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J. A. LUARDE

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ADJUSTABLE CUSHION SUPPORT

Filed Jan. 14, 1932

Fig. 1.

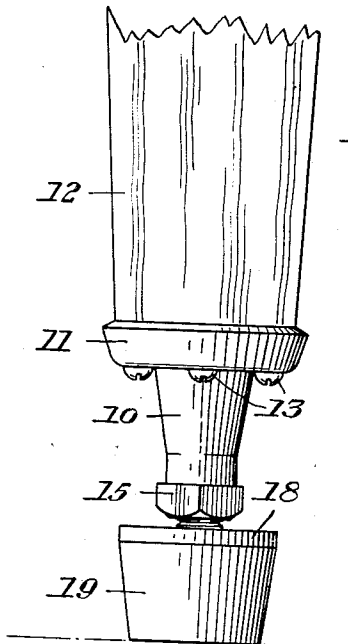


Fig. 2.

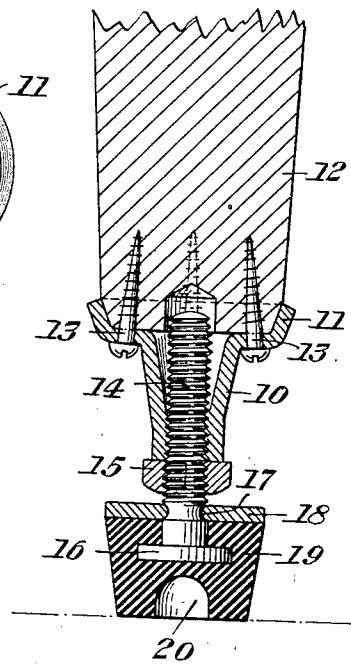


Fig. 3.

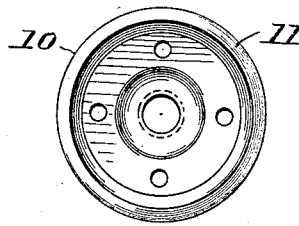


Fig. 4.

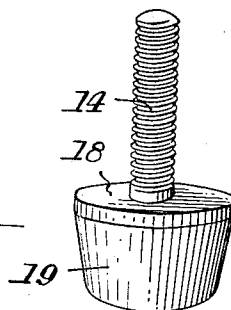


Fig. 5.

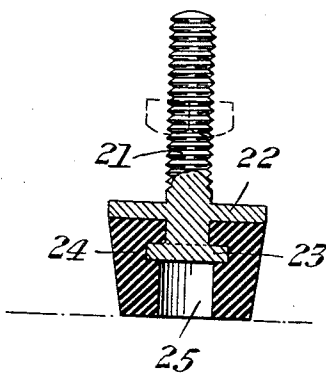


Fig. 6.

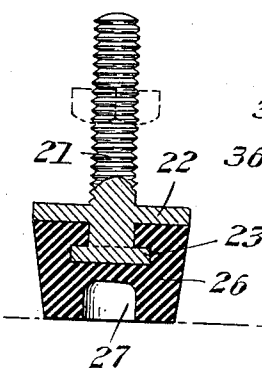
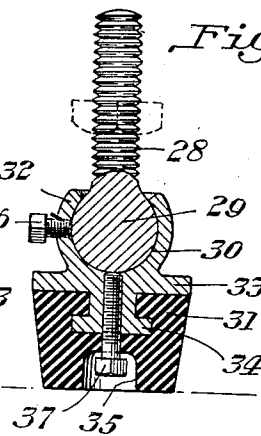


Fig. 7.



INVENTOR

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UNITED STATES PATENT OFFICE

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ADJUSTABLE CUSHION SUPPORT

Application filed January 14, 1932. Serial No. 536,535.

My invention relates to a foot for furniture which may be adjusted to insure that the piece of furniture sits solidly on the floor regardless of the deviations of the latter from horizontal. It is also an object of the invention to provide a foot for furniture which is cushioned by resilient material to prevent marring of floors and also to prevent sliding of the furniture on smooth floors of wood or stone.

