Sept. 13, 1960 J. ADLER 2,952,306

CHAIR BRACE

Filed Dec. 5, 1956

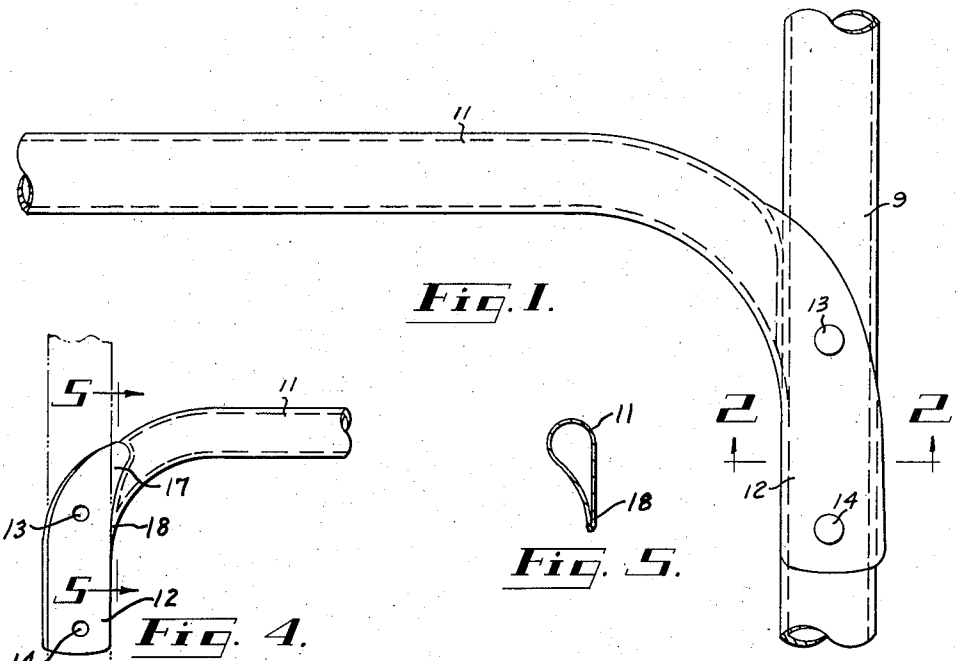


Fig. 1.

Fig. 4.

Fig. 5.

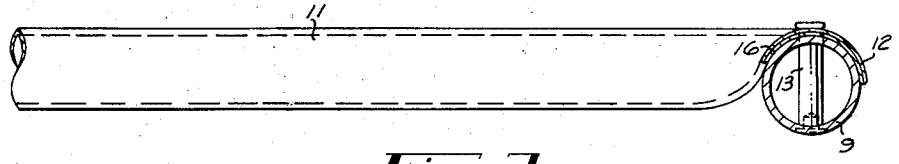


Fig. 2.

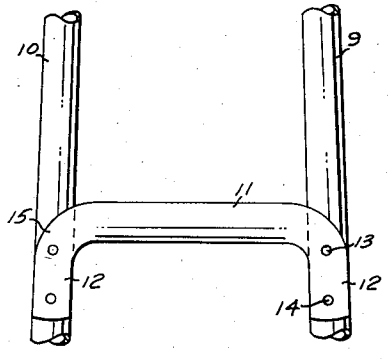


Fig. 3.

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1 Claim. (Cl. 155—197)

My invention relates to a new and useful improvement in a chair construction and particularly to a brace for the legs thereof. From the description of the invention it will be obvious that the invention may be used on any supporting body, such as a table or the like, having tubular legs which are connected together by braces.

It is an object of the present invention to provide a construction of this type which will be simple in construction, economical of manufacture, durable and compact.

Another object of the invention is the provision whereby a tubular brace may be mounted on a leg circular in cross-section in such a manner that the maximum of strength in the bracing member may be obtained.

Other objects will appear hereinafter.

It is recognized that various modifications and changes may be made in the details of the structure illustrated without departing from the invention, and, it is intended that the present disclosure shall be considered to be but the preferred embodiment.

Forming a part of this application are drawings, in which,

Fig. 1 is a fragmentary side elevational view of the invention;

Fig. 2 is a sectional view taken on line 2—2 of Fig. 1;

Fig. 3 is a side elevational view of the invention showing it attached to supporting legs illustrated in fragment;

Fig. 4 is a fragmentary sectional view from the opposite side of Fig. 1;

Fig. 5 is a view taken on line 5—5 of Fig. 4.

