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DEMOUNTABLE FURNITURE LEG

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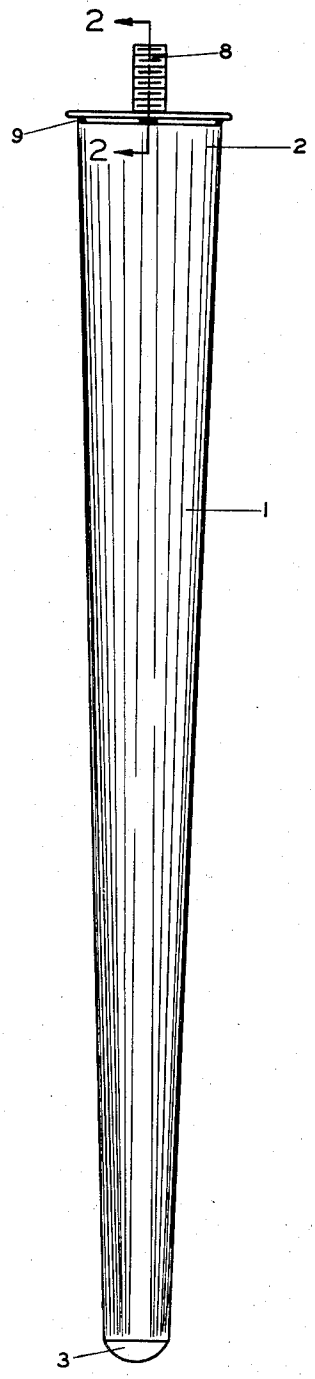


FIG-1

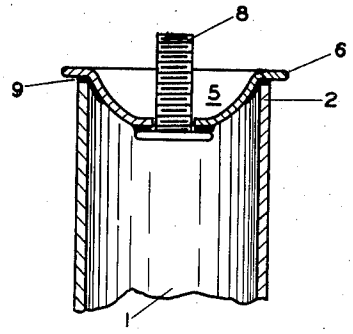


FIG-2

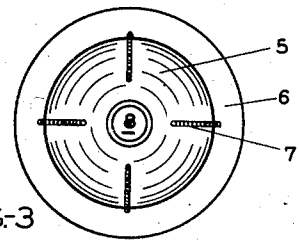


FIG-3

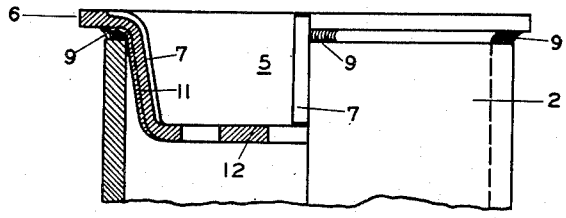


FIG-4

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DEMOUNTABLE FURNITURE LEG

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1 Claim. (Cl. 311—114)

This invention relates to a demountable leg for articles of furniture such as tables, benches, television cabinets and the like.

Since it is desirable to ship leg supported articles with their legs dismounted, it is all the more desirable to provide legs which can be easily, quickly and firmly remounted. For example, one presently used structure comprises: a metal leg having its upper end fashioned in the form of an upwardly-open straight-walled cylinder; and a metal leg-securing fitting telescopically mounted snugly within the open upper end of the leg and permanently secured thereto. The fitting comprises: a short vertically-arranged straight-walled cylinder having a circular upper edge defining its open mouth and being closed at its lower end with a flat bottom; and a securing bolt welded to the bottom of the fitting to project upwardly therefrom and centrally through both its bottom and its mouth. The straight side walls of the leg and fitting cylinders are welded together at circumferentially spaced points to hold these parts with their upper edges in flush relationship.

This arrangement has a number of disadvantages. While the spot welds on the leg are only spaced approximately one-quarter to one-half inch below the under surface of the leg-receiving body, they are nevertheless sufficiently visible to be objectionable. With tapered legs, it is necessary to undergo the additional expense involved in either: tapering the cap; or changing the upper end of the tapered leg to a straight-walled cylinder. Furthermore, the flat bottom of the cup may be deformed when the securing bolt is threaded into tight engagement with the leg-receiving body of the article of furniture with which it is used.

The principal objects of the present invention are: to provide a new and improved demountable leg which has the advantages of similar prior legs but not the disadvantages thereof; to provide a fitting which can be used in straight sided and tapered legs with equal facility; and to provide a similar but sturdier fitting which is correspondingly less apt to become loose or deformed.

The objects of my invention are primarily achieved in capping the upper end of an upwardly open leg with a cup-like metal cap or fitting comprising: a downwardly tapered body, which forms the mouth of the cap at its upper end; a perimetric flange extending laterally outward from the upper end of said body and cooperating therewith to form a shoulder on the upper side of the cap and a corresponding crook on the under-side thereof; a series of perimetrically spaced projections on the under-side of the cap extending downwardly across the crook; said cap being dimensioned to fit within the upper open end of said leg with its projections in overlying engagement with the upper end edge of the leg and with its body extending downwardly within the leg and diverging laterally inward from the walls of the leg; and a conventionally arranged and mounted securing bolt.

A fitting of this character is no more expensive than the prior fittings. It can be easily, quickly placed in

position on the upper open end of a tapered or straight leg. Since its projections preferably engage only the upper edge of the leg, it can be easily and quickly welded thereto and the welds thus made are so close to the body of the article of furniture that they are not readily visible; hence, are relatively unobjectionable. Finally, its downwardly tapered structure provides it with the deformation resisting properties of an arch, to an extent depending on the degree and character of the taper. But even with a slight taper, it will strongly resist deformation and thus enables an extremely tight joint to be made and remade without risking serious deformation.

