March 17, 1953 P. D. BECKER 2,631,330

SLIDING CASTER TYPE SUPPORT

Filed May 2, 1952

FIG. 1.

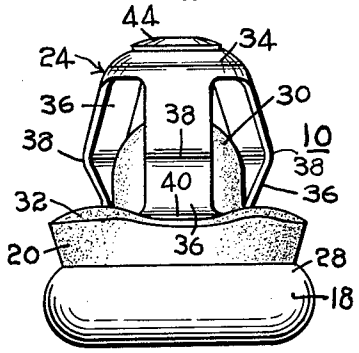


FIG. 2.

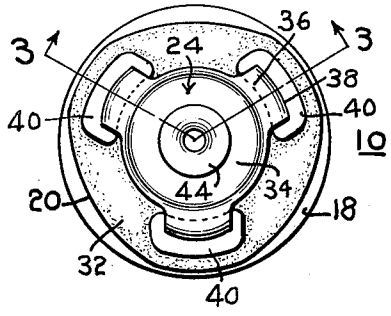


FIG. 3.

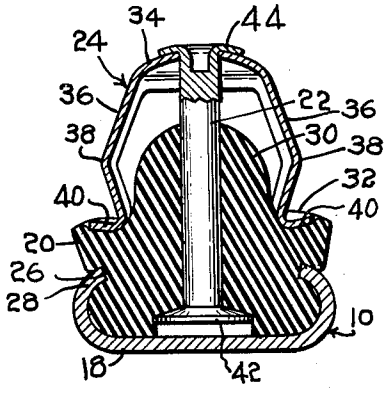


FIG. 4.

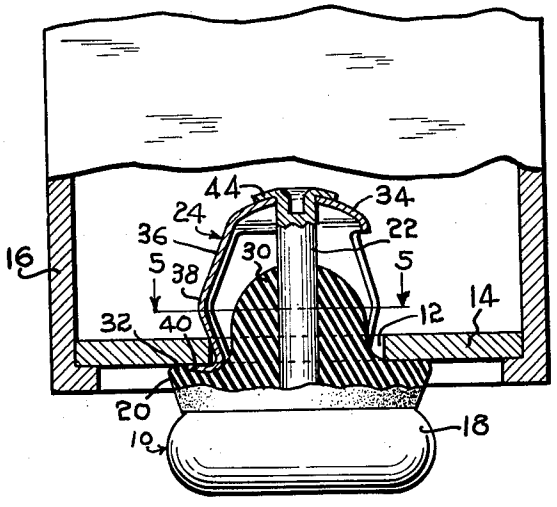
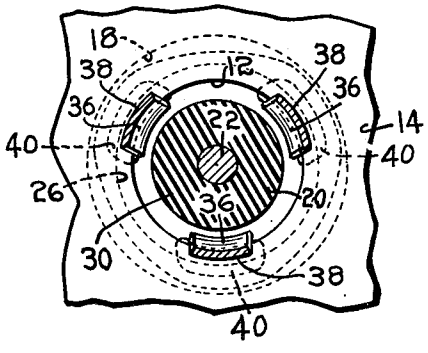


FIG. 5.



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SLIDING CASTER TYPE SUPPORT

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5 Claims. (Cl. 16—30)

1

This invention relates generally to supports, and has particular reference to a support for an article of furniture or the like.

The object of the invention is to provide a support for snapping engagement into a support plate opening.

A further object of the invention is to provide a support having plate-engaging snap arms, in which means is provided to prevent substantial movement of the ends of the arms to increase the strength of the snap action.

A still further object of the invention is to provide a support in which shouldered arms have their free ends seated on a resilient member to prevent substantial movement of the ends of the arms during assembly into an opening in a support plate.

Other objects of the invention will, in part, be obvious and will, in part, appear hereinafter.

In the drawing:

Fig. 1 is a view in elevation of a support embodying the features of the invention;

Fig. 2 is a top plan view of the support of Fig. 1.

Fig. 3 is a view in section taken on line 3—3 of Fig. 2;

Fig. 4 is a view in section of the support of Fig. 1 assembled into a support plate opening; and

Fig. 5 is a view in section taken on line 5—5 of Fig. 4.

Referring to the drawing, there is illustrated a support 10, which is adapted for snapping engagement into an opening 12 in the support plate 14 of a leg 16 of an article of furniture or the like.

In the preferred embodiment, the support 10 comprises a cup-shaped base 18, a resilient member 20 assembled with the base, a center rod 22 extending upwardly through the resilient member, and a plate-engaging member 24 assembled onto the upper end of the rod.

The resilient member 20 may be formed of natural or synthetic rubber, resilient plastic, or the like, and is provided with a peripheral recess 26 to receive the inturned rim 28 of the cup-shaped base, and has a raised portion 30 disposed centrally on the upper side, with a peripheral rim 32 disposed about the raised portion.

