Oct. 2, 1951 E. B. CHANSLOR ET AL 2,569,555

UTILITY FRAME

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Fig. 1.

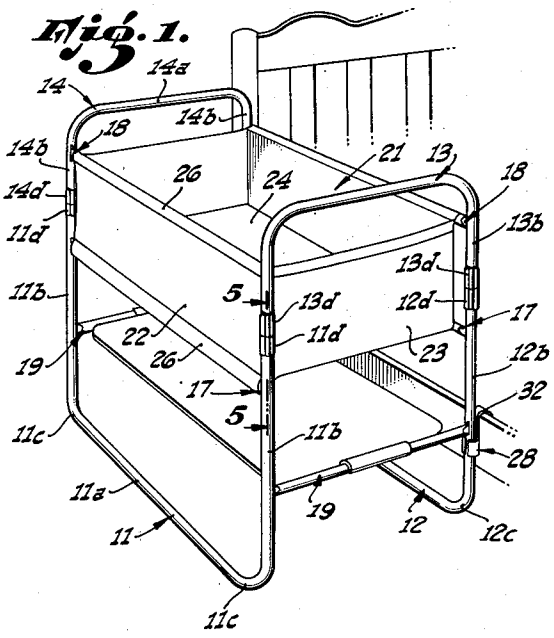
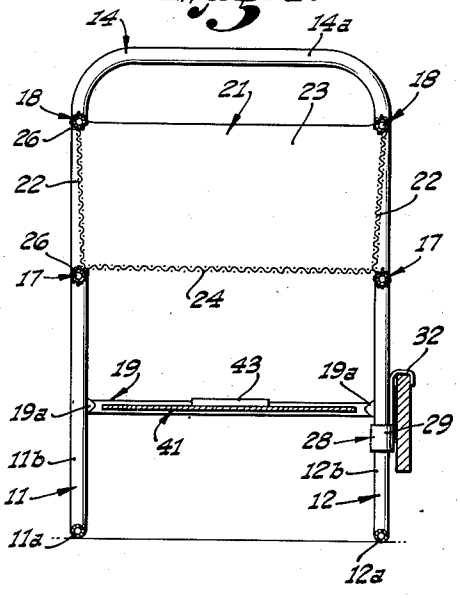


Fig. 2.



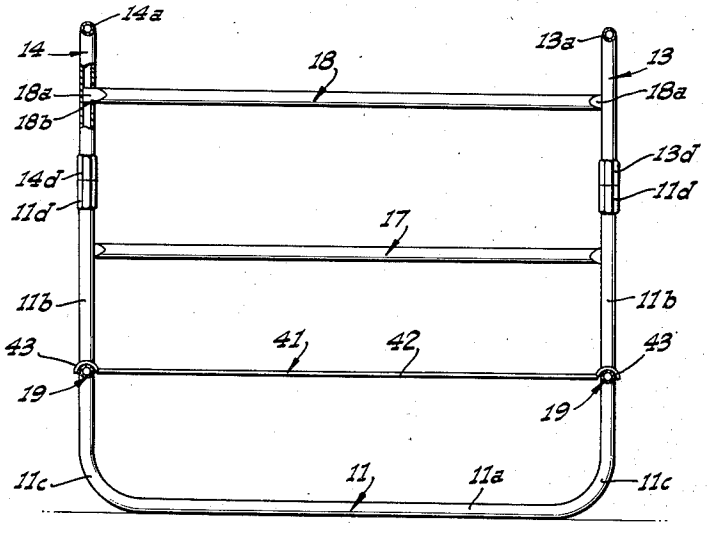


Fig. 3.

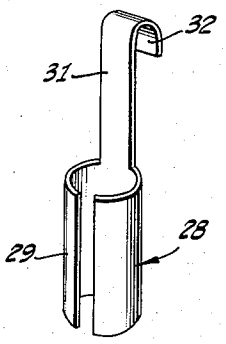


Fig. 4.

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Fig. 5.

