

March 14, 1967

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3,309,051

ADJUSTABLE LEG ASSEMBLY FOR FURNITURE OR THE LIKE

Filed April 26, 1965

2 Sheets-Sheet 1

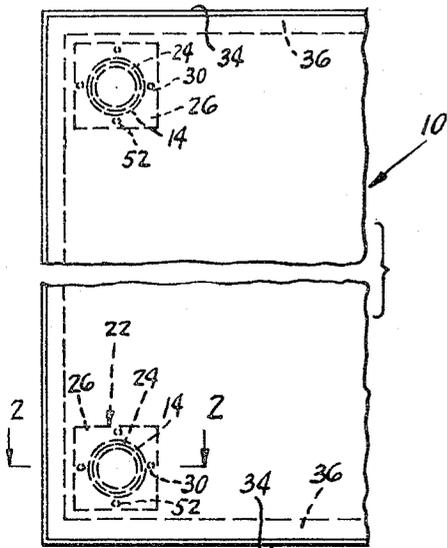


FIG. 1

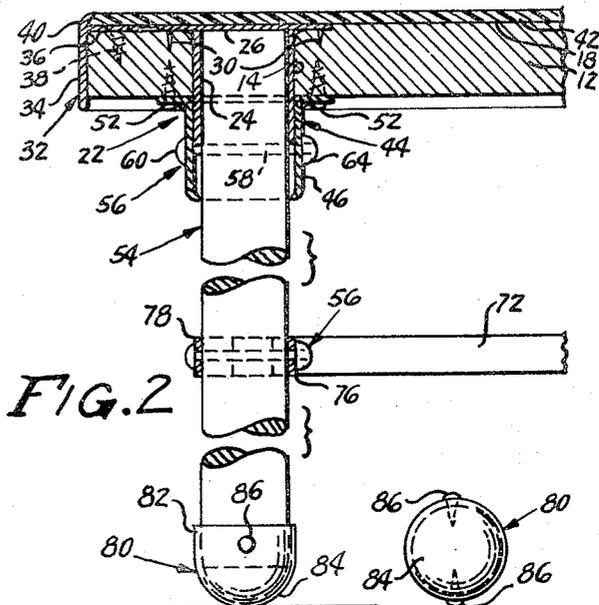


FIG. 2

FIG. 6

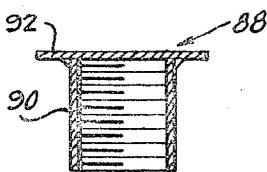


FIG. 7

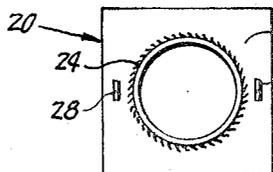


FIG. 3

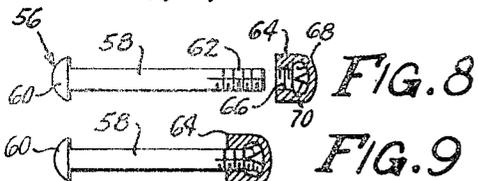


FIG. 8

FIG. 9

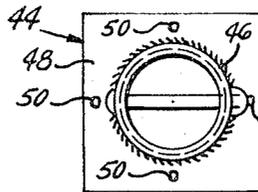


FIG. 4

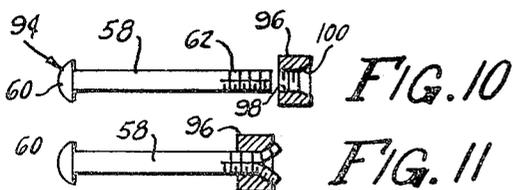


FIG. 10

FIG. 11

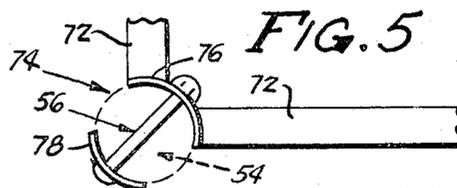


FIG. 5

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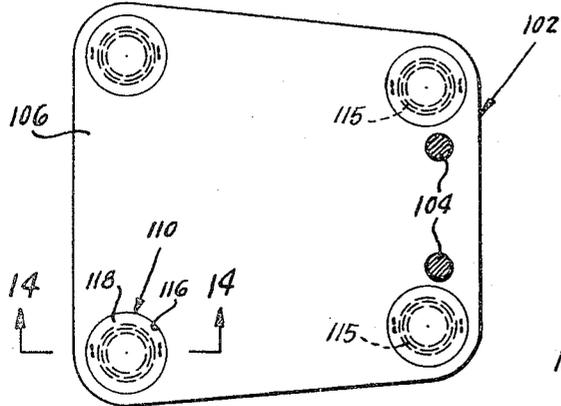


FIG. 13

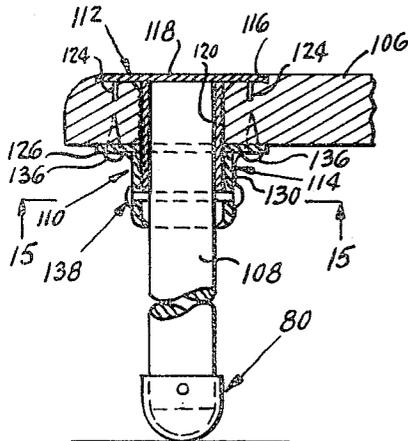


FIG. 14

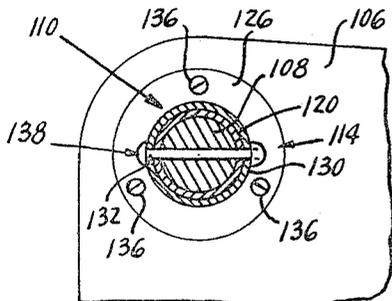


FIG. 15

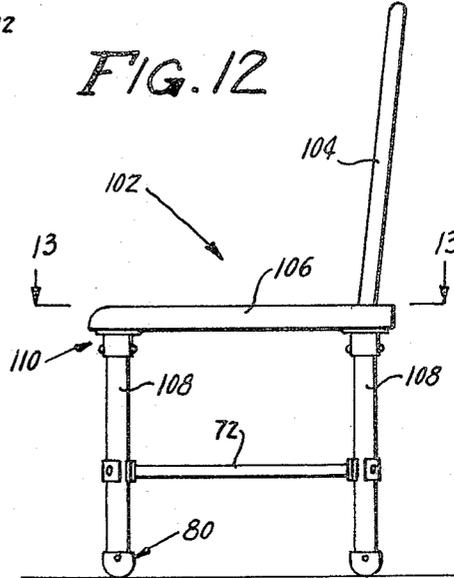


FIG. 12

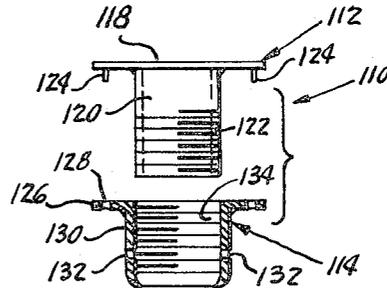


FIG. 16

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**ADJUSTABLE LEG ASSEMBLY FOR FURNITURE  
OR THE LIKE**

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3 Claims. (Cl. 248—188.5)

This invention relates to furniture construction, and more particularly to a means for rigidly connecting a leg-type support to a platform such as a tabletop, a chair seat, and the like.

It is one object of the instant invention to provide a furniture support and connecting means for a platform type piece of furniture which is characterized by its sturdiness, inexpensiveness and removability.

Another object of this invention is to provide a furniture support for a platform type piece of furniture having a series of vertically spaced sleeves holding the support.

It is another object of the instant invention to provide means for independently adjusting the several supports of a furniture piece to accommodate an uneven floor.

