Nov. 1, 1932. J. C. KRANER 1,885,269

FOLDING CHAIR

Filed Feb. 20, 1931

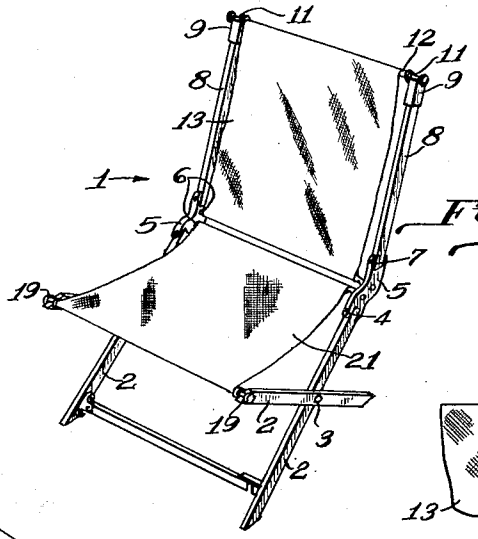


Fig. 1.

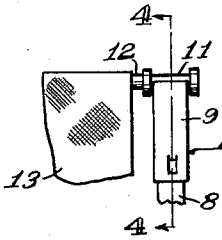


Fig. 3.

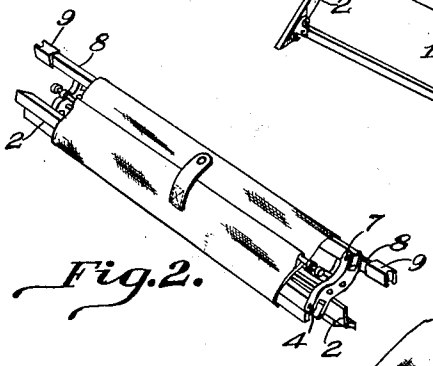


Fig. 2.

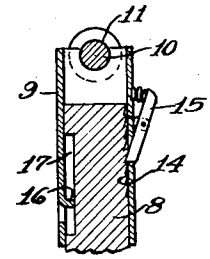


Fig. 4.

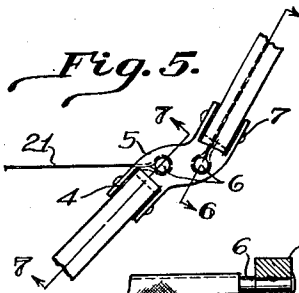


Fig. 5.

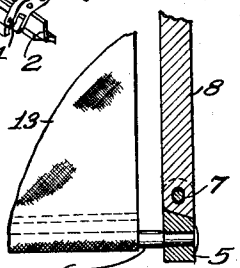


Fig. 6.

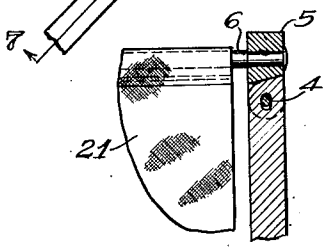


Fig. 7.

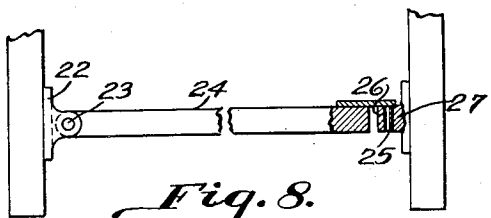


Fig. 8.

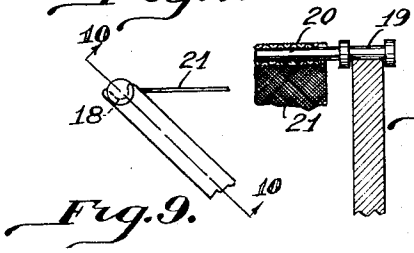


Fig. 9.

Fig. 10.

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UNITED STATES PATENT OFFICE

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FOLDING CHAIR

Application filed February 20, 1931. Serial No. 517,253.

