Feb. 28, 1933. W. H. NOELTING 1,899,395

ROCKING STEM SLIDE

Filed Dec. 21, 1931

FIG. 1

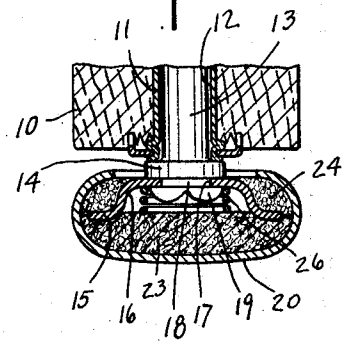


FIG. 2

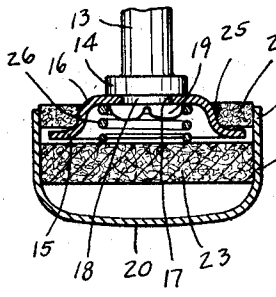


FIG. 3

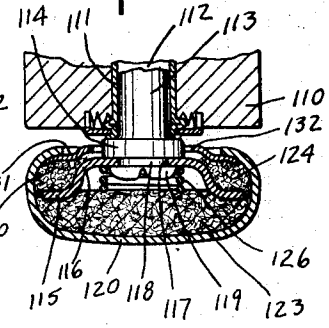


FIG. 4

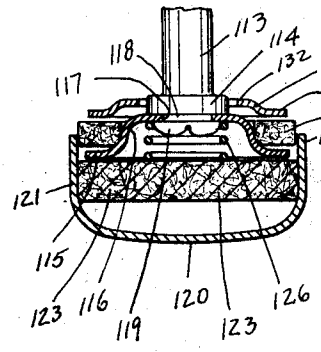


FIG. 5

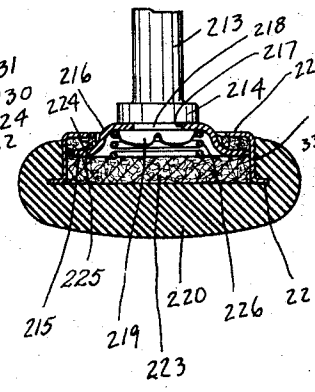


FIG. 6

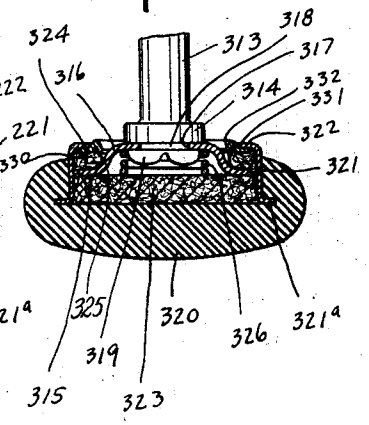


FIG. 7

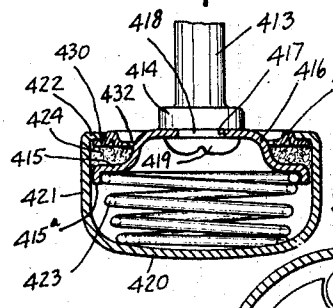


FIG. 8

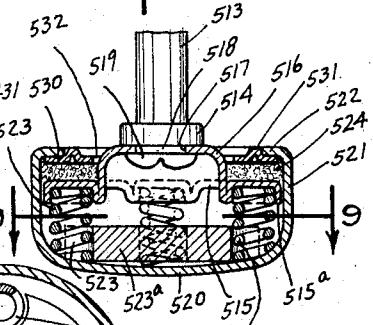
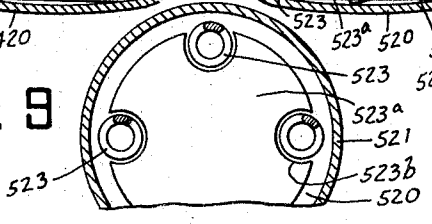


FIG. 9



INVENTOR.
WILLIAM H. NOELTING.

BY Lockwood Lockwood
Goldsmith & Galt
ATTORNEYS.

Patented Feb. 28, 1933 1,899,395

UNITED STATES PATENT OFFICE

WILLIAM H. NOELTING, OF EVANSVILLE, INDIANA, ASSIGNOR TO FAULTLESS CASTER COMPANY, OF EVANSVILLE, INDIANA, A CORPORATION

ROCKING STEM SLIDE

Application filed December 21, 1931. Serial No. 582,264.

This invention relates to a rocking cushion slide.

The chief object of this invention is to provide a slide which can be suitably mounted upon furniture legs and which will permit the leg and the anchorage portion of the slide to tilt relatively to the base portion and which is so arranged that when desired there is no metal to metal contact between the anchorage portion or parts supported thereby and the slidable base.

