June 16, 1959 C. G. NG 2,890,744

CHAIR OR THE LIKE OBJECT, AND SUPPORT THEREFOR

Filed Oct. 5, 1956 2 Sheets-Sheet 1

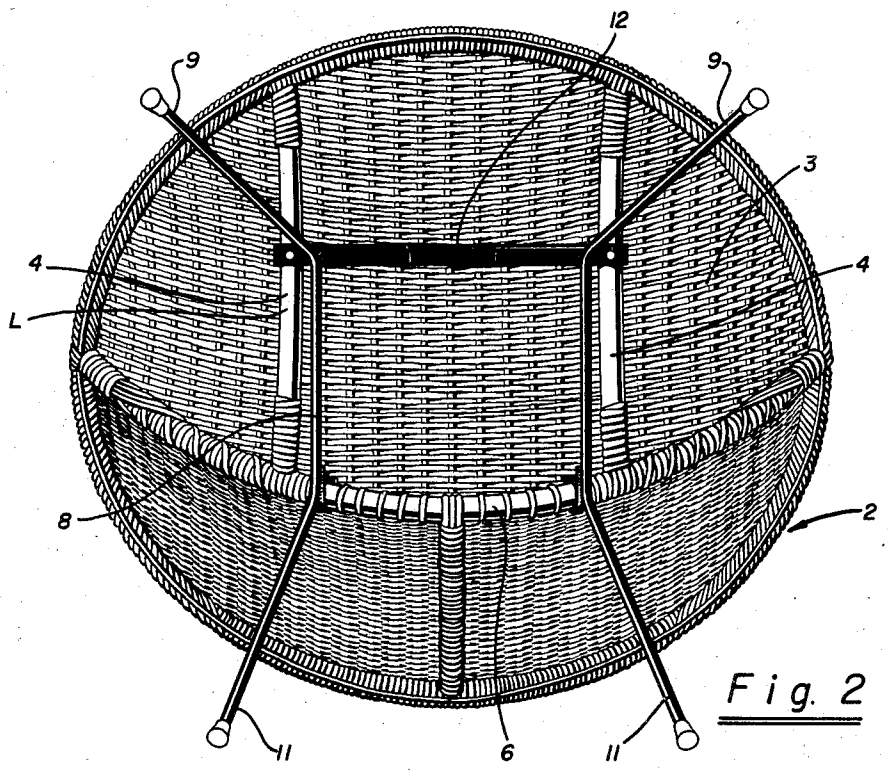


Fig. 2

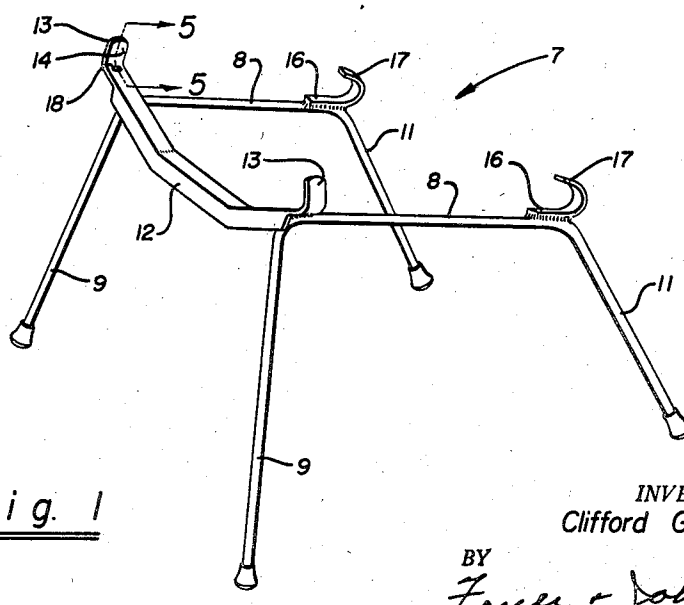


Fig. 1

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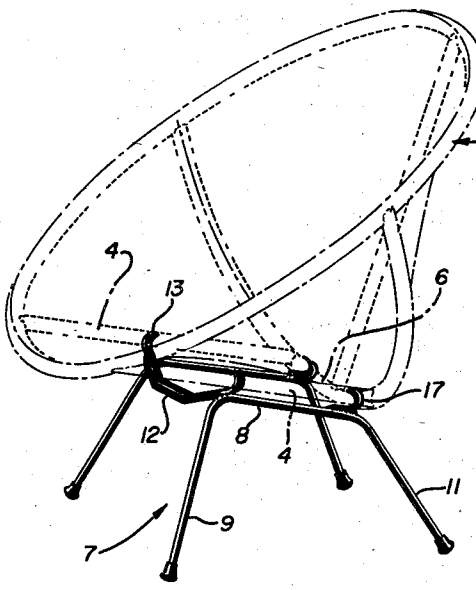