It is another object of the instant invention to provide a furniture support connection which extends partially through the body of the associated platform member and over which may be laid a sheet of veneer or the like to conceal the upper part of the connection.

It is another object of the instant invention to provide an auxiliary connecting means by which a retaining sleeve may be secured to a furniture support.

Other objects and advantages of the instant invention reside in the combinations of elements, arrangements of parts, and features of construction, all as will be more fully pointed out hereinafter and disclosed in the accompanying drawing wherein there is shown several preferred embodiments of this inventive concept.

In the following specification and claims occasionally use is made of the term, "platform" to indicate the member to which the leg devices are joined. This term is intended to cover, in addition to tabletops to which it obviously applies, any structural surface or member of a piece of furniture to which it is customary or desirable to attach leg supports and thus is intended to include chests, chairs, desks, bureaus, cabinets, and the like.

In the drawings:

FIGURE 1 is a view of a table equipped with the connection and support in accordance with the principles of the instant invention with certain parts being broken away for clarity of illustration;

FIGURE 2 is a cross sectional view of the device of FIGURE 1 taken substantially along line 2—2 thereof and viewing in the direction of the arrow;

FIGURE 3 is a bottom view of an upper sleeve which is used in the connection of a leg support to a platform member as shown in FIGURE 2;

FIGURE 4 is a bottom view of a lower sleeve used in the connection of a leg support to a platform member as shown in FIGURE 2;

FIGURE 5 is a view showing the connection of a leg support with cross members, certain parts being broken away for clarity of illustration;

FIGURE 6 is a bottom view of a protective attachment secured to the bottom of a leg support;

FIGURE 7 is a modified form of an upper sleeve used in the connection of a leg support to a platform member;

FIGURE 8 is an exploded view of an auxiliary connecting means used to secure a leg support to either a lower sleeve or a cross member;

FIGURE 9 is a view of the auxiliary connecting means

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of FIGURE 8 showing the several parts thereof secured together;

FIGURE 10 is an exploded view of another form of auxiliary connecting means used to secure a leg support to either a lower sleeve or a cross member;

FIGURE 11 is a view of the device of FIGURE 10 showing the several parts thereof secured together;

FIGURE 12 is a side elevational view of chair utilizing the support of the instant invention;

FIGURE 13 is a partial cross sectional view of the chair of FIGURE 12 taken along line 13—12 thereof and viewing in the direction of the arrows;

FIGURE 14 is a cross sectional view taken along line 14—14 of FIGURE 13 and viewing in the direction of the arrows;

FIGURE 15 is a cross sectional view of FIGURE 14 taken along line 15—15 thereof and viewing in the direction of the arrows; and

FIGURE 16 is an exploded view of the support shown in FIGURES 12 to 15 inclusive.

Referring now to the drawing, wherein like reference characters designate like elements throughout the several views thereof, there is generally indicated at 10 a platform type piece of furniture which may be a table, chair, desk, bureau, or the like, as previously mentioned. Table 10 comprises a rectangular planar structural member 12 having an aperture 14 at each corner thereof extending through member 12.

A lamina of any desired configuration is cut from each corner of structural member 12 to provide an indentation 18. An upper sleeve indicated generally at 20 of a support connecting means shown generally at 22 comprises a downwardly extending tube 24 with a rectangular or other conveniently shaped closure 26 fixedly secured across one end thereof. Tube 24 of upper sleeve 20 is placed in aperture 14 providing a close sliding fit enhancing the structural rigidity of connecting means 22 as more fully explained hereinafter.

Closure 26 has provided therein a plurality of apertures 28 through which are inserted any conventional frictional fastening means 30 such as nails or screws, although flange 26 may be secured in indentation 18 by gluing. An outer peripheral facing indicated generally at 32 is provided about the exposed ends of structural member 12 and comprises a downwardly extending face 34 which may be finished in accordance with the remainder of the piece, and a perpendicularly extending projection 36 which may be secured to structural member 12 by frictional fastening means 38 or by gluing. Outer facing 32 also comprises an upwardly extending flange 40 which is conveniently shaped to overlie a table surface lamina 42 as shown in FIGURE 2.

