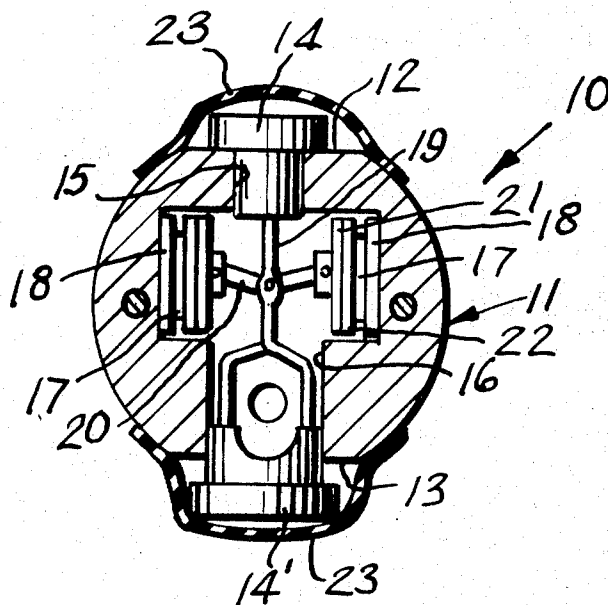
Primary Examiner—Robert L. Wolfe

Assistant Examiner—Lawrence J. Staab

[57] **ABSTRACT**

An electric plug of the female type, including a rod and toggle arrangement having pushbuttons so as to frictionally engage the tongs of a male plug received within the plug to prevent the male plug from slipping out of the female plug.

2 Claims, 3 Drawing Figures



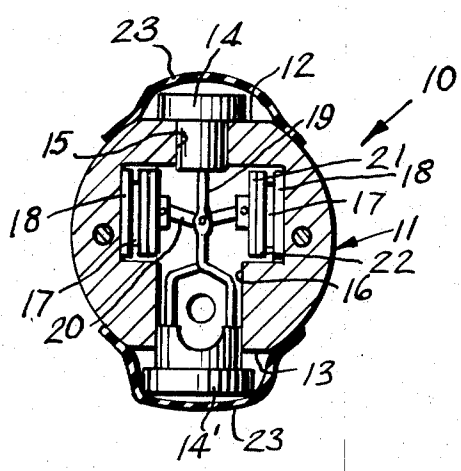


FIG. 1

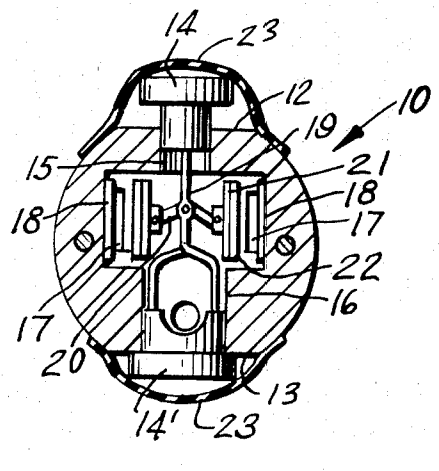


FIG. 2

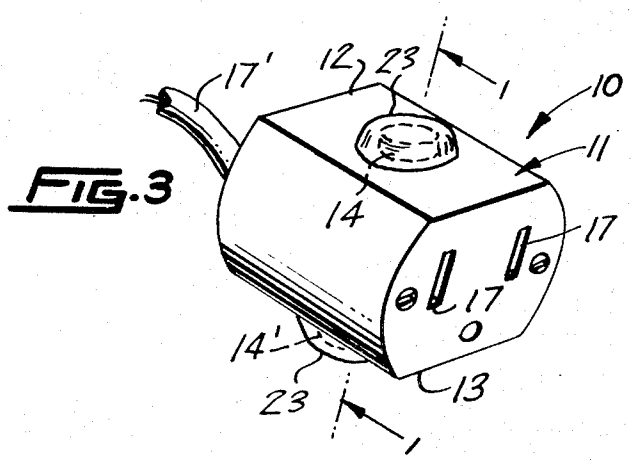


FIG. 3

INVENTORS.
JOSEPH W. WARNER
RICHARD J. WARNER

LOCKING ELECTRIC PLUG

This invention relates to electric cord plugs, and more particularly to a locking electric plug.

