H. C. WILLIAMS.

COLLAPSIBLE CHAIR.

APPLICATION FILED JAN. 16, 1918.

Patented Jan. 21, 1919.

2 SHEETS—SHEET 1.

1,292,200.

Fig. 2.

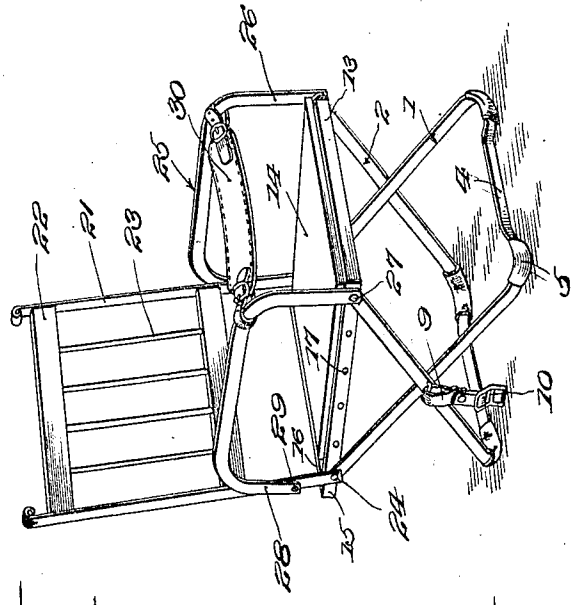
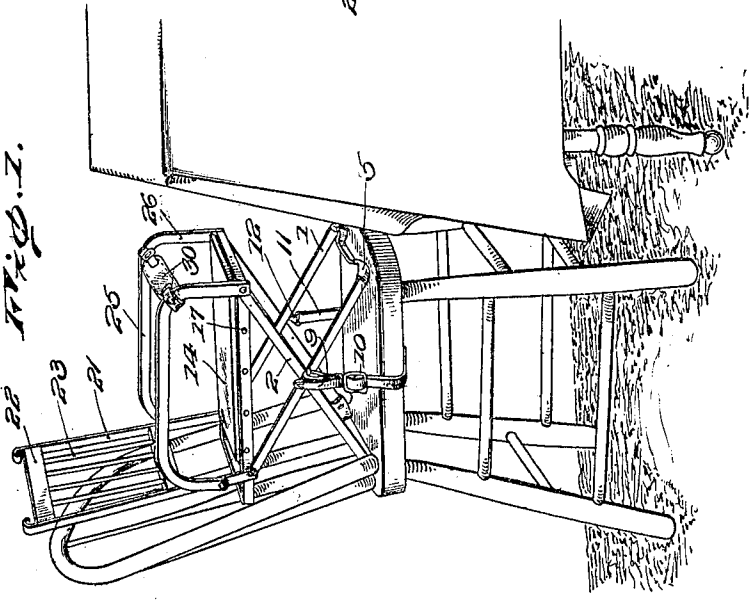


Fig. 1.



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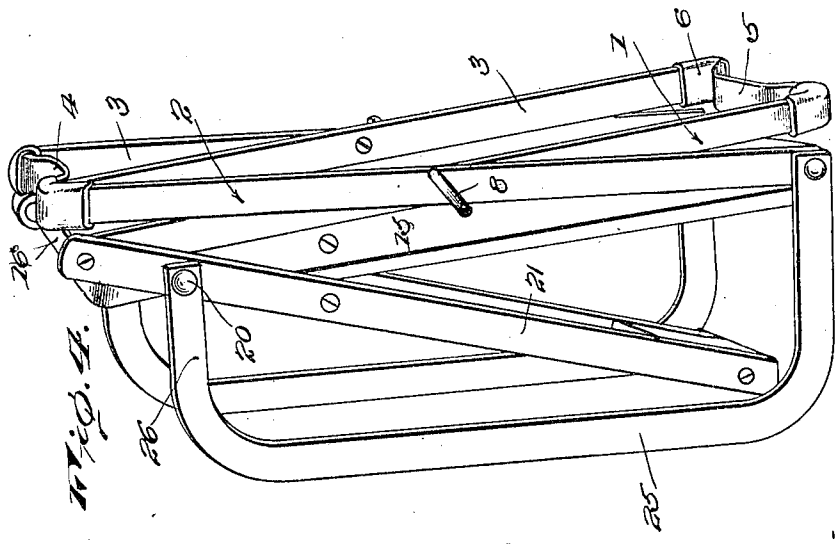


Fig. 4.

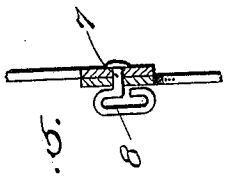


Fig. 5.

Fig. 3.

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COLLAPSIBLE CHAIR.

1,292,200. Specification of Letters Patent. Patented Jan. 21, 1919.

Application filed January 16, 1918. Serial No. 212,000.

To all whom it may concern:

Be it known that I, HORTON C. WILLIAMS, a citizen of the United States, residing at Big Rapids, in the county of Mecosta and State of Michigan, have invented certain new and useful Improvements in Collapsible Chairs, of which the following is a specification.

