

Feb. 16, 1954

A. E. PULS ET AL

2,669,287

INFANT'S OR CHILD'S TABLE AND CHAIR

Filed May 10, 1949

2 Sheets-Sheet 1

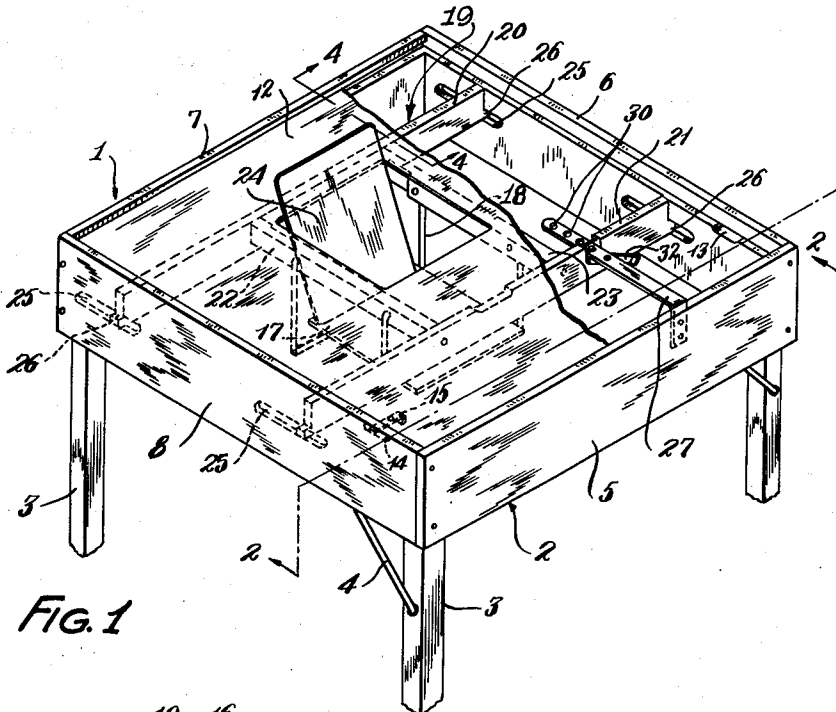


FIG. 1

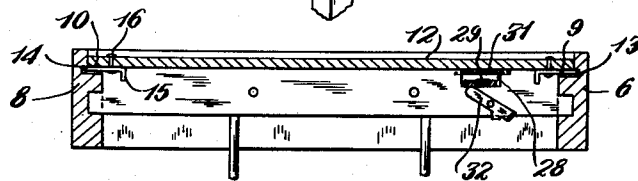


FIG. 2

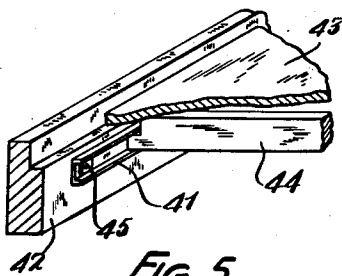


FIG. 5

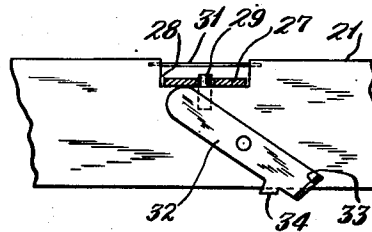


FIG. 3

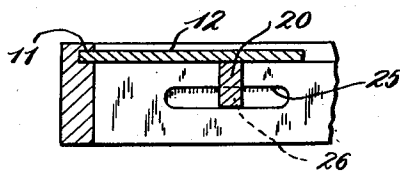


FIG. 4

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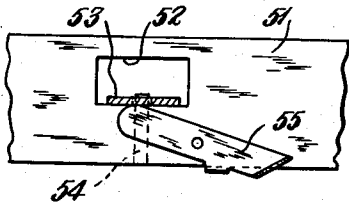


