Dec. 11, 1928. 1,695,117

L. H. McKEE

FOLDING CHAIR

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Fig. 1.

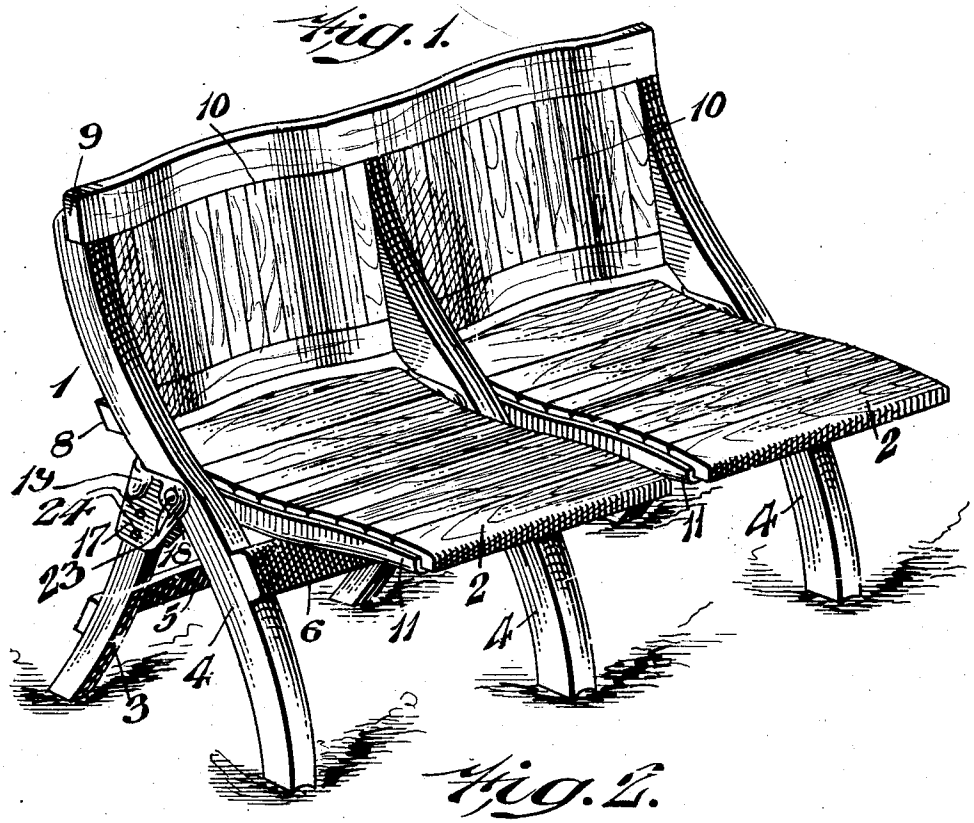
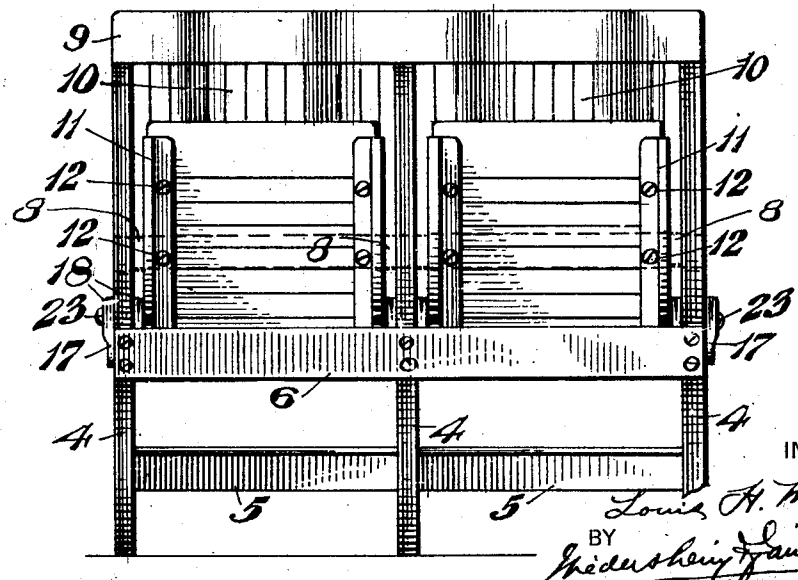


Fig. 2.



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Fig. 4.

