April 30, 1963 G. S. REIDER, JR 3,088,088

MALE TAB FOR ELECTRICAL CONNECTOR

Filed Aug. 3, 1960

FIG. 1

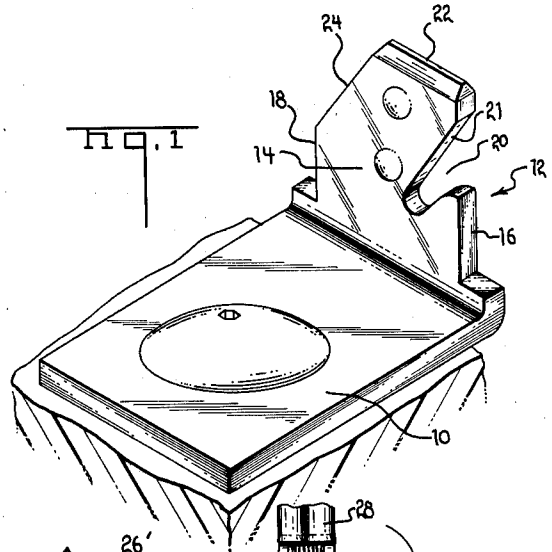


FIG. 2

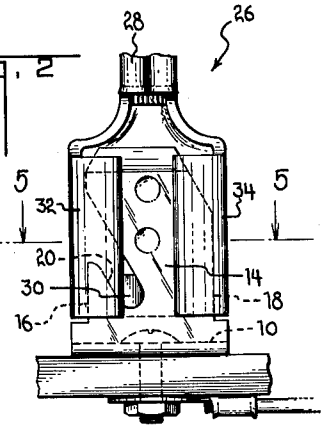


FIG. 3

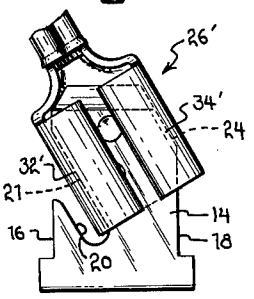


FIG. 4

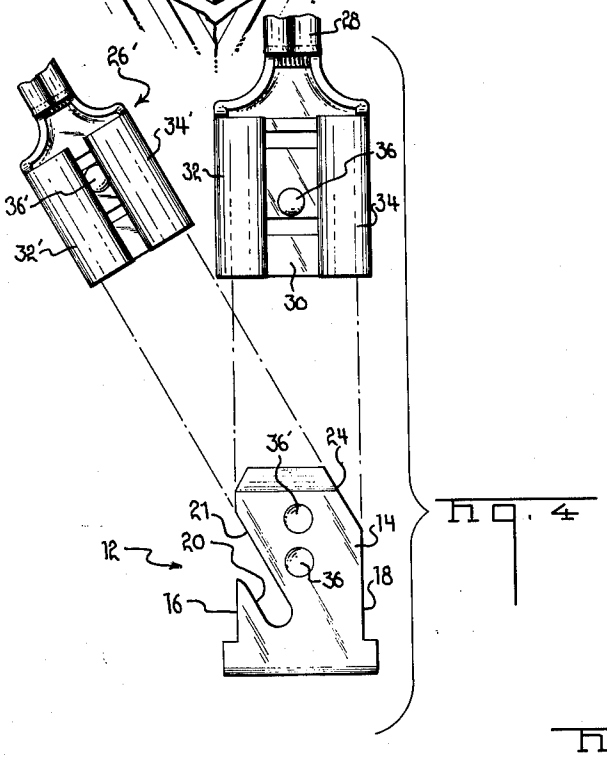
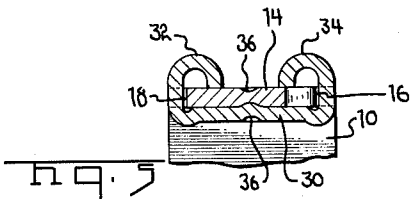


FIG. 5



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MALE TAB FOR ELECTRICAL CONNECTOR

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In the art of making electrical connections, it is frequently desirable to secure mating connectors to a pair of conductors so that the conductors may be joined together or detached at will. One connector assembly of this type is disclosed in the patent to Schumacher et al., No. 2,744,244. One element of the connector is comprised of a flat, blade-type member, called a "tab," secured to a ferrule-forming member whereby the ferrule-forming member may be crimped onto a conductor. The mating member comprises a receptacle which receives the tab and has a spring means for holding the tab in the receptacle. The receptacle is also secured to a ferrule-forming member which may be crimped onto the second conductor. The conductors may be joined or disjoined by insertion or extraction of the tab relative to the receptacle.

