July 25, 1950 L. GOTTFRIED 2,516,774

CONVERTIBLE HIGH CHAIR

Filed June 26, 1948

Fig. 1.

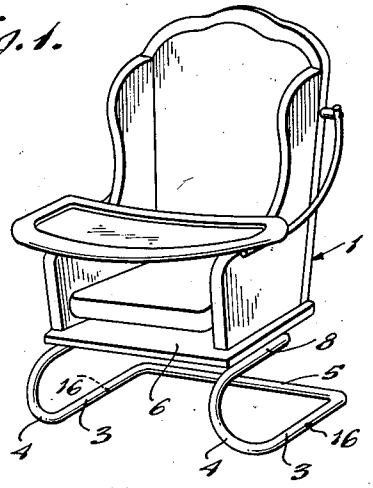


Fig. 3.

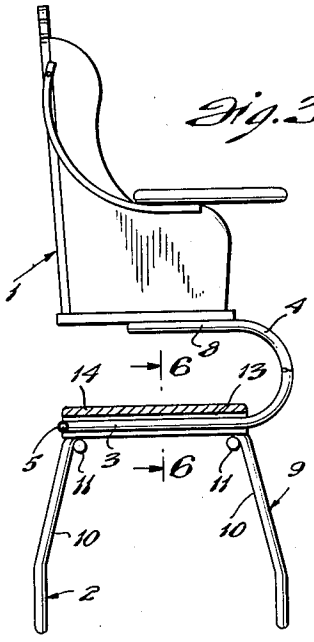


Fig. 6.

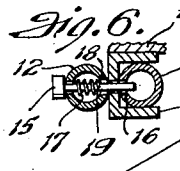
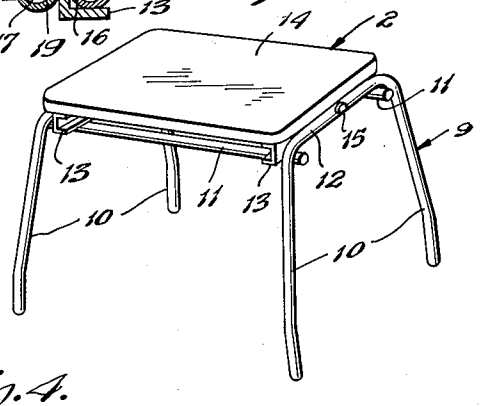


Fig. 2.



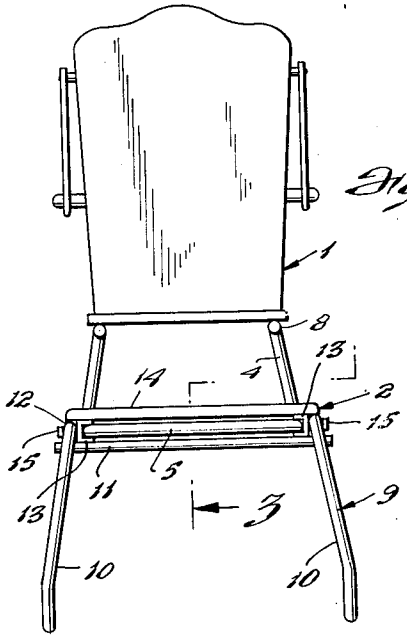


Fig. 4.

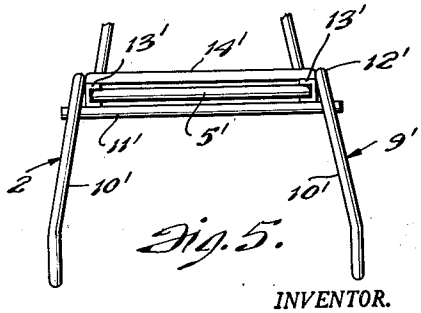


Fig. 5.

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CONVERTIBLE HIGH CHAIR

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21 Claims. (Cl. 155—39)

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The present invention relates to a high chair and in particular to a convertible high chair.

Convertible high chairs are known which permit separation of the chair from the supporting structure which is designed as table, walker or the like. Yet the known constructions show several drawbacks as for instance lack of sufficiently rigid connection between the chair and the supporting structure rendering dissatisfactory safety for the child using the chair, support of the bottom part of the chair on the table top which likely results in damage of its surface, and a number of others.

The present invention relates to new and useful improvements in a convertible high chair and one of its objects is to provide a convertible high chair, having a chair and a supporting structure, in which the chair is removably, but rigidly and securely inserted in the supporting structure.

