July 31, 1951 C. G. MILES 2,562,629

COLLAPSIBLE HIGH CHAIR

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Fig. 1.

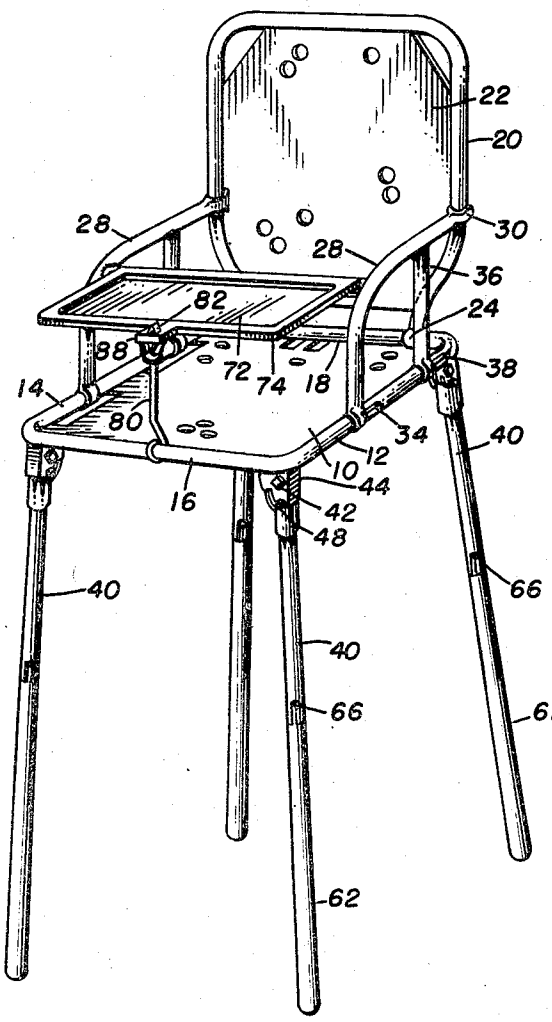

Fig. 7.

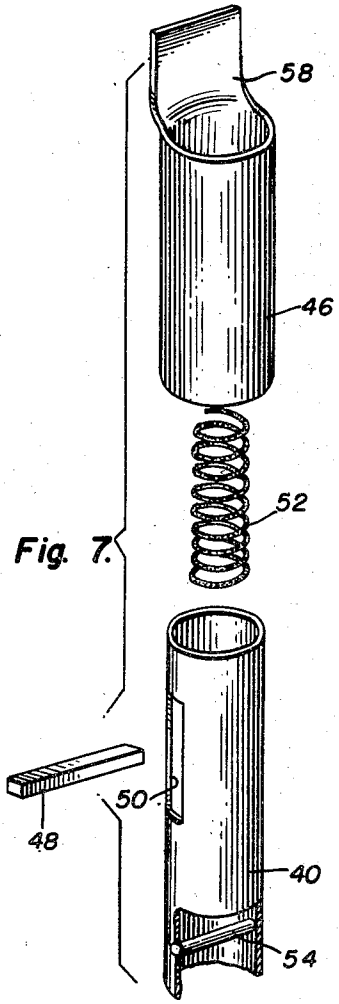

Fig. 8.

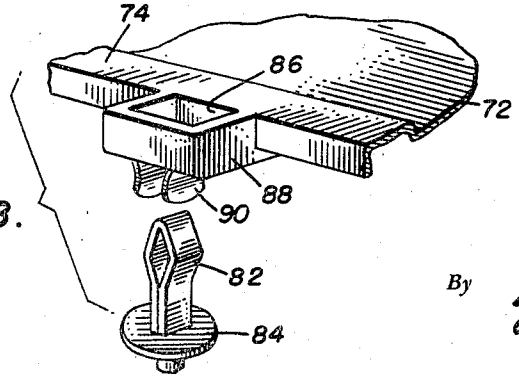

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Fig. 2.

