June 20, 1933. J. R. JONES 1,914,511

SHOE OR FOOT FOR LEGS OF FURNITURE

Filed April 21, 1931

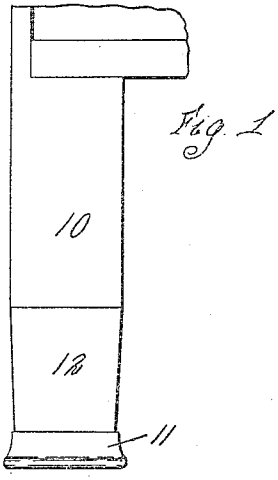
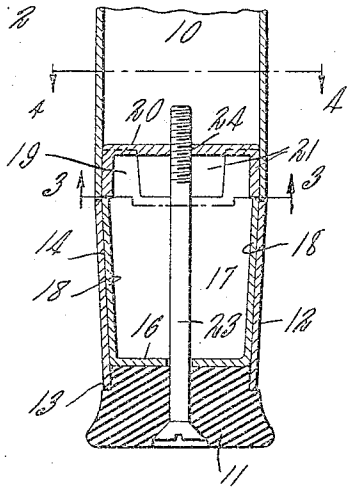


Fig. 1

Fig. 2



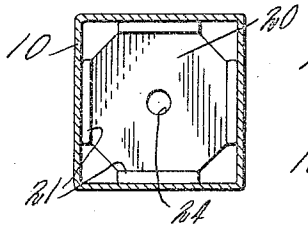


Fig. 3

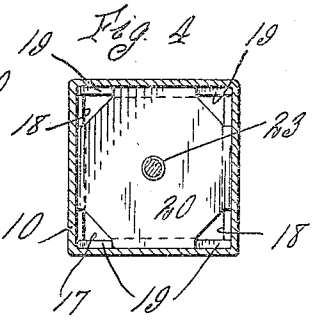


Fig. 4

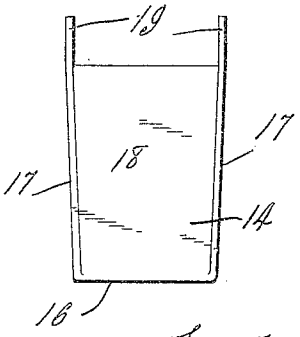


Fig. 5

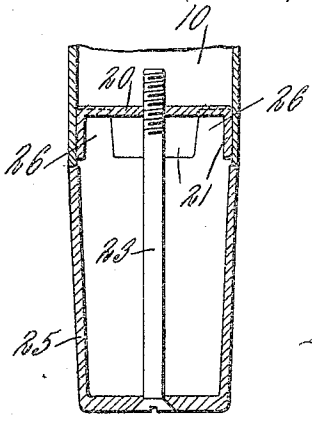


Fig. 6

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UNITED STATES PATENT OFFICE

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SHOE OR FOOT FOR LEGS OF FURNITURE

Application filed April 21, 1931. Serial No. 531,701.

This invention relates to improvements in shoes or feet for the pedal extremities of the legs of articles of furniture, such for instance, as metal desks.

One object of the invention is to provide a foot or shoe which gives a neat, attractive finish to the leg and provides a base which will not mar or injure the floor or floor covering on which it rests when the shoe or footing is employed on heavy objects, such for example, as metal desks.

Another object of the invention is to provide a desirable leg foot or shoe of improved construction which can be readily applied to the legs of furniture; which is of improved construction having a non-metallic broad base by which the furniture rests on the supporting floor or surface; which provides a desirable non-metallic supporting base for the leg and a finishing or ornamental sleeve extending upwardly from said base but in which the leg and the weight thereon is supported from the base independently of such finishing sleeve; which is constructed and secured to the leg in a manner which enables the shoe or foot to be readily replaced by a metal shoe of known construction; and which is of improved construction in the other respects hereinafter described and set forth in the claims.

