Jan. 28, 1969 L. GOTTFRIED ET AL 3,424,493

BABY CHAIR WITH RELEASABLE SIDE GUARDS

Filed May 26, 1967

FIG. 1.

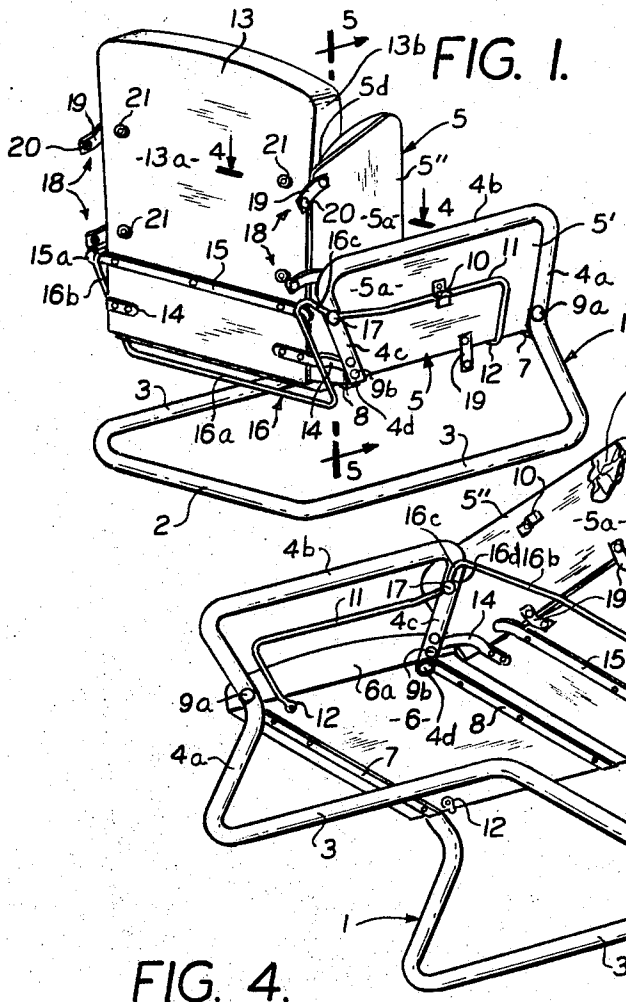


FIG. 6.

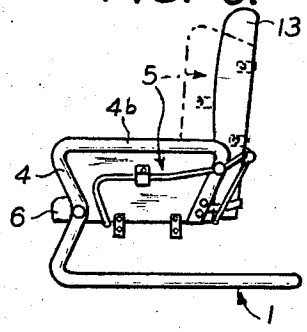


FIG. 2.

FIG. 5.

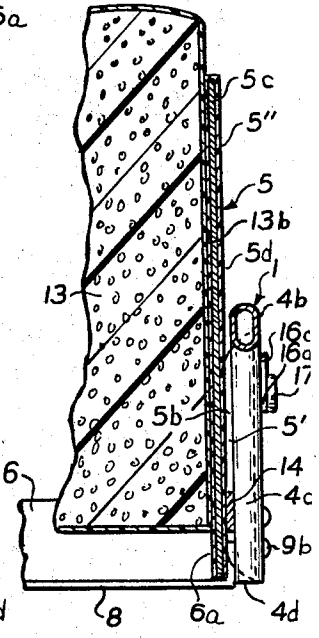


FIG. 4.

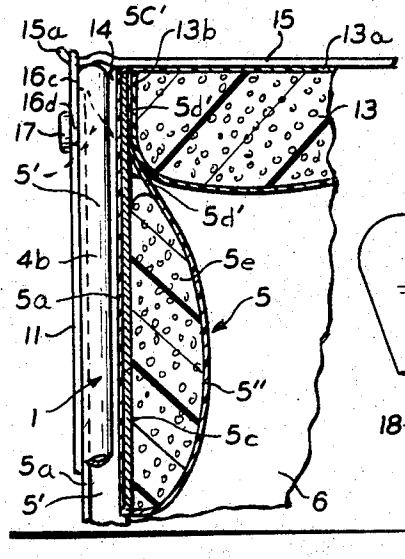
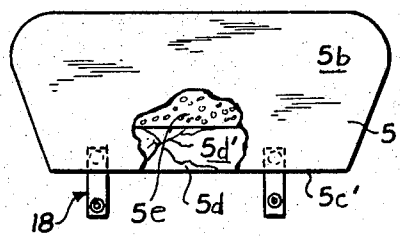


FIG. 3.



