Oct. 22, 1946. L. GOTTFRIED 2,409,622

BABY CHAIR

Filed July 17, 1941 2 Sheets-Sheet 1

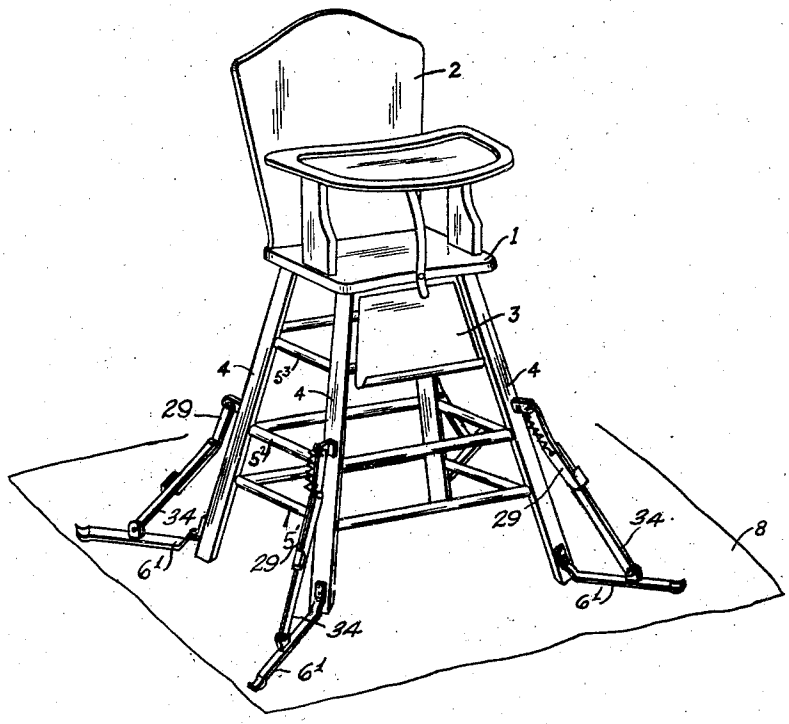


Fig. 1.

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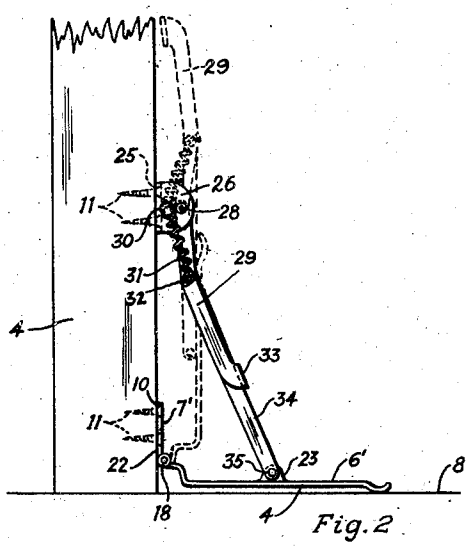


Fig. 2

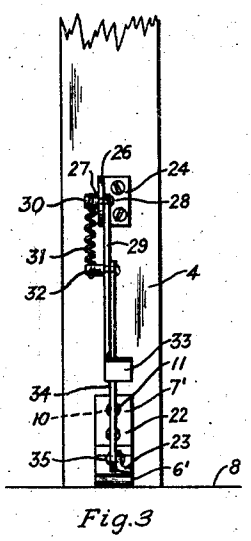


Fig. 3

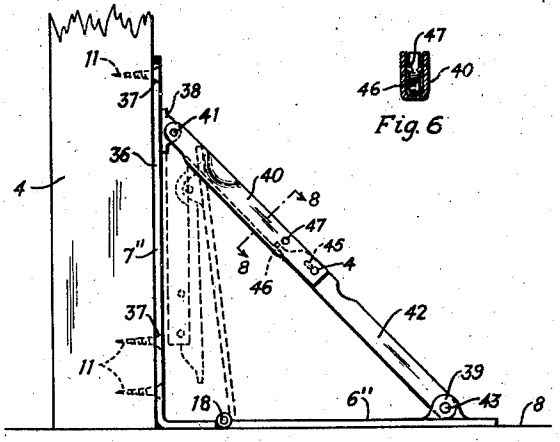


Fig. 4

Fig. 6

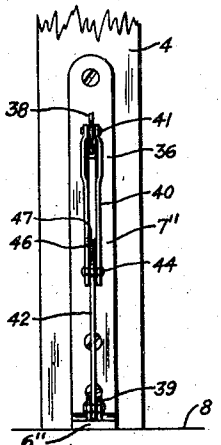


Fig. 5

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BABY CHAIR

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4 Claims. (Cl. 155—188)

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This invention relates to improvements in chairs and more particularly to that type of high chairs which is especially adapted for use in the care of small children although same is not restricted to such use.

