July 20, 1954 D. G. STONE 2,684,110

BABY CHAIR WITH CONVERTIBLE TABLE HAVING LOCKED-IN FOOD DISH

Filed May 1, 1953

2 Sheets-Sheet 1

Fig. 1

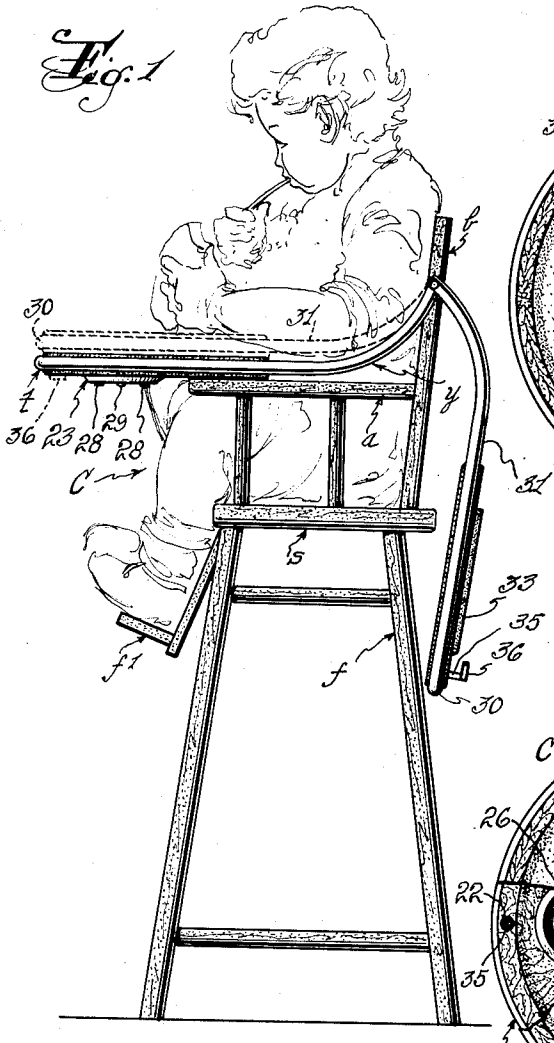


Fig. 3

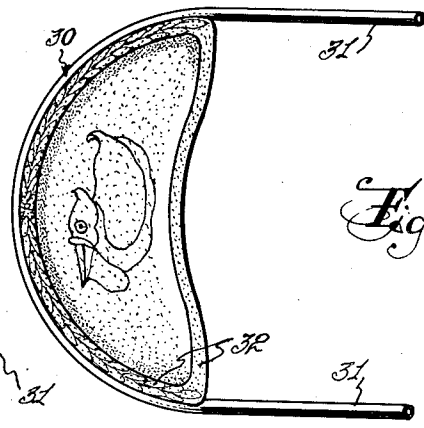
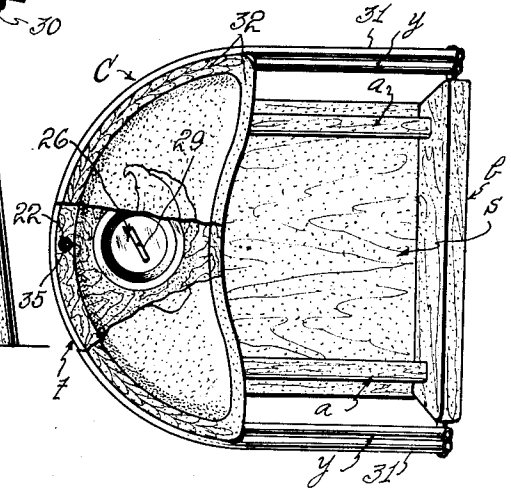


