

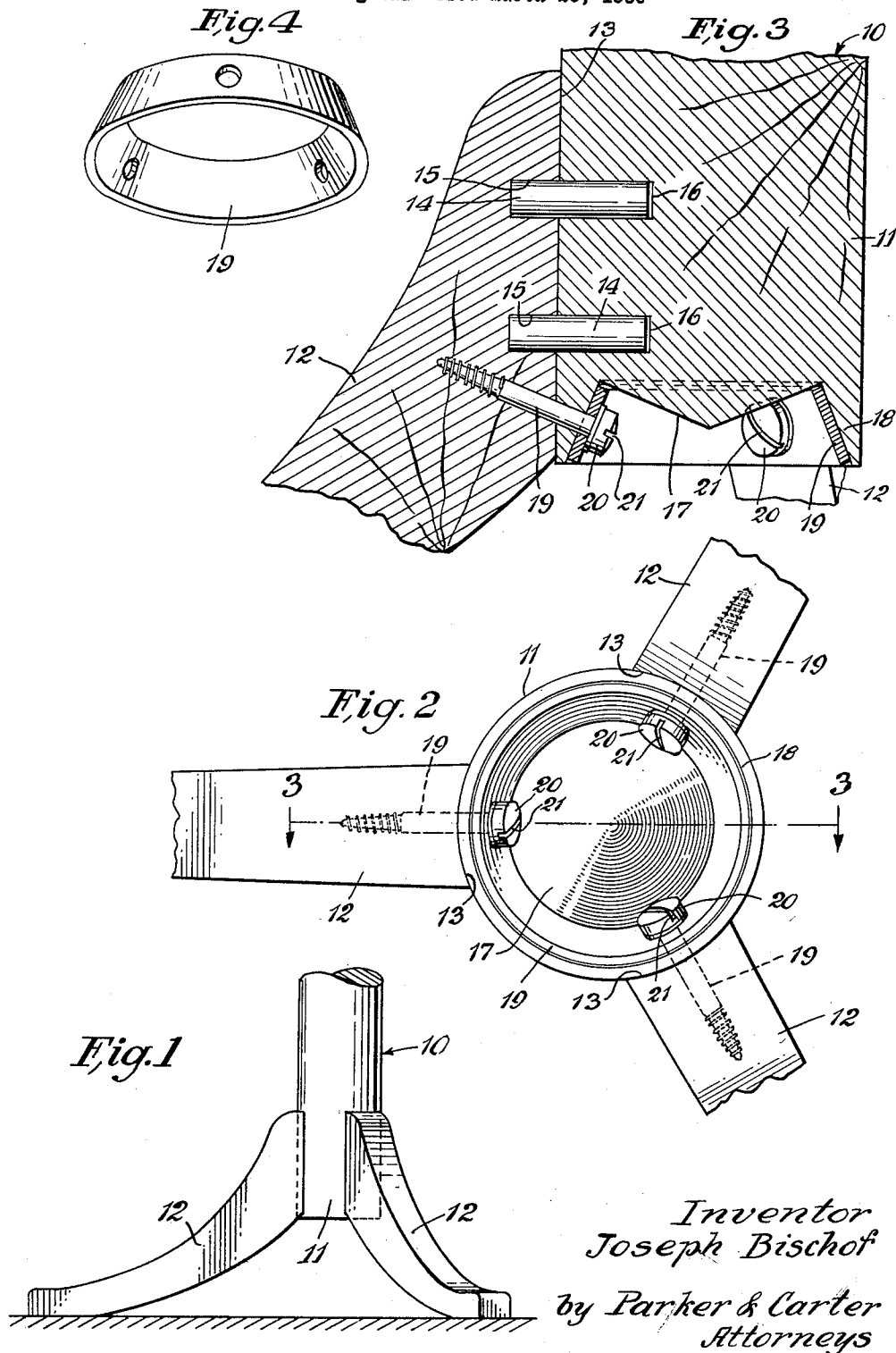
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PEDESTALS FOR TABLES OR CHAIRS

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PEDESTALS FOR TABLES OR CHAIRS

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Continuation of abandoned application Serial No. 496,139, March 23, 1955. This application October 3, 1958, Serial No. 765,719

2 Claims. (Cl. 248—188)

This application is a continuation of my copending application S.N. 496,139, filed on March 23, 1955, now abandoned.