This invention relates to improvements in folding chairs, and has for one of its outstanding objects the provision of a simple yet efficient chair structure which may be comfortably employed when in an extended or active position for chair purposes but which when collapsed or folded will occupy but a minimum of space so that it may be readily carried or otherwise advantageously transported from place to place.

With these and other objects in view, which will appear as the description proceeds, the invention consists in the novel features of construction, combination of elements and arrangements of parts hereinafter fully described and pointed out in the appended claims.

In the accompanying drawing:

Fig. 1 is a perspective view of my improved folding chair disclosing the same in an extended or active position;

Fig. 2 is a similar view disclosing the chair when in a folded or collapsed position;

Fig. 3 is a detail view in front elevation disclosing the connection between the upper portion of the back rest and a companion side bar;

Fig. 4 is a vertical sectional view taken on the plane indicated by the line 4—4 of Fig. 3;

Fig. 5 is a detail side elevation disclosing the mounting utilized in connecting the hinge bars of the chair frame;

Fig. 6 is a sectional view taken on the line 6—6 of Fig. 5;

Fig. 7 is a similar view on the plane indicated by the line 7—7 of Fig. 5;

Fig. 8 is a detail view disclosing the spacing bar connected with the chair legs;

Fig. 9 is a detail side elevation disclosing the connection between the chair legs and the flexible chair seat;

Fig. 10 is a sectional view on the line 10—10 of Fig. 9.

Referring more particularly to the drawing, the numeral 1 designates my improved folding chair in its entirety. The chair comprises a frame structure which is formed to include spaced pairs of pivotally connected leg members 2 which have their intersecting portions pivotally connected as at 3. The upper ends of certain of the leg members 2 are, as shown in Figs. 5 and 7, pivotally connected as at 4 with a pair of hinge members 5, and these members are relatively united by a pair of spaced longitudinally extending rods 6. Also pivotally connected to the hinge members 5 as at 7 are the side bars 8 of the back rest. As shown especially in Figs. 6 and 7, the pivotal connections 4 and 7 are such that the members pivotally connected with the hinge members 5 may be rocked to assume positions occupying vertical planes but cannot be rocked past such planes.

The upper ends of the bars 8, as shown in Fig. 4, carry adjustable metallic sleeves 9 which are mounted for limited movement longitudinally on the ends of the bars 8. The outer ends of the sleeves 9 are formed with semicircular sockets 10 which are adapted to receive the collared ends 11 of a rod 12. Connected with the rod 12 and also with one of the rods 6 is a back rest 13 formed from a strong fabric such as canvas or other equivalent material.

To draw the back rest 13 taut when the chair structure is in an extended position, the upper ends of the bars 8 are provided with ratchet teeth 14. These teeth are engaged by a spring pressed detent 15 carried by each of the sleeves 9. Obviously, by inserting the collared end of the rod 12 into the sockets 10 and by forcing outwardly on the sleeve 9, the back rest may be stretched or drawn to a taut position and automatically retained in such position by the engagement of the detents 15 with the ratchet teeth 14. The sleeves are prevented from being accidentally removed from the upper ends of the bars 8 by the provision of inturned lugs 16 formed with said sleeves and which are slidably positioned within elongated recesses 17 formed in the upper ends of the bars 8.

The leg members 2, which are not connected with the hinge members 5, have their upper ends formed with semicircular sockets 18 as shown particularly in Fig. 9. These sockets receive the collared outer ends 19 of a rod 20 to which is connected the forward

edge of the flexible chair seat 21, which ordinarily is formed from the same material as the back rest 13. The other edge of the chair seat 21 is connected with one of the rods 6 in a secure manner. One of the leg members 2 which is pivotally connected with one of the members 5 has its lower end provided with a bracket 22 to which is pivotally connected, as at 23, a longitudinally extending spacing bar 24. The other end of the bar 24 is provided with a pin 25 which is receivable within a socket 26 formed in a socket member 27 secured to the opposite leg member 2, the spacing bar serving to stabilize the lower portion of the chair structure and to prevent unnecessary lateral movement thereof.