Fig. 2



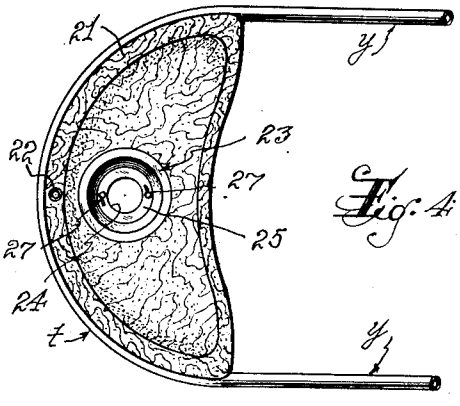


Fig. 4

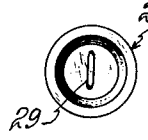


Fig. 5

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Fig. 8

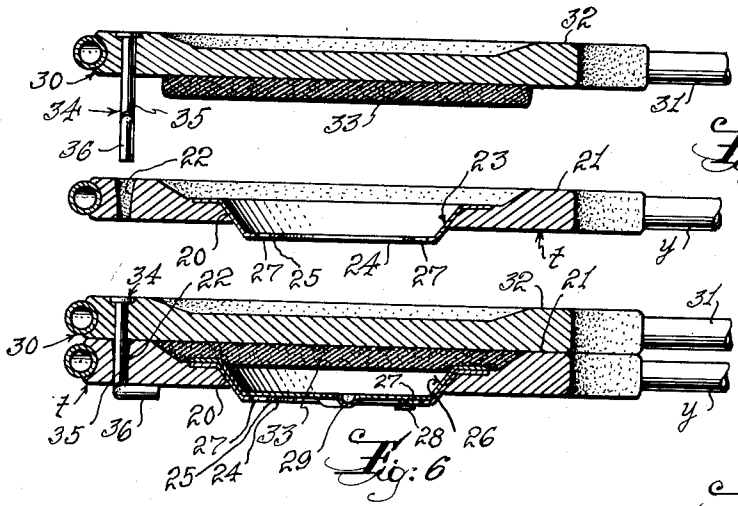


Fig. 7

Fig. 13

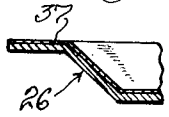
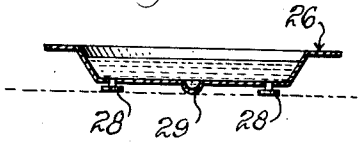


Fig. 6

Fig. 11



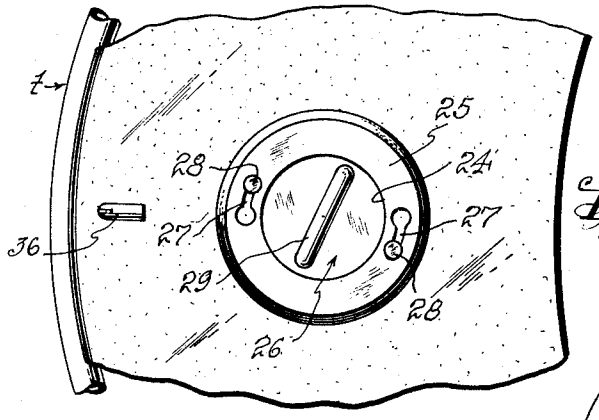
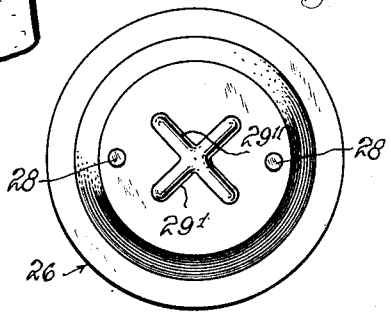


Fig. 9

Fig. 12



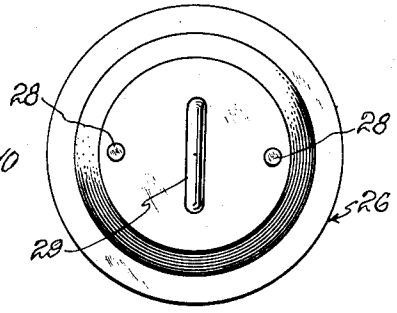


Fig. 10

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BABY CHAIR WITH CONVERTIBLE TABLE HAVING LOCKED-IN FOOD DISH

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Application May 1, 1953, Serial No. 352,345

4 Claims. (Cl. 155—126)

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The invention relates to combined chair and table articles of juvenile furniture, such as high chairs and feed-and-play tables, which are used by babies while being fed or while playing with small toys and other playthings.

It is my primary object to provide a baby's chair-table article with means for locking a food dish securely in position on the table thereof at feeding time to prevent it from becoming overturned when subjected to the baby's natural inquisitiveness or immature handling.

