

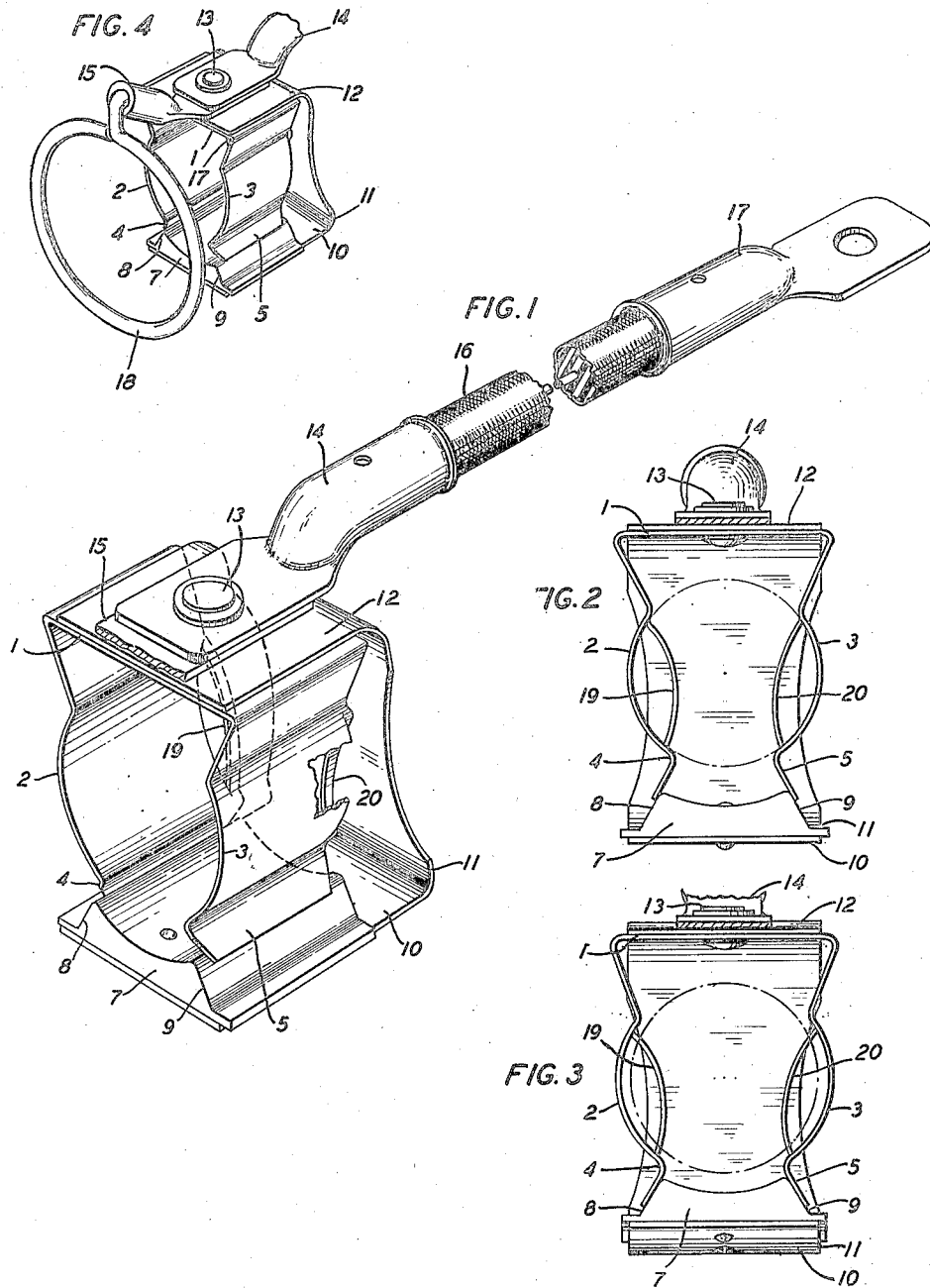
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ELECTRICAL CONNECTER

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ELECTRICAL CONNECTER

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3 Claims. (Cl. 173—269)

This invention relates to connectors and particularly to clamps for establishing electrical connections between apparatus and circuits in telephone or similar systems.

The object of the invention is to provide a simple and ruggedly constructed clamp or clip for conducting electrical currents, which may be readily attached to or removed from a terminal without in any way disturbing or jarring the terminal and which at the same time provides an intimate and positive electrical contact with the terminal when attached thereto.

Heretofore clips have been provided in which jaws may be separated for the application of the clip to a terminal by squeezing them or in which two jaws may be forced together over a terminal by a wedge or cam.