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United States Patent Office 3,424,493
Patented Jan. 28, 1969

3,424,493

BABY CHAIR WITH RELEASABLE SIDE GUARDS

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Filed May 26, 1967, Ser. No. 641,591
U.S. Cl. 297—384 11 Claims
Int. Cl. A47d *15/00;* A47c *7/40*

ABSTRACT OF THE DISCLOSURE

A baby chair which comprises a frame including a supporting base. A seat is connected to and between the frame and includes first longitudinal sides spaced from the frame. A back rest is disposed between the frame adjacent the rear of the seat and includes second longitudinal sides spaced from the frame. Two side panels each having an upholstered center portion and a marginal flattened portion, the latter of a thickness complementary to the space between the first and second longitudinal sides and the frame, and received in the space by engagement substantially along the length of the second longitudinal side. The side panels are each independently removable from and insertingly held securely in the space and extend abuttingly along the second longitudinal side of the back rest and constitute side guards for the back rest.

The present invention relates to baby chairs, in general, and to baby chairs having removable and interchangeable side panels serving jointly or selectively as side walls for the frame or as side guards for the back rest, in particular.

Side guards, forwardly extending and disposed along the longitudinal sides of the back rest of baby chairs, are known to protect the infant child from injury, as well as, side walls for the frame of the chair.

Heretofore to insure adequate and secure support the side guards were either immovably affixed to the back rest, or two were specially integrated as a unit to provide secure engagement with the back rest when in position. With these latter integrated side guards, when they were removed, they were discarded since they were specially adapted only for the back rest. With the former, the chair could not be readily converted to meet the growing needs of a child. To date no removable and/or interchangeable side guards and side panels are known, which provide adequate support and engagement in operative position without requiring rather extensive securing means.

It is one object of the present invention to provide a baby chair with functional and economical side panels which can be disposed in a space defined by the back rest and the adjacent tubing of the baby chair for use as a side guard and which can be readily removed and retained as a side wall for the frame of the chair.

It is another object of the present invention to provide a baby chair having interchangeable side panels, selectively or jointly serving as side walls for the frame of the chair and operating as side guards for the back rest. The side panels are adapted to be securely, yet removably engaged as side guards, without requiring locking means, when the back rest is in an upright position by means of a special complementary space between the frame and the longitudinal sides of the seat and back rest.

It is still another object of the present invention to provide a baby chair comprising a frame including a supporting base and two upwardly directed portions extending from the supporting base; a seat including support means connected to and intermediately between the frame, the seat including longitudinal sides spaced from the frame; a back rest secured to the frame adjacent the rear end of the seat and including longitudinal sides spaced from the frame; and a side panel for use as a side guard

having a longitudinal edge of a length substantially identical with the height of the back rest and having a thickness resiliently complementary to the space defined between the longitudinal sides of the seat and the back rest and the frame for being removably secured therein abuttingly against the back rest.

It is yet another object of the present invention to provide a baby chair in accordance with the above-mentioned objective wherein the frame forms open side spaces complementary to the side panel for disposition of the side panel therein as a side wall.

It is yet another object of the present invention to provide a baby chair in accordance with the aforementioned objectives, wherein the side panel is formed with upholstered padding on one side terminating spaced from but adjacent the longitudinal edge thereof for complementary abtument with the longitudinal side of the back rest.

With these and other objects in view which will become apparent in the following detailed description, the present invention wil be clearly understood in connection with the accompanying drawing, in which:

FIGURE 1 is a rear perspective view of a baby chair with side walls and side guards, designed in accordance with the present invention;

FIG. 2 is a bottom perspective view of the baby chair with the back rest in inclined position and showing side panels connected thereto as side guards;

FIG. 3 is a side elevation of an interchangeable side panel;

FIG. 4 is a section taken along the lines 4—4 of FIG. 1;

FIG. 5 is a section taken along the lines 5—5 of FIG. 1; and

FIG. 6 is a side elevation of the baby chair showing the interchangeability of the side panels either as side walls for the frame or as side guards for the back rest.