Prior to the present invention, attempts have been made to devise means for removably affixing a special food tray or dish to the regular table, or "tray" as it is sometimes called, at feeding time, but the resulting devices are bulky, complicated, unsightly and impractical in other respects. Moreover, when the food dish is removed, in each instance the table, or tray, presents open holes or protruding fastening means which render the table, or tray, unsuitable for play purposes.

In accordance with my improvement, a simple, shallow food dish of attractive appearance is secured temporarily in countersunk position in the regular table, or tray, by locking means located thereunder in a position inaccessible to the baby seated in the chair and which is of a construction capable of easy manipulation by an adult.

Another object of the invention is to provide means by which the feeding table may be converted readily into a play table that presents a smooth, uninterrupted and imperforate upper surface. To be more explicit, I have provided an articulated cover for the regular feeding table that may be maintained in an out of the way position in back of the chair frame when said regular table is being used for feeding and then may be swung into horizontal operative position overlying and resting upon the regular feeding table when the baby occupying the chair wants to play with toys. The cover just mentioned, which serves to convert the feeding table into a play table, also has means inaccessible to the occupant of the chair by which it may be secured fixedly to the feeding table in operative position.

A further object is to provide the conversion table cover with means to seal the food dish which may be assembled with the feeding table at the time against spilling of its contents whenever it is desired to convert said feeding table into a play table temporarily in interruption of the feeding period. Due to this provision, it is thus practicable to permit intermittent feeding and play without removal of the food dish, which oftentimes is a great advantage. Additionally, the

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specific dish sealing means employed serves to aid in automatically starting separation of the conversion cover from the feeding table upon release of the securing means for the former.

The foregoing and other objects, advantages and features of the invention will be more fully understood as the following specific description is read in connection with the accompanying drawings, in which:

Fig. 1 is a side elevation of a high chair embodying the invention, showing the play table conversion cover for the feeding table in inoperative out of the way position in full lines and in operative position covering the feeding table in broken lines; and Fig. 2 is a fragmentary plan view of the high chair, showing the play table conversion cover in operative position only and a food dish assembled with the underlying feeding table.

Fig. 3 is a plan view of the play table conversion cover alone; Fig. 4 is a similar view of the feeding table alone but without the food dish; and Fig. 5 is a similar view of the food dish alone.

Fig. 6 is a large scale fragmentary vertical section of the feeding table and assembled food dish with the conversion cover in operative relation to said feeding table and secured thereto by the latch means; Fig. 7 is a similar view of the feeding table alone; Fig. 8 is a similar view of the conversion cover alone, showing the latch device in open condition; and Fig. 9 is a fragmentary bottom plan view of the feeding table, showing the food dish locked in assembled position as in Fig. 6.

Fig. 10 is an enlarged detail bottom plan view of the food dish; Fig. 11 is a vertical section of the same; and Fig. 12 is a view similar to Fig. 10 of a modified form of food dish.

Fig. 13 is a fragmentary vertical section of a food dish having its exposed upper face provided with a sanitary coating.

Referring now in detail to the drawings, wherein like reference characters designate corresponding parts in the several views, the improved feeding device and play table conversion means are shown as being incorporated in a baby's high chair of conventional construction. It is to be understood, however, that it is within the scope of the invention to apply the invention to other types of juvenile seat-provided furniture such as "baby tenders" and "feed-and-play tables."

In the illustrative embodiment, the high chair C comprises the usual long-legged frame *f* which supports the seating arrangements including seat *s*, backrest *b*, armrests *a* and footrest *f'*. The usual articulated table, or tray, *t* is pivotally con-

nected to backrest *b* by a substantially U-shaped yoke *y* whose side arms are of such length that said table or tray will rest upon the forward portions of armrests *a*, when swung into the operative position represented in Fig. 1, in convenient location with respect to a child occupant of the seat.

Since the present invention is of such a nature structurally that it may be built into a conventional article of juvenile furniture with only minor alterations in the latter, it will be assumed in the present disclosure that the existing high chairs in the unsold stock of a manufacturer are to be modified for reasons of economy preliminary to incorporation of the invention in future production.

As shown particularly in Figs. 6 and 7, table *t* is provided with a large diameter circular through hole 20 in the thinned intermediate area thereof that is bordered by rim 21. The only other alteration of table *t* that is required is provision of a preferably downwardly tapered small diameter latch hole 22 to which more specific reference will be made later herein.

