March 10, 1964 D. BERLIN 3,124,388

CHILD'S CONVERTIBLE BED AND SEAT

Filed April 5, 1961

FIG. 1

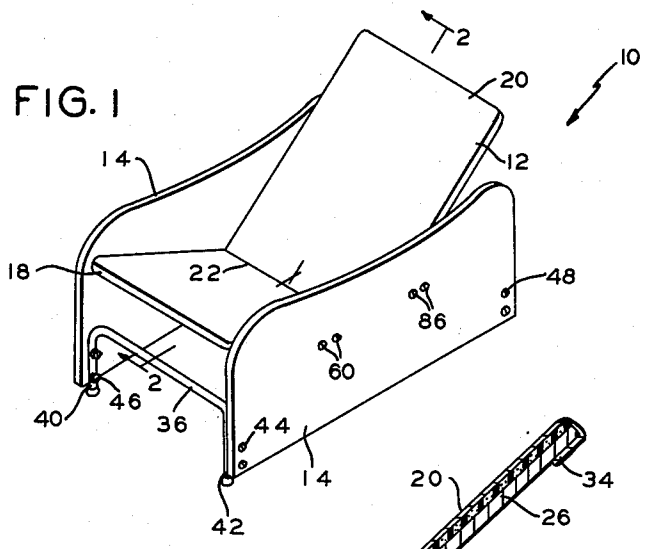



FIG. 2

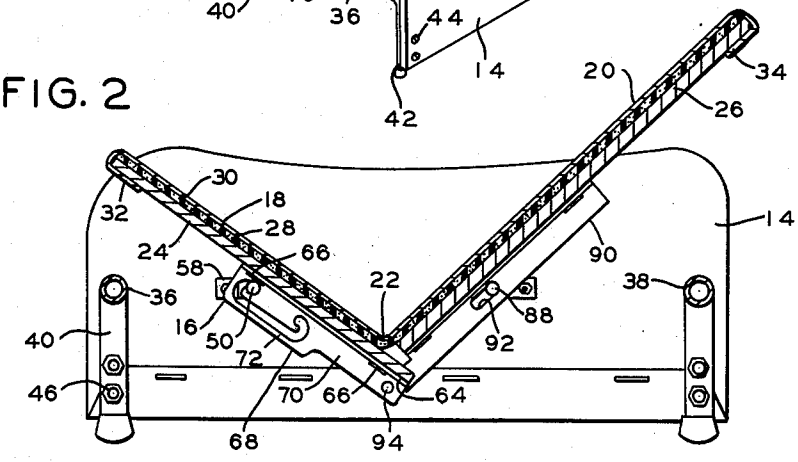



FIG. 3

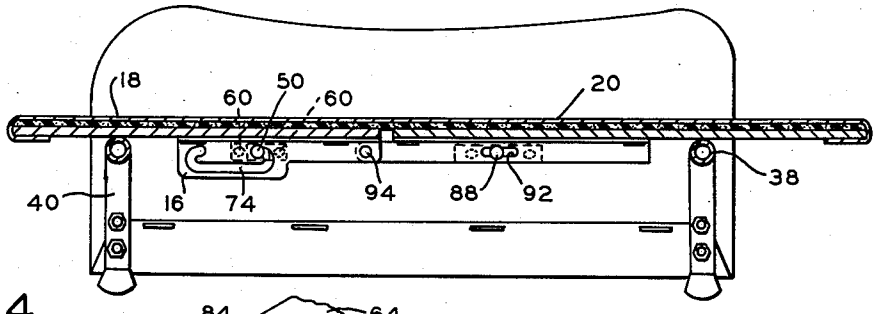
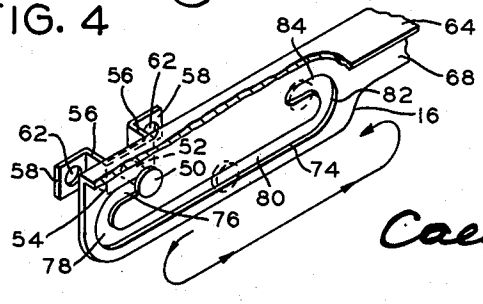



FIG. 4




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# CHILD'S CONVERTIBLE BED AND SEAT

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2 Claims. (Cl. 297—320)

This invention relates to a child's convertible bed and seat and more particularly it relates to a device wherein a child may be placed to remain in a given location and which may be converted into a bed should the demands of the particular occasion so demand.

It is often necessary that a small child be safely placed in a given location so that it will not fall, crawl or walk away or otherwise harm itself. Toward this end a variety of chairs and other supporting devices have been developed. However, it often occurs that when a child remains in one place for a period of time it becomes sleepy. At other occasions a bed is required for a small child which will also protect it from rolling away or falling as would be the case with normal size beds. When the child awakes, it is desirable to have an available seat.

