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MOUNTING FOR PLUG-IN UNITS

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Fig. 1

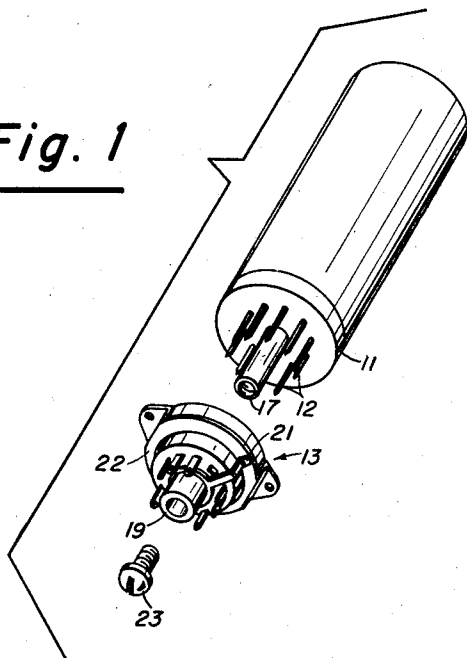


Fig. 2

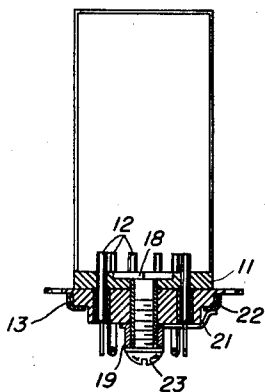
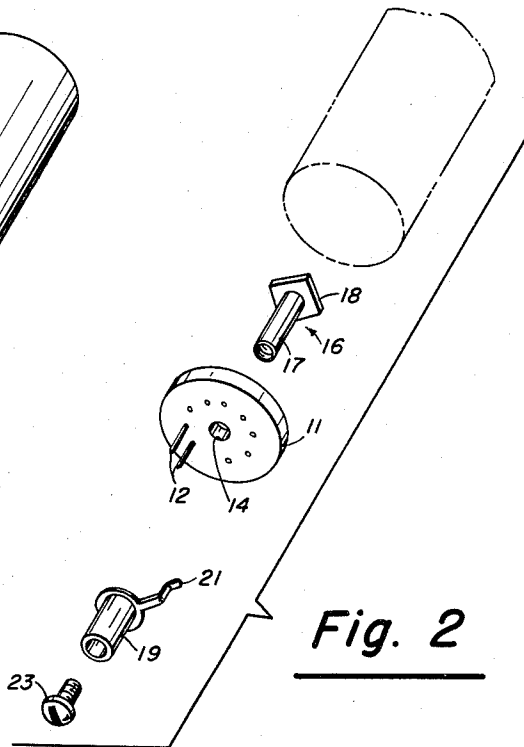


Fig. 3

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1 Claim. (Cl. 339—92)

This invention relates to a mounting for plug-in units and more particularly to a mounting that does not loosen or become disengaged due to jarring or vibration.

Other types of hold down mountings have been used but they require additional clamps or other equipment and thus become more expensive to manufacture and complicated to assemble.

This invention utilizes a hold down member and guide pin in the base of a plug-in unit and a bushing secured to the bottom of a plug-in receptacle. A bolt through the bushing and into the hold down member secures the plug-in unit to the receptacle. The receptacle is then fastened to a chassis in the conventional manner.

An object of this invention is the provision of an improved mounting for plug-in units.

A further object is the provision of a mounting for insuring electrical contact of a plug-in unit with external circuitry.

A further object is the provision of a mounting for securing a plug-in unit to its receptacle to prevent accidental disengagement due to jarring or vibration.

Another object is the provision of a hold down mounting comprising a minimum of parts, which is easy to assemble and inexpensive to manufacture.

Other objects and many of the attendant advantages of this invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings wherein:

Fig. 1 is an exploded view of the parts required for assembly;

Fig. 2 is an exploded view of the parts required for modifying a conventional plug-in receptacle for use in this invention; and

Fig. 3 is a cross-sectional view of the completed assembly.

Referring now to the drawings in which like numerals refer to like parts throughout the several drawings, there is best shown in Fig. 2 the base 11 of a suitable plastic material in which is embedded a plurality of contact pins 12. These pins may be of silver plate beryllium copper spring wire or any other material having excellent electrical conductivity. These pins are so arranged to fit into a conventional vacuum tube receptacle 13 which may

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be 7-prong, 9-prong, miniature, standard size or other known type as desired. To the top of these pins 12 may be connected electrical components which may then be encapsulated in a suitable polymerizing resin or covered by a housing secured to the base 11.

The center of base 11 has an aperture 14 into which is fitted hold down member 16. This consists of a sleeve 17 internally threaded and a head 18 of non-circular shape. The base 11 has a recessed portion about the aperture to receive the head 18 and to prevent its rotation due to torque from a screwdriver during assembly. This hold down member 16 may also serve as a ground connection for the components on the base 11 if desired.

Bushing 19 is soldered to grounding clip 21 and positioned over the center aperture in plug-in receptacle 13. The other end of the clip is then soldered to the retaining band 22 to complete the path to ground when the receptacle 13 is mounted on a chassis. When the pins 12 on base 11 are inserted into the receptacle 13, the sleeve 17 fits inside the bushing 19. Bolt 23 is then inserted into the sleeve 17 and tightened with a screwdriver. The completed assembly is shown in Fig. 3 ready for installation on a chassis in the normal manner.

Obviously many modifications and variations of the present invention are possible in the light of the above teachings. It is therefore to be understood that within the scope of the appended claim the invention may be practiced otherwise than as specifically described.

What is claimed is:

An electrical assembly comprising a plug-in unit, a receptacle for said plug-in unit, said receptacle having conducting means adapted to be connected to ground, mutually cooperating apertures in said plug-in unit and said receptacle, tubular means positioned in said apertures, said tubular means having internal threads, head means on one end of said tubular means in non-rotational engagement with said plug-in unit, bushing means telescopically positioned about the other end of said tubular means in engagement with said receptacle, said bushing means having a radially extending portion in engagement with said conducting means, and means having external threads in engagement with the internal threads of said tubular member for securing said plug-in unit to said receptacle.

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