April 26, 1932. V. I. NIGG 1,855,307

FOLDING CRIB

Filed Nov. 11, 1929

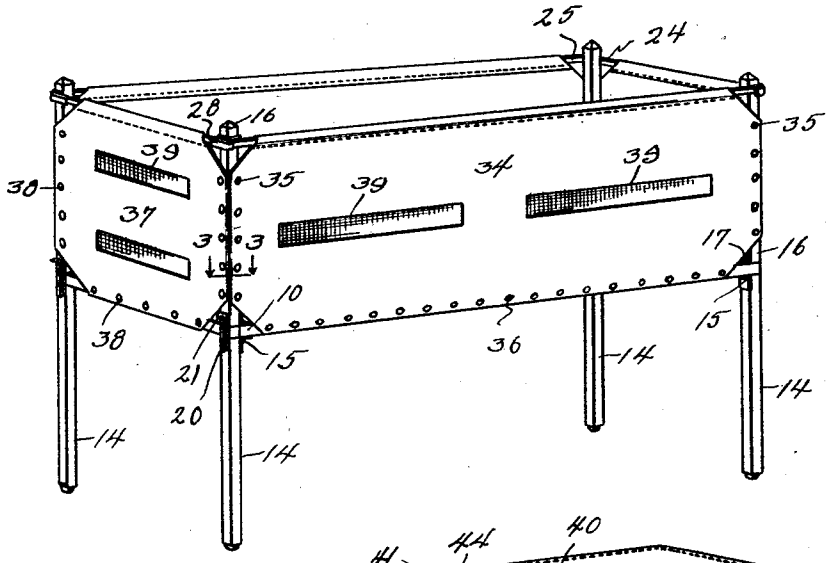


Fig. 1

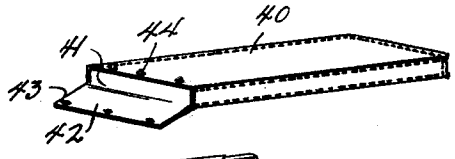


Fig. 7

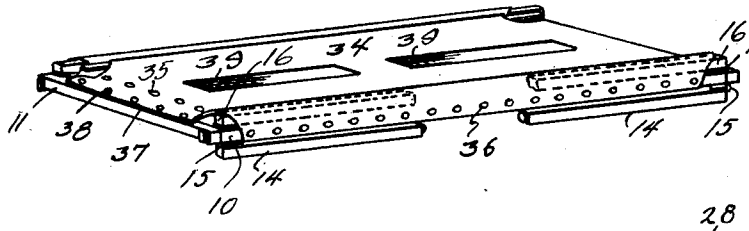


Fig. 2

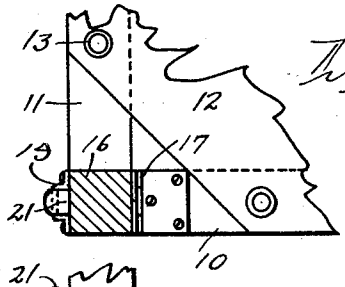


Fig. 3

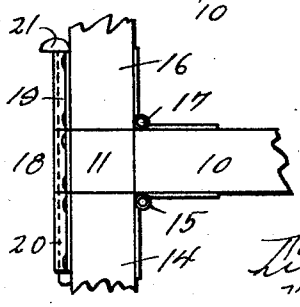


Fig. 4

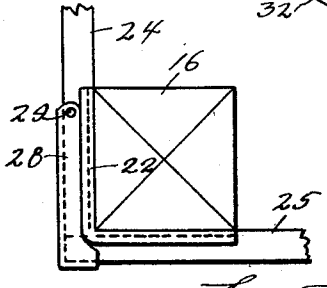


Fig 5

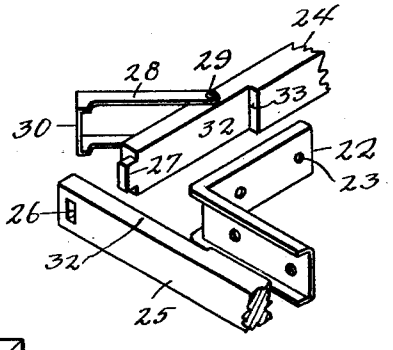


Fig 6

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UNITED STATES PATENT OFFICE

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FOLDING CRIB

Application filed November 11, 1929. Serial No. 406,241.

My invention relates to babies' cribs and has for its primary object to provide a crib which may be folded into a compact bundle.

More specifically it is my object to provide a crib including a bottom, legs supporting the bottom, upright corner posts and side members secured between said corner posts, the legs and corner posts and side members all being foldable against the bottom in such a manner as to form a flat package, the bottom retaining the same shape at all times.

