April 10, 1934. E. W. NORTH 1,954,458

FURNITURE GLIDE

Filed April 11, 1930

Fig. 1.

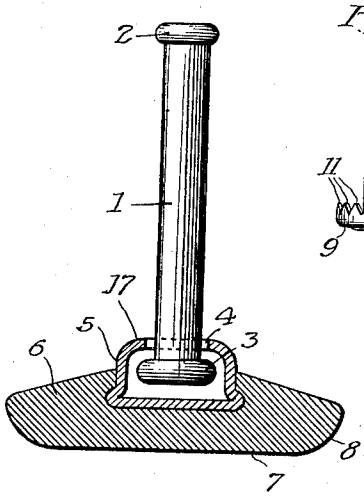


Fig. 4.

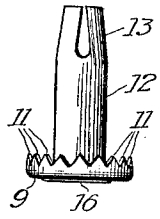


Fig. 2.

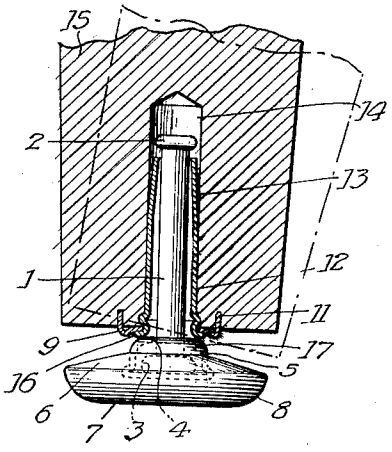


Fig. 3.

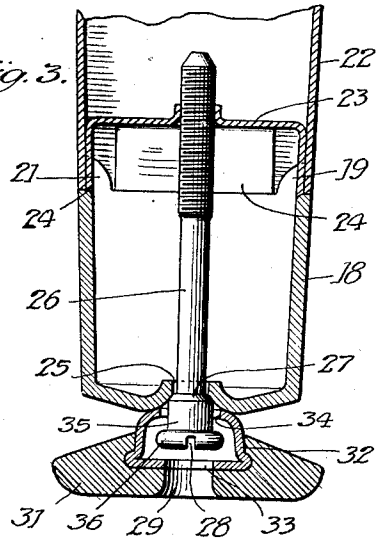
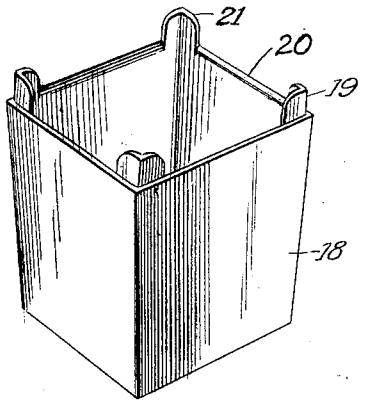


Fig. 5.



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Patented Apr. 10, 1934 1,954,458

UNITED STATES PATENT OFFICE

1,954,458

FURNITURE GLIDE

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Application April 11, 1930, Serial No. 443,402

7 Claims. (Cl. 16—42)

This invention relates to improvements in sliding shoes for furniture or as they are sometimes called furniture glides.

Among the objects of this invention is to provide an improved construction of the sliding shoe and the attaching means to reduce the cost of and facilitate manufacturing and assembling of the devices. Low cost and durability are important characteristics which must be attained in a device of this character in order that its advantages may be made available in low priced furniture as well as in expensive furniture.

Other objects, advantages and capabilities inherently possessed by this invention should become apparent after a perusal of this specification.

In the drawing:

Fig. 1 is a central vertical sectional view of one form of the furniture glide provided in this invention.

Fig. 2 is a central vertical section of the same glide and its attaching means mounted in a leg of a piece of furniture.

Fig. 3 is a modified form of the glide shown secured to a desk leg.

Fig. 4 is a side elevation of the pin retaining means, and

Fig. 5 is a perspective of the socket forming part of the desk leg.

Referring now to the drawing the glide is comprised of a spindle 1 having an enlarged bead 2 at one end and a similar bead 3 at the other end, the lower bead being somewhat larger in diameter than the circular aperture 4 which is provided in the socket 5 so that the spindle will not become detached from the shoe 6 whenever the piece of furniture is lifted clear of the floor.

