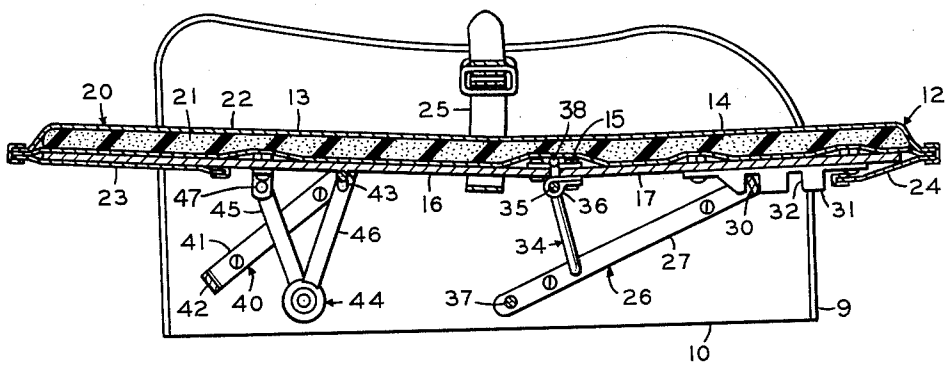
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BABY CHAIR BED

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FIG. 2



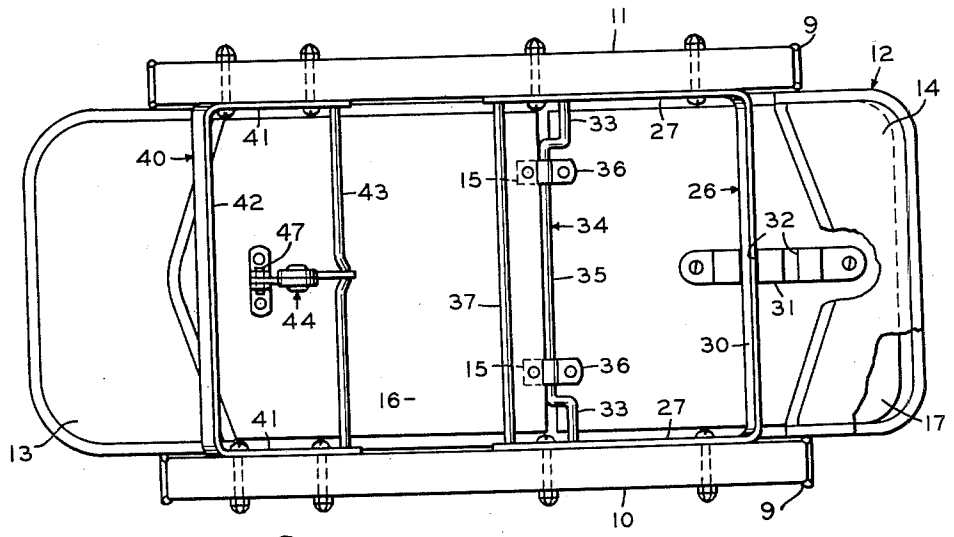


FIG. 3

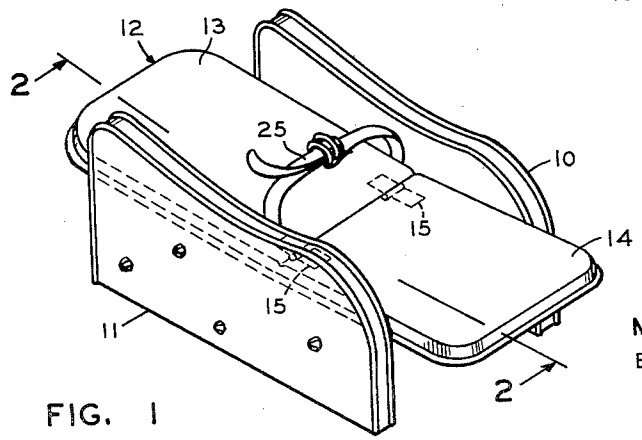


FIG. 1

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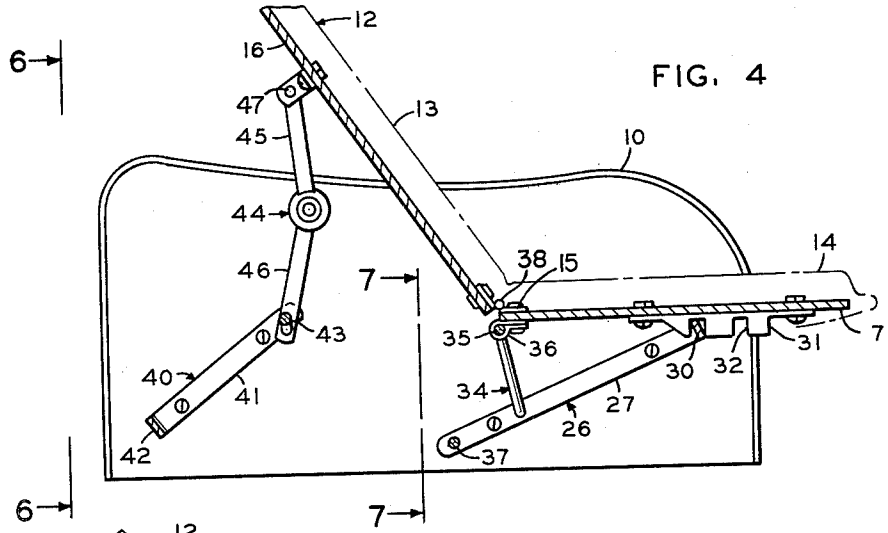


FIG. 4

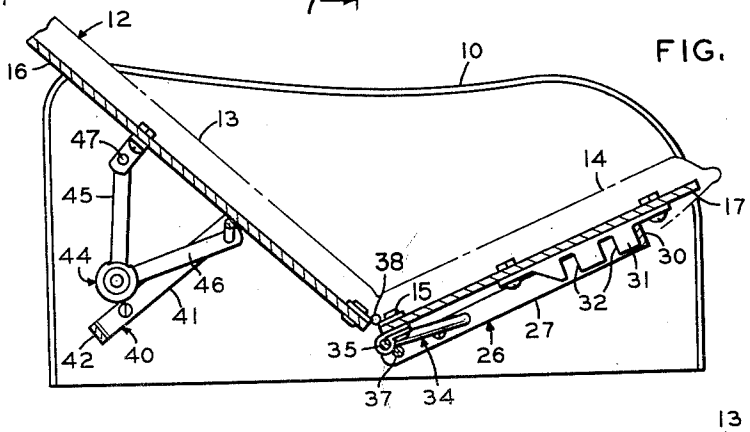


FIG. 5