Fig. 3

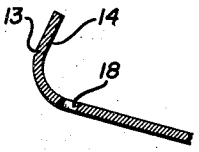


Fig. 5

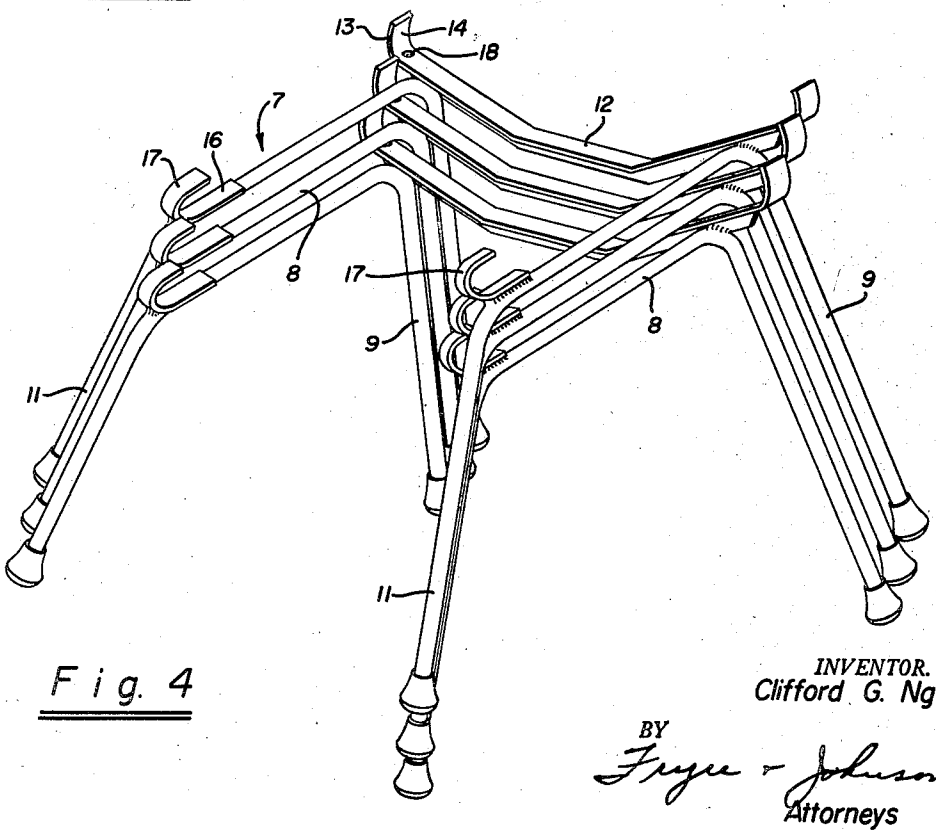


Fig. 4

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CHAIR OR THE LIKE OBJECT, AND SUPPORT THEREFOR

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4 Claims. (Cl. 155—191)

This invention relates to supporting means for a chair seat or the like object, and more particularly to a support frame that can be quickly attached to parts of said object by snap-lock connecting means, thus obviating the necessity of having to employ additional securing means, such as separate clamps and bolts and nuts, heretofore utilized for fixedly securing the support frame to the object.

With respect to certain types of chairs in which the seats are made essentially of rattan, and which are commonly known as basket chairs, it is customary for economic reasons to have the chair seats manufactured in countries foreign to the United States. Such chair seats are imported into the United States, and separate frame supports manufactured domestically are provided for the seats. The seats and the support frames are generally sold as unattached units, thus leaving it to the customer to assemble a seat and support frame. For effecting such assembly, it has, heretofore been necessary to provide clamps and nuts and bolts for fixedly securing these parts together.

Summarizing the invention, it eliminates the time required and the necessity of having to perform the manual operation for securing a support frame to such seat with the usual separate fastening means heretofore required. For this purpose, a support frame having upwardly extending lugs is provided, and these lugs are of such character as to provide snap-lock connecting means with parts of the seat or similar object. The invention thus has as its objects, among others, the provision of an improved support frame which can be quickly and easily attached to a chair seat or a similar object, which is of economical and simple construction, and which is of such character as to lend itself for ready stacking to facilitate shipping and handling of the same in stacked units. Other objects of the invention will become apparent from the following more detailed description.

