Feb. 16, 1932. E. J. GRAY 1,845,791

KNOCKDOWN CRIB

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Fig. 1.

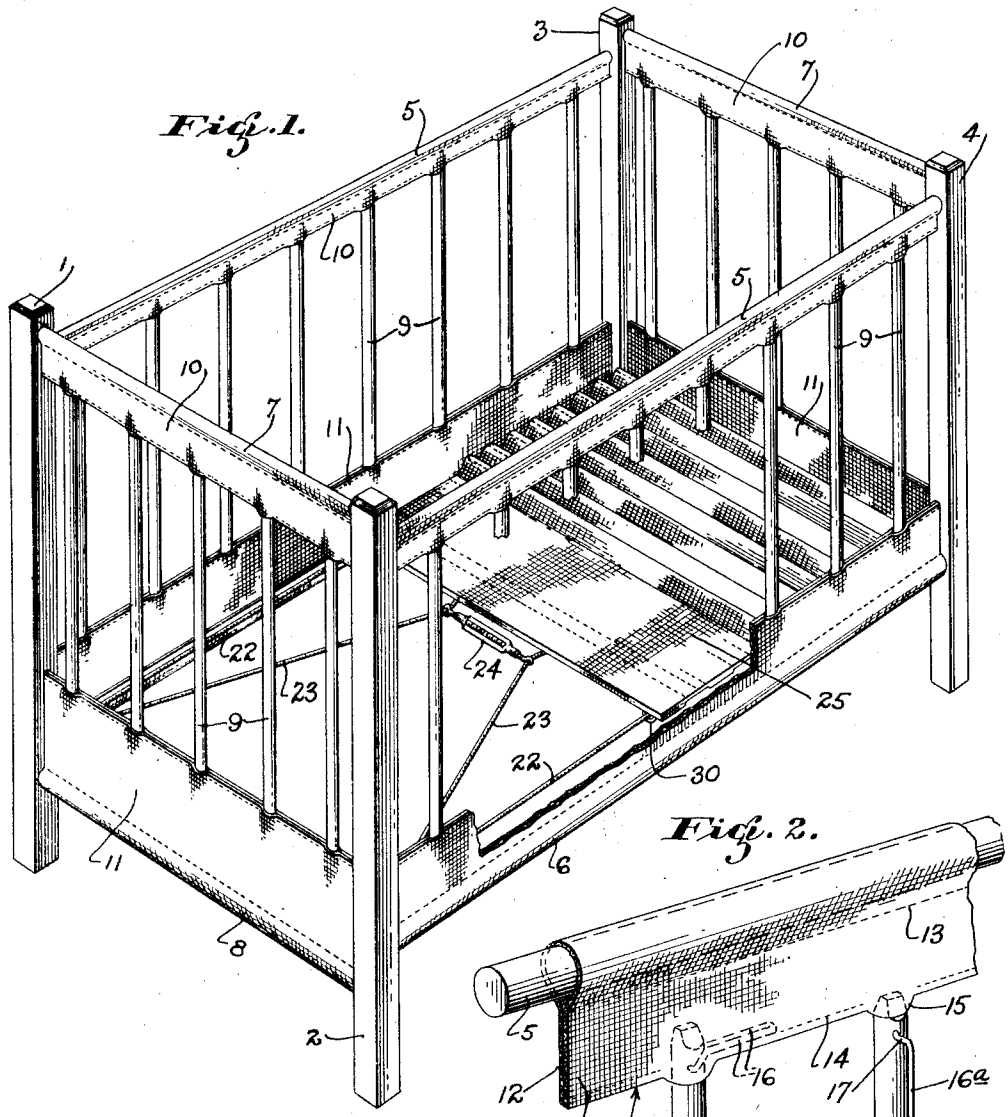
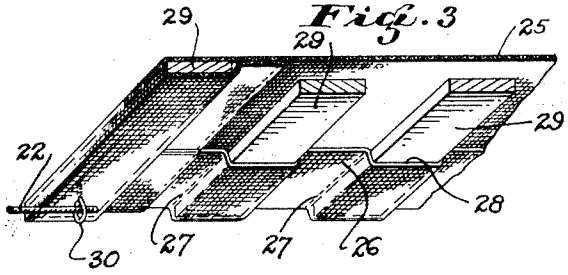


Fig. 2.

Fig. 3



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Fig. 4.