The socket and spindle are first assembled by placing the lower bead 3 inside of the socket and pressing or spinning or in any other suitable manner reducing the size of the aperture 4 so that the spindle and socket may not thereafter become disengaged. The socket is then inverted and placed in a mold with the spindle depending through a hole in the bottom of the mold. Part of the socket also extends into this hole so that when the composition in plastic or fluid condition is placed in the mold and hardened about the socket, that part of the socket remains exposed, as is shown in the finished glide. The composition employed for the shoe is hard rubber or other suitable material such as "bakelite" having adequate strength for the purpose and which may be provided with a smooth bottom surface 7 suitable for a furniture glide. A beveled edge 8 is provided on the shoe to facilitate the shoe gliding up over the edges of the carpets, thresholds and other obstructions.

The attaching means shown in Fig. 2 comprises a collar 9 having serrated teeth 11 which are forced into the wood on the bottom of the leg of the piece of furniture. The collar 9 is provided with a central aperture in which is securely crimped a cylindrical sleeve 12, the upper portion 13 of which is slotted and pinched together to provide it with a reduced diameter at its upper end. This upper portion is sufficiently resilient to permit the upper beaded end 2 of the spindle to be pushed upwardly therethrough into the position shown in Fig. 2. Thereafter the beaded end cannot be withdrawn readily except by the application of great force, which would not be contemplated unless the device were to be disassembled. The side walls of this cylindrical sleeve 12 will have an external diameter approximately equal to the internal diameter of the hole 14 which is provided in the furniture leg whereby a snug fit of the sleeve within that hole may be attained.

With the furniture glide and attaching means assembled as shown in Fig. 2 the weight of the furniture which is supported on the furniture leg 15 is transmitted through the collar 9 and the bottom outwardly flared end 16 of the sleeve upon the top rounded surface 17 of the socket and thence into the shoe 6. As the shoe is molded snugly about the socket 5 the weight of the furniture is therefore distributed over a broad area of the shoe and will be found to have no tendency to crack the shoe. Even though the furniture leg may be tilted as much as is shown by the dotted lines in Fig. 2 the glide will remain level upon the floor and no force will be imparted thereto which would tend to fracture the shoe. As the furniture leg is tilted the flared portion 16 of the sleeve continues to bear evenly upon the top rounded surface of the socket permitting a free movement of the furniture leg relatively to its shoe. At no time will the weight of the furniture be transmitted through the spindle, the spindle serving, however, to prevent the shoe from falling away from the furniture leg if the latter be lifted. The aperture 14 in the socket is sufficiently large to allow as much angular movement of the furniture leg relatively to the shoe in any direction as may be expected to occur.

The modification shown in Fig. 3 is especially designed for use where an ornamental attachment such as a bronze socket is placed upon the bottom of a square hollow metal furniture leg. The socket 18 which may be of bronze, brass or other suitable metal is provided with four ears such as the ears 19 and 21, each of which is inserted upwardly into a corner of the hollow square leg 22 of the piece of furniture. A yoke 23 having four depending legs each like the leg 24 is snugly secured in any suitable manner within the hollow furniture leg either by a driving fit, by welding or in any other suitable manner. The lower extremity of each leg of the yoke may

be flush with the bottom of the furniture leg and thus contact with the upper edge 20 of the bronze socket 18.

The lower extremity of the bronze socket will preferably be fashioned as shown in Fig. 3 and provided with a central aperture 25 through which will extend a spindle 26, the upper end of which is threadedly engaged with the yoke 23. An annular shoulder 27 on this spindle will engage the marginal edges of the aperture 25 when the spindle is screwed tightly into the yoke and will thus cooperate with the threads on the spindle to lock the spindle tightly in position. A kerf 28 is provided on the bottom of the spindle by means of which the spindle may be conveniently screwed into position by inserting a screw driver through the opening 29 in the shoe 31.

