This invention relates to articles of furniture, and more particularly to tables and the like, and to the supporting leg structure thereof.

Prior supporting legs for tables and the like have generally required legs for different table designs to be different styled and dimensioned, thereby requiring the manufacturer of the furniture to make and stock a large number of component parts for the furniture. Moreover, such prior furniture legs have not wholly been satisfactory for supporting glass top tables and the like because of the difficulty of fastening the glass table top to the legs. These difficulties contributed to the instability of the table leg. Moreover, in order to provide a table that is favorably priced on the market, it is desirable that the table leg be readily and economically manufactured.

It is therefore an object of the present invention to provide an improved supporting leg structure for an article of furniture which overcomes the aforementioned difficulties.

A further object of the present invention is to provide an improved supporting leg structure for an article of furniture.

Another object of the present invention is to provide an improved supporting leg structure for an article of furniture which is strong, stable, and economical to manufacture and stock, and which is readily adaptable to support glass and similar table tops.

Further objects and advantages of this invention will become apparent as the following description proceeds and the features of novelty which characterize the invention will be pointed out with particularity in the claims annexed to and forming a part of this specification.

Briefly stated, according to the present invention, there is provided a supporting structure for a piece of furniture such as a table or the like and formed of at least three interwoven stacked legs, each of which crosses under an adjacent one of the legs at intermediate points thereon, and crosses over another adjacent one of the legs at another intermediate point therealong spaced from the first intermediate point. One preferred furniture leg is formed with a rectangular cross section of uniform width and decreasing depth from an intermediate point outwardly toward its ends, and the legs are formed longitudinally with a pair of large radius reverse bends defining a slightly 8-shaped leg. When the legs are interwoven, the longitudinal axis of the legs assumes an inclined position relative to the horizontal.

The legs are provided with vertically extending aligned bolt holes at the points where they cross each other and the legs at these points are joined by a bolt extending through both of the legs. A spherical washer is positioned on the bolt between the intersecting legs to provide a bearing surface for the legs.

The nature of the invention will be best understood when described in connection with the accompanying drawings, in which:

FIG. 1 is a perspective view of a glass top table incorporating the supporting leg structure according to the present invention;

FIG. 2 is a front elevational view of the supporting leg structure of FIG. 1;

FIG. 3 is a plan view of the supporting leg structure of FIG. 2, but drawn on a smaller scale;

FIG. 4 is a fragmentary sectional view of the supporting leg structure of FIG. 2, taken along line 4-4 thereof and drawn to a larger scale;

FIG. 5 is a perspective view of a modified glass top table employing a supporting leg structure according to the invention; and

FIG. 6 is a perspective view of a glass top table including a supporting leg structure according to yet another embodiment of the present invention.

Referring now to the drawings, and particularly to FIGS. 1 to 4 thereof, there is illustrated an article of furniture, here shown as a table 10, having a somewhat triangular freeform table top 11 formed of glass and carried by a supporting leg structure 12, according to the present invention. The leg structure 12 includes three interwoven stacked legs 13, individually referenced as 13a, 13b, and 13c. As herein illustrated, each of the legs 13 is identical and therefore only one leg thereof is described in detail. However, it is to be understood that the legs 13, if desired, need not be identical, and, for example, one of the legs thereof may be longer than the others. As best illustrated in FIG. 3, each of the legs 13 crosses under an adjacent one of the legs at intermediate points identified as A, B, and C, and cross over another adjacent one of the legs at an intermediate one of the points A, B, and C spaced from the first intermediate point; that is, leg 13a crosses under leg 13c at the intermediate point B and crosses over leg 13b at the point C intermediate the ends of leg 13a and spaced from the point B. Similarly, leg 13b crosses under leg 13a at the point C intermediate the length of the leg 13a and 13b and leg 13b crosses over leg 13c at the point A intermediate the length of the leg 13b and spaced from the point C; leg 13c crosses under leg 13b at the point A intermediate the length of the leg 13c and spaced from the leg 13a at the point B intermediate the legs 13c and spaced from the point A.

Referring now to the furniture legs 13, as best illustrated in FIGS. 2, 4 and 6, only the leg 13a will herein be described in detail since the legs 13b and 13c are identical thereto. The leg 13a is formed of an elongated wooden member having a generally rectangular cross section of uniform width and decreasing depth from an intermediate point outwardly toward its ends. The leg 13a is provided with a pair of large radius bends 14 and 15 so that the upper end thereof curves upwardly and the lower end thereof curves downwardly; the reverse bends 14 and 15 defining a slightly 8-shaped leg. A metal slider 16 is carried at the lower end of the leg 13a and a resilient slider or bumper 17 of rubber or similar material is carried at the upper end of the leg 13a for supporting the table top 11. Each leg is provided with a pair of spaced vertical holes 18 and 19 intermediate the ends of the legs. The legs 13 are positioned with the upper of the holes 19 vertically aligned above the lower of the holes 18 of an adjacent leg at the points A, B, and C.

