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BUMPER FOR FURNITURE LEGS

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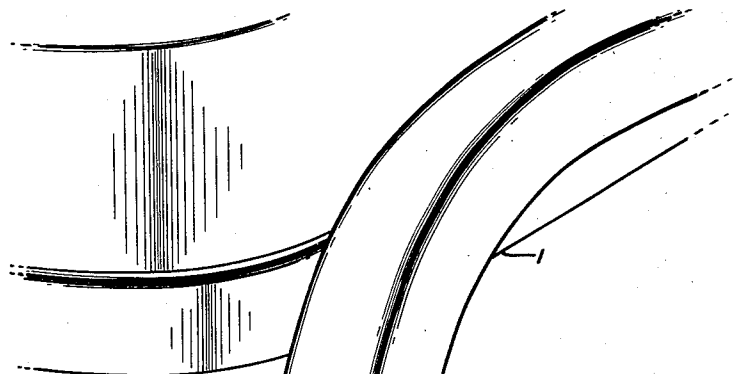


Fig. 1.

Fig. 2.

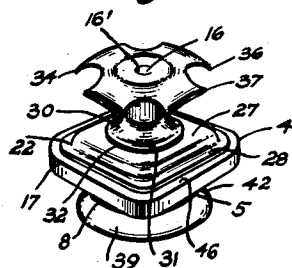


Fig. 3.

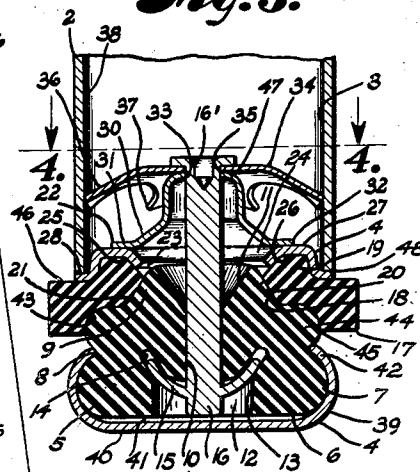


Fig. 4.

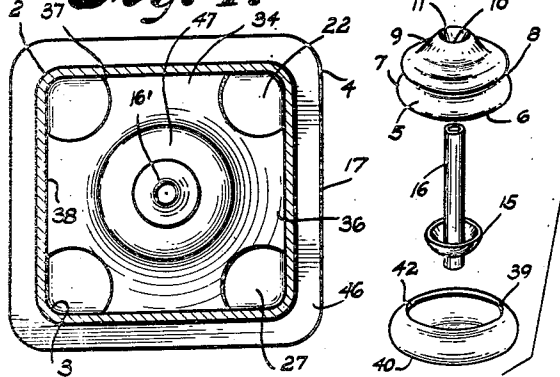


Fig. 5.

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BUMPER FOR FURNITURE LEGS

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2 Claims. (Cl. 16—42)

This invention relates to bumpers for the legs of furniture, and more particularly to a bumper for chair legs of the shoe glide type.

The principal objects of the present invention are to provide a bumper on the lower end of the chair leg and secured thereto by a shoe; to provide a bumper of this character which extends outwardly from the periphery of the lower end of the leg of furniture to prevent the chair from marring the walls or other pieces of furniture in the room; to provide a bumper on the lower end of the leg of the chair to prevent marring of the chair when storing the same or for shipping in nested relation; to provide the shoe including the glide member with a rubber bumper whereby the shoe may be pressed into the open end of the leg of the chair and retained thereon by gripping means; to provide for resilient action in the shoe and bumper member to accommodate for the weight of the user of the chair; and to provide a device of this character simple and economical to manufacture.

In accomplishing these and other objects of my invention I have provided improved details of structure the preferred forms of which are illustrated in the accompanying drawings, wherein:

Fig. 1 is an enlarged perspective view of the lower portion of a chair leg and chair seat showing my invention.

Fig. 2 is a perspective view of the shoe for the lower end of the chair showing the rubber bumper.

Fig. 3 is an enlarged sectional view of the shoe including the bumper.

Fig. 4 is a cross sectional view taken on a line 4—4, Fig. 3.

Fig. 5 is a disassembled view of the parts of the shoe including the rubber bumper.

Referring more in detail to the drawings:

1 designates a chair frame and 2 a chair leg of hollow construction as indicated at 3 preferably of metal, such as aluminum or the like, and the lower end being open for receiving a shoe indicated generally at 4.

The shoe comprises a resilient member 5 preferably molded of rubber having a horizontal plane bottom surface 6 and has its annular side wall 7 rounded and tapered inwardly forming an annular groove 8 therearound. The rubber member 5 has a tapered upper portion 9 and is provided with a central bore 10, the upper portion of the bore of the bumper being enlarged as indicated at 11. The lower portion of the rubber member 5 has a central counterbore socket 12 and from the upper edge 13 of which is extended an annular groove 14 for receiving a cup shaped flange 15 on a stem 16 adapted to extend through the central bore 10 of the rubber member, the cup shaped flange being suitably formed or rigidly secured to the stem as best illustrated in Fig. 3.

