C. J. SNIDEMAN.

DETACHABLE TRAY FOR HIGH CHAIRS.

APPLICATION FILED APR. 15, 1921.

1,428,916. Patented Sept. 12, 1922.

Fig. 1.

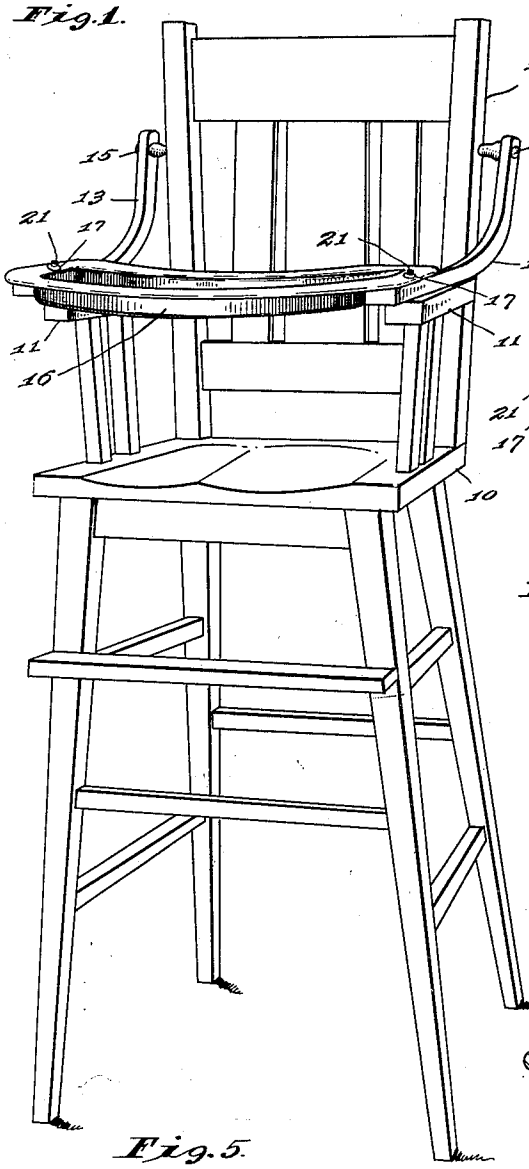


Fig. 2.

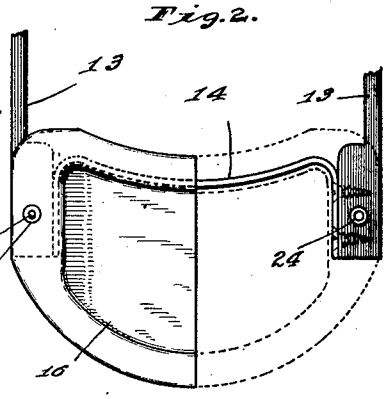


Fig. 3.

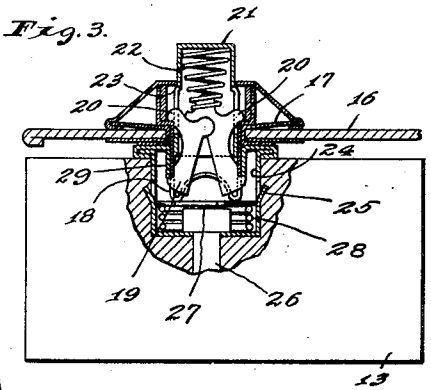


Fig. 4.

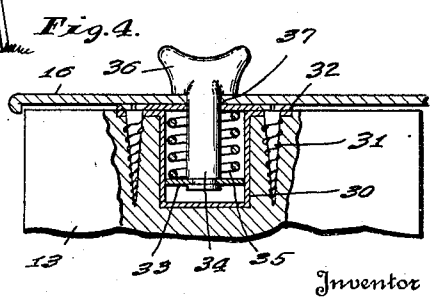
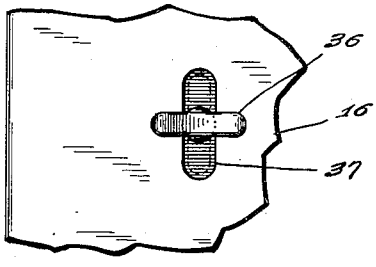


Fig. 5.



