Sept. 1, 1953 L. GETHNER 2,650,653

FOLDING CHAIR

Filed March 24, 1950

Fig. 1

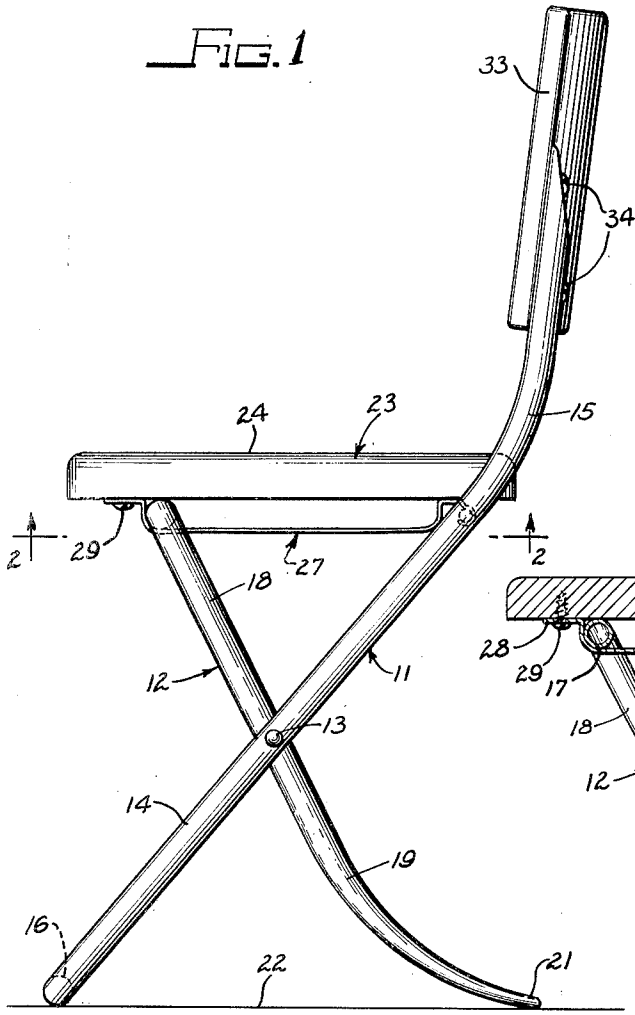


Fig. 3

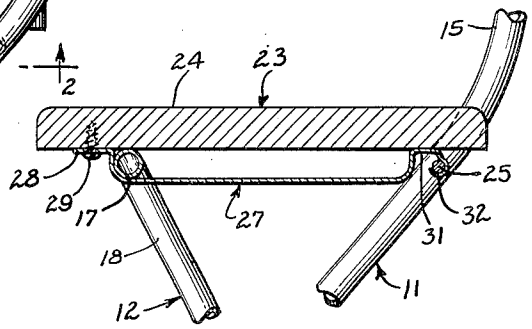


Fig. 2

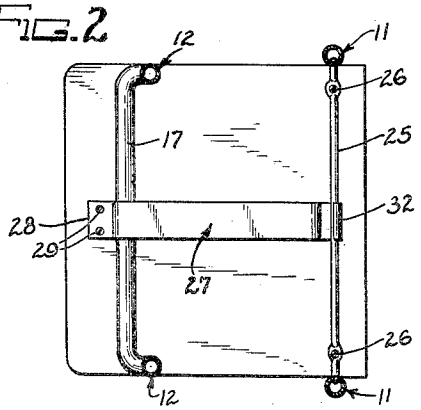
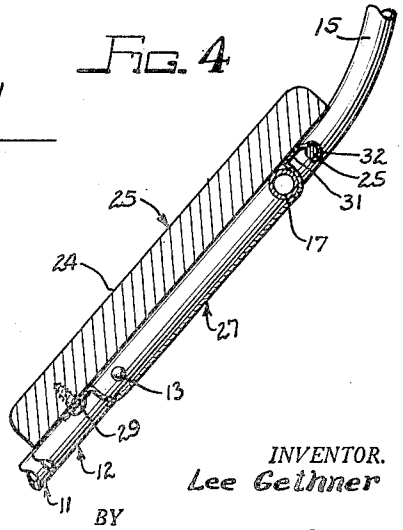