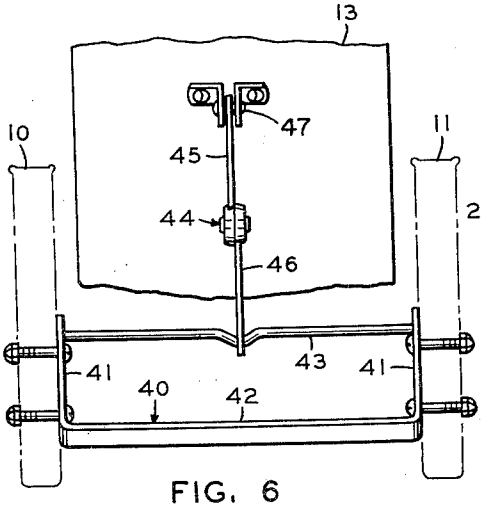


FIG. 6

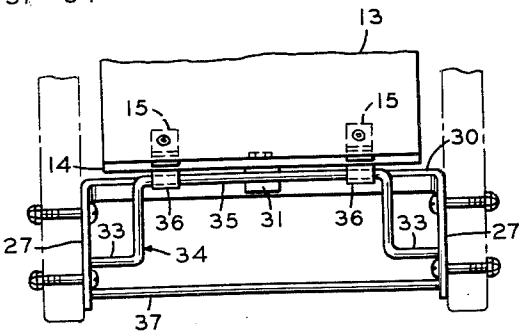


FIG. 7

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3,066,981

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Filed Feb. 13, 1961, Ser. No. 88,921
10 Claims. (Cl. 297—317)

This invention relates generally to improvements in a baby chair bed, and more particularly to improved mechanisms for selectively converting the item to either a chair or a bed.

