March 28, 1961 G. CIVITELLI ET AL 2,977,564

ELECTRIC PLUG EJECTOR

Filed May 19, 1958

Fig. 1.

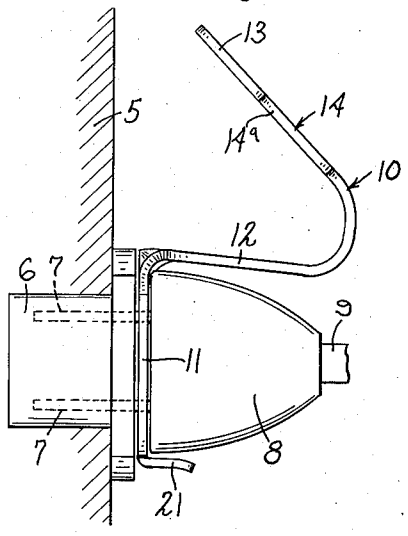


Fig. 2.

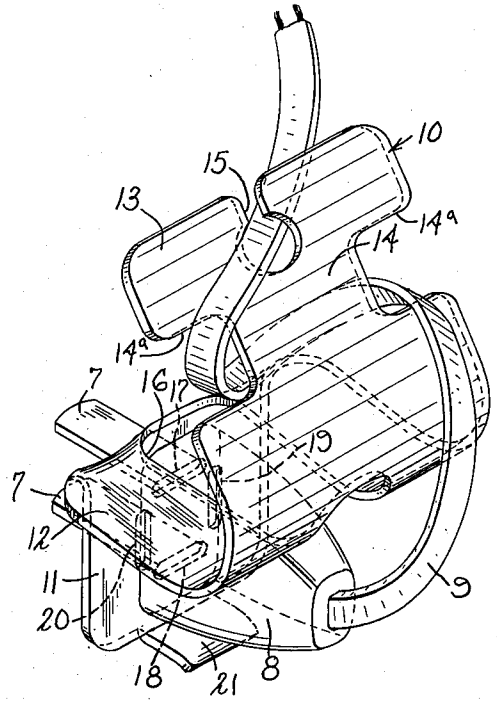


Fig. 3.

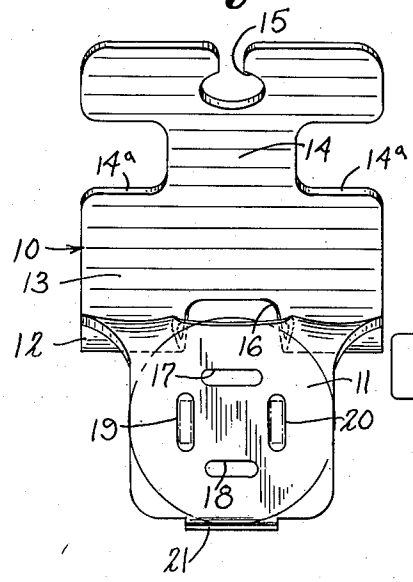
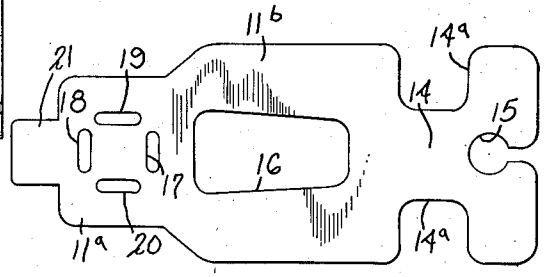


Fig. 4.



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ELECTRIC PLUG EJECTOR

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2 Claims. (Cl. 339—45)

This invention relates to electric plug ejectors for facilitating the removal of plugs used in connection with electric outlets.

An object of the invention is to provide a simple, inexpensive and effective device for facilitating the removal of a prong-type electric plug.

Another object is to obviate any need for pulling directly on the electric cord as a means or method for withdrawing the plug from the socket member.

Another object is to obtain more effective pull on the plug in comparison to other constructions of this type, while, at the same time, avoiding injurious strain on the connection between the cord and the prong elements of the plug.

In the accompanying drawings:

Fig. 1 is a side elevation partly in section showing the relative arrangement of the pull or release member omitting all but a fragment of the electric cord;

Fig. 2 is a perspective view showing the release or ejector member and the relation between this member and the electric plug and its cord;

Fig. 3 is an elevational view of the release member looking from the left of Fig. 1, omitting the plug and the connector cord; and

Fig. 4 shows the blank used for making the release member before it takes the final form shown in the other views.

As shown in Fig. 1, a wall **5**, shown in section, is provided with a socket **6** adapted to receive the spaced apart prongs **7** of an electric plug **8**. A part of an electric cord, indicated at **9**, associated with the plug has the usual or any preferred connection to the parallel prongs or blades **7**. A releasing element or ejector, indicated at **10**, has a lower vertical pendent tablike portion, indicated at **11**, interposed between the plug and the face portion of the socket. Just above the body of the plug **8** the member **10** has a substantially horizontal portion **12** and this portion **12**, outstanding from wall **5**, is in one piece with the part **11** and also with an upwardly and inwardly sloped or inclined release portion **13**.

