MULTIPURPOSE STACKABLE HIGH CHAIR
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ABSTRACT OF THE DISCLOSURE
A child's high chair consisting of a plurality of hollow cylinders of successively smaller diameter, a chair, and a feeding tray. The cylinders being adapted to be stacked, one upon the other, and secured together, to form a high base for the chair and the feeding tray mounted thereon. When disassembled, the several components being nestable, one within the other, to form a compact carrying package of which the feeding tray forms the cover.

The primary object of the invention is to provide a child's high chair made up of a number of separate hollow sections that can be either, nested for easy storage, and carrying, or stacked, to provide a sturdy child's high chair including a feeding tray.

Another object is to provide a device of the type stated whose several components can be used individually, or in varied combinations, to provide a bathtub, a portable baby utility case, a youth chair, or a stool.

These and other objects of the invention will be more apparent from a reading of the following specification and claims, together with the accompanying drawings, wherein like parts are referred to and indicated by like reference numerals, and wherein:

FIG. 1 is a perspective view of the Multipurpose Stackable High Chair that is the subject of our invention, showing it in its stacked condition, with a portion of the feeding tray broken away, and in section;

FIG. 2 is a perspective view, showing the several components in their nested condition, to provide a compact package, ready for storage, or carrying;

FIG. 3 is a vertical sectional view taken along the line and in the direction of the arrows 3—3 of FIG. 1, with portions in full elevation;

FIG. 4 is a top plan view taken along the line and in the direction of the arrows 4—4 of FIG. 3;

FIG. 5 is an exploded view of a portion of two of the hollow cylinders, in their stacked condition, at one of the flange inter-locking means;

FIG. 6 is a bottom plan view taken along the line and in the direction of the arrows 6—6 of FIG. 5;

FIG. 7 is a vertical sectional view taken along the line and in the direction of the arrows 7—7 of FIG. 4;

FIG. 8 is a top plan view taken along the line and in the direction of the arrows 8—8 of FIG. 5;

FIG. 9 is a vertical sectional view taken along the line and in the direction of the arrows 9—9 of FIG. 2;

FIG. 10 is a perspective view of a low youth's chair, formed by stacking two of the components;

FIG. 11 is a perspective view showing one of the cylindrical components resting on its top wall, and serving as a bathtub;

FIG. 12 is a vertical sectional view of the utility case, formed by nesting the chair component upside-down in one of the cylindrical members; and,

FIG. 13 is a perspective view of the chair crotch piece, in its unmounted condition.

Referring more particularly to the drawing, there is seen in FIG. 1 the Multipurpose Stackable High Chair that is the subject of the invention, broadly indicated by reference numeral 10, in its fully assembled condition.

The assembled high chair 10, as seen in FIGS. 1 and 3, comprises three hollow cylindrical sections, or members, 11, 12 and 13, of successively smaller diameter, which are stacked, one upon the other, to form a high base for the chair member 14 and its attached feeding tray 15.

The several components may be fabricated from any moldable or formable material, combining the required physical properties of strength, rigidity and lightness, so that the several members, when nested together to form a compact package, as described hereinafter, can be easily carried. Suggested materials are, thermo-plastics, such as polypropylene or polyethylene; or thermo setting resins, fiber-glass re-inforced, polyesters, etc.

Each hollow cylindrical member 11, 12 and 13 has a flat top 17, continuous side walls which terminate in a peripheral flange 16, and is open to the bottom. Each cylinder top wall 17 has four diametrically spaced slot sockets 19 cast therein at the peripheral edge thereof, as seen most clearly in FIGS. 5 and 8. Each flange 16 has similarly spaced fingers 18, as seen FIGS. 5 and 6, adapted to inter-fit the sockets 19 and lock the stacked cylindrical members together, upon clock-wise rotation, as seen in FIG. 3.

It is, of course, to be understood that other means might be used to provide inter-locking of the stacked members.

The so stacked and locked cylinder members 11, 12 and 13 provide a base for the chair member 14, of a height to position a child seated in the chair at the proper height at a conventional dining table. It is to be understood that we do not intend to limit the present invention to any particular number of cylindrical members.

The chair member 14 has a contoured seat 21 and a peripheral mounting flange 16 including locking fingers 18 which inter-fit the sockets 19 of the top cylindrical member 13, to anchor the chair 14 securely on top of the so assembled base.

The front portion of the cylindrical member 13 is contoured at 23 and 24 to provide comfortable support for the legs of a child sitting on the seat 21 of the chair member 14.

Reference numeral 15 indicates a feeding tray adapted to be mounted on the top edge of the chair member 14, as seen in FIGS. 1, 3 and 4. The tray 15 has an inner opening bounded by a rim 32 and a peripheral rim 34. The inner rim 32 has a continuous slot 33 centered therein which is adapted to receive the upper edge of the chair therein, as seen in FIG. 7. The so mounted tray 15 is locked in place on the chair 14 by three spaced tabs 30 having lock buttons 31 which interfit similarly spaced holes 23 in the chair wall as again seen most clearly in FIGS. 7 and 10.

The outer rim 34 of the tray has four circumferentially spaced, inwardly extending, lock fingers 35, each of which is spaced downwardly of the underface of the tray.
and parallel thereto, a distance equal to the thickness of the flange 16 of the cylindrical member 11; for a purpose to be disclosed hereinafter.

The flange 16 of the cylindrical member 11 has four similarly spaced notches 41, cut therein, of a width to clear the fingers 35 of the tray.