It is another object of the present invention to provide a chair the bottom portion of which may slide into complementary means of the supporting structure for the chair, the supporting structure forming a table, a baby carriage, a walker, and a stroller, respectively.

It is still another object of the present invention to provide a convertible high chair, the bottom part of which comprises two parallel horizontal arms and the supporting structure of which has adjacent its top two guides receiving the parallel arms.

It is yet another object of the present invention to provide a convertible high chair, the bottom part of which comprises two parallel horizontal arms and the supporting structure of which has adjacent its top two guides receiving the parallel arms and means for locking the arms in the guides when in inserted position.

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

Figure 1 is a front perspective view of the chair;

Fig. 2 is a front perspective view of the supporting structure for the chair as shown by example in form of a table;

Fig. 3 is a side elevation of the combined chair and supporting structure partly in section along the lines 3—3 of Fig. 4;

Fig. 4 is a rear elevation of the chair combination;

Fig. 5 is a fragmentary rear elevation of a variation in the supporting structure; and

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Fig. 6 is a fragmentary section of the locking means along the lines 6—6 of Fig. 3.

Referring now to the accompanying drawing, the convertible chair comprises a chair 1 and a supporting structure which by example is shown as a table 2, the chair being adapted to be removably inserted in complementary structure in the table 2.

While the chair 1 may be of any convenient design, the chair as shown in the drawing is of the conventional chair design. It is, however, essential that the bottom of the chair is equipped with two parallel horizontal arms 3 or legs which form the connection means with the supporting structure 2.

The arms 3 are each shown in the drawing as one leg portion of two preferably parallel, tubular U-members 4 and in order to render the construction more rigid the rear ends of the arms 3 are connected by a special connecting bar 5. The chair 1 comprises a seat 6 and back and the other leg portion 8 of each U-member 4 is secured to the bottom face of the seat 6 by screws (not shown) or in any other convenient manner.

The supporting structure for the chair 1 is shown by example as table 2 and in the embodiment disclosed in Figs. 2 to 4, the table comprises preferably two inverted substantially U-shaped members 9 the leg portions 10 of which form the legs of the table 2. Two parallel bars 11 are secured to the U-shaped members 9 adjacent the bases 12 of the U's by welding or any other means and, thereby, form a unit in which the two U-shaped members are secured in predetermined spaced relation in approximately parallel arrangement.

Two guides 13 of preferably U-shaped cross section are supported by and secured to the bars 11 at an angle of substantially 90° by welding or by any other convenient means in such manner that the openings of the U's of the two guides 13 are disposed opposite each other, thus providing an opening in each of the guides in sideward and inward direction. In addition the guides 13 may also be secured by proper means as for instance welding to the bases 12 of the U-members 9. In the embodiment shown in Fig. 4 the tops of the guides 13 and the tops of the bases 12 of the U-members 9 are in the same horizontal plane. A table top 14 is supported by and secured to the bases 12 of the U-members 9 by screws (not shown) or any other conventional means.

The embodiment of the supporting table structure, as shown in Fig. 5, has a slight variation by lowering somewhat the guides 13' and inserting

the table top 14' between the bases 12 of the U-members 9 in such manner that the top face of the table top 14' is flush with the tops of the bases 12' of the U-shaped members 9'.

While the comparatively long guides 13 provide sufficient security against involuntary withdrawal of the chair 1 from the supporting structure 2 and thereby prevent the danger of the child, using the chair, falling off the supporting structure with the chair, additional means may be provided, to retain the horizontal arms 3 of the chair 1 in the guides 13. Such means as shown in Fig. 6 may comprise at least one spring supported bolt 15 provided on each guide 13. The bolt 15 penetrates the base 12 of the U-member 9 in horizontal direction and the inner end of the bolt 15 is adapted to be received by a hole 16 provided in the arm 3 of the chair 1. A spring 17 is inserted into a proper inner opening 18 of the base 12 and one end of the spring 17 is inserted into a small recess 19 of the bolt 17 whereas its other end abuts the opposite inner face of the base 12. By this arrangement the bolt 17 tends to take the innermost position, that means its inner end will be in the path of the arm 3. When the arm 3 slides into the guide 13 the bolt 17 is pressed out compressing the spring 17 and when the arm 3 reaches the position in which the hole 16 of the arm 3 lies opposite the inner end of the bolt 15, the latter is pressed by spring 17 into the arm 3 at the same time stopping any further movement of the arm 3. The withdrawal of the arms 3 and thereby of the chair 1 can only be achieved after withdrawing the bolts 15 on both sides from the arms 3, thus permitting a forward sliding of the arm 3 and thereby of the chair 1.