It is common experience that many pieces of furniture are in daily use which do not sit solidly on the floor, either because of warpage in the piece of furniture itself or the floor on which it rests. It is also known that furniture equipped with present types of feet slides readily on smooth floors. This is a disadvantage in many instances and has been the cause of serious injury in some cases. Where furniture equipped with feet which permit easy sliding is placed on smooth stone or wooden floors, there is considerable danger that leaning thereon, arising from, or sitting down in a chair, for example, will result in a fall for an unwary person.

The invention is particularly applicable to furniture such as drawer cabinets, grandfather clocks and the like, which must be accurately leveled for proper operation.

I have invented a foot for furniture which permits of adjustment to take care of all irregularities in floors and to insure that furniture resting thereon will be absolutely level. This is particularly important in game devices such as pool tables and the like. It is also desirable that other kinds of furniture, such as dining tables, sit solidly on all four legs so that any objectionable tilting or shaking will be avoided. The invention also prevents the accidental displacement of furniture even though it stands on polished wooden or stone floors.

In accordance with my invention, I employ a threaded sleeve adapted to be secured to the bottom of the legs of chairs, tables, etc. A threaded stem having a cup-shaped rubber pad or foot is adapted to be threaded into said sleeve and locked in adjusted position therein by means of a lock-nut. A special feature of the invention is the construction of

the stem and the application of the cup-shaped foot thereto.

For a complete understanding of the invention, reference is made to the accompanying drawing, in which

Figure 1 is a side elevation of a leg on a piece of furniture equipped with the invention;

Figure 2 is a central sectional view of the structure shown in Figure 1;

Figure 3 is a top plan view of the invention as it appears before it is mounted on a leg of a piece of furniture;

Figure 4 is a perspective view of the threaded stem;

Figure 5 illustrates a modified form of foot;

Figure 6 is a similar view, showing another modified form of foot; and

Figure 7 illustrates a still further modified form of foot.

Referring in detail to the drawing, the adjustable foot of my invention comprises a sleeve 10 threaded internally at its lower end and having its upper end enlarged and flanged upwardly at 11. The enlarged upper portion of the sleeve forms a socket for receiving a leg 12 of a piece of furniture such as a chair or table. The sleeve 10 is secured to the leg 12 by means of screws 13.

A threaded stem 14 is adjustable in the sleeve 12 and a lock-nut 15 permits any desired adjustment of the stem in the sleeve to be maintained. The stem 14 has an enlarged head 16. Adjacent the head 16, the stem 14 is grooved at 17. A washer 18 is seated in the groove 17. Preferably, the inner edge of the washer 18 is dish-shaped out of the plane of the outer edge thereof so that the washer can be slipped over the threaded portion of the stem 14. By means of a suitable pressing operation, the inner edge of the washer can then be restored to the plane of the remainder thereof so that the washer is rigidly secured to the stem.

A resilient foot 19 is provided for the lower end of the stem 14. This foot may be of rubber molded around the head 16. A vacuum cup 20 in the bottom of the foot increases its anti-skid character.

It will be apparent that the load on the leg

12 is transmitted to the rubber foot 19, both by the head 16 and the washer 18 on the stem. The latter has a wide bearing surface so that the pressure on the foot is well within the capacity of the material of which it is composed. The washer 18, in fact, acts as though it were a flange integral with the stem. The head 16, of course, prevents the foot 19 from being pulled off the end of the stem.

The manner of using the invention will be obvious from the foregoing. The sleeves 10 are screwed to the bottom of the legs of a piece of furniture and the stems 14 threaded therein to an extent such that all four feet of the piece of furniture rest squarely on the floor and the piece of furniture is supported in horizontal position. The lock-nuts 15 are then tightened up to maintain the adjustment desired. This adjustment, of course, can be changed to meet varying conditions should they arise. The cushioned foot with its vacuum cup provides a resilient contact surface which can not injure floors and which also prevents sliding of the furniture thereon.