Referring to the drawings:

Fig. 1 is an isometric view of the support frame of the invention;

Fig. 2 is a view looking at the underside of a basket type chair seat to which the support of Fig. 1 is attached, to provide the complete chair;

Fig. 3 is an isometric view of the assembled chair, in which the chair seat is illustrated in phantom lines;

Fig. 4 is an isometric view illustrating a plurality of the supports of Fig. 1 in stacked relationship for storage or transportation.

Fig. 5 is a fragmentary section taken in a plane indicated by line 5—5 in Fig. 1.

Chair seat 2 is of conventional construction, comprising frame members of relatively resilient material, such as bamboo, and flexible strips of cellulosic material, such as rattan 3, interwoven with the frame members. The frame members include substantially parallel side rails 4 which are at the bottom of the chair in its normal position, and a concave or downwardly curved rear rail 6 extending transversely with respect to side rails 4 and connected thereto.

Support frame 7 is of very simple construction, and is adapted for quick connection to the parts of the chair seat comprising rails 4 and 6. It consists essentially of the following parts. Two generally U-shaped frame members are provided. They are of any suitable strong but bendable material, preferably iron rods, but may be of any other metal or tubing. Each of these U-shaped members is bent to provide a side rail 8, a downwardly extending forwardly inclined front leg 9, and a downwardly extending rearwardly inclined rear leg 11.

Adjacent the front end of frame 7, side rails 8 are rigidly connected together in substantially parallel spaced apart relationship by a transversely extending rail 12 of suitable material, such as iron, and which for strength is an angle section. Rail 12 is fixedly secured to rails 8 by any suitable means such as welding. At their rear ends, rails 8 are desirably unconnected as such connection is unnecessary when the support is connected to the chair seat.

A plurality of upwardly extending lugs is fixed on support frame 7 to provide for snap-lock connection of such support to chair seat parts 4 or 6. Two of such lugs 13 are formed at the ends of transversely extending rail 12 at the front end of frame 7; and each of these lugs 13 has an inner face 14, the respective faces 14 extending longitudinally of the chair seat whereby they are opposed to each other. The distance between such faces 14 is slightly less, in the order of about a quarter of an inch or any other suitable short distance, than the distance between the outer sides of side rails 4 in the normal position of such rails before the support is attached to the chair seat.

These faces 14 are adapted to engage frictionally longitudinally extending side rails 4 of the chair seat 2, as is shown in Figs. 2 and 3; and because of the natural resiliency of such side rails 4 and the fact that the distance between lug faces 14 is slightly less than the normal distance between the outer sides of the side rails, lugs 13 will firmly grip such side rails in the assembled position of the frame support on the chair seat. To facilitate such gripping action, lugs 13 are bent inwardly slightly as can be seen best from Fig. 5.

At the rear end of support frame 7, two additional laterally spaced apart lugs 16 are provided; being fixedly secured to rails 8 by any suitable means, desirably welding. Each of these lugs 16 has a hook part 17 extending above the support frame and facing in a direction toward lugs 13 at the front end of support frame 7, and are hence adapted to engage over transverse frame member 6 of the chair seat. It will be noted that each of the four lugs 13 and 16 is adjacent a top portion of a leg of support frame 7, thus providing a strong construction when the support frame is attached to the chair seat; and the four lugs are arranged in polygonal relationship, or in other words, they form the corners of a polygon formed by imaginary straight lines connecting the lugs. This polygonal relationship of the lugs makes for rigidity when the support is attached to the chair seat. Although four such lugs are most advantageously employed in the preferred embodiment of the invention, such strength factor can be obtained by any other number of lugs greater than two arranged in polygonal relationship, depending upon the character of the object to which the support frame is adapted to be attached.

In assembling support frame 7 to the chair seat 2, this can be quickly and easily done merely by positioning front lugs 13 over the outer sides of rails 4 at any convenient location whereat rear lugs 16 are displaced rearwardly of transverse rail 6, for example, at the location indicated at L in Fig. 2. By merely sliding lugs 13 forwardly along side rails 4, hooks 17 of lugs 16 will become engaged over rear rail 6 of the chair seat.