An embodiment of the invention is illustrated in the accompanying drawing wherein:

Fig. 1 is an elevational view of my supporting leg and cap assembly;

Fig. 2 is a sectional view taken substantially along line 2—2 of Fig. 1;

Fig. 3 is a top view of the leg and cap assembly of Fig. 1; and

Fig. 4 is a fragmentary view, half in vertical section and half in side elevation, of a demountable leg with a modified form of fitting, the securing bolt being omitted from this view.

The present invention is illustrated in connection with a supporting leg 1 of conventional character and length (6 to 30"). This leg has its upper end 2 conventionally fashioned in the form of an upwardly-open cylinder, which may be straight-walled but preferably it is made to taper downwardly. The body of the leg 1 may be solid but it preferably is hollow and made to taper downwardly from an upper end diameter of about 1½" to a lower end diameter of about ¾". Preferably its lower end is plugged with a suitable glide 3. The leg may be fabricated from any suitable material or combination of materials but preferably is made entirely of a metal such as aluminum or steel. As is customary, it may be provided with a bright finished surface providing corrosion resistance and an aesthetic appearance.

In accordance with my invention, the upper open end of the leg is provided with a flanged semispherical leg-securing shell-like or cap-like metal fitting 5 comprising: a downwardly tapered body (also designated 5) open at its upper end to form the mouth of the cap; a perimetric flange 6 extending laterally outward from the upper open end of the body and cooperating therewith to form a shoulder on the upper side of the cap and a corresponding crook on the under-side thereof; a series of perimetrically spaced depressions 7 on the topside of the cap extending downwardly across the shoulder; a corresponding series of correspondingly located projections on the under-side of the cap extending downwardly across the crook; said cap being dimensioned to fit within the upper open end of the leg with its projections in overlying engagement with the upper end edge of the leg and with its tapered body 5 extending downwardly within the leg and diverging laterally inward from the walls of the leg; and a conventionally arranged and mounted securing bolt 8.

The tapered body 5, preferably, is of a concavo-convex shape, of the general character illustrated. The perimetric flange 6 may be discontinuous but preferably it is made in the form of a continuous annular flange. The perimetrically spaced depressions 7 need only be long enough to extend from a horizontal direction on the flange to a more or less vertical direction on the body. Preferably, however, they are made to extend horizontally to a point at or near the periphery of the flange 6. In the vertical direction they are preferably made to extend downwardly along the wall of the body for a distance sufficient to reinforce or strengthen the body substantially. Accordingly, they should extend to a point at or near the bottom since the further down they actually extend, the stronger

the cap will become. The securing bolt 8 is conventionally welded to the bottom of the cap to extend upwardly therefrom successively through both the bottom and top or mouth of the cap and to project, from the mouth, a distance of about one-fourth inch to one-half inch.

In accordance with one feature of my invention, the upper end edge of the leg is welded to the projections on the cap. During the welding operation, which may be advantageously accomplished in one down stroke of the welder, these projections cause localized weldments 9 to be formed, each joining a spot on the upper edge and the inside corner of the upper edge of the leg to a corresponding spot on the crook of the cap. While any number of these projection welding depressions 7 may be used, four will normally be amply sufficient and these should be uniformly spaced circumferentially along the crook of the cap.

In detachably mounting a leg upon an article of furniture, the upper end of the bolt 8 is inserted into a cooperating tapped recess or bolt hole in the leg-receiving body part of the furniture (not shown) and the entire leg rotated to screw bolt 8 into said recess until the upper surface of the perimetric flange 6 abuts the under-side of said furniture body.

It will be appreciated that this fitting is no more expensive to make and assemble than prior fittings. Since it is tapered, it can be easily and quickly placed in position on the upper end of any suitable upwardly open leg whether the leg is tapered or straight. Since it receives the upper edge of the leg along the crook of the cap, it is more or less self-centering and may therefore be promptly welded. In fact, it may be off centered as much as 1/16 or even 1/8 of an inch, where the other dimensions permit, and still provide an eminently satisfactory structure. The welding operation can be easily and quickly done simultaneously at spaced points which are substantially limited to the upper edge of the leg. Consequently, the weldments thus made are positioned so closely to the body of the article of furniture that they are not readily visible and therefore they are relatively unobjectionable.

Furthermore, the spherical or concavo-convex form of the cap provides an arched structure which will deflect slightly under strong pressure without deforming and thus enable an extremely tight joint to be made and remade without risking any lasting damage.

My invention is not limited to concavo-convex body. To demonstrate this, a modified form of fitting is shown in Fig. 4 wherein the body, which is offset from the leg, has tapered walls 11 and a flat bottom 12. However, this structure has, over the corresponding straight-walled flat-bottomed fitting the advantages of being as cheap to make, cheaper to assemble, faster and thus cheaper to weld and stronger resistance to deformation.

Having described my invention, I claim:

A demountable leg comprising: an elongate leg member having an open upper end; a cup-like cap mounted on the open upper end of said leg member for securing the upper end of the leg member to the body of an article of furniture; said cap including a downwardly tapered body open at its upper end and dimensioned to fit within the open upper end of said leg member; a perimetric flange extending laterally outward from the open upper end of said cap body to form a shoulder on the upper side of the cap and a corresponding crook on the underside thereof; a series of perimetrically spaced projections on the underside of the cap in overlying engagement with the upper end edge of said leg member and extending downwardly across the crook; an upright furniture securing member having its lower end secured to the lower end of the cap body and having its upper end projecting upwardly from the mouth of the cap; and weldments securing the upper edge of said leg member to said projections of the cap.

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