It is an object of this invention to provide such a tab and receptacle arrangement whereby a single tab is capable of receiving different sized receptacles. The versatility of this tab is achieved without increasing the size of complexity of the tab.

Other objects and attainments of the present invention will become apparent to those skilled in the art upon a reading of the following detailed description when taken in conjunction with the drawings in which there is shown and described an illustrative embodiment of the invention; it is to be understood, however, that this embodiment is not intended to be exhaustive nor limiting of the invention but is given for purposes of illustration in order that others skilled in the art may fully understand the invention and the principles thereof and the manner of applying it in practical use so that they may modify it in various forms, each as may be best suited to the conditions of a particular use.

In the drawings:

FIGURE 1 represents a perspective view of the tab portion of an electrical connector and illustrating the principles of this invention;

FIGURE 2 is a top plan view illustrating a receptacle secured to the tab of FIGURE 1;

FIGURE 3 is a top plan view illustrating a receptacle of a different size secured to the tab of FIGURE 1;

FIGURE 4 is an exploded view showing the relationship between the tab and receptacles of different sizes; and

FIGURE 5 is a sectional view taken through plane 5—5 of FIGURE 2.

The male connector assembly, as shown in FIGURE 1, includes a base portion **10** and a flat, blade-like tab portion **12**. The base member **10**, as shown in the illustrative embodiment, is comprised of a stamped sheet metal plate which may be bolted or otherwise secured to an electrical circuit. The tab **12** is also metallic and is integral with the base **10** and has a pair of parallel sides **16** and **18**. A notch **20** is cut into the side **16** at an angle thereto, preferably during the stamping operation, intermediate the ends of the surface **16**. A receptacle mating surface **21** is formed by the notch **20**. The front or leading edge of the tab member comprises a surface **22** which is disposed at a right-angle to the axis of the tab. The top of the surface **18** and the corresponding end of the edge **22**

are cut away to form a second receptacle mating surface **24** which is parallel to the first receptacle mating surface **21**. Thus there are two pairs of parallel sides, namely, **16** and **18**, extending parallel to the longitudinal axis of the tab **12**, and a second pair of parallel sides **21** and **24** which are at an angle to the longitudinal axis of the tab. It is noted that each pair of sides define different widths.

A female receptacle **26** comprises ferrule-forming means **28**, a flat sheet metal member **30**, and a pair of ears **32** and **34** curled inwardly to form springlike members (see FIGURE 5 described in the Schumacher et al. patent noted above).

As shown in FIGURES 2–4, a receptacle **26** of one size is adapted to mate with the tab **14** by engagement of the parallel sides **16** and **18** with the rolled-over spring members of the receptacle. A receptacle **26'** of a second size is adapted to be inserted into the tab with the spring members projecting into the notch **20** so that the surface **21** and the surface **24** accommodate the rolled-over spring members **32'** and **34'**. Dimple-like members **36** and **36'** may be struck into the tab to mate with a corresponding boss on the receptacle, as described in the patent to Schumacher referred to above.

It is noted that the described device permits a single tab to accommodate at least two different sized receptacles without increasing the bulk or complexity of the tab.

Changes in construction will occur to those skilled in the art and various apparently different modifications and embodiments may be made without departing from the scope of the invention. The matter set forth in the foregoing description and accompanying drawings is offered by way of illustration only. The actual scope of the invention is intended to be defined in the following claims when viewed in their proper perspective against the prior art.

I claim:

1. An electrical connector including means for securing said connector to an electrical receptacle, said connector comprising: a base portion and a flat, blade-like portion, said blade-like portion having a first pair of parallel sides substantially equal to the width of the receptacle adapted to be received, said blade-like portion having a leading edge which extends from one of said sides a distance less than the width of said sides, and a pair of receptacle-receiving surfaces comprising a first surface extending from said leading edge to one of said sides, and a second surface parallel to the first surface, projecting into the blade-like member.

2. An electrical connector including means for securing said connector to an electrical receptacle, said connector comprising: a base portion and a flat, blade-like portion, said blade-like portion having a first pair of sides substantially equal to the width of the receptacle adapted to be received, said blade-like portion also having a leading edge which extends from one of said sides a distance less than the width of said sides, said blade-like member also having a pair of receptacle-receiving surfaces comprising a first surface extending from said leading edge to one of said first sides, and a second surface projecting into the other side of the blade-like member.

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