A resilient rubber bumper 17 is here shown to be of substantially square shape, although I do not wish to be limited to any particular shape of chair leg or bumper. It has a central tapered opening 18 for engaging over the stem 16 and has its lower surface conforming substan-

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tially to the upper surface of the rubber member 5 also as best illustrated in Fig. 3. The bumper 17 has an annular upstanding flange 19 around the upper portion thereof and an annular shoulder 20 which engages the upwardly tapered portion 9 of the rubber member 5 as indicated at 21. A retainer member 22 has a central opening 23 and an annular peripheral flange 24 which engages the top of the rubber bumper member 17 as indicated at 25, thereby forming a groove 26 in which the upstanding shoulder 19 of the bumper member 17 engages. The retainer has a plane surface 27 surrounding the opening 23 and is flared outwardly as indicated at 28.

A bell-shaped member or derby 30 is provided having a flared skirt portion 31 and an annular flange 32 which is adapted to engage the plane surface 27 of the retainer member. The bell member has an opening 33 in the top through which the stem 16 engages. A grip plate 34 having an opening 35 engages over the stem 16 and the end of the stem is peened as indicated at 16' to retain the grip plate on the stem. The grip plate has a plurality of legs 36 having sharp edges 37 which engage the inner side walls 38 of the chair leg to aid in retaining the shoe in the hollow leg of the chair.

A glide or cap plate 39 has a plane surface 40 which engages the floor where the chair is used and is spaced from the rubber member 5 as indicated at 41 and has its edges turned upwardly and inwardly forming an annular rim 42 for engaging in the annular groove 8 of the rubber member 5 for retaining the glide on the rubber member and to provide an easily movable chair over the floor surface.

In assembling the device constructed as described the stem 16 is inserted through the opening 10 in the rubber member 5 and the flanges 15 engage in the groove 14 of the rubber member. The rubber bumper 17 is then placed over the stem 16 and the annular groove 43 engages over the annular rounded portion 44 of the rubber member 5 and the lower part of the tapered opening 18 engages against the tapered portion 9 of the rubber member to form a tight fit thereon, as indicated at 45. The retainer member 22 is then placed over the stem 16 until the lower side of the flange engages against the flange or plane surface 46 of the rubber bumper member 17 and the upstanding annular shoulder 19 of the rubber member fits in the annular groove 26 of the retainer member. The inwardly and downwardly flared flange 24 of the retainer member fits in the cone shaped upper portion of the opening 18 of the rubber bumper member 17. The bell-shaped member 30 is then sleeved over the stem 16 and placed upon the flat portion 27 of the retainer member 22 whereafter the stem 16 is inserted in the opening 35 of the grip plate 34 which then engages against the top 47 of the bell-shaped member and the stem is then peened over to form a rigid structure or shoe. The shoe is then placed in the open end 4 of the chair leg and pressed or swedged therein until the lower edge 48 of the chair engages the flared portion 28 of the retainer member. The grip plate is slightly larger in diameter than the inside of the leg structure and assumes a downwardly flared position as best illustrated in Fig. 3 and the legs 36 with the sharp edges 37 will bite into the inner surface of the tubular leg to retain the shoe in place.

It will be noted that the rubber bumper member 17 extends outwardly from the leg of the chair to provide the bumper for the leg and to prevent marring of other furniture or stacking when the chairs are nested for shipping or storing. When the chair is in use the glide space 41 between the cap plate 40 and the rubber member 5 will provide some resiliency in the shoe when in use.

It will be obvious from the foregoing that I have provided an improved bumper for a shoe for chairs or the

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like which is easily constructed and economical in use.

What I claim and desire to secure by Letters Patent is:

1. A shoe for a tubular chair leg comprising, a retainer having a boss engaging in the end of the leg and having a lateral annular flange engaging the lower edge of the chair leg and having a central opening, a stem, an upwardly extending annular flange on the lower end of the stem, a rubber member having an opening through which the stem extends, said rubber member having a socket in the bottom thereof and an annular groove extending upwardly from the socket for receiving the annular flange on said stem, said rubber member having a boss on its upper side for engaging said retainer, a resilient bumper member having a central opening engaging the boss on the rubber member and extending outwardly between said member and said retainer beyond the periphery of said leg, and means retaining the shoe in said leg.

2. A shoe for a tubular chair leg comprising, a retainer having a boss engaging in the end of the leg and having a lateral annular flange engaging the lower edge of the chair leg and having a central opening, a stem, an

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upwardly extending annular flange on the lower end of the stem, a rubber member having an opening through which the stem extends, said rubber member having a socket in the bottom thereof and an annular groove extending upwardly from the socket for receiving the annular flange on said stem, said rubber member having a boss on its upper side for engaging said retainer, a bell-shaped member having an annular flange engaging said retainer, a resilient bumper member having a central opening engaging the boss on the rubber member and extending outwardly between said member and said retainer beyond the periphery of said leg, and means retaining the shoe in said leg.

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