While the invention has been disclosed in connection with a table 2 forming the supporting structure, it is to be understood that any other supporting structure may be provided as long as the supporting structure has the guides 13 receiving the arms 3. Such guides may be provided on the gear of a baby carriage, of a stroller, of a walker or any other structure used for children. If used with a baby carriage or stroller, the arrangement renders the possibility of removing the chair from the carriage and using the chair as seat for the child in an automobile, while the gear carrying the guides 13 may be put in the trunk space of the car.

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

I claim:

1. In an article of manufacture, the combination of a chair, having a seat portion and a connecting portion extending from the seat portion and including at least two parallel disposed horizontal arm portions, with a supporting table comprising two substantially parallel inverted U-members, connecting bars between said U-members, at least two horizontally disposed parallel guide members supported by said connecting bars, said guide members being adapted to support and to removably receive said horizontal portions of the chair.

2. The article as set forth in claim 1, including a top for said table supported by the base of the inverted U-members.

3. The article, as set forth in claim 1, including a top for said table, disposed between the bases of the inverted U-members and supported by said guide members.

4. The article, as set forth in claim 1 including a bolt-member inserted crosswise into each base of the inverted U-members, a resilient member tending to retain the bolt member in the base, a recess in the adjacent guide member removably receiving the bolt member, and a perforation in the arm opposite the inner end of the bolt, when the arms are in inserted supported position, said perforation removably receiving the inner end of the bolt member, thereby preventing involuntary removal of the chair from the table.

5. In an article of manufacture, the combination of a chair, having a seat portion and a connecting portion extending from the seat portion and including at least two parallel disposed horizontal arm portions, with supporting means comprising a table top, at least two horizontally disposed parallel guide members adapted to support and to removably receive said horizontal arm portions of the chair, and means for securing said guide members beneath the table top.

6. In an article of manufacture, the combination of a chair, having a seat and a connecting means extending from the seat and including two parallel, substantially horizontally disposed members, with a supporting table having a top and comprising two parallel, substantially horizontally disposed guide members below said table top, and said guide members interengaging and removably receiving said members of the chair.

7. An article of manufacture comprising a table, a chair and means removably mounting said chair on said table, said table having a top and said chair mounting means including a pair of channel members disposed below said table top and rigidly secured to said table, and said chair comprising a seat and a support therefor, the latter including two parallel horizontally disposed leg portions to engage the ground, and each of said channel members removably receiving one of said leg portions of the chair.

8. An article of manufacture comprising a table, a chair and means removably mounting said chair on said table, said table having a top and said chair mounting means including a pair of parallel channel members disposed below said table top and rigidly secured to said table, said channel members having longitudinal slots disposed on the oppositely facing sides thereof, and said chair comprising a seat and a support therefor, the latter including two parallel horizontally disposed leg portions, and a part connecting and spacing said leg portions at a predetermined distance to engage the ground and each of said channel members removably receiving one of said legs of the chair.

9. In an article of manufacture for use by children, the combination of a chair having a seat and a connecting means extending from the seat including a pair of substantially horizontally disposed portions underlying and spaced from the seat and arranged to engage the ground, said horizontally disposed portions merging into other portions curved in an upward direction towards the upper portion of said chair, with an article of furniture underlying said seat and two substantially horizontally disposed guide members secured to said article of furniture and interengaging the said portions, said guide members being secured to said article of furniture above the supporting surface therefor.

10. Baby tending apparatus comprising in combination, a first article of furniture, and a

second article of furniture removably connected to and overlying the first article and supported thereby; substantially horizontal guide elements carried by said first article of furniture; and said second article of furniture comprising a seat element and a second supporting structure comprising a pair of members having substantially horizontal portions underlying and spaced from said seat element, said portions merging into other portions curved in an upward direction towards the seat and forming the sole support therefor, said members being removably received in said guide elements.

11. The combination with baby tending device of a chair structure removably connected to and overlying said device and supported thereby; said device including substantially horizontal guide means carried by an upper portion thereof; and said chair structure comprising a seat and supporting structure comprising a pair of elements having horizontally disposed portions underlying the seat and spaced therefrom, said portions merging into other portions curved in an upward direction towards the upper portion of said chair, said horizontally disposed portions being removably received in said guide means.