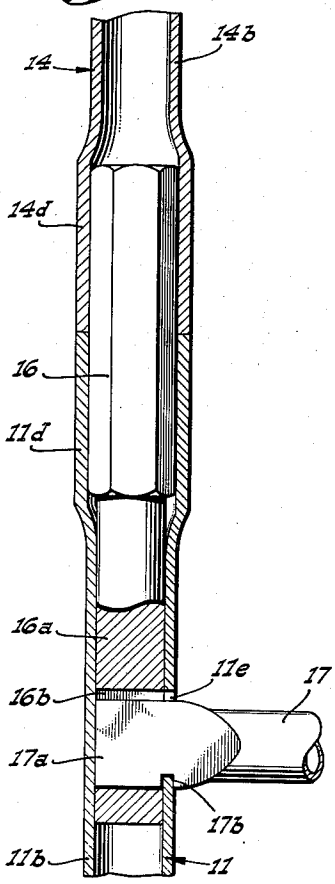
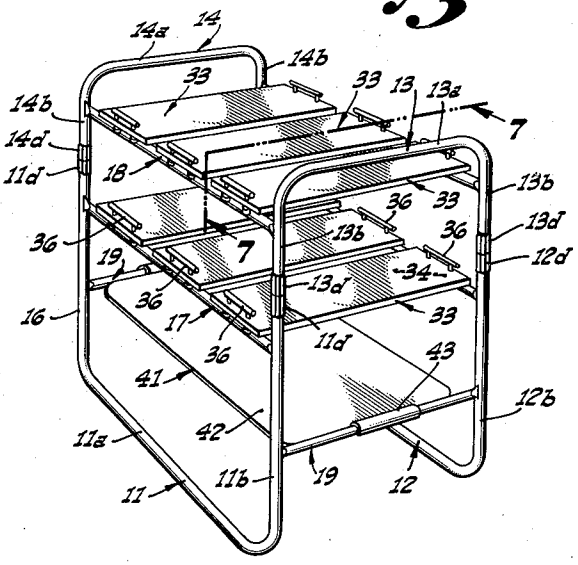


Fig. 6.



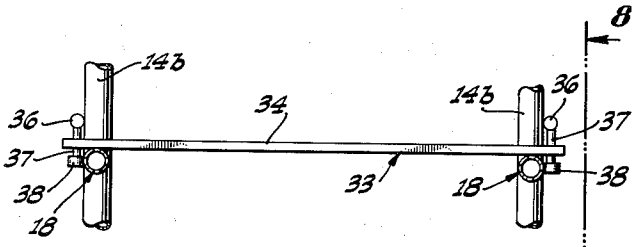


Fig. 7.

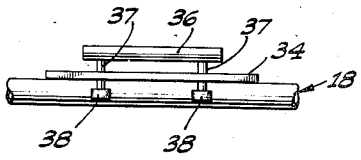


Fig. 8.

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UTILITY FRAME

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Application June 10, 1946, Serial No. 675,528

7 Claims. (Cl. 5—93)

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The present invention relates to supporting means in general and particularly to a new and novel frame constructed and designed as to be capable of performing a plurality of desirable and necessary functions. More specifically the invention comprises a demountable frame constructed and arranged as to function as a child's crib or as a cocktail table.

Children's cribs have formed an integral part of the home from the dawn of civilization. The young child requires a special bed in which it can be placed in comfort and in which it will remain with safety. The ordinary adult size bed is not suitable for the very young child as it provides no safeguards to prevent the child from rolling off onto the floor. In the special child's crib, usually made in dimensions only a fraction of those of the full size adult bed, sides are provided of sufficient height to serve as barriers or guards for purpose of safety.

It is the history of the use of children's cribs however that they gradually pass from the very center of the stage of home life into a state of disuse to find their final abode in some storage closet or attic from which they are recalled only upon the appearance of a new offspring whereupon the cycle is repeated, being always of substantially the same time duration. An economic loss is involved in this type of usage which is greater or lesser in degree and in proportion to the number of children in the family. Being primarily designed for a single purpose, the crib becomes non-utilitarian after it has served that function and remains usually only as a reminder of the past.