This invention relates to collapsible chairs and more particularly to a child's chair which may be employed in the nursery and also as a high chair.

Ordinarily children's chairs which are designed for disposal upon an ordinary chair in order that they may serve the purpose of a high chair embody means for connection with the back of an ordinary chair and as ordinary chair backs are of varying heights it is not infrequently the case that the child's chair will be supported either too low or too high. Furthermore, when such a chair is attached to the back of an ordinary chair, there is likelihood of over-tilting of the ordinary chair or slipping of the child's chair from its engagement with the back with consequent injury to the child. The present invention, therefore, has as one of its primary aims to provide a child's chair so constructed as to adapt the same to be disposed and securely fastened upon the seat of an ordinary chair so that whether applied to one chair or another it will be supported at the proper height and also, being disposed upon the seat of the ordinary chair instead of upon the back thereof, will be firmly and securely supported and not liable to tilt or become otherwise displaced.

A further aim of the invention is to so construct the chair that the same may be readily collapsed when not in use so as to occupy but little space, the chair being further so constructed that it will be automatically collapsed as soon as the rear portion of the seat is slightly lifted, and on the other hand it may be readily unfolded or set up merely by lifting upon the upper portion of the back rest. As a result the chair of the present invention may be conveniently manipulated while the child is being held in the arms.

A further feature of the invention resides in the novel means provided for securing the chair of the present invention upon the seat of an ordinary chair so as to positively prevent displacement and at the same time increase the locking force which serves to hold the chair in set up condition and against collapse.

In the accompanying drawings:

Figure 1 is a perspective view of the chair embodying the present invention in use as a high chair;

Fig. 2 is a similar view but illustrating the chair adapted for ordinary use;

Fig. 3 is a vertical front to rear sectional view through the chair in set up condition;

Fig. 4 is a perspective view of the chair folded;

Fig. 5 is a horizontal sectional view in detail on the line 5—5 of Fig. 3.

The chair embodying the present invention is supported by means of leg frames, one indicated in general by the numeral 1 and the other by the numeral 2, and each of these leg frames is preferably formed from an integral length of bar metal bent to form spaced parallel side members 3 and a transversely extending connecting bottom member 4 which extends between the lower ends of the side members 3. At points adjacent the juncture of the ends of the connecting members 4 with the lower ends of the side members 3, the said connecting member is bent so as to form an upwardly or inwardly arched portion 5. Thus the intermediate portions of the connecting members 4 of the two leg frames will be spaced above the floor surface or above the upper surface of the seat of an ordinary chair upon which the chair embodying the present invention is disposed, the rest portions of the leg members being the bends forming the said arched portions and these bends being preferably covered by means of short lengths of rubber tubing 6 fitted thereon and serving as pads to prevent scratching of any polished surface upon which the chair of the invention may be disposed. As clearly shown in the drawings, the leg frames are assembled with their side members 3 crossing each other and the frames are pivotally connected by means of the shanks 7 of eye members 8, as shown in Fig. 5 of the drawings, the eye members serving for the connection of the ends of the strap which is to secure the chair in place upon the seat of an ordinary chair. This strap connection comprises a short length 9 which is connected with the loop or eye 8 at one side of the chair and which carries a buckle 10, and a

longer strap 11 which is adjustable at one end with the buckle 10 and which at its other end is provided with a snap or other suitable fastening 12 for engagement with the eye member 8 at the other side of the chair, it being understood that in employing the strap connection, the strap 11 is to be passed beneath the seat of the ordinary chair upon which the chair of the invention is disposed and connected with the buckle 10, as shown in Fig. 1 of the drawings.

The seat structure of the chair includes a nursery seat, indicated in general by the numeral 13, and an auxiliary seat 14, and the seat 13 is disposed between the spaced parallel side members 15 of a seat frame, which frame is preferably formed from an integral length of bar metal bent to form the said side portions 15 and a connecting member 16 which extends transversely between the rear ends of the said side members 15. Suitable securing elements, such for example as screws 17, are passed through openings in the side member 15 of the seat frame and are secured in the edges of the seat 13, the seat being in this manner securely mounted within the seat frame. The auxiliary seat 14 may be hingedly or otherwise connected with the seat 13 and as will be observed by reference to Fig. 3 of the drawings, the rear edges of the two members of the seat are spaced forwardly from the connecting member 16 of the seat frame so that the side members 15 of this frame extend rearwardly beyond the rear side of the seat. In their said rearwardly extending portions, the side members 15 have their lower edges formed with notches 18 designed to receive the end portions of a rod 19 which is secured at its ends through the upper ends of the side members 3 of the leg frame 1, the engagement of the rod 19 in the notches 18 serving to lock the chair in set up condition and, therefore, prevent collapse of the same. The rod 19 serves also to relatively brace the upper ends of the side members of the said leg frame 1. The upper ends of the side members 3 of the leg frame 2 are pivotally connected, as indicated by the numeral 20, with the seat 13 at the forward corners thereof.