A baby chair bed of this general type is disclosed in U.S. Patent 2,928,457, issued March 15, 1960 to the present applicant Matilda D. Welsh, and entitled "Baby Chair-Bed."

An important object of the invention is to provide a mechanism that enables the hinged body-supporting members to be moved selectively and easily to either a folded chair position or to an extended bed position, and which effectively supports and retains the members in those positions.

Another important objective is achieved by the provision of an adjustable latch means interconnecting one of the body support members with the side panels so as to adjust the member in a plurality of fore and aft positions relative to the side panels, the mechanism supporting the body support members automatically moving the members to either a folded chair or to an extended bed position in response to such adjustment.

Still another important objective is realized by providing a hanger that pivotally interconnects the seat member with the side panels, the hanger holding the seat member in a substantially horizontal bed position when the adjustable latch means retains the seat member in one adjusted position, and the hanger holding the seat member in an inclined chair position when the adjustable latch means retains the seat member in another adjusted position.

Yet another important objective is provided by a toggle that operatively interconnects the back-rest member with the side panels, the toggle enabling the back-rest member to be moved upwardly from a horizontal bed position to an inclined chair position even though the seat member is retained in a horizontal bed position by the adjustable latch means.

Other important advantages are afforded by the support rod that slidably engages and supports the back-rest member as the back-rest member moves between the horizontal bed position and the inclined chair position in response to actuation of the previously mentioned adjustably latch means, the toggle permitting such relative sliding movement between the back-rest member and the support rod.

Another important object is to provide an item of the type described which is of simple and durable construction, economical to manufacture and assemble, efficient in operation, and which is readily converted to either a chair or a bed.

The foregoing and numerous other objects and advantages of the invention will more clearly appear from the following detailed description of a preferred embodiment, particularly when considered in connection with the accompanying drawings, in which:

FIG. 1 is a perspective view of the baby chair bed showing the device converted to a bed;

FIG. 2 is an enlarged view, partly in cross section, of the bed assembly as seen along line 2—2 of FIG. 1;

FIG. 3 is a bottom plan view of the device shown in FIG. 2;

FIG. 4 is a cross sectional view similar to that illustrated in FIG. 2, but showing the back-rest member inclined upwardly to a chair position;

FIG. 5 is a cross sectional view similar to that illustrated in FIGS. 2 and 4, but showing the body support means converted to a chair position;

FIG. 6 is a fragmentary end elevational view as seen along line 6—6 of FIG. 4, and

FIG. 7 is a fragmentary elevational view as seen along line 7—7 of FIG. 4.

Referring now by characters of reference to the drawings, and first to FIG. 1, it is seen that the baby chair bed includes spaced side panels 10 and 11 arranged in vertical parallel relation. Disposed between panels 10 and 11 is a body-supporting means generally indicated at 12 which includes a back-rest member 13 and a seat member 14 hinged together by a pair of hinges 15. It is seen that the hinge axis provided by hinges 15 extends transversely of side panels 10 and 11.

The side panels 10 and 11 can be and are constructed substantially as taught in applicant's prior Patent No. 2,928,457. Briefly, in each of these panels 10 and 11 a board (not shown) of relatively stiff rigid material is covered with a relatively soft cushion layer (not shown) adapted to protect the child when the child is placed on the body-supporting means 12 between the panels 10—11. A cover 9 is placed over the cushion layer and the rigid board. Preferably, the cover 9 is of a washable plastic material, and may have decorative features that improve the aesthetic appearance of the article.

The back-rest and seat members 13 and 14 are similarly constructed and uphostered. As is best seen in FIG. 2, the back-rest member 13 is formed of a rigid board 16. Similarly, the seat member 14 is formed of a rigid board 17. A cushion indicated at 20 overlies the rigid boards 16 and 17. More particularly, the cushion 20 includes a soft resilient layer 21 enclosed and retained by a fabric cover 22. The cushion 20 is held in position by end pockets 23 and 24 fitted over the outer ends of the back-rest member 13 and the seat member 14 respectively.