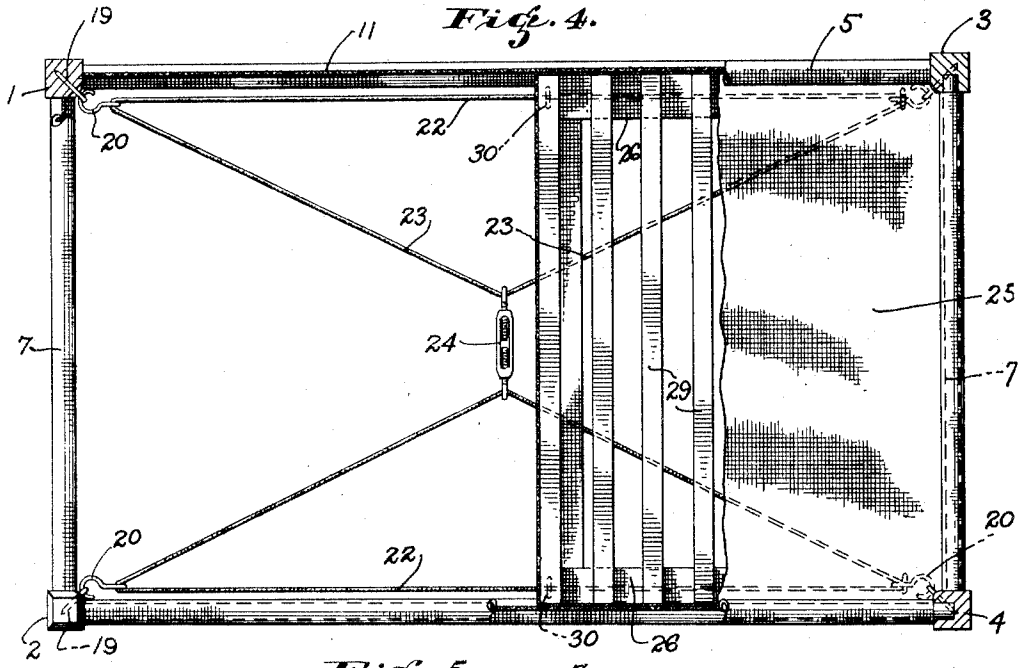


Fig. 5.

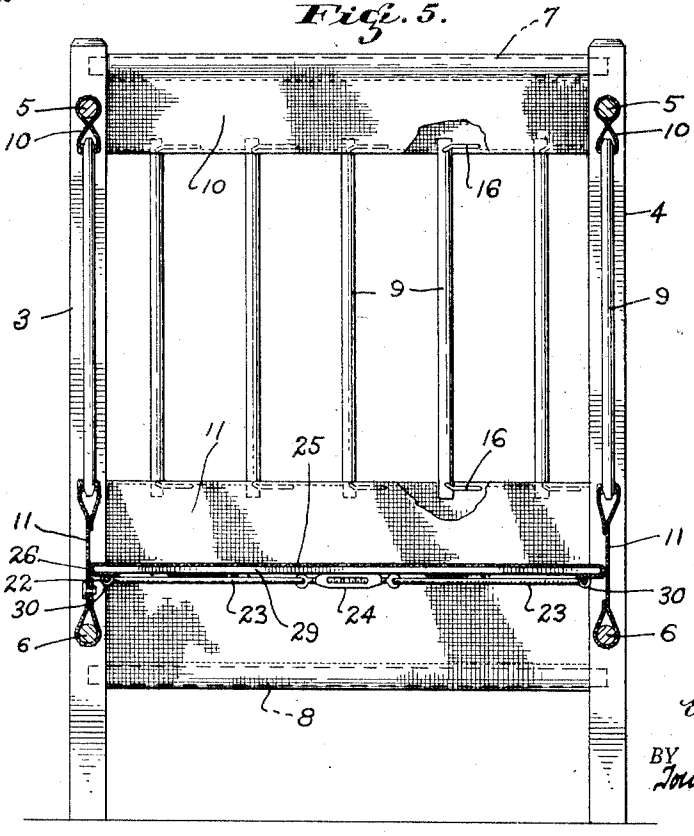
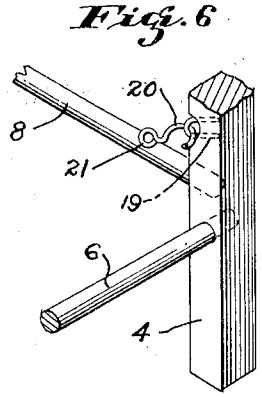


Fig. 6



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UNITED STATES PATENT OFFICE

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KNOCKDOWN CRIB

Application filed October 10, 1928. Serial No. 311,522.