FIG. 6

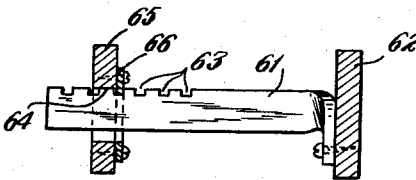


FIG. 7

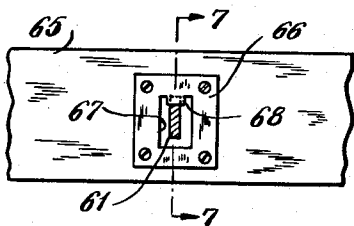


FIG. 8

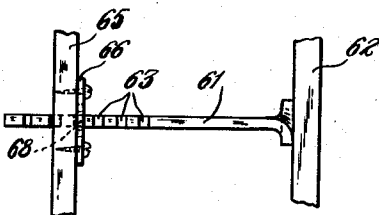


FIG. 9

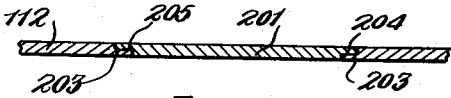


FIG. 11

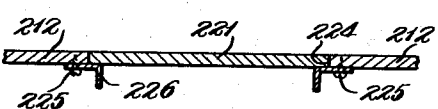


FIG. 13

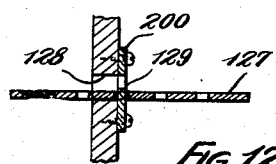


FIG. 12

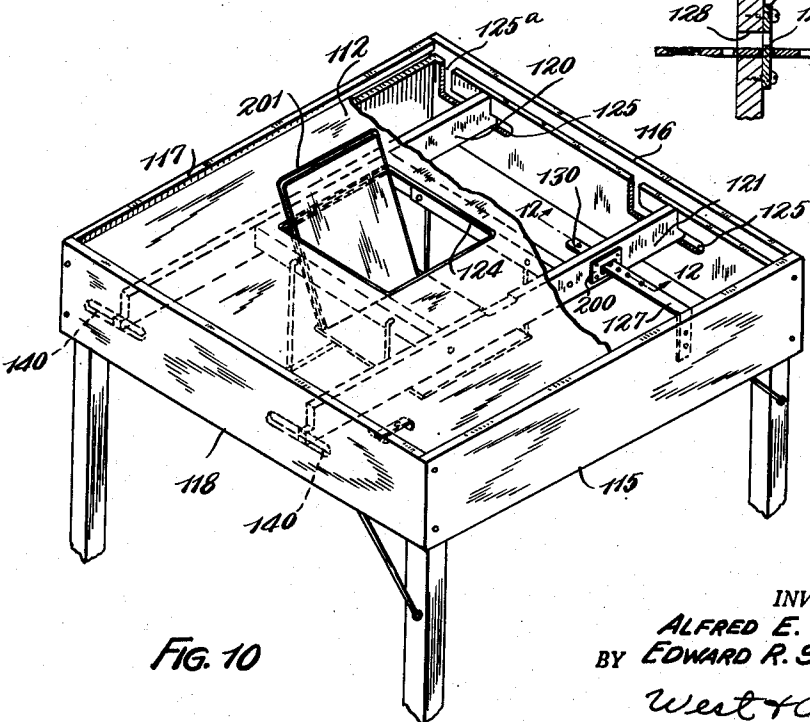


FIG. 10

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INFANT'S OR CHILD'S TABLE AND CHAIR

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Application May 10, 1949, Serial No. 92,261

12 Claims. (Cl. 155—123)

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This invention relates to an infant's or child's table and chair, especially to such an article of furniture which is provided with a removable top portion and which has a movable seat provided underneath the removable top.

Heretofore there have been several different types of combined infant's tables and chairs provided many of which have comprised a flat top portion which has a hole formed in the center portion thereof and underneath which a seat is pivotally secured for receipt of an infant while being fed, playing or for other purposes. As such infants grow rapidly, it is difficult to secure the infant tightly in the suspended seat whereby he does not fall or bob around too much in the chair or seat while being supported therein. Also, it is difficult to keep the table tops as clean as would be desired since food and other debris have a tendency to accumulate adjacent the edges of the table which usually are positioned slightly below a supporting frame that surrounds the top.