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UNITED STATES PATENT OFFICE.

CLORA J. SNIDEMAN, OF WABASH, INDIANA, ASSIGNOR TO WABASH SANITARY COMPANY, OF WABASH, INDIANA, A CORPORATION OF INDIANA.

DETACHABLE TRAY FOR HIGH CHAIRS.

Application filed April 15, 1921. Serial No. 461,577.

To all whom it may concern:

Be it known that I, CLORA J. SNIDEMAN, a citizen of the United States, residing at Wabash, in the county of Wabash and State of Indiana, have invented a new and useful Detachable Tray for High Chairs, of which the following is a specification.

It is the object of my invention to provide a simple detachable mounting for trays for high chairs, especially adapted for the swinging-tray frames, though not limited to such use, wherein the attaching device is attachable and releasable wholly from the top, and may readily by put in place by "feel".

The accompanying drawings illustrate my invention: Fig. 1 is a perspective view of a high chair having a tray mounted thereon in accordance with my invention; Fig. 2 is a plan view of the tray and its mounting, with half of the tray broken away to show the cross bar of the tray frame; Fig. 3 is a greatly enlarged sectional view through the fastener used in Figs. 1 and 2; Fig. 4 is a similar sectional view, showing a modified form of fastener; and Fig. 5 is a plan of the fastener shown in Fig. 4, with a fragment of the tray.

The high chair 10 has the usual side arms 11 and back 12, and a tray frame consisting of swinging side arms 13 cross-connected by a curved cross bar 14 screwed to them, is pivoted at the rear upwardly extending ends of the swinging side arms to the back 12 by pivot screws 15, the swinging side arms when the tray is down in normal position resting on the fixed side arms 11. Mounted on this swinging frame 13—14 is a tray 16, which has a depressed center portion, for holding the food or other things for the child, surrounded by an outer flange portion which overlies the forward ends of the side arms 13 and the cross bar 14, the latter being in the rear of the depressed center portion and being shaped to correspond to the curve which is given to the rear edge of the tray to accommodate it to the child's body. The cross bar 14 cooperates with the rear under surface of the tray at the rear edge of the depressed center portion to locate the tray on the swinging frame by "feel".

To fasten the tray detachably on the frame, I provide a device which is exposed at the top of the tray but which a small child is unable to operate. This device may take several forms, of which one form is shown in Figs. 1, 2, and 3, and another in Figs. 4 and 5, the form shown in Figs. 1, 2, and 3 being the one I prefer. This preferred form comprises a pressed metal frame 17 which extends through a suitable hole in the tray 16 over the end of one of the swinging arms 13 and has fixed therein a tube 18 which also projects through such hole and is notched at the bottom to allow the catches of two dogs 19 to project through, the two dogs being articulated together within the tube 18 on a suitable hinge joint and being provided with laterally projecting fingers 20 which rest on a shoulder near the top of the tube 18, and a depressible button 21 slidable in the frame 17 and tube 18 and slotted where the fingers 20 project through and spring-pressed upward by a compression spring 22 which acts against the top of one of the dogs 19 to press the hinge point of such dogs downward and their lower ends outward. The push button 21 is enlarged within the frame 17 to provide a shoulder 23 which prevents it from being pushed upward out of such frame, and is unslotted directly below the fingers 20 so that when the push button is depressed such unslotted portions act upon the lower ends of the dogs 19 to push them inward against the action of the spring 22. Two of these push buttons 21 with their mountings are provided on the tray 16, one over each arm 13. Each arm 13 below the push button 21 is provided with a cup 24, which is counter-sunk in the upper face of such arm and suitably held in place, as by ratchet teeth 25 on its sides or by a tack or screw 26 in its bottom. Within this cup is a disk 27 which is spring-pressed upward by a coiled compression spring 28 seated in the cup. The upward movement of the disk 27 is limited by engagement with a tube 29 which depends part way into such cup and is spaced from the inner wall thereof.