Fig. 4



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Patented Sept. 1, 1953

2,650,653

UNITED STATES PATENT OFFICE

2,650,653

FOLDING CHAIR

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Application March 24, 1950, Serial No. 151,760

1 Claim. (Cl. 155—143)

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The invention relates to improvements in a folding chair structure, and is more particularly concerned with a folding chair of a kind adapted to have its seat structure mounted to be pivotally foldable downwardly forwardly while the chair is being folded.

Folding chairs of the general character to which the present invention pertains usually have the seat structure foldable upwardly into a folded position against the back rest. Some such chairs embody structure to cause the parts to be wedgingly held in folded position so as to prevent inadvertent unfolding. Obviously, considerable annoyance results from the resistance attending the initial unfolding operation. Other known types of folding chairs have the seat mounted so as to be slidably movable during folding operation rearwardly and then downwardly against the back of the leg members. This type of chair is awkward to manipulate primarily because, to unfold, the seat must be lifted rearwardly into a horizontal position and then shoved forwardly. When this type of chair is folded it occupies an excessive amount of space. It is apparent that both prior types of folding chairs require the use of two hands in order to move them into folded and unfolded positions.

The objectionable characteristics of prior known types of folding chairs are overcome by the structure of the chair embodying the features of the present invention and it is, therefore, an object of the invention to provide a folding chair that can be moved into folded or unfolded position easily and quickly and with one hand.

Another object is to provide a folding chair with novel means to permit its seat structure to fold downwardly forwardly in response to movement of its leg frames into folded position.

Another object is to provide a folding chair which will remain in folded position without frictional binding or wedging of the parts and which, therefore, may be moved into unfolded position easily.

Another object is to provide a light weight folding chair of the character described which is constructed ruggedly, at low cost and from a minimum number of parts.

Other objects of the invention will appear from the following description and accompanying drawings and will be pointed out in the annexed claim.

In the accompanying drawings there has been disclosed a structure designed to carry out the various objects of the invention, but it is to be

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understood that the invention is not confined to the exact features shown as various changes may be made within the scope of the claim which follows.

In the drawings:

Fig. 1 is a side elevational view of a folding chair embodying the features of the present invention.

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

Fig. 3 is a vertical sectional view of a fragment of the chair in the position shown in Fig. 1, and illustrating the seat structure mounting.

Fig. 4 is a sectional view similar to Fig. 3, but showing the chair in folded position.

Referring to the accompanying drawings, the folding chair includes main and auxiliary frame side members 11 and 12, respectively, pivotally connected intermediate their lengths by pivots 13 (one shown). The main frame side member 11 consists of front legs 14 and back rest portions 15. It is fashioned from a U-shaped piece of tubular stock and, when in assembled position, its intermediate or bight portion 16 is located at the bottom ends of the front legs 14. Upon referring to Fig. 1, it will be noted that the leg portions 14 are substantially straight and that the back rest portions 15 are bent so as to dispose the upper terminals of said portions in a substantially vertical position.

The auxiliary frame side member 12 also is constructed from tubular stock and is formed substantially U-shaped with its bight portion 17 located at the upper end thereof. The side portions of the auxiliary frame side member 12 constitute seat supporting portions 18 and rear legs 19. The rear legs 19 preferably are curved rearwardly out of the plane of the U-shaped auxiliary frame side members 12 so as to dispose their flattened terminals 21 in a plane substantially parallel with the plane of a supporting surface 22 when in unfolded position.

