Aug. 15, 1933. E. V. SUNDT ET AL 1,922,643

ELECTRICAL CONNECTER CONSTRUCTION

Filed Jan. 20, 1932

Fig. 1

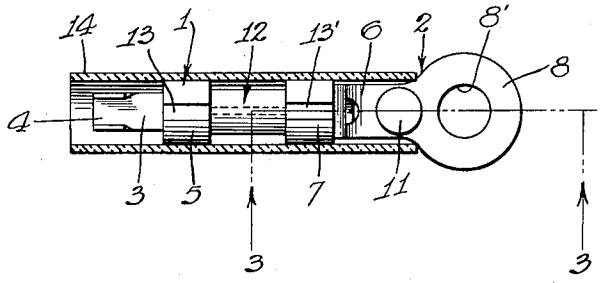


Fig. 2

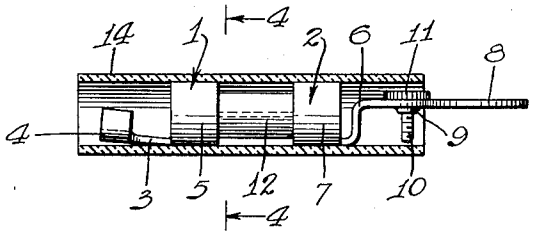


Fig. 3

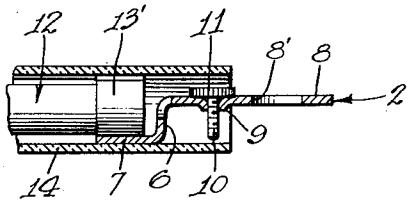
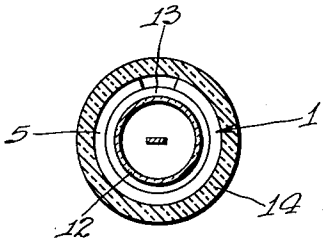


Fig. 4



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ELECTRICAL CONNECTER CONSTRUCTION

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Chicago, Ill.

Application January 20, 1932. Serial No. 587,780

2 Claims. (Cl. 200—115.5)

Our invention relates to improvements in electrical connecter constructions, and it consists in the combinations, constructions, and arrangements herein described and claimed.

An object of our invention is to provide an electrical connecter construction whereby devices having cylindrical or polygonal terminal members may be quickly connected to or detached from an electrical circuit.

Another object of our invention is to provide an electrical connecter which is particularly adapted for use in temporary hook-ups and experimental set-ups where secure electrical connections are desired but the use of solder would be inconvenient.

A further object of our invention is to provide means whereby fuses, resistance units, and the like may be rapidly inserted in or taken out of an electrical hook-up.

Other objects and advantages will appear in the following specification, and the novel features of the invention will be particularly pointed out in the appended claims.

Our invention is illustrated in the accompanying drawing, forming part of this application, in which

Figure 1 is a top plan view of a device embodying our invention,

Figure 2 is a side elevational view of the same device,

Figure 3 is a section taken along the line 3—3 of Figure 1, and

Figure 4 is a section taken along the line 4—4 of Figure 2.

In carrying out our invention, we make use of terminal grip members 1 and 2 which may, if desired, be made of metal. The grip member 1 may include a centrally disposed bridge portion 3 and integral transversely extending upwardly bent or curved gripping portions 4 and 5. The grip member 2 may include a bridge portion 6, a bent or curved grip portion 7, and an enlarged end portion 8 which is provided with an opening 8' whereby the grip member may be secured to any suitable binding post, such as, for instance, those used on ammeters or voltmeters. The grip member 2 may have an interiorly threaded opening 9 and may be provided with a screw 10 having a head 11. The head 11 of the screw 10 may, if desired, be knurled.

The grip members 1 and 2 may be made in any suitable manner but are preferably stamped out of a metal sheet. The gripping portions 4, 5, and 7 may thereafter be curved or bent in any suitable form.

The device of our invention may be provided with one or more insulating sleeves which may be made of any suitable fabric or other material, as, for instance, flexible rubber.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood. For the purpose of illustration, we have shown a cylindrical fuse device 12 having terminal end cap members 13 and 13' disposed at either end thereof. The end cap members may be grippingly held by the grip members in a manner which is readily understood by referring to the accompanying drawing.

In this particular assemblage, we have shown a tubular sleeve 14 enclosing all portions of the fuse and connecter construction except the perforated end section 8. The end section 8 is preferably left exposed so that it may be conveniently connected to a binding post, not shown. This arrangement is considered ideal where a fuse or resistance unit is to be connected in series with an electrical machine provided with a binding post. When secured to the binding post, the assembled construction is rigid and is insulated. If the sleeve be made of flexible rubber, the assembled construction, besides being insulated, is protected from jars incidental to its use, and the contact of the rubber with the gripping bands 5 and 7 serves to compress the same more firmly upon the caps of the fuse and also resists stresses tending to move the gripping members from the caps.

It will of course be understood that the device of our invention is not solely applicable for use with fuses, resistance rods, or the like, but may be used for the purpose of providing a quickly attachable and removable connecting means for any electrical device provided with suitable terminal contacts adapted to be gripped by clamping or gripping members.

When so employed, two tubular sleeves may be used, each of which should be of sufficient length to insulate the connecting portions. The screw 10 is provided for the purpose of rigidly securing the end of an electrical conductor or wire. While we have shown two distinct forms of grip members connected to the fuse device, it will of course be understood that both of the grip members employed may be of the same construction. For instance, two of the grip members 1 may be employed where the construction is not intended to be connected to a binding

post. The bridge 3 of the grip member 1 may, if desired, be made of greater length and provided with a threaded opening and thumb screw in the same manner as is the grip member 2.

From the foregoing description, it is obvious that the construction herein described is particularly adapted for physically as well as electrically connecting together the adjacent ends of two oppositely disposed electrical conductor wires forming part of a circuit. The grip members 1 and 2, when operatively connected to any rigid elongated electrical connector, such as the fuse device 12, provide means whereby the terminals of the wire may be physically as well as electrically secured together in a manner whereby the two electrical wires and the connecter construction may be considered as a single cable which may be suspended between two posts. Attention is directed to the fact that the connecter construction herein described, when so connected requires no support other than that offered by the conductors connected to the connecter construction. The connecter construction itself forms part of the support or means whereby the opposite wires may be suspended.

We claim:

1. An electrical connecter construction for physically connecting together adjacent terminals of conductor wires forming part of an electrical circuit, said construction including two grip elements and an elongated bridging element adapted to be connected between said grip elements, each of said grip elements being provided for gripping bands for securely engaging said bridging element and being also provided with means whereby the terminals of one of said conductor wires may be fixedly secured to said grip element, said bridging element and each of said grip elements being enclosed in a rubber tube, said rubber tube being stretched for compressing said grip bands upon said bridging element.

2. Means for connecting in an electrical circuit a fuse having end cap members comprising a pair of spring gripping members adapted to frictionally engage said caps, conductor connecting members extending in opposite directions from said gripping members, and an insulating flexible tube drawn over said fuse and gripping members in engagement with the latter and resisting displacement of the latter longitudinally of said fuse.

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