The main object of this invention is to provide a chair of the above character, in which means are adapted to substantially eliminate the tipping or turning over of the chair by enlarging the base of the chair, said means, comprising a plurality of devices, which work independently of each other, and in which means are provided for securing said means in the respective extended and withdrawn positions.

A further important object of this invention is to provide a device of the above character which might be brought into and out of the operative position and is of simple construction, and one which may be readily and cheaply manufactured and placed upon the market at a reasonable cost.

The invention will be understood from a consideration of the following detailed description taken in connection with the accompanying drawings forming part of this specification, with the understanding however that the invention is not confined to any strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawings:

Figure 1 is a perspective view of the complete chair showing one construction of the new device mounted on the legs of the chair.

Fig. 2 is an enlarged side elevation of one embodiment of the invention showing different means for keeping a support in the upright or downed position.

Fig. 3 is a front elevation corresponding to the construction shown in Fig. 2.

Fig. 4 is an enlarged side elevation of another embodiment of the invention showing different means for keeping the support in the operative and inoperative position respectively.

Fig. 5 is a front elevation to the construction shown in Fig. 4.

Fig. 6 is a fragmentary cross section 6—6 of Fig. 4.

The chair comprises the usual upper seat 1 with the back 2, the foot rest 3, the legs 4 and the cross bars 5^1, 5^2 and 5^3 connecting the legs 4.

The baby chairs, also called high chairs, have a relatively small base compared with the height of the chair and therefore there is a big danger of tipping or turning over the chair. Although this danger has been known for long time nothing has been done to eliminate the tipping save the arrangement of the legs of the chair in a little

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wider distance, which brought only limited and unsatisfying results.

According to the present invention an arm is pivotally secured to the legs 4. The arm can be brought into the extended and in the withdrawn position, respectively. The arms increase the supporting base of the chair when in the extended position and thus the dangerous tipping is quite impossible.

In Figs. 2 and 3 is shown one modification of the invention.

The device shown in Figs. 2 and 3 comprises an arm 6', mounted on a bracket 7' to be turned down from the inoperative to the operative position. The bracket 7' in this construction comprises a base plate 22 having holes 10 and secured to the leg 4 by screws 11. The arm 6' is pivotally mounted on the base plate 22 by a pivot 18. The arm 6' has a part bent up between the ends forming an ear 23.

At a suitable distance from the base plate 22 another base plate 24 having holes 25 is secured to the leg 4 by screw 11. The base plate 24 is equipped with a forwardly extending projection 26. The projection 26 has a hole 27 carrying a pivot 28, on which pivot 28 a lever 29 is pivotally mounted. The projection 26 is provided with a bolt 30 arranged close to the leg 4 and said bolt 30 carries one end of a spring 31, the other end of which is secured to a bolt 32 arranged between the ends of the lever 29. The distance of the bolt 32 from the bolt 30 varies in the different positions of lever 29, which distance is shortest in the upper and lower positions of lever 29 and is longest in the lateral position of lever 29. Thus spring 31 tends to keep lever 29 in the upper or lower position, since spring 31 is most expanded in the lateral position of lever 29. So the spring 31 keeps the lever 29 in either one of the positions. The lower end of the lever 29 has a part 33 being bent over for about 90° in order to limit its swing down movement by abutment against a link 34 connecting arm 6' with lever 29. The bolt 32 serves also as a pivot for the upper end of the link 34, the lower end of which is pivotally mounted on the ear 23 of the arm 6' by a pivot 35. In Fig. 2 the device is shown in the position enlarging the base of the chair in full lines and in order to swing the arm 6' into inoperative position, which position is shown in dotted lines, the lever 29 is turned up with the action of the spring 31, whereby also link 34 and arm 6' are drawn up and the spring 31 retains the lever 29 and in that way also link 34 and arm 6' in the upper position.

In Figs. 4, 5 and 6 is shown another modification of the invention.

