

Aug. 31, 1948.

B. B. LINEBERRY ET AL
INFANT'S CRIB

2,448,317

Filed Sept. 27, 1944

2 Sheets-Sheet 1

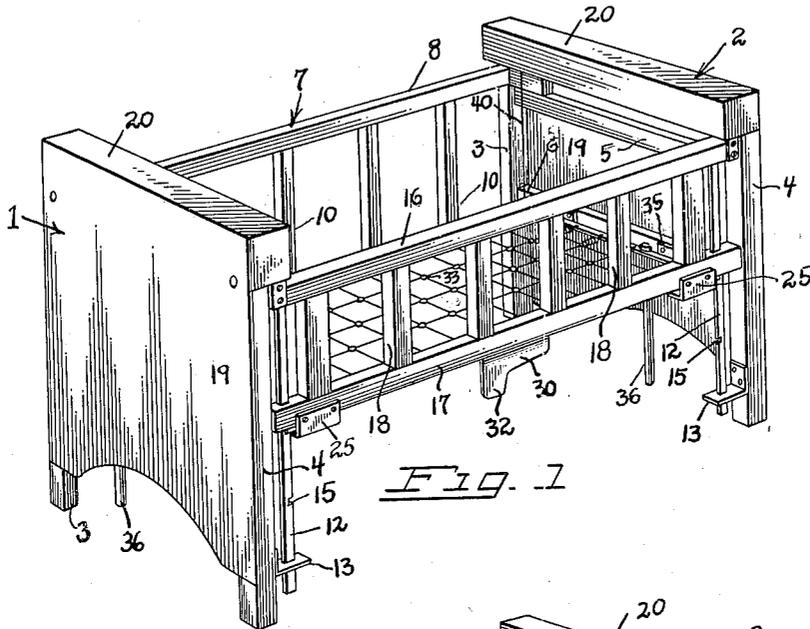


Fig. 1

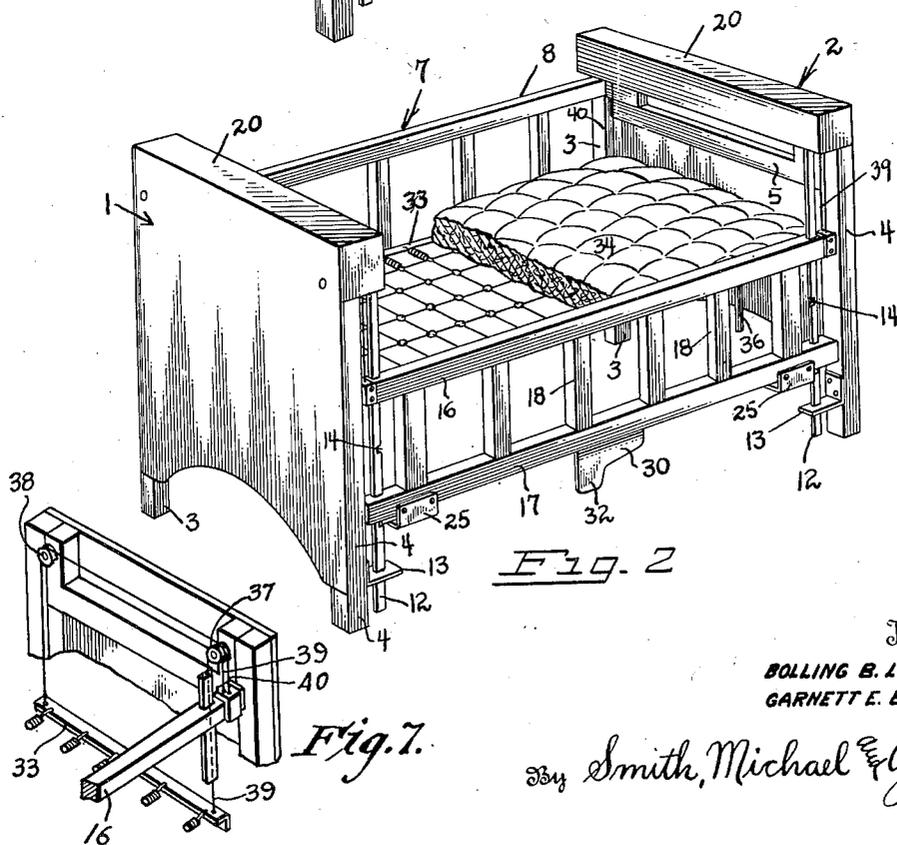


Fig. 2

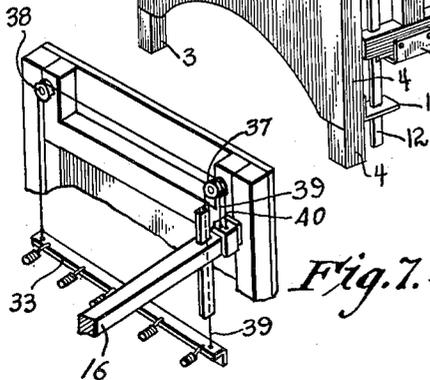


Fig. 7

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2 Sheets-Sheet 2

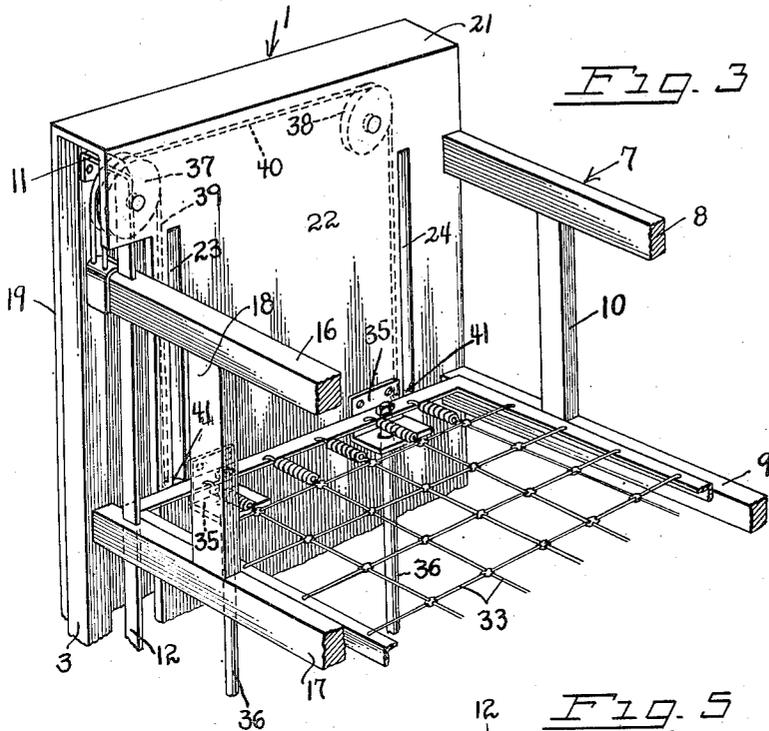


Fig. 3

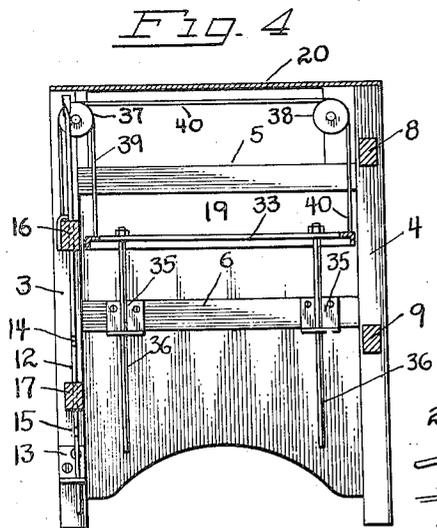


Fig. 4

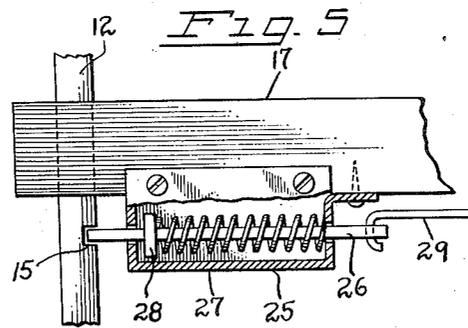


Fig. 5

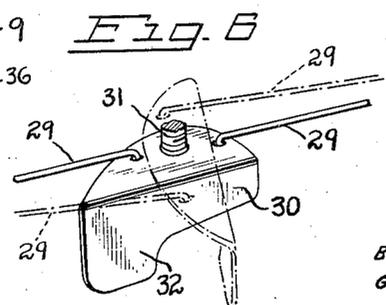


Fig. 6

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UNITED STATES PATENT OFFICE

2,448,317

INFANT'S CRIB

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2 Claims. (Cl. 5-100)

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Our invention relates to an infant's crib or the like, and has particular reference to a crib of the type in which one or more of the side panels of the crib is vertically slidable so that it may be lowered from a normal, confining position to a lower, non-confining position to permit the infant to be moved to and from the crib and to permit the parent, nurse or other attendant to feed, bathe or otherwise care for the infant.

