Nov. 5, 1929. G. W. SUTTON 1,734,058

SLIDING FURNITURE SHOE

Filed Aug. 20, 1927

Fig. 1.

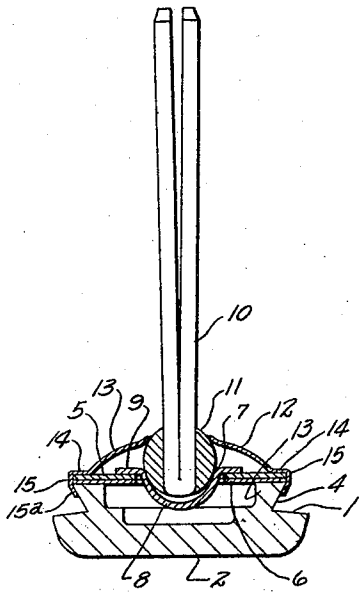


Fig. 2.

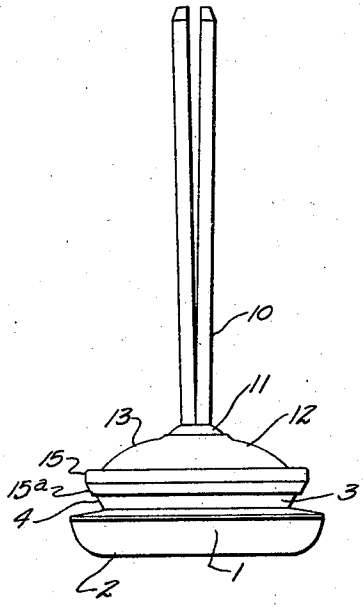


Fig. 3.

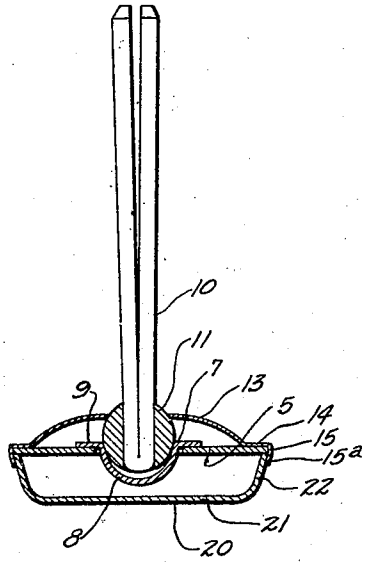
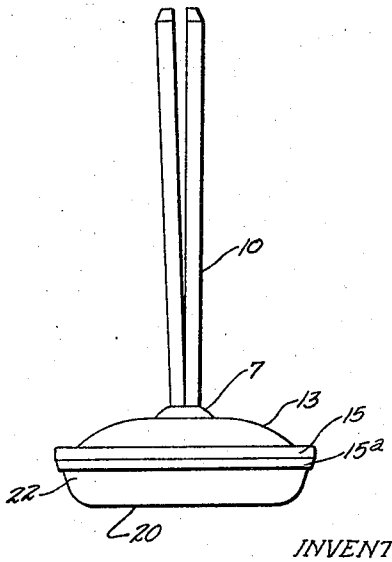


Fig. 4.



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UNITED STATES PATENT OFFICE

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SLIDING FURNITURE SHOE

Application filed August 20, 1927. Serial No. 214,293.

This invention relates to an improvement in sliding shoes for furniture of the type wherein an appropriate form of universal connection, such as a ball and socket joint, is provided between the pintle or attaching device and the shoe proper.

One object of the invention is to provide a sliding shoe of this character wherein the load is distributed over a substantial area of the base of the shoe thereby avoiding bulging and excessive wear as well as the other disadvantages that would result from concentrating the load on a small area.

Another important object is to provide a sliding furniture shoe having this novel feature of distributing the load and which also provides a substantially enclosed ball and socket joint and yet presents a construction which is extremely simple, durable, and comparatively easy and inexpensive to manufacture.

Still another important object resides in the provision of a sliding shoe which incorporates cushioning means between the shoe base and the elements which transmit the load to the base. This feature is an especial advantage when a glass base or some other type of non-metallic base is employed.

Other objects and advantages reside in certain novel features of the construction, arrangement and combination of parts which will be hereinafter more fully described and particularly pointed out in the appended claims, reference being had to the accompanying drawings forming a part of this specification, and in which:

Figure 1 is a view partly in central vertical section and partly in side elevation showing one form of sliding shoe embodying the present invention;

Figure 2 is a view in side elevation of the device shown in Figure 1;

Figure 3 is a view similar to Figure 1 showing a slightly different type of construction; and

Figure 4 is a view in side elevation of a device shown in Figure 3.