In the accompanying drawing:

Fig. 1 is an elevation, on a reduced scale, of a furniture leg equipped with a shoe or foot embodying my invention.

Fig. 2 is a sectional elevation thereof on a larger scale.

Fig. 3 is a sectional, bottom plan view of the leg on line 3—3, Fig. 2, with the shoe removed.

Fig. 4 is a sectional plan view thereof on line 4—4, Fig. 2.

Fig. 5 is a side elevation, detached, of the filler or supporting member.

Fig. 6 is a sectional elevation showing the improved shoe replaced by a metal shoe.

10 represents one of the legs of an article of furniture such, for instance, as a metal desk, the leg shown being formed by a thin walled metal tube of square cross section.

In the illustrated embodiment of the invention, the leg 10 rests upon a base member or block 11, and the leg is formed of two sections abutting end to end in superposed relation. A supporting and coupling member 14 telescopes into the lower end of the leg, fits both leg sections snugly, and overruns the butt joint between the leg sections so as to keep them in proper vertical alignment. The base member 11 preferably consists of a block of hard, durable, non-metallic material, such as bakelite, hard rubber or other suitable composition or material, and preferably has a broad, flat bottom face adapted to bear upon the floor or supporting surface. The upper end of this base block 11 is of slightly reduced diameter and the lower leg section 12 at its lower end surrounds and fits on the reduced upper end of the base block with the lower end of the section 12 bearing on the circumferential shoulder 13 formed on the base block at the lower end of its reduced upper portion. The lower leg section 12 may be made of bronze or other suitable metal adapted to give an attractive, contrasting or finished appearance to the lower end of the leg 10. Preferably the section 12 is of slightly tapered or upwardly flaring form because the trade prefers a downwardly tapering leg. It is less expensive to make the tapered section separate from the upper or untapered section of the leg, and usually the two leg sections are formed of different metals or finished differently.

The filler or supporting member 14, which preferably has the shape of an upright cup has a bottom wall 16 adapted to bear upon the top of the base block 11, and side walls extending upwardly from the bottom wall 16 at an inclination conforming to the taper or flare of the leg section 12 so that the side walls of the supporting member will wedge and fit tightly within the section 12. This supporting member is conveniently formed from a sheet steel blank of substantially cross shape having the legs of the cross bent upwardly to form the side walls 17 and 18 of the supporting member. Two opposite side walls of this member, for instance, the opposite walls 17, preferably extend up-

wardly beyond the upper ends of the other two side walls 18, and the upper portions of the longer walls 17 are preferably recessed as shown in Fig. 2, thereby leaving four upwardly projecting lugs 19 at the corners of the upper end of the supporting member.

Extending crosswise in the lower portion of the upper section of the hollow leg 10 is a securing plate 20 which is rigidly secured in the leg in any suitable manner, as by welding the downturned side flanges 21 of the securing plate to the walls of the hollow leg. At its corners the securing plate 20 is cut away or notched, thus leaving openings through the plate 20 at its corners into which the corner lugs 19 at the upper end of the supporting member are adapted to project. The upper end of the supporting member fits snugly in the lower end of the upper leg section with its lugs 19 fitting in between and bearing against opposite side walls of the leg and the edges of the downturned side flanges 21 of the securing plate, as indicated most clearly in Fig. 4. In this way the upper end of the supporting member is firmly held in place against lateral movement in the leg, and this member keeps the two abutting leg sections in perfect vertical alignment and couples them.

The base block 11 is removably secured in place on the lower end of the leg, preferably by a screw 23 which passes through a central hole in the base block 11 with the head of the screw seated in a counterbore in the bottom of the base block 11 and its threaded upper end screwed into a threaded, central hole 24 in the securing plate 20. By turning this screw up tightly, the supporting member, which bears at its lower end against the upper end of the base block 11, is forced up into the leg until arrested by the engagement of the upper edges of its side walls with the downturned side flanges 21 of the securing plate 20 which form fixed stops or an abutment on the interior side faces of the leg at a point above the lower end of the leg, thereby tightly securing the block 11 in place on the lower end of the leg 10. At the same time the lower leg section 12 which encloses the supporting member is clamped in place between the upper leg section and the base member 11. While the section 12 is thus clamped between the lower end of the leg and the base block 11, it is not intended to carry the major part of the weight on the leg. The weight on the leg is largely transmitted from the interior faces of the leg to the base block 11 of the shoe through the interposed supporting member 14. The section 12 may therefore be made of a relatively light or thin tube, with its walls of the same thickness as that of the walls of the upper section, even though the material of the lower section has not the strength of the material of the upper section.

