May 17, 1955 W. ORSINI 2,708,741

ATTACHING CLIP FOR TWO-PRONG ELECTRIC PLUG

Filed Nov. 20, 1952

Fig. 1

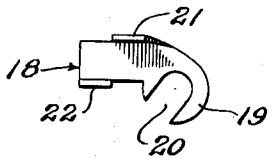


Fig. 2

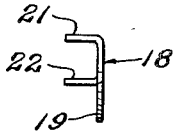


Fig. 4

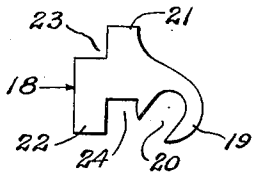


Fig. 3

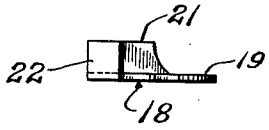


Fig. 5

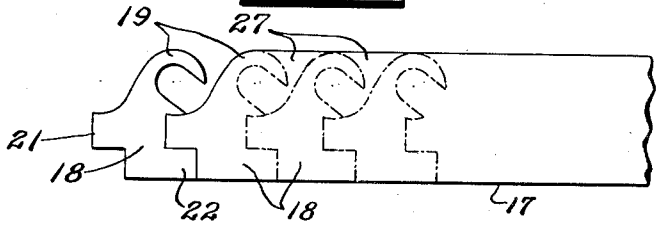


Fig. 6

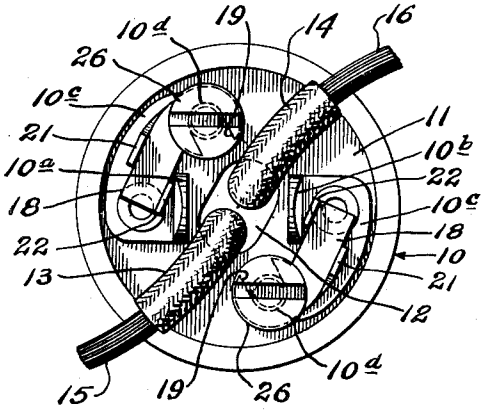


Fig. 7

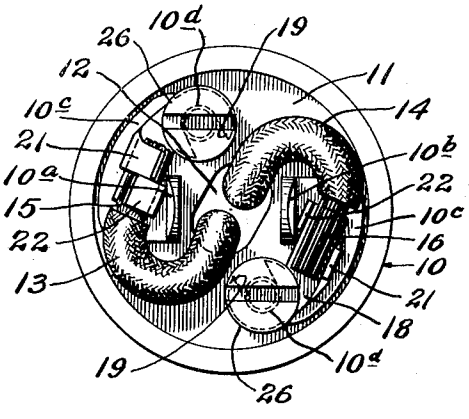


Fig. 10

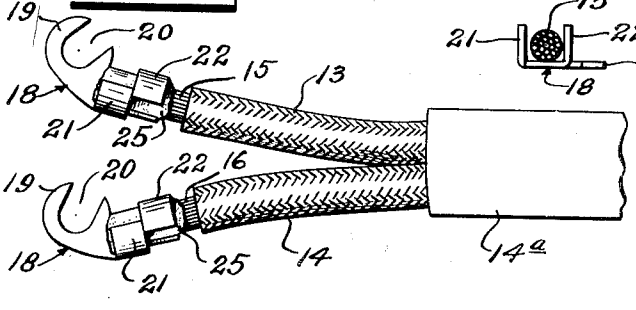
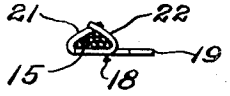


Fig. 8

Fig. 9



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ATTACHING CLIP FOR TWO-PRONG ELECTRIC PLUG

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1 Claim. (Cl. 339—276)

This invention relates to electric plugs commonly used for connecting a power source with an electric appliance, and more particularly to a strain relieving clip for attaching a cable wire to a terminal of such a plug.

Many such devices have been proposed in the past, but involved complex and complicated constructions, requiring the use of an excessive amount of cord and metal.

One object of the present invention is to provide a device of the above nature, having novel means for relieving the strain of the connection between the appliance cord and the plug.

A further object is to provide a device of the above nature which will be simple in construction, inexpensive to manufacture, easy to install and manipulate, compact, ornamental in appearance, and very efficient and durable in use.

With these and other objects in view, there has been illustrated on the accompanying drawing, one form in which the invention may conveniently be embodied in practice.

In the drawing,

Fig. 1 represents a top plan view of a strain relief clip embodying the invention showing the offset staggered prongs bent up into a vertical position.

Fig. 2 is an end view of the same.

Fig. 3 is a side view of the same.

Fig. 4 is a plan view of the clip similar to Fig. 1, before the prongs have been bent up.

