United States Patent

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[15] **3,705,704**

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[54] **CHAIR BASE**

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[52] **U.S. Cl.** **248/188.7**

[51] **Int. Cl.** **F16m 11/20**

[58] **Field of Search** 248/188.7, 188.8, 431, 345.1

[56] **References Cited**

UNITED STATES PATENTS

3,617,023	11/1971	Schneiderman	248/188.7
526,834	10/1894	Hetterschied	248/188.7
2,193,719	3/1940	Foote	248/345.1
2,217,754	10/1940	Johnson	248/188.7
2,913,208	11/1959	McKinley	248/188.7
2,954,637	10/1960	Scherer	248/345.1
2,992,803	7/1961	Good	248/188.7
3,148,855	9/1964	Hamilton	248/188.7
3,160,382	12/1964	Lee	248/188.7
3,497,170	2/1970	Armstrong	248/188.7

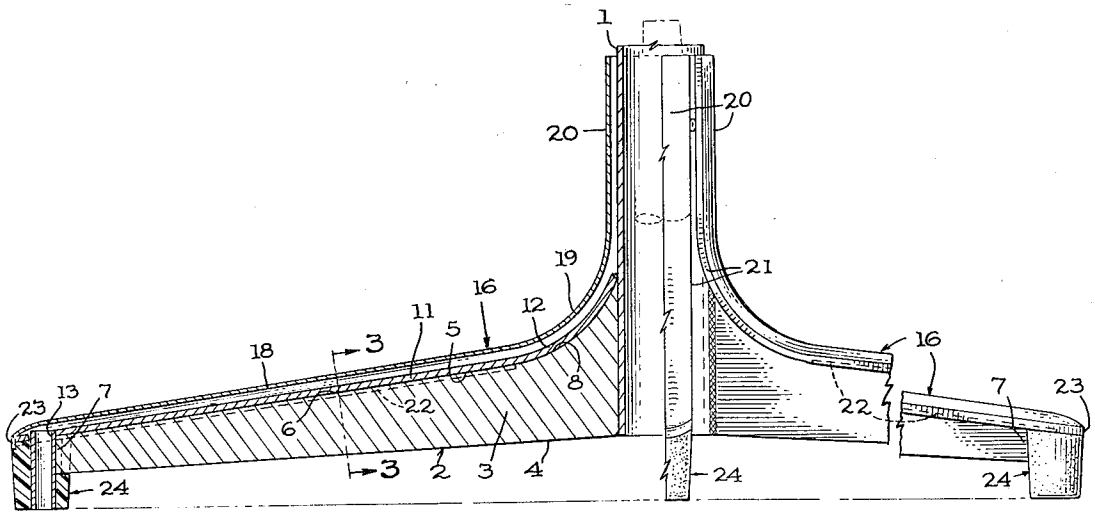
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[57] **ABSTRACT**

A chair base includes a vertical column from which radiate a plurality of legs each having a top plate and a caster-receiving socket adjacent its distal portion. An end cap is removably mounted about the socket while a separate integral scuff cap is slidably attached in an overlying manner to each leg and extends in an upward direction to overlie a portion of the base column.

9 Claims, 9 Drawing Figures



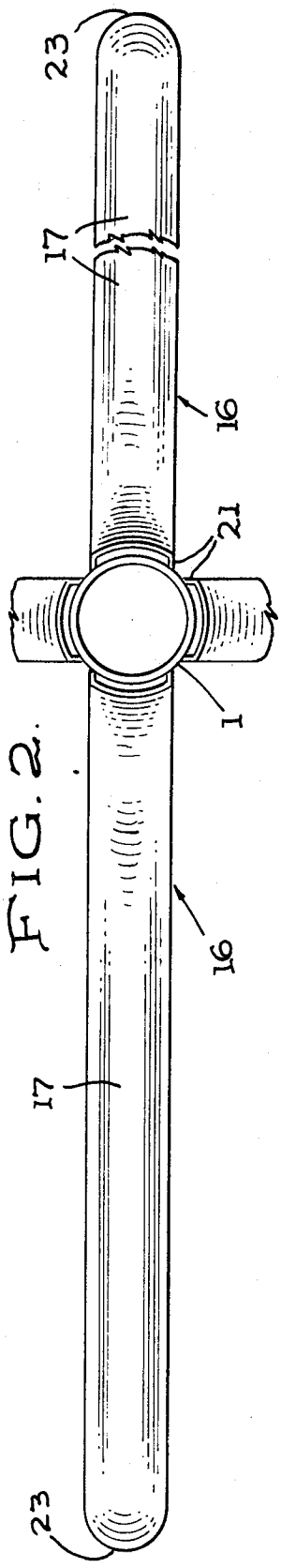


FIG. 2.