Fig. 6 shows how a hollow cast metal foot or shoe 25 of known construction may be secured on the leg 10 in place of the lower leg section and base block hereinbefore described. This foot 25 is formed with corner lugs 26 at its upper end adapted to project up into the upper leg section and enter the corner holes in the securing plate 20, and, like the lugs 19 before mentioned, to fit snugly between and bear against the inner faces of the side walls of the upper leg section and the edges of the side flanges of the plate 20. The foot 25 is secured in position by the screw 23, as in the case of the construction illustrated in Figs. 1 to 5.

The legs of desks are commonly rectangular or square in horizontal cross-section and have been so illustrated in the drawing. The base block 11 is, therefore, also made rectangular in horizontal cross section at its upper end so as to fit and substantially close the open lower end of the lower section 12 of the leg. Since the base block 11 extends up into the lower leg section 12 to some extent, the leg section 12 will prevent rotation of the base block 11 about a vertical axis, that is, about the screw 23 because if one of two abutting rectangular sections should rotate about an endwise axis, an unsightly appearance would result. It will be noted that the plate 20 is attached to the inside walls of the leg in the upper leg section, and at a point above its lower end and, thus, any weight on the leg is transferred largely to the plate 20 through the inside face walls of the upper leg section at a point spaced above the lower edge of the upper leg section. From the plate 20 the load or weight is transmitted through the shell 14 and its flat bottom 16 to the base block 11. Because of the abutting areas of relatively large size between the bottom 16 and the base block 11, the weight or load will not be concentrated on a small area of the base block, such as would tend to cause it to crumple or crack, and hence the base block 11 may be made of frangible material with perfect safety. The lower leg section, because of the fact that it fits down over the upper part of the base block 11 to some extent and below the bottom 6 of the shell where the load is transmitted to the base block, reinforces the corner side edges of the base block and prevents crumpling of the same under the load applied to the upper face of the base block. If the base block 11 should become broken for any reason or worn too badly, it may be easily replaced merely by removing the screw 23, replacing the base block on the screw 23 with a new one, and then reapplying the screw 23 to the plate 20, as shown in Fig. 2.

I claim as my invention:

1. The combination with a leg having a hollow lower end, of a transverse plate in said hollow leg having side flanges which are

rigidly secured to the leg and are separated by openings at the corners of the plate, and a foot bearing against parts rigid with said leg and having upper end portions projecting into the hollow leg within said corner openings in said plate and confined between the walls of the leg and said plate flanges, and screw means for securing said foot to said plate.

2. A furniture construction comprising a leg having a hollow, thin walled, open lower end, a supporting element telescoping within said open lower end and depending therefrom, said element and leg having cooperating abutment portions which limit the extent to which said element telescopes within said leg and transfers the weight on the leg from the leg to said element, said element having a relatively broad lower face, a base block having a relatively broad upper face upon which the broad lower face of said element rests, and means engaging said block and passing upwardly through said element and engaging with said leg to secure said block to said element and said element to said leg.

3. A furniture construction comprising a leg having a thin walled, tubular, open lower end, an abutment member disposed within said leg above the lower end thereof and extending a substantial distance along and positively secured to the inner faces of said leg, a base block substantially closing the open lower end of said leg, and means within said leg and securing said block in position at the lower end of said leg and for transmitting the weight of said leg through said abutment member and said connecting means to said block.

JAMES R. JONES.