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W. E. NORDMARK ETAL

3,173,168

FURNITURE GLIDE

Filed May 14, 1963

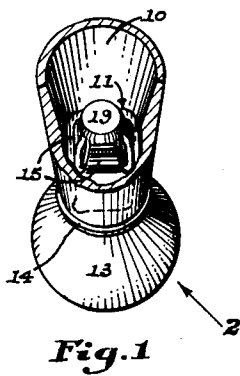


Fig. 1

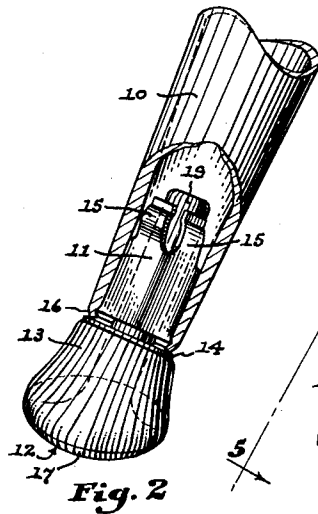


Fig. 2

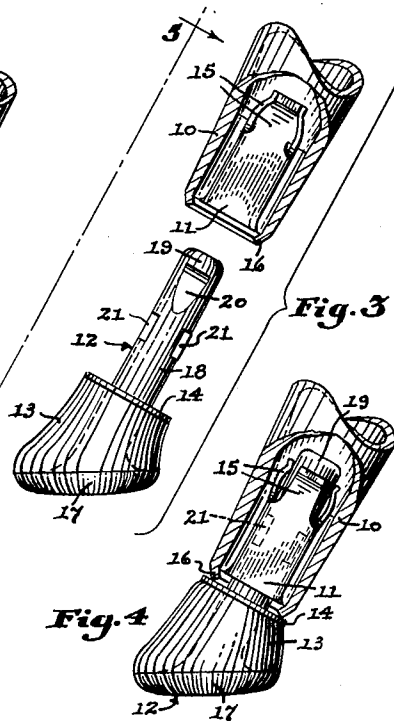


Fig. 3

Fig. 4

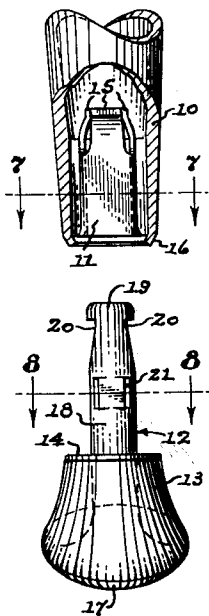


Fig. 5

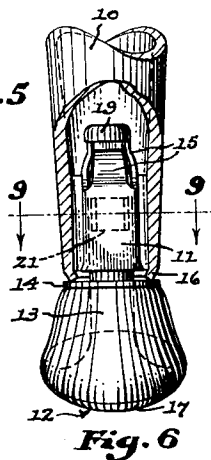


Fig. 6

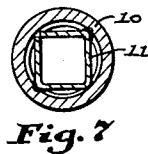


Fig. 7

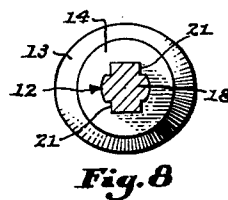


Fig. 8

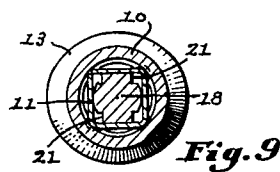


Fig. 9

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3,173,168 FURNITURE GLIDE

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5 Claims. (Cl. 16—42)

The present invention relates to furniture glides and more particularly to glides adapted for attachment to tubular metal furniture legs.

The primary objects of the invention are to provide such a furniture glide which may quickly and easily be assembled to a tubular metal furniture leg; to provide such a glide which when assembled to the furniture leg cannot easily be removed therefrom by vandals; to provide such a glide having a cushioning element which cushions any sudden load placed on the article of furniture to which it attached, thus to minimize any denting of floors such as linoleum; to provide such a glide which can be disassembled from the furniture leg for replacement of the cushioning element should the latter become worn or damaged; and in general to provide such a glide which is simple and rugged in construction, economical in manufacture and attractive in appearance.

An illustrative embodiment of the invention is shown in the accompanying drawing, wherein:

FIGURE 1 is a top plan view of the glide assembled to a tubular metal furniture leg shown fragmentarily;

FIGURE 2 is an elevational view of the glide assembled to the leg, the view being taken from a 45° angle as indicated by the arrow 2 of FIGURE 1;

FIGURE 3 is a view partly in side elevation and partly in vertical section of a retainer sleeve assembled to the furniture leg and the glide assembly prior to its assembly to the leg;

FIGURE 4 is a similar view showing the glide fully assembled to the leg;

FIGURE 5 is a front elevational view of the partially assembled glide, as viewed from the line 5—5 of FIGURE 3;

FIGURE 6 is a similar view showing the glide fully assembled to the furniture leg;

FIGURE 7 is a horizontal sectional view taken on the line 7—7 of FIGURE 5;

FIGURE 8 is a horizontal sectional view taken on line 8—8 of FIGURE 5; and

FIGURE 9 is a horizontal sectional view taken on the line 9—9 of FIGURE 6.