This invention relates to improvements in pedestals for tables or chairs, in which the pedestal is supported on three or more downwardly and outwardly curved legs, such as is widely used in certain types of so-called "period" furniture.

As at present constructed, pedestals of the character above described usually have the legs secured thereto by means of dowel pins and with the meeting faces of the legs glued to the adjacent circular face of the pedestal. This type of construction is especially subject to failure because the outwardly and downwardly curved legs have a spreading action when in use, tending to break the legs away from the pedestal. The joint between the pedestal and each leg is subject to two forces tending to separate connection between the pedestal and leg. First of all, vertical shear forces act on the connecting means between the pedestal and legs due to the weight of the pedestal itself as well as the weight of any superimposed object. The joint is also subject to a separating force which can be considered as a turning moment acting in a tangential direction with respect to a circle described about the upper edge of the leg adjacent the pedestal as a center. The downwardly acting forces on the pedestal tend to force the upper portions of the legs downwardly, thus producing the turning moment and the spreading tendency of the legs. In conventional types of constructions using dowel pins or screws between the legs and the pedestal, the shear forces may be adequately taken care of but the tangential force tends to cause a breaking away of the leg, and/or the pedestal base, at that region of the leg and/or pedestal base positioned beneath the lowest dowel pin, screw or other connecting member employed in the joint. As a result, pedestals of the type mentioned usually require considerably more repair work than other comparable types of furniture construction.

The principal object of the present invention is to provide a simple and inexpensive reinforcing construction for pedestals of the character above described which gives adequate strength for withstanding the spreading action of the legs.

A further object is to provide a reinforcing construction which can be readily applied to conventional pedestals in a furniture repair shop, so as to avoid further failure of pedestals of this type.

The invention may best be understood by the accompanying drawings, in which:

Figure 1 is a side view of a three-legged pedestal constructed in accordance with my invention.

Figure 2 is an enlarged bottom view of the pedestal, with the end portions of the legs broken away.

Figure 3 is a detailed section on line 3—3 of Figure 2.

Figure 4 is a perspective view of the reinforcing ring used in carrying out my invention.

Referring now to the details of the embodiment of the invention shown in the drawings, 10 indicates the

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bottom end of a pedestal for a table or stool. The pedestal has a cylindrical bottom end or base 11 to which a plurality of similar downwardly and outwardly curved legs 12, 12 are attached. In the form shown, three such legs are employed. Each leg is thicker at its point of juncture with the pedestal base and tapers toward its lower outer end. The upper end of each leg has an upright inner face 13 which is arcuate in horizontal section so as to fit against the adjacent cylindrical surface of the pedestal base. Dowel pins 14, 14, herein two in number, are fitted in apertures 15, 15 spaced along the arcuate face 13, the lowermost dowel pin being preferably disposed at a substantial distance above the bottom end of the arcuate inner end face 13 of its leg. These dowel pins are adapted to fit in the correspondingly aligned apertures 16, 16 formed in the cylindrical portion 11 of the pedestal so that the dowel pins extend radially of said pedestal and centrally of their legs when in assembled position. The dowel pins so employed are especially adapted to resist the vertical shear forces imposed between the joint on the pedestal and the legs.

The bottom face of the pedestal base 10 is formed, preferably in the turning operation, with a concentric recess 17 having upwardly and inwardly inclined side walls 18 generally in the form of a truncated cone. A reinforcing ring 19, preferably of metal, also shaped in the form of a truncated cone, is inserted in said recess so that its outer face fits snugly against the inner walls 18. In the preferred form shown, the lower edge of the reinforcing ring terminates substantially flush with the bottom edge of said recess, so that the ring is hidden within the base when the pedestal is in normal upright position.

A plurality of screws 19, one for each leg, is passed through preformed bores or apertures in the reinforcing ring from the underside of the pedestal base. Each of said screws is inclined upwardly and outwardly so as to penetrate its adjacent leg 12 substantially at the thickest part of the latter, so that the screw can be of maximum length without weakening the leg. Each screw passes into its associated leg at a level above the junction of the inclined lower surface of the leg and the vertical, pedestal abutting surface of the leg.

