Summary Of The Invention

There is disclosed herein a number of embodiments of an improved chair which avoids the disadvantages of prior devices while affording additional structural and operating advantages.

According to a first aspect of the invention, a highchair is described, the highchair comprising:

a seat having a bottom support and a back support, the bottom support including a fixed center post extending there from, wherein the center post includes a retention channel formed on a generally vertical side of the center post, wherein the retention channel includes a plurality of tray position notches;

a tray detachably coupled to the center post of the seat, wherein the tray includes a center post channel;

a tray latching mechanism for connecting the tray to the center post and capable of movement between a first connecting position, a second connecting position and a release position, wherein the tray latching mechanism includes pins adjacent the bottom surface of the tray and a handle adjacent the bottom surface of the tray and linked to the pins such that movement of the handle results in movement of the pins, wherein the pins are positioned in the center post channel and the tray is positioned on the center post by aligning the center post with the center post channel, wherein a respective pin is receivable in a respective tray position notch to prevent movement of the tray with respect to the center post;

a frame supporting the seat at a first position and having a footrest supported at a second position on the frame, wherein the bottom support of the seat and the footrest are independently adjustable between a plurality of fixed seat position channels on the frame and a plurality of fixed footrest position channels on the frame, respectively, wherein the seat position channels extend such that a rear-most end of each seat position channel terminates progressively forward moving top to bottom; and

a harness for securing a child positioned in the seat, the harness being secured to the seat and adjustable for various sizes at a position adjacent a rear surface of the back support, the harness including a harness strap which is attached to the center post.

According to the second aspect of invention, a chair is described, the chair comprising a seat having a bottom support and a back support;

a center post extending from the seat, the center post including a tray guide having a retention channel including a plurality of tray position notches;

a frame supporting the seat;

a tray detachably coupled to the center post;

a tray latching mechanism for detachably connecting the tray to the center post, and the latching mechanism being adjustable between an adjust setting where the tray is secured to the center post and capable of sliding movement between a plurality of latching points, a locked setting where the tray is secured at a respective latching point of the plurality of latching points and prevented from movement, and a release setting where the tray is released from attachment,

wherein the tray latching mechanism includes a pin, wherein the pin is located in the retention channel when in the adjust setting and the in is located in one of the plurality of tray position notches when in the locked setting wherein the tray latching mechanism includes pins adjacent a bottom surface of the tray and a single release mechanism comprising a handle adjacent the bottom surface of the tray and linked to the pins such that movement of the handle results in movement of the pins; wherein the tray includes a center post channel, wherein the pins are positioned in the center post channel and the tray is positioned on the center post by aligning the center post with the center post channel; and wherein the center post includes a retention channel formed on a generally vertical side of the center post, wherein the retention channel includes a plurality of tray position notches, wherein a respective pin is receivable in a respective tray position notch to prevent movement of the tray with respect to the center post.

In ~~a first~~an embodiment, a highchair for seating a child is described. The highchair comprises a seat having a bottom support and a back support, the bottom support including a fixed center post extending there from, a frame attached to and supporting the seat at a height, the bottom support of the seat being adjustable between a plurality of fixed positions channels on the frame, and a tray detachably coupled only to the center post of the seat.

In ~~a second~~an embodiment, the highchair includes a seat having a bottom support and a back support, the bottom support including a fixed center post extending there from, a frame attached to and supporting the seat at a height, and a tray having a locking mechanism on a bottom surface for adjustably coupling at a position to the center post of the seat, wherein the position, including removal of the tray, on the center post is adjustable via manipulation of a single release mechanism fixed to the tray and coupled to the locking mechanism.

~~A third~~An embodiment of the disclosed highchair includes a seat having a bottom support and a back support, the bottom support including a fixed center post extending there from, a frame comprising a plurality of fixed seat position channels and a plurality of fixed footrest position channels, wherein the frame supports the bottom support in a first seat position channel and a footrest is a first footrest position channel and the bottom support of the seat and the footrest are independently adjustable

between the seat position channels and the footrest position channels, respectively, and a tray detachably coupled to the center post of the seat.

In ~~a fourth~~an embodiment, the highchair includes a seat having a bottom support and a back support, the bottom support including a fixed center post extending there from, a frame attached to and supporting the seat at a height, a harness for securing a child positioned in the seat, the harness being secured to the seat and adjustable for various sizes at a position adjacent a rear surface of the back support, and a tray detachably coupled to the center post of the seat.