The chief feature of the invention consists in the rigid mounting of a plate upon a slide anchoring member and yieldingly associating the same with a base in such a manner that the anchorage portion has tilting movement relative to the base and without contact with the base portion.

The full nature of the invention will be understood from the accompanying drawing and the following claims and description:

In the drawing, Fig. 1 is a central sectional view of one form of the invention applied to a furniture leg provided with a socket, the slide being of and illustrated as of the stem anchorage type.

Fig. 2 illustrates the parts of the slide in assembled relation just previous to securing all of the parts together in operative relation.

Fig. 3 is a view similar to Fig. 1 and of a modified form of the invention.

Fig. 4 is a view similar to Fig. 2 and of the form of the invention shown in Fig. 3.

Fig. 5 is a view similar to Fig. 1 and of a still further modified form of the invention.

Fig. 6 is a view similar to Fig. 3 and of a further modified form of the invention, the modifications shown in Figs. 5 and 6 differing from each as the modifications shown in Figs. 1 and 3 differ.

Fig. 7 is a central section through a modified form of slide.

Fig. 8 is a similar view of a somewhat similar modification illustrated in Fig. 7.

Fig. 9 is a transverse section taken on line 9—9 of Fig. 8 and in the direction of the arrows.

In Figs. 1 and 2 of the drawing there is illustrated one form of the invention and herein 10 indicates a furniture leg equipped with a socket 11 having a tubular bore 12 that is adapted to receive a stem 13 or load sustaining anchoring portion of the slide. The stem includes an enlargement 14 and mounted on the lower end of the stem immediately below the enlargement is a centrally apertured plate having the peripheral portion 15, the upwardly directed embossed portion 16 and the coaxial recess 17, through which the stem portion 18 extends. The lower end of the stem is enlarged as at 19 and the centrally embossed plate is rigidly anchored to the stem.

A cup shaped chamber forming base—see Fig. 2—includes the curved but relatively flattened bottom portion 20 and the peripheral wall 21, terminating in the free edge 22. Nested within the chamber of said cup or base, is a cushion washer or disc 23. The plate 15 is then nested within the cup and superimposed thereon is the centrally apertured cushion washer 24 having the aperture 25 into which extends the central embossment and through which projects the stem when the parts are operatively associated together.

The parts are assembled as shown in Fig. 2 and then the free end 22 of the cup is directed inwardly into the formation shown in Fig. 1. When thus directed inwardly, the washer 24 is forced inwardly and upwardly, as illustrated, and the washer or disc 23 is forced inwardly and upwardly as illustrated. These cushion washers may be of so-called sponge rubber or may be of less resilient cushion material. At no time, therefore, does the washer 15 engage the base or cup 20. Likewise, at no time does the cushion material engage the leg or socket. Relative tilting

movement between the base and the stem is permitted by reason of the cushion connection between the base and the plate supported by the stem.

In Fig. 1 there is also illustrated a coil spring 26 which may be interposed between the plate and the base but which in this figure is shown bearing upon the cushion disc 23, although the spring may be nested in a central aperture in the disc 23 when the latter comprises a washer and said spring will then bear upon the base. With this construction the cushion washer will peripherally envelope the coil spring. Whenever desired, the cushion disc may be of smaller diameter and peripherally enveloped by the coil spring. The latter then will be interposed between the plate portion 15 and the base 20. In certain instances the cushion plate 23 may be entirely omitted and a suitable spring construction or a pair of springs coiled one within the other may be substituted therefor. These variations, additions and omissions, in view of this disclosure, will be readily apparent to those skilled in this art without additional illustration.

In Figs. 3 and 4 of the drawing, there is illustrated a modified form of the invention in which like or similar parts are indicated by numerals of the 100 series. For example, the stem is indicated by the numeral 113, the upper enlargement by 114. The other parts are anchoring portion 118, the retaining portion 119, the lower cushion 123, the upper washer 124 having the central aperture 125 therein, the cup like base 120 and the side wall 121. The coil spring employed is indicated by the numeral 126 and the plate 115 carried by the stem is centrally embossed as at 116 and centrally apertured as at 117.

In this form of the invention there is provided an additional metal retaining washer and the same herein includes a peripheral portion 130, the laterally offset portion 131 terminating in an annular centrally recessed portion 132. The upper end 122 of the base in this form of the invention is shown turned inwardly so as to overlie the portion 130 of the last mentioned washer, whereby all of the parts are retained in assembled relation.

Fig. 4 of the drawing shows the parts before final assembly and in their predetermined arrangement immediately prior to final association or completion.