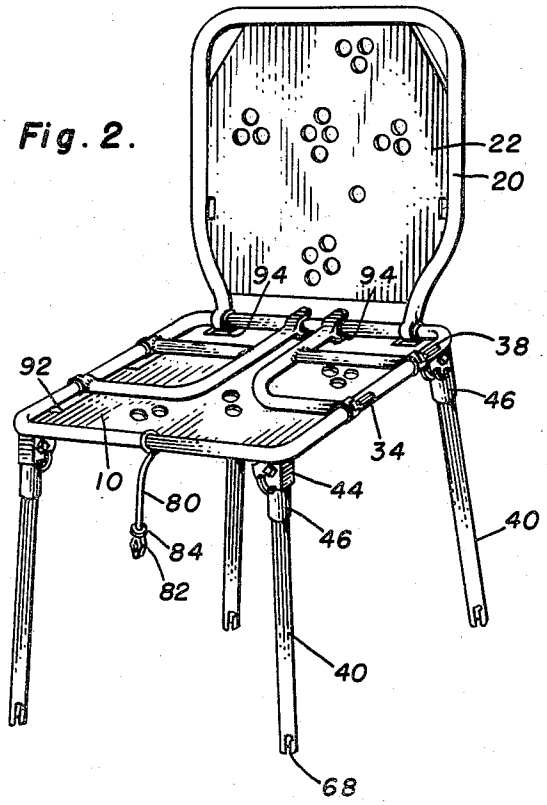
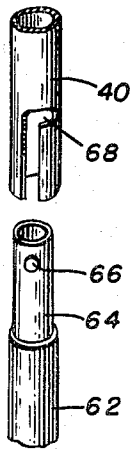


Fig. 9.



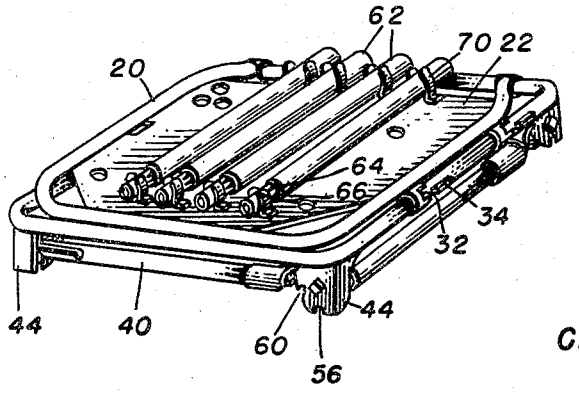


Fig. 3.

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Fig. 4.

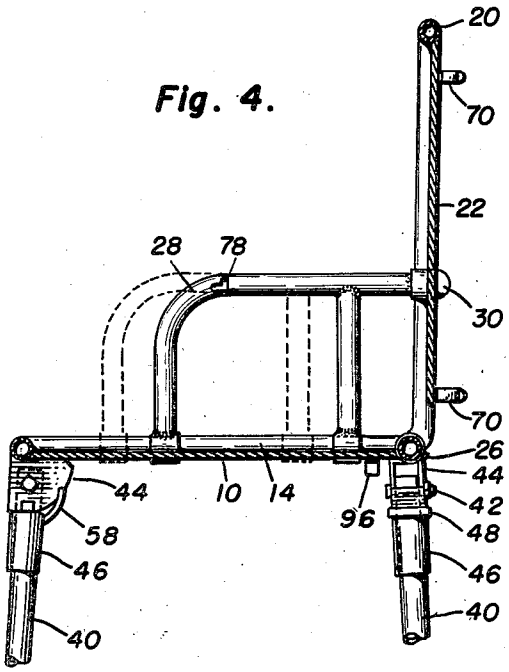
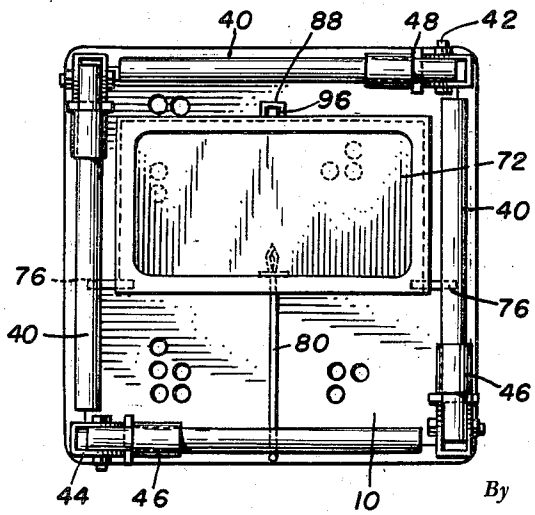


Fig. 5.



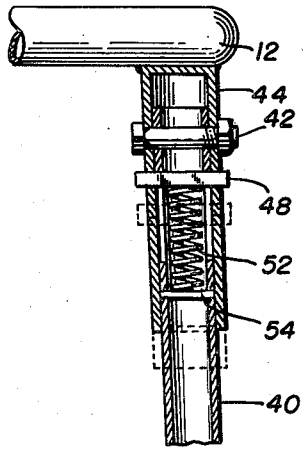


Fig. 6.

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Patented July 31, 1951 2,562,629

UNITED STATES PATENT OFFICE

2,562,629

COLLAPSIBLE HIGH CHAIR

Charles G. Miles, Phillipsburg, Kans.