The side wall of hole 20 is tapered downwardly to fit a dish-shaped socket member 23 when lowered into position therein. In this applied position, the horizontal rim of socket member 23 is countersunk in the upper portion of hole 20 and secured permanently therein in suitable manner, as by adhesive means or concealed fasteners (not shown). The bottom wall of socket member 23 is centrally punched out to afford a circular finger access opening 24 surrounded by annular supporting ledge 25 for a purpose now to be described.

A food dish 26 is provided for use in feeding the occupant of the chair. This dish 26 is intended to fit within socket member 23 in such a manner that the rim and bottom wall of the dish will rest upon the rim and annular flange 25, respectively, of said socket member to prevent the side wall of the dish from becoming tightly wedged against the side wall of said socket member, it being desired that the dish may be rotated freely through a limited arc of adjustment in the socket member and subsequently removed by light upward finger pressure against its bottom wall exerted through access opening 24. In other words, although food dish 26 is substantially identical in cross-sectional shape with socket member 23, the outside diameter of the former is not the same as that of the latter. Instead, the mean outside diameter of the dish is substantially equal to the mean inside diameter of the socket member.

The reason for making dish 26 rotatable without binding friction in socket member 23 is to permit utilization of the simple locking means which has been chosen to prevent the chair occupant from lifting and upsetting the dish. As shown particularly in Figs. 6, 7, 8, 10 and 11, this locking means is of the bayonet slot and headed lug type. In this instance, flange 25 of socket member 23 has been provided with diametrically opposed bayonet slots 27—27 of arcuate form and the bottom wall of dish 26 has headed lugs 28—28 positioned to register with and engage the respective bayonet slots when the dish is seated in the socket member. Subsequent partial rotation of the dish will cause it to be locked in place and the means for doing this will be concealed below the feeding table in a location inaccessible to the chair occupant. It is believed that the degree of arc of bayonet slots 27—27 shown in the drawings is sufficient for secure attachment of dish 26 under normal conditions of use, but it is to be understood that the arc may be increased or otherwise changed in practice without departing from the scope of the invention.

To facilitate manual rotation of dish 26 in the act of locking and unlocking it, the bottom wall of said dish is provided with a diametrically arranged downstruck ridge 29 which protrudes through finger access opening 24 in socket member 23 and thus affords a finger-hold or handle.

As shown in Fig. 11, the bottom faces of locking lugs 28—28 and finger-hold 29 of dish 26 have been arranged horizontally flush to permit the dish to rest in a level position on any convenient flat horizontal supporting surface after the dish has been removed from feeding table *t* of the high chair so that any liquid contents remaining in the dish will not be spilled. If, however, it should be found to be preferable in future development to use some other form or disposition of locking means, dish 26 may be provided with crossed ridges 29'—29'', as depicted in Figure 12, to insure a stable base.

The other feature of the present invention that makes it possible to convert feeding table *t* quickly into a smooth, imperforate play table consists of a conversion cover 30 for said feeding table. This cover 30 is identical in horizontal outline with table *t* and is similarly articulated in its attachment to backrest *b* of high chair C by means of an additional yoke member 31, which preferably is pivotally attached in coaxial relation to yoke *y* of table *t* (Figs. 1 and 2). Conversion cover 30 may be swung freely between the inoperative depending position in back of chair frame *f* represented in full lines in Fig. 1 and the operative position shown in broken lines in Fig. 1 and in solid lines in Fig. 2. The upper surface of conversion cover 30 is countersunk to afford a smooth, level play table surrounded by a low protective rim 32.

Since it frequently occurs that feeding from dish 26 while assembled with feeding table *t* will be interrupted to permit play with toys and the like on top of conversion cover 30, means has been provided to seal the mouth of dish 26 and thereby prevent spilling of its contents in the event that the chair is rocked by violent play or other causes. The means which I prefer to employ for this purpose is a circular flat sealing member 33 of yieldable, elastic or resilient material, such as soft rubber or the like, which is adhesively or otherwise united to the under face of conversion cover 30 in a position to register with dish 26 when said cover is swung into its horizontal operative position in covering relation to feeding table *t*.

