L. K. EBERSOLE
PORTABLE FOLDING CRIB

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This invention relates to portable folding cribs. An object of this invention is to provide a full sized crib for infants and children which may readily be folded or collapsed into a compact symmetrical body for storage or easy transportation requiring a minimum of space and being light in weight.

Another object of this invention is to provide a crib which may readily be set up from the folded form into a structure having all the stability of a non-folding construction of equal size and similar parts.

Another object of this invention is to provide a crib which may be opened into set-up position, and locked in such position by a single individual in a minimum of time and with a minimum of effort.

Still another object of this invention is to incorporate a center support for the crib increasing the set-up stability without increasing the size of the folded form.

And a further object of the invention is to provide a foldable crib structure in which all the parts necessary for full assembly are incorporated within the structure thereby eliminating any separate pieces which could be mislaid, lost or forgotten when the crib is transported from place to place.

Other objects and advantages of this invention relating to the arrangement, operation and function of the related elements of the structure, to various details of construction, will be apparent to those skilled in the art upon consideration of the following description and appended claims, as will be the combination of parts and the economies of manufacture, reference being had to the accompanying drawings forming a part of this specification wherein like reference characters designate corresponding parts in the several views.

Referring to the drawings:

Fig. 1 is a side elevation of the crib, in set-up position, ready for use;

Fig. 2 is a view on the line II—II, Fig. 1;

Fig. 3 is a view on the line III—III, Fig. 2;

Fig. 4 is a view on the line IV—IV, Fig. 2;

Fig. 5 is an end view of the folded crib;

Fig. 6 is a side view of the folded crib;

Fig. 7 is a bottom plan view of the folded crib;

Fig. 8 is a view looking into a side rail and center support joint in folded position;

Fig. 9 is a fragmentary view of a corner post showing the pocket for a post-to-secondary-frame connection; and

Fig. 10 is a side elevation of a portion of an alternate construction for the upper edge of the secondary frame.

Under conditions wherein caretakers for infants and children are not available nor desirable and it is desired to take the children from place to place, the crib herein may be carried along without undue burden or inconvenience. Also the crib is highly desirable for limited living quarters or as a spare.

The crib frame comprises four corner posts 20, 22, 24, and 26. These posts may be mounted on casters or slides 28 for ready shifting over the crib supporting surface.

The side and end connections assembling these posts are articulated constructions. The side rails are formed by a pair of elements as bars 30, 32, each section having their remote ends attached by hinges 34 to the two opposing faces of the posts 20, 22, and 24, 25, and joined together centrally of the crib sides by means of hinges 36. The end rails have a similar construction, sections or bars 38, 40, being attached to the opposing faces of the posts 20, 24, and 22, 26, by means of hinges 42 and joined together centrally of the crib ends by means of hinger 44. It is obvious this primary frame construction may readily be collapsed or folded into a compact body, the hinged sectional rail construction being folded and posts drawn close together.

Means are provided to limit the opening movement of the rails to a horizontal position and to this end, the posts mount a stop 45 for each side rail section and a stop 48 for each end rail section. These stops not only determine the horizontal position of the side and end rails in set-up position but relieve the strain on the post-rail connecting hinges when the crib is occupied so that all the weight is substantially carried by these stops. These stops are herein shown as angle brackets fixed on the posts and may be of such size and strength as to provide a safety factor far beyond any load for which the crib may be designed to carry.

Locking means are provided for holding the crib in its laterally extended or set-up position. On the outer end side of each post, a strut or bar 50 is pivotally mounted and extends inwardly therefrom. On each end of the two bars 50 are cut-out extents 52 and the two bars on each crib end are pivotally connected together within these regions so that the bars may be swung into position to form a continuous asymmetrical extent across the crib ends. In this straight-line position these bars form a brace and lock for the lat-
eral crib set-up. Auxiliary locking is also provided insuring against any accidental up-setting of the straight-line bar assembly. A hook 54 is hinged to one of the end rail sections at each end of the crib and adjacent the hinges 44 and as the crib is set up these hooks may be swung over to engage the straight-line positioned bars 56 centrally thereof. Weight downwardly on the primary frame maintains the bars 50 in alignment.

Centrally lengthwise of the crib, additional primary frame supporting means are provided with locking means incorporated therewith for the side rails in set-up position.

An angle bracket 56 is mounted on the inner face of each side rail section adjacent the abutting ends thereof forming two pairs, one pair on each side of the crib. Each pair pivotally mounts one end of a leg forming bar 55 which bars extend toward and cross each other, being pivotally joined together by pin 60. Cut-out regions 62 adjacent the pivot 60 permit partial nesting of the central legs 55 when the crib is folded.

These auxiliary legs 58 have portions 64 extending abruptly away from the brackets 56, the purpose of which is hereinafter made fully apparent.

Secondary frame construction provides sides and ends for the crib. These sides and ends are formed from bars 55 pivotally interconnected into lazy-tong assemblies. The termini 66 of each side and end unit are connected by links 68 to pins 70 passing through suitably dimensioned pockets 72 in the respective posts for accommodating the link movements from crib set-up to folded positions. In crib folded position these lazy-tong barriers form compact bodies and are readily expanded into suitable retaining walls for an occupant of the crib.

Attached to a lower joint of two centrally disposed bars 65 on each side barrier is an angle bracket 74 which engages the under side of a side rail unit 30 when the crib is set up. This not only serves to help support the side rails and limit the horizontal positioning thereof but maintains the side walls of the secondary frame from bulging away from the primary frame.

