Feb. 18, 1936. J. KERSTEN 2,031,109

ADJUSTABLE SEAT

Filed June 25, 1934

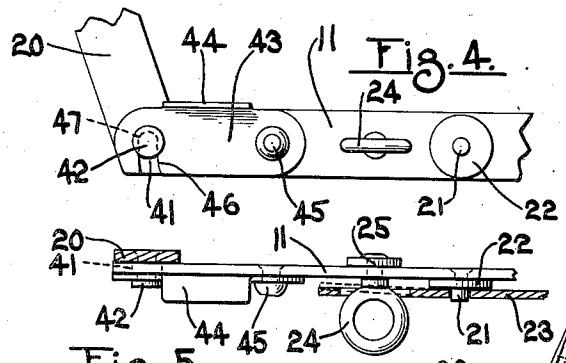


Fig. 4.

Fig. 5.

Fig. 1.

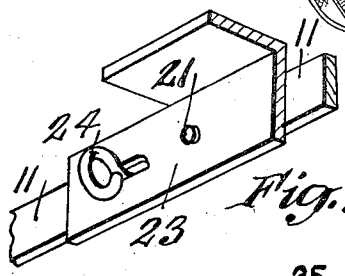


Fig. 7.

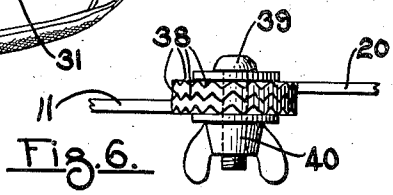


Fig. 6.

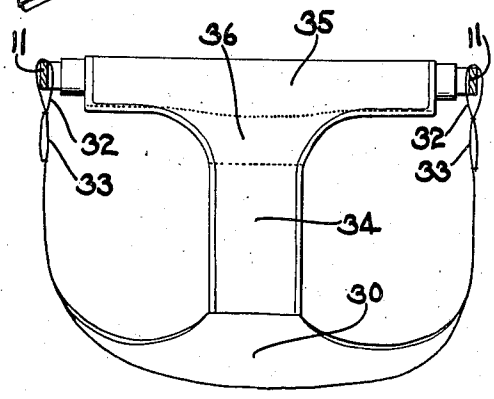


Fig. 2.

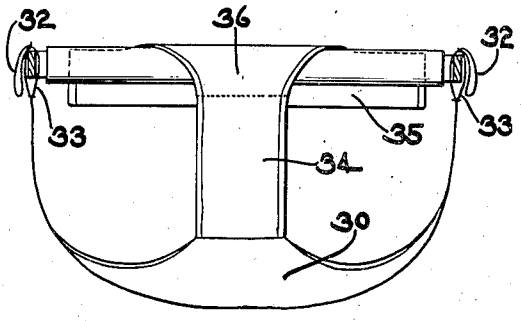


Fig. 3.

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ADJUSTABLE SEAT

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Application June 25, 1934, Serial No. 732,198

6 Claims. (Cl. 155—17)

This invention relates to a child's seat or baby jumper and more particularly is directed towards improvements over the devices shown in my former Patents No. 1,945,781, allowed February 6, 1934, and No. 1,952,872, allowed March 27, 1934.

One of the advantages of my invention resides in the construction of the canvas seat whereby the same may be raised or lowered to accommodate children of different sizes. In this connection, it is to be noted that the back of the seat is tiltable to the optimum angle for use with the particular height to which the seat portion is adjusted.

Another advantage of the construction resides in the means for connecting the frame of the seat onto the main supporting frame, this means giving a resilient connection whereby accidental detachment between these two members is avoided.

Still another advantage resides in the detachable connection between the seat supporting U-shaped members.

Other advantages will become apparent as the description proceeds.

In the drawing:

Fig. 1 is a perspective view of my invention.

Fig. 2 is a sectional view through the seat looking toward the front thereof with the flexible seat portion being in its lower position.

Fig. 3 is a similar view with the seat portion adjusted to its upper position.

Fig. 4 is a side view of the detachable connection between the two seat supporting members.

Fig. 5 is a plan view of Fig. 4.

Fig. 6 is a view illustrating the connection at the other side of the seat supporting member.

Fig. 7 is a fragmentary perspective view illustrating the mounting of the seat frame member.

Numeral 10 indicates the lower U-shaped member, see Fig. 1, and the upper U-shaped member 20 is pivotally connected thereto. A flexible seat construction, preferably formed of cloth material, has a seat portion 30 and sides 31 extending upwardly at each side thereof, these sides being folded and stitched as shown to form elongated pockets 32 and 33 respectively. These pockets receive the sides 11 of the U-shaped frame 10.

At one end of the seat a strip 34 is attached centrally thereof and extends upwardly and has a folded portion which is sewed to form pockets 35 and 36, these pockets receiving the end of the U-shaped frame 10. At the other end of the seat the flexible material is extended upwardly to form a back portion 37, this back portion being folded and sewed whereby the upper frame member 20 may be inserted thereinto.

From the above description, it will be seen that the back portion may be attached to the U-shaped member 20, when either pivotal joint is disconnected and then the lower U-shaped frame 10 threaded through either the upper pockets 32 and 35 or else through the lower pockets 33 and 36 to form either a lower or a higher seat, respectively. Also, the angularity or tilt of the seat may be changed by utilizing the upper side pockets and the lower front pocket or vice versa.