A further object is to provide a device of this character in which the sides and the supporting portion of the bottom may be formed of canvas or other suitable fabric material, the parts being so arranged that the canvas may be partially detached from the bottom and corner posts in order to allow the folding movement described in the last paragraph.

My invention is carried out in a crib in which the corner posts are hinged to the bottom and adapted to fold as hereinbefore stated and in which a plurality of connecting bars are secured between the upper extremities of the posts, the side portions of the fabric being hung from said bars.

My invention contemplates a detachable connection between the bars and the posts, whereby the bars may be quickly detached from the posts to allow the posts to fold.

A further object of my invention is to provide a construction which is very durable and strong and yet which is not unduly complicated and which may be manufactured at a reasonable expense.

An object of my invention is to provide a crib which will provide ventilation for the infant sleeping therein.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which:

Fig. 1 is a perspective view of the crib.

Fig. 2 is a perspective view of the crib folded.

Fig. 3 is a detail, sectional view taken on the line 3—3 of Fig. 1.

Fig. 4 is a detail, side elevation of the parts shown in Fig. 3.

Fig. 5 is a detail, plan view of one of the corner posts and the associated connecting bars.

Fig. 6 is a perspective view of the connecting bar assembly, the parts being disassociated so as to better illustrate the construction.

Fig. 7 is a perspective view of the casing which is to be employed to receive the folded crib.

I find that the most simple way in which to construct a folded crib which can be folded without difficulty to form a neat package is that of providing a bottom member of permanent shape and providing for the folding of the legs and corner posts against the bottom member. This allows the use of a sheet of canvas or other fabric material as the supporting medium for the bed.

The bottom member constructed according to my invention comprises a pair of side rails 10 and a pair of end rails 11, which are secured to the side rails 10 to form a rectangular frame. The supporting sheet 12 of canvas or the like is secured to the rails 10 and 11 by means of upholstering tacks or the like 13. With the rigid frame structure just described and the canvas supporting sheet permanently secured to the upper faces of the rails thereof, a structure is provided having lasting qualities. The weight of the infant will be transmitted to the frame structure through the medium of the upholstering tacks 13, permanently imbedded in the rails 10 and 11. In other words, the parts which receive the strain of the weight of the occupant of the crib are secured together in a permanent combination.

The side members which do not receive any particular strain are designed to be secured by means of snap fasteners or the like in order to allow the proper folding of the parts. I find that snap fasteners are suitable for this purpose.

The four legs 14 are connected to the bottom frame by means of hinges 15, arranged

to allow the legs to fold beneath the bottom and against the side rails 10, as shown in Fig. 2. The hinges 15 are so arranged that when the legs are in their extended positions shown in Fig. 1, the weight of the bed will be supported against the flat, upper ends of the legs and the hinges will not be called upon to bear any weight. The hinges will, however, function to prevent spreading of the legs beyond the perpendicular positions shown in Fig. 1.

The corner posts 16 are similarly hinged by means of hinges 17 to the upper faces of the rails 10. The corner posts and hinges 17 are so arranged that the corner posts may fold flat against the upper faces of the rails 10, as indicated in dotted lines in Fig. 2. The arrangement is also such that the corner posts, when they are in their upstanding positions shown in Fig. 1, will be alined with the legs 14.

The hinges 17 function to restrain the corner posts 16 against movement outwardly beyond their perpendicular positions shown in Fig. 1.

I provide locking means for temporarily securing the corner posts 16 and legs 14 against inward movement toward collapsed positions. The locking means just referred to comprises a plurality of yokes 18, secured to the bottom frame and a plurality of yokes 19 and 20, secured to the posts 16 and legs 14, respectively.

The yokes 19 and 20 are secured to the posts 16 and legs 14 on opposite sides thereof from the hinges 17 and 15, respectively. The yokes 19 and 20 will thus be alined with each other and the yokes 18 are arranged to register in alinement with the yokes 19 and 20 when the posts 16 and legs 14 are in their perpendicular positions shown in Fig. 1.

I provide a plurality of locking pins 21, adapted to be received through the yokes 19, 18 and 20 and to thereby lock the legs 14 and posts 16 in alinement with each other. The hinges 17 and 15 cooperate with the locking devices in this regard, since the hinges will hold the adjacent corners of the posts and legs against the bottom frame. It will be noted in this regard that the operation of the hinges is modified by the operation of the locking devices and vice versa so that a much stronger locking operation is had by virtue of the cooperation of the two.

At the upper extremities of the posts to the outer side faces thereof are secured L shaped keepers 22, which are channel shaped in cross section, as shown in Fig. 6. The keepers 22 are provided with openings 23 to receive suitable screws or fastening devices for securing them to the posts.