Referring now to the drawing, and in particular to FIG. 1, the baby chair comprises a tubular frame **1** which has a horizontally disposed U-shaped base **2**, including lateral leg members **3**, the legs of which are turned upwardly at their front ends to extend into upwardly oriented members **4***a* which in turn are bent rearwardly at their upper ends into substantially horizontally disposed members **4***b* which may be used as arm supports or as bases for specially designed arm or tray supports (not shown), and which are bent downwardly at their rear ends to extend into downwardly projecting members **4***c* terminating at lower ends **4***d* spaced above the U-shaped base **2**.

A preferably upholstered and interchangeable side panel **5** (FIG. 3), designed in accordance with the present invention, may be inserted into the complementary open side space formed by the horizontally disposed tubular member **4***b*, the downwardly projecting member **4***c* and the upper part of the upwardly oriented member **4***a* so as to function as a side wall **5'** for the chair, as shown in FIG. 1 and as will hereinafter be described in further detail.

A preferably upholstered seat **6** is horizontally disposed between the lower ends **4***d* of the downwardly projecting members **4***c* and intermediate the ends of the upwardly oriented members **4***a*, and is secured thereto by any suitable means, such as front and rear horizontal bars **7** and **8**, respectively, affixed to the bottom face of the seat **6** and connected at their ends to the frame **1**, by screw bolts **9***a* and **9***b*, respectively, as readily disclosed in FIG. 2.

A side wall locking bar **11** is secured to the downwardly projecting member **4***c* intermediate the ends thereof and extends horizontally and forwardly below the horizontally disposed member **4***b* of the frame **1**, and is then bent downwardly, before reaching the front or upwardly ori-

ented member 4*a* of the frame 1. The lowermost end of the vertically disposed portion of the bar 11 is bent inwardly and secured underneath the seat 6 to form a horizontal portion 12.

The horizontal portion 12 of the side wall locking bar 11 extends outwardly from the longitudinal side 6*a* of the seat 6 for a length substantially equal to the thickness of the side walls 5'. The latter thus rest on the horizontal portions 12 of the bar 11, and the bar 11 also operates as an outwardly limiting or abutting means for the side walls 5' in order to prevent inadvertent outward removal through the open side space formed by the frame 1 between the horizontally downwardly projecting member 4*c*, the horizontally disposed member 4*b* and the upwardly oriented member 4*a*.

A latch 10 is pivotally mounted to the outside face 5*a* of the side walls 5' beyond reach of a child in the chair, for releasably engaging the upper portion of the bar 11 thereby locking the side walls 5' in position to the frame 1. The latch 10 prevents tipping or removal of the side walls 5' inwardly when it is vertically turned so as to outwardly engage the bar 11. When the latch 10 is pivoted into the horizontal position, the side walls 5' may be readily removed in a direction inwardly from the chair.

A back rest 13 is pivotally secured, adjacent the rear of the seat 6, to and between the downwardly projecting members 4*c* of the frame 1 near the lower ends thereof and is pivotally adjustable relative to the seat 6, for instance, by a structure disclosed in applicants' own prior Patent No. 3,069,202, dated Dec. 18, 1962.

Basically, this structure includes a pivotal hinge 14 connected between the opposite members 4*c* and the bottom of the back rest 13 and which permits inclination of the back rest 13 to angularly spaced apart positions (FIG. 2). A horizontally disposed cross-bar 15 is secured to the rear face 13*a* of the back rest 13 and has rearwardly curved end portions 15*a* which are adapted to be engaged by portions of a U-shaped holding frame 16 which retains the back 13 in the upright position (FIG. 1) as well as in the inclined positions.

The U-shaped holding frame 16 has a horizontally disposed base 16*a* and two arms 16*b* projecting upwardly and having their upper ends bent into downwardly extending portions 16*c* to form an acute angle between the upwardly extending portions 16*b* and the downwardily extending portions 16*c*. A free end 16*d* of the latter is pivotally secured to the downwardly projecting member 4*c* of the frame 1 intermediate the ends thereof together with the rear end of the locking bar 11, by means of a bolt 17, so that the U-shaped frame 16 can be turned upwardly about the bolts 17 constituting a turning axis.