A seat belt 25 (FIGS. 1 and 2) is attached to the back-rest member 13, and is utilized as a safety precaution to hold the child in place on the body-supporting means 12.

Holding the side panels 10 and 11 in spaced relation is a U-shaped brace referred to at 26, the brace 26 including spaced side arms 27 attached to the side panels 10 and 11 and including an interconnecting bar 30. The brace 26 is inclined forwardly and upwardly with its bar 30 uppermost. The brace 26 is located generally below the seat member 14.

A cooperating latch member 31 is attached to the underside of the seat member 14. Formed along the lower edge of latch member 31 are a plurality of longitudinally spaced notches 32 that are adapted to receive and retain selectively the transverse bar 30. When the bar 30 is interfitted into any one of the latch notches 32, the bar 30 supports the seat member in a predetermined position, and the stop shoulders defining the notches 32 preclude the seat member 14 from being shifted either in a fore or aft direction relative to side panels 10 and 11.

The outer ends 33 of a U-shaped hanger 34 are pivotally attached to the side panels 10 and 11, and more specifically attached to the side arms 27 of brace 26. The web portion 35 of hanger 34 is pivotally connected to the seat member 14 by a pair of hinge straps 36. It is seen that the hinge straps 36 hold the web portion 35 of hanger 34 immediately below the hinge axis 38 between the seat member 14 and the back-rest member 13.

The bed position of seat member 14 is best illustrated in FIG. 2. In this position, the bar 30 is interfitted in the rearmost notch 32 of latch 31 so that the seat member 14 is located in its forwardmost position relative to

the side panels 10 and 11. The hanger 34 is swung upwardly to hold the seat member 14 in a substantially horizontal position.

To relocate the seat member 14 to an inclined chair position as is illustrated in FIG. 5, the seat member 14 is lifted to remove the bar 30 from the rearmost notch 32. The seat member 14 is then shifted rearwardly until the bar 30 is interfitted in the forwardmost notch 32 of the latch 31. In the embodiment shown, the forwardmost notch is represented by the front edge of latch 31. Automatically, as the seat member 14 is moved rearwardly as described, the hanger 34 moves downwardly to incline the seat member 14 as is best shown in FIG. 5.

A rod 37 extends transversely of side panels 10 and 11 and interconnects the lower ends of the side arms 27 of U-shaped brace 26. The hanger 34 abuts the rod 37 as the hanger 34 is moved downwardly and thereby determines its lower limit.

Obviously, the seat member can be adjusted subsequently to the bed position by reversing the procedural steps outlined above. For example, the seat member is simply lifted to disengage the bar 30 from latch 31, and then the seat member 14 is shifted forwardly relative to the side panels 10 and 11 until the bar 30 is capable of interfitting the rearmost notch 32 as shown in FIG. 2. When supported by bar 30 in this manner, the hanger 34 and the bar 30 retain the seat member 14 in a substantially horizontal position.

The mechanism for actuating the back-rest member 13 includes a U-shaped brace 40 having side arms 41 attached to side panels 10 and 11. The side arms 41 of brace 40 are inclined forwardly and upwardly so that its interconnecting web portion 42 is located lowermost.

Extending between panels 10 and 11 and interconnecting the upper ends of the side arms 41 of brace 40, is a transverse rod 43. The rod 43 underlies the back-rest member 13, and more particularly slidably engages the underside of back-rest member 13 to support such member.

As is seen in FIG. 2, the transverse rod 43 supports the back-rest member 13 in a substantially horizontal position, while in FIG. 5 the rod 43 supports the back-rest member 13 in an inclined chair position.

A toggle generally indicated at 44 consists of a pair of pivotally connected toggle arms 45 and 46. Toggle arm 46 is pivotally connected to the back rod 43 while toggle arm 45 is pivotally connected by pin 47 to the underside of back-rest member 13. The toggle 44 expands and contracts to permit a fore and aft shifting of the back-rest member 13 as such back-rest member 13 is moved respectively to the inclined chair position of FIG. 5 or to the horizontal bed position of FIG. 2.