It should be noted that the particular tapered shape of the recess and ring provides a relatively narrow thickness of wood at the lower edge of the base with a progressively upwardly increasing thickness to the upper edge of the recess and ring. This greater thickness at the upper edge of the recess is important inasmuch as the spreading tendency of the legs is transmitted through the screws and ring to that part of the pedestal base beneath the upper edge of the recess. Thus the force imposed on the lower portion of the pedestal base by the spreading tendency of the legs tends to work on the lower portion of the pedestal base as a cantilever. The greater thickness of the pedestal at the level adjacent the upper portion of the recess thus provides a strengthening of the base at the point where it is needed most.

The reinforcing ring not only acts as a reinforcement for the legs but also acts as a reinforcement for the lower portion of the pedestal base. When all of the screws 19 have been inserted into position, the legs, ring and pedestal base are unitarily joined together. Any spreading force acting on one or more legs will induce a pulling force on the ring adjacent that leg or legs and as a consequence will transmit force to the other screws and legs. Thus any spreading tendency in one leg is effectively opposed by the unitary structure of the pedestal base, ring, screws and other legs. The use of the ring with the pedestal base in effect provides strength of the base generally equivalent to a thickness of wood on the pedestal

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base on the order of two or three times the single thickness of the base adjacent the upper edge of the recess.

It will be observed from Figure 3 that the inner face of the ring 19 is inclined at such an angle that the heads of the screws are in position to be reached by a screw driver held in axial alignment therewith for engagement with the slot 21 in the heads 20 of said screws. In other words, the projected axis of each screw passes below the lower rim of the ring at the opposite side of the pedestal base. Moreover, the screws are disposed substantially tangential to the normal direction of spreading action on the legs.

All of the legs 12, 12 are provided with similar screws passing through the reinforcing ring 19 and with the slotted heads 20, 20 of the screws engaging the inner face of said ring when the parts are fully assembled. With this construction the reinforcing ring forms a rigid connection between all of the screws, with the legs connected to the base in such a manner that the ring eliminates danger of splitting the side walls of the pedestal base surrounding the bottom recess 17.

In practice, the legs may be assembled on the pedestal base in any suitable succession of operations. For instance, it may usually be found preferable to insert the dowel pins 14, 14 initially in the legs, with said pins glued in their apertures 15, 15. Each leg may then be mounted on the side of the pedestal base by inserting the dowel pins in the corresponding apertures 16, 16 in the base. The parts may be glued together in this position, if desired, by glue applied both to the dowel pins and the arcuate meeting faces of the leg and base. The reinforcing ring 19 may then be inserted in the bottom recess 17 and the screws then screwed home in their final position as shown in Figures 2 and 3.

Although I have shown and described certain embodiments of my invention, it will be understood that I do not wish to be limited to the exact construction shown and described but that various changes and modifications

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may be made without departing from the spirit and scope of the invention as defined by the appended claims.

I claim:

1. In a pedestal support, a generally upright pedestal having a base of cylindrical form and a plurality of legs radiating therefrom, the inner ends of said legs having an upright surface in abutting contact with said cylindrical base, said legs having a lower surface extending in a downwardly inclined direction from said upright surfaces, a plurality of dowel pins having opposite ends thereof projecting respectively into said pedestal base and the abutting inner surface of each of said legs, said dowel pins extending generally horizontally and radially with respect with the axis of said pedestal base, said base having a circular recess on the under surface thereof providing a progressively upwardly increasing thickness at the lower end of the base, a reinforcing ring positioned substantially completely within said recess and having its outer face fitting against the side walls of said recess, a screw for each leg extending through said ring and the adjacent wall of said base, each screw extending into one of said legs, the axis of each said screw being upwardly inclined with respect to the axis of said dowel pins, and passing above the junction of said upright surface and said lower surface of the leg associated with the screw, said ring and said recess being in the shape of a truncated cone.

2. The structure of claim 1 wherein the axis of each of said screws passes below the lower rim of the ring at the opposite side of said base to permit engagement of the heads of the screws by a screw driver.

References Cited in the file of this patent

UNITED STATES PATENTS

140,895	Dawson	July 15, 1873
602,489	Trapp	Apr. 19, 1898
1,417,816	Foot	May 30, 1922
1,890,456	Cushman	Dec. 13, 1932