Referring to the drawing and more especially to Figures 1 and 2 numeral 1 designates the base of the shoe. In this form of the invention a non-metallic base, such as a glass base, is provided and has a flat and smooth bottom 2 of relatively broad area and also has an integral upwardly projecting annular flange 3 around its periphery, the flange 3 being formed with an inwardly inclined or undercut outer face 4.

An annular load distributing plate 5 is provided and in this embodiment of the invention rests on a similarly shaped cushioning washer 6 interposed between the load distributing plate 5 and the upper face of the flange 3. As shown in Figure 1, the washer 6 has its outer periphery engaged with this flange 3 and the supporting action of the flange 3 is transmitted to the outer periphery of the load distributing plate 5. Inwardly of the flange 3 the load distributing plate 5 and also the washer 6 are spaced from the intermediate portions of the base. A socket piece 7 is provided and comprises a ball receiving body portion 8 and an integral supporting flange 9, the body portion 8 depending through the openings of the load distributing plate 5 and washer 6 while the flange 9 flatly engages the upper face of the plate 5 around its central opening.

An attaching device or pintle 10 is provided and has a ball 11 at its lower end. Any suitable form of attaching device may be employed and the ball 11 may be solid, as shown, or may be a sheet metal stamping suitably attached to the pintle. A combined cover and retaining member, designated generally at 12, is provided and has an upwardly dished or crowned body portion 13, an outwardly extending horizontal flange 14 flatly engaging the upper face of the outer periphery of the load distributing plate 5, and a depending vertical flange 15 engaging the peripheral edges of the plate 5 and washer 6 and having its lower extremity 15^a deflected or spun inwardly into snug engagement with the undercut face 4 of the flange 3 whereby to secure the plate 5 and the washer 6 in position and retain the ball 11 operatively engaged with the body portion 8 of the socket. With this form of the invention the load is transmitted from the ball 11 of the attaching device to the socket piece 7 and through the flange 9 of

this socket piece to the load distributing plate 5. In this connection it is to be noted that the socket piece is located in spaced relation to the base thereby avoiding direct transmission of the load. The load taken by the plate 5 is transmitted through the cushioning washer 6 to the flange 3 and thus is distributed over the relatively broad area of the base and is not localized or concentrated on any one portion of the base. The resiliency of elasticity of the cushioning washer 6, which may be of any suitable composition or material, absorbs any severe shocks or sudden strains to prevent injury or breakage of the base 1.

The form of the invention shown in Figures 3 and 4 is identical with that just described with the exception that a different type of base is employed and the cushioning washer is omitted. In Figures 3 and 4 a sheet metal base, designated generally at 20, is provided and has a flat and relatively broad and smooth bottom 21 and has an integrally upwardly directed flange 22. The load distributing plate 5 has its periphery resting on the upper edge of this flange 22 and it is held thus assembled with the flange of the base by the action of the flanges 14 and 15 of the cover and retaining member 13. As in the other form of the invention, the flange 9 of the socket 7 is horizontally disposed and flatly engages the plate 5 while the body portion 8 of this socket is located in spaced relation to the base 20. By avoiding direct engagement of this socket 7 and the base 20 and by distributing the load over a substantial area of the base, bulging, excessive wear and injury to the base is avoided.

The invention claimed is:

1. A sliding shoe for furniture comprising a base having a relatively broad and flat bottom and provided with a peripheral flange, a load distributing plate supported on the peripheral flange and spaced from the intermediate portion of the base, a socket member carried by the plate and spaced from the base, an attaching device having a ball fitted in the socket member, and a cover plate having an upwardly dished and appropriately apertured body portion substantially enclosing the ball and socket and having means around its periphery coacting with the load distributing plate and with the flange of the base to maintain the assembly.

2. A sliding shoe for furniture comprising a base having a relatively broad and flat bottom and provided with an upwardly directed flange around its periphery, a flat load distributing plate supported at its periphery on the upper edge of said flange and otherwise spaced from the base, said load distributing plate being centrally apertured, a socket member having a ball receiving body portion depending through the opening of the plate and located in spaced relation to the base, said ball receiving body portion having a horizontal flange flatly engaging the load distributing plate around the central opening thereof, an attaching device having a ball fitted in said ball receiving body portion, and a cover plate substantially enclosing the ball and socket and having a flange arrangement around its periphery coacting with the load distributing plate and with the flange of the base to maintain the assembly.

3. A sliding shoe for furniture comprising a base having a relatively broad and flat bottom and provided with an upwardly directed peripheral flange, a load distributing plate located in spaced relation to the base, a cushioning washer interposed between the plate and the flange whereby the plate has its peripheral portion elastically supported on on flange, a socket member carried by the plate and spaced from the base, an attaching device having a ball fitted in the socket member and a cover plate substantially enclosing the ball and socket and coacting with the flange to maintain the assembly.

In witness whereof, I hereto affix my signature.

GEORGE W. SUTTON.