Upon turning upwardly the U-shaped frame 16, the back rest 13 can be shifted downwardly into an inclined position and retained angularly relative to the upright position thereof by a support engagement by the base 16*a* of the frame 16 with the rear face 13*a* of the back rest 13.

As shown in FIG. 1, the top portion of the arms 16*b* engage the curved end portions 15*a* of the cross bar 15 to hold the back rest 13 in an upright position, by raising the back rest and then turning the frame 16 to its lowermost position.

Referring now again to the drawing, and more particularly to FIGS. 1–3, the side panels 5 are interchangeably adapted for use as side walls 5' for the frame 1, or for releasable attachment to the back rest 13 (FIGS. 1 and 2), as side guards 5'', the latter providing lateral support forwardly substantially along the entire length of the longitudinal sides 13*b* of the back rest 13, particularly for the head of the baby or infant. The side panels 5 designed in accordance with the present invention (FIG. 3), are provided with a preferably inner, padded upholstered side 5*b*, the outside face 5*a* thereof (FIGS. 1 and 2) being flat and without padding and formed with a thin flexible board 5*c*, covered with a protective covering 5*d*. The thickness of the side panels 5 with the padding is resiliently complementary to and secured in the space between the longitudinal side 13*b* of the back rest 13 and the longtiudinal side 6*a* of the seat 6 and the rear portions of the frame 1, and the side panels 5 are readily and snugly positioned therebetween in self-supporting secure engagement.

When the side panels 5 serve as side guards 5'' (FIG. 2), the flat sides 5*a* abuttingly engage portions of the downwardly projecting tubular member 4*c* and the rear of the horizontally disposed members 4*b* of the frame 1, and the hinge 14 (when the panels 5 are not utilized jointly as side walls), and the upholstered side 5*b* abuts the longiutdinal sides 6*a* of the seat 6 and extends upwardly against and along the entire longitudinal side 13*b* of the back rest 13 and projects forwardly therefrom. The bottom of the side guards 5'' is supported by the rear horizontal bar 8 and abuts the pivotal hinge 14 when the back rest 13 is in the upright position. In the inclined position, the bottom of the side guards 5'' is partially supported by the pivotal hinge 14 and the cross-bar 15.

Since the panels are upholstered on one side, when side panels 5 are used as side guards 5'' for the back rest, and when another panel is used jointly as a side wall 5', as shown in FIG. 1, a snug fit for the bottom of the side guard 5'' is also readily achieved as the upholstery material resiliently compresses to releasably secure the side guard 5'' in position complementarily between the inner upholstered face 5*b* of the side wall 5' and the longitudinal sides 6*a* and 13*b* of the seat 6 and the back rest 13, respectively. In this position, the flat or non-upholstered side 5*a* of the side guard 5'' abuttingly engages the inner upholstered face 5*b* of the side walls 5', and the inner upholstered side of the side guard 5'' abuts the longitudinal sides 6*a* of the seat 6 and extends upwardly along and against the entire longitudinal side 13*b* of the back rest 13.

Accordingly, the panels 5 used as side guards 5'' are adapted to provide sufficient snug support in the upright position of the back rest 13 with or without adjacent side walls 5' and without attachment or connecting means. As indicated, the panels 5 constitute interchangeable side walls 5' and side guards 5''. For combined or joint usage as side guards 5'' and side walls 5', as shown in FIG. 1, four panels 5 are supplied. As shown in FIG. 2, the interchangeable panels 5 are disclosed in position as side guards 5'' without side walls, although the same panels may be removed for placement as side walls without side guards (as shown in FIG. 6).

Referring now again to the drawing, and more particularly to FIG. 3, for an innerchangeable panel 5, conventional padding material 5*e* is disposed within and adjacent the upholstered face 5*b* of the panel and terminates spaced from, but adjacent longitudinal edge 5*c'* of the panel 5, thereby forming a non-padded margin 5*d'*, which margin is complementary to the width of and is adapted to abut the longitudinal sides 13*b* of the back rest 13 when the side panel is used as a side guard 5'', as in FIGS. 1 and 2. When the panels are used as side guards, this helps to provide secure engagement of the side guards 5'' in position.

