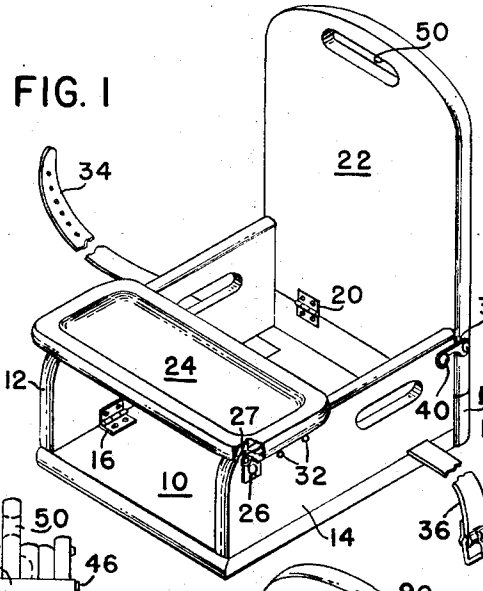
June 5, 1951 M. A. BLECK 2,555,566

COLLAPSIBLE SEAT

Filed March 4, 1947

FIG. 1



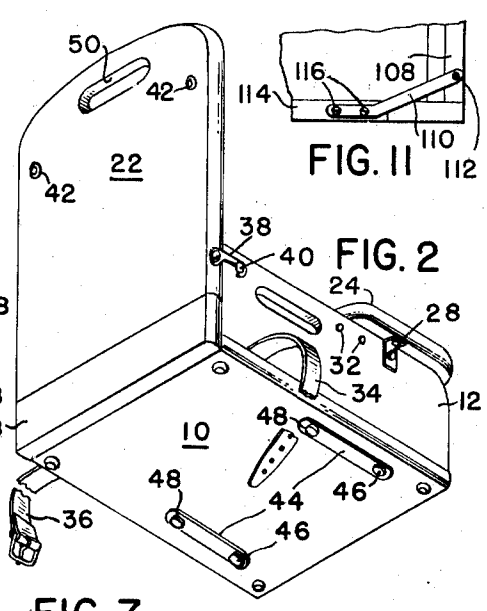


FIG. 2

FIG. 11

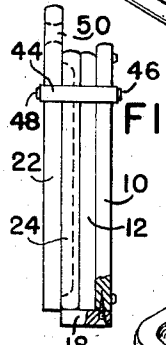


FIG. 3

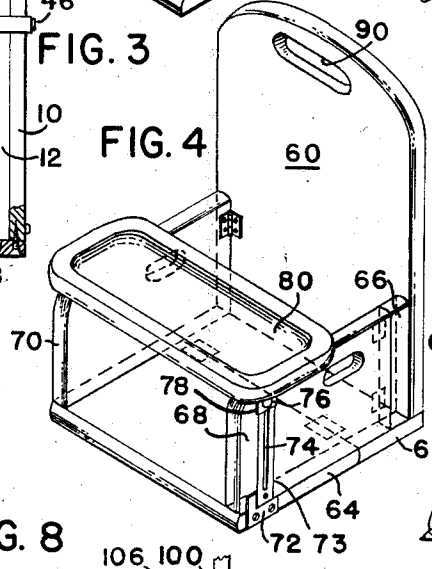


FIG. 4

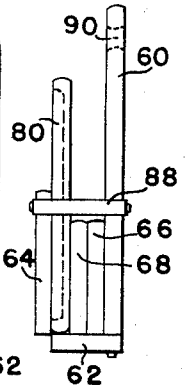


FIG. 7

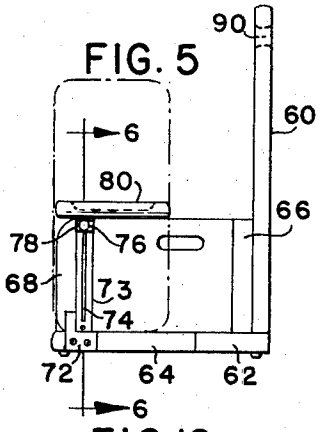


FIG. 5

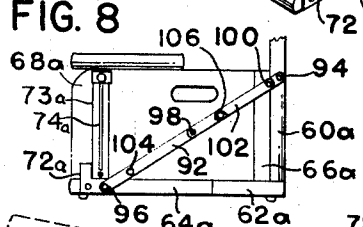


FIG. 8

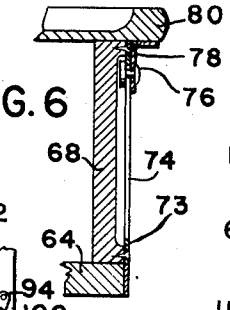


FIG. 6

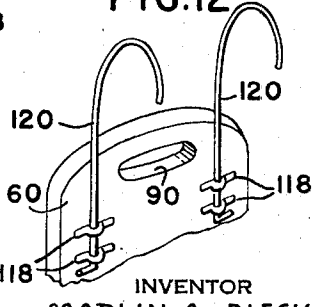


FIG. 12

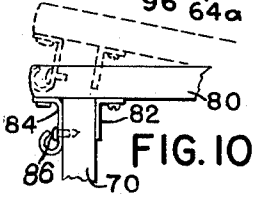


FIG. 10

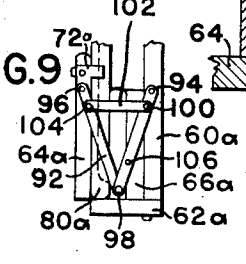


FIG. 9

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COLLAPSIBLE SEAT

Marlin A. Bleck, Dayton, Ohio

Application March 4, 1947, Serial No. 732,270

8 Claims. (Cl. 155—131)

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This invention relates to portable chairs, particularly to collapsible, portable chairs for infants.

The object of the present invention is to provide a portable infant's chair which may readily be folded into a small amount of space for transportation.

Another object is to provide a collapsible and a portable infant's chair which is of rigid construction and which will not collapse when opened.

Still another object is to provide a collapsible portable infant's chair having an adjustable tray thereon.

Still another object is to provide a portable infant's chair together with means for securing the said chair to an object when in use.

These and other objects and advantages will become more apparent upon reference to the following description taken in connection with the attached drawings in which:

Figures 1 and 2 are perspective views of one form of chair constructed according to this invention;

Figure 3 is a side elevation of the chair when folded into its collapsed position;

Figure 4 is a perspective view of a modified form of construction;

Figure 5 is a side elevation of the chair illustrated in Figure 4;

Figure 6 is a vertical section indicated by the line 6—6 on Figure 5 and showing the connection of the tray to the chair;