The general object of the present invention is to avoid and overcome the foregoing and other difficulties with present types of juvenile furniture of the class referred to, and to provide an article of that type which is characterized by the ease of cleaning same and by the tightness and definiteness of positioning an infant in the combined table and chair.

Another object of the invention is to provide a support carriage which slidably carries an infant's chair whereby the carriage can be adjusted to adapt the seat for receiving varying size infants therein.

A further object of the invention is to provide a table top which is separate from the remainder of the device of the class described and which can readily be engaged with or disengaged from the same.

A further object of the invention is to provide a lock member for retaining a movable carriage of a combined infant's table and chair in a given position and which can be readily and easily disengaged therefrom.

A further object of the invention is to utilize the movable carriage both for supporting a seat in an article of the class described and for controlling the size of the opening for an infant to be positioned in the seat.

The foregoing and other objects and advantages of the invention will be made more apparent as the specification proceeds.

For a better understanding of the present invention, attention is directed to the accompanying drawings, wherein:

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Fig. 1 is a perspective view of a combined infant's table and chair embodying the principles of the invention;

Fig. 2 is a transverse vertical section taken on line 2—2 of Fig. 1;

Fig. 3 is a fragmentary enlarged detail showing a lock release member of the invention;

Fig. 4 is a fragmentary vertical section taken on line 4—4 of Fig. 1;

Fig. 5 is a fragmentary perspective view of a modification of the positioning means used to support a carriage frame on the frame of the chair;

Fig. 6 is a fragmentary enlarged perspective view of a modified lock device of the invention;

Fig. 7 is a fragmentary sectional elevation of a modified type of lock device of the invention taken on line 7—7 of Fig. 8;

Figs. 8 and 9 are a transverse section and a plan, respectively, of the components of the lock device of Fig. 7;

Fig. 10 is a perspective view, partially broken away and shown in section, of a modified type of infant's table and chair of the invention;

Fig. 11 is a fragmentary section of the seat back engaged with the table top;

Fig. 12 is a fragmentary section on line 12—12 of Fig. 10; and

Fig. 13 is a view, similar to Fig. 11, of a modification of the invention.

The present device relates in general to the same kind of a structure as is shown and described in U. S. Patents 2,161,657, 2,161,658 and 2,483,062.

Attention is now directed to the details of the structure shown in the accompanying drawings wherein a combined infant's or child's table and chair is indicated by the numeral 1. This article of furniture in general comprises a frame 2 which is formed from a plurality of substantially vertically extending side, or apron member suitably secured together in any desired manner. The frame 2 has a plurality of supports or legs 3 provided therefore which are in pivotal engagement with the frame 2 and which may have braces 4 pivotally associated therewith whereby the legs 3 can be retained in a desired extended position with relation to the frame 2, or can be folded up compactly thereagainst. The frame 2 includes four side members designated 5, 6, 7 and 8 with certain of said sides, 5 and 7 usually being considered the front and rear sides of the frame and the sides 6 and 8 being the laterally opposed portions of the frame.

Fig. 2 of the drawing clearly shows, as one

feature of the invention, that the sides 6 and 8 of the frame are both provided with a rabbeted inner edge so as to form support shoulders 9 and 10, respectively, thereon. A similar shoulder (not shown) is also provided on the front side member 5, whereas ordinarily the rear side member 7 is provided with a slot 11 that is formed in its upper inner surface for a purpose to be hereinafter described. By provision of the shoulders 9 and 10 and the slot 11 in the chair of the invention, it is possible to support a table top 12 on the chair of the invention in a removable manner. The shoulders 9 and 10 provide desirable and convenient support surfaces for the top 12 to which the top easily can be secured and from which the top can readily be removed. The shoulders 9 and 10 may extend slightly into the adjacent portions of the sides to form undercuts therein at local areas, as indicated at 13 and 14, Fig. 2, so that the top 12 can be locked to the frame 2. Any suitable or desirable type of lock means may be used to secure the top 12 to the frame 2. In this instance, a plurality of locking plates 15 are pivotally secured to the under surface of the top 12 adjacent the side edges thereof by conventional devices, such as rivets 16. These plates 15 can be swung into or out of engagement with the slots 13 and 14, as desired.