As shown in the drawings I have indicated a pair of tubular supporting legs **9** and **10** connected together by a tubular brace **11**. As shown in Fig. 2 the ends of the brace are collapsed to provide a trough-shaped structure which is curvilinear in cross-section to provide a tongue **12** which snugly embraces a portion of the leg such as the leg **9**. This tongue is lengthened to extend longitudinally of the leg a distance sufficient for permitting the insertion of spaced apart rivets **13** and **14** through the tubular supporting legs.

As clearly shown in Fig. 3 this collapsed tongue is provided with a curved portion **15** which curves toward the outside of the leg to which attached and proceeding from this curved portion is the tongue **12**.

Experience has shown that a brace of this type is very economically formed and is possessed of great strength. The top rivet **13** is located at substantially the lower terminus of the curve **15**. Consequently, strain placed upon the brace **11** will be in a direction to tend to straighten out the curved portion. This tendency to straighten out the curved portion is prevented by the portion **16** of the collapsed end which serves as a shoulder which resists the tendency to straighten out the tongue **12**. Consequently, the strain is resisted not only from the strength of the metal itself, but also by the resistance offered through engagement of the leg with the shoulder of the brace.

It will be noted that the tongues **12** do not engage the opposed faces of the legs **9** and **10** but engage either the front face or the back face of the legs **9** and **10**. This characteristic is referred to in the claim by stating that these angularly turned tongues or ends engage other than the opposed faces of the legs **9** and **10**. Where the brace is so constructed and located that the tongues engage the opposed faces of the legs, the strain is such that these tongues have a tendency to move inwardly toward each other, warping the entire structure.

Furthermore, in the manufacture of the brace, the tube is formed U-shaped, as shown in Fig. 3, and then the legs of this U-shaped structure are collapsed to form a curvilinear formation. If it is intended to have these legs of the U-shaped structure engage the opposed faces of the legs to be braced, in fabricating, the angularly turned legs of the U-shaped structure will be bent out of shape in forming them into the semi-circular formation. Where these angularly turned legs of the U-shaped structure are to engage either the front or back faces of the legs to be braced, the U-shaped structure may lie flat and the curvilinear or semi-circular formation given to the legs of the U-shaped structure in one operation without any danger of warping or twisting of the legs of the U-shaped structure out of their relation to the bight of the U-shaped structure.

Consequently, with the structure illustrated herein, these parts designated **12** in the specification, and which constitute the legs of the U-shaped structure, lie in the same plane as the bight and the semi-circular formation opens into this plane.

When this U-shaped structure is formed, the angularly turned ends or tongues **12** are fastened to the legs **9** and **10**. Because of the formation of these angularly turned tongues **12**, in the manner indicated, the legs **9** and **10** will always lie in the same plane.

It will be noted that the collapsed portion of the ends **12** of the member **11** extends upwardly from **17** well into the curve which extends from the member **11** so that any tendency to bend these tongues **12** inwardly or outwardly of each other will be across the collapsed portion. This provides a strength which resists this tendency of movement and consequently a rigid structure results. The strain which would have a tendency to bend the tongues **12** relatively to the member **11** would be concentrated at the point indicated by **18** so that if the bend were to take place, it would be transversely of the collapsed portion.

When constructed in this manner and mounted as described, a very rigid formation is provided in which warping is entirely avoided and a superior construction is obtained to that which would be obtained were these legs of the U-shaped structure to engage opposed faces of the legs to be braced.

What I claim is:

In a chair, the combination of, a pair of spaced apart tubular legs of curvilinear cross-section, a tubular cross brace connecting said legs and comprising a tube of curvilinear wall cross-section disposed between the legs at right angles thereto with the ends thereof being turned at right angles to the tube and extending longitudinally of the legs along faces of the legs other than the opposed faces of the spaced apart legs, each of said ends having the inner half of its curvilinear wall which abuts the adjacent leg collapsed against the outer half of its curvilinear wall to form a tongue which is curvilinear in cross-section and which partially embraces the adjacent leg, and fastening means for fixedly securing said tongues to said legs.

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