Reference numeral 27 indicates a crotchet piece which is positioned at the front of the chair 14, extending in a vertical plane between the seat 21 and the tray rim 32, as seen in FIG. 1. The crotchet piece 27 is centered between the legs of a child seated in the chair, and serves to prevent the child from falling or sliding forward, out of the chair.

The crotchet piece 27 is removably mounted in place by means of a button 28 at its lower end which seats in a hole 26 centered in the cylindrical member 13 between its contoured sections 23 and 24, as is most clearly seen in FIG. 10. The upper end of the crotchet piece has a tongue 29 which is inserted into the inner tray rim slot 33 and anchored in place by the button 31 of a fourth rim tab 30, not visible in FIG. 1, which interfits a hole 40 immediately below the tongue 29, as seen in FIG. 13.

The so stacked and locked unit is all-of-a-piece, and the wide diameter of the lowest cylindrical member 11 provides a structure that is stable and non-tipable.

To dismantle the unit for storage or transporting, the following procedure is followed:

The tray 15 is disengaged from the chair 14 and the crotchet piece 27; the crotchet piece is removed; the chair member 14 is rotated counter-clockwise to disengage its locking means from the base; the cylindrical members 12 and 11 are similarly released from one another.

The largest diameter cylinder 11 is inverted and made to rest on its top wall 17, as seen in FIG. 9. Cylinders 12 and 13 are similarly inverted and nested within cylinder 11. The chair member 14 is nested inside cylinder 13 with its seat 21 uppermost.

The tray 15 is then positioned over the flange 16 of cylinder member 11, with its four lock fingers 35 aligned with the four flange notches 41, and rotated until the fingers 35 clear the notches and engage the flange 16 to provide a compact package 60 having the tray 15 for a cover, with the inverted chair seat 21 acting as a closure for the central opening of the tray, as seen in FIG. 2.

The tray rim 34 has a hand-grip opening 37 and a flattened section 36, diametrically opposite the hand-grip, which acts to prevent rolling of the package 60 when it is set down on its edge.

The several members may be used individually or in varied combinations to provide the following useful items:

1. A bathinet.—Cylindrical member 11 may be used as bathinet by inverting it, with its top wall 17 down, and filling it with water, as seen in FIG. 11. The use of cylindrical members 12 or 13 in the same way will provide smaller units.

2. A stool.—Created by stacking the cylindrical members 11, 12 and 13, only, omitting the chair member 14.

3. A low, youth's chair.—Created by using cylindrical member 13, only, as the base for the chair member 14, and omitting the tray 15, as seen in FIG. 10.

4. A portable baby utility case.—Created by nesting the chair member 14 within the cylindrical member 13, in an inverted position, and securing them together through locking means 39, as seen in FIG. 12, and identified by reference numeral 50. The utility case 50 can be used to carry various baby supplies such as diapers, dusting powder, etc. A cord handle 38, for carrying the case is mounted on the side wall of cylindrical member 13.

It will now be clear that there is provided a device which accomplishes the objectives herefore set forth.

While the invention has been disclosed in its preferred form, it is to be understood that the specific embodiment thereof, as described and illustrated herein, is not to be considered in a limited sense, as there may be other forms or modifications of the invention which should also be construed to come within the scope of the appended claims.

We claim:

1. A multipurpose stackable high chair, comprising in combination:
   a. a plurality of rigid hollow cylindrical members of diminishing cross-section;
   b. each having a flat top wall and a continuous side wall, open to the bottom, bounded at its lower edge by a peripheral flange;
   c. an upstanding chair member having a peripheral flange at its lower edge;
   d. a circular feeding tray member of a diameter equal to that of the largest cylindrical member flange; the tray having a peripheral rim and a rimmed central opening adapted to fit around the chair member at the upper edge thereof;
   e. the cylindrical members being stackable, one upon the other, to form a base for the chair member;
   f. co-operating lock means positioned on the cylindrical member top walls and the flanges of said cylindrical and chair members;
   g. said co-operating lock means being movable between first, engaged, and second, disengaged, positions upon relative rotation of the stacked members;
   h. when in their first position the lock means engage to join the stacked members inseparably together; when in their second position the lock means disengage the stacked members; which then may be nested, one within the other, with the tray member peripheral rim fitted and secured to the peripheral flange of the largest diameter cylindrical member, to provide a compact package for which the tray member serves as a cover.

2. A multipurpose stackable high chair, as in claim 1, wherein the co-operating lock means comprise a plurality of circumferentially spaced female socket elements formed in the top wall of each cylindrical member, at the peripheral edge thereof, and a plurality of similarly spaced, inwardly projecting, male finger elements on the flanges, engageable with said female sockets, to secure mating parts together, upon relative rotation of the stacked members.

3. A multipurpose stackable high chair, as in claim 1, wherein the inner rim of the tray member has a groove in the lower edge thereof adapted to fit over and seat on the upper edge of the chair member; said inner rim having lock means engageable with the chair member, at the rim, to secure the tray and chair members together.

4. A multipurpose stackable high chair, as in claim 1, wherein the feeder tray member outer rim has a plurality of circumferentially spaced, inwardly projecting, fingers, spaced downwardly of the under face of the tray a distance equal to thickness of the flange of the largest diameter cylindrical member; said flange having a plurality of similarly spaced notches cut in the peripheral edge thereof of a width to clear the fingers when aligned therewith in pressed engagement with the under face of the tray; said tray being locked to the cylindrical member through its flange when the fingers are rotated out of alignment with the flange notches.

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