It is a feature of the present invention to provide an electrical connector comprising a U-shaped clip having its jaws tensioned to engage an electrical conductor or terminal and a spring member attached at one end to the clip with a wedge attached to the other end of said spring. This wedge normally engages the free ends of the jaws so that it may be pressed between said jaws to separate them sufficiently for the free insertion of an electrical terminal between them. Any suitable connection for conducting electrical current from the clip may be attached to the clip.

This invention has been illustrated in the accompanying drawing in which:

Fig. 1 shows a perspective view of a clip designed in accordance with the applicant's invention;

Fig. 2 shows a front view of this clip with the jaws and the wedge in normal position; and

Fig. 3 shows a front view of this clip with the wedge pressed between the jaws to separate them;

Fig. 4 shows a perspective view of the clip complete with a static ring attached.

Referring now to Fig. 1, the clip consists of a U-shaped member 1 having the middle portion of its sides or jaws 2 and 3 shaped in a segmental form to receive a terminal. The lower free ends of these jaws 2 and 3 are bent outwardly to form flaps or lips 4 and 5, respectively. Between these lips is placed a wedge-shaped member 7 with the wedge surface 8 registering with the lip 4 and the wedge surface 9 registering with lip 5. The wedge 7 is secured to the side 10 of the U-shaped spring member 11, the other side 12 of which is secured to the top side of the U-shaped clip 1. The spring 11 and clip 1 are held together by rivet 13. This rivet also holds the metal tip 14

and a holder 15. To tip 14 is secured a conductor 16 having a tip 17 at its other end to conduct current from the clip 1 and to holder 15 is secured a static ring 18.

It should be noted that the segmental portions 2 and 3 of the clip 1 are sheared at the back to form segmental portions 19 and 20 extending inwardly towards each other in opposite directions to the portions 2 and 3. These portions 19 and 20 act as a back stop for a terminal inserted between the jaws 2 and 3 to prevent it from being inserted too far and to interfering with the spring 11.

A clip of this type may be used for transmitting currents from comparatively large terminals that are attached to delicate and easily disturbed radio apparatus, such as vacuum power tubes for example. For terminals of this type it is necessary to attach conductors for electrical currents without in any way jarring or displacing the terminals. A clip according to the present invention is particularly suitable for this purpose as when attaching it to a terminal the wedge 7 with its surfaces 8 and 9 may be pressed against the lips 4 and 5 of the clip members 2 and 3 to separate them, as shown in Fig. 3. The clip is then passed carefully over the terminal. The pressure on the wedge 7 is then released and the terminal will be clamped securely between the members 2 and 3, which have a shape such that when the members are pressed against the terminal they make intimate contact therewith as seen in Fig. 2. Similarly, when it is desired to remove the clip from the terminal the wedge 7 may again be pressed inwardly to separate the two members 2 and 3 and the clip can then be carefully removed from the terminal without disturbing it. To separate the members 2 and 3 from each other in the most convenient manner the thumb and forefinger may be pressing respectively against the members 10 and 12 of the spring 11.

The static ring 18, illustrated in Fig. 4, is usually arranged in such a position in relation to the clip and the seal of the terminal in the tube to which it is applied, that it will act as a guard for the seal against any undue electrostatic or other electric charges that may injure it, by conducting such charges directly to the clip.

What is claimed is:

1. An electrical connector comprising a U-shaped spring clip having jaws tensioned to engage an electrical conductor between them, a bent spring member attached at one end to the bottom portion of the clip, a wedge-shaped mem-

ber attached to the other end of said spring member, said spring member being so shaped that the wedge member will normally engage the free ends of the jaws of said clip so that when pressure is exerted on said wedge it will separate said jaws to permit the free insertion of an electrical conductor between said jaws.

2. An electrical connector comprising a spring clip having jaws tensioned to engage an electrical conductor between them, a spring member attached at one end to the clip, a wedge attached to the other end of said spring, said spring and wedge being so shaped and formed that when pressure is exerted on the spring towards the clip, the wedge will separate the jaws of said clip

to permit the free insertion of an electrical conductor between them.

3. An electrical connector comprising a U-shaped spring clip having jaws tensioned to engage an electrical conductor between them, a U-shaped spring member having one leg attached to the bottom portion of the U-shaped spring clip, a wedge attached to the other leg of said U-shaped spring member, said U-shaped spring member being so located that the wedge will engage the free ends of said jaws and separate them for the free insertion of an electrical conductor when the legs of said U-shaped spring member are pressed together.

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