Feb. 4, 1969 A. E. PETERSON 3,425,743

FOLDING HIGH CHAIR WITH ADJUSTABLE BACK

Filed Oct. 9, 1967

Sheet 1 of 2

FIG. 1.

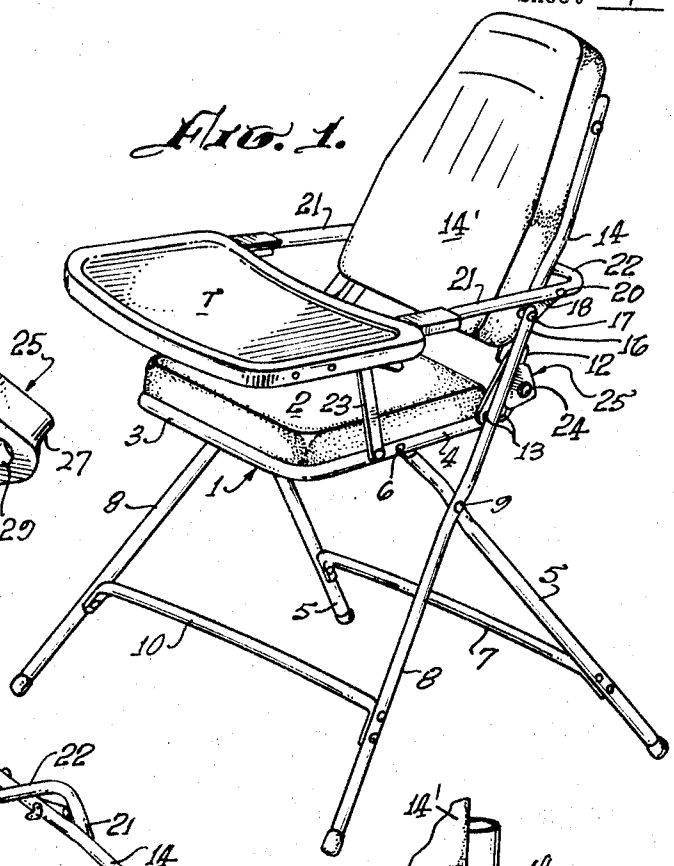


FIG. 9.

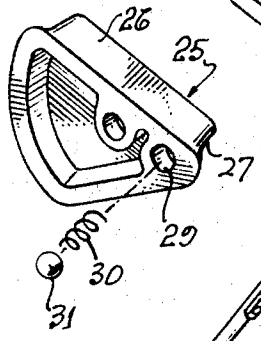


FIG. 2.

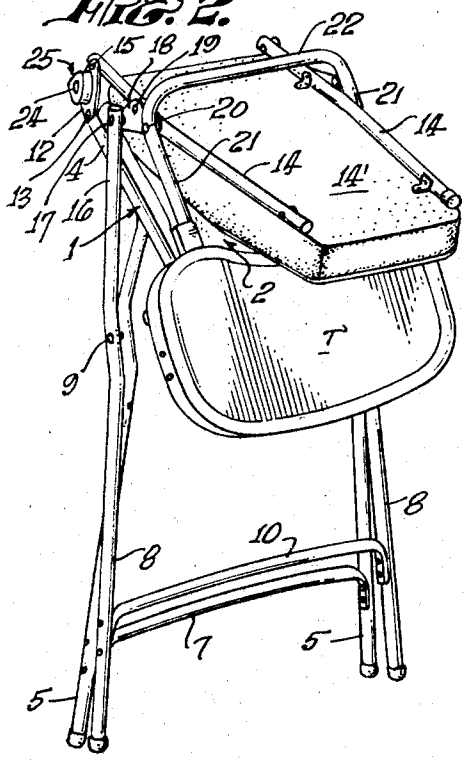
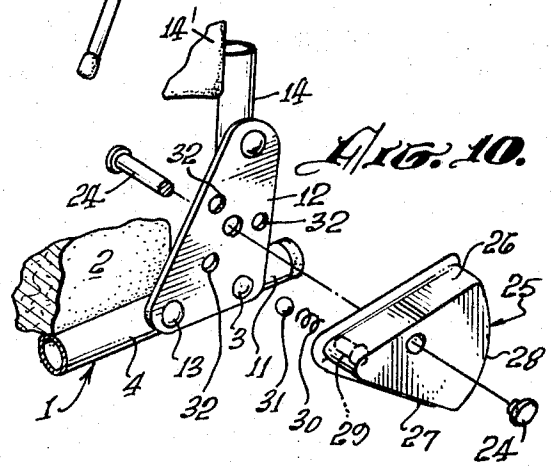


FIG. 10.