The back rest of the chair comprises side members 21 which are relatively braced by means of cross bars 22, the space between which may be occupied by rods 23 or any other suitable elements affording a rest surface, and the lower ends of the side members 21 of the back rest are pivotally connected, as indicated by the numeral 24, to the ends of the rod 19. The chair also includes two arm rests preferably formed from suitable lengths of bar metal and indicated in general by the numeral 25 and each of these arm rests has a downwardly extending forward portion 26 pivotally connected as at 27, to the upper ends of the side members 3 of the leg frame 2, and downwardly extending rear portions 28 pivotally connected at their lower ends as at 29 with the side bars 21 of the back rest above the pivots 24. The usual strap 30 may be employed to extend between the arm rests 25 so as to hold the child in the chair.

From the foregoing description of the invention it will be understood that the chair embodying the same is designed for application to an ordinary chair by disposing the lower ends of its leg frames upon the upper surface of the ordinary chair in the manner shown in Fig. 1 of the drawings and then tightening the strap 11. When so secured in place the chair of the invention will be effectually held against displacement and as the weight imposed upon the ordinary chair is located directly above the seat instead of upon the back as has heretofore been customary, there is no likelihood of tilting or overturning of the chair. By reference to Fig. 3 of the drawings it will be apparent that in order to collapse the chair of the invention it is only necessary to lift upwardly upon the connecting member 16 of the seat frame to disengage the walls of the notches 18 from the rod 19 whereupon the chair will settle by its own weight to collapsed condition in which condition it is clearly illustrated in Fig. 4 of the drawings. On the other hand when it is desired to restore the chair to set up condition it is only necessary to grasp the upper side of the back of the chair and lift upwardly thereon until the rod 19 becomes engaged in the notches 18 whereupon the chair will be locked in its set up condition. It will further be apparent that inasmuch as the securing straps 9 and 11 are connected in effect to the pivots for the leg frames, and when these straps are tightened, a downward pull is exerted upon the pivots tending to spread the upper ends of the leg frames apart, this strain causes the rod 19 to seat more firmly and securely in the notches 18 so as to effectually prevent accidental collapse of the chair through any slight upward movement of the rear side of the seat, and it is preferable that the walls of the notches 18 be inclined downwardly and forwardly, as clearly shown in Fig. 3 so as to further insure of firm engagement of the rod 19 in the said notches in the set up condition of the chair.

Having thus described the invention, what is claimed as new is:

1. In a chair of the class described, leg frames each having spaced side members, the frames being pivotally connected with their side members in crossed relation, a seat to the forward corners of which the upper ends of one leg frame are pivotally connected, a rod extending between the upper ends of the other leg frame, spaced bars rigidly secured

to the sides of the seat and slidable over said rod and provided in their lower edges with notches to engage said rod, a back rest pivotally connected at its lower end to the upper ends of the last-mentioned leg frame, and arm rests pivotally connected at their forward ends to the forward corners of the seat and at their rear ends to the back rest above the pivotal connection between the back rest and the leg frame.

2. In a chair of the class described, a seat, a leg frame pivotally connected at its upper portion to the forward portion of the seat, a leg frame disposed in crossed relation to the first-mentioned leg frame and pivotally connected therewith, interlocking elements upon the upper end of the last-mentioned leg frame and the rear portion of the seat, a back rest pivotally connected at its lower end to the last-mentioned leg frame, arm rests pivotally connected to the first-mentioned leg frame and to the back rest; and a securing strap having connection at its ends with the leg frames substantially at the pivots connecting the said frames.

3. In a chair of the class described, crossed pivoted leg frames, a securing strap having connection at its ends with the pivots for the leg frames, a seat to the forward portion of which one leg frame is pivotally connected, the seat having a frame member extending beyond its rear side and provided with notches, and a rod carried at the upper end of the other leg frame and engageable in said notches.

4. In a chair of the class described, crossed pivoted leg frames, a securing strap having connection at its ends with the pivots for the leg frames, a seat to the forward portion of which one leg frame is pivotally connected, the seat having a frame member extending beyond its rear side and provided with notches, a rod carried at the upper end of the other leg frame and engageable in said notches, a back rest pivotally connected at its lower end to the said rod, and arm rests pivotally connected with the first-mentioned leg frame and with the said back rest.

5. In a chair of the class described, a seat frame including rigid side members and a connecting rear portion, the side members being formed in their lower edges with notches, a seat supported between the side members of the said frame and having its rear edge spaced forwardly from the rear portion of the seat frame, leg frames disposed in crossed relation and pivotally connected with each other, one leg frame being pivotally connected at its upper end with the forward portion of the seat frame, and a rod carried by the upper end of the other leg frame and slidably supporting the seat frame and engageable in the said notches.

In testimony whereof I affix my signature.

HORTON C. WILLIAMS. [L. S.]

Copies of this patent may be obtained for five cents each by addressing the "Commissioner of Patents, Washington, D. C."