As a special feature of the invention, a seat 17 is pivotally supported from means that are positioned underneath the top 12 and are adjustably carried by the frame 2 for movement in a direction from front to rear of the chair 1 of the invention. This seat 17 is supported from hangers 18 which pivotally engage therewith and which engage with a support carriage 19. The carriage 19 is shown as comprising a pair of transversely extending rails 20 and 21 which are connected by means of other rails 22 and 23 that extend in a direction from front to rear of the seat 17 whereby a unitary support carriage is provided for the seat 17. Normally the rails 22 and 23 lie immediately adjacent a hole or opening or well 24 which is provided in the top 12 for receipt of an infant therein. In some instances, the hole 24 may be formed in a shape of a recess which is formed at one edge portion of the top 12. In all events, the seat 17 is supported underneath the hole 24 whereby a child or infant supported in the seat 17 can have the seat adjustably positioned with relation to the hole 24 as hereinafter pointed out. Thus the margins of the hole can aid in supporting the infant in the chair of the invention.

Usually conventional rail and track means are used to support the rail unit adjustably on the frame 2. In this instance, a plurality of longitudinally directed slots 25 are provided on the inner surfaces of the opposed sides 6 and 8 of the frame 2 and such slots 25 receive therein extension lugs 26 provided on and usually formed integrally with the rails 20 and 21. Obviously the length of the slots 25 is correlated with the size of the hole 24 in a direction from front to rear of the table so that a desired adjustment of the seat and the exposed portion of the hole 24 can be effected.

Inasmuch as the means supporting the seat 17 are adjustably carried by the frame 2, it usually is desirable to provide means for locking the seat and its supporting means in a given position. Hence in this instance there is provided a locking plate 27 that is secured to the

front side 5 of the frame 2 and extends rearwardly of the chair 1. The locking plate 27 is shown as extending through a little slot or recess 28 formed in the upper edge of the rail 21. A locking stud 29 is secured in the bottom of the recess 28 and it is adapted to engage with the holes 30 formed in longitudinally spaced positions of the plate 27 so that the locking plate will be in fixed engagement with the seat support unit or carriage. Usually a little retainer bar 31 is provided across the upper portion of the slot 28 to retain the elongate locking plate 27 in engagement therewith. The plate 27 normally is of slightly resilient construction and tends to bear upon the bottom portion of the recess 28, or upon the stud 29. A desired release device may be provided for lifting the locking plate out of engagement with the stud 29 and is shown as a release arm 32 which is pivotally secured to the rail 21 adjacent and below the slot 28. The arm 32 has an engagement flange 33 provided thereon to facilitate grasping or pressing on such arm 32. Also, the arm 32 has a finger 34 extending therefrom to prevent the arm 32 from moving beyond the desired relationship with the bar 31 and for preventing the release bar from falling below such locking plate 27, as indicated in Fig. 3.

Fig. 5 shows a slight modification of the invention where an actual channeled track member 41 is provided on a side 42 of the frame of this form of the invention and such side 42 receives the top 43 of the chair whereas again, a transversely directed rail 44 is provided for supporting the seat unit of the invention on this device. In this instance, the ends of the rail 44 engage with the channeled track 41 for longitudinal movement thereon. When desired, the track 41 could be replaced by another equivalent device such as a pair of spaced parallel wood or metal strips which are secured to the side of the frame. Usually some kind of a stop means is associated with the ends of the track to limit movement of the chair means of the invention. A stop plate 45 is shown in Fig. 5 for limiting movement of the rail 44.

It will be realized that the reverse of the mounting means shown in the present device may readily be used to support the carriage support unit. That is, a T shaped element could be secured to the side of the frame with one leg extending inwardly thereof and then this inwardly extending portion of the T member could be received in a groove cut in the end of the rail of the invention.