In ~~a fifth~~an embodiment, the highchair comprises a seat having a bottom support and a back support, the bottom support including a fixed center post extending there from, a tray detachably coupled to the center post of the seat, a tray latching mechanism for connecting the tray to the center post and capable of movement between a first connecting position, a second connecting position and a release position, a frame supporting the seat at a first position and having a footrest supported at a second position on the frame, wherein the bottom support of the seat and the footrest are independently adjustable between a plurality of fixed seat position channels on the frame and a plurality of fixed footrest position channels on the frame, respectively, and a harness for securing a child positioned in the seat, the harness being secured to the seat and adjustable for various sizes at a position adjacent a rear surface of the back support.

Still, ~~a sixth~~an embodiment of the highchair comprises a seat having a bottom support and a back support, a frame supporting the seat at a first position and having a footrest supported at a second position on the frame, wherein the bottom support of the seat and the footrest are independently adjustable between a plurality of fixed seat

position channels on the frame and a plurality of footrest position channels on the frame, respectively, a tray detachably coupled to the seat, a tray latching mechanism for connecting the tray to the seat and capable of movement between a first connecting position, a second connecting position and a release position, and a harness for securing a child positioned in the seat, the harness being secured to the seat and adjustable for various sizes at a position adjacent a rear surface of the back support.

In ~~a seventh~~an embodiment, a child seat is disclosed which comprises a seat having a bottom support and a back support, a frame having a plurality of fixed seat position channels each configured to retain the bottom support therein, wherein the bottom support of the seat is vertically adjustable relative to the back support via the seat position channels, and a seat latching mechanism for retaining the seat at any of the fixed seat position channels. In such an embodiment the seat latching mechanism comprises a slide bar positioned to intersect each of the fixed seat position channels and capable of movement along an axis between a lock position and a release position, wherein the seat is locked in a channel when the slide bar is at the lock position and the seat is removable from a channel when the slide bar is at the release position, and a button attached to an end of the slide bar and which moves along an axis, transverse to the axis of the slide bar, between a first and second position, wherein the slide bar is prevented from movement when the button is in the first position and is slidable between the slide bar lock and release positions when the button is in the second position.

In still another embodiment, a chair comprises a seat having a bottom support and a back support, a frame supporting the seat, a tray detachably coupled to the seat, and a tray latching mechanism for connecting the tray at a latching point to one of

Claims

1. A highchair for seating a child, the highchair comprising:

a seat having a bottom support and a back support, the bottom support including a fixed center post extending there from;

a frame attached to and supporting the seat at a height, the bottom support of the seat being adjustable between a plurality of fixed positions channels on the frame; and

a tray detachably coupled only to the center post of the seat, wherein the tray further includes a center post channel including pins; and

a tray latching mechanism for connecting the tray to the center post and capable of retaining the tray in one of a plurality of attached positions and a release position;

wherein the tray latching mechanism comprises a single actuator, which is a single handle, for adjusting the latching mechanism between three settings including:

a locked setting where the tray is secured to the center post and prevented from movement;

an adjust setting where the tray is secured to the center post and capable of sliding movement between a plurality of latching points, which are a plurality of tray position notches; and

a release setting where the tray is released from attachment to the center post,

wherein the handle is directly linked to the pins such that movement of the handle results in movement of the pins, wherein the center post includes a tray guide at the upper end of the center post, and within the tray guide is a retention channel which includes the plurality of tray position notches,

in the release setting the handle is in a release position and the tray can be properly placed into contact with the top of the post,

in the adjust setting the handle is in the adjust position and the tray is secured to the post by the pins simultaneously moving to enter the retention channel,

and in the locked setting the handle and the pins are moved to a locked position in which the pins enter one of the tray position notches preventing the tray from further movement in the guide.

2. The highchair of Claim 1, wherein the center post is detachable from the bottom support.

3. The highchair of Claim 1, further comprising a harness for securing a child positioned in the seat, the harness being secured to the seat and adjustable for various sizes at a position adjacent a rear surface of the back support.

4. The highchair of Claim 3, wherein the harness is attached to the center post.

5. The highchair of Claim 1, further comprising a seat latching mechanism for retaining the seat at any of the fixed seat position channels.