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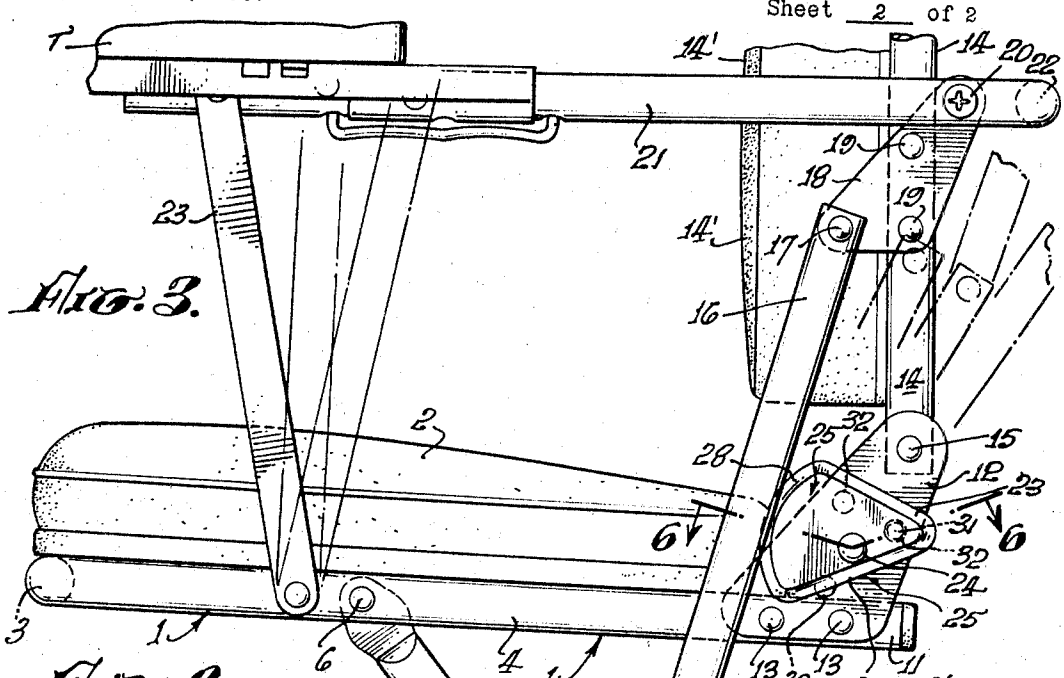


FIG. 3.

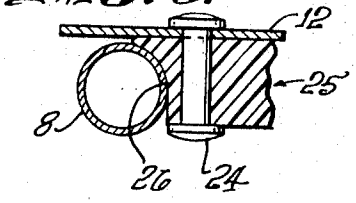


FIG. 8.

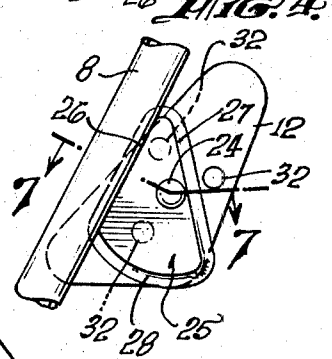


FIG. 4.

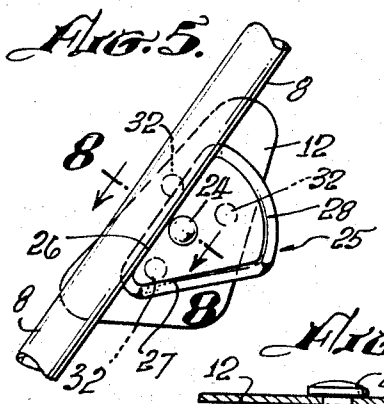


FIG. 5.

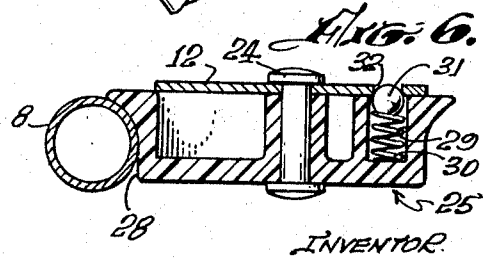


FIG. 6.

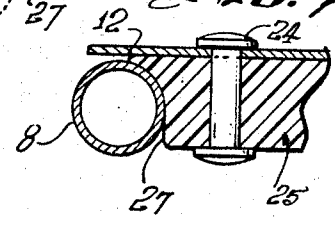


FIG. 7.

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United States Patent Office 3,425,743 Patented Feb. 4, 1969

3,425,743

FOLDING HIGH CHAIR WITH ADJUSTABLE BACK

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Filed Oct. 9, 1967, Ser. No. 673,848
U.S. Cl. 297—19 8 Claims
Int. Cl. A47c 4/24; A47d 1/02

ABSTRACT OF THE DISCLOSURE

A folding type of child's high chair characterized by a back portion hingedly mounted on the seat portion and by the inclusion of stop means adjustable to a selected position determining the extent of rearward inclination of the chair back.