Infants' cribs of the aforesaid type are old and well known in the art, but such cribs possess numerous inherent disadvantages of construction and operation which impose undue burdens upon the person or persons attending the infant within the crib. For example, in the conventional crib of the type specified, the spring and mattress are disposed at a relatively low level which necessitates considerable stooping and bending on the part of the parent, nurse or other attendant when it becomes necessary to move the infant to and from the crib, or to feed, bathe or otherwise care for, or attend, the infant. It would be highly impractical and unsafe to permanently dispose the spring and mattress of an infant's crib at a higher level than that encountered in a conventional crib and, hence, parents, nurses and other attendants of infants have for years tolerated this inconvenient and tiresome stooping and bending.

It is therefore an object of our present invention to provide an infant's crib in which the spring and mattress are normally disposed at the usual level encountered in conventional cribs, and to provide means whereby the spring and mattress may be moved to a high, more convenient, level when it is desired to move the infant to or from the crib or to feed, bathe or otherwise attend the infant, to thus avoid the inconvenient and tiresome stooping or bending usually encountered in connection with conventional cribs.

It is a further object of our present invention to provide an infant's crib in which the mattress-supporting spring is vertically movable within the crib from a normal or low position to an upper or high position, and to associate with said mattress-supporting spring novel means for effecting vertical movements of the mattress-supporting spring and for guiding the same during such movements.

It is a further object of our present invention to provide an infant's crib in which the mattress-supporting spring is vertically movable within the crib and in which at least one of the side panels of the crib is vertically slidable, and to so connect the said mattress-supporting spring with

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the said vertically slidable panel that when the said panel is moved downwardly in a vertical direction from its normal or upper position, said mattress-supporting spring will be moved upwardly to a convenient level, the construction and operation being such that upward sliding movement of the side panel of the crib will permit the return of the mattress-supporting spring to its normal position.

It is a further object of our present invention to provide an infant's crib of the above referred to character in which the vertically slidable side panel of the crib is connected to the mattress-supporting spring in a manner such that the lowering of the panel in a vertical direction from its upper, confining position to its lower, non-confining position, will automatically elevate the said mattress-supporting spring, and wherein the raising of said panel in a vertical direction to its normal upper or confining position will automatically lower said mattress-supporting spring.

It is a further object of our invention to provide an infant's crib of the above referred to character in which means are associated with the vertically-slidable panel to lock said panel in its upper and lower positions, the arrangement being such that the locking of said panel in its lowermost position will maintain the mattress-supporting spring at a convenient level where the parent, nurse or other attendant may readily care for the infant within the crib without the necessity of stooping or bending.

It is a still further object of our present invention to provide an infant's crib of the above referred to character which is simple in construction and operation, strong and durable, cheap and easy to manufacture, and highly efficient in the purposes for which designed.

In the accompanying drawings forming a part of this specification, and wherein for the purpose of illustration we have shown several preferred embodiments of our invention:

Fig. 1 is a perspective view of an infant's crib showing the side panel locked in its upper, confining position and the mattress-supporting spring in its lower, normal position.

Fig. 2 is a perspective view similar to Fig. 1, but showing the side panel locked in its lower, non-confining position and the mattress-supporting spring in its upper position, this figure including a fragmentary showing of the mattress.

Fig. 3 is an enlarged, fragmentary perspective view of a slightly modified form of crib embodying the features of our present invention,

Fig. 4 is a vertical transverse sectional view of the crib of our present invention,

Figs. 5 and 6 are fragmentary views in side elevation and partly in section, and in perspective, respectively, of details of the locking and latching means for retaining the side panel in its upper and lower positions, and

Fig. 7 is a fragmentary perspective view illustrating in detail the mechanism disposed between the mattress-supporting spring and the vertically slidable front panel whereby the said spring will be raised and lowered in accordance with the vertical movements imparted to the said panel.