While the use of a plurality of rabbeted edges if shown for mounting the top plate of the chair unit, in combination with one grooved side portion, it will be appreciated that all four parts of the frame could be provided with rabbeted edges, or shoulder portions for support of the top thereon. Likewise, in some instances, a pair of adjacent edges may have slots formed therein for receipt of the top. Preferably, all of the top edges would be provided with support shoulders thereon, since that simplifies cleaning the edges of the top and provides no crevices or cracks into which food or other dirt could accumulate and not easily be cleaned therein or removed therefrom.

Other types of support carriages than that shown may be used in place of the means disclosed and might even comprise one relatively wide rail that is at about the center of the sides

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of the seat and has an offset portion that extends around the hole 24.

Fig. 6 shows a rail 51 which is a part of a seat carriage support and which has a slot 52 cut therefrom. A lock plate 53 extends through the slot 52 and has holes therein for engagement with a stud 54 that extends up into the slot 52. A release lever 55, like the arm 32, is usually again provided to aid in disengaging the plate 53 and stud 54.

In view of the foregoing, it will be seen that a chair and seat device for infants is provided wherein the sides of the opening provided in the chair for receipt of an infant can easily be varied. This adapts the chair to support an infant as it grows over a period of several years. Furthermore, the chair support means can be moved merely by release of one lock plate which can be reached from in under the chair without moving the top of the chair from its normal position. However, if desired, the top can be removed to expose the chair support means for adjustment action. Also, the top can be easily cleaned by removing same from the chair of the invention. Thus the chair provides a more secure and desirable support action for infants than does any kind of a fixed position chair. Furthermore, no safety factor is surrendered by the adjustment action provided in the chair of the invention since the center of gravity stays nicely within the chair at all times and the top and seat are in a desired fixed relation at any given time. Nor is any part of the mechanism exposed so that a child in the table cannot stick his fingers in the adjustable means or pinch them by accidental movement of the seat support. Hence it is submitted that all of the objects of the invention have been achieved and that a novel and desirable chair has been provided.

While several complete embodiments of the invention are shown in Figs. 1 through 6, attention also is directed to the modified type of a lock arm as shown in Fig. 7, which includes a lock bar 61 which is secured in a conventional manner to a front apron bar 62 of a table and chair device similar to that shown in Fig. 1 of the invention. This lock bar 61 preferably is of spring construction and is twisted upon its own longitudinal axis 90° adjacent the end thereof to facilitate supporting same on the front apron member 62. The lock bar 61 has a plurality of notches 63 provided in the upper surface thereof and it extends through a slot 64 that is provided in a carriage bar 65 that extends transversely of the seat device of the invention. In alignment with this slot 64 and over the front surface thereof, a metal plate 66 is secured. This metal plate 66 has a slot 67 formed therein which has a locking finger or lug 68 extending thereinto. The locking lug 68 is adapted to engage with any one of the recesses 63 formed in the lock bar 61 so that the carriage bar 65 and seat means associated therewith can be fixedly secured in a specific or given position with relation to the mounting frame or carriage provided therefor. The lock bar 61 can of course be pressed downwardly to disengage it from the locking lug 68 and permit longitudinal or sliding movement of the carriage means provided in this device of the invention.

A particular feature of the modification of the invention disclosed in Fig. 10 is that the carriage assembly of the invention is removably secured to the remainder of the device. In this

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instance, the frame of the table and chair device includes apron members 115, 116, 117 and 118 which removably support a top 112 therein in a manner similar to that of the other modification of the invention disclosed hereinbefore. As a special feature of this device, the carriage rail supports 120 and 121 engage with special slots 125 which are formed in the apron member 116, and slots 140 formed in the side member 118. It will be noted that these slots 125 and 140 usually extend longer depthwise (from front to rear) of the device of the invention than do the slots 25 of the embodiment of the invention of Fig. 1. This permits the movable carriage to be slid rearwardly of the device a sufficient distance to disengage a lock bar 127 from a slot 123 that is provided in the carriage bar or frame member 121. A special release portion 125a is provided on the slots 125 and extends upwardly of the side or apron 116 to the upper edge thereof. Thus the carriage rails 120 and 121, which have slight clearance in their positioning slots, can be swung upwardly into the offset portions 125a to be released from the slots 125, being pivoted on their ends received in the slots 140. Thus after the top 112 of the table and chair device is removed, at any desired time, the entire seat and carriage support provided therefor may be lifted up from the table. Release slots may be provided at both ends of the carriage rails, if desired.