Figure 7 is a side elevation of the construction of Figure 4 in its collapsed position;

Figure 8 is a fragmentary side elevation of a chair having an auxiliary brace thereon;

Figure 9 is a view of the modification shown in Figure 8 in its folded position and with the brace thereof employed for locking the chair in its collapsed position;

Figure 10 is a fragmentary view showing one manner of securing the end of the tray in place;

Figure 11 is a fragmentary view of a modified manner of hinging the chair seat and back together; and

Figure 12 is a fragmentary perspective view showing how hooks could be attached to the back of the seat for suspending the chair from the back of an automobile seat.

Referring to the drawings, the chair illustrated in Figures 1, 2 and 3 comprises a bottom portion 10 having the side portions or arms 12 and 14 hinged thereto as by the hinge indicated at 16. Each of the side portions is somewhat less than ½ the width of the bottom portion 10 so that the

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said side portions can be folded flat against the bottom.

Rigid with the bottom portion 10 along the back edge thereof is an upstanding transverse part 18. Extending upwardly from and hinged to the part 18, as by the hinge 20, is the back portion 22 of the chair.

At the forward edges of the side portions 12 and 14, there is a tray 24 which may be pivoted as at 26 to the side portion 14 and detachably secured as at 28 to the side portion 12. There are provided a plurality of positions for the pivotal connection 26 in order to accommodate the tray 24 to infants of varying sizes, and there are the corresponding positions 32 on the side portion 12 for receiving the detaching means at 28.

Should it be desired to secure the chair in position, as for example to the seat of another chair, the straps indicated by the numerals 34 and 36 may be employed. These are adapted for passing around the object on which it is desired to place the chair, and one thereof comprises a buckle so that the said chair may be rigidly anchored.