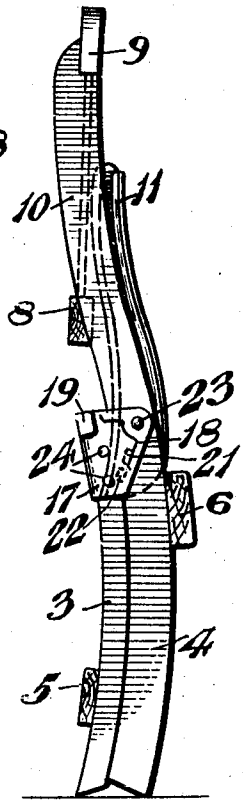


Fig. 3.

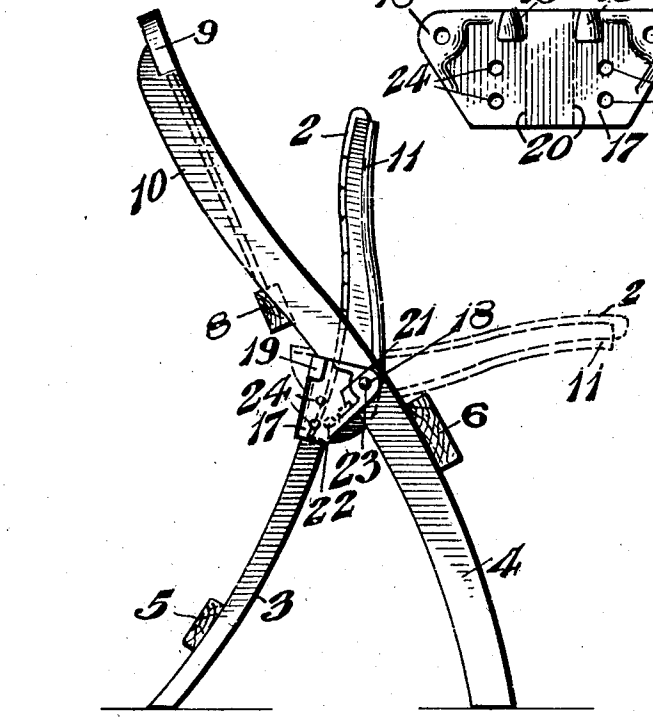


Fig. 7.

Fig. 9.

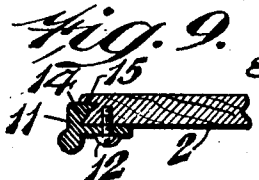


Fig. 5.

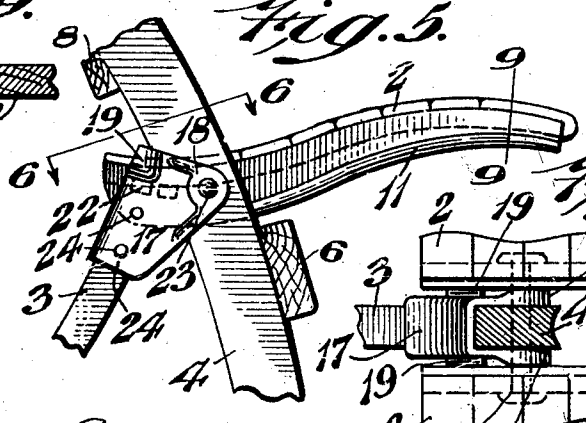


Fig. 6.

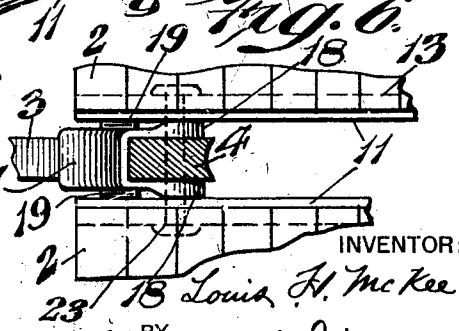
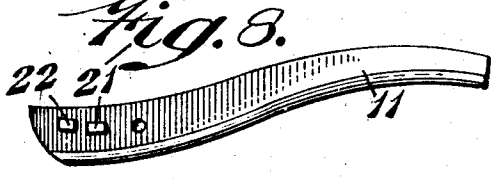


Fig. 8.



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UNITED STATES PATENT OFFICE.

LOUIS H. McKEE, OF TRENTON, NEW JERSEY.

FOLDING CHAIR.

Application filed September 9, 1927. Serial No. 218,424.

My invention relates to a new and useful folding chair and more particularly, to the type of folding chair commonly used in schools, assembly houses, auditoriums and the like, where frequent rearrangement of seats is necessary and where it is often required to clear the floor entirely thus entailing the removal of a great number of chairs and the storing of the same in a limited space.