As is shown in FIG. 2, when the back-rest member 13 is disposed horizontally in a bed position, the back-rest member 13 is supported directly on the back rod 43 and the toggle 44 is relatively contracted. If it is desired raise the back-rest member 13 while maintaining the seat member 14 in its horizontal position, the back-rest member 13 is merely lifted to the inclined position illustrated in FIG. 4. The toggle 44 expands as the back-rest member 13 is lifted, and moves to an over-center position to retain the back-rest member 13 in the raised chair position. To lower the back-rest member 13, the back-rest member 13 is raised slightly to permit the toggle 44 to be moved out of its over-center position, and thereby allow the back-rest member 13 to be simply lowered back onto the back rod 43.

Briefly, the baby chair bed includes a pair of side panels 10 and 11 retained in spaced relation, and a body support means 12 between the panels 10 and 11 including a back-rest member 13 and a seat member 14 hinged together. An adjustable latch means 30—31 interconnects the seat member 14 with the side panels 10 and 11 to support the seat member, the adjustable latch means

30—31 including a plurality of stop shoulders 32 adapted to hold the seat member 14 selectively in any one of a plurality of fore and aft positions relative to the side panels 10 and 11. A hanger 34 pivotally interconnects the seat member 14 with the side panels 10 and 11 and holds the seat member 14 substantially horizontal when the adjustable latch means 30—31 retains the seat member 14 in one adjusted position, the hanger 34 being swingable to incline the seat member 14 when the adjustable latch means 30—31 holds the seat member 14 in another adjusted position. Means 43 slidably engages and supports the back-rest member 13 as the back-rest member 13 is adjusted between a substantially horizontal bed position and an inclined chair position, and a toggle 44 interconnected with the back-rest member 13 enables movement of the back-rest member 13 between the chair and bed positions independently or in response to adjustment of the seat member 14 as permitted by the latch means 30—31.

It is thought that the operation and functional advantages of the baby chair bed have become fully apparent from the foregoing detailed description of parts, but for completeness of disclosure the operation of the supporting mechanism will be briefly described as the body support means 12 is adjusted from a bed to a chair position.

It will be assumed that the body-support means 12 is located in the bed position as illustrated in FIG. 2, and it is desired to adjust such body-support means 12 to a chair position as is illustrated in FIG. 5. First, the seat member 14 is lifted to release the bar 30 from the rearmost latch notch 32. Then, the seat member is simply shifted rearwardly until the bar 30 is aligned with the forwardmost notch defined by the forward edge of latch 31. As the seat member 14 is shifted rearwardly, the hanger 34 swings downwardly until it abuts the rod 37. The seat member 14 is now disposed in its inclined seat position.

The back-rest member 13 is shifted rearwardly slightly and inclined automatically upon adjustment of the seat member 14 as described. The back-rest member 13 slides on its supporting back rod 43 and is maintained in such inclined chair position. The toggle 44 expands slightly to permit this shifting movement of the back-rest member 13 as it slides on back rod 43.

To relocate the body support means 13 to the bed position, the seat member 14 is lifted to detach bar 30 from the forwardmost latch notch 32 and the seat member 14 is shifted forwardly until the bar 30 is aligned with and interfitted in the rearmost latch notch 32 as illustrated in FIG. 2. The hanger 34 swings upwardly to maintain the seat member 14 in the horizontal position. Again, the back-rest member 13 is moved automatically from the inclined position of FIG. 5 to the substantially horizontal position of FIG. 2 upon actuation of the seat member 14. The back-rest member 13 merely slides on the back rod 43 as permitted by toggle 44.

It will be noted that the latch 31 is provided with an intermediate slot 32 into which the bar 30 can be selectively fitted. If this is done, the back-rest member and the seat member will be disposed in a slightly angular position somewhere between the bed position shown in FIG. 2 and the chair position shown in FIG. 5.