The side rails locking is accomplished by hook and eye connections 76 between the brackets 74 and the central legs 55. With this hook and eye connection in place, there is rigidity between the surrounding parts. The hook and eye connections are readily uncoupled and when the frames are collapsed, slots 78 in the side rail engaging legs of the brackets 66 permit the side rail sections to be folded toward each other while likewise permitting a folding of the central legs 55.

The side and end rails mount a suitable flexible floor 80 such as canvas or the like with cut-out regions 62 adjacent the corners and the other inclined regions. This defeats bunching of the floor at these points and gives manual access therethrough to aid folding of the crib, without detracting from full utility for the floor.

From storage or folded position (Figs. 5, 6) it is only necessary to spread the posts, the side and end rails falling naturally into position, then a connection of the hooks 54 over the braces 50 and a hooking of the hook and eye connections 76 and the rigid and stable crib is ready to be used. From this set-up (Fig. 1) a reversal of these operations brings the crib back to its easily portable form. This form being substantially a regular or symmetrical body lends itself to being placed into a simple carrier such as a bag or the like for ready transportation.

In the event it is desired to provide an unbroken upper edge or rail for the ends and sides, the upper joints of the bars 55 may have a flexible binding or hook 84 cemented or otherwise attached thereto which folds into the collapsed form.

While the structure shown herein is particularly adapted to be fabricated from wood, metal may be used for all the parts, especially the lighter weight metals and such construction needs only the changes as would be well known from this disclosure.

In the use of a flexible floor 80, there is naturally some give thereto, some sag and with continued use some stretch. By the abrupt drop away portions 64 of the legs 58, a child would not cause the underside of the floor 80 to bump the legs thereby preventing possible discomfort or injury, even though considerable sag develops.

The end rails may be centrally supported from the secondary frame by brackets 86 attached to a central lower joint on each end portion extending therefrom to engage the lower side of a section 30 or 43 adjacent the brackets 66.

It is to be understood that the above detailed description of the present invention is intended to disclose an embodiment thereof to those skilled in the art, but that the invention is not to be construed as limited in its application to the details of construction and arrangement of parts illustrated in the accompanying drawings, since the invention is capable of being practiced and carried out in various ways without departing from the spirit of the invention. The language used in the specification relating to the operation and function of the elements of the invention is employed for purposes of description and not of limitation, and it is not intended to limit the scope of the following claims beyond the requirements of the prior art.

With the help and it is desired to secure by United States Letters Patent:

1. In a portable folding crib of the class described, a primary frame comprising corner posts, articulated side and end rails connecting said corner posts, said side rails providing joints substantially centrally between said posts, a foldable floor for the crib carried by said primary frame, auxiliary supporting legs for said primary frame, and hinge means for mounting said auxiliary supporting legs to said side rails adjacent the centrally disposed joints.

2. In a portable folding crib of the class described, a primary frame comprising corner posts, articulated side and end rails connecting said posts, said side rails providing joints substantially centrally between their respective supporting posts, a foldable floor for the crib carried by said primary frame, secondary frame means including foldable barriers carried between said posts to provide sides and ends for the crib, auxiliary supporting legs for said primary frame, hinge means for mounting said auxiliary supporting legs to said side rails adjacent the centrally disposed joints, and means for detachably locking together said auxiliary legs to said secondary frame means.

3. In a portable folding crib of the class described, a primary frame comprising corner posts, articulated side and end rails connecting said posts, a foldable floor for the crib carried by said side and end rails, secondary frame means providing barriers for the sides and ends...
of said crib, foldable means connecting said posts at the ends of said crib for holding said posts in spaced relationship when said crib is in set-up position and additional means detachably connected between the end rails and the foldable means when the crib is in set-up position to thereby reinforce said end rails against a load placed upon the floor of the crib.

4. In a crib of the class described, an articulated primary frame, a secondary frame of lazy-tong construction providing ends and sides for said crib, said lazy-tong construction including a series of spaced joints along the upper periphery of the crib, and a foldable hood for said joints providing an upper rail for the crib when said crib is in set-up position.

5. In a foldable crib of the class described, a primary frame comprising four corner posts each having an end and side rail section hinged thereto, hinge means for connecting said side and end rail sections together, a foldable floor for said crib carried by said side and end rails, auxiliary supporting legs for said side rails hingedly connected thereto adjacent the junctions of the side sections, a secondary frame comprising lazy-tong barriers mounted by and between said posts to provide ends and sides for the crib, means interconnecting the lower central portions of said ends and sides with the adjacent end and side rails when said crib is in set-up position, and means for detachably connecting said secondary frame with the auxiliary legs to lock said crib in the set-up position.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>609,491</td>
<td>Ashwell</td>
<td>Aug. 23, 1896</td>
</tr>
<tr>
<td>907,295</td>
<td>Segal</td>
<td>Dec. 22, 1908</td>
</tr>
<tr>
<td>914,154</td>
<td>Binney</td>
<td>Mar. 2, 1909</td>
</tr>
<tr>
<td>1,247,192</td>
<td>Whable</td>
<td>Nov. 20, 1917</td>
</tr>
</tbody>
</table>

FOREIGN PATENTS

<table>
<thead>
<tr>
<th>Number</th>
<th>Country</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>15,151</td>
<td>Great Britain</td>
<td>1887</td>
</tr>
</tbody>
</table>