To provide for means connecting the legs 13a, 13b, and 13c together at the points A, B, and C intermediate their length, there is provided at each of the points A, B, and C, a leg bolt 20 extending upwardly through the lower hole 18 of one leg, for example, leg 13a, into the upper hole 19 of leg 13a. In order to conceal the head of the bolt 20 and to provide a flat surface for the head to bear against, the hole 18 in the leg 13a may have a downwardly extending countersink 21. Moreover, in order to secure the legs together, the bolt 20 is provided with a chrome-plated cylindrical nut 22 closed at its upper end by a conically shaped end section 22a and internally threaded along its axis to receive the bolt 20. In order to provide a neat appearing joint between the legs, and to provide a flat surface for the cylindrical nut 22 to bear against, the hole 19 may be provided with a downwardly extending countersink 23 to receive the nut 22.

In order to provide a bearing surface for the legs 13a, 13b, and 13c, at their joints at A, B, and C, there is pro-
vided a spherical washer 24 positioned on the bolt 20 between the legs 13a, 13b, and 13c at the points A, B, and C.

It will be appreciated that the furniture supporting structure 12 set out in FIGS. 1 to 4, may be economically manufactured and assembled and the legs 13a, 13b, and 13c may be used in various combinations with different dimensioned legs with variously shaped table tops, or turned upside down. One such embodiment utilizing legs identical to that of the embodiment of FIGS. 1 to 4 is illustrated in FIG. 5. As therein illustrated, there is provided a table 30 having a generally rectangular table top 31 resting on the upper end of a supporting leg structure 32. The leg structure 32 includes a plurality of legs 13 identical with those heretofore described in the embodiments of FIGS. 1 to 4 and interwoven and stacked, each leg 13 being joined at two intermediate points by bolts 28 provided with hexagonal nuts countersunk into the respective legs in the counterbores 23 thereof. The counterbores 23 are filled with wood putty or similar material 34 and the legs 13 are finished as by varnishing, without visible exposure of the nuts 33.

The legs 13 may be joined in a plurality of different manners in order to provide differently shaped furniture. In FIG. 6 there is illustrated a table 40 having a table top 41 resting on the upper ends of a supporting leg structure 42. The leg structure 42 includes a plurality of supporting legs 43 geometrically similar to the legs 13 heretofore described, but differing therefrom in that a pair of vertically aligned connecting holes 44 and 45 therethrough provided at two intermediate spaced points on the respective legs 43 are formed at a different angle than in the legs 13. Consequently, the legs 43 are interwoven or stacked at a different angle than the legs 13 when secured together by the bolts 20 threaded into the cylindrical nuts 22. The spherical washers 24 serve to provide bearing surfaces between the respective legs 43 at their connections. The different in angular positioning of the joining holes in the legs 40, changing the angle of stacking of the legs 43, alters the height of the table 40 as compared to that in the heretofore described embodiments; for example, in one set of tables made in accordance with the embodiment of FIGS. 1 to 4 and 5, the table were 15½ inches high whereas tables made in accordance with the angular positioning of the stacked legs 43, as illustrated in FIG. 6, were 22 inches high. The difference in the stacking angle of the legs 43 and the legs 13 additionally requires the ends of the legs 43 and 13 to be cut at different angles so as to provide flat ends on the legs.

It will be seen that furniture resting on the supporting leg structure of the present invention will be geometrically stable, strong, and economically manufactured and assembled. Moreover, one or more differently designed legs permit numerous combinations of leg and leg and table assemblies so that the stocking of various size and shaped legs may be minimized.

Although certain preferred embodiments of the invention have been described by way of illustration, many modifications will occur to those skilled in the art. It is intended therefore in the appended claims to cover all such modifications as fall within the true spirit and scope of this invention.

What is claimed as new and is desired to be secured by Letters Patent of the United States is:

1. Supporting structure for a table top or the like comprising three identical leg members, each leg member having its maximum width at an intermediate portion and tapering toward each end from said point of maximum width, each leg member when in supporting position having its longitudinal axis disposed at an acute angle with the horizontal, means defining a first vertically disposed opening in each leg member substantially at its point of maximum width, means defining a second opening in each leg parallel with said first opening and disposed between said point of maximum width and said lower end, means for securing said legs together in supporting position comprising three fastening means each passing through a different first opening in one leg and a different second opening in another leg, and a spherical washer interposed between adjacent ends of aligned first and second openings and staked between two associated legs by one of said fastening means to insure a rigid supporting structure.

2. Supporting structure as set forth in claim 1 wherein each of said fastening means includes a bolt having a head and a nut, said head being countersunk into one of said legs at said second opening and said nut being countersunk at least partially into another of said legs at said first opening.

3. Supporting structure as set forth in claim 2 wherein said nut is of cylindrical shape with an upper conically shaped closed end and provided with axially extending threads adapted to cooperate with a threaded portion of said bolt.

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