Another feature of the table and chair of Fig. 10 is that the lock bar 127 provided extends through the slot 123 in the carriage bar 121 and it is adapted to engage with a locking lug 129 that is provided on a metallic plate 200 that may be suitably secured to the front face of the carriage bar 121. Usually the locking lug 129 is smaller than apertures or holes 130 that are formed in the lock bar 127 so that slight clearance is provided between these two members to permit use of same without extremely accurate positioning of these two relatively movable members.

Yet another special feature of the invention shown in Figs. 10 and 11 is that a top and back member 201 of the device is provided with rabbeted sides 202 and 203. These sides of the back and cover member are adapted to engage with complementary shaped rabbeted edge portions 204 and 205 that are provided in the top 112 at the opening 124 provided therein. Thus even though the under structure of the seat of the invention is completely removed from the device, still the back and cover member provided can be supported in its position flush with the upper surface of the top to close the opening 124. The front and rear edges of the back member 201 may also be rabbeted and engage with corresponding edge portions of the top 112, if desired. The top 112 may be notched at the rear portion of the opening 124 at the sides thereof to facilitate receiving the top and back member 201 in an upright position for providing a back for the seat positioned in the chair and table of the invention.

It will be realized that in other types of mounting rail means used in practice of the invention, such as that shown in Fig. 5, the carriage structure may be removed from engagement with the table by removal of the stop means 45 provided at the end of the rail 41.

In Fig. 13 there is shown a table top 212 that has an opening 224 formed therein and with a back and cover member 221 positioned in and

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filling the opening 224. A feature of the construction is that the member 221 is supported on plates or angles 225 that are suitably secured to the top 212 adjacent one or more pairs of opposed sides of the opening 224 and protruding into same. The angles 225 are secured to the undersurface of the top 212 and the member 221 is of such thickness that the upper surfaces of the top 212 and member 221 are flush. Downwardly extending legs 226 may be formed on the angles to avoid a sharp edge thereon in the exposed portions thereof. The angles 225 may be of suitable length and a plurality of spaced angles may be positioned on one edge of the opening 224. In some instances, it may be desired to position the angles 225 or plates, if used, pivotally on the top 212 so that they can be swung in under the top to be placed in inoperative positions.

While several complete embodiments of the invention have been disclosed herein, it will be appreciated that modifications of these particular embodiments of the invention may be resorted to without departing from the scope of the invention as defined by the appended claims.

Having thus described our invention, what we claim is:

1. An infant's table and seat comprising an open centered frame, a top carried by said frame, said frame being rabbeted on a plurality of adjacent sides to form an inner ledge for support of said top thereon, pivotal bars on said top engageable with slots formed in said frame to secure said top thereto, said top having a hole formed therein for receipt of an infant, a seat for an infant, a plurality of transversely extending rails extending across said frame, means connecting with said rails to form a unit therefrom, longitudinally extending tracks on the sides of said frame, the ends of said rails being engaged with said tracks for movement therealong to vary the position of said seat with relation to said opening, a longitudinally extending lock arm fixedly secured to said frame and extending in a direction of front to rear thereof, lock means carried by said unit for engagement with said lock arm to secure said unit in a given position, a pivotal release means carried by said unit and extending therefrom, said release means having a finger engageable with said lock arm for moving same and releasing said lock arm from said lock means.

2. An infant's table and seat comprising a frame having at least a pair of rabbeted inner top edges on opposed sides thereof and a slot provided in another side thereof on the inner surface of such side, a top carried by the rabbeted edges of said frame, and being coextensive with said frame, said top extending into said slot to be partially positioned thereby, said top having an opening formed therein, said top lying in a plane, a seat, carriage means supporting said seat under the opening in said top for access to said seat, and securing means carried by said top for removably securing said top to said frame, said top being movable in an upwardly directed vertical arc a short distance about an edge thereof engaging said slot when said securing means are released and then being adapted to be disengaged completely from said frame by short movement of said table top in the plane defined thereby away from the table frame and chair.