To secure conversion cover 30 releasably in operative position, a simple latch device 34 of the spring spindle type has been located centrally beneath the front edge of said cover for engagement with latch hole 22 in feeding table *t*. Latch device 34 comprises rigid shank 35 that depends from cover 30 and articulated, spring-deviated (closed) latch member proper 36. Shank 35 is anchored in cover 30 and projects beneath the same to an extent substantially equal to the thickness of feeding table *t* for complete penetration of latch hole 22 therein. In order to permit such penetration, latch member 36 must first be oscillated from its deviated latching position against the action of its spring (not shown) into alignment with shank 35. The tapered form of latch hole 22 facilitates initial penetration, when the tip of latch member 36 happens to be slightly out of precise axial alignment with said latch hole, and finally corrects the align-

ment to such a degree that the marginal edges of feeding table *t* and conversion cover **30** will match perfectly. After penetration, latch member **36** will be restored by its spring biasing means to operative, locking position perpendicular to shank **35**, wherein it abuts the under face of feeding table *t*. In this position, latch member **36** will effectively latch cover **30** in operative position and will be inaccessible to the chair occupant. When it becomes desirable to release and lift cover **30** to restore feeding table *t* to operative condition for its primary purpose, latch member **36** is manipulated on its pivot into alignment with shank **35** and then used as a handle, to push cover **30** upward from its seat until it can be grasped securely at its edges and swung into the inoperative position in rear of the high chair frame *f* represented in full lines in Fig. 1.

When conversion cover **30** is clamped in its operative position shown in Fig. 6, elastic sealing member **33** will be compressed and thereby placed under tension. Consequently, subsequent release of latch means **34** by swinging latch member **36** into alignment with shank **35** will permit sealing member **33** to expand vertically and draw latch member **36** upward into latch hole **22**. This starting action permits instant freeing of the finger grasp on latch member **36**, so that thereafter all that is required is upward fingertip pressure on the end of said latch member to lift conversion cover **30** sufficiently to permit it to be grasped at its edges by the free hand.

As illustrated in Fig. 13, dish **26** may be provided on its upper, exposed surface with a coating of porcelain or baked enamel to improve the appearance and sanitary condition of the dish in use.

In the embodiment of my invention in articles of juvenile furniture to be produced in the future, metal or plastic material may be used in the fabrication of the feeding table or the conversion cover instead of the wood ordinarily used for that purpose. Similarly, plastic or other material may be used to produce the food dish and socket member, it being understood that I am not limited to the choice of any particular material.

The present disclosure of the invention is an illustrative example and it accordingly is to be understood that various changes, modifications and alterations may be made in this structural embodiment which do not constitute departures from the spirit and scope of the invention.

Having thus described the invention, I claim:

1. An article of juvenile furniture comprising: a supporting frame; a seating structure supported by the frame; a table structure mounted on the frame in convenient relation to the seating structure for use by the occupant thereof; a food dish; socket means provided in the table structure and being adapted to have the food dish seated therein; and cooperative means provided on said dish and socket means beneath the table structure to detachably lock the dish in seated position.

2. An article of juvenile furniture as defined in claim 1, wherein the dish and socket means are circular in horizontal cross-section to permit rotation of the dish in its seated position; and wherein the locking means for the dish is of the bayonet slot and headed lug type and arranged so that said locking means may be engaged and disengaged by rotation of the dish in the socket means.

3. An article of juvenile furniture comprising: a supporting frame; a seating structure supported by the frame; a feeding table mounted on the frame in convenient relation to the seating structure for use by the occupant thereof; the feeding table being provided with a circular vertical through hole; a circular dish-shaped socket member countersunk in said hole in the feeding table and having a concentric circular finger access opening in its bottom wall of such diameter that a marginal annular ledge remains, said ledge having concentric arcuate bayonet slots therein; a food dish of circular form adapted to be seated in the socket member for rotation in bearing contact with said ledge and being supported thereby; and headed locking lugs depending from the bottom of the food dish for locking engagement with the bayonet slots in the bottom ledge of the socket member.

4. An article of juvenile furniture as defined in claim 3, wherein the locking lugs of the food dish are located at diametrically opposite sides of the bottom wall thereof; wherein a diametrical handle ridge is downstruck from the bottom wall of the dish and arranged at a horizontal angle to the line intersecting the locking lugs; and wherein the bottom faces of said lugs and ridge are horizontally flush to afford a stable base to mount the dish on a supporting surface upon removal from said socket member.

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