With an appreciation of the normal life history of children's cribs, and with a full awareness of their vital function in the family life, the present invention has been made and provides a construction which embodies all of the functional usefulness and capabilities of the child's crib and in addition thereto other functions and abilities which entirely change the history of its usefulness. According to the present invention, a utilitarian frame is provided which is so constructed and arranged as to form the supporting structure of a child's crib when needed for that purpose. Being constructed of a multiplicity of interrelated and interfitting parts, it is adapted to be disassembled readily and with a minimum of physical labor and converted into a utility table particularly suitable for beverages and foods, a table of the type commonly referred to as a cocktail table. When not needed as a crib, it stands ready to perform this second function and accordingly is continuously useful throughout its entire life instead of being useful only intermittently.

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With the foregoing in mind it is an object of the present invention to provide a utilitarian frame suitable as the supporting framework of a child's crib and also as the supporting frame of a cocktail table. It is a further object of the invention to provide a frame for a child's crib formed of a plurality of interfitting parts which are readily assembled and disassembled. It is still a further object of the invention to provide a child's crib which is convertible into a cocktail table, and vice versa.

These and other more specific objects will appear upon reading the following specification and claims and upon considering in connection therewith the attached drawings to which they relate.

Referring now to the drawings, in which a preferred embodiment of the invention is illustrated:

Figure 1 is a view in perspective of a child's crib constructed in accordance with the present invention;

Figure 2 is a transverse vertical section through the crib shown in Figure 1;

Figure 3 is a vertical longitudinal section through the framework comprising the present invention;

Figure 4 is a bracket element by which the framework is secured to an adult bed;

Figure 5 is a longitudinal section through one of the joints, being taken upon the line 5—5 of Figure 1;

Figure 6 is a perspective view of the present invention converted into a cocktail table;

Figure 7 is a transverse section upon the line 7—7 of Figure 6;

Figure 8 is a partial side view looking in the direction of the arrows upon the line 8—8 of Figure 7.

Referring again to the drawings and to Figures 1 to 5, inclusive, the frame constructed in accordance with the present invention is disclosed embodied in a child's crib. The frame proper is seen to comprise four main U-shaped body members 11, 12, 13 and 14 which are preferably metallic, tubular and exteriorly finished as to provide a pleasing appearance. Members 11 and 12 are the side floor-contacting members and each includes an elongated horizontal extension 11*a* which rests upon the floor and from the ends of which extend upright sections or legs 11*b* connected thereto by gently curved corners 11*c*. Side member 12 is a duplicate of member 11 in each detail. The

upper ends of the vertical portions 11*b* and 12*b* are slightly enlarged to form irregularly sectioned, preferably hexagonal, receptacles or sockets 11*d* and 12*d*.

Spaced lower body members 11 and 12 are seen to be parallel and to have their vertical elements 11*b* and 12*b* connected by the upper body frame members 13 and 14, which, in a manner similar to members 11 and 12, are provided with horizontal and vertical portions 13*a*, 14*a*, and 13*b*, 14*b*, respectively. The lower extremities of the vertical legs 13*b* and 14*b* of members 13 and 14 are enlarged and given an irregular section to form sockets 13*d* and 14*d*, respectively, and into each is fixed, as by being pressed or welded, a similarly sectioned projecting pin 16 the lower end 16*a* of which is cylindrical and of a size to fit snugly in the vertical legs of the lower U-shaped frame member positioned thereunder and into which it extends for some distance.