Application May 26, 1947, Serial No. 750,458

2 Claims. (Cl. 155—127)

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This invention relates generally to chairs, and more particularly to a collapsible high chair, in which the back, arms and legs may be folded into substantially parallel relation with the seat portion of the chair, the chair having a removable tray, and removable extensions for the legs, the removal of said extensions transforming the high chair into a play chair of lessened height.

A primary object of this invention is to provide a high chair which may be collapsed into relatively small space, thus providing a chair which is ideally suited for use in trailers, small apartments and anywhere where living space is at a premium or wherever collapsible furniture is desired with a view to facilitating the packing and transporation of the same.

Another object of this invention is to provide a collapsible high chair which may also be used as a play chair, the chair being ruggedly constructed and generally designed to make the same suitable for this secondary purpose.

Still another object of this invention is to provide means for locking the collapsible legs in normal position, that is, depending and slightly diverging from the corners of the seat.

Another object of this invention is to provide easily manipulable lateral arm portions which are securable to the back, when these arms and back are in upright position, these arms being further supported and locked in position by means incorporated with the lateral portions of the seat.

With these objects definitely in view, this invention resides in certain novel features of construction, combination and arrangement of parts and portions as will be hereinafter described in detail in the specification, particularly pointed out in the appended claims, and illustrated in the accompanying drawings which form a material part of this application, and in which:

Figure 1 is a perspective view of the high chair;

Figure 2 is a perspective view of this invention, with the legs extensions removed, in order to adapt the device for use as a play chair, it being noted that in this figure the arms are depressed, rather than being positioned in the upright positions which they would normally be made to assume when the device is in use;

Figure 3 shows this invention in collapsed form, the view being in perspective and on a slightly enlarged scale;

Figure 4 is a vertical sectional view of the major portions of this chair, a second position of the side arms being indicated in dash lines;

Figure 5 is a bottom plan view of this invention when the leg extensions are removed from the legs and when these legs are folded upwardly and the tray is secured to the legs in this folded or collapsed position;

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Figure 6 is a fragmentary enlarged detail view of the pivotal connection and locking means for the legs;

Figure 7 is a grouped view, largely in perspective, of the portions of the structure on the upper ends of each leg, the figure being in a larger scale than Figure 6;

Figure 8 is a grouped view of a portion of the tray and the upper end portion of the tray supporting member which is pivotally secured to the front of the seat; and

Figure 9 is a grouped view of the lower end portion of a leg and the upper end portion of a leg extension removably secured thereto.

Similar characters of reference designate similar or identical parts and portions throughout the specification and throughout the several views of the drawings.

Referring now to the drawings in detail, this invention will be seen to include a seat portion 10 which may be comprised of perforated metal and marginally supported by a substantially square frame of tubular metal, the side portions of which are indicated at 12 and 14, and the front and rear portions of which are indicated at 16 and 18 respectively.

The back of the chair may also be formed from tubular material, as indicated at 20, and comprises essentially a U-shaped frame with perforated sheet material secured thereto, as illustrated at 22. The lower ends of the U-shaped member 20 comprise tubular portions 24 which encircle the rear portion 18 of the seat and constitute hinge members for the back. It should be noted that these cylindrical portions 24 are prevented from moving longitudinally on the member 18 by a pair of rearwardly extending flange portions 26 on the said rear portion 18 of the seat.

The arms are comprised of arcuate portions 28 which extend rearwardly to terminal U-shaped spring clamps 30 of a size and character to grip the vertical side portions of the back 20 and comprising fastening means whereby the back and the arms are retained in upright positions. The forward and lower ends of these said arcuate portions are provided with tubular hinge portions which encircle the lateral portions 12 and 14 of the seat. These tubular portions are recessed, as at 32 and one edge of each of these recesses abuts one of the flanges 34 on the side members

12 and 14, when the arms are moved into upright position and slid rearwardly. A vertical arm member 36 is integrally secured to the horizontal portion of the arcuate member 28 and the lower end of this vertical member is provided with a tubular hinge portion which is also recessed to coact with a flange 38 which is similar to the flange 34 described above. It will be understood that the U-shaped spring clamp 30 will grip the member 20 at the same time as the said tubular portions of the lower ends of the arm portions contact the flanges 34 and 38. This construction has been found to give very rigid support to the arm portions as well as to the back of the chair.

Each of the legs 40 are pivotally secured, as by a pivot bolt 42, to open-sided brackets 44 integrally secured to the corners of the seat. A sleeve 46 is mounted on the upper end of each leg and carries a key 48 disposed transversely thereof and extending through a slot 50 in the upper end of the leg. This key is biased upwardly by a helical spring 52 compressed between the pin 54 secured to the leg and the said key, and when the leg is in normal depending position this key is forced upwardly into an end notch 56, shown clearly in Figure 3, in the U-shaped bracket portion 44, holding the leg in place with reference to this bracket and the seat. Each leg is further locked by a lip flange 58 which is engaged in a lateral notch 60 in the bracket 44 when the sleeve 46 is urged upwardly by the spring 52. The releasing of this lock, when it is desired to hold the legs upwardly toward the seat, is accomplished by depressing the sleeve 46 until the key 48 emerges from the end notch 56 and the lip flange 58 emerges from the lateral notch 60, whereafter the leg can be pivoted on the axis bolt 42.

