# United States Patent

**Stanback**

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## [54] METER SOCKET BASE ASSEMBLY


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**Related U.S. Application Data**

[63] Continuation of Ser. No. 771,463, Oct. 29, 1968, abandoned.

[52] **U.S. Cl.** .....**339/198 M,** 339/31 B, 339/217 R

[51] **Int. Cl.** .....**H01r 9/00**

[58] **Field of Search** .....339/217, 214, 215, 31, 198 M; 317/105-111



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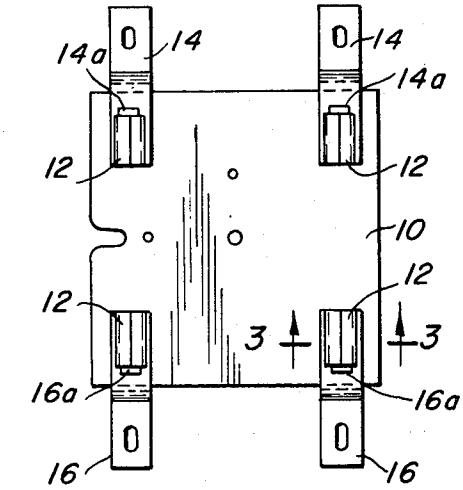
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[57] **ABSTRACT**

A flanged cup is inserted in an aperture in an insulation plate from one side, and a terminal strap and a plug-in contact jaw member are secured by a screw and nut to a flat bottom of the cup on the other side of the insulation plate.


**4 Claims, 4 Drawing Figures**



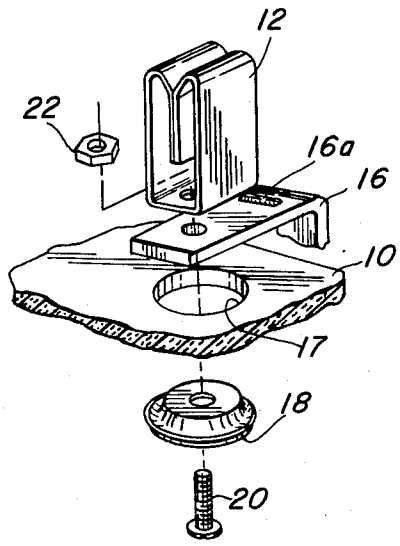



FIG - 1

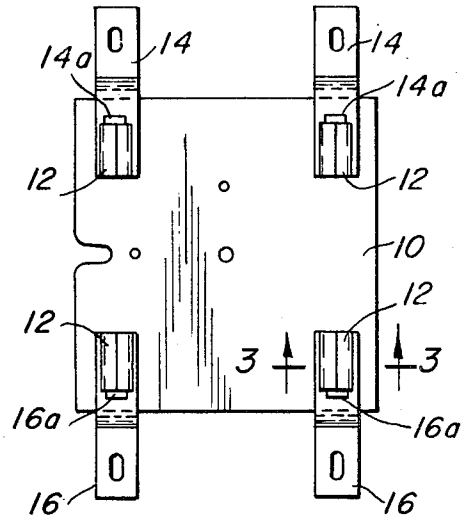



FIG - 2

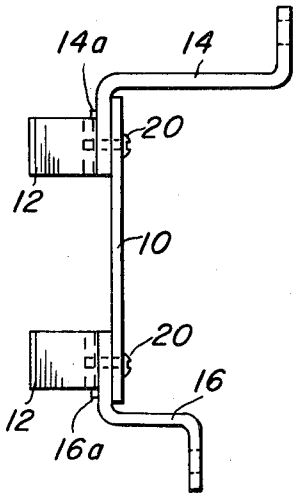



FIG - 3

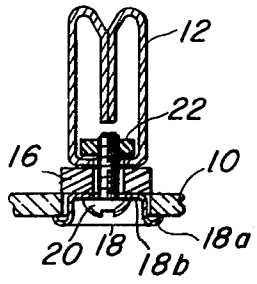
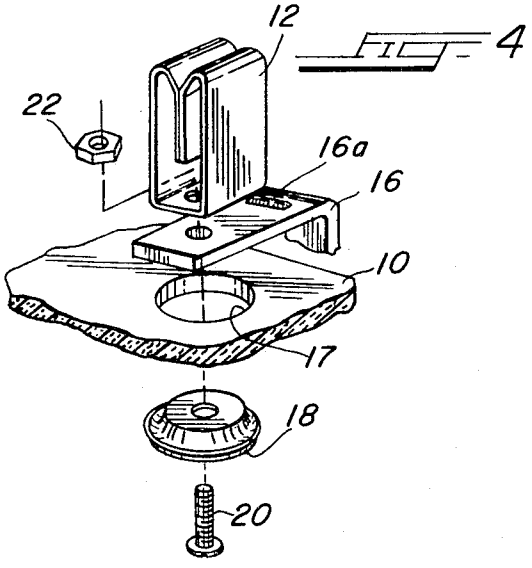



FIG - 4




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# METER SOCKET BASE ASSEMBLY

This application is a continuation of application, Ser. No. 771,463, filed Oct. 29, 1968, now abandoned.

This invention relates to an improved meter socket base assembly for watt-hour meters. Formerly the contact jaw members and terminal straps of meter sockets were mounted on insulation members of block form. Consequently, a relatively large amount of insulating material was required. To reduce the amount of insulating material required, a sheet of insulating material was used as a base and the contact jaw members and terminal straps were clamped thereto. Shrinkage of the sheet of insulating material in use reduced the contact pressure between the contact jaw members and their respective terminal straps, resulting in poor electrical connections.