It is therefore, an object of the present invention to provide a device which can be simply and easily converted from its position as a chair to that of a bed or vice versa.

A further object of the present invention is to provide a device which will securely support a child when converted to the position of a chair or as a bed.

The foregoing as well as other objectives of the invention are achieved by providing a seat member wherein the seat portion is pivotally secured to the back portion and including side members to prevent the child from falling from the device. Secured to the seat member is a movable locking member including a guide channel and secured to the side members is a cam positioned in the guide channel, the movement of the locking member being limited by the interaction of the guide channel and the cam. The seat member may be adjusted from a somewhat inclined position wherein it serves as a portion of the seat to a generally horizontal position by movement of the locking member as permitted by the guide channel-cam arrangement. When the seat member is brought to the horizontal position, the back member pivots from its previously inclined position generally perpendicular to the initial position of the seat member to lie also in a horizontal position behind the seat member. Thus the seat member and back member now present a continuous horizontal surface which functions as a sleeping area and the side members prevent the child from rolling away. A guiding member and cam positioned in the guide channel thereof are associated with the back member to assist in its pivoting with respect to the seat member, namely, to compensate for movements of the back member in being brought to horizontal or inclined position.

Other objects and many of the attendant advantages of this invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings wherein:

FIG. 1 is a perspective view of a child's combination bed and seat embodying the present invention;

FIG. 2 is an enlarged sectional view taken along the lines 2—2 of FIG. 1;

FIG. 3 is a view similar to FIG. 2 but showing the device of FIG. 1 converted to a bed; and

FIG. 4 is a fragmentary enlarged perspective view showing the locking member of the seat member with the cam positioned in the guide channel thereof.

Referring now in greater detail to the various figures of the drawings wherein similar reference characters refer to similar parts, the child's convertible bed and seat is generally shown at 10 in FIG. 1.



Device 10 basically comprises a seat member 12 positioned within side members 14, the movement of the seat member 12 being controlled by a locking member 16.

The seat member 12 comprises a seat portion 18 and a back portion 20, the seat portion and back portion being pivotally or hingedly secured to each other at common edge 22 (FIG. 2). The seat portion 18 includes a base 24 and the back portion 20 includes a base 26. The bases 24 and 26 are separate from each other except as will be indicated hereinafter. A layer of flexible fabric or plastic 28 is positioned upon the base 24 and is of sufficient length to be also positioned upon the base 26. The layer 28 is secured to the bases 24 and 26 by means of an outer web 30 of plastic or fabric which is positioned upon layer 28. Web 30 is secured at one end 32 beneath the base 24 and extends from its end 32 over the portion of the fabric 28 secured to the base 24 and to base 26. Web 30 is finally secured at its other free end 34 beneath base 26.

The side members 14 are positioned on both sides of the seat 12 and function to prevent the child from rolling or falling out of the present device, whether in the form of a chair as in FIG. 2 or in the form of a bed as in FIG. 3. The side members 14 are secured in parallel spaced relationship by means of U-shaped rods 36 and 38 secured respectively at the front and rear portions thereof. As shown in FIG. 2, the U-shaped rod 36 includes legs 40 and 42 which are respectively secured to one of the sides 14 by means of nuts 44 and bolts 46, as indicated in FIG. 1. The rearward rod (not shown) is similarly secured to the sides 14 as by bolts 48 shown in FIG. 1.

Secured to the inner surface of each side 14 somewhat forwardly of the midpoint of the sides 14 is a cam member 50 as best indicated in FIG. 4. The cam member 50 includes a neck portion 52 which projects backwardly toward the interior surface of one of the sides 14 and is secured in a bridging portion 54 between spaced legs 56 of a bracket which terminate in flanges 58. These flanges are secured to an interior surface of the side 14 by bolts 60 projecting through open edges 62 in the flanges 58.

Secured beneath the seat portion 18 adjacent each side edge thereof and adjacent the interior surfaces of the sides 14 are a pair of guide channels 16. Each guide channel 16 is basically L-shaped and includes an elongated leg 64 (FIG. 4) which is secured beneath base 24 of the seat by means of fastener 66 (FIG. 2). The other leg 68 of the guide channel 16 comprises a relatively narrow rear portion 70 and a wider front portion 72. The wider front portion 72 has formed therein the guide slot 74 which is basically U-shaped and comprises first nesting portion 76 merging into a first leg 78, merging into an elongated run 80, merging into a second leg 82 and finally terminating in the second nesting portion 84. It is thus seen that nesting portions 76 and 84 and elongated run 80 extend in the same direction, whereas legs 78 and 82 are generally perpendicular thereto.

Secured to the interior surface of each side member 14, adjacent the back portion 20 via bolts 86 (in a manner similar to the securement of cam 50) is a second cam 88 located in slot 92. A guiding member 90 including the elongated guide slot 92 is associated with the cam 88 in such a manner that movement of guiding member 90 will occur as limited by the sliding of the slot 92 with respect to the second cam 88. The guiding member 90 is pivotally secured to the first locking member 16 at point 94 so that the seat and back portions are operative together. However, point 94 is otherwise free from sides 14 or the seat member.