Figures 5, 6, and 7 illustrate modified forms of the invention. In Figure 5, a stem 21 has an integral flange 22 to replace the washer 18 of the device of Figures 1 through 3. The stem 21 has a head 23 similar to the head 16 of the stem 14. A foot 24 of rubber or equivalent resilient material embraces the head 23 to maintain it on the stem. A vacuum cup 25 extends upwardly from the bottom of the foot 24 to the head 23.

Figure 6 shows a stem which is similar to that of Figure 5, except that it is provided with a foot 26 having a vacuum cup 27 which terminates short of the head of the stem. Otherwise, the stem of Figure 6 is similar to that of Figure 5.

In Figure 7, a threaded stem 28 has a ball 29 integrally formed on one end thereof. The ball 29 is adapted to cooperate with a socket 30 carried by a foot 31 to form a ball and socket joint. The upper portion of the socket is turned inwardly around the ball as at 32 so as to prevent the ball from being removed from the socket when the article to which it is attached is moved. The socket is formed integrally with a flange 33 similar to the flange 22 of Figures 5 and 6. A head 34 similar to the head 23 of Figures 5 and 6 is formed integrally with the socket 30 and flange 33. The foot 31 of rubber or equivalent resilient material embraces the head 34 to maintain it on the socket. A vacuum cup 35 similar to the vacuum cup 27 of Figure 6 extends upwardly from the bottom of the foot 31 and terminates short of the head 34. A set screw such as that shown at 36 or 37 may be used to maintain any desired adjustment of the foot.

The advantages of the arrangement shown in Figure 7 will be apparent. In addition to the advantages pointed out with respect to

the other forms of the present invention described above, the form illustrated in Figure 7 permits tilting if the floor is rocky and is also useful for furniture having inclined or curved legs.

The advantages resulting from the use of the invention have already been mentioned hereinabove. In addition to those mentioned, the device can be manufactured at relatively low cost from cheap stock. While I am aware that previous proposals have been made to provide adjustable feet for furniture, I do not believe that any of such provisions which have been known to the art heretofore provide as satisfactory a solution for the problems herein mentioned as the device I have described and illustrated.

Although I have disclosed herein only one preferred embodiment of the invention, together with certain modifications thereof, it will be apparent that the invention may be otherwise embodied within the scope of the appended claims and without sacrificing the advantages pointed out.

I claim:

1. An adjustable support for the legs of furniture comprising a threaded sleeve adapted to be secured to the lower ends of said legs, a stem threaded in said sleeve, a rubber foot on said stem, the end of the stem being enlarged to secure the foot thereto, and a flange on said stem for transmitting the load to said foot.

2. An adjustable support for furniture comprising a sleeve adapted to be secured to the legs thereof, a stem threaded in said sleeve, a resilient foot on said stem, said stem having an enlarged head for gripping said foot, and a washer on said stem for transferring the load thereon to said foot.

3. An adjustable support comprising a sleeve having an enlarged upper portion, the edge thereof being flanged upwardly to form a socket for receiving a leg of a piece of furniture, a stem threaded into said sleeve, a head on the stem, a resilient foot molded therearound, and a flange on said stem for distributing the load thereon uniformly over the foot.

4. An adjustable support comprising a threaded sleeve enlarged at its upper end to receive a leg of a piece of furniture, a stem threaded into the lower end of said sleeve, a lock-nut on the stem for engaging the sleeve, a head on the stem, a resilient foot engaging the head, and a flange on the stem for supporting the stem on the foot.

5. An adjustable support including a threaded sleeve, a stem in said sleeve, a foot on said stem, and a washer having its edge seated in a groove on said stem and its lower surface engaging said foot.

In testimony whereof I have hereunto set my hand.

JOSEPH A. LUARDE.