The plate-engaging member 24 comprises a center portion 34 and a series of legs 36 extending therefrom toward the resilient member. The legs 36 are inclined radially outwardly from the center portion and then inwardly, forming shoulder portions 38 disposed in spaced relation

2

to the rim 32 of the resilient member, and terminate in relatively broad flat feet 40 which are seated on the rim 32 and in abutting relation with the raised center portion 34. To retain the plate-engaging portion in assembly, the lower end of the rod is provided with a flange 42 for bearing against the bottom of the resilient member, and the upper end of the center rod extends through a suitable opening in the center portion 34 and is headed or curled over thereabove as at 44. During assembly of the device, the heading of the upper end of the center rod is done with sufficient force that the feet 40 of the legs are compressed downwardly into the rim of the resilient member, so that the feet remain partially embedded therein. The broad feet on the legs prevent cutting or tearing of the resilient member during this operation.

The device is assembled into the support plate opening 12 by simply pushing the plate-engaging member through the opening so that the shoulders 38 snap into engagement behind the edges of the plate, with the plate bearing against the rim 32 of the resilient member. During such engagement, the legs 36 flex inwardly to allow the shoulders to pass through the opening, and the strength of the legs in resisting such flexing, to impart a strong snap action thereto, is enhanced by the fact that the movement of the feet 40 is restricted by reason of their being compressed into the rim 32, and by abutting the raised center portion 30 of the resilient member. Hence, any such movement can be accomplished only by deformation of the portion of the resilient member immediately adjacent the feet, and consequently the legs 36, being supported at both ends, require a relatively large force to cause sufficient flexing thereof to allow the shoulders to pass through the opening, thereby increasing the holding power of the legs.

Although the device illustrated is designed for assembly into an opening in a support plate, with minor modifications, it may also be adapted for assembly into the end of a tubular member, such as a tubular chair leg. Although three legs are provided in the illustrated embodiment, it will be understood that other numbers may be used in some cases with equally good results.

Since certain other obvious modifications may be made in the device without departing from the scope of the invention, it is intended that all matter contained herein be interpreted in an illustrative and not in a limiting sense.

I claim:

1. A support for snapping engagement into an

opening in a plate comprising a base, a resilient member assembled onto the base, a center rod extending upwardly through the center of the resilient member, and a plate-engaging member having a center portion assembled onto the rod above the resilient member and a series of legs extending from the center portion toward the resilient member, said legs having outwardly extending shoulder portions spaced from the resilient member for snapping engagement into the plate opening, the ends of the legs being seated on the resilient member.

2. A support for snapping engagement into an opening in a plate, comprising a base, a resilient member assembled onto the base, a rod extending upwardly through the center of the resilient member, and a plate-engaging member having a center portion assembled onto the rod above the resilient member and a series of legs extending downwardly therefrom toward the resilient member, said legs having outwardly extending shoulders disposed in spaced relation to the resilient member for snapping engagement into the plate opening, and relatively broad flat feet seated on the resilient member, said feet being compressed into said resilient member so that said feet and the ends of the legs are retained against substantial movement.

3. A support for snapping engagment into an opening in a plate, comprising a base, a resilient member assembled onto the base, a rod extending upwardly through the resilient member, and a plate-engaging member having a center portion assembled onto the rod above the resilient member and a series of legs extending therefrom toward the resilient member, said legs having shoulders disposed thereon in spaced relation to the resilient member for snapping engagement into the plate opening, the ends of said legs being seated on the resilient member, said resilient member having a raised portion disposed between the ends of the legs, said legs abutting said raised portion to resist substantial inward flexing of the ends of said legs.

4. A support for snapping engagement into an opening in a plate, comprising a base, a resilient member assembled onto the base, a rod extending upwardly through the resilient member, and a plate-engaging member having a center portion assembled onto the rod above the resilient member and a series of legs extending therefrom toward the resilient member, said legs having outwardly extending shoulders disposed thereon in spaced relation to the resilient member for snapping engagement into the plate opening, the ends of said legs having relatively broad flat feet, the plate-engaging member being so assembled onto the rod that the feet are compressed into the surface of the resilient member, said resilient member having a center raised portion disposed inside the ends of the series of legs, the ends of said legs being in abutting relation with said raised portion, whereby substantial movement of the ends of the legs due to flexing of the legs during assembly into the plate opening is prevented.

5. A support for snapping engagement into an opening in a plate, comprising a resilient member, a center rod extending upwardly through the center of the resilient member, and a plate-engaging member having a center portion assembled onto the rod above the resilient member, said legs having outwardly extending shoulder portions spaced from the resilient member for snapping engagement into the plate opening, the ends of said legs being compressed into said resilient member so that said ends are retained against substantial movement.

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