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FOLDING CHAIR

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1 Claim. (Cl. 155—139)

This invention relates to folding chairs.

An object of the invention is to provide a folding chair including a pair of upright front legs; a pair of rear legs inclining downwardly and rearwardly from their connection with the front legs substantially below the upper ends of the latter; a seat frame pivotally connected with the upper ends of the rear legs and with the front legs by a pair of axially aligned pivots which permit the seat frame and the front and rear legs to be folded substantially flatwise with respect to each other; a back rest frame having its lower end pivotally connected with the rear legs respectively; arm rests pivotally connected with the sides of the back rest frame and extending above the upper ends of the front legs; brackets connecting the rear end of the seat frame with the side portions of the back rest frame; and additional brackets having substantially the same form and shape and dimensions as said first named brackets pivotally connecting the upper ends of the front legs with said arm rests, the entire chair structure cooperating so that the back rest frame is strongly supported upon the rear legs, and the arm rests are strongly supported by the front legs, all of the respective pivotal connections functioning to permit the chair to be folded into flatwise position, in which the seat frame is between the front and rear legs and against the back rest frame.

Another object of the invention is to provide a folding chair of the type mentioned in which the back rest frame is strongly supported upon and against the rear legs when the chair is open, and in which the brackets supporting the rear end of the seat frame and connecting the arm rests with the front legs respectively are of substantially duplicate construction to reduce cost of manufacture.

Other objects will appear from the following description, reference being made to the annexed drawing, in which—

Fig. 1 is a plan view of my improved folding chair open and ready for use.

Fig. 2 is a front elevation of the open chair.

Fig. 3 is a side elevation thereof.

Fig. 4 is a side elevation of the chair partially folded.

Fig. 5 is an enlarged side elevation showing the connection between an arm rest and the connected front leg.

Fig. 6 is a perspective view of one of the brackets of the type used to connect the seat frame with the back rest frame, and also used to connect the arm rests with the front legs.

The two front legs 1 are approximately vertical when the chair is open for use, and are rigidly connected near their lower ends by a cross bar 2. The rear legs 3 have their upper ends pivotally connected with the front legs 1 substantially below the upper ends of said front legs by pivots 4 and incline downwardly and rearwardly therefrom when the chair is open for use. Some distance above their lower ends, the rear legs are rigidly connected by a cross bar 5.

The seat frame comprises two side members 6 rigidly connected near their forward ends by a cross bar 7 and near their rear ends by a cross bar 8. As shown, the seat may be formed by a number of cross slats 9 attached to the upper sides of the side members 6 and cooperating with the bars 7 and 8 to form a strong seat frame. The side members 6 are pivoted on the same pivots 4 that connect the front and rear legs of the chair. Spacing washers 10 may be mounted on the pivots 4 between the front and rear legs, and other spacing washers 11 may be mounted on said pivots between the rear legs and the seat frame to facilitate pivotal movements of the parts to fold and open the chair. The pivots 4 may be in the form of bolts having their heads at the outer sides of the front legs 1 and provided with nuts or washers 12 on their inner ends adjacent to the seat side members 6 to hold these parts in permanently connected and pivoted relationship.

The back rest frame comprises two side members 13 having their lower ends beveled or inclined in order to seat upon the inclined upper surfaces of the rear legs 3 when the chair is open, as shown in Fig. 3. Links 14 have their upper ends connected with the lower ends of the side members 13 of the back rest frame by pivots 15, and their lower ends connected with the rear legs 3 by pivots 16. When the chair is open, the links 14 extend downwardly and rearwardly from the side members 13 and cooperate to hold the lower ends of said side members firmly and securely against and upon the legs 3. The side members 13 of the back rest frame are rigidly connected by a number of cross bars 17 to which the back rest may be attached. As shown, the back rest comprises a number of slats 18 converging downwardly and rigidly attached to the front sides of said cross bars 17.