A pair of vertically spaced straight tubular side members 17 and 18 extend upon opposite sides of the frame between the vertical legs of the U-shaped frame members. These side members are flattened at their ends, in the manner shown at 17*a* in Figure 5, so as to extend through a slot formed in each vertical leg of the principal frame members. This slot is indicated at 11*e* in Figure 5 for frames member 11 and is exemplary. The height of flattened portion 17*a* is such as to enable it to be inserted through the slot 11*e* so that a notch 17*b* on its underside can seat the leg wall to effectively lock member 17 against lateral displacement in the absence of a vertical displacing force. Each of the lower side members 17 also performs a joint locking function and in the following manner. The lower cylindrical end 16*a* of each joint pin 16 extends below slot 11*e* and is itself provided with a transverse channel or slot 16*b* into which the flattened portion 17*a* extends. The pin cannot be displaced vertically until the side member 17 has been displaced and this provides an interlocking relationship which prevents the upper and lower main frame members being separated unintentionally. The lower main frame members 11 and 12 are slightly spring-like and the transverse side members 17 are of a length such that with the notches 17*b* seating the wall of the vertical legs 11*b* and 12*b*, each frame member is slightly tensed, thereby providing a tight fit at the notches 17*b* and insuring greater rigidity and an entire absence of looseness or play.

The upper tubular side elements 18 are also provided with flattened ends 18*a* and extend through "*e*" slots in members 13 and 14 at its opposite ends. They connect between the downwardly extending legs of upper main frame members 13 and 14 in the identical manner that members 17 connect the upwardly extending legs of lower main frame members 11 and 12. The only difference lies in the fact that members 18 perform no joint locking function as do members 17. Members 18 are also of such length that with the members 17 in place, the notches 18*b* seat tightly in the manner previously described in connection with the notches 17*b*. The members 17 and 18 upon the opposite sides of the frame are positioned above and below the joints, and are separated vertically by a distance which is suitable for the depth of the bed portion of a child's crib or bassinet.

The framework proper also includes horizontally extending tubular end members 19 provided,

in the manner of members 17 and 18, with flattened end portions 19*a* and which seat in the opposed and parallel vertical leg portions of the lower frame members 11 and 12 in the manner previously discussed in connection with the side horizontal elements 17 and 18. Members 19 are positioned vertically substantially midway between members 17 and the supporting surface and complement horizontal portions 13*a* and 14*a* of the top main frame members in giving transverse rigidity to the frame.

The frame which has now been described is adapted for use as an integral part of a child's crib or as the supporting base or framework of a cocktail table. Its use as a crib or bassinet is illustrated in Figures 1 and 2, in which the frame assembled as described carries an open topped flat sided and flat bottomed box-like receptacle 21. The side walls of this receptacle are indicated by the reference character 22, the end walls by the reference character 23, and the bottom by the character 24. Open hems or sleeves 26 extend along the upper and lower edges of side walls 22 and seat the horizontal side elements 17 and 18. In assembling, elements 17 and 18 are inserted through the sleeves 26 prior to being connected into the framework and when finally incorporated therein are so positioned as to draw taut the sides, ends and bottom walls of the receptacle in the manner shown in Figures 1 and 2. The receptacle 21 may be made of any suitable material, a strong cloth such as canvas being suitable, or even of sheet metal if desired.

It is often desirable that the crib be retained in close proximity to the bed of the parent and to aid in securing it in such a position a bracket 28, such as that illustrated in Figure 4, is provided. Bracket 28 includes a lower split cylindrical portion 29 and an upward extension 31 turned over at its end to form a hook 32. The bracket is adapted to be positioned, as shown in Figure 1, upon one of the vertical legs, as for example 12*b*, and immediately below the transverse end member 19. When so positioned the upper hooked end 32 is adapted to extend over the side rail of the bed where it functions to fix the position of the bed and the crib.

The frame constructed, as stated, is also adapted for use as the supporting structure of a combination food and drink or cocktail table. When so used, the receptacle 21 is entirely omitted and between the horizontal side members 17 and 18 are positioned a plurality of trays 33, each of which comprises a flat base 34 at the ends of which are positioned handle elements 36, including spaced bolts 37 so positioned as to extend immediately outside and adjacent to the supporting elements 17 or 18. The lower end of each bolt 37 carries an abutment ring 39 which is preferably of a non-abrasive material such as rubber and which is so positioned as to contact the side of its supporting element 17 or 18 to eliminate entirely all danger of accidental transverse displacement. In a preferred arrangement three trays 33 are supported upon the upper side members 17 and an additional three trays upon the lower members 18. At a still lower level and between the end members 19, a single elongated tray 41 is mounted. Element 41 may well be made of a single piece of metal or plastic, of a length as to fit between the elements 19, and of a width slightly less than the width of the frame proper. Its base 42 is formed with

slightly hooked ends or handles 43 which rest upon elements 19 to provide a secure support.

