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COLLAPSIBLE CHAIR OF THE KNOCK-DOWN TYPE

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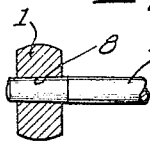
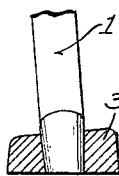
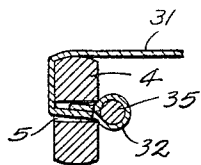
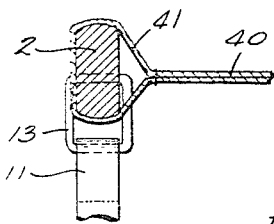
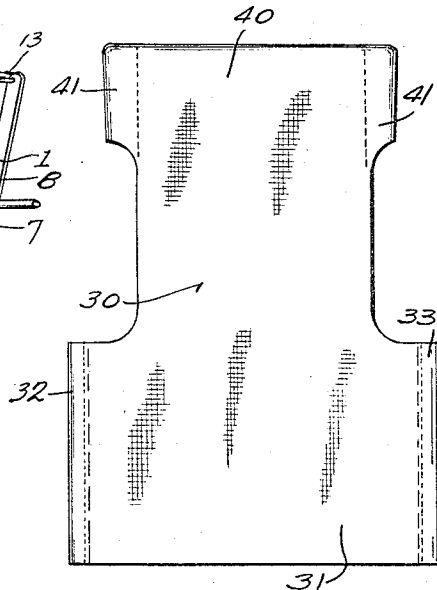
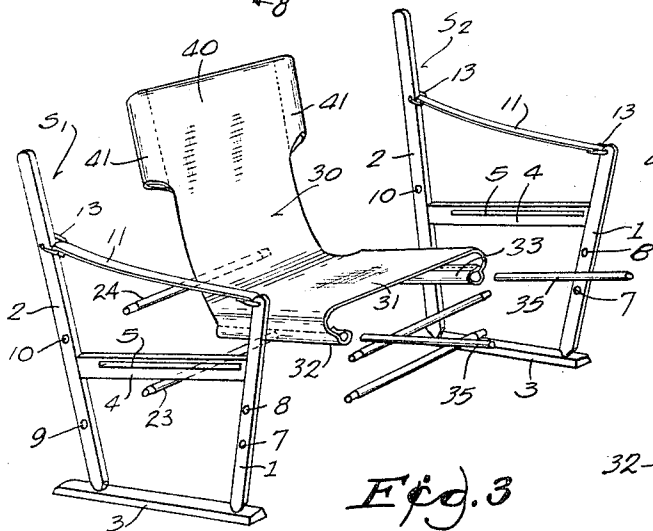
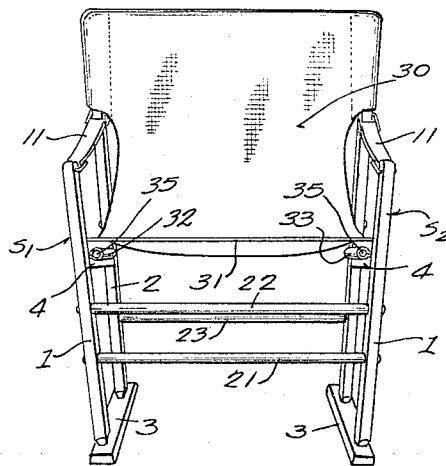
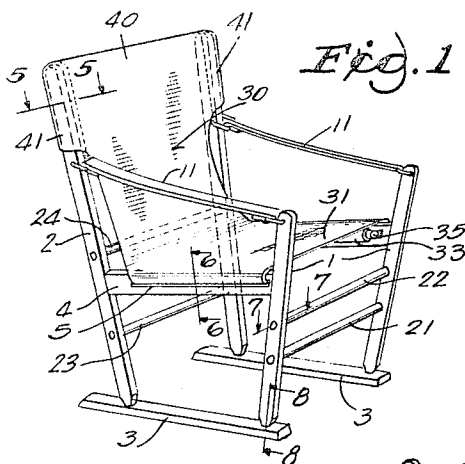


Fig. 4

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1

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COLLAPSIBLE CHAIR OF THE KNOCK-DOWN TYPE

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ABSTRACT OF THE DISCLOSURE

A collapsible chair having two separable side units which are held in spaced apart relationship by removable cross braces and are held on the cross braces by a unity seat and back member of canvas or other flexible fabric.