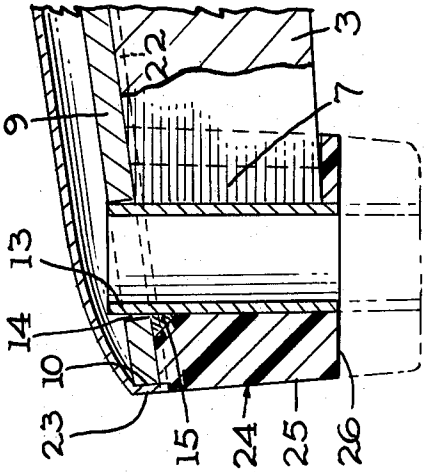


FIG. 4.

FIG. 1.

FIG. 3.

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FIG. 6.

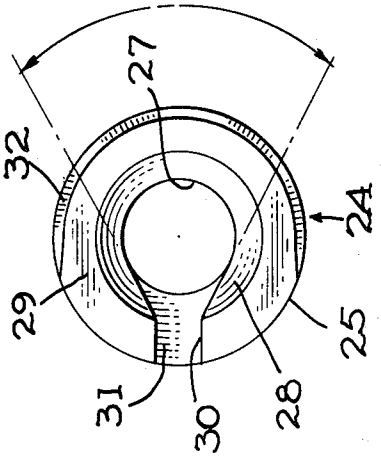


FIG. 5.

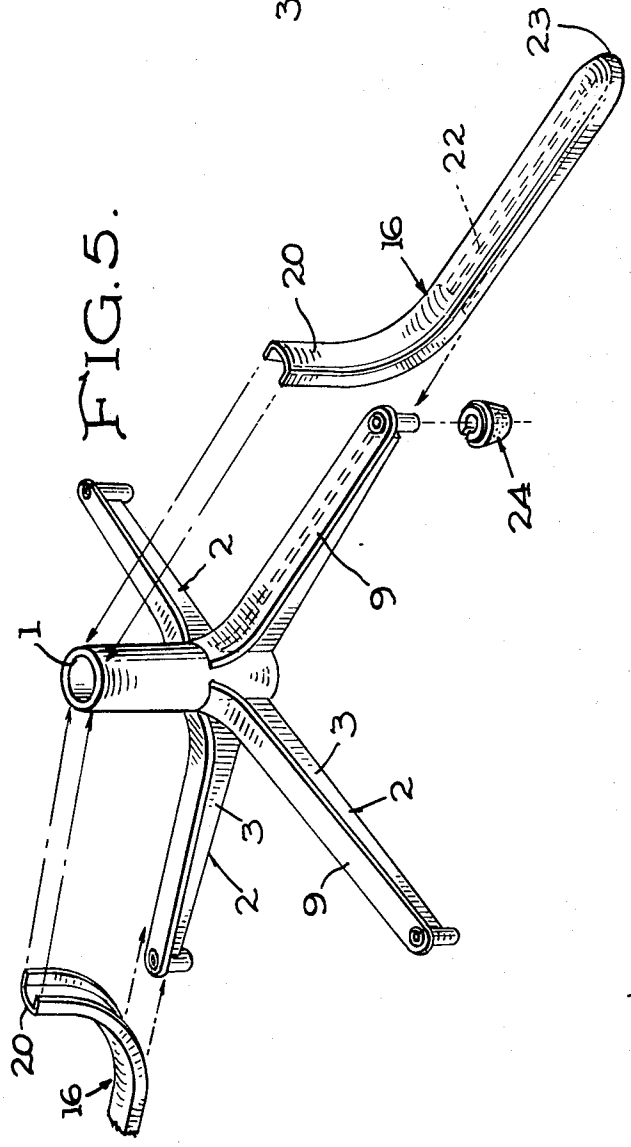


FIG. 9.

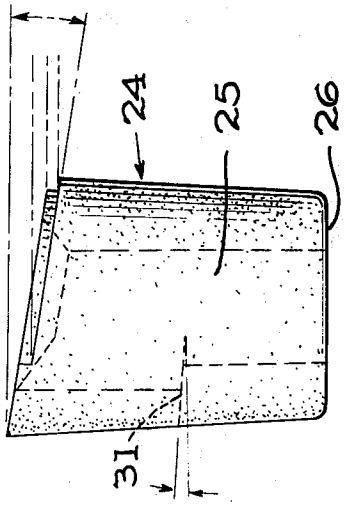


FIG. 8.