Connecting means 22 also comprises a lower sleeve indicated generally at 44 which is comprised of a tubular section 46 about which is secured a conveniently configured flange 48 having a series of apertures 50 therein. As shown in FIGURE 2 lower sleeve 44 is secured to the underside of structural member 12 coaxially with aperture 14 and upper sleeve 20 so that the lower end of tube 24 is received within the upper end of tube 46 in a close sliding fit thus enhancing the structural rigidity of connecting means 22.

A conveniently configured leg indicated generally at 54 is disposed coaxially of tubes 24 and 46 and provides a close sliding fit with the interior of tube 24. A series of aligned transverse openings are provided in tube 46 and through leg 54 for the convenient reception of a nut and bolt fastening device indicated generally at 56. Fastening device 56 comprises an elongated shank 58 having an enlarged head 60 on one end thereof and a bifurcated threaded portion 62 on the other end. A nut fastener 64

comprises an internally threaded portion 66 and an enlarged aperture 68 therebehind. Fixedly secured within opening 68 is a spreader 70 affixed to the interior wall of opening 68 and pointed coaxially with the opening of fastener 64. As is apparent from FIGURE 9 the reception of fastening nut 64 on threaded portion 62 causes spreader 70 to separate bifurcated end 62 of shank 53 thus providing an extremely tight connection between lower sleeve 44 and leg 54.

Midway through the length of leg 54 is a series of horizontal cross members 72 secured thereto by a coating arcuate brace indicated generally at 74. Brace 74 comprises a first arcuate portion 76 which is fixedly secured to cross members 72 and a second arcuate portion 78, both arcuate portions being conveniently apertured for the reception of a nut and bolt. The interior arcuate configurations of braces 76, 78 are adapted to receive a nut and bolt connecting device 56 such as that previously described.

Coaxially secured on the lower end of leg 54 is a floor protective cap indicated generally at 80 which comprises a tubular upper portion 82 adapted to provide a close sliding fit with leg 54 and a lower hemispherical section 84 to provide an attractive lower support for leg 54. Protective cap 80 may be secured to leg 54 by any convenient means such as frictional fasteners 86 which may be nails or screws.

A modified form of an upper sleeve is shown generally at 88 in FIGURE 7 and comprises a depending interiorly threaded tube 90 and a plate 92 which may be conveniently provided with a number of apertures therethrough for the reception of frictional fastening means in much the same manner that flange 26 of upper sleeve 20 is so provided. When using modified upper sleeve 88, leg 54 is complementarily threaded on the upper end thereof, providing a means for independently leveling each leg.

Another form of nut and bolt connecting means is shown generally at 94 in FIGURES 10 and 11 and comprises an elongated shank 58 having an enlarged head 60 on one end thereof and a bifurcated exteriorly threaded portion 62 on the other end. Connecting means 94 also comprises a fastening nut 96 having an interiorly threaded opening 98 at one end with an outwardly diverging non-threaded aperture 100 at the other. When fastening means 94 is assembled, fastening nut 96 is conventionally received upon threaded portion 62 until the extreme end thereof extends beyond diverging opening 100. A punch or chisel is then placed in the slot formed by bifurcated portion 62 with the end thereof being struck to place the bifurcations into close contact with opening 100.

Referring now to FIGURE 12 there is indicated generally at 102 a chair comprising the customary back 104, seat 106, and legs 108. Legs 108 are secured to the platform seat 106 by a support connection indicated generally at 110 which comprises an upper sleeve indicated generally at 112 and a lower sleeve indicated generally at 114. The upper surface of seat 106 is formed with an aperture 115 adjacent each corner thereof and a coaxial circular indentation 116 into which is fitted upper sleeve 112. As shown in FIGURE 14 indentation 116 receives a circular flange 118 and aperture 115 receives a downwardly extending coaxial tube 122 so that platform 106 and the upper surface of upper sleeve 112 provides a smooth upper surface. The lower end of tube 120 of upper sleeve 112 is externally threaded for purposes more fully pointed out hereinafter. Flange 118 carries a series of downwardly extending fastening means 124 for secure engagement with surface 106.