6. The highchair of Claim 5, wherein the seat latching mechanism comprises:

a slide bar positioned to intersect each of the fixed seat position channels and capable of movement along an axis between a lock position and a release position, wherein the seat is locked in a channel when the slide bar is at the lock position and the seat is removable from a channel when the slide bar is at the release position; and

a button attached to an end of the slide bar and which moves along an axis, transverse to the axis of the slide bar, between a first and second position, wherein the slide bar is prevented from movement when the button is in the first position

and is slidable between the slide bar lock and release positions when the button is in the second position.

7. The highchair of Claim 1, further comprising a footrest supported at a second position on the frame, wherein the footrest is adjustable between a plurality of fixed footrest position channels on the frame.

8. The highchair of Claim 7, wherein the footrest and seat are independently adjustable.

Claims

1. A highchair comprising:

a seat having a bottom support and a back support, the bottom support including a fixed center post extending there from, wherein the center post includes a retention channel formed on a generally vertical side of the center post, wherein the retention channel includes a plurality of tray position notches;

a tray detachably coupled to the center post of the seat, wherein the tray includes a center post channel;

a tray latching mechanism for connecting the tray to the center post and capable of movement between a first connecting position, a second connecting position and a release position, wherein the tray latching mechanism includes pins adjacent a bottom surface of the tray and a handle adjacent the bottom surface of the tray and linked to the pins such that movement of the handle results in movement of the pins, wherein the pins are positioned in the center post channel and the tray is positioned on the center post by aligning the center post with the center post channel, wherein a respective pin is receivable in a respective tray position notch to prevent movement of the tray with respect to the center post;

a frame supporting the seat at a first position and having a footrest supported at a second position on the frame, wherein the bottom support of the seat and the footrest are independently adjustable between a plurality of fixed seat position channels on the frame and a plurality of fixed footrest position channels on the frame, respectively, wherein the seat position channels extend such that a rear-most end of each seat position channel terminates progressively forward moving top to bottom; and

a harness for securing a child positioned in the seat, the harness being secured to the seat and adjustable for various sizes at a position adjacent a rear surface of the back support, the harness including a harness strap which is attached to the center post.

2. The highchair of claim 1, wherein the tray latching mechanism further comprises a single actuator for moving the tray between the first connecting position, the second connecting position and the release position.

3. The highchair of claim 1, further comprising a seat latching mechanism for retaining the seat at any of a plurality of fixed seat position channels on the frame.

4. The highchair of claim 3, wherein the seat latching mechanism comprises:

a slide bar positioned to intersect each of the fixed seat position channels and capable of movement along an axis between a lock position and a release position, wherein the seat is locked in a respective seat position channel when the slide bar is at the lock position and the seat is removable from the respective seat position channel when the slide bar is at the release position; and

a button attached to an end of the slide bar and which moves along an axis, transverse to the axis of the slide bar, between a first and second position, wherein the slide bar is prevented from movement when the button is in the first position and is slidable between the slide bar lock and release positions when the button is in the second position.

5. A chair comprising:

a seat having a bottom support and a back support;

a center post extending from the seat, the center post including a tray guide having a retention channel including a plurality of tray position notches;

a frame supporting the seat;

a tray detachably coupled to the center post;

a tray latching mechanism for detachably connecting the tray to the center post, and the latching mechanism being adjustable between an adjust setting where the tray is secured to the center post and capable of sliding movement between a plurality of latching points, a locked setting where the tray is secured at a respective

latching point of the plurality of latching points and prevented from movement, and a release setting where the tray is released from attachment,

wherein the tray latching mechanism includes a pin, wherein the pin is located in the retention channel when in the adjust setting and the in is located in one of the plurality of tray position notches when in the locked setting wherein the tray latching mechanism includes pins adjacent a bottom surface of the tray and a single release mechanism comprising a handle adjacent the bottom surface of the tray and linked to the pins such that movement of the handle results in movement of the pins; wherein the tray includes a center post channel, wherein the pins are positioned in the center post channel and the tray is positioned on the center post by aligning the center post with the center post channel; and wherein the center post includes a retention channel formed on a generally vertical side of the center post, wherein the retention channel includes a plurality of tray position notches, wherein a respective pin is receivable in a respective tray position notch to prevent movement of the tray with respect to the center post.

6. The chair of claim 5, wherein the tray latching mechanism comprises an actuator for moving the latching mechanism between the settings.

7. The chair of claim 6, wherein the actuator is a single handle attached to the tray.