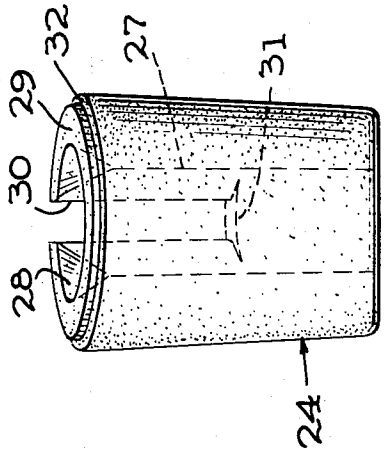
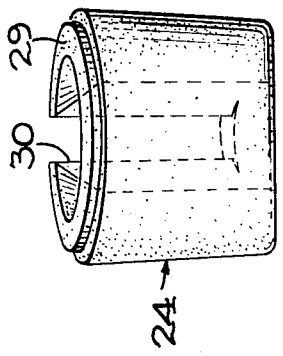


FIG. 7.



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CHAIR BASE

This invention relates generally to furniture and, more particularly, to the supporting structure or base of an office appliance such as a stenographic chair.

Many office chairs having a pedestal type of base include a central vertical column from which extend a plurality of radiating legs having swivel casters at their distal portions, thus providing a cruciform arrangement projecting beneath the chair in the area proximate to the user's feet. Accordingly, it is most desirable to provide means on the chair base to preclude scuffing of the user's footwear. Many of the prior art devices include anti-scuff means comprising a cover assembly attached to and overlying the structure of a chair base however, most such arrangements comprise a cumbersome device greatly enlarging the resultant size of the chair base and usually requiring special separate fastening means for securing the device to the legs of the chair base.

The present invention seeks to overcome the objections to presently known chair bases having scuff caps by providing a unique chair base assembly including a separate cover or cap which is slidably attached to each leg of the chair by means of integral means forming a part of the cap, and wherein this cap not only overlies and completely masks the upper portion of each leg, but also extends upwardly to overlie and abut a portion of the periphery of the chair base column.

Included in the present invention is a unique toe cap which is slidably attached to the distal portion of each leg in the area adapted to receive a conventional swivel caster and which cooperates with the outermost portion of each cover element whereby this cover serves to provide locking means retaining the toe cap in its use position.

Accordingly, one of the primary objects of the present invention is to provide an improved chair base assembly, including a cruciform arrangement of outwardly radiating legs attached to a central vertical column, and having a separate scuff cap slidably attached to and overlying the entire upper portion of each leg.

Another object of the present invention is to provide an improved chair base including a plurality of outwardly extending legs, each including a horizontal plate having a lower vertical web attached thereto and a removable cover member having lateral flanges adapted to slidably engage said horizontal plate in a masking relationship.

Still another object of the present invention is to provide a chair base leg comprising rigidly attached upper and lower elements with a toe cap removably attached to the distal portion of the leg and retained in position by means of a slidable cover element overlying the upper element of the leg.

A further object of the present invention is to provide an improved chair base assembly including a vertical central chair base column from which extend a plurality of radiating legs and wherein a SEPARATE integral cover element is removably attached to each leg and extends from its distal portion towards its base column and thence upwardly in overlying relationship to a portion of the base column periphery.

With these and other objects in view which will more readily appear as the nature of the invention is understood, the invention consists of the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed:

A preferred and practical embodiment of the invention is shown in the accompanying drawings, in which:

FIG. 1 is a fragmentary transverse sectional view through the chair base of the present invention.

FIG. 2 is a fragmentary top plan view of the present invention.

FIG. 3 is a transverse sectional view taken along the line 3—3 of FIG. 1.

FIG. 4 is an enlarged view of the end structure of one of the chair base legs of FIG. 1.

FIG. 5 is an exploded perspective view of the present invention.

FIG. 6 is a top plan view of the toe cap of the present invention.

FIG. 7 is an outside end elevation of the toe cap of FIG. 6.

FIG. 8 is a view similar to FIG. 7 and illustrates another embodiment of the toe cap.

FIG. 9 is a side elevation of the toe cap in FIG. 8.

Similar reference characters designate corresponding parts throughout the several figures of the drawings.

