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EXTENSIBLE DROP SIDE FOR FOLDING CRIBS AND LOCKING MECHANISM THEREFOR

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Fig. 1.



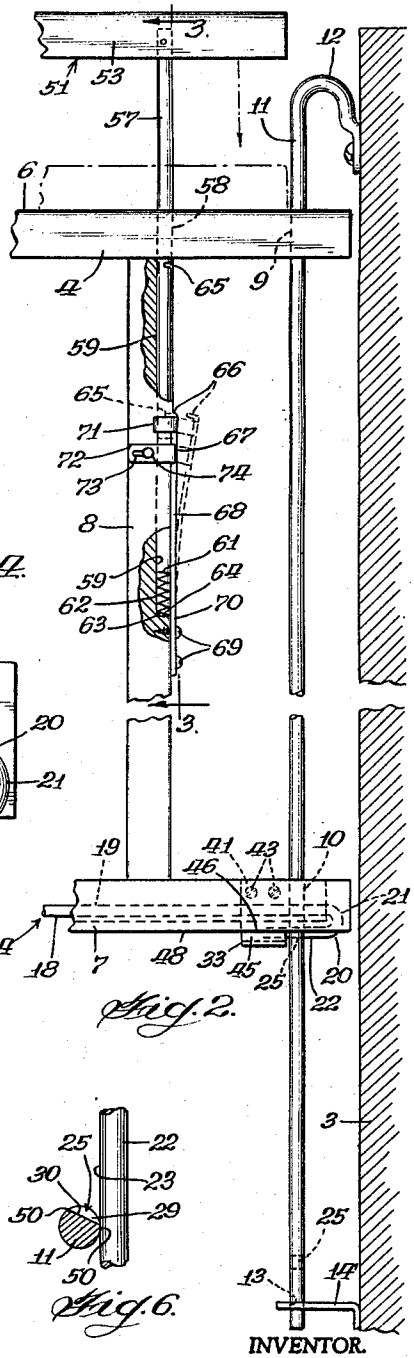


Fig. 2.

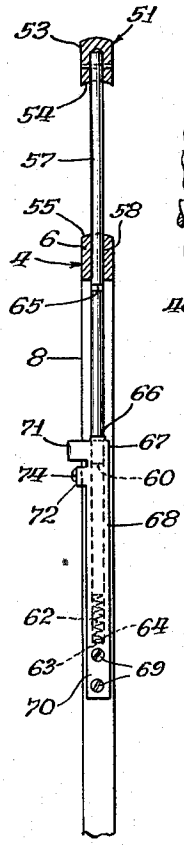


Fig. 3.

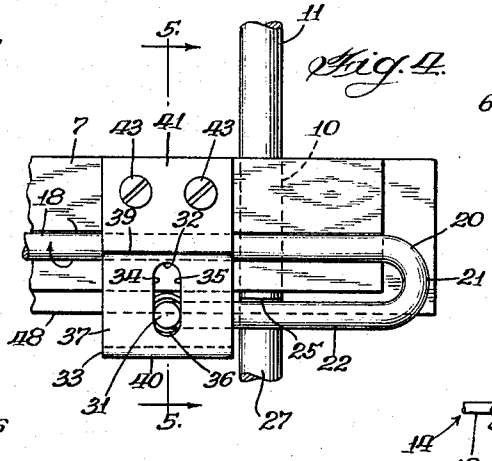


Fig. 4.

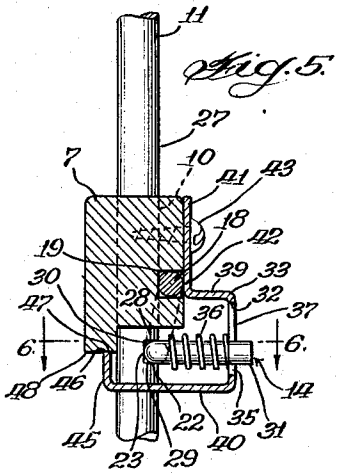


Fig. 5.

Fig. 6.

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EXTENSIBLE DROP SIDE FOR FOLDING CRIBS AND LOCKING MECHANISM THEREFOR

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4 Claims. (Cl. 5—100)

This invention relates to cribs of the type comprising drop sides and more particularly to the mechanism for locking and extending the sides.