At times it may be desirable only to raise the back-rest member 13 while maintaining the seat member 14 in the horizontal position. This is accomplished merely by raising the back-rest member 13 as permitted by the expansion of toggle 44, the back-rest member 13 being raised sufficiently to permit the toggle 44 to be located in an over-center position as is shown in FIG. 4. Then the back-rest member 13 is released and is held in such raised position rigidly by the locked toggle 44.

To lower the back-rest member 13, it is raised slightly to permit the toggle 44 to be unlocked from its over-

center position, and then the back-rest member 13 is simply lowered onto the back support rod 43. The toggle 44 merely folds or contracts to permit this result.

Although this invention has been described by making detailed reference to a single preferred embodiment, such detail is to be understood in an instructive, rather than in any restrictive sense, many variants being possible within the scope of the claims hereunto appended.

I claim as my invention:

1. In a baby chair-bed, a pair of side panels retained in spaced relation, a body-support means between said panels including a back-rest member and a seat member hinged together, means carried by at least one of said panels supporting one of the body-support members, a hanger pivotally connected to said side panels and to said body-support means, adjustable means supporting the other body-support member and selectively retaining the said other body-support member in a plurality of fore and aft positions relative to said side panels, whereby to support said body-support means in either a chair or a bed position, and a toggle operatively interconnecting the said one of the body-support members with at least one of said panels, the toggle being expansible selectively to raise the said one body-support member from a bed to a chair position while the said other body-support member is retained by the adjustable means and hanger in a substantially horizontal position.

2. In a baby chair-bed, a pair of side panels retained in spaced relation, a body-support means between said panels including a back-rest member and a seat member hinged together, means carried by at least one of said panels supporting the back-rest member, a hanger pivotally connected to said side panels and to said body-support means, a bar extending across said side panels and supporting said seat member, a latch member attached to said seat member and including a plurality of stop shoulders selectively engaging said bar in a plurality of fore and aft positions relative to said side panels, whereby to adjust said body-support means to either a chair or a bed position, and a toggle operatively interconnecting the back-rest member with at least one of said panels, the toggle being selectively expansible to raise the back-rest member from a bed to a chair position while the seat member is retained by the bar, latch member and hanger in a substantially horizontal position.

3. In a baby chair-bed, a pair of side panels retained in spaced relation, a body-support means between said panels including a back-rest member and a seat member hinged together, a hanger pivotally connected to said side panels and to said body-support means, a bar extending across said side panels and supporting one of said members, a latch attached to the last said member including a plurality of longitudinally spaced stop shoulders selectively engaging said bar in a plurality of fore and aft positions relative to said side panels, whereby to adjust said body-support means to either a chair or a bed position, means carried by at least one of said panels supporting the other said body-support member, and a toggle operatively interconnecting at least one of said panels with the last said body-support member, the toggle being selectively expansible to raise the last said member from a bed to a chair position while the said one member is retained by the bar, latch and hanger in a substantially horizontal position.

4. In a baby chair-bed, a pair of side panels retained in spaced relation, a body-support means between said panels including a back-rest member and a seat member hinged together, a back rod extending across said side panels and supporting the back-rest member, a toggle pivotally interconnecting the back rod with said back-rest member, a U-shaped brace having side arms attached to said side panles and having an interconnecting bar supporting the seat member, the brace being inclined forwardly and upwardly with the bar uppermost, a hanger pivotally connected to the said arms of said brace and pivotally connected to said seat member, a latch member attached to said seat member forwardly of said hanger, the latch member including a plurality of longitudinally spaced stop shoulders selectively engaging said bar in a plurality of fore and aft positions relative to said side panels, whereby to adjust said body-support means to either a chair or a bed position, the hanger holding the seat member substantially horizontal when the bar abuts a predetermined stop shoulder, and means on said side panels limiting movement of said hanger to hold the seat member in an inclined position when the bar abuts another predetermined stop shoulder.