Each leg is provided with an extension 62, which has a reduced portion 64 and a locking pin 66 transversely disposed of this reduced portion and extending radially therefrom for engagement in key-shaped slots 68 in the lower ends of each of the legs 40, these slots 68 being shown clearly in Figure 2 and the locking pins being illustrated in Figure 3. A plurality of spring bracket members 70 are secured to the rear face of the panel 22 of the back, and when the chair is to be used as a play chair the extensions 62 are removed from the legs and clipped into the spring brackets 70.

A tray 72 which comprises a flat plate with a raised marginal portion 74 may be generally rectangular in shape and is provided with extending lugs 76 which fit into the slots 78 and the inner surfaces of the arcuate portions 26 of the arms, when the tray is in the position represented in Figure 1, that is, when the device is being used as a high chair and the tray is being used to support play things or being used as a table. The forward side of the tray will be supported by an arm 80 which is pivotally secured to the front seat portion 16. The arm 80 has an irregularly shaped terminal 82 designed to be inserted in a slot 86 in a forward projecting portion 88 of said tray, and a disc-like portion 84 is provided to abut the lower surface of this extending portion 88. A pair of spring clip members 90 are rigidly secured to this extending portion 88, the clip members 90 being, of course, provided to grasp and hold the irregularly shaped terminal 82.

It will be noted that recesses 92 are cut in the side of the seat panel 10 to provide clearance for the tubular portion on the lower end of the arm members, and similar apertures 94 are cut in the rear margin of the same seat panel 10 to provide clearance for the tubular hinge portion 24 of the back and the U-shaped bracket members 30 of the arms when these arms are depressed, as when the chair is collapsed.

In using this invention, no special care need be taken to prevent the chair from collapsing since the various portions thereof may be securely locked in place, and the method of operation of this invention will be clearly understood from a consideration of the foregoing description of the mechanical details thereof, taken in conjunction with the above recitation of the objects sought to be achieved by this invention. It may be added, however, that in collapsing the chair the arms are pulled forwardly and folded downwardly onto the seat, whereafter the back is folded forwardly on the tubular hinge portion 24, and the legs are individually folded upwardly. Obviously, the tray will first be removed from the arms before such folding can be accomplished, and when the legs are folded upwardly toward the seat, the tray may be inserted, as indicated in Figure 5 on the lower side of the seat and held in place by inserting the lugs 76 in slots provided therefor intermediate the ends of two of the legs with the extending portion 88 secured on the projection 96 on the lower side of the seat panel, while the arm 80 is folded into parallel relation with the seat and with the free end thereof held between the seat and the adjacent portion of the tray.

Obviously, many minor variations may be made in the detail of construction of this invention and the chair need not necessarily be constructed entirely of metal as the foregoing description suggests, and though there has been shown a particular embodiment of this invention, this application is not limited to this particular embodiment but it is desired to include within the scope of this invention the construction, combination and arrangement of parts and portions substantially as set forth in the appended claims.

What I claim is:

1. A collapsible high chair comprising a seat, a back hinged thereto, arms pivotally and laterally mounted on said seat and slidable in a fore and aft direction, a tray removably securable to said arms, and legs pivotally secured to said seat, said arms having opposite apertures and said tray having laterally extending lugs inserted in said apertures, an arm having one end pivoted on the forward portion of said seat and having the other end removably securable to a forward portion of the tray, and said first mentioned arms having U-shaped spring clamps for detachably securing the arms to said back when said arms and back are in upright positions.

2. A collapsible high chair comprising a seat, a back hinged thereto, arms pivotally and laterally mounted on said seat and slidable in a fore and aft direction, a tray removably securable to said arms, and legs pivotally secured to said seat, said arms having opposite apertures and said tray having laterally extending lugs inserted in said apertures, an arm having one end pivoted on the forward portion of said seat and having the other end removably securable to a forward portion of the tray, and said arms having U-shaped spring clamps for detachably securing the arms to said back when said arms and back are in upright positions, said back comprising a panel and a marginally disposed frame, said seat comprising a flat panel and a marginally disposed frame having a tubular portion at the rear of the seat of the same cross sectional dimension as said

frame of the back, and said spring clamps being selectively engageable with the frames of the back and seat when the arms are in upright and collapsed positions, respectively.

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