The padding material at the bottom of the side guard 5'' is adapted to readily and resiliently accommodate itself securely and complementarily in the space provided between the longitudinal sides 6*a* and 13*b* of the seat 6 and the back rest 13, respectively, and the frame 1 (when no side walls 5' are used), as well as into the space provided between the longitudinal sides 6*a* and 13*b* of the seat 6 and the back rest 13, respectively, and the inner upholstered side 5*b* of the side walls 5' (when side walls 5' are jointly used therewith). As shown in FIGS. 4 and 5 the paddling tapers toward the ends of the panel and from the margin 5*d'* further aiding the securing. Also the board 5*c* resiliently presses the margin 5*d'* against the longitudinal side 13*b* of the back rest 13, when the panel is secured in the above-mentioned spaces since the complementary fit forces the resilient board 5*c* inwardly.

In the upright position of the back rest **13** (FIG. 1) no further securing means are necessary for the side guards **5''** to provide sufficient support even when the side walls **5'** are not jointly used (not shown). However, for the inclined position of the back rest **13** (FIG. 2) to further insure adequate securing of the side guards **5''**, releasable snap lock means **18** are provided. In the inclined position the angle of the back rest **13** does not provide as large a complementary engagement surface in the complementary space between the longitudinal sides **6***a* and **13***b* of the seat **6** and the back rest **13**, respectively, and the frame **1**, so that an additional securing means is desirable.

The releasable snap lock means **18** comprise a plastic band **19** which is secured at one end to the outside non-padded side **5***a* of the side guard **5''** adjacent the longitudinal edge **5***c'* thereof. The other end of the plastic band **19** contains a female snap-on clip **20**. The plastic band **19** is flexible and is adapted to be bent around the rear of the back rest **13** so that the clip **20** can engage in a corresponding complementary male snap member **21** secured to the rear face **13***a* of the back rest **13** adjacent the longitudinal side **13***b* thereof. Two snap lock means **18** are provided on each guard **5''** in spaced relationship, one being adjacent the top and the other adjacent the bottom thereof to provide secure and ready latching of the side guards **5''**, when the back rest **13** is in the inclined position. The plastic bands **19** are selected to have a length sufficient so that when the panel is disposed as a side guard **5''** and locked in inclined position by the lock means **18**, the plastic band **19** is taut to provide a tight and secure engagement of the side guards **5''** against the longitudinal sides **13***b* of the back rest **13**.

With the panels **5** designed in accordance with the present invention, the panels are adapted for interchangeable utility as side guards or side walls, selectively or jointly, providing sufficient and secure engagement in operative position, whether or not side walls and side guards are used together, and with or without the lock means **18** when the back rest is in the upright position. The side panels may be readily interchanged as side guards, or side walls, as desired, according to the growing or daily needs of the child, and may be readily washed when removed. The complementary space between the frame member and the longitudinal sides of the back rest and the seat, and spacing the rear horizontal bar and the pivoted hinge, and the cross bar, serve as abutments for side guard engagement positioning, and the upholstered padding of the side panel, together therewith provides secure removable positioning of the panels in side guard position, whether or not side walls are used therewith, by virtue of the expansible and resilient accommodating nature of the padding.

While we have disclosed several embodiments of the present invention, it is to be understood that these embodiments are given by example only and not in a limiting sense, the scope of the present invention being determined by the objects and the claims.

We claim:

1. A baby chair comprising:
- a frame including a supporting base,
- a seat connected to and between said frame and including first longitudinal sides spaced from said frame,
- a back rest disposed between said frame adjacent the rear of said seat and including second longitudinal sides spaced from said frame,
- two side panels each having an upholstered center porton and a marginal flattened portion, the latter of a thickness complementary to the space between said first and second longitudinal sides and said frame and secured in said space, and
- said side panels each independently being removable from and insertingly held securely in said space and extending abuttingly along said second longitudinal side of said back rest and constituting side guards for said back rest.