While the tray 24 supports the side portions 12 and 14 in their opened position, there is preferably additionally provided the hooks 38 which may be pivoted to either the chair back 22 or to the side portions 12 and 14 of the chair, and which are movable to engage a pin on the adjacent side of the said portions. As shown in the drawings, the hooks 38 are pivoted on the chair back 22 and hook over the pins 40 on the side portions 12 and 14.

When the chair shown in Figures 1, 2 and 3 is to be collapsed, the hooks 38 are disengaged from their respective pins 40, and the tray is detached from the side portion 12 by releasing the detaching means at 28. Thereafter, the tray 24 is pivoted upwardly about the pivot pin 27 thereafter transversely about the pivot pin 26 until it lies along the side of the side portion 14. The side portions 12 and 14 may then be folded flat against the seat portion 10. Thereafter, the back 22 is folded down by pivoting it on its hinges 20 and the assembly as soon as the position is illustrated in Figure 3. For retaining the chair in its folded position to facilitate transportation thereof, the back 22 may be provided with the snap members 42 while the seat 10 carries on the lower surface thereof the straps 44 which are pivoted at 46 and which have at their end portions cooperating snap members 48 for engagement with the snap members 42. Optionally, the hooks 38 may be made of sufficient length to reach from their

pivotal connection to the back portion completely across the folded assembly to engage suitable pins carried by the seat 10, but the construction illustrated is to be preferred because it eliminates the auxiliary snap member which would be so located as to be easily injured.

After the chair has been folded into its Figure 3 position, it may be readily transported by means of the hand grip 50 in the upper portion of the back 22.

In the construction shown in Figures 4, 5, 6 and 7, a similar arrangement is shown except that the side portions of the seat are pivoted to the back to fold thereagainst when the seat is collapsed.

As shown in these figures, the back 60 has rigidly connected therewith the horizontally extending seat part 62 to which is pivoted the main seat part 64. Along one edge of the back adjacent the lower part thereof, there is rigidly secured the side part 66 to which is pivotally connected the side member 68. At the other side of the back 60, there is pivoted the side member 70. Inasmuch as the side members pivot outwardly, the stop-plates 72 are provided which are rigidly secured to the seat portion 64 and which positively limit the outward movement of the side portions when the chair is unfolded.

For supporting the tray on the side portions in such a manner that it may be readily folded into collapsed position, there is provided a plate 73 having a slot 74 therein, the said plate being secured to the side portion 68 as best seen in Figure 6. Slidable in the slot 74 is a pin or rivet 76 which passes through one flap of a hinge 78, the other flap of which is secured to the underside of the tray 80.

The other end of the tray at the side portion 70 may be detachably secured thereto in any desired manner, and one form of accomplishing this is illustrated in Figure 10 wherein the said side wall portion is received between a pair of depending flanges 82 and 84 carried by the tray 80, and of which the flange 84 includes a pin 86 which engages a hole in the side wall to prevent the tray from being accidentally removed from position.

When the construction illustrated in Figures 4 through 7 is to be collapsed, the tray 80 is first disengaged from the side wall 70, is then moved to a vertical position by means of the hinge 78, and is then moved downwardly by movement of the pin 76 in the slot 74 until the said tray occupies substantially the dotted line position shown in Figure 5. Thereafter, the side wall 70 is turned to lie flat across the back 60, and the side wall 78 is turned to lie flat across the outside of the side wall 70. Finally, the seat portion 64 is pivoted upwardly to lie against the tray 80, and the attaching straps 88 are secured in position between the back 60 and the seat 64. As in the case of the construction shown in the Figures 1 and 2, the collapsed chair is readily portable by means of the hand grip 90 in the back portion thereof.

In Figures 8 and 9, there is illustrated a still further modification which is similar in construction to the form shown in Figures 4 through 7. For this reason, the parts of Figures 8 and 9 which are similar to those in Figures 4 through 7 are similarly numbered with the addition of a subscript *a*. In this modification, there is additionally provided a brace 92 which is pivoted at 94 to the back 60*a* and at 96 to the seat 64*a*. The brace itself has a pivot at 98 and is fully extended when the chair is open. Pivoted to one end of the brace, as at 100 is a link 102 and on the other end of the brace is a pin 104 adapted for engagement by a notch in the end of the link. When the chair is folded, as shown in Figure 9, the link 102 may be unhooked from its retaining pin 106 and hooked instead, on the pin 104. Thus, the construction shown in Figures 8 and 9 provides for a brace member which adds to the strength and rigidity of the chair when opened, and serves as well as a latching means for retaining the chair in its collapsed position.

