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JUVENILE SEATING DEVICE

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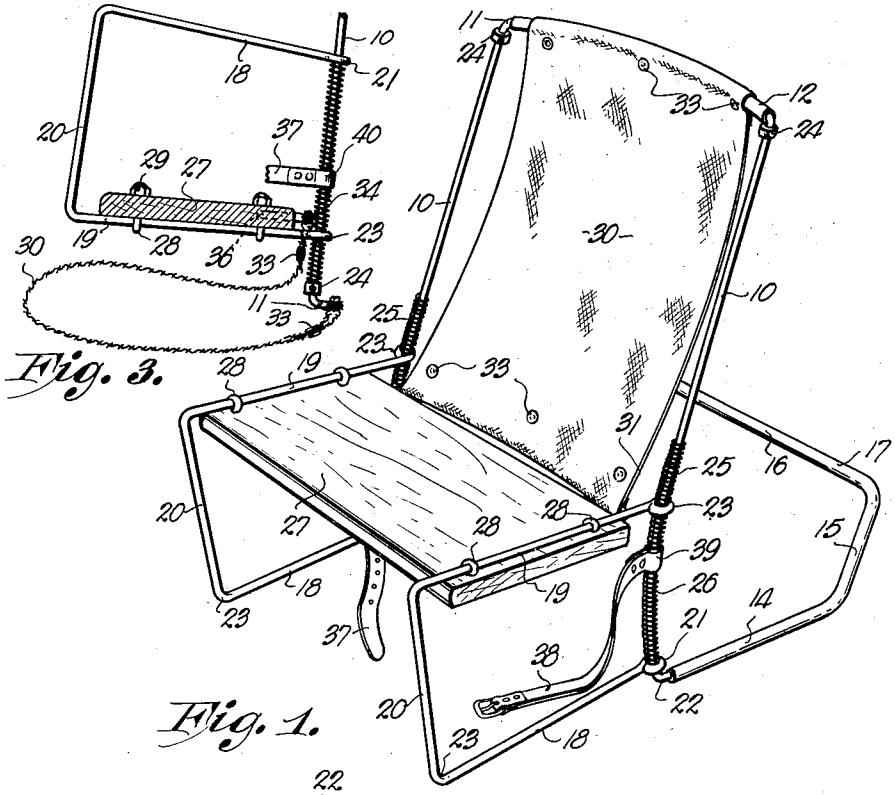


Fig. 3.

Fig. 1.

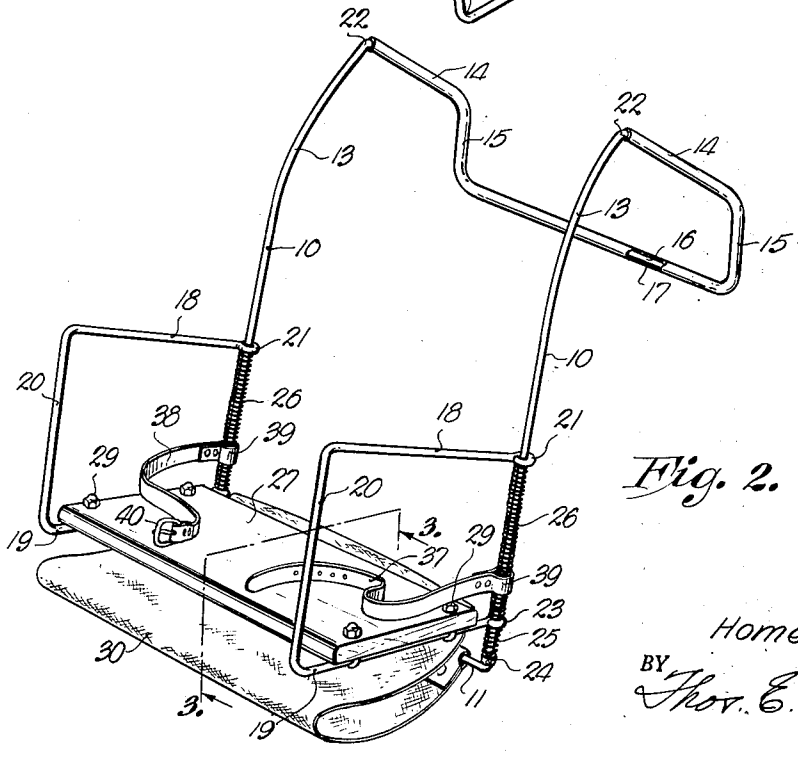


Fig. 2.