It will be noted that rear legs 11 of support frame 7 are

of effective shorter length than front legs 9. As a result, the top of support frame 7 is inclined downwardly toward the rear thereof when it rests on a support such as a floor. Consequently, the weight of a person sitting in chair seat 2 will cause a rearward thrust on the chair seat maintaining firm engagement of hooks 17 with rear rail 6 of the chair seat. In the embodiment of the invention illustrated, rear legs 11 are actually shorter than front legs 9. However, the arrangement of the legs could be such that legs 11 are longer, and the top of support frame 7 be inclined downwardly toward the rear by increasing the angle of inclination of legs 11.

No other securing means need be provided after support frame 7 is attached to chair seat 2 in the manner described. However, if desired, a hole 18 may be formed at each end of rail 12 adjacent a lug 13 to receive a small wood screw that can be screwed into a side rail 4 of the chair seat after assembly of the parts. Such securing with wood screws will insure that hooks 17 will not accidentally slip away from rear rail 6, which might otherwise occur should the assembled chair be roughly handled or when the assembled chair is moved from one location to another. The screws are, however, not required to maintain support frame 7 fixed to chair seat 2 during normal usage of the chair.

Support frame 7 can be quickly detached from the chair seat in a manner reverse from that described for attaching these parts. As is illustrated in Fig. 4, the construction of support frame 7 is such as to enable a plurality of the frames to be conveniently stacked for storage, or shipment to a customer.

I claim:

1. A quickly attachable and detachable support for a chair seat or like weight supporting object comprising a supporting frame structure including four downwardly extending legs, a first pair and a second pair of chair seat engaging lugs positioned on said frame structure with a lug adjacent the top of each of said legs, each of said first pair of lugs having an inner face extending longitudinally of said supporting frame structure whereby said faces are opposed to each other, said inner faces being spaced from each other a distance slightly less than the distance between outer surfaces of longitudinally extending side frame members of said chair seat whereby each of said opposed faces is frictionally engageable with an outer surface of an asosciated longitudinally extending side frame member of said chair seat, each of the lugs of said second pair being substantially hook shaped with the hook thereof facing the lugs of said first pair, said hooks being frictionally engageable with a transversely extending rear frame member of said chair seat, whereby said supporting frame structure may be snap-locked into secure engagement with said frame members of said chair seat thereby precluding the need for other auxiliary fastening means.

2. In combination, a chair seat comprising two spaced substantially parallel longitudinally extending resilient side frame members and a rear frame member extending transversely of said side frame members; and a quickly attachable and detachable supporting frame structure for

said chair seat including four downwardly extending legs, first and second pairs of chair seat engaging lugs extending upwardly from said supporting frame structure with a lug adjacent the top of each of said legs, each of said first pair of lugs having an inner face extending longitudinally of said chair seat whereby said faces are opposed to each other and spaced from each other a distance slightly less than the distance between the outer sides of said resilient side frame members, each of said opposed faces being frictionally engaged with an outer side of an associated side frame member, each of the lugs of said second pair being substantially hook shaped with the hook thereof facing the lugs of said first pair and frictionally engaged over said rear frame member, said pairs of lugs securely fastening said supporting frame structure to said chair seat in snap-lock fashion thereby precluding the need for auxiliary fastening means to prevent inadvertent separation of said chair seat and said supporting frame structure.

3. A supporting frame structure for rapid attachment to and detachment from a chair seat which includes two resilient side frame members extending longitudinally of said chair seat and a rear frame member extending transversely of said side frame members, said supporting frame structure comprising a plurality of downwardly extending legs and a transverse rail for operatively connecting together said legs, first and second pairs of chair seat engaging lugs extending upwardly from said supporting structure, each of said first pair of lugs having an inner face extending longitudinally of said supporting frame structure whereby said faces are opposed to each other, said faces being spaced from each other a distance slightly less than the distance between outer surfaces of said side frame members of said chair seat whereby each of said faces may be frictionally engaged with an outer surface of an associated side frame member when said supporting frame structure is attached to said chair seat, each of the lugs of said second pair being substantially hook shaped with the hook thereof facing said first pair of lugs whereby said second pair of lugs may be frictionally engaged with said rear frame member of said chair seat when said supporting frame structure is attached thereto, said pairs of lugs adapting said supporting frame structure to be securely attached to said chair seat in snap-lock fashion thereby precluding the need for tools or auxiliary fastening means to effect such attachment.

4. The supporting frame structure of claim 3 wherein the top thereof is inclined downwardly longitudinally rearwardly to insure secure engagement of said second pair of lugs with said chair seat rear frame member when said structure is attached to said chair seat and weight is supported thereby.

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