2. The baby chair, as set forth in claim **1**, wherein:
- said side panels comprise,
- a longitudinally flexible board,
- an upholstered and resilent padding layer adjacent one side of said board,
- a covering material for said board and said padding layer,
- said padding layer being adjacent said longitudinal sides, when said side panel is inserted in said space, and said padding layer resiliently accommodating to said space and holding said side panel securely therein,
- said space being adapted so as to force said flexible board to bend longitudinally inwardly and abuttingly toward said second longitudinal side of said back rest when said side panel is secured in said space, thereby securely holding said side panels against said second longitudinal side of said back rest.

3. The baby chair, as set forth in claim **1**, wherein:
- said side panels comprise a board,
- an upholstered and resilient padding layer adjacent one side of said board,
- a covering material for said board and said padding layer,
- said padding layer terminating on said one side of said board in spaced relationship from said longitudinal edge thereof and defining said flat marginal portion therebetween, and
- said flat marginal portion being complementary to the width of said second longitudinal side of said back rest and abutting complementarily said second longitudinal side of said back rest when said side panel is inserted in said space.

4. The baby chair, as set forth in claim **3**, wherein:
- said board is longitudinally flexible, and
- said space adapted, so as to force said board to bend inwardly toward said second longitudinal side when said side panel is secured in said space, thereby securely holding said flat marginal portion of said side panel against said second longitudinal side of said back rest.

5. The baby chair, as set forth in claim **3**, wherein:
- said padding layer is of a thickness which decreases and tapers gradually toward the edges of said side panel for providing a snug fit when inserted in said space, and
- said padding layer further tapers and decreases in thickness toward said flat marginal portion.

6. The baby chair, as set forth in claim **1**, further comprising:
- two additional side panels adapted to be removably positioned securely between said frame and said first longitudinal sides of said seat and extending abuttingly along said first longitudinal side of said seat and constituting side walls for said seat.

7. The baby chair, as set forth in claim **1**, wherein:
- said frame defines an open side space extending along and adjacent each of said first longitudinal sides of said seat, and
- each of said side panels is shaped complementary to said open side space and adapted to be exchangeably disposed complementarily in said open side space constituting therein said walls for said seat.

8. The baby chair, as set forth in claim **1**, further comprising:
- pivoted hinge means pivotally connecting said back rest to said frame,
- said pivotal hinge means abutting said side panel when said side panel is inserted in said space, and
- releasable lock means disposed on the non-padded side of said side panel adjacent to said longitudinal edge thereof for releasably locking said side panel to said

back rest for additional support when said back rest is in a pivotally inclined position.

9. The baby chair, as set forth in claim **8**, wherein:

said releasable lock means comprises,

a band secured at one end to said side panel,

a complementary means disposed at the other end of said band, and

a complementary clip means secured to the rear of said back rest adjacent said second longitudinal side thereof for releasably locking with said complementary means.

10. The baby chair, as set forth in claim **9**, wherein:

each of said side panels includes two of said releasable complementary means spaced longitudinally apart adjacent said longitudinal edge thereof.

11. The chair, as set forth in claim **1**, wherein:

said frame includes a supporting base and two upwardly directed portions extending from said base, two spaced parallel and horizontally disposed portions extending from the upper end of said upwardly directed portions in the rearward direction, and two downwardly projecting portions, extending from the rear of said horizontally disposed portions, forming two open side spaces therebetween adjacent said first longitudinal sides of said seat,

said seat including front and rear support means connected to and disposed intermediately between said upwardly directed portions of said frame and said downwardly projecting portions, respectively,

said back rest including pivotal connecting means pivotally secured to said downwardly projecting portions adjacent the rear end of said seat,

a substantially horizontally disposed bar member extending forwardly from an intermediate point of each

of said downwardly projecting portions and then bent in a downward direction spaced apart from said first longitudinal side of said seat, and bent again in a horizontal bottom portion passing underneath and there secured to said seat,

said side panel of a shape substantially complementary to said open side space formed between each of said horizontally disposed portions, said upwardly directed portions and said downwardly projecting portions of said frame, respectively, said side panel adapted to be selectively and exchangeably disposed therein inwardly of said bar member and resting on said horizontal bottom portion of said bar member for use as a protective side wall for said seat, and

latch means for releasably securing said side panel inwardly to said horizontally disposed portion of said bar member.

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JAMES T. McCALL, *Primary Examiner.*

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