I provide a pair of side connecting bars 24, which are preferably constructed of metal and a pair of end connecting bars 25, provided with openings 26 to receive tenons 27, formed on the ends of the side bars 24. It will be understood in this connection that other types of interfitting members might be provided on the ends of the respective bars, the primary requirement being that the end bars 25 be held against longitudinal movement.

For instance, the slot 26 might be cut entirely through one side of the bar 25 to provide a hook to engage over the tenon 27.

A latch member 28 is hinged at 29 to the side bar 24 and is provided with a hood portion 30 adapted to enclose a short portion of the side bar 25, as illustrated in Fig. 5, thereby holding the side bar 25 against pulling away from the bar 24 in a direction longitudinal of the bar 24. It will now be seen that the connecting means just described comprises inter-fitting members formed on the bars 24 and 25 to prevent movement of the bar 25 longitudinally of itself and a latch member adapted to engage the end of the bar 25 to prevent movement longitudinally of the bar 24.

The ends of the bars as at 32 are shaped to fit the respective arms of the keeper 22 and the bars 24 are provided with shoulders 33 adapted to engage against the ends of the keeper 23.

It will be seen that when the bars 24 and 25 are locked together with the shoulders 33 engaging the ends of the keeper 23, that the keeper and with it the corner post will be securely locked in the embrace of the two bars so that it cannot move in any direction relative to the bars. By swinging the latch 28 away from locked position, the bars 24 and 25 will be allowed to fall away from the post. The side members 34 are made of canvas or fabric and are provided with snap fasteners 35 to coact with fasteners (not shown) on the posts 16. The lower edges of the side members 34 may be permanently attached to the frame rails 10, as at 36, or snap fasteners may also be employed here if desired. I prefer, however to, employ a permanent attachment since there is no necessity for removing the side members from the bottom frame during the folding movement. The end members 37 are formed integrally with the side members 34, one side member and one end member forming a continuous strip of canvas. The end members are provided with snap fasteners 38, by means of which they are secured to the posts and end rails 11, respectively.

During the folding movement, the bars 24 and 25 are first released from the upper extremities of the post. The end members 37 are detached from the bottom and from both posts.

The posts are then folded downwardly to the positions shown in Fig. 2.

The end members are then folded flat against the side members 34, the bars 24

lying closely adjacent to and parallel to the bars 25. The side members are then folded flatly against the bottom, the end members being folded therebeneath until the parts assume the positions shown in Fig. 2. The side members 34 thus serve to retain the other members in position and form a compact package, which may be easily stored in a small space.

The side members 34 and 37 are provided with ventilating openings which are screened as at 39. In producing the crib for the market, the bars 24 and 25 and all metallic parts will be enameled or lacquered and if desired, the wooden portions may be provided with the same finish.

I provide a casing 40 of heavy canvas or the like having one end open as at 41 and provided with a flap 42 having snap fasteners 43 to coact with snap fasteners 44 on the casing. The casing is made just the proper size to receive the folded crib.

The folded package can very easily be carried on an automobile when traveling, either on the running board or in the storage compartment of a coupé. Due to the form in which the bed is made, the canvas can be permanently attached to the bottom frame and no springs need be used.

In order to losen the bars to support the canvas, it is only necessary to release the four catches at the corners and the bars will then drop away.

The bed can be taken apart and the canvas portions laundered by removing the upholstery tacks.

Some changes may be made in the construction and arrangement of the parts of my invention without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents, which may be reasonably included within their scope.

I claim as my invention:

1. In a folding crib, a bottom, posts hinged thereto, and connecting bars extending between the upper ends of the posts, said bars being detachably connected together at their ends, and extending around the outer sides of the posts, the latter being provided with channeled grooves to receive the bars, and the bars being provided with shoulders engaging inner sides of the posts.

2. In a folding crib, a bottom, posts hinged thereto, and connecting bars extending between the upper ends of the posts and means for securing the bars together at their ends, the bars extending around the outer sides of the posts, the latter being provided with channeled grooves to receive the bars, and the bars being provided with shoulders engaging inner sides of the posts.

3. In a folding crib, a bottom, posts hinged thereto, L shaped channels secured to the posts in their outer faces near their upper ends, connecting bars extending between the posts and received in said channels, means for securing the ends of the bars together at the outer corners of the channels, and shoulders on the bars positioned to snugly receive the inner extremities of the channels to secure the bars in engagement with the posts.

Signed this 25th day of October, 1929, in the county of Woodbury and State of Iowa.

VERA IRENE NIGG.