When supporting the trays 33 and 41 as illustrated in Figures 6, 7 and 8, the construction is an acceptable article of household furniture performing a desirable function. When functioning as a child's crib, as shown in Figures 1, 2 and 3, it is as suitable as constructions having no other capabilities. Being formed of a plurality of interengaging parts it is readily assembled and disassembled and without the use of tools. The crib receptacle is easily removed and replaced by a fresh receptacle, a feature of importance particularly when the unit is used as standard hotel equipment. The entire frame may be made of a polished metal, coated, sprayed, painted or varnished as desired, and the cooperating and removable trays may be artistically designed and colored to present a most pleasing appearance.

While the particular apparatus herein shown and described in detail is fully capable of attaining the objects and providing the advantages hereinbefore stated, it is to be understood that it is merely illustrative of the presently preferred embodiment of the invention and that no limitations are intended to the details of construction or design herein shown other than as defined in the appended claims.

We claim:

1. A utility frame comprising spaced parallel upwardly opening U-shaped main frame members each formed with a surface contacting portion and with upwardly extending legs, spaced parallel downwardly opening U-shaped main frame members extended between said upwardly opening U-shaped members and formed with downwardly extending legs, break joints removably connecting the legs of said upper and lower frame members, and a pair of vertically spaced side members lying in the plane of each of said upwardly opening U-shaped members, one connecting the upwardly extending legs of each of said upwardly opening U-shaped members at a level below said break joints, and the other connecting the downwardly extending legs of different downwardly opening U-shaped members at a level above said break joints, and a receptacle positioned between said upwardly opening U-shaped frame members and provided with supporting means along its sides seating on said vertically spaced side members.

2. The structure recited in claim 1, characterized in that each of said break joints comprises a socket formed in one leg and a projecting pin carried by the abutting leg, and in that said pin and socket are slotted and the end of one of said vertically spaced side members extends into said slots to prevent unintentional separation of said break joint.

3. The structure recited by claim 1 characterized in that each of said break joints comprises a socket formed in one leg and a projecting pin carried by the abutting leg, and in that said pin and socket are slotted and the end of one of said vertically spaced side members extends into said slots to prevent unintentional separation of said abutting legs from each other, and further in that said end of said side member has a notch in the bottom side thereof engaging the bottom end of the slot in said socket, so as to prevent unintentional separation of said side member from the abutting leg.

4. The structure recited by claim 1, characterized in that said receptacle includes side walls, each of which is attached at its top and bottom edges to the upper and lower side members, respectively, whereby said side members are tied together by said receptacle side walls, thereby preventing unintentional separation of said abutting legs from each other.

5. The structure recited by claim 1, characterized further in that each of said break joints comprises a non-circular socket formed in one leg and a companionate pin of non-circular cross section projecting from the abutting leg and received in said socket, said pin and socket cooperating to prevent relative rotation between said legs at said break joint, whereby said U-shaped main frame members are braced against twisting with respect to one another.

6. The structure recited in claim 1, characterized further in that said frame members and said side members are formed of round tubing, and in that each of said break joints comprises a socket formed in one leg and a projecting pin carried by the abutting leg and received in said socket, said pin and said socket having aligned slots formed therein, and said vertically spaced side members having their ends flattened to pass through said aligned slots and being received therein, said flattened end portions having notches formed in the bottom edges thereof which engage over the bottom ends of the slots in said socket, whereby said side members are prevented from being withdrawn from said slots, and said pins are prevented by said side members from being withdrawn from said sockets.

7. The structure recited in claim 1, characterized further in that at least one of said U-shaped main frame members is constructed of elastic material and is initially formed with the legs in a non-parallel relationship, said legs being forcibly sprung to a parallel relationship at the time the frame is assembled, so that said frame members are slightly tensed, thereby eliminating looseness or play in the joints and increasing rigidity of the structure.

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