United States Patent

[11] **3,626,358**

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[54] **FAST-CONTACT CLIP**
1 Claim, 2 Drawing Figs.

[52] **U.S. Cl.** ..... **339/97 T,** 324/72.5, 339/108 TP, 339/255 P
[51] **Int. Cl.** **H01r 11/20**
[50] **Field of Search** 339/95, 97–99, 108, 255, 260, 261; 324/72.5, 149

[56] **References Cited**

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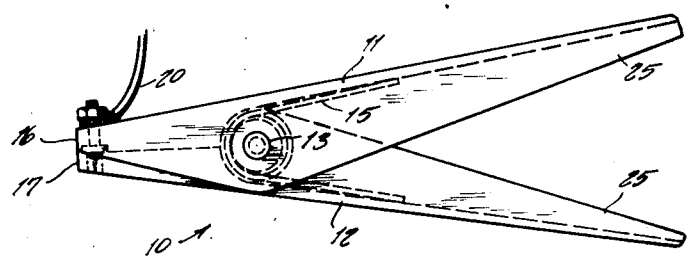
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Primary Examiner—Joseph H. McGlynn
Attorney—Merchant & Gould

ABSTRACT: A clamping device for clipping against an electric wire so to connect two wires together, the device comprising a pair of levers which are connected pivotally free together along an intermediate portion of the levers, one end of the levers forming a squeeze handle and the opposite ends of the levers forming a pair of jaws, one of which has a seat across which a wire may be rested and the other jaw carrying a pointed stud for piercing the insulation around the seated electric wire and electrically engaging the enclosed electrical conductor.



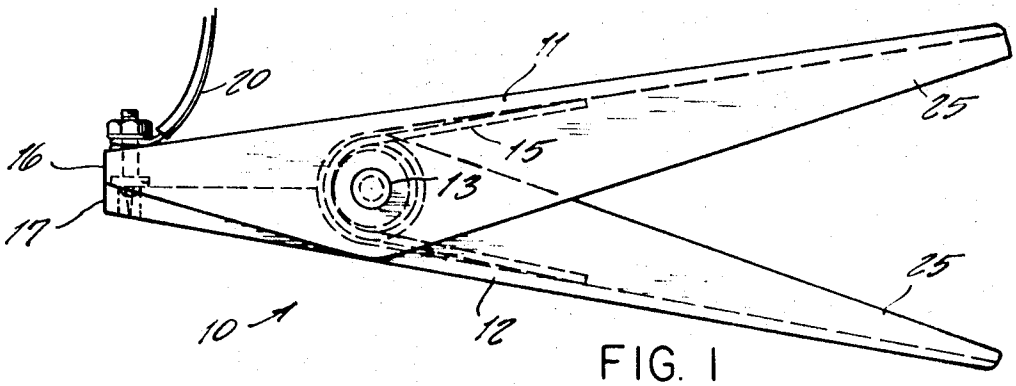


FIG. 1

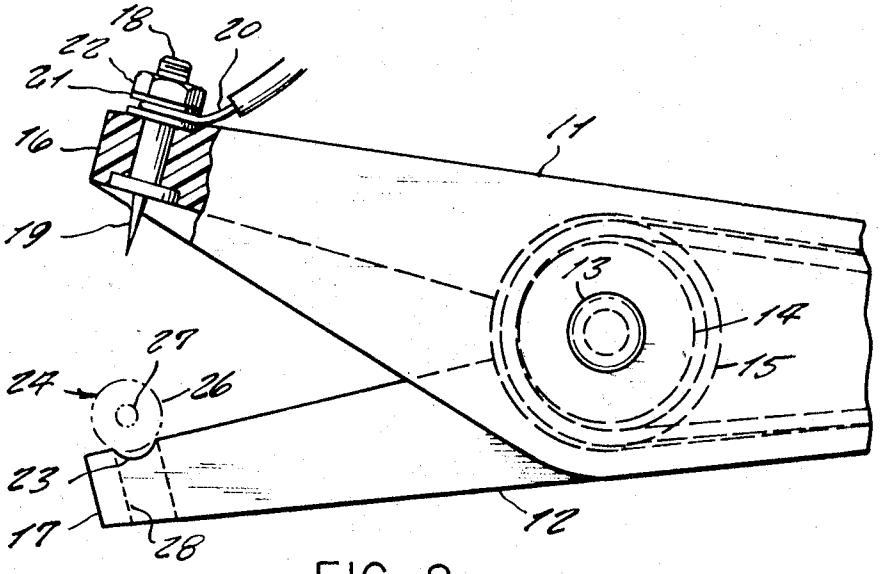


FIG. 2

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FAST-CONTACT CLIP

This invention relates generally to clips. More specifically the present invention relates to electric clips.