An angular bracket 19 is rigidly attached to the outer side of each side member 6 of the seat frame by fasteners 20. These angular brackets 19 extend upwardly from the seat frame, and the upper ends thereof are pivotally

connected with the side members 13 by pivots 21. In this relationship, the rear end of the seat frame extends between the side members 13. The brackets 19 are attached to the outer sides of the seat frame and are pivoted to the inner sides of the side members 13 and operate between the seat frame and the side members 13 of the back rest frame.

The two arm rests 22 have their rear ends attached to the outer sides of the back rest frame by pivots 23 which may be in the form of bolts having their heads at the outer sides of the arm rests and washers or nuts 24 attached to their inner ends. Spacing washers 25 are mounted between the arm rests 22 and the side members 13 of the back rest frame to facilitate pivotal action of these parts.

Brackets 26, which are substantial duplicates of and commensurate with the brackets 19 and can be cut out by the same mechanism or dies, have their lower arms attached to the inner sides of the front legs 1 by rivet fasteners 27, and their upper rearwardly extended arms connected with the inner sides of the arm rests 22 by pivots 28. Thus, the arm rests extend above and may seat upon the upper ends of the front legs when the chair is open for use. In this way, the chair is strengthened and braced by the engagement of the lower ends of the side members 13 upon and against the rear legs, the downwardly and rearwardly extended links 14 functioning as braces when the chair is open, and by the brackets 26 extending above and engaging against the upper ends of the front legs 1.

This construction also permits easy folding of the chair by raising the front end of the seat frame and swinging the seat frame upwardly and rearwardly against the back rest frame, thereby placing a considerable portion of the rear legs 3 between the front legs 1 and all of the seat frame between said rear legs 3. The movement of the parts to this position should be easily understood by reference to Fig. 4 of the drawing. The upper ends of the front legs 1 are strengthened to prevent splitting by bolts or rivets 29 extending from front to rear.

As explained, the brackets 19 and 26 are substantial duplicates in form and dimensions. They are of angular formation and have relatively long and relatively short arms. The brackets 19 are formed with one hole at the end of the short arm and one hole at the angle for the fasteners 20, and with one hole at the end of the long arm

for the pivot 21; whereas the brackets 26 have one hole at the end of the short arm for the pivot 28 and two holes in the long arm for the fasteners 27, as will be understood by reference to Fig. 3 of the drawing. The brackets 19, the brackets 26 and the links 14 cooperate to hold the seat frame 6 between and parallel with the rear legs 3 and against and approximately parallel with the back rest frame when the chair is folded. When folded, the thickness of the chair is approximately equal to the combined thickness of the back rest frame and the seat frame because the seat frame is against and parallel with the back rest frame and is between and parallel with the front legs 1 and the rear legs 3.

It should now be apparent that this invention attains all of its intended objects and purposes efficiently and satisfactorily. The chair may be easily folded and opened and is of strong and lasting construction, due to the engagement of the parts in the manner described and the bracing effect obtained by such engagement. The arrangement of the parts may be varied within the range of equivalent limits without departure from the nature and principle of the invention.

I claim:

In a folding chair comprising two front legs, two rear legs, a back rest frame having two rigidly connected side members, a seat frame mounted between said front legs and between the forward ends of said rear legs and extending rearwardly between said side members of said back rest frame, and two laterally spaced arm rests engaging the upper ends of said front legs and having their rear ends at the outer sides of and pivotally connected with said side members, respectively, of said back rest frame; axially aligned pivots supporting the front ends of said rear legs and also the forward portion of the seat frame between said front legs, angular brackets having their lower ends rigidly attached to the rear end of said seat frame and their upper ends pivoted to said side members above said seat frame, other angular brackets having their lower ends rigidly attached to the inner sides of said front legs and their upper arms pivoted to the inner sides of said arm rests rearwardly from said front legs, and forwardly and upwardly inclined links having their upper ends pivoted to said side members below said seat frame and their lower ends pivoted to said rear legs rearwardly beyond said side members of said back rest frame.

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