Referring now to the drawings, particularly FIGS. 1 and 5, the present invention will be seen to relate to a chair base including a central vertical column 1 having a plurality of legs, generally designated 2, radiating outwardly from the lower portion thereof. Each of the legs 2, which are disposed substantially in a horizontal plane, includes a vertical web 3 having a lower edge 4 preferably flush with the bottom of the column 1 and an upper edge 5 which defines a straight line 6 along the major portion of its extent from the distal portion 7 of the web to a point short of the column 1. As will be seen most clearly in FIG. 1, a curved portion 8 is provided from the innermost terminus of the straight portion 6 to the point of contact with the periphery of the chair base column 1.

Overlying the entire extent of the web upper edge 5 is a horizontally disposed plate 9 which is preferably of constant width and includes an outer edge 10 projecting beyond the distal portion 7 of the vertical web 3. Inasmuch as this horizontal plate 9 is in full contact with the underlying upper edge 5 of the web, it will follow that the plate will include a straight portion 11 juxtaposed the web straight portion 6 as well as a curved portion 12 juxtaposed the curved portion 8 of the web.

Adjacent the distal portion 7 of each leg web 3 is a vertically disposed caster-receiving socket 13, the upper portion of which may extend through an opening 14 provided through the horizontal plate 9. This caster socket 13 is rigidly attached to the leg assembly by means of a weld bead 15 about the outer periphery of the socket adjacent the undersurface of the horizontal plate 9 as shown most clearly in FIG. 4.

The scuff member or cap, generally designated 16, comprises a unitary element which is preferably formed by stamping and bending of a metallic material having a thickness for example of 20 gage but which may quite obviously be formed of other materials such as plastic. The selected material should possess a minimum degree of inherent resilience for reasons which will become obvious hereinafter. Each cap element 16 includes a top portion 17 which is bowed in cross section

throughout its length and includes a straight outwardly projecting section 18 corresponding in length to the straight portion 11 of the base horizontal plate 9, together with a curved section 19 adapted to extend in a juxtaposed manner above the curved portion 12 of the plate 9 and which curved section 19 is joined to an uppermost vertical section 20, attached to and overlying a portion of the periphery of the chair base column 1 as shown in FIG. 1.

Extending downwardly from each lateral edge of the cap top portion 17 is a side wall 21 from which further extends a return flange 22 projecting inwardly from each side wall 21 substantially at right angles thereto as shown in FIG. 3. It will be evident that the height of each side wall 21 is substantially comparable to the thickness of the horizontal plate 9, while it will be important to note that the latter mentioned flanges 22 extend only from the distal portion of each cap 16 for a longitudinal distance corresponding to the length of the straight portion 11 of the horizontal plate 9. In the area of the distal portion of the cap, the side wall 21 is curved to provide the rounded outer edge 23 as shown in FIGS. 1 and 5.

The toe cap, generally designated 24, is preferably formed of plastic composition and may comprise a unitary element molded to provide the disclosed construction which includes a frusto-conical configuration having a side wall 25 tapering inwardly towards the base 26. Vertically extending through the toe cap is a caster socket bore 27, the upper portion of which communicates with a countersink area 28 which in turn communicates with the planar top wall 29. This top wall is inclined from the horizontal an amount corresponding to the slight inclination of the straight portion of the chair base horizontal plate 9 for reasons which will become obvious hereinafter.

One side of the toe cap body includes a radial slot 30 passing completely through the toe cap in the upper portion thereof with the width of this slot substantially corresponding to the thickness of the chair base leg vertical web 3. With the foregoing structure in mind, it will be seen that the toe cap 24 may be initially attached to the distal portion of each leg 2 by inserting the caster socket 13 within the socket bore 27 of the toe cap while the toe cap slot 30 straddles the distal portion 7 of the vertical web 3. The toe cap is pushed upwardly until the top wall 29 thereof abuts the undersurface of separate horizontal plate 9 of the leg and in this position it will be seen that the weld bead 15 securing the caster socket 13 to the leg assembly will be disposed within the area provided by the countersink 28 in the toe cap. The vertical height of the slot 30 is selected to insure that the lower edge 4 of the leg web 3 will abut the bottom 31 thereof when the toe cap is thus finally positioned. From the above, it will follow that rotary displacement of the toe cap is thus precluded in view of the engagement between the vertical web 3 and the slot 30.

Another feature of the toe cap 24 of the present invention is the provision of peripheral groove 32 formed in a portion of each toe cap intermediate the juncture of the side wall 25 and top wall 29 thereof. As most clearly shown in FIG. 6, this groove 32 extends approximately 180° about the top portion of the toe cap.