An alternative method of pivoting the seat and back together is shown in Figure 11 wherein there is pivoted to the back 108 a bar 110. The pivot point 112 where the said bar is joined to the back 108 is spaced somewhat upwardly from the seat 114. The bar extends downwardly and toward the seat and is rigidly connected therewith as at 116. The arrangement is such that when the seat 114 is pivoted upwardly about the pivot 112, the seat becomes parallel with the back at a spacing which will exactly enclose therebetween the chair arms and the tray in the same manner as they are enclosed in the seat and back as in Figure 7.

For adapting the chair to use in connection with an automobile, the back thereof may carry the clips or brackets 118 through which pass the hooks 120. The upper ends of the hooks are shaped exactly to pass over the edge of the car seat while the lower ends are bent to form stops to lock the hooks properly when in use.

It will be understood that this invention is susceptible to modification in order to adopt it to different usages and conditions and, accordingly, it is desired to comprehend such modifications within this invention as may fall within the scope of the appended claims.

I claim:

1. In a collapsible seat for infants; back, seat, side and tray portions; hinge means connecting all of said portions together for permitting the folding thereof toward each other into a flat unit; holding the sides and tray portions protected between said seat and back; releasable hook means for retaining the seat in its opened position; releasable means retaining the unit in its folded position; and manual means graspable for transporting the folded unit.

2. In a collapsible seat; back, seat, side and tray portions; a plurality of hinges connecting said portions together for permitting the folding together thereof into a substantially flat unit; holding the sides and tray portions protected between said seat and back; means of retaining said seat in both its opened and collapsed positions; and means of securing the opened seat to a support.

3. In a collapsible infant's seat; back, seat, side and tray portions; hinge means connecting said side portions with said seat portion to permit their being folded flat thereagainst; means connecting said tray with one of said side portions to be pivoted thereabout on two axes thereby to lie flat thereagainst; and hinge means in said back portion for permitting the same to be folded flat against the folded tray and side portions.

4. In a collapsible infant's seat; a two section back, seat, side and tray portions; means hingedly and pivotally connecting said tray with one of said side portions and said side portions to said seat portion to be folded flat thereagainst; hinge means extending laterally across said back portion for permitting the folding thereof between

the sections and the bringing of the main back portion flat against said side and tray portions; and means of retaining the seat in its folded position comprising flexible members carried beneath the said seat portion and adapted for extending across and into engagement with said back portion.

5. In a collapsible infant's seat; back, side and seat portions; means hingedly connecting said portions for permitting the folding thereof into a substantially flat unit; a pivoted brace connected between said back portion and said seat portion for bracing the seat in its opened position; and latching means adapted for being connected between the legs of said brace when said seat is collapsed for retaining said seat in its collapsed position.

6. In a collapsible infant's chair; back, seat, side and tray portions; means hingedly connecting said tray portion to one of said side portions, and said side portions to one of said seat and back portions for permitting said side and tray portions to be folded together into parallelism with each other and with the said one of said side and seat portions; and hinge means extending laterally across the other of said seat and back portions whereby the same can be folded inwardly so that the said side and tray portions are embraced between the said seat and back portions.

7. In a collapsible infant's seat; back and seat portions; side portions hingedly connected with said back portion for being folded thereagainst; a tray portion; means pivotally supporting said tray portion on one of said side portions to be folded

flat thereagainst; hinge means in said seat whereby the main seat portion is folded flat against the folded side portion; and single means for bracing said seat in its opened position and also for latching said seat together in its collapsed position.

8. In a collapsible infant's chair; back, side, tray, and a two-section seat portions; means hingedly connecting said tray to one of said side portions and said side portions to said back portion for permitting said side and tray portions to be folded together into parallelism with each other and with one of said side and back portions; and hinge means extending laterally across said seat portion whereby the main section of said seat can be folded inwardly so that the said side and tray portions are embraced between said back portion and said seat.

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