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SOCKET MEMBER FOR A WIRELESS CIGAR LIGHTER

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This invention relates to cigar lighters, and more particularly to lighters, adapted for use in automobiles, having a withdrawable igniter plug. The primary object of the invention is to provide an improved socket member for a cigar lighter of the "wireless plug" type which may be readily attached to the metallic perforated instrument board on an automobile.

As devices of this character are ordinarily used on automobiles and operate from a six volt battery, it is very important that good clean contacts are provided between the socket member and instrument board which is usually grounded to one side of the battery. In the course of manufacturing a car, the instrument board usually has its front face enameled and its rear face sometimes is coated with oil, lacquer, or the like. Accordingly, one of the important objects of the present invention is to provide a clamping member which will automatically cut through insulating films sufficiently to scratch or cut the back face of the panel to insure a good contact when the socket member is installed.

The present application is a continuation in part of my application Serial No. 64,151, filed February 15, 1938, which matured into Patent No. 2,125,791 on September 13, 1938, relating to a Cigar lighter.

The invention is illustrated in a preferred embodiment in the accompanying drawing, in which:

- Figure 1 is a broken longitudinal sectional view of a socket member embodying the invention, and showing a withdrawable igniter plug resting therein; Fig. 2 is a broken end elevational view of the same; Fig. 3 is an exploded view, partly in section, showing how the parts are assembled; Fig. 4 is an elevational view, partly in section, showing a modified construction; Fig. 5, a fragmentary sectional view, taken as indicated at line 5 of Fig. 4; and Fig. 6, a fragmentary elevational view, of a portion of the socket member illustrated in Fig. 4, before the member is mounted on a panel.

In the embodiment illustrated in Figs. 1-3, a contact-sleeve member 1 is provided with an outwardly directed ornamental flange 3 which is adapted to bear against the front face of a panel 9 when the sleeve has been inserted through a perforation 10, it being understood that the panel may be the metallic instrument board of an automobile or the like. In this structure a contact-sleeve may be in the form of a bushing provided with external threads 11. As the withdrawable wireless plug member 12 is provided with an outwardly directed contacting button 13, it will be understood that the sleeve member 7 must be well grounded in electrical contact with the panel 9 to provide one terminal for the circuit of the heating element in the plug member.

The contact-sleeve member 7 is clamped in position by means of a cup-like clamping sleeve 14 whose outer end 15 is adapted to be screwed onto the threads 11 of the contact-sleeve 7. The extreme outer end of the member 14 is in the form of an outwardly directed flange 16 provided with a series of notches 17, best shown in Fig. 2, which are punched to provide a roughened surface which will cut into or scratch the rear surface of the panel 9 and provide good electrical contact and resist loosening. As shown in Fig. 3, the member 14 may be provided with a fluted portion 18 to facilitate screwing the member into position. If desired, suitable ventilating apertures, not shown, may be provided in this cup-shaped member.

The closed end of the member 14 is shown provided with a contacting terminal member 19 mounted on a terminal bolt 20 and insulated from the clamping sleeve by means of insulating washers 21 which are gripped in position by means of nuts 22. Thus it will be understood that a heating unit in plug member 12 is in electrical circuit on one side through the button 13 and the contacting sleeve 7 which is grounded to the panel 9 by the clamping member 14, and the other side of the circuit is supplied from a lead-in wire 23 through contact terminal 19.

In the modification shown in Figs. 4-6, inclusive, a somewhat simpler and less expensive form of socket member is provided. The tubular contact-sleeve member 24 is provided at its front end with an ornamental flange 25 which frames an aperture 26 for a withdrawable plug member 27. The member 24, after being inserted through a suitable perforation in a panel member 28, is locked in position by means of tongue-members 29. These tongue-members are formed by cutting V-shaped slots 30 in the side walls of the member 24, as best shown in Fig. 6. The front portions of the slots are biased from the plane of the flange 25 or panel 28 so that the front edge portion of the tongue is inclined rearwardly, as indicated at 31, to produce a special clamping and cutting effect when the tongues are struck outwardly to grip the contact-sleeve member 24 against the panel. When the tongues are struck out, as indicated in Figs. 4 and 5, the front edge portion of the tongues cut into the rear marginal edge portions of the aperture and grip the panel tightly to produce a good electrical contact. The tapered tongue not only adapts the socket to...
5 slight variations which may be found in thickness of the panel, but also causes the tongues to bend considerably from planes perpendicular to the panel, as indicated in Fig. 5.

It will be understood that the contact-sleeve member 24 is provided at its base with a contacting terminal 32 and is shown with ventilating apertures 33. The tongue-members 29 may be bent into clamping position from the front of the panel by means of a screwdriver or special tool, not shown.

The side walls of the member 24, in the latter construction, have small apertures 34, but the contacting button on the plug member is large enough to slide over these perforations without difficulty and normally is inserted into the socket beyond the same.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, but the appended claim should be construed as broadly as permissible, in view of the prior art.

I claim:

A socket member affording a side wall contact and a base contact, insulated from the side wall contact, for the terminals of a removable cigar lighter plug member, comprising: a round tubular side wall contact member having at its front end a laterally directed ornamental flange adapted to engage the front face of a perforated metallic supporting panel when said member is inserted through a perforation in said panel; and a conducting clamping member threaded to said side wall contact member so as to make electrical contact therewith, said clamping member having a large handle portion so that it may be screwed manually into final gripping position with the first mentioned contact member on the panel without the aid of tools, the front end of said clamping member having a plurality of detents for cutting into the rear face of said panel close to the perforation to provide good electrical contact and lock the parts together.

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