Assembly of the various components comprising the present chair base will now be explained. Assuming the leg structure 2 is fully constructed as shown in FIG. 5, the final assembly of the scuff cap 16 and toe cap 24 for each leg 2 may be readily accomplished, even by the ultimate user of the chair base. The toe caps 24 are each installed about the respective caster sockets 33 as previously described. Thereafter, a separate scuff cap 16 is mounted upon each outwardly radiating leg 2 in the manner shown in FIG. 5 wherein it will be understood that as the vertical section 20 of the cap 16 is moved in the direction of the arrows toward the chair base column 1, the depending side walls 21—21 will be guided into overlying relationship with the lateral edges 9a of the horizontal plate 9. As soon as the innermost edges of the return flanges 22—22 engage the undersurface of the horizontal plate 9 the scuff cap 16 is precluded from vertical displacement away from the base leg 2 and may only be moved in an inwardly or outwardly radial direction with respect to the chair base column 1. The inwardly movement of the cap is continued until side walls 21—21 in the area of the vertical section 20 abut the outer periphery of the chair base column, at which point it will be understood the return flanges 22—22 completely engage the entire extent of the straight portion 11 of the horizontal plate 9 while the rounded outer edge 23 of the cap will be disposed within the peripheral groove 32 of the toe cap.

With the foregoing described arrangement, it is not necessary to utilize separate fastening means to secure either the scuff cap or toe cap in their use positions. The security of the scuff cap is enhanced by the bowed construction of the cap top portion 17 and the inherent resilience of the material forming the cap such that a natural constant gripping action will at all times be present. Not only is the inherent resilience relied upon in a transverse manner as shown in FIG. 3 but also it will be understood that by initially forming each scuff cap 16 so that the upper portion of the vertical section 20 is normally disposed inwardly towards the central axis of the column 1 prior to final assembly, it will be seen that when the scuff cap is moved to its final mounted position a spring-loaded condition will exist with the scuff cap further tending to provide the desired self-locking feature.

I claim:

1. A chair base including, a central chair supporting column, a plurality of legs rigidly affixed to and radiating from said column, separate cover means overlying each of said legs and individually mountable thereon, each said cover means comprising a unitary cover member including longitudinally projecting section, a vertically extending section and an intermediate upwardly curved section, said longitudinally projecting section extending inwardly from the distal portion of each leg to said curved section juxtaposed the juncture of said leg and column, said vertically extending section overlying and biased against the periphery of said column above the plane of said legs, and each said cover means including integral locking means comprising flanges along the lower portion of said longitudinally projecting section engageable with said leg as said cover means is slidably attached thereto and fully overlies the upper portion of said respective leg.

2. A chair base according to claim 1 wherein, said cover means includes a top portion adapted to overlie said leg and a portion of said column, a side wall depending from each lateral edge of said top portion, and said flanges project inwardly from said side walls.

3. A chair base according to claim 1 wherein, each said leg includes a vertical web attached to the undersurface of a horizontal plate and said cover means overlies and engages said plate.

4. A chair base according to claim 1 wherein, each said leg includes a horizontal plate having a straight portion adjacent the distal end of the leg provided with substantially parallel lateral edges, and said locking flanges on said cover member longitudinal section are engageable beneath said plate lateral edges.

5. A chair base according to claim 3 including, a caster-receiving socket element adjacent the end of the undersurface of said horizontal plate, a toe cap having a central bore slidably mounted about said socket element beneath said cover means.

6. A chair base according to claim 2 wherein, said side wall extends about the distal portion of said cover top portion to provide an outer edge engageable with the distal portion of said leg.

7. A chair base according to claim 2 wherein, said top portion is arcuate in cross-section.

8. A chair base according to claim 2 wherein, said cover means is formed of resilient material whereby the inherent resilience thereof provides the sole attaching force.

9. A chair base including, a central chair supporting column, a plurality of legs radiating from said column, each said leg including a vertical web attached to the undersurface of a horizontal plate, separate cover means overlying and engaging each of said leg plates, each said cover means extending inwardly from the distal portion of each leg to said central column and thence upwardly adjacent the periphery of the column, a caster-receiving socket element adjacent the end of the undersurface of said horizontal plate, a toe cap having a central bore slidably mounted about said socket element beneath said cover means, said toe cap including a peripheral groove adjacent the upper portion thereof, and said cover means including locking means engageable with said leg as said cover means is slidably attached thereto and fully overlies the upper portion of the leg, with the distal portion of said cover means fitted within said toe cap groove.

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