In accordance with this invention, the contact jaw members and terminal straps are mounted on a sheet or plate of insulating material, hereinafter called an insulation plate, in such a manner that in effect the insulation plate is not a part of the clamped joint at any contact jaw member and its respective terminal strap. Thus, any shrinkage of the insulation plate in use does not cause deterioration of the electrical connection between any contact jaw member and its respective terminal strap.

Accordingly, an object of the invention is to provide an improved meter socket base assembly for watt-hour meters.

A further object is to provide a means of mounting a contact jaw member and a terminal strap on an insulation plate whereby shrinkage of the insulation plate does not cause deterioration of the electrical connection between the contact jaw member and terminal strap.

In the drawings,

FIG. 1 is a front view of a meter socket base assembly constructed in accordance with the invention;

FIG. 2 is a side elevational view of the meter socket base assembly of FIG. 1;

FIG. 3 is a fragmentary sectional view taken along the line 3—3 of FIG. 1; and

FIG. 4 is an exploded perspective view of the portion of the base assembly shown in FIG. 3.

A meter socket base assembly constructed in accordance with the invention includes a body **10** of insulating material in the form of a relatively thin, flat, generally rectangular sheet or plate. The insulation plate **10** may be fiberglass reinforced polyester resin. In the embodiment shown, four plug-in contact jaw members **12** are secured to the insulation plate **10** in proper position respectively to receive four contact blades of a watt-hour meter (not shown). As best shown in FIG. **2**, the two upper contact jaw members **12** are provided respectively with a pair of relatively long terminal straps **14** and the two lower contact jaw members **12** are provided respectively with a pair of relatively short terminal straps **16**. The length of the terminal straps **14** and **16** is dependent upon the position of respective bus bars (not shown) to which they are attached when in use. As shown, the terminal straps **14** and **16** are generally Z-shaped, and each includes a front end portion disposed on the front side of the insulation plate **10** and a rear end portion spaced from the front end portion in a direction perpendicular to the insulation plate **10** and disposed on the rear side of the plate.

The manner of securing the contact jaw members **12** and the terminal straps **14** and **16** to the insulation plate **10** is best shown in FIGS. **3** and **4**. Respectively adjacent four corners thereof, the insulation plate **10** is provided with four holes **17**, one of which is shown in FIG. **4**. Four cup members **18** each having a curved flange **18***a* and a flat bottom **18***b* are received respectively in the holes **17** from the rear side of the insulation plate **10**, only one of the cup members **18** being shown. The curved flange **18***a* of each cup member **18** is concave toward the bottom **18***b*. The bottom portion **18***b* of each cup member **18** is provided with an appropriate hole large enough to receive the threaded shank portion of a screw **20** but small enough to prevent passage of the enlarged head portion of the screw. Each of the contact jaw members **12** and the front end portions of the terminal straps **14** and **16** is also provided with an appropriate hole for reception of the threaded shank portion of a screw **20**. Each screw **20** is threaded into a nut **22** disposed within the respective contact jaw member **12** and held against rotation thereby. The contact jaw members **12** are respectively held against rotation by raised boss or dimple portions **14***a* and **16***a* disposed respectively on the front end portions of the terminal straps **14** and **16**.

The contact jaw members **12**, nuts **22**, and the front end portions of the terminal straps **14** and **16** are disposed on the opposite side of the insulation plate **10** from the curved flanges **18***a* of the cup members **18**, each of the front end portions of the terminal straps **14** and **16** being disposed between the bottom **18***b* of the respective cup member **18** and the respective contact jaw member **12**. The thickness of the insulation plate **10** is substantially equal to the distance from the edge of the flange **18***a* of a cup member **18** to the outer surface of the bottom **18***b* of the cup, and substantially no clamping pressure is applied to the insulation plate **10**. Any shrinkage of the insulation plate **10** in use has no effect on the electrical connection between each contact jaw member **12** and its respective terminal strap **14** or **16**.

Various modifications may be made in the structure shown and described without departing from the spirit and scope of the invention.

I Claim:

1. A meter socket base assembly comprising a flat generally rectangular plate of insulating material having four apertures extending therethrough respectively adjacent four corners thereof, four flat-bottomed flanged cups disposed respectively in said apertures, each cup having a flange portion disposed on a rear side of the plate in overlapping relationship with a portion thereof defining the respective aperture and having an outer surface of a flat bottom portion substantially flush with a front surface of the plate, four terminal straps each having a front end portion disposed on a front side of the plate generally in alignment with a respective one of the apertures and a rear end portion spaced from the front end portion and from the plate in a direction perpendicular to the plate and disposed on the rear side of the plate, four plug-in contact jaw members disposed on the front side of the plate generally in alignment respectively with the apertures, and fastening means securing the front end portions of the terminal straps and the contact jaw members respectively in electrical contact with each other and clamping them respectively against the bottom portions of the cups.

2. A meter socket base assembly as claimed in claim 1 wherein each of the contact jaw members is disposed on the opposite side of the respective front end portion of the terminal strap from the insulation plate.

3. A meter socket base assembly as claimed in claim 2 wherein the fastening means includes a plurality of nuts and screws, the nuts being disposed respectively within the contact jaw members and the screws having head portions disposed respectively within the flanged cups.

4. A meter socket base assembly comprising a flat generally rectangular plate of insulating material, four terminal straps each having a front end portion disposed on a front side of the plate and secured to a corner portion thereof and a rear end portion spaced from the front end portion and from the plate in a direction perpendicular to the plate and disposed on the rear side of the plate, and four plug-in contact jaw members electrically connected and mechanically secured respectively to the front end portions of the terminal straps, the rear end portions of the terminal straps being securable respectively to bus bars, whereby the terminal straps form a support for the plate and contact jaws.

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