When it is desired to attach the tray 14, it is put in place over the swinging frame, and located by "feel," if desired, by the engagement of the curved cross bar 14 with the curved rear under edge of the center depressed portion of the tray, thus bringing the tubes 18 over the tubes 29. The tray

is then pushed down, and the two tubes 18 engage their respective disks 27 and depress them, and the slanting lower ends of the dogs 19 engage the upper end of the tubes 29 and are pushed inward thereby until the lateral latches at the lower ends of such dogs pass below the lower end of the tubes 29, whereupon the spring 22 pushes such latch projections outward so that they will catch on the lower edges of the tubes 29 and hold the two parts together. To release the tray the push buttons 21 are depressed, so that the unslotted lower end of each push button engages the sides of the dogs 19 and forces the lower latch ends thereof inward to release them from the tube 29, whereupon the spring 28 pushes the disk 27 and therethrough pushes the tube 18 upward to lift the tray sufficiently so that the latch projections on the dogs 19 will no longer be caught by the tube 29. Thus to attach the tray, it is merely necessary to push the tray downward after the tubes 18 and 29 have been brought into alinement, and this alinement can be obtained by "feeling," and to release the tray from the swinging frame it is necessary merely to depress the two push buttons 21. The pressure required on the push buttons 21, however, is too great to be exerted by a child of the size who would use a high chair, so that there is no opportunity to detach the tray. When the tray is detached, and removed from the swinging frame, the curved cross bar 14 still remains in place, so that although the tray is gone the child is still held against falling out of the chair.

Although I have shown this detachable mounting of the tray on the swinging frame 13—14, there is no reason why it should not be made on the fixed side arms 11.

The other form which I have shown of my detachable mounting, in Figs. 3 and 4, consists of a cup 30 which is set in the upper face of the side arm—as shown, of the swinging side arm 13—which cup is fastened in place by screws 31 and is provided with a cover 32 between which and a disk 33 carried by a stem 34 a compression spring 35 acts. The upper end of the compression spring carries a cross arm or thumb button 36, which when in one position may pass through an elongated slot 37 in the tray side 16 but when turned at right angles to such position lies crosswise of such slot, as shown in Fig. 5, to hold the tray 16 in place. The thumb button 36, like the push button 18, is accessible from above the tray; and when the thumb button is turned in one position it permits the tray to be readily attached and detached, and when turned in the other direction it locks the tray in place on the side arms 13.

I claim as my invention:

1. In combination, a high chair having side arms, a tray having portions which overlie said side arms and are detachably fastened thereto, and fastening means at opposite edges of the tray for attaching said tray to said side arms, each of said fastening means including a cup countersunk in each of said side arms and held against lateral displacement thereby and a spring-pressed plate mounted in said cup, and a finger engaged member which cooperates with said cup and extends through the tray and projects above the tray in a position to be engaged by the fingers and for releasing the fastening device to permit detaching of the tray.

2. In combination, a high chair having side arms, a tray arranged to be supported on said side arms, said side arms being provided with sockets having stop members arranged therein, a pair of spring pressed laterally acting snap members mounted on the underface of said tray and arranged to engage said stop members in the sockets, and finger operated means on the upper surface of said tray for contracting said snap members to release them from the stop members.

3. In combination with a high chair having side arms, vertically extending socket members formed in said side arms having snap receiving members therein, snap members on the underside of said tray arranged to be inserted in said socket by a vertical right line movement and finger pressure operated means on the upper face of said tray for releasing said snap members from the sockets.

4. In combination, a high chair having side arms, a tray arranged to be supported on said side arms, said side arms being provided with sockets having snap engaging projections arranged therein, a socket engaging member having laterally projecting spring actuated snaps arranged to engage said projections in said sockets, and finger operated means on the upper surface of the tray for operating said snap members to release them from the stops.

In witness whereof I, CLORA J. SNIDEMAN, have hereunto set my hand at Wabash, Indiana, this 12th day of April, A. D. one thousand nine hundred and twenty-one.

CLORA J. SNIDEMAN.

Witnesses:
ROBERT R. BATTON,
EDNA SCHMITT.