This invention relates to beds or cribs, such as used for infants, and especially to a crib or bed which may be readily assembled for use or taken apart and folded into a compact bundle for shipment or storage.

The object of the present invention is to generally improve and simplify the construction and operation of cribs of the character described; to provide a wire brace adapted to be attached to the four corner posts of the crib and which is capable of exerting a central pull so as to hold the posts in rigid engagement with the side and end rails of the crib, to provide a wire brace which also forms a resilient mattress support; to provide a mattress support which is foldable and further to provide side and end sections which are detachable with relation to the side and end rails, and which, together with the posts, the rails, the wire brace and the mattress support may be rolled into a compact bundle.

The crib is shown by way of illustration in the accompanying drawings, in which:

Fig. 1 is a perspective view of the crib in its assembled form, said view being shown partially broken away and partially in section,

Fig. 2 is a detailed view of one of the side rails, said view showing the canvas attached thereto and the method of inserting and securing the vertical rods therein,

Fig. 3 is a perspective view partially in section of a portion of the mattress support,

Fig. 4 is a plan view of the crib in its assembled form, said view being shown partially broken away and partially in section.

Fig. 5 is an end view of the crib in its assembled form said view being shown partially broken away and partially in section.

Fig. 6 is a detailed perspective view of one of the corner posts and portions of the side and end rails inserted therein.

Referring to the drawings in detail, particularly Fig. 1, it will be noted that the bed structure requires four corner posts such as indicated at 1, 2, 3 and 4, a pair of upper side rails 5, 5; a pair of lower side rails 6, 6; a pair of upper end rails 7, 7; and a pair of lower end rails 8, 8. The upper and lower ends of the posts are provided with recesses for receiving the ends of the side and end rails, as shown in Fig. 6, and they are secured therein in the manner hereinafter to be described. The upper and lower side and end rails are connected by means of vertical rods, such as shown at 9, and these rods are secured to the respective side and end rails by canvas strips generally indicated at 10 and 11. These canvas strips are identical in construction throughout and are perhaps best illustrated in Fig. 2. They are constructed in the following manner: A long strip of canvas is folded upon itself to form a double layer of canvas, as indicated at 12, 12. This canvas is then stitched along the line indicated at 13, so as to form a tube for the reception of the end or side rail 5, and it is also stitched at intervals along the lower edge, as indicated at 14. The spaces which are not stitched form openings 15, through which the upper ends of the vertical rods 9 may be inserted and the rods are secured when so inserted by retainers formed of wire, such as indicated at 16. These wire retainers merely consist of a piece of wire bent upon itself to form two parallel sections 16, 16, the outer ends are forked, as at 17 and inserted in opposite sides of the rod. They pivot at this point and may lie parallel with the rod as shown at 16*a* when the rod is to be inserted. After insertion the wire retainers are extended as shown by dotted lines at 16 and the rod is thus secured and held against being pulled out. The vertical rods form comparatively high side and end sections which prevent an infant from crawling or falling out of the crib, and they also form a structure which may be folded or rolled up when the bed is folded or taken apart, as will hereinafter be described.

The top and bottom, side and end rails are secured with relation to the posts in the following manner:

A staple or the like, such as shown at 19, is driven into each post or otherwise secured. A hook member 20, terminating in an eye 21 is used in connection with each staple 19, and a pair of wires are threaded through the eyes of each pair of hooks. These wires are spliced together so as to form two endless

loops of wire, each loop consisting of a side section 22 and inner pull or brace sections 23. The hooks are applied to the staples 19 as shown in Fig. 4 and the inner sections 23 of each wire loop are then connected by a turnbuckle 24. By tightening up the turnbuckle the wire loops are pulled toward each other and a central pull is thus exerted on each post, causing them to rigidly engage and secure the top and bottom, side and end rails. It should furthermore be noted that the staples are secured at a point considerably above the lower side and end rails, as shown in Fig. 6 so that a pull is not only exerted near the bottom ends of the posts but also near the upper ends of the posts, hence rigidly securing them with relation to the top and bottom rails. The wire braces not only serve the function of securing the posts the side and end rails with relation to each other, but they also form a flexible resilient mattress support. The mattress support consists of a piece of canvas or like fabric, generally indicated at 25. The edges of the canvas are turned under, as indicated at 26, and pockets, 28 are formed therein by sewing the inturned edges along the lines indicated at 27. These pockets receive the ends of thin wooden slats, such as indicated at 29, and as these slats overlie the side wires 22, and also the wire sections 23, it will be noted that the slats, together with the canvas 25, form a support which is resilient and flexible and upon which any type of mattress may be placed.