Referring to Fig. 1, the closed pivotal connection is formed by corrugating the arm 11 of the lower U-shaped frame 10 and the corresponding arm of the upper U-shaped member as clearly shown in Fig. 6 and as indicated by the reference numeral 38. A bolt 39 with its wing nut 40 provides means for holding the U-shaped frame 20 and consequently the back 37 in proper desired relationship to the U-shaped frame 10.

The other pivotal connection between the two U-shaped frames is disclosed in Figs. 4 and 5 and the arm 11 on this side of the frame 10 is formed with an opening 41, this opening being of sufficient size to receive the pin 42, located on the U-shaped frame 20, therethrough. A locking element 43, having a finger lug 44, is pivoted at 45 and has a slot 46 adapted to be received in a groove 47 located in the pin 42. Thus these two members may be detachably locked in position.

The arms 11 of the lower U-shaped frame 10 have pins 21 extending outwardly therefrom as clearly shown in Figs. 1 and 5. These pins 21 have washers 22 thereon to form abutments against which suitable supporting members 23 contact. The members 23 have properly located holes to receive the pins 21. See Fig. 5. The arms 11 also have ring members 24 pivotally mounted as indicated at 25 and these members are adapted to extend through slots in the supporting members 23 and then rotate, this rotation causing a camming action between the ring members 24 and the supporting frame members 23 whereby distortion of the members 23, see the dotted line showing of Fig. 5, is had and thus accidental detachment between these two members is absolutely prevented. The several members 23 are preferably of angle shape as clearly shown in Fig. 7.

From the preceding description, it will be seen that I have provided novel means for attaching both sides of the U-shaped frames together and also for adjustably mounting the seat 30 whereby its height and tilt may be varied and the back 37

relatively adjusted thereto so as to have the desired angle therebetween.

Also, it is to be realized and understood that the back frame 28 can be folded downwardly between the side arms 11 of the horizontally positioned frame until the upper part of the frame 28 hits against the seat portion 30. When the frame 28 is in this lowered position, the back 37 rests against the seat portion 30 and forms a very stout seat which is usable by older children. This type of seat has an open front and thus use thereof is easy because it is simply the shape of a chair having the arms and the back of the same height.

The back frame 28 can be locked in the above position, if desired, and furthermore the strip 34 can be shortened in order to raise the rear part of this seat to a higher level. Or, if desired, the sides 31 may also be shortened.

The construction shown in this patent is an improvement over my former Patent No. 1,945,781, inasmuch as I provide positive locking means between the back frame and the horizontal or seat frame. Furthermore, the back frame shown in this application can be pushed downwardly until it is in line with the seat frame or else it can be pushed vertically. This gives adjustments which are not possible in my prior patent because the flexible material forming the seat and back is lengthened when the back frame 28 is moved toward its vertical position from the position shown in Fig. 1. Also, the material is lengthened if the back 28 is moved downwardly from the position shown in Fig. 1. In other words, the intermediate portion shown in Fig. 1 is the dead center and movement in either direction causes a lengthening of the canvas or seat material. The movement of the back is combined with the lengthening or the shortening of the front strip 34, the sides 31 acting as the fulcrum and thus proper tilting of the seat is obtained. It is to be noted that the canvas is fairly taut between the sides of the back frame 28 and that movement of the back frame to a position somewhat below that shown in Fig. 1 causes an abrupt change in the angle between the lower part of the back and the upper part of the back. Thus a pillow or the like may be readily placed and utilized upon the upper part of the back portion. This angular change might be indicated by a straight line a slight distance above the pivotal axis of the seat members and in parallelism therewith.

The invention is defined in the appended claims and is to be considered comprehensive of all forms of structure coming within their scope.

I claim:

1. In a construction of the class described, a resilient supporting member having a slot therein and a hole therein, said slot being adjacent the end of the said member, a seat frame member including a side arm having means adapted to be received in the hole in the supporting member, additional means for holding the supporting member in spaced relationship to the arm and further means pivoted onto the arm and extending through said slot, said further means being adapted to be rotated to prevent its withdrawal from the slot and to cause flexing of the supporting member for the purpose described.

2. In a construction of the class described, a resilient supporting member having a slot therein, a seat frame member including a side arm having spacing means abutting the resilient supporting member at a point spaced from the slot whereby the arm is spaced from the supporting member and additional means pivoted onto the arm and extending through said slot, said additional means being rotatable to prevent its accidental withdrawal from the slot and to cause flexing of the supporting member whereby the same acts in the nature of a spring.

3. In combination, a seat frame, a back frame pivoted at one end thereof, a flexible seat portion, a flexible back portion attached between the seat portion and the back frame, sides attached to the seat portion at their bottom edges and fastened to the seat frame at their top edges, a strip fastened to the seat portion and adjustable means between the strip and the seat frame whereby the seat portion may be controlled, said movement of the back frame relatively to the seat frame also causing positioning of part of the seat portion.

4. A combination of elements as set forth in claim 3 in which the seat frame and back frame are movable from positions in which they are located in a straight line to positions in which they are at right angles to each other.

5. A combination of elements as set forth in claim 3 in which the back frame and seat frame are positively locked together.

6. A combination of elements as set forth in claim 3 in which the seat frame and back frame may be moved in parallelism to and adjacent to each other thus giving a minimum height to the device.

JACOB KERSTEN.