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JUVENILE SEATING DEVICE

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20 Claims. (Cl. 155—11)

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My invention relates to juvenile seating devices, and more particularly to a convertible chair for children that can be used in one position for support on a floor or similar surface and in a reversed position for support from a seat of a vehicle, such as an automobile, in a hanging position.

More particularly my invention comprises a chair that has a frame with a pair of upstanding side members and a pair of seat supporting members slidably mounted on the upstanding members so that said seat supporting members can be moved from a position adjacent one end of the upstanding members for one of the positions of said chair to a position adjacent the other end of said upstanding members for the other position of said chair.

Another important characteristic of my improved chair is that the back thereof is made of flexible material so that it will be in an extended position to support the back of the child occupying the chair in the floor supported position thereof and will be in a folded position under the seat when the chair is in a position in which it is supported from an automobile seat.

One of the principal features of my invention is the provision of cushioning means in the form of coil springs on the upstanding members that act as supporting means for the seat supporting members to provide a cushion mounting therefor, particularly in the position thereof on an automobile seat, enabling the child sitting in the chair to bounce up and down with the seat due to the action of said springs.

Another important feature resides in the provision of means for adjusting the elevation of the seat when same is hung over the back of an automobile seat or the like.

It is still another important purpose of my invention to provide a chair that can be folded up into a compact form for shipping purposes or for storing purposes, this being accomplished by providing a mounting for the seat whereby the seat can be swung adjacent one of the seat supporting members and the seat supporting members being swingable about the upstanding frame members so as to fold the seat and the seat supporting members into substantially the same plane as the upstanding frame members.

The flexible back supporting member is not only detachable from the seat to permit this, but is also detachable from the frame so that it can be removed and washed whenever this is desirable. The mounting for the flexible back supporting member on the seat is, preferably, adjustable so as to adjust the position of the flexible back supporting member relative to the seat and the tension thereon.

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Other objects and advantages of my invention will appear as the description of the drawings proceeds. I desire to have it understood, however, that I do not intend to limit myself to the particular details shown or described, except as defined in the claims.

In the drawings:

Fig. 1 is a perspective view of my improved child's chair in the position it assumes when supported on a floor or similar surface,

Fig. 2 is a similar view, showing the chair in the position it assumes when suspended or supported from an automobile seat or similar member, and

Fig. 3 is a fragmentary vertical sectional view through the chair, taken on the line 3—3 of Fig. 2.

Referring in detail to the drawings, my improved chair comprises a frame that has a pair of parallel upstanding side members 10, a transversely extending member 11, which may be provided with an outer covering 12 of rubber or similar cushioning material. The upstanding frame members 10 are provided with bends 13 therein of long radius and have supporting portions 14 extending from the ends thereof opposite those connected by the transverse member 11, obliquely extending portions 15 extending from the supporting portions 14, and a transverse frame portion 16 connecting the obliquely extending portions 15. A sleeve of rubber or similar cushioning material 17 is, preferably, provided on the portions 14, 15 and 16 of the frame.

When the chair is in the position shown in Fig. 1 the supporting portions 14 are in engagement with the floor, the obliquely extending portions 15 extend upwardly away from the floor and the transversely extending portion 16 is spaced from the floor. When the chair is in the position shown in Fig. 2 the supporting portions 14 are in engagement with the top of the automobile seat and the portions 15 and 16 extend around the back of the seat, while the curved or bent portions 13 follow the curved contour of the forward upper portion of an automobile seat.