Fig. 2 shows how the connector cord **9**, passing into the interior of the plug, is extended upwardly to engage a narrowed neck portion **14** at the upper part of the ejector member; and Fig. 2 also shows an upper portion of the cord engaged in a notch or recess **15** at the upper end of the ejector member. The ejector member is preferably made from a strip or blank of sheet material which provides electric insulation, which insulation is especially necessary in the region in which the prongs or blades **7** are extended into the socket provided in the wall.

Fig. 4 shows the blank of plastic material from which the ejector member is formed. At the right-hand end portion the notch or recess **15** is provided, also the neck portion **14**. At about the middle of the blank a clearance aperture **16** is provided, the object of which will be hereinafter mentioned, and extending leftward from the

blank body (Fig. 4) is a portion **11a** that will eventually be placed in the location of part **11** shown in Fig. 1. The part **11**, shown in Fig. 1, is provided with four elongated openings, as shown in Fig. 3, two of these being horizontal and the other two vertical, the object being to provide for reception of pairs of prongs in vertical arrangement or prongs in horizontal arrangement. The clearance aperture **16** in the wider middle part **11b** of the blank gradually increases in width toward the prong-receiving portion **11a**.

The ejector member shown in the drawing by way of example is a transparent member of plastic material formed to the shape shown and having toughness and strength and a certain amount of resiliency, which qualities adapt it well to use for the indicated purposes.

Fig. 1 shows an arrangement of parts in which one prong of the plug is located above the other. Fig. 2 also shows an assembly where this same arrangement of prongs is used, the upper prong passing through an upper slot **17** of the ejector and the other prong extending through a lower slot **18**. The portion **11** of the ejector is, however, provided also with vertically disposed prong slots **19** and **20**.

Referring to Fig. 2, the electric cord **9**, shown here, is of the flat or strip type. This cord has the part entering the plug looped upwardly and extended around the neck portion of the ejector so that two portions of the cord engage the side notches **14a** in the ejector. Moreover, this portion of the cord is continued upwardly to engage the upper end recess **15**. This recess has a narrow entrance extending to the upper edge of the ejector. By this arrangement the cord is easily held in assembly with respect to the ejector member with available space to enable the operator to insert his finger between the wall **5** and the upwardly and inwardly inclined release portion **13** of the ejector member. To effect removal of the plug from its socket the forefinger is easily introduced into the space referred to and it is then a very simple matter to pull the plug out of the socket.

If desired, a tongue or lug **21** may be provided upon the outer end of the part **11** and bent outwardly in a plane substantially transverse to that of the part **11**, as shown in the drawings. In withdrawing the plug from the socket, the thumb of the user may rest against this lug, when the forefinger is between the portions **12** and **13**, which will assist in applying an even withdrawing pull to the ejector member by the user.

While the cord or strip is engaged with the ejector in the manner above described, the plug can be removed without, in any way, placing injurious strain on the cord.

The elongated clearance opening **16**, previously mentioned, provides clearance for plug bodies of different sizes and shapes. In the Fig. 2 arrangement there is ample clearance between the ejector member and a relatively narrow plug body. This is not the only condition that is met, however, because, as indicated in Fig. 3, a wider plug body of round cross section, indicated by a broken line and having lateral vertically disposed prongs, may be received partially in the slot **16** of the release member.

In the arrangement of Fig. 2, somewhat less than a complete turn of the cord is engaged with the neck portion **14**, but if desired more cord turns or portions can be employed in this relationship for taking up slack in the cord or for other purposes.

Where the wall socket is covered by an escutcheon plate having an opening registering with the socket, the tab-like portion **11** of the ejector member will preferably be smaller than this opening so that it will always lie flatly against the face of the socket.

The disclosure herein is understood to be by way of

example, and various changes in the details may be made without departure from the principles involved and the scope of the claims.

What we claim is:

1. A plug ejector member formed from a flat blank and having a lower upright portion adapted to be interposed between a wall socket and a double-prong electric plug and provided with slots through which the prongs may project, said member having an approximately horizontal forwardly extending portion to be located above the plug and also having an upwardly and rearwardly inclined portion to extend toward the wall equipped with the socket, said last two portions of the member providing an approximately angular part into which a finger can be introduced for pulling the plug out of the socket, the side edges of the upwardly inclined portion being recessed inwardly to provide a neck portion of reduced width about which a conductor cord attached to the plug may be wound, a lug projecting forwardly from the lower end of the upright portion to provide a finger rest for the user in withdrawing the plug from the socket, and said forwardly extending portion having a plug clearance opening therein.

2. A plug ejector member formed from a flat blank and having a lower upright portion adapted to be interposed between a wall socket and a double-prong electric plug and provided with slots through which the prongs

may project, said member having an approximately horizontal forwardly extending portion to be located above the plug and also having an upwardly and rearwardly inclined portion to extend toward the wall equipped with the socket, said last two portions of the member providing an approximately angular part into which a finger can be introduced for pulling the plug out of the socket, the side edges of the upwardly inclined portion being recessed inwardly to provide a neck portion of reduced width about which a conductor cord attached to the plug may be wound, the upper edge of said upwardly inclined portion being provided with a notch having a narrow entrance mouth to receive the conductor cord, a lug projecting forwardly from the lower end of the upright portion to provide a finger rest for the user in withdrawing the plug from the socket, and said forwardly extending portion having a plug clearance opening therein.

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