A general object of the invention is to provide a novel locking device for a crib side which is practical, inexpensive to make and positive in operation.

A further object of the invention is to provide a novel extensible side comprising a basic side panel and an extension telescoped thereover with intervening resilient means operative between the extension and the panel in the lowermost position of the extension to minimize shock loading on the side locks for the panel as the extension is brought down into fully telescoped position, the side locks formed and arranged to cam out upon excessive loading on the side panels.

A different object of the invention is to devise a novel one piece locking element which comprises a wire rod fashioned into a center handle from which extend pintle-like rod portions toward the opposite ends of the side panel, said portions having ends bent inwardly to provide latching bolts which are thrust sidewise by spring means reacting between the side panel and the bolts and urged into detents in the connecting rods which slidably secure the side panels to the ends of the bed.

A further object is to contour the ends of the locking rods so that they not only provide the locking bolts but also guide lugs bent therefrom to locate the locking assembly and to position the springs and serve as retainers and guides for the locking assembly.

These and other objects of the invention will become more apparent from the specification and the drawings, wherein:

Figure 1 is a perspective view of a crib incorporating the invention;

Figure 2 is an enlarged fragmentary side elevational view of the crib;

Figure 3 is a transverse vertical sectional view taken substantially on line 3—3 of Figure 2;

Figure 4 is an enlarged fragmentary side elevational view of the side lock structure taken from the inner side thereof;

Figure 5 is a transverse vertical sectional view taken essentially on line 5—5 of Figure 4, and

Figure 6 is a horizontal sectional view taken generally on the line 6—6 of Figure 5.

Describing the invention in detail and having particular reference to the drawings, there is shown a crib 2 comprising end panels 3, 3 and identical side panels 4, 4 extending between and interconnecting the end panels.

Each side panel comprises top and bottom generally horizontal rails 6 and 7 and interconnecting vertical struts or spindles 8. The rails 6 and 7 are provided at each end with vertically registering apertures 9 and 10 respectively which admit the securing, retaining and positioning rod 11 therethrough, the rod being hooked at 12 at its upper end and fastened to the adjacent end panel and at its lower end projected through an opening 13 in a bracket 14' fastened to the adjacent end panel. Thus the sides and

ends are relatively pivotal and foldable about vertical axes.

The lower rail 7 of each side carries a locking assembly 14 which comprises a one piece rod bent at its center portion to provide a U-shaped combination handle and lever 15 (Figure 1) which comprises a bottom handhold bight 16 and upstanding legs 17, the latter merging into horizontal pivot portions 18 which fit into a groove 19 extending lengthwise within the inner side of the bottom rail 7. The pivot portions extend to opposite ends of the lower rails of the side panel and terminate in U-shaped end portions 20 which present an outwardly directed bight 21 and a lower leg 22 which parallels the related portion 18 and spaced therefrom therebeneath.

Portion 22 forms a latch element and extends transversely of the rod 11 and with its side 23 is adapted to fit into notches 25, on the inner side 27 of the rod 11, each slot 25 defined by generally horizontal top and bottom edges 28, 29 and a vertical side 30 which extends chordwise of the cylindrical rod 11.

The lower leg 22 projects a limited distance inwardly of the related end and merges into a positioning and retaining lug 31 which is bent inwardly and extends transversely of the plane of the end portion into a vertically elongated slot 32 in a retaining bracket 33, the slot 32 having a width approximately corresponding to the diameter of the positioning lug 31 for guided engagement therewith by the sides 34, 35.

It will be seen that as the handle is urged inwardly with attendant rotation of the locking assembly about the portions 18, the lug 31 at each end swings upwardly and inwardly with coincidental compression of springs 36 sleeved over the lugs 31 and compressed between the latch portion 22 and the vertical plate 37, in which slot 32 is provided, of the bracket 33.