It is therefore the primary purpose of this invention to provide a locking electric plug which will grippingly engage the prongs of a male plug received within the female plug thus preventing the connection or coupling of male and female plugs from uncoupling accidentally.

Another object of this invention is to provide a plug of the type described which will have pushbutton means extending from the body of the plug for engaging and disengaging insulated plate members which grip the prongs of the male plug.

Another object of this invention is to provide a plug which will have a toggle arrangement within the center of the body of the plug, the toggle being secured to an oscillatable rod having a button on each end for engaging or disengaging the plug from a male plug.

A further object of this invention is to provide a plug which will have extending button members covered with a rubber shell to thus keep out foreign matter and also prevent accidental button release.

Other objects of the present invention are to provide a locking electric plug which is simple in design, inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

These and other objects will become readily evident upon a study of the following specification together with the accompanying drawing wherein:

FIG. 1 is a cross-sectional view taken along the line 1—1 of FIG. 3;

FIG. 2 is similar to FIG. 1, but shows the device in its unlocked position; and

FIG. 3 is a perspective view of the present invention.

According to this invention, a locking electric plug 10 is shown to include a body portion 11 having a top side 12 and a bottom side 13 from which extends a pushbutton 14 at side 12 and a pushbutton 14' at side 13 for a purpose which hereinafter will be described. Button 14 is freely and slideably carried within opening 15 and button 14' is freely and slideably carried within opening 16 of body 11.

Body 11 is provided with a pair of spaced apart rectangular openings 17 for receiving the prong members of a male plug (not shown). The electric cord 17' extends from the opposite end of body 11 and the wires are secured by suitable means to contacts 18 which are held in a suitable manner within body 11 (not shown). A push rod 19 is carried on the interior of body 11 of plug 10 and secured pivotally to a toggle member 20

which has secured pivotally thereto a pair of plates 21 oppositely opposed to each other. Adhered to plates 21 is an insulation 22 which provides frictional engagement against the prongs of the male plug received within plug 10.

Each of the buttons 14 and 14' are encased within a rubber cover 23 which is adhered to body 11 of plug 10, the cover 23 serving to prevent foreign matter from entering the openings 15 and 16 of body 11 and also preventing accidental release of buttons 14 and 14'.

Referring to FIG. 1 of the drawing, one will see the top button 14 depressed so as to cause the toggle 20 to engage the insulated plates 21 with the prongs of the male plug received within the openings 17, thus causing them to remain in contact with contacts 18 which are electrically connected to cord 17'.

Referring now to FIG. 2 of the drawing, it will be seen that the bottom button 14' has been depressed which cause the toggle member 20 to disengage the insulated plates 21 from the prongs of the plug in order that the female plug may be removed therefrom.

What I now claim is:

1. A locking electrical socket comprising a body member, an electric cord carried by said body member for the passage of current to electrical contacts carried within said body, a pair of opposed push buttons carried by said body with a toggle member disposed therebetween, a pair of opposed and aligned plate members connected by said toggle member to a rod member, with insulation bonded to said plates adjacent said electrical contacts for grippingly engaging prongs of a male plug received within said socket, said rod member being secured to said opposed push buttons and pivotally carrying said toggle member, rubber means secured over openings in said body member for receiving said buttons to prevent foreign matter from entering the openings said buttons are oscillatable within, said plate member being expandable by bearing down upon one of said buttons so as to grippingly engage said prongs of said male plug which is received within apertures in an end wall of said socket.

2. The combination according to claim 1, wherein said plate members secured to said toggle members are in parallel alignment with said electrical contacts secured to the interior of said socket, said electrical contacts are electrically secured to the cord carried by said socket, and said rubber means of said socket is adhered to said body at its outer edges and prevents foreign matter from entering the openings said push-buttons are oscillatable within.

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