My invention further relates to a novel folding chair construction which is equally applicable to a single, double, or multiple seat chair, as may be desired, the seat being foldable simultaneously with, or independently of the chair frame.

My invention further relates to a novel folding chair construction, which, in addition to being strong and durable, is also neatly and compactly foldable so as to occupy a minimum space when in the folded condition to facilitate handling and transportation.

To the above ends my invention consists of a folding chair construction wherein I employ novel means for securing the rear legs and seat member to the front legs and frame members, comprising a metallic clevis having a pair of spaced abutments or stops coacting with a corresponding pair of juxtaposed lugs on the adjacent edge of the seat member for limiting the upward and downward movement of the latter with respect to the chair frame.

My invention further consists of a folding chair wherein the front and rear legs as well as the back support and seat member are of such shape and contour as to rest back of each other so as to occupy a minimum space when the chair is folded.

My invention further consists of novel bracing or reinforcing means for the seat member whereby the same is firmly and pivotally secured to the frame of the chair.

My invention further consists of various other novel features of construction and assembly, hereinafter described and claimed.

In the accompanying drawings,

Figure 1 represents a perspective view of a two-seat folding chair embodying my invention, shown in the operative or seating position.

Figure 2 represents a front elevation of the same shown folded.

Figure 3 represents a side elevation of a chair with the seat in the partly raised or folded position.

Figure 4 represents a side elevation of the same in the completely folded position.

Figure 5 represents a fragmentary view, on an enlarged scale, showing the hinge or pivot construction in detail.

Figure 6 represents a section on line 6—6, Fig. 5.

Figure 7 represents a plan view of the blank for the metallic clevis employed, shown in the flat or unbent condition.

Figure 8 represents a side elevation of a reinforcing and supporting end frame for the seat of the chair. Fig. 9 represents a detailed construction of the rear end of the seat member.

For the purposes of illustrating my invention, I have shown in the accompanying drawings, a form thereof, which is at present preferred by me, since it will give in practice, satisfactory and reliable results, although it is to be understood that the various instrumentalities may be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

Referring to the drawings, in which like reference numerals indicate like parts, 1 designates my novel chair construction, comprising the seat 2, the rear leg 3, the front leg and frame member 4, the brace members 5 and 6, and the back support comprising the horizontal braces 8 and 9, and the intermediate body portion 10. The lower front brace 6, in addition to securing and reinforcing the front legs 4, also serves to support the seat 2 when the same is in the horizontal, unfolded or operative position, as will be understood from Figs. 1 and 3, and as will be hereinafter more fully stated.

The seat 2 is provided with metallic, angular end frame 11, secured thereto by means of the screws, bolts, or rivets 12, said frame being also provided with an inturned longitudinal upper edge or flange 13 which is driven into or wedged in a slot in the edge of the seat, and is further provided with the rear tongue 14 which engages the offset or recess 15 in the rear end of the seat 2, as will be understood from Figs. 6 and 9.

A metallic clevis 17, stamped or punched from suitable sheet metal and provided with the abutments 18 and 19 is employed to secure the rear legs 3 to the front legs 4, it being understood that the blank of said clevis is first bent upon itself along the lines

20 (see Fig. 7) to form a U shaped enclosure or recess for receiving the rear and front legs, as will be understood from Figs. 1, 3, 4 and 5. The frame 11 is provided with the lugs 21 and 22 which coact with the abutments 18 and 19 on the clevis 17 which form stops for limiting the movement of the seat 2, which is pivotally secured to the front leg by means of the pivot bolt 23, passing through the opposed sides of the clevis, and into the frame 11, as will be understood from Figs. 1, 2, 3, 4, 5 and 6, the clevis being secured to the rear leg 3 by suitable screws or bolts 24 or the like.

When the chair is in the operative, seating position, that is, when the seat 2 is unfolded into the position shown in full lines in Fig. 1 and in dotted lines in Fig. 3, the lug 22 on the frame 11 abuts against the juxtaposed abutment 19 on the inner side of the clevis 17 (see Fig. 5). Similarly, when the seat 2 is folded independently of the legs 3 and 4, the lug 21 on the frame 11 abuts against the abutment 18 on the juxtaposed side of the clevis 17 (see Fig. 3), the seat 23 thus describing an arc of a circle subtended by an angle of approximately 60 degrees.