The shoe is formed preferably of some composition such as hard rubber, or other suitable material and is molded about the shoe socket 32. This socket has an aperture 33 which registers with the aperture 29 in the shoe. An upper opening 34 is provided through which the enlarged portion 35 of the spindle extends. However, the aperture 34 is smaller in diameter than the bead 36 at the lower end of the spindle thus preventing the shoe from dropping off the furniture leg in case the article of furniture is lifted clear of the floor. The lower portion of the bronze socket is arranged to contact with the shoe socket 32 and thus transmit the weight of the furniture upon the shoe or glide. At no time is the weight of the furniture carried upon the spindle. However, the size of the aperture 34 permits the furniture leg to be inclined at a considerable angle without causing the spindle to contact with the side of the aperture in the socket 32 to cause the shoe itself to be tilted. The angle of movement here provided is sufficient for all practical purposes. The contacting of the bronze socket with the shoe socket is such that a universal joint action between the two parts is possible at all times.

It will be noted that in both modifications the weight of the furniture is carried upon the metal shoe socket which is calculated to constitute a good wearing surface in spite of the intrusion of dust particles and to adequately withstand any shocks which may be transmitted to it occasioned by the dropping of the furniture.

It should be understood that the modifications herein shown are those which are preferred but that other modifications may yet be devised which will remain within the spirit and scope of this invention.

Having shown and described the invention, I claim:

1. A furniture support comprising a non-metallic shoe having a floor contacting bottom surface, a metallic socket partially buried interlockingly within said shoe and having an upwardly convexed portion exposed above the shoe with an aperture therethrough, a furniture engaging pin extending loosely through said socket and provided at its lower end with means for preventing accidental disengagement of the pin and socket, and means provided in a furniture leg for normally retaining the pin in vertical position including a surface adapted for slidable movement on the convexed portion of said socket.

2. In a furniture support, a non-metallic sliding shoe, a hollow metallic socket partially buried interlockingly within the shoe having an upwardly convexed surface extending above the shoe and provided with an aperture through said surface, and a pin for rockably connecting the shoe with a furniture leg having a portion extending through said aperture and provided at its lower end with means inside of said socket for preventing accidental withdrawal of the pin from the socket.

3. In a furniture support, a non-metallic sliding shoe, a hollow metallic socket partially buried interlockingly in said shoe and having an upwardly convexed surface extending above the shoe for carrying the weight of the furniture, the top of said socket being provided with an aperture through said surface, and a pin for rockably connecting the shoe to a leg having its lower portion extending loosely through said aperture and provided with means at its lower end for preventing accidental disengagement of the pin from said socket.

4. In a furniture support, a non-metallic sliding shoe, a hollow metallic socket partially buried interlockingly in said shoe and having an upwardly convexed surface extending above the shoe for carrying the weight of the furniture, the top of said socket being provided with an aperture through said surface, and a pin for rockably connecting the shoe to a leg having its lower portion extending loosely through said aperture and provided at its lower end with an enlargement for positively preventing disengagement of the pin and socket.

5. In a furniture support, a non-metallic shoe and a metallic hollow socket immovably affixed thereto having a surface exposed above the top of said shoe and provided with an aperture through said surface, a pin extending upwardly from within said socket loosely through said aperture for connection to a furniture leg provided with means at its lower end for preventing its accidental withdrawal through said aperture, means for connecting the pin to said leg and a wearing member between the end of said leg and socket having a surface bearing on the socket surface, one of said surfaces being rounded to rockably support the leg on the socket.

6. In a furniture support, a non-metallic shoe and a metallic hollow socket immovably affixed thereto having a surface above the shoe and an aperture in said surface, means extending through said aperture for connecting said shoe to a furniture leg constructed for preventing accidental disengagement of the shoe from the leg, and a wearing member between said socket and the end of the furniture leg provided with a surface contacting said socket, one of said surfaces being so formed that the furniture leg may be rockably supported on said shoe.

7. A furniture support comprising a shoe having a floor contacting surface made of moldable non-metallic material, a metallic socket having an enlarged base buried lockingly within the shoe and having an upwardly convexed metal surface exposed above the shoe and a central opening therethrough, a pin extending loosely through said opening provided with an enlargement on the lower end for preventing its withdrawal through said opening, means for retaining the upper portion of the pin in a furniture leg and a cooperating metal wearing element secured to the furniture leg for supporting the weight of the furniture slidably upon said socket.

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