The bracket 33 in addition to plate 37 which is offset inwardly of the lower rail has a horizontal top and bottom flange 39 and 40 extending from the top and bottom of plate 37, the flange 39 merging into a vertical mounting flange 41 which overlaps the groove 19 and engages the portion 18 as at 42 adjacent the respective end portion to hold the locking structure in assembly with the rail, flange 41 being secured as by screws 43 which pass through suitable openings in flange 41 and thread into the wooden rail 7. The bottom flange 40 extends under the latch portion to a point outwardly of the rod 11 and is provided with an upturned lip 45 (Figure 5) which tightly abuts as at 46 at its upper edge 47 against the bottom edge 48 of the bottom rail 7 to hold the bracket with the screws securely in place. From a consideration of Figure 6 it will be seen that the latch portion 22 tends to cam the sides into perpendicular relation with the ends in view of the transverse force imposed thereon by the spring thereadjacent as the portion 22 rests on either edge 50 of the respective slot in rod 11.

In addition to each side panel being adjustable in entirety, there is also provided an extender generally designated 51 which comprises a rail member 53 overlapping the top rail 6 of the side panel, said rail 53 terminating at the rods 11 and preferably having a concave curved bottom 54 which complements the convex top 55 of rail 6.

Adjacent to each end of rail 53 there is secured thereto a vertical rod or pin 57 which passes through an aperture 58 in rail 6 and into a vertical groove 59 in one of the struts 8 in vertical alignment with the aperture 58.

The rod 57 has a bottom end 60 which is adapted to sit on the upper end 61 of a spring 62 which sits as at 63 on the closed lower end 64 of the groove 59. The spring 62 is adapted to be compressed by the rod 57 upon the rail 53 being positioned in its lowermost location on top of rail 6 at which time the uppermost notch

65 on the rod 57 registers with a detent 66 which enters therein and holds the extender locked in its lowest position, the detent being formed as an inwardly projecting lug on the upper end of a latch 67 which comprises a vertically elongated transversely flexible spring arm 68 fastened as by screws 69 at its lower end 70 to the associated strut 8.

The arm 68 is provided at one side adjacent to its upper end with a thumb handle 71 and also a limiting strap 72 which has a horizontally elongated slot 73 loosely receiving a limiting screw 74 therethrough which is screwed into a side of the associated strut 8.

I claim:

1. In a crib having end panels and side panels and means slidably mounting said side panels from the end panels for vertical movement and comprising rods connected to the end panels and extending through vertical apertures in the side panels, means for locking the side panels in a plurality of vertically displaced positions, and comprising horizontal notches in said rods, a single locking element pivotally mounted on each side panel and including a wire fashioned to provide an integral central handle and horizontal oppositely extending pivot portions, and terminating in U-shaped end portions extending beyond respective rods and each including a horizontal inwardly extending latch adapted to extend sidewise into respective notches, an integral lug bent from the inner end of each latch transversely thereof, a bracket carried on each side panel adjacent to each end thereof and having a portion opposing and spaced from the adjacent latch and having a vertically elongated slot receiving the adjacent lug therein and spring means sleeved over each lug and compressed between the respective latch and bracket portion biasing the latch into latching position.

2. In a crib having end members, upright guide rods spaced inwardly from the end members and having upper ends rigidly secured to the latter, drop sides with upper and lower rails apertured to receive the guide rods, and manually operable latch means swingably mounted on the lower rail and comprising an elongated element projecting beyond the ends of the lower rails and having inwardly directed latching bolts extending transversely of the guide rod into notches therein in releasable interlocking engagement therewith, and said latch means including brackets on the lower rail, and guide and mounting lugs projecting transversely from the bolts through slots in said brackets, and spring means sleeved over the lugs and compressed between the brackets and bolts for urging the latter into latching relation with the guide rod said spring means disposed in direct abutting relationship to said bolts.

3. A latch for a crib drop side comprising a one-piece rod including a center handle and oppositely extending pintle sections havings inturned end portions defining latching bolts spaced from the pintle sections and disposed generally parallel thereto, and combination spring-positioning and guide lugs bent from the free ends of the bolts and extending substantially angularly to the plane of the bolts and pintle sections.

4. A one-piece latch for a crib drop side comprising a rod fashioned to provide a handle and a pair of pintles extending oppositely from the handle and terminating in U-shaped end portions each including an inwardly extending latching bolt spaced laterally from the pintle, and a lug bent from the free end of each bolt and extending generally normal thereto.

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