In view of the foregoing, it will be seen that the present invention provides a folding chair which when not in use, may be compactly folded, as shown in Fig. 2, to occupy but a minimum of storage space. The entire structure is extremely light in weight so that the chair may be conveniently carried or otherwise readily transported. When folded, the leg members 2 extend parallel and lie immediately adjacent to the rods 6 carried by the hinge members 5, and this is likewise true of the side bars 8 of the chair back. This is made possible by reason of the removable connections existing between the back rest 13, the chair seat 21 and the upper ends of the leg members 2 and the upper ends of the bars 8. The spacing bar 24 is also pivotally mounted in connection with one of the leg members so that it too may be folded to lie substantially parallel with the leg members when the latter are in their collapsed positions. The fabric portions of the chair may then be wrapped around these collapsed frame members to retain the same in their folded positions and to present a package or bundle which may be conveniently carried.

While I have described what I consider to be the preferred form of my invention, nevertheless, it will be understood that my improved folding chair is subject to considerable variation and modification without departing from the spirit and scope of the invention as the latter has been defined by the following claims.

What is claimed is:

1. In a folding chair, a frame structure comprising a pair of spaced hinge members, rods uniting said hinge members, spaced pairs of pivotally united leg members, transverse pivotal connections between the upper ends of certain of said leg members and said hinge members, spaced back rest bars, similar pivotal connections uniting the lower portions of said bars and said hinge members, a flexible back rest carried in connection with said bars, a flexible chair seat carried in connection with said leg members, the pivotal connections between the hinge members, the leg members and said bars serving to permit said leg members and the bars to extend substantially parallel to each other and said rods when the frame structure is folded.

2. In a folding chair, a frame structure comprising a pair of spaced hinge members, rods uniting said hinge members, spaced pairs of pivotally united leg members, transverse pivotal connections betwen the upper ends of certain of said leg members and said hinge members, spaced back rest bars, like pivotal connections uniting the lower portions of said bars and said hinge members, a flexible back rest arranged between said bars, a flexible chair seat extending between the upper ends of said leg members, the pivotal connections between the hinge members, the leg members and the bars serving to permit said leg members and said bars to extend substantially parallel to each other and said rods when the frame structure is folded, and a hinged spacing bar connected to one of said leg members, the outer end of said spacing bar being provided with a pin received within a socket member carried in connection with the complemental leg member.

3. In a folding chair, a frame structure comprising a pair of spaced hinge members, rods uniting said hinge members, spaced pairs of pivotally united leg members, transversely arranged pivotal connections between the upper ends of certain of said leg members and said hinge members, a flexible chair seat connecting one of said rods and leg members, spaced back rest bars, like pivotal connections uniting the lower portions of said bars and said hinge members, the pivotal connections between the hinge members, the leg members and said bars serving to permit said leg members and the bars to extend substantially parallel to each other and said rods when the frame structure is folded, adjustable sleeves carried by the upper ends of said bars, means for locking said sleeves in their positions of adjustment on said bars, a flexible back rest, means separately connecting the upper edge of said back rest with said sleeves the lower edge thereof being connected with one of said rods.

4. In a folding chair, a frame structure comprising a pair of spaced hinge members, rods uniting said hinge members, spaced pairs of pivotally united leg members, transverse pivotal connections between the upper ends of certain of said leg members and said hinge members, spaced back rest bars, like pivotal connections uniting the lower portions of said bars and said hinge members, the pivotal connections between the hinge members, the leg members and said bars serving to permit said leg members and the bars to extend substantially parallel to each other and said rods when the frame structure is folded, adjustable sleeves carried by the upper ends of

said bars, means for locking said sleeves in their positions of adjustment on said bars, a flexible back rest, means separably connecting the upper edge of said back rest with said sleeves, the lower edge thereof being connected with one of said rods, and a flexible chair seat having one of its edges connected with one of said rods and means separably connecting the other edge of said seat with certain of said leg members.

In testimony whereof I affix my signature.

JACOB C. KRANER.