Background of the invention

This invention pertains to collapsible furniture of the knock-down type which utilizes two identical side frame members that are quickly detachable from one another and are held in spaced apart relationship with a unity flexible seat and back member located therebetween.

Prior art chairs of this general type have been used heretofore with considerable success, but many of them have had definite shortcomings, for example some of these prior art devices required folding hinges, ropes or other devices to hold the parts in assembled relationship. These devices not only made it difficult to assemble and package the chair initially, but they also presented certain problems in the folding up or assembling of the chair. Not only did the hinges and other parts become loose and broken, but many of the devices resulted in pinched fingers on the part of the user.

The invention is in the nature of an improvement over the chair shown in the U.S. Patent 3,167,352 issued Jan. 26, 1965, to J. L. Johnson, which chair used a unity seat and back of flexible material but was not of the collapsible type; instead that chair used a unity armrest and backframe member rigidly fixed to side units.

Summary of the invention

This invention relates to a collapsible chair of the knock-down type which has two identical side members, which members are rigidly held in spaced apart relationship by easily removable cross braces. The cross braces hold the side members at a predetermined distance apart and a flexible seat by itself holds the side members tightly toward one another in assembled relationship on the cross members. There is no need for additional parts such as ropes, hinges or the like to hold the chair in assembled relationship. The seat member is securely locked in position and it together with the back of the chair can be readily removed when it is desired to collapse the chair.

These and other objects and advantages of the present invention will appear as this disclosure progresses.

Brief description of the drawings

FIGURE 1 is a perspective view of the front and side of a collapsible chair embodying the present invention;

FIGURE 2 is a front perspective view of the chair shown in FIGURE 1;

FIGURE 3 is a perspective, exploded view of the chair shown in FIGURE 1;

FIGURE 4 is a spread out view of the unity seat and back member of flexible material shown in the assembled chair position in FIGURE 1 and 2;

FIGURE 5 is a fragmentary, cross sectional view taken along line 5-5 in FIGURE 1, but on an enlarged scale;

2

FIGURE 6 is a fragmentary cross sectioned view taken along line 6-6 in FIGURE 1, but on an enlarged scale;

FIGURE 7 is a fragmentary cross sectioned view taken along line 7-7 in FIGURE 1; and

FIGURE 8 is a fragmentary cross sectioned view taken along line 8-8 in FIGURE 1.

Description of the preferred embodiment

The chair provided by the present invention includes two side units S1 and S2 which are identical in construction and which extend generally upwardly from the floor or supporting surface and in an outwardly flaring direction. As each of these side units is identical, only one will be described. Each unit includes a front upwardly extending member 1, a rear upwardly extending member 2 which is somewhat longer than the front member and both of the members are rigidly held together by a lower sill 3 and a seat rail 4. The lower surface of the lower sill is inclined or beveled so as to set squarely on the floor or other supporting surface.

The seat rail 4 has a groove, or recess 5, extending along the major portion of its length and intermediate the height of the seat rail. The front member has a pair of tapered holes 7 and 8 and the rear member also has a pair of tapered holes 9 and 10.

Each side unit also includes an arm 11 formed of a flexible material and which is held by steel rings 13 which extend through the looped ends of the arms and through the front and rear members.

Thus the side units S1 and S2 are formed as a single unitary unit and can be packaged or stored readily because of their flat configuration.