3. An infant's table and seat comprising a frame having sides thereon, a top carried by

said frame and being coextensive therewith, said top having an opening formed therein for receipt of an infant therein, a seat, a plurality of transversely extending rails approximately the width of said frame, means connecting said rails together to form a unit therefrom, said unit supporting said seat under the opening in said top, cooperating track and rail-track engaging means being provided on said rails and on said frame sides, said track and rail-track engaging means permitting movement of said unit in a direction from front to rear of the table to vary the effective size of the opening in said top, and means for removably securing said top to said frame at a pair of opposed edges of same to permit removal of said top and access to said unit and said track and rail-track engaging means.

4. An infant's table and chair comprising a substantially square frame, a top carried by said frame, said top having a hole formed therein for receipt of an infant therein, a seat for an infant, carriage means supporting said seat under the hole in said top, said carriage means extending the width of and being slidably carried by said frame for movement forwardly and rearwardly of same, and a removable back provided for said seat and adapted to fill the hole in said top, said top adjacent said hole being rabbeted to support said back on said top flush with the top surface thereof.

5. An infant's table and seat as in claim 3 wherein means are provided for locking said seat and rail unit in a given position.

6. A table and seat as in claim 5 wherein said lock means comprise a lock bar extending in a direction from front to rear of said frame and secured thereto, lock means carried by one of said rails and adapted to engage with said lock bar to anchor said rail in a specific position, and a release finger pivotally carried by said rail and engageable with said lock bar to release same from engagement with said lock means.

7. A table and seat as in claim 5 wherein said lock means comprise an apertured lock plate secured to said frame and extending therefrom across one of said rails, and a lock stud secured to said rail and extending therefrom in engagement with one of said apertures in said plate to lock said unit in a given position.

8. A table and seat as in claim 5 wherein said lock means comprise an apertured lock plate secured to the front end of said frame and extending rearwardly of the chair, one of said rails having a slot therein receiving said lock plate, and means on said rail for securing said unit releasably to said lock plate.

9. An infant's table and seat comprising a frame, a top carried by said frame, said top having an opening formed therein for receipt of an infant, a seat, a plurality of transversely extending rails, means connecting said rails together to form a unit therewith, said unit supporting said seat under the opening in said top, longitudinally extending support tracks secured to said frame on the sides thereof on the inner surfaces of same, the ends of said rails being engaged with said tracks for movement therealong, a longitudinally extending lock arm fixedly secured to the front of said frame and extending horizontally rearwardly therefrom, and lock means carried by said unit for engagement with said lock arm to secure said unit in a given position.

10. An infant's table and seat comprising a frame, a top carried by said frame and being

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coextensive therewith, said top having an opening formed therein for receipt of an infant, a seat, carriage means supporting said seat under the opening in said top, and means removably securing said top to said frame, said frame being rabbeted on a plurality of sides to form an inner ledge for support of said top thereon, said last named means comprising pivotal bars on said top engageable with slots formed in said frame.

11. An infant's table and seat comprising a frame, a top carried by said frame, said top having a hole formed therein for receipt of an infant therein, a seat for an infant, a plurality of transversely extending rails extending completely across said frame, means connecting said rails together to form a unit therewith, longitudinally extending tracks carried by said frame on the sides thereof on the inner surfaces of same, the ends of said rails being engaged with and supported by said tracks for movement therealong, a longitudinally extending lock arm fixedly secured to the front of said frame and extending rearwardly therefrom, lock means carried by said unit for engagement with said lock arm to se-

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cure said unit in a given position, and pivotal release means carried by said unit and extending down therefrom, said release means having a finger engageable with said lock arm for lifting same and releasing said lock arm from said lock means.

12. A table and seat as in claim 11 wherein said release means is pivotally secured to one of said rails adjacent said lock means.

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