The device shown in Figs. 4 to 6 comprises again an arm 6'', pivotally mounted as before on a bracket 7'' to be turned down from the in-

operative to the operative position. The bracket 7'' comprises a base plate 36 with holes 37 for securing it by screws 11 to the leg 4 of the chair. Close to the upper end of the base plate 36 and close to the outer end of the arm 6'' respectively an ear 38 and two parallel upwardly projecting ears 39 respectively are arranged. A lever 40 is pivotally mounted on the ear 38 by a pivot 41, said lever 40 having an U-cross section (Fig. 6) and a link 42 is pivotally mounted on the ears 39 by a pivot 43. The lever 40 and the link 42 are also pivotally connected by a pivot 44 arranged on the lever 40. The pivot 44 glides in a slot 45 arranged on the upper end of the link 42 and the latter extends into the U-shaped sectioned lever 40. The end 46 of the link 42 is narrowed and that end 46 is secured between the back of the U-shaped lever 40, which back ends in some distance from the lower end of the lever 40, and two pointings 47 narrowing the two branches of the U-shaped sectioned lever 40 on this point only, in the operative position. In this position the lever 40 and the link 42 are locked against relative turning. In order to reduce the enlarged base of the chair the link 42 is first moved in longitudinal direction out of the U-shaped sectioned lever 40 so that the end 46 clears the U-shaped part in that way removing the end 46 from the narrow part of the lever 40 whereby the pivot 44 glides in the slot 45 and then the lever 40 is turned down around the pivot 41 and the link 42 turned up around the pivot 44. In accordance with the movement of the link 42 the arm 6'' swings up around the pivot 18. So the arm 6'' turns from the horizontal position shown in Fig. 4 in full lines to the upright position shown in dotted lines.

Although I have specifically described and illustrated my invention in connection with a baby chair it is to be understood that the invention may be applied to bassinets, or other juvenile furniture where the tendency to tip prevails to eliminate the danger of tipping.

The preferred embodiments of the invention are disclosed in the drawings and set forth in the specification, and in particular the base expanding device has been shown supported by the legs of the chair, although the device can be supported by any other part of the supporting structure of the chairs, as for instance by the cross bars. It will be understood that any modifications within the scope of the claimed invention may be made in the construction without departing from the principle of the invention or sacrificing any of its advantages.

What I claim is:

1. In a baby chair, an upper seat structure and a lower supporting structure comprising at least three legs, a plurality of base expanding means mounted on said supporting structure, each of said base expanding means comprising bracket elements arranged one above the other, each of said upper bracket elements having pivotally secured thereto a lever and each of said lower bracket elements having pivotally secured thereto an arm, a link connecting each of said levers of the upper bracket elements with an arm of the corresponding lower bracket elements intermediate the ends of the lever and the arm, respectively, the said arms being extendable in a lateral direction outside of the base formed by said supporting structure and withdrawable adjacent to said supporting structure, the said lever and the said arm of one base expanding means being movable independently from that of the said other base expanding means, one of the said bracket elements carrying one end of a spring, the other end of said spring being secured to the corresponding lever of said bracket element, said spring being mounted on a line to one side of the line between the pivot on the upper bracket and the pivot between the lever and link, to retain the arms in their expanded or withdrawn position, respectively, by contraction of said spring when changing from one expansion to the other.

2. In a baby chair, an upper seat structure and a lower supporting structure, comprising at least three legs forming a supporting base, base expanding means for said supporting base comprising a plurality of arms pivoted upon said supporting structure, a plurality of levers pivoted upon said supporting structure, each of said levers positioned above and cooperating with one of said arms, and a plurality of links, one link pivotally connected to each of said arms and to one of said cooperating levers, said arms adapted to be shifted independently of each other from inoperative to operative position in a lateral direction outside of said supporting base and again to inoperative position by drawing up said arms independently adjacent to said supporting structure and means for securing each of said arms in its extended position.

3. In a baby chair, an upper seat structure and a lower supporting structure, comprising at least three legs forming a supporting base, base expanding means for said supporting base comprising a plurality of arms pivoted upon said supporting structure, a plurality of levers pivoted upon said supporting structure, each of said levers positioned above and cooperating with one of said arms, and a plurality of links, one link pivotally connected to each of said arms and to one of said cooperating levers, said arms adapted to be shifted independently of each other from inoperative to operative position in a lateral direction outside of said supporting base and again to inoperative position by drawing up said arms independently adjacent to said supporting structure and means for securing each of said arms in their respective extended and drawn-up positions.

4. In a baby chair, an upper seat structure and a lower supporting structure comprising at least three legs forming a supporting base, a plurality of base expanding means mounted on said supporting structure, each of said base expanding means comprising at least one bracket element, said bracket element having pivotally secured thereto a lever and a corresponding arm, said lever arranged above said arm, a link connecting each of said levers with one of said corresponding arms, the said arms being extendable in a lateral direction outside of the base formed by said supporting structure and withdrawable adjacent to said supporting structure, the said lever and the said arm of one base expanding means being movable independently from that of the other base expanding means; and means for rigid connection of each of said levers with the corresponding link in the extended position of said arm pivotally connected to said corresponding link in order to retain said arm in its extended position.

LOUIS GOTTFRIED.