Mounted on the upstanding frame members 10 are substantially C-shaped auxiliary frame members that serve as seat supporting members, said auxiliary frame members each having a pair of arms 18 and 19 connected by the upstanding portions 20. The arms 18 and 19 extend substantially in parallelism, the arms 18 being slightly inclined toward the arms 19 toward the ends

thereof that are remote from the connnecting portion 20, as will be obvious from Figs. 1 and 3. Accordingly when the eyes 21 on said arms 18 are in the position shown in Fig. 1 (i. e., in engagement with the bends 22 connecting the portions 14 of the frame with the portions 10) the forward end portions of said arms 18 adjacent the bends 23 will be in contact with the supporting surface and the chair will be supported by said ends of the arms 18 and the rearwardly extending supporting portions 14 of the frames 10.

The arms 19 are also provided with eyes 23 similar to the eyes 21. The eyes 21 and 23 of the arms 18 and 19 of the auxiliary frames are slidable on the upstanding frame members 10 between a position in which the eyes 21 engage the bends 22 and a position determined by the stop collars 24. These collars are slidable on the upstanding portions 10 of the frame, each being provided with a set screw (not shown) whereby it can be fixedly secured to the frame in any adjusted position. When the collars are positioned adjacent the bends connecting the transverse portions 11 and the upstanding portions 10 of the frame, as shown, and the chair is supported in its Fig. 2 position, the seat will be as far below the level of the hook shaped upper end of the frame as possible; to raise the level of the seat relative the frame, it is only necessary to adjust the collars 24 upwardly on members 10.

A compression coil spring 25 is mounted between the collars 24 and the eyes 23. The springs 25 will slide along on the upstanding frame members 10 so that when the parts are in the position shown in Fig. 1 the springs 25 will slide to a position where the same rest on the eyes 23, but in the position shown in Fig. 2 the springs will have one end of each thereof in engagement with the collars 24 and the other end of each thereof will be in engagement with the eyes 23, the springs being compressed when in the position shown in Fig. 2 so that the auxiliary frames will have a cushioned or resilient mounting on the frame.

A compression coil spring 26 is also provided between the eyes 21 and 23, preventing any permanent distortion of the auxiliary frames due to the weight supported from the seat, as the springs 26 will act as auxiliary supporting means for the seat, limiting approach of the eyes 23 toward the eyes 21 when the parts are in the position shown in Fig. 1.

A seat 27 is provided, which is, preferably, a board of suitable width and thickness, provided with openings through which hook bolts extend. The latter bolts have the hook ends 28 that engage the arms 19 and are clamped in position by means of the acorn nuts 29. When the nuts are tightened up on the hook bolts, the hooks 28 will firmly clamp the seat and the rod-like arms 19 together, so that there is no possibility of any swinging movement of the auxiliary frames relative to the main frame or of the seat relative to the auxiliary frames. However, if the one set of hook bolts is loosened by loosening the nuts 29, the hook portions 28 will move far enough away from the surface of the seat 27 to permit disengagement of the hook portions from the member 19. By disengaging the seat from one of the members 19 in this manner, the seat can be swung on the other set of hooks 28 into a position adjacent the one auxiliary frame or in a position in substantial alignment with the one auxiliary frame and the two auxiliary frames can then be swung inwardly toward each other on the main frame so as to make a compact package of the chair for either shipping purposes or storing purposes.

A back 30 of flexible material, such as canvas, is provided for the chair, the back having a pair of pockets formed in the opposite ends thereof by turning back a portion of the material, as shown at 31, and detachably securing said portion to the main body portion of the fabric by means of snap fasteners 33. The seat is provided with a U-shaped bracket 34 having a transversely extending portion received in one of said pockets, while the transverse portion 11 of the frame 10 is received in the other pocket. The opposite legs of bracket 34 are slidably mounted in bores 36 in the seat for adjusting the bracket relative to the seat. It will be obvious that when the canvas back member 30 is in the position shown in Fig. 1 the depth of the seat can be changed somewhat by adjusting the position of the bracket member above described; it also will be clear that when the seat is in the position shown in Figs. 2 and 3 the canvas back-supporting member 30 is in a folded position under the seat 27.