Fig. 5 is a plan view of a blank strip of metal from which the clips are being stamped in interfitting relation to produce the minimum of scrap.

Fig. 6 is an end view of a two-prong plug having two of the strain relief clips assembled therein according to the first method of assembly.

Fig. 7 is a view, similar to Fig. 6, in which one of the conductors has been loosely embraced by the ears of one strain relief clip, and the other conductor has been clamped by the ears of the other clip.

Fig. 8 is an end view of a strain relief clip, and a stranded conductor wire loosely embraced thereby.

Fig. 9 is an end view of the clip after the ears have been tightly clamped upon the conductor wire.

Fig. 10 is a plan view of the portion of a two-conductor cable with two strain relief clips soldered upon the bared stranded ends of the insulated conductors, according to the second and preferred method of attaching said clips.

Referring now to the drawing, in which like reference numerals denote corresponding parts throughout the several views, the numeral **10** indicates a hollow two-prong plug having a pair of prongs **10***a*, **10***b* projecting therefrom, said prongs having perpendicular bases **10***c* located on the inside of the hollow cap, within the cavity **11** thereof.

The numeral **12** indicates a rear aperture in the cap **10** through which the insulated conductors **13** and **14** of the cable **14***a* are passed.

The numerals **15** and **16** indicate the bared stranded wire ends of the cable conductors **13**, **14** which are shown in Fig. 6 prior to being attached to the bases **10***c* of the prongs **10***a* and **10***b*.

As clearly shown in Fig. 5, the attachment strain relief clips **18** of this invention are adapted to be stamped out of a blank strip of metal **17** in succession as in a punch press, in such a manner that the successive stampings are interfitted with one another to produce the minimum amount of scrap **27**.

The clips **18** are provided with curved ends **19**, which embrace inclined open slots **20**. The other ends of said clips **18** are provided with offset ears **21**, **22** and open recesses **23**, **24** on opposite sides of said clips.

As clearly shown in Figs. 8 and 9, the ears **21** and **22** are adapted to be first bent up and then forced down into clamping engagement with the bared stranded wire terminals **15** and **16** into the shape shown in Fig. 9.

If desired, the clips **18** may first be attached to the bases **10***c* of the prongs **10***a* and **10***b*, and then locked in position by inserting the headed screws **26**.

According to the preferred method of assembly, however, the clips **18** will be permanently attached to the stranded wire ends **15**, **16**, by bending the ears **21**, **22** into engagement with said wire and then securing them thereto by means of solder **25**, as clearly shown in Fig. 10.

One advantage of the present invention is that the scrap pieces **27** which are located only on one side of the strip **17**, are quite small thereby lowering the cost of manufacture of the strain relief clip considerably.

Operation

In operation, each strain-relieving clip may be attached to the prongs **10***a* and **10***b* of the plug **10** by fitting the slot **20** on said clip around the shank of the headed binding screw **26**, which may then be tightened by means of a screw driver or other tool.

The stranded wires **15**, **16** of the cable may then be inserted through the rear aperture **12** and placed between the upstanding ears **21**, **22** of the clips **18**, which ears will then be bent downwardly around said wires so that the cord cannot be pulled out.

It will also be understood that when the alternative method of attaching the clips to the plug is employed, the clips will be first attached and soldered to the stranded wire ends **15** and **16** and then inserted through the aperture in the plug, after which the headed binding screws **26** will be tightened to clamp the clips in position within the plug **10**.

While there has been disclosed in this specification, one form in which the invention may be embodied, it is to be understood that this form is shown for the purpose of illustration only and that the invention is not to be limited to the specific disclosures, but may be modified and embodied in various other forms without departing from its spirit. In short, the invention includes all modifications and embodiments coming within the scope of the following claim.

Having thus fully described the invention, what is claimed as new, and for which it is desired to secure Letters Patent is:

In a strain relief metallic clip for detachably connecting the end of a bare conductor wire to the base terminal

of a two-prong electric plug, a strip metal member curved at one end and provided with an inclined inwardly-extending parallel edged slot on one side to embrace the shank of one of the binding screws of said plug, the other end of said member being provided with a pair of oppositely extending longitudinal ears offset from each other, said member having a pointed prong spaced from the ear on said slotted end defining a rectangular recess which is adapted to interfit with the ear on the other end of said member so as to permit production of a plurality of said clips by stamping them successively from a coiled strip with the minimum of scrap.

References Cited in the file of this patent

UNITED STATES PATENTS

368,987	Wheeler	Aug. 30, 1887
422,058	McIntire	Feb. 25, 1890
962,921	Schneider	June 28, 1910
1,274,543	Heineman	Aug. 6, 1918
2,206,662	Conradi et al.	July 2, 1940
2,288,918	Parker	July 7, 1942