A seat structure 23, which consists of a substantially square seat 24, of such width as to permit its rear or back end to be extended freely between the back rest portions 15, is suitably mounted for movement from the substantially horizontal position shown in Fig. 3 into a folded position substantially as illustrated in Fig. 4. To this end, a rod 25 is arranged on the bottom face of the seat 24 adjacent its back edge. The rod 25 is firmly secured to the seat as by means of screws 26 extending therethrough and engaged in the seat. The terminals of the transverse rod 25 are rotatably mounted in the back rest por-

tions 15 to thereby provide a pivotal mounting for the seat structure whereby it may be folded downwardly into substantially the plane of the main frame side member 11.

When the chair is in unfolded position the seat structure is supported substantially horizontally. To this end, the horizontal bight portion 17 of the auxiliary frame side member 12 is located adjacent the front edge of the seat in the manner shown. The bight portion 17 is adapted to be moved rearwardly during folding operation of the chair so as to dispose said portion 17 within the plane of the main frame side member. Such folded position is illustrated in Fig. 4.

Means is provided on the bottom face of the seat 24 to guide the auxiliary frame side member 12 into folded and unfolded positions. As best shown in Figs. 2 and 3, such means preferably consists of a metal strap 27 having its forward end portion 28 bent upwardly and secured to the bottom front margin of the seat 24 as by a screw 29. The other end of the strap 27 is likewise bent upwardly into abutment with the bottom of the back margin of the seat 24, as at 31. The rear end portion of the strap 27 is extended through a space between the rod 25 and the bottom face of the seat 24 and said end is then rolled around said rod, as at 32. The rolling of the back end of the strap 27 about the rod 25 constitutes the mounting for said back end of the strap. It will be noted that the intermediate off-set portion of the strap 27 is spaced from the bottom face of the seat 24 a distance corresponding substantially to the diameter of the auxiliary frame side member portion 17 which extends through said space. Accordingly, the strap 27 constitutes guide means for the portion 17 to thereby prevent inadvertent displacement of the seat structure 23 when the chair is in unfolded position.

A back rest 33 may be secured to the terminal portions of the back rest portions 15 in any suitable manner, said back rest bridging the space between said portions and being secured thereto as by screws 34.

Folding and unfolding of the chair is accomplished very easily. For example, when the unfolded chair is to be folded, the back rest 33 may be grasped with one hand and the chair moved in a rearwardly tilted position so as to engage the flattened terminals 21 of the auxiliary frame side members with the supporting surface to thereby cause said auxiliary frame side member to rotate about its pivotal connection 13 with the main frame side member 11. This pivotal rotation carries the auxiliary frame side member portion 17 rearwardly along the bottom of the seat structure within the guide 27 so as to cause said seat structure to swing downwardly into the position illustrated in Fig. 4. In order to unfold the chair, the reverse operations may be effected or the seat structure 23 may be engaged along its front edge and lifted upwardly while holding the back rest 33.

Although an exemplary form of construction has been shown in the accompanying drawings and described in detail in the foregoing specification, it should be understood that the invention is capable of embodying a variety of modifications in its details of construction without departing from the spirit of the invention or the scope of the appended claim.

I claim:

In a folding chair of the class described, the combination of, main and auxiliary frame side members pivotally connected intermediate their lengths and respectively having front leg and back rest portions and rear leg and seat supporting portions, a rigid seat structure, and means for mounting said seat structure on said main and auxiliary frame side members comprising a rod secured to the bottom face of the seat structure adjacent its rear edge, a portion of said rod being spaced from said seat structure and the ends of said rod being pivotally mounted in the main frame side member, a strap arranged on and having a portion spaced below the bottom face of the seat structure, said strap having its rear end bent downwardly and extending between the seat and the portion of the rod spaced therefrom and having its rearmost end rolled downwardly around said rod portion to retain the rear end of the strap in place, the forward end of said strap being off-set upwardly and secured firmly to said seat to thereby define a guide to receive the upper end of the seat supporting portion of the auxiliary frame side member, said seat being thereby mounted on said frame side members for downward pivotal folding movement relative to the main frame side member when the upper end of the auxiliary frame side member is moved rearwardly about its pivot to locate the auxiliary frame side member substantially in the plane of the main frame side member and to locate the seat structure in overlying relation to said auxiliary side frame member.

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