Lower sleeve 114 comprises an annular flange 126 having a series of radially spaced apertures 128 and a downwardly extending coaxial tube 130 having a pair of transversely aligned apertures 132 and an internally threaded portion 134.

As shown in FIGURE 14 lower sleeve 114 is secured to the under surface of seat 106 by threadably connecting

threaded portions 122 and 134. Frictional fastening means 136 are then placed in radially spaced apertures 128 and engaged with seat 106.

Legs 108 are each provided with a transversely extending aperture adjacent the upper end thereof for the convenient reception of a transverse connecting means indicated generally at 138, which may be of the types shown in FIGURES 8 to 11 inclusive. The lower end of leg 108 each carries a floor protector indicated generally at 80 of the type shown in FIGURE 6. Secured intermediate leg 108 and connecting adjacent legs together is a support rod 72 as shown in FIGURE 5.

It should be apparent that the connection provided by the instant invention provides a sturdy, inexpensive, and convenient means for attaching a leg to a platform type piece of furniture. Because of the close sliding relation between upper flange 20, aperture 14, and between leg 54 and upper sleeve 20, and between upper and lower sleeves 20, 46 and extremely secure connection is provided.

From the foregoing, it will now be seen that there is herein provided an improved furniture support, which accomplishes all of the objects of this invention and others, including many advantages of great practical utility and commercial importance.

As many embodiments may be made within this inventive concept, and as many modifications may be made in the embodiment hereinbefore shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

I claim:

1. An article of furniture comprising a platform having an upper and lower surface and having an opening extending therethrough, an upper sleeve mounted in said opening and extending downwardly therethrough, a lower sleeve secured to said lower surface of said platform coaxial with said opening and receiving said upper sleeve, an elongated leg member received in said upper and lower sleeves, and means fixedly securing said leg member to said sleeves, said upper surface of said platform being cut away to provide a planar indentation, said upper sleeve including a plate secured to said upper surface of said indentation and a tube secured to said plate and extending downwardly through said opening beyond the lower surface of said platform, said lower sleeve comprising an apertured flange secured to said lower surface of said platform coaxial with said opening, and a depending tube secured on said flange coaxial with said opening and receiving therein the exposed portion of said tube of said upper sleeve.

2. An article of furniture comprising a platform having an upper and lower surface and having an opening extending therethrough, an upper sleeve mounted in said opening and extending downwardly therethrough, a lower sleeve secured to said lower surface of said platform coaxial with said opening and receiving said upper sleeve, an elongated leg member received in said upper and lower sleeves, and means fixedly securing said leg member to said sleeves, said securing means comprising an elongated shank having an enlarged head at one end thereof and a split exteriorly threaded portion at the other, said lower sleeve and said leg member being provided with transverse aligned openings, said shank extending therethrough, and a fastening nut having an interiorly threaded opening at one end thereof and having means positioned coaxial with said last mentioned opening for separating the split portions.

3. An article of furniture comprising a platform having an upper and lower surface and having an opening extending therethrough, an upper sleeve mounted in said opening and extending downwardly therethrough, a lower sleeve secured to said lower surface of said platform coaxial with said opening and receiving said upper sleeve, an elongated leg member received in said upper and lower sleeves, and means fixedly securing said leg member to said sleeves, said securing means comprising an elongated

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shank having an enlarged head at one end thereof and a split exteriorly threaded portion at the other end, said leg member and said lower sleeve being provided with aligned transverse apertures, said shank being disposed in said apertures, and a fastening nut having an interiorly threaded opening at one end and a diverging non-threaded opening at the other, said nut being placed on said threaded portion with the split portion spread apart.

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5 CLAUDE A. LE ROY, *Primary Examiner.*

JOHN PETO, *Examiner.*