In Fig. 5 of the drawing, there is illustrated a modified form of the invention wherein like or similar parts are indicatel by numerals of the 200 series—thus the stem 213 has the enlargement 214, the plate supporting portion 218 and the retaining portion 219. The plate is indicated by the numeral 215 and includes the upwardly directed centrally embossed portion 216 provided with a central aperture 217. Herein the base member is shown comprising a vitreous, phenol condensation or relatively hard rubber material and is indicated by the numeral 220. Imbedded therein and defining a central chamber is a retaining structure of metal including the upwardly directed portion 221, laterally and outwardly directed anchoring lower portion 221*a* molded in the base, the upper and free portion 222 being arranged for inturning and retaining the cushion washer 224 having the central aperture 225, through which the stem projects. The plate rigid with the stem bears upon the lower washer or disc 223 receivable by the chamber formed in the base. If desired, the spring 226 may be employed with either the washer or disc type of member 223.

In Fig. 6 of the drawing there is illustrated a still further modified form of the invention and the same includes the disclosure of Figures 3 and 5, and in said figures, similar or like parts are indicated by numerals of the 300 series. Thus, the composition base 320 has imbedded therein the portions 321*a* of the member 321 terminating in the portion 322 that is inwardly directed for anchorage of all of the parts in assembled relation. The lowermost cushion plate or washer is indicated by the numeral 323 and associated therewith, if desired, may be a coil spring 326. The plate is indicated by the numeral 315 and includes the centrally embossed portion 316, apertured as at 317 to receive the anchoring portion 318 of the stem 313, the latter having the two enlarged clamping portions 314 and 319.

In this form of the invention an additional plate bears upon the upper cushion washer 324 centrally apertured as at 325 and said plate includes the bearing portion 330, the offset or embossed portion 331 and the centrally apertured portion 332. The spring 326 may be provided or omitted and if utilized may be positioned as before indicated with reference to the modification illustrated in Fig. 1.

In the form of the invention shown in Fig. 7, similar or identical parts are indicated by numerals of the four hundred series. In this modification the resilient cushion instead of being sponge rubber, or the like, comprises a coil spring 423, herein shown somewhat conical. The plate 415 includes a cushion seat forming flange or skirt 415*a* for spring centering.

In Figs. 8 and 9, a modified form of spring type slide is illustrated, similar or like parts bearing numerals of the five hundred series. In this form, the plate 515 includes a plurality of spring retaining or seating sockets 515*a* to receive springs 523 arranged in spaced relation. Herein four springs are employed. A spacing unit 523*a* having arcuate recesses 523*b* prevents the springs 523 from getting out of position.

In the forms illustrated in Figs. 7 to 9 inclusive, the additional top bearing washer,

which is similar to Figs. 3 and 6, is illustrated. However, instead of this formation, the slide may be secured together as illustrated in Figs. 1 and 6.

The invention claimed is:—

1. A rocking cushion slide comprising a load engaging stem, an upwardly directed centrally embossed plate rigid therewith, a chamber forming base therebeneath, resilient means in the chamber interposed between the base and the plate, means extending inwardly from the base and rigid therewith and overlying the plate and having an enlarged central aperture permitting rocking of the stem relative thereto, and other resilient means in the chamber and interposed between said plate and said inwardly extending means.

2. A rocking cushion slide comprising a load engaging stem, an upwardly directed centrally embossed plate rigid therewith, a chamber forming base therebeneath, resilient means in the chamber interposed between the base and the plate, a metal washer extending inwardly from the base and underlying an inturned portion thereof for rigid connection therewith and overlying the plate and having an enlarged central aperture permitting rocking of the stem relative thereto, and other resilient means in the chamber and interposed between said plate and said metal washer.

3. A rocking cushion slide comprising a load engaging stem, a plate rigid therewith, a chamber forming composition base therebeneath, resilient means in the chamber and interposed between the base and the plate, means embedded in the base and extending inwardly therefrom and overlying the plate and having an enlarged central aperture permitting rocking of the stem relative thereto, and other resilient means in the chamber interposed between said plate and said inwardly extending means.

4. A rocking cushion slide comprising a load engaging member, a plate rigid therewith, a chamber forming composition base therebeneath, means imbedded in the base and extending inwardly therefrom and overlying the plate and having an enlarged central aperture permitting rocking of the load member relative thereto, resilient means in the chamber and interposed between the base and plate, a metal washer extending inwardly from the base and underlying the inwardly extending means carried by the base for rigid connection therewith, and other resilient means in the chamber interposed between said member support plate and the metal washer.

5. A rocking cushion slide comprising a load engaging member, an upwardly directed centrally embossed plate rigid therewith, a chamber forming composition base therebeneath, resilient means in the chamber and interposed between the base and the plate, means embedded in the base and extending inwardly therefrom and overlying the plate and having an enlarged central aperture permitting rocking of the load member relative thereto, and other resilient means in the chamber interposed between said plate and said inwardly extending means.

In witness whereof, I have hereunto affixed my signature.

WILLIAM H. NOELTING.