12. An article of furniture comprising a table, a chair and means removably mounting said chair on said table; said table comprising a top having a pair of straight oppositely disposed edges, a pair of supports of inverted U-shape having straight web portions disposed for extension thereof along said straight edges of the top and connecting the legs of the supports, and spaced parallel rods each connected to upper portions of said supports; said chair comprising a seat and a support therefor made up of a strip of material shaped to form two similar members, each having one straight portion arranged to engage the ground and a second portion extending therefrom and secured to said seat, said straight portions being parallel; and said chair mounting means comprising a pair of channel members disposed below said table top and rigidly secured to said rods and having each a recess removably receiving one of the straight portions of the chair support, and a latch arranged to retain one of said straight portions within the channel receiving the same.

13. An article of manufacture comprising a table, a chair and means removably mounting said chair on said table, said table having a top and legs, cross bars connecting oppositely disposed legs, and said chair mounting means including a pair of channel members disposed below said table top and rigidly secured to said table, and said chair comprising a seat and a support therefor, the latter including two parallel horizontally disposed leg portions to engage the ground, and each of said channel members removably receiving one of said leg portions of the chair.

14. An article of manufacture comprising a table, a chair and means removably mounting said chair on said table, said table having a top, legs, cross bars connecting oppositely disposed legs and said chair mounting means including a pair of channel members disposed below said table top and rigidly secured to said table, and said chair having a seat and a connecting means extending from the seat including a pair of parallel substantially horizontally disposed leg portions underlying and spaced from the seat and arranged to engage the ground, said leg portions merging into other portions curved in an upward direction towards the upper portion of said chair, and each of said channel members removably receiving one of said leg portions of the chair.

15. An article of manufacture comprising a table, a chair and means removably mounting said chair on said table, the table having a top and legs, at least one cross bar disposed between two of said oppositely disposed legs, and said chair mounting means including a pair of channel members disposed below said table top and rigidly secured to said table, and said chair comprising a seat and a support therefor, the latter including two parallel horizontally disposed leg portions to engage the ground, and each of said channel members removably receiving one of said leg portions of the chair.

16. An article of manufacture comprising a table, a chair and means removably mounting said chair on said table, said table having a top and legs, cross bars connecting the pairs of oppositely disposed legs, and said chair mounting means including a pair of channel members disposed below said table top and rigidly secured to said cross bars, and said chair comprising a seat and a support therefor, the latter including two parallel horizontally disposed leg portions to engage the ground, and each of said channel members removably receiving one of said leg portions of the chair.

17. An article of furniture comprising a table, a chair and means removably mounting said chair on said table; said table comprising a top having a pair of straight oppositely disposed edges, a pair of supports of inverted U-shape and spaced parallel rods each connected to upper portions of said supports; said chair comprising a seat and a support therefor made up of a strip of material shaped to form two similar members, each having one straight portion arranged to engage the ground and a second portion extending therefrom and secured to said seat, said straight portions being parallel; and said chair mounting means comprising a pair of channel members disposed below said table top and rigidly secured to said rods and having each a recess removably receiving one of the straight portions of the chair support, and a latch arranged to retain one of said straight portions within the channel receiving the same.

18. An article of manufacture comprising a table structure, a chair structure and means removably mounting the latter on the former, said table structure having a top and said chair structure mounting means including a pair of channel members disposed below said top and rigidly secured to said table structure, and said chair structure comprising a seat and a support therefor, the latter including two parallel horizontally disposed leg portions to engage the ground, and each of said channel members removably receiving one of said leg portions of the chair structure, and a latch bolt carried by one of said structures and removably engaging a corresponding portion of the other structure.

19. An article of manufacture comprising a table top, legs for supporting said table top, front and rear cross bars disposed beneath the table top and connecting opposite legs, a seat, a frame having upper and lower extensions, the lower extensions carried by said cross bars and removably slidable with respect thereto and concealed beneath the table top and the upper extensions supporting said seat.

20. An article of manufacture comprising a

table, a chair and means removably mounting said chair on said table, said table having a top and said chair mounting means including a pair of channel members carried by said table, and said chair comprising a seat and a support therefor, the latter including two parallel horizontally disposed leg portions to engage the ground, and each of said channel members removably receiving one of said leg portions of the chair.

21. A combination table and chair seat comprising a table frame having legs and connecting front and rear cross bars, a top plate, supporting channel members supported on the cross bars beneath the top plate and a detachable seat having a frame with spaced members removably slidable in said channel members and concealed beneath the table top.

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