Referring now in detail to this drawing, the new glide is there shown in various stages of assembly to a tubular metal furniture leg 10, only the lowermost fragment of which is shown and which is also broken away in FIGURES 1—6. The leg 10 is here shown sloping as if it were the leg of a chair, and the glide is designed to compensate for the slope so that its floor-contacting surface lies flat on the floor (see FIGURES 3 and 4).

In general the glide comprises a sheet metal retainer sleeve 11, an integrally formed cast metal foot and shank element 12, a rubber or plastic cushioning element 13, and a metal washer 14.

The retainer sleeve 11 is a cross-sectional square and has at its upper end four prongs 15 which extend upwardly from the four sides of the sleeve, and which extend normally inwardly and are of springable metal. This retainer sleeve 11 is forced into the open lower end of the tubular metal furniture leg 10, the four corners of the sleeve biting into the metal of the inside wall of the leg so that the sleeve is securely anchored inside the leg. The extreme lowermost end of the leg is thereafter turned

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slightly inwardly as indicated at 16 to additionally anchor the retainer sleeve 11 inside the leg 10.

The floor-contacting foot 17 of the foot and shank element 12 is generally oval-shaped and its bottom surface is convex in form. The upwardly extending shank 18 is of generally cylindrical form and has at its upper end a head 19 which is formed by undercuts 20 made in the shank on diametrically opposite sides thereof (see FIGURES 3 and 5). The shank 18 is canted relative to the foot 17 to orient the shank with the sloping furniture leg 10. The shank 18 has a region 21 intermediate its ends which is filleted on opposite sides of the shank for a purpose hereinafter described.

In the final assembly of the glide to the furniture leg, the rubber cushioning element 13 and the metal washer 14 are first mounted on the shank 18 as seen in FIGURES 3 and 5. With the retainer sleeve 11 in position in the furniture leg 10, also as seen in FIGURES 3 and 5, the glide assembly is pushed upwardly into the leg with the shank 18 entering the sleeve 11. The prongs 15 of the sleeve 11 are sprung outwardly by the shank's head 19 to permit passage of the head thereby and thereafter the prongs 15 spring inwardly to engage behind the head 19 and thus prevent removal of the glide assembly from the tubular furniture leg 10. The filleted region 21 of the shank 18 engages opposite inner walls of the square sleeve 11 to prevent turning movement of the shank, thus maintaining the glide in properly oriented position on the furniture leg.

Provision is made for removal of the glide assembly for replacement of the rubber cushioning element 13 should the latter become worn or damaged. This is accomplished by first cutting away the damaged cushioning element. The foot and shank element 12 can then be pushed farther up into the furniture leg 10 until the filleted region 21 of the shank 18 clears the squared body of the sleeve 11. The shank can then be rotated 45° so that none of the four prongs 15 registers with the undercuts 20 in the shank 18, and the shank can then be withdrawn from the sleeve 11. After replacing the cushioning element 13, the glide assembly can be reassembled to the leg 10 in proper orientation as previously described.

It will thus be seen that the invention provides a simple and effective glide for a tubular metal furniture leg, and while but one specific embodiment of the invention has been herein shown and described it will be understood that numerous details thereof may be altered or omitted without departing from the spirit of the invention as defined by the following claims.

We claim:

1. In a furniture glide for attachment to the lower end of a tubular metal furniture leg, a retainer sleeve adapted for insertion into a frictional retention in the lower end of said furniture leg, said retainer sleeve having a lower cross-sectionally squared portion and at its upper end a plurality of upwardly and normally inwardly-extending springable prongs, and a floor-contacting glide assembly having an upwardly-extending shank which is undercut at spaced points below the upper end to provide a head thereabove, said shank being also filleted intermediate its ends to engage sides of the square sleeve to prevent turning movement of the shank within the sleeve, said shank being insertable upwardly through said retainer sleeve, and said prongs being sprung outwardly by the head to permit passage of the head thereby, and thereafter springing inwardly to engage the said undercut recesses, said shank being movable upwardly to free said filleted portion thereof from said square sleeve to permit turning movement of the shank for disengagement of said prongs with said recesses to permit withdrawal of said glide assembly from said retainer sleeve.

2. A furniture glide according to claim 1 in which said cross-sectionally square retainer sleeve is embedded into the inner wall of the tubular metal furniture leg.

3. A furniture glide according to claim 1 in which the undercuts are made in the shank on diametrically-opposite sides thereof.

4. A furniture glide according to claim 1 in which the shank is provided with a floor-contacting foot integrally formed on the lower end of the shank and in which a cushioning element is interposed between said foot and the lower end of said tubular metal furniture leg.

5. A furniture glide according to claim 4 in which said cushioning element is formed of resilient material which may be cut away to permit upward movement of said

shank for disengagement of the glide assembly from said retainer sleeve.

References Cited by the Examiner

UNITED STATES PATENTS

1,016,654	2/12	Thompson	-----	16—37
1,761,319	6/30	Vollmer	-----	16—39
1,855,625	4/32	Darnell	-----	16—42
1,954,458	4/34	North.		
2,567,441	9/51	Miller		
3,080,601	3/63	Kramcsok	-----	16—42

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