In order to hold a child in the seat when it is in the position shown in Figs. 2 and 3, a pair of straps 37 and 38 are provided, these having tubular eyes 39 embracing the springs 26 on the upstanding frame portions 10 for securing said straps to the frame. Strap 38 has a buckle 40 engaging with the other strap 37 in a well known manner for securing the child in position in the seat. It will be obvious that the straps can be adjusted up and down to the desired holding position on the upstanding frame members 10.

The frame members comprising the upstanding portions 10 and the portions 11, 14, 15 and 16 are preferably, made of rod, or tubing, while the auxiliary frame members comprising the portions 18, 19 and 20 may be made of rod, as shown, or of strap metal punched out to provide eyes corresponding to 21 and 23.

It is believed that from the above it will be obvious that a convertible chair is provided that is adapted for use either on a floor or other similar supporting surface, or which may be supported from a seat, such as an automobile seat, in a hanging position. Also it will be noted that by the construction provided the chair can be kept clean and sanitary because the fabric portion thereof is readily removable, and furthermore the chair is capable of being folded into a compact package that is easy to transport from place to place. By providing the coil springs a resilient or cushioned mounting is provided for the seat that is highly pleasing to a child that occupies the same.

Having described the invention, I claim:

1. A chair of the character described having a frame comprising a base with a pair of upstanding side members, a pair of seat supporting members having spaced arms slidably connected with said upstanding members, a seat secured to said supporting members, said frame being invertible and said base being shaped to form a hook by which the frame may be hung in inverted position with said side members depending from the base.

2. A chair of the character described having a frame comprising a base with a pair of upstanding side members, said frame being invertible and said base being shaped to form a hook by which the frame may be hung in inverted position with said side members depending from the base, a pair of seat supporting members having

spaced arms slidably connected with said side members, means for limiting sliding movement of said arms on said side members in one direction including cushioning means, and a seat secured to said supporting members.

3. A chair of the character described having a frame comprising a pair of upstanding side members, a pair of seat supporting members having spaced arms slidably connected with said upstanding members, said frame having supporting portions extending rearwardly from one end of each of said side members, a transverse frame member and means connecting said transverse member and supporting portions to offset said transverse member from said supporting portions.

4. A chair of the character described having a frame comprising a base with a pair of upstanding side members, said frame being invertible and said base being shaped to form a hook by which the frame may be hung in inverted position with said side members depending from the base, a pair of seat supporting members each having a pair of spaced arms with eyes at the ends thereof slidably connected with said side members, stops on said side members, coil springs mounted between said eyes and between each of said stop members and one of said eyes, and a seat secured to said supporting members.

5. A chair of the character described having a frame comprising a base with a pair of upstanding side members, a transverse member connecting said upstanding members at their upper ends, a pair of seat supporting members having spaced arms slidably connected with said upstanding members for movement up and down on same, a seat secured to said supporting members, a flexible back supporting member detachably connected with said transverse member and seat, said frame being invertible and said base being shaped to form a hook by which the frame may be hung in inverted position with said side members depending from the base.

6. A chair of the character described having a frame comprising a pair of upstanding side members, a transverse member connecting said upstanding members, a pair of seat supporting members having spaced arms slidably connected with said upstanding members, a seat secured to said supporting member, and a flexible back supporting member detachably connected with said transverse member and detachably adjustably connected with said seat.

7. A chair of the character described having a frame comprising a base with a pair of upstanding side members, said frame being invertible and said base being shaped to form a hook by which the frame may be hung in inverted position with said side members depending from the base, a seat slidably supported on said side members for movement up and down on same, said frame including stops limiting the distance said seat can move in either direction on said side members.

8. A chair of the character described having a frame comprising a base with a pair of upstanding side members, said frame being invertible and said base being shaped to form a hook by which the frame may be hung in inverted position with said side members depending from the base, a seat slidably supported on said side members for movement up and down on same, said frame including stops limiting the distance said seat can move in either direction on said side members, and resilient cushioning means between said seat and one of said stops.