BACKGROUND OF THE INVENTION

Field of the invention

The field of the invention is that of folding chairs having pivotally mounted backs adjustable to a selected one of a plurality of positions, rearwardly inclined from the vertical.

Prior art

Applicant is unaware of any patents relating to this specific invention.

SUMMARY OF THE INVENTION

The invention is directed to a child's high chair and specifically to the provision of a high chair (preferably one capable of being folded when not in use) in which the back component can be positioned either in a substantially vertical position or in at least one rearwardly inclined position determined by selective positioning of a stop means operative to determine the desired position.

BRIEF DESCRIPTION OF THE DRAWINGS

In the accompanying drawings illustrating a presently preferred embodiment of the invention:

FIGURE 1 is a right hand side perspective view of a child's high chair constituting the said presently preferred embodiment as unfolded for use;

FIGURE 2 is a left hand perspective view showing the chair folded for storage;

FIGURE 3 is an enlarged side elevational view of the seat portion of the chair in open position and showing in dotted and full lines the various positions to which the back component may be positioned;

FIGURES 4 and 5 are fragmentary, side elevational views showing different adjusted positions of the stop means by which back adjustment is achieved;

FIGURE 6 is an enlarged scale, fragmentary section taken on the line **6—6** of FIGURE 3;

FIGURE 7 is an enlarged scale fragmentary section taken on the line **7—7** of FIGURE 4:

FIGURE 8 is an enlarged scale sectional view taken on the line **8—8** of FIGURE 5;

FIGURE 9 is a perspective exploded view of the stop component employed at the right hand side of the chair as viewed in FIGURE 1 and the associated mounting and detent means; and

FIGURE 10 is a perspective view of the corresponding stop component and detent employed at the opposite side of the chair.

DESCRIPTION OF PREFERRED EMBODIMENT

Referring to the drawings, the illustrated embodiment of the invention comprises a chair seat component having a seat cushion base **1** provided with a seat cushion **2**, said

base including a length of tubing bent into a modified U-shaped configuration including a horizontal front run **3** and parallel, rearwardly extending side runs **4**. The chair supporting leg structure, having reference to the chair when unfolded for use, includes a pair of downwardly and laterally diagonally diverging rear legs **5, 5** having their upper end pivotally attached by rivet **6** to the respective side runs **4** near the forward ends thereof, and having an interposed stretcher member **7** extending between the lower portions of said legs. Cooperating with the legs **5, 5** is a pair of front legs **8, 8** which extend diagonally downwardly and forwardly and are pivotally connected to the rear legs intermediate their ends by rivets **9, 9**. A stretcher **10** extending between the lower ends of the front legs holds them in laterally spaced relation.

Since the means for folding and unfolding the chair at one side is the mirror image of the corresponding means of the other side, the same identifying numerals will be applied to corresponding elements at each side of the chair. The rear legs **5, 5** constitute lengths of metal tubing having their upper ends pivotally secured to the inner sides of the seat support runs **4** as above described. The rear ends **11, 11** of the runs **4, 4** carry generally vertically extending sheet metal brackets **12, 12** secured thereto by rivets **13, 13** and the lower ends of the tubular metal chair back supporting members **14** are pivotally secured by rivets **15** to the upper ends of the brackets **12**, said members being connected to and supporting the chair back component **14'**. The portions of the brackets **12** between the said upper and lower portion thereof support a pair of adjustable stop means to be presently described.

The front legs **8, 8** are pivotally connected to the outer faces of the rear legs and thence extend upwardly past the seat and have the upper ends **16, 16** thereof pivotally connected by rivets **17, 17** to one corner of a generally triangular sheet metal bracket **18** secured to the outer side face of the back supporting members **14** by rivets **19, 19** and another corner of the bracket **18** is pivotally connected by bolts **20** to the rear portions of the arm rests **21** of the chair, said arm rest constituting the limbs of a U-shaped tubular member extending horizontally and the connected run **22** thereof being disposed in rear of the chair back. If desired, the arms may support a detachable tray T. Lazy bar links **23, 23** connect the forward ends of the arm rest with the seat supporting runs adjacent the front ends of said runs.

It will be understood that all of the pivots above described define parallel axial lines, wherefore, the folding action is achieved. Assuming that the chair is in its folded position shown in FIGURE 2, upon moving the seat back upwardly, the hinging action of the various hinge joints formed by the rivets and bolts tend to open out the legs, position the seat in a horizontal position and move the back into a position determined by the engagement of the upper endss of the front legs with the stop means to be described. Upon tending to move the upper end of the seat back forwardly and downwardly, the reverse action of this linkage will bring the chair into the folded position thereof.