In actual operation when the bed is assembled and in use and if it is desired to take it apart, for shipment or storage, it is accomplished by first sliding the mattress support towards one end of the bed, the mattress support being shown in this position in Figures 1 and 4. It might also be stated that it is guided and secured to the wire sections 22 by means of eyes 30 secured to the endmost slats. When the mattress support has been moved far enough towards one end to expose the turnbuckle 24 it is only necessary to rotate this so as to slacken the wire braces and when they are sufficiently slackened the hooks 20 may be disengaged with relation to the corner posts when the mattress, together with the wire braces may be completely removed from the bed. The corner posts may now be removed with relation to the side and end rails, and the side and end rails may be removed from the canvas strips by pulling them out of the tubular sections produced by the longitudinal seams 13.

The mattress section, together with the wire braces are now straightened out on the floor and the side and end rails, together with the posts, are laid crosswise thereof. The canvas strips containing the vertical rods 9 may be placed on top of the posts and the side and end rails and the parts thus assembled may then be rolled up into a compact bundle, as the mattress support is sufficiently flexible to be rolled and so are the canvas strips which support the vertical rods 9. The bundle when thus rolled may be tied together or placed in a cover, if such is provided and as such requires comparatively little space for storage or shipment.

When erecting the bed it is only necessary to untie the bundle and roll it out flat. The side and end rails are then inserted in the tubular sections of the canvas strips and they are then inserted in the recesses provided in the corner posts. The corner posts, together with the side and end sections are then assembled, as shown in Fig. 1 and the wire braces applied to the posts by engaging the hooks 20 with the staples 19. When the turnbuckle 24 is tightened the structure is pulled tightly together so that all parts become rigidly secured with relation to each other and as the mattress support is already attached to the wire braces, it is merely necessary to pull it towards one end or the other so as to completely cover the wire braces and to form a support for the mattress and bedding.

A crib such as described is particularly handy for camping as it may be quickly assembled or taken apart when moving from place to place. It is obviously just as useful in the average home, and it is so rigid in structure that it may be continuously employed until the child becomes sufficiently large to occupy an ordinary bed.

It should furthermore be noted that the bed is sanitary, as the several parts are open and accessible for cleaning and disinfection. Furthermore, the side and end rails may be removed with relation to the canvas strips and so may the vertical rods, thus permitting the canvas strips and the mattress support to be laundered from time to time if desired.

While certain features of the present invention are more or less specifically described, I wish it understood that various changes in construction and arrangement may be resorted to within the scope of the appended claims, similarly that the materials and finishes of the several parts employed may be such as the manufacturer may decide, or varying conditions or uses may demand.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. In a crib of the character described a flexible resilient mattress support comprising a section of fabric, interspaced flexible slats carried by the fabric section and the slats intermediate the end slats being detachable with relation thereto; wires extending from end to end of the crib and forming a support for the slats and the fabric; and means securing the slats and fabric with relation to the wires and permitting sliding movement thereof from end to end of the wires,

said means comprising a plurality of eyelets in fixed relation to said slats, said eyelets being threaded over said wires.

2. In a crib of the character described a bottom and top rail; a tubular fabric member through which each rail extends; said tubular fabric members having extensions formed thereon with interspaced openings formed therein; a plurality of vertically disposed rods insertable in the openings of the fabric extensions; and means securing the rods against removal.

3. In a crib of the character described a bottom and top rail; a tubular fabric member through which each rail extends; said tubular fabric members having extensions formed thereon with interspaced openings formed therein; a plurality of vertically disposed rods insertable in the openings of the fabric extensions; means securing the rods against removal; said means comprising an arm pivotally secured at each end of each rod; said arms adapted to assume a position parallel to the rods when they are inserted in the openings of the fabric sections and adapted to assume a right angular position when inserted so as to secure the rods against removal.

4. In a crib of the character described, a bottom and a top rail, a flexible tubular fabric member enclosing the top rail and extending from end to end thereof, a downwardly extending flexible fabric flap attached to the tube and extending from end to end thereof, said flap having interspaced openings formed therein, a flexible tubular fabric member enclosing the bottom rail and extending from end to end thereof, an upwardly extending flexible fabric flap attached to said tube and extending from end to end thereof, said flap having interspaced openings formed therein in alignment with the openings in the first named flap and a plurality of vertically disposed rods insertable in the openings of the flaps and provided with means whereby the rods are secured against removal.

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