5. In a baby chair-bed, a pair of side panels retained in spaced relation, a body-support means between said panels including a back-rest member and a seat member hinged together, an adjustable means supporting the seat member, a hanger pivotally interconnecting and supporting the seat member on the side panels, a rod between said side panels supporting the back-rest member, the adjustable means, hanger and rod holding the body-support means substantially horizontal in one position, and a toggle interconnecting the rod with said back-rest member, the toggle being selectively expansible to raise the back-rest member from a bed to a chair position while the seat member is retained by the adjustment means and hanger in the said substantially horizontal position.

6. In a baby chair-bed, a pair of side panels retained in spaced relation, a body-support means between said panels including a back-rest member and a seat member hinged together, an adjustable means supporting the seat member, a hanger pivotally interconnecting and supporting the seat member on the side panels, a rod between said side panels supporting the back-rest member, the adjustable means, hanger and rod holding the body-support means substantially horizontal in one position, and a toggle interconnecting the rod with said back-rest member, said toggle consisting of two arms pivoted together, one toggle arm being pivoted to said rod, the other toggle arm being pivoted to said back-rest member, said toggle arms being selectively expansible from a relative collapsed condition to an over-center condition whereby to raise the back-rest member from a bed to a chair position while the adjustable means and hanger maintain the seat member in the said substantially horizontal position.

7. In a baby chair-bed, a pair of side panels retained in spaced relation, a body-support means between said panels including a back-rest member and a seat member hinged together, adjustable means interconnecting one of said members with the side panels to support the said member, said adjustable means including a plurality of stop shoulders adapted to hold the last said member selectively in any one of a plurality of fore and aft positions relative to said side panels, a hanger pivotally interconnecting the body-support means with said side panels, means slidably engaging and supporting the other of said members, said hanger holding the said members substantially horizontal when the adjustable means retains its associated body-support member in one adjusted position, and said hanger being swingable to incline the said members when the adjustable means holds its associated body-support member in another adjusted position, and a toggle operatively interconnecting the said other member with at least one of said panels, the toggle being selectively expansible to raise its associated body-support member from a bed to a chair position while the body-support member associated with the adjustable means is retained by the adjustable means and hanger in the substantially horizontal position.

8. In a baby chair-bed, a pair of panels retained in spaced relation, a body-support means between said panels including a back-rest member and a seat member hinged together, adjustable means interconnecting one of said body-support members with the side panels to support such member, said adjustable means including a plurality of stop shoulders adapted to hold the said body-support

member selectively in any one of a plurality of fore and aft positions relative to said side panels, a hanger pivotally interconnecting the said body-support member with said side panels, means slidably engaging and supporting the other said body-support member, and a toggle interconnecting the last said means with its associated body-support member, the toggle being selectively expansible to raise its associated body-support member from a bed to a chair position, the said hanger holding the said back-rest member and seat member substantially horizontal when the adjustable means retains its associated body-support member in an adjusted forward position, and the hanger being swingable to incline the said back-rest member and seat member when the adjustable means holds its associated body-support member in another rearwardly adjusted position.

9. In a baby chair-bed, a pair of side panels retained in spaced relation, a body-support means between said panels including a back-rest member and a seat member hinged together, means carried by at least one of said panels supporting one of the body-support members, a hanger pivotally connecting said body-support means to at least one of said side panels, adjustable means supporting the other body-support member and selectively retaining the said other body-support member in a plurality of fore and aft positions relative to said side panels, whereby to support said body-support means in either a chair or a bed position, and a toggle operatively interconnecting the said one body-support member with at least one of said panels, said toggle enabling independent movement of the said one body-support member from a bed to a chair position while the said other body-support member is retained by the adjustable means and hanger.

10. In a baby chair-bed, a pair of side panels retained in spaced relation, a body-support means between said panels including a back-rest member and a seat member hinged together, means carried by at least one of said panels supporting one of the body-support members, a hanger pivotally connected to said body-support means and to at least one of side panels, adjustable means supporting the other body-support member and selectively retaining the said other body-support member in a plurality of fore and aft positions relative to said side panels, whereby to support said body-support means in either a chair or a bed position, and means operatively interconnecting the said one body-support member with at least one of said panels and enabling selectively independent movement of said one body-support member from a bed to a chair position while the said other body-support member is retained by the adjustable means and hanger.

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