9. In a chair of the character described, a substantially rigid frame comprising a pair of laterally spaced supporting bars adapted to rest on the floor and having a cross-piece interconnecting said bars at one end, the other end of said bars turned upwardly to form laterally spaced posts, and a cross-piece interconnecting said posts at their upper end; a pair of laterally spaced C-shaped brackets each having its opposite free ends slidably connected to one of said posts so the bracket can move axially of the post, said brackets projecting from said posts opposite to the direction said bars project from the posts and the lowermost portion of each C-shaped bracket adapted to rest on the floor when said supporting bars rest on the floor, a seat spanning the space between said brackets and connected at its ends to the portions of the respective brackets that are uppermost when said bars rest on the floor, said frame being invertible and adapted to be hung by said bars with said posts in dependent relation thereto, and said brackets being adapted to slide toward the lowermost ends of said posts when the frame is thus inverted.

10. A chair as in claim 9 having stops on said posts limiting the distance said brackets can slide toward the lowermost end thereof when the frame is inverted, and means for adjusting the position of each stop on its associated post.

11. A chair as in claim 10 having, between each bracket and the corresponding stop, yieldable resilient means supporting the bracket on said stop when the frame is inverted.

12. A chair as in claim 9 wherein each of said C-shaped brackets is resiliently flexible so its free ends can move axially of the associated post toward and away from one another, and yieldable resilient means between said free ends urging them apart.

13. In a chair of the character described, a substantially rigid frame comprising a pair of laterally spaced supporting bars adapted to rest on the floor and having a cross-piece interconnecting said bars at one end, the other end of said bars turned upwardly to form laterally spaced posts, and a cross-piece interconnecting said posts at their upper end; a pair of laterally spaced C-shaped brackets each having its opposite free ends slidably connected to one of said posts so the bracket can move axially of the post, said brackets projecting from said posts opposite to the direction said bars project from the posts and the lowermost portion of each C-shaped bracket adapted to rest on the floor when said supporting bars rest on the floor, a seat spanning the space between said brackets and connected at its ends to the portions of the respective brackets that are uppermost when said bars rest on the floor, said frame being invertible and adapted to be hung by said bars with said posts in dependent relation thereto, said brackets adapted to slide toward the lowermost ends of said posts when the frame is thus inverted, and means limiting the distance each bracket can move downwardly when the frame is inverted, said means including a resilient cushioning member positioned between each bracket and the lower end of the depending posts.

14. In a chair of the character described, a substantially rigid frame comprising a pair of laterally spaced supporting bars adapted to rest on the floor and having a cross-piece interconnecting said bars at one end, the other end

of said bars turned upwardly to form laterally spaced posts, and a cross-piece interconnecting said posts at their upper end; a pair of laterally spaced C-shaped brackets each having its opposite free ends slidably connected to one of said posts so the bracket can move axially of the post, said brackets projecting from said posts opposite to the direction said bars project from the posts and the lowermost portion of each C-shaped bracket adapted to rest on the floor when said supporting bars rest on the floor, a seat spanning the space between said brackets and connected at its ends to the portions of the respective brackets that are uppermost when the bars rest on the floor, a flexible back having its upper end connected to the cross-piece located at the upper end of said posts and its lower ends connected to said seat, said frame being invertible and adapted to be hung by said bars with said posts in dependent relation thereto, said brackets adapted to slide toward the lowermost ends of said posts when the frame is thus inverted.

15. In a chair of the character described, a substantially rigid frame comprising a pair of laterally spaced supporting bars adapted to rest on the floor and having a cross-piece interconnecting said bars at one end, the other end of said bars turned upwardly to form laterally spaced posts, and a cross-piece interconnecting said posts at their upper end; a pair of laterally spaced C-shaped brackets each having at its opposite free ends eyes through which one of said posts extends, whereby each bracket is slidably mounted on a corresponding one of said posts for movement axially of the post, said brackets projecting from said posts opposite to the direction said bars project from the posts and the lowermost portion of each C-shaped bracket adapted to rest on the floor when said supporting bars rest on the floor, a seat spanning the space between said brackets and connected at its ends to the portions of the respective brackets that are uppermost when said bars rest on the floor, said frame being invertible and adapted to be hung by said bars with said posts in dependent relation thereto, said brackets adapted to slide toward the lowermost ends of said posts when the frame is thus inverted.