A principal object of the present invention is to provide a means whereby two electric wires may be connected together electrically.

Another object of the present invention is to provide a fast-contact clip wherein the two wires may be connected together without the necessity of taking the wires apart, thereby providing a safe manner for making the electrical engagement without endangering the operator by getting an electric shock.

Another object of the present invention is to provide a fast-contact clip wherein accordingly the device permits making a connection with a live electrical conductor without the danger of the operator getting an electric shock.

Other objects of the present invention are to provide a fast-contact clip which is simple in design, inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

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

FIG. **1** is a side elevation view of a fast-contact clip shown with the jaws in a closed position; and

FIG. **2** is an enlarged fragmentary view thereof shown partly in cross section and showing the jaws in a separated position.

Referring now to the drawing in detail, the reference numeral **10** represents a fast-contact clip device, according to the present invention, wherein there is an assembly comprised of a pair of levers **11** and **12** each of which is made of rigid plastic material so as to be electrically nonconductive. The levers **11** and **12** are enjoined pivotally free together by a transverse extending pin **13** which connects the longitudinal intermediate portions of the levers together. Each of the levers **11** and **12** are of generally cross-sectional channel configurated across which the pin **13** extends, the pin **13** extending through an arbor or sleeve **14** fitted between opposite sidewalls of the lever members, and a tension coil spring **15** being fitted around the arbor **14**, the opposite ends of the tension coil spring **15** bearing against the two levers so as to urge together a pair of jaws **16** and **17** formed at one end of the levers.

The jaw **16** has a stud **18** extending therethrough which at one end thereof is provided with a point **19**. The stud **18** is made of electrically conducted metal and is connected to an electric conductor **20** which is attached at its end around the stud and secured by means of a washer **21** and nut **22**.

The other jaw **17** is provided with a transversely extending seat **23** and across which an electric wire **24** can be seated.

In operative use, the opposite ends **25** of the levers **11** and **12** together form a convenient handle that can be squeezed together so as to separate the jaws apart as shown in FIG. **2** and after which the electric wire **24** is placed across the seat **23**. By releasing the handle, the pointed end **19** of the stud **18** will now puncture the insulation **26** of the electric wire **24**, the point **19** electrically engaging the conductor **27** contained within the wire **24**, thus establishing an electric connection to the conductor **20**. It is to be noted that a clearance opening **28** is provided in the jaw **17** so that the point **19** of the stud **18** will clear the jaw **17**. Thus the point **19** will not become blunted after extensive use.

Thus there is provided a fast-contact clip that comprises a helpful device in automotive maintenance as well as for other uses.

What I now claim is:

1. In a fast-contact clip, the combination of a pair of levers of generally channel cross-sectional configuration, said levers being made of rigid plastic material so as to be electrically nonconductive and being pivotally connected by means of a pin extending through opposite sidewalls of said levers and bridging a channel space therebetween, said pin pivotally connecting longitudinally intermediate portions of said levers to form a pair of handle members at one end of said levers and a pair of jaws at the opposite ends of said levers, means including a tension coil spring fitted around said pin, said spring having opposite ends bearing against said levers to urge said jaws toward and into engagement with each other, one of said jaws having a single, electrically conductive metal stud secured thereto and extending therefrom toward said other jaw, means for securing an electrical conductor to said stud, said stud having a point at one end thereof pointing toward said other jaw, said other jaw having an opening therein to accommodate said stud upon engagement of said jaws and having a transversely extending, groovelike seat formed therein to support an insulated electric wire in alignment with said point of said stud, said point of said stud penetrating the insulation of said electric wire to electrically engage with an electric conductor therein upon engagement of said jaws.

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