When however, the rear leg 3 is folded up against the front leg 4, the abutment 18 on the clevis 17 is withdrawn from contact with the lug 21 on the frame 11, and the seat 2 may then be folded back into contiguous relation with the back support 10, as shown in Fig. 4. This feature is highly advantageous in that it prevents the forcible impact or knocking of the seat 2 against the back support 10 thereby adding considerably to the serviceability and durability of the chair.

By providing the metalic clevis 17 with the abutments 18 and 19 on either side thereof, I am enabled to add any desired number of seat sections to form a row of seats of any desired capacity, said seats being either permanently or detachably assembled and secured.

The corresponding lug 22 and abutment 19 and lug 21 and abutment 18 on the frame 11 and clevis 17 respectively, are so arranged and spaced as normally to permit a swinging movement of the seat 2 independently of the position of the legs 3 and 4, from the horizontal seating position shown in dotted lines in Fig. 3, into the partly folded or raised position seen in full lines in Fig. 3, the seat 2 being brought into the completely folded position shown in Fig. 4 by completely folding, or bringing the front and rear legs 3 and 4 into the contiguous relation illustrated in Fig. 4.

It will be apparent from the foregoing that the seat 2 of my novel construction is provided with double stops or supports for limiting the downward movement of said seat on its pivot point and for reinforcing the same against whatever weight it is subjected to. Thus, the frame brace member 6, acts as a stop and support for the seat 2 when the same is in the horizontal or operative position, not only to limit the movement thereof but also to impart to said seat added strength and support, said seat being simultaneously maintained in the horizontal position by the action of the lug 22 and the abutment 19 hereinbefore described.

It will also be seen that my novel folding chair construction in addition to being highly compact and durable, is also extremely simple in construction and assembly, calling for a minimum number of parts, effectively and efficiently assembled. Thus, the seat 2 provided with the end frame 11 having the lugs 21 and 22 is secured to the front leg by the pivot 23 which also passes through the clevis 17 which engages the rear leg 3. Each of the three parts just mentioned can be made by a single stamping or punching operation, and said parts can be assembled at a minimum cost of time and labour thereby producing a compact, durable and efficient folding chair at a minimum cost.

It will now be apparent that I have devised a new and useful folding chair which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description, and while I have in the present instance, shown and described an embodiment thereof which is at present preferred by me since it will give in practice satisfactory and reliable results, it is to be understood that such embodiment is susceptible of modification in various particulars without departing from the spirit or scope of my invention or sacrificing any of its advantages.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a folding chair of the character stated, a front leg, a rear leg pivotally secured thereto, a seat member pivotally secured to said front leg, an end frame engaging the edge of said seat adjacent said legs, a U-shaped clevis common to said front and rear legs, said clevis being fixed to said rear leg and pivotally connected to said front leg and a pair of spaced abutments on said clevis coacting with a corresponding pair of lugs on the juxtaposed end of said frame for limiting the vertical and horizontal positions of said seat.

2. In a folding chair having a back support, a front leg, a rear leg and a seat, a common pivot point for said legs and seat, a metallic end frame engaging the edge of said seat adjacent said legs and having two spaced lugs at the rear end thereof, a metallic clevis common to and engaging said front and rear legs and having a pair of abutments, one of said abutments coacting

with one of the lugs on said frame to maintain said seat member in a horizontal position and the other of said abutments coacting with the other of the lugs on said frame to prevent contact of the seat with said back support when the chair is in folded condition.

3. In a folding chair having a back support, a seat, front and rear legs on either side of said seat, a horizontal front brace secured to said front legs below said seat and adapted to form a support for the latter when unfolded, a common pivot point for said legs and seat, a metallic frame engaging the edge of said seat adjacent said legs and having two spaced lugs at the rear end thereof, a U-shaped metallic clevis common to and engaging said front and rear legs, said clevis being fixed to said rear leg and pivotally connected to said front leg and having a pair of spaced abutments, one of said abutments coacting with one of the lugs on said frame to maintain said seat member in a horizontal position, and the other of said abutments coacting with the other lug on said frame to prevent contact of the seat with said back support while the chair is in folded condition.

4. In a device of the character stated, a rear leg, a U-shaped clevis attached thereto and provided with abutments, a front leg pivoted to said clevis, a seat pivoted to said front leg and clevis, an end frame therefor having rear lugs coacting with said abutments and a front brace secured to said leg below said seat and adapted to arrest the downward movement of said seat, whereby the latter when unfolded is supported at the front and rear of its pivot point.

LOUIS H. McKEE.