16. A chair as in claim 15 wherein said seat is detachably connected to the respective brackets.

17. A chair as in claim 15, wherein said seat is hingedly connected to one of said brackets and detachably connected to the other to facilitate folding of the chair.

18. In a chair of the character described, a substantially rigid frame comprising a pair of laterally spaced supporting bars adapted to rest on the floor and having a cross-piece interconnecting said bars at one end, the other end of said bars turned upwardly to form laterally spaced posts, and a cross-piece interconnecting said posts at their upper end; a pair of laterally spaced C-shaped brackets each having at its opposite free ends eyes through which one of said posts extends, whereby each bracket is slidably mounted on a corresponding one of said posts for movement axially of the post, said brackets projecting from said posts opposite to the direction said bars project from the posts and the lowermost portion of each C-shaped bracket adapted to rest on the floor when said supporting bars rest on the floor, a seat spanning the space between said brackets and connected at its ends to the portions of the respective brackets that are uppermost when said bars rest on the floor, said frame being invertible and adapted to be hung by said bars with said posts in dependent relation thereto, said brackets adapted to slide toward the lowermost ends of said posts when the frame is thus inverted, an adjustable stop collar encircling each post between said last cross-piece and the bracket mounted on said post to limit the distance the bracket can move downwardly when said frame is inverted, and means for locking each collar in adjusted position.

19. In a chair of the character described, a substantially rigid frame comprising a pair of laterally spaced supporting bars adapted to rest on the floor and having a cross-piece interconnecting said bars at one end, the other end of said bars turned upwardly to form laterally spaced posts, and a cross-piece interconnecting said posts at their upper end; a pair of laterally spaced C-shaped brackets each having at its opposite free ends eyes through which one of said posts extends, whereby each bracket is slidably mounted on a corresponding one of said posts for movement axially of the post, said brackets projecting from said posts opposite to the direction said bars project from the posts and the lowermost portion of each C-shaped bracket adapted to rest on the floor when said supporting bars rest on the floor, a seat spanning the space between said brackets and connected at its end to the portions of the respective brackets that are uppermost when said bars rest on the floor, said frame being invertible and adapted to be hung by said bars with said posts in dependent relation thereto, said brackets adapted to slide toward the lowermost ends of said posts when the frame is thus inverted, an adjustable stop collar encircling each post between said last cross-piece and the bracket mounted on said post to limit the distance the bracket can move downwardly when said frame is inverted, means for locking each collar in adjusted position, and a coiled compression spring encircling each post between the collar and the bracket mounted on said post to resiliently support said bracket on the collar when said frame is inverted.

20. In a chair of the character described, a substantially rigid frame comprising a pair of laterally spaced supporting bars adapted to rest on the floor and having a cross-piece interconnecting said bars at one end, the other end of said bars turned upwardly to form laterally spaced posts, and a cross-piece interconnecting said posts at their upper end; a pair of laterally spaced C-shaped brackets each having at its opposite free ends eyes through which one of said posts extends whereby each bracket is slidably mounted on a corresponding one of said posts for movement axially of the post, each of said brackets being resiliently flexible, a coiled compression spring encircling the post between the opposite eyes of each bracket urging the upper and lower portions of the bracket apart, said brackets projecting from said posts opposite to the direction said bars project from the posts and the lowermost portion of each C-shaped bracket adapted to rest on the floor when said supporting bars rest on the floor, a seat spanning the space between said brackets and connected at its ends to the portions of the resilient brackets that are uppermost when said bars rest on the floor, said frame being invertible and adapted to be hung by said bars with the posts in dependent relation thereto. and said brackets

adapted to slide toward the lowermost ends of said posts when the frame is thus inverted.

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