Rotatably mounted on the outer faces of each of the brackets **12, 12** by rivets **24, 24** are a pair of adjustable stop members **25** made in mirror image duplicate form and comprising generally triangular plastic moldings presenting, respectively, straight side peripheral faces **26** and **27** at different radial distances from the axial line of the rivet **24** and curved peripheral face **28** at a greater distance from the said axial line than either of the two straight sides. The side of the stop member adjacent the bracket includes a bore **29** housing a compression spring **30** and a ball **31** urged by the spring into engagement with detent openings **32** formed in the face of the bracket at a radial distance from the axial line which is com-

plementary to the path of excursion of the detent ball **31**, said openings being so positioned that the stop member may be positioned to limit the extent of inclination of the back by engagement of the selected portion of the peripheral face with the rear face of the upper ends of the front legs as shown in FIGURES 3, 4 and 5. Additionally, as shown in FIGURES 6, 7 and 8, the peripheral surface of the stop member is curved to effect a surface contact with the curved face of the leg members and thus to exert a lateral stabilizing effect on the mechanism by reason of such engagement. Thus, it will be noted that when the chair is opened, by appropriate adjustment of the two stop members, the extent to which the back may be rearwardly inclined can be predetermined and while only three positions are here shown, it will be appreciated that a greater or lesser number of positions could be provided if desired.

I claim:

1. A folding high chair comprising a seat component, a back component hingedly connected to the rear end of said seat component, a supporting leg structure comprising a rearwardly extending rear leg means pivotally connected to opposite sides of said seat component adjacent the forward end thereof and a front leg means pivotally connected to said rear leg means beneath said seat, and pivotally connected to said back component above said pivotal connected between said components, said pivotal interconnection between said leg means and between said seat and back components being so relatively positioned that movement of the lower ends of said leg means towards each other tends to move said seat and back components folded one on the other and inclined downwardly toward the lower end of said front leg means, and means for selectively determining the degree of rearward inclination of said back component relative to said seat components when the chair is unfolded for use.

2. A folding high chair as claimed in claim **1** in which said means for determining the degree of inclination of said back component comprises rotatable members disposed one each at each side of said chair and each having a plurality of peripheral faces disposed at different radial distances from the axis of rotation thereof and means for rotatively positioning said rotatable members for engagement by separate components of said leg means incident to movement thereof to unfolded position of said high chair with resultant selective positioning of said back component at a predetermined angle of rearward inclination.

3. A high chair as claimed in claim **1** in which the rear end of said seat component carries a pair of upwardly extending brackets disposed one each at each side of said seat, in which the lower end of said back component is pivotally connected to the distal ends of said brackets for said pivotal movement relative to said seat component about a line extending transversely of said component, and in which said front leg means comprises a pair of legs having the upper ends thereof pivotally connected to said back component at a point thereon above the point of pivotal connection of said seat to said brackets.

4. A high chair as claimed in claim **3** in which said stop means operative to limit the pivotal movement of said front legs about the pivotal connection thereof to said front leg means with resultant limitation of the extent of rearward inclination of said back component when the chair is unfolded for use.

5. A high chair as claimed in claim **1** in which said selective means is comprised of variable stop means mounted on said brackets and operative to limit the pivotal movement of said front legs about the pivotal connection thereof to said front leg means with resultant limitation of the extent of rearward inclination of said back component when the chair is unfolded for use.

6. A folding high chair comprising a seat component and a back component having the lower edge thereof pivotally connected to the rear portion of said seat component for pivotal movement about an axial line disposed laterally transversely of said seat component, a supporting leg structure comprising a pair of rear legs having the upper ends thereof pivotally connected to opposite sides of said seat component adjacent the front end thereof and a pair of front legs pivotally connected to one each of said rear legs intermediate the ends thereof and having the upper ends thereof pivotally connected to opposite sides of said back component at points equally above said pivotal connection between said seat and back components, and stop means carried by said seat component disposed in the path of movement of said front leg means incident to unfolding of said chair and operative to limit the extent of movement of said front leg means longitudinally of said seat component and thereby limit both the extent to which said front and rear leg means may move pivotally about their interconnection and simultaneously limit the extent of rearward inclination of the back component.

7. A folding high chair as claimed in claim **6** in which said seat component carries a pair of upwardly extending brackets at the rear end thereof, in which said seat component pivotal mounting is carried by the distal end of said brackets, and in which said means limiting the extent of movement of said front leg means is carried by said brackets.

8. A folding high chair as claimed in claim **7** in which said movement limiting means is selectively operable to predetermine a desired position of rearward inclination of said back component relative to said seat component when the chair is unfolded for use.

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DONALD A. GRIFFIN, *Primary Examiner.*

U.S. Cl. X.R.

297—365