The two side units are held in properly spaced relationship by means of the four braces 21, 22, 23 and 24 which have tapered ends that complement the shape of the respective holes in which they are mounted. Thus the braces hold the side units in properly spaced apart relationship, the side units being pushed snugly on the tapered ends of the cross braces. They are thus prevented from being inserted on the cross braces past a predetermined distance, due to the tapered nature of the connection.

The seat and back of the chair are formed as a single piece of flexible fabric 30, such as canvas, naugahyde or the like, and the seat portion 31 has a loop 32, 33 formed along either of its sides. These loops are formed by the doubling over and sewing of the material and are adapted to be inserted from the outside of the chair and inwardly through the slotted groove or recess 5 in the seat rails. It will be noted that the rear end of these loops are sewn shut so that when the locking strip 35 is inserted in the loop, they are prevented from being pushed or working their way rearwardly through the loop. With this slot and locking strip connection, the seat is locked in place and cannot shift forwardly or rearwardly. The seat portion is of sufficient tautness when assembled so as to hold the side units of the chair tightly on the tapered cross braces, that is, it holds the side units toward one another and there is no need for additional ropes or other braces to perform this function.

To assemble the chair, it is only necessary to insert the side loops of the seat portion inwardly through the slots or recesses 5 in the seat rails and then insert the locking strips in the loops which are then located beneath the seat portion and inwardly of the seat rails.

The back portion 40 of the combined seat and back flexible member 30 has a loop 41 formed at each side which is adapted to be slipped over the upper, free ends of the rear members. The top of the back portion 40 is also sewed shut so as to prevent the back from slipping down too far on the back members. Thus the back por-

tion 40 acts to hold the top ends of the side units firmly together and thereby add rigidity to the assembled chair.

To disassemble the chair, it is only necessary to withdraw the locking strips 35 from the seat loops 31, 32, and then simply pull the loops outwardly through the slotted recesses 5 in the seat rails. The back portion 40 is then lifted from the free ends of the rear members 2 and the side units S1 and S2 can then simply be pulled outwardly and thus slipped off the cross braces.

Various modes of carrying out the invention are contemplated as being within the scope of the following claims particularly pointing out and distinctly claiming the subject matter which is regarded as the invention:

I claim:

1. A collapsible knock-down chair comprising: a pair of unitary side units each having a seat rail with a recess along a major portion of the length thereof, a plurality of cross braces detachably secured to and between said side units to hold said units in predetermined spaced apart relationship; a flexible sheet having a unitary seat portion and a back portion, said seat portion having a loop formed along each side thereof and removably inserted through the respective said side rail recess; locking means removably inserted in said loops to hold said seat portion captive in said rails and said side units from moving relatively apart from one another; and said back portion having means for support on said side members.

2. A chair as defined in claim 1 further characterized in that said cross braces have tapered ends and said side units have complementary tapered holes, whereby said cross braces are detachably connected to said side units by having their tapered ends snugly inserted in said tapered holes.

3. A collapsible knock-down chair comprising: a pair of side units each having an upstanding front member, an upstanding rear member which is higher than said

front member and spaced rearwardly therefrom and having a free upper end, a lower sill rigidly connected to and between the lower ends of said upstanding front and rear members, and a seat rail rigidly connected to and between said upstanding front and rear members and intermediate the height of said members, said rail having a recess along a major portion of the length thereof, a plurality of cross braces detachably secured to and between said side units to hold said units in predetermined spaced apart relationship; and a flexible sheet having a seat portion and a back portion, said seat portion having a loop formed along each side thereof and removably inserted through the respective said side rail recess from the outer side of said rail, a locking strip removably inserted in said loops in the inside of said rails to hold said seat portion captive in said rails, said back portion having a loop formed along each side thereof and inserted over said free ends of said upstanding rear members, whereby said flexible sheet prevents said side units from moving relatively apart from one another.

4. A chair as defined in claim 3 further characterized in that said cross braces have tapered ends and said side units have complementary tapered holes, whereby said cross braces are detachably connected to said side units by having their tapered ends snugly inserted in said tapered holes.

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