In order to detail the operation of the present device, it will be assumed that it has been converted to the position of FIG. 2, namely, as a seat or chair. When a child is seated in the device of FIG. 2, the weight of the child

tends to force back portion 20 in the downward direction. However, this cannot occur because second cam 88 is positioned against the upward reaches of the slot 92 thereby preventing any additional downward movement of the back portion 20. Should it be desired to convert the device from position as a seat (FIG. 2) to the position of FIG. 3 as a bed, this can be simply done with the child removed. First the seat member 18 is forced rearwardly for a short distance so that the cam 50 no longer lies in first nesting portion 76 but is now positioned above first leg 78 of guide slot 74. The rearward movement of the seat portion 18 is permitted by a pivoting action about the pivot point 94 which temporarily brings the back portion 20 somewhat closer to a vertical disposition. The position of slot 92 with respect to cam 88 remains virtually unchanged at this time.

The seat portion 18 is now forced upwardly so that cam 50 is now positioned at the base of first leg 78 and is ready to be passed over by the length of elongated run 80. Once again, the upward movement of the seat portion 18 is permitted by a pivoting thereof about point 94 with any necessary adjustment of back portion 20 not compensated at point 94 being corrected by displacement of the slot 92 with respect to the cam 88.

The seat portion 18 is now moved generally forwardly so that elongated run 80 of the guide slot 74 rides over the cam 50 which is thereafter positioned adjacent second leg 82 of the guide slot 74. Such forward movement may require some compensation in the back portion 20 as permitted by the guide slot 92 and cam 88. The seat portion is now forced downwardly so that the top of second leg 82 of the guide channel 74 has been moved to pass by the cam 50. The seat portion 18 is now moved rearwardly so that the cam 50 enters second nesting portion 84 to attain its final position as indicated in phantom in FIG. 4. It is to be noted that the final position of cam 50 with respect to guide slot 74 is such that seat portion 18 has been moved forwardly and upwardly. Moreover, when the seat portion 18 is brought to the horizontal position of FIG. 3, the back portion being pivotally secured thereto was likewise brought to a horizontal position. In so doing the back portion had to move backwardly to permit the raising of pivot point 94. This backward movement is limited by slot 92 sliding with respect to cam 88.

Reversal of the foregoing technique should be obvious in order to convert the bed of FIG. 3 to the seat of FIG. 2. This is briefly done by urging the seat portion forwardly, then upwardly, then rearwardly, then downwardly and finally frontwardly so that the cam 50 is now positioned in the first nesting portion 76. It is thus seen that the present device may be quickly converted from a seat



to a bed and vice versa. It should also be clear that when the present device is converted for use as a bed (FIG. 3) a child lying thereon will have its weight so distributed as to bear on both front and rear rods 36 and 28. Thus the bed will not tend to fold about pivot point 94.

Obviously many modifications and variations of the present invention are possible in the light of the above teachings. It is, therefore, to be understood that within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

What is claimed as the invention is:

1. A child's convertible bed and seat comprising a forward portion adapted to serve as a seat portion and a rearward portion adapted to serve as a back portion, said forward and rearward portions being positioned between two side members and being hingedly secured together along a common edge, cam means secured to both of said side members, locking means secured to one of said portions, said locking means including a guide channel with a guide slot, said guide slot being generally U-shaped and having nesting portions at both open ends of the U, said cam means being positioned within said guide slots, and a pair of brackets connecting said side members, each of said brackets having horizontal sections between said side members whereby said portions may be inclined away from each other to form a seat and brought to a horizontal position to form a bed with the undersides of said portions resting on said horizontal sections.

2. The invention of claim 1 including second cam means secured to both of said side members and a guiding member secured to the other of said portions, said second cam means being associated with said guiding member to guide movement of said other portion.


**References Cited** in the file of this patent

UNITED STATES PATENTS

| | | |
|---|---|---|
| 809,657 | Wersel | Jan. 9, 1906 |
| 948,709 | Ruggles | Feb. 21, 1911 |
| 2,294,475 | McAllister | Sept. 1, 1942 |
| 2,328,260 | Cooney | Aug. 31, 1943 |
| 2,400,588 | McArthur | May 21, 1946 |
| 2,439,370 | Orton | Apr. 6, 1948 |
| 2,823,737 | Eriksen | Feb. 18, 1958 |
| 2,928,457 | Welsh | Mar. 15, 1960 |
| 3,049,376 | Rosenthal | Aug. 14, 1962 |

FOREIGN PATENTS

| | | |
|---|---|---|
| 4,363 | Great Britain | Feb. 20, 1913 |
| 637,068 | Great Britain | May 10, 1950 |
| 88,449 | Norway | Dec. 3, 1956 |