In the accompanying drawings wherein like reference numerals have been employed to designate like parts throughout the several views, the numeral 1 designates the head section of the crib and the numeral 2 designates the foot section thereof, each of these sections including corner posts 3 and 4 connected by cross bars 5 and 6. The rear or fixed panel 7 is rigidly connected to the spaced corner posts 3 and 4 at the rear edges of the head and foot sections of the crib, and comprises horizontally-disposed bar members 8 and 9 connected by spaced, upright bar members 10. Attached to the upper, inner surface of each of the front corner posts 4, is a guide rod or member comprising a flat strip of metal having a short horizontally-extending portion 11 and a vertically-extending portion 12, the lower end of which vertical portion extends through an aperture in a bracket 13 secured to the lower, inner surface of each of the front corner posts 4. The inner edge of each of the said guide rods or members is provided with correspondingly spaced and positioned notches 14 and 15. A vertically slidable front panel is provided and includes horizontally-disposed bar members 16 and 17 connected by spaced upright bar members 18, the opposite end portions of the said bars 16 and 17 being slotted to permit passage therethrough when the crib is being assembled and during the use of the crib, of the vertically extending portions 12 of the guide rods or members above described, the arrangement being such that the said front panel is freely slidable along, and is guided by, said rods or members during vertical sliding movements of said panel from a lower position to an upper position to be hereinafter described. The corner posts 3 and 4 of the head and foot sections 1 and 2, respectively, are preferably covered with an outer panel of sheet material 19 and the upper edges of said head and foot sections are covered by a box-like casing 20, as clearly shown in Figs. 1 and 2, it being noted that in this form of the invention the inner opposed walls of the said box-like casing are spaced from the inner surfaces of the corner posts 3 and 4. In the modified form of the invention shown in Fig. 3, each of the head and foot sections includes a short, horizontally-extending top wall 21 and an inner panel 22 disposed in parallel spaced relation to the outer panel 19 and from the inner surfaces of the corner posts 3 and 4, and having therein spaced, vertically positioned slots 23 and 24 for a purpose to be hereinafter described.

As a means for latching or locking the vertically-slidable front panel of the crib in its upper or lower positions, we secure a casing 25 at each end of the bar 17, each of which casings is provided with horizontally aligned apertures through which extend a bolt 26 normally urged to an outer or extended position by means of a tension

spring 27 disposed between one end of the casing and a shoulder or abutment 28 on each of the bolts 26, the said bolts, when in their normal, projected positions, being adapted to engage with either the upper notches 14 or the lower notches 15 on the inner, opposed edges of the sections 12 of the guide rods or members above described. Each of the bolts 26 has its inner end connected by a wire or rod 29 which extends inwardly along the lower edge of the bar 17 and is hooked into an aperture in a latch operating member 30 pivotally mounted on a screw or stud 31 secured to the lower edge of the bar 17. The operating member 30 includes a depending hand-engaging portion 32.

It will be apparent from the above description when considered in connection with Figs. 5 and 6 of the accompanying drawings, that when the latch operating member 30 is rotated by the hand-engaging portion 32 in a counter-clockwise direction as viewed in Figs. 1, 2 and 6, the wires or rods 29 will be moved inwardly and will retract the bolts 26 against their springs 27, which action will disengage the outer ends of the bolts from contact within the notches 14 or 15, to permit vertical sliding movement of the front panel of the crib.

The crib of our present invention includes a rectangular spring 33 of any desired or preferred construction, which spring, as is the usual custom, is adapted to support a mattress 34. The spring 33 is supported, when in its lower, normal position, on the horizontal sections of spaced L-shaped brackets 35, attached to the inner surfaces of the lower cross bars 6 of the head and foot sections of the crib, each of these brackets being provided with a centrally-located aperture to receive a vertically-disposed guide bar 36 secured to and depending from the end frame members of the spring. Hence, the vertical movements of the spring within the crib are guided by the bars 36 passing through the apertured brackets 35.

As above set forth, it is an important feature of our present invention to provide mechanism extending between the mattress-supporting spring and the vertically slidable front panel, whereby the said spring will be raised and lowered in accordance with the vertical movements imparted to the said panel. To accomplish this, we connect each end of the spring 33 to the vertically movable front panel by means of suitable flexible wires or cables which pass over pulleys and transmit the movement of the panel to the spring. As clearly illustrated in the accompanying drawings, we mount a double-grooved pulley 37 at the upper front portion of the head and foot sections of the crib, and a single-grooved pulley 38 at the upper rear portion of each of said sections. A flexible wire or cable 39 has one end secured to the end of the bar 16 of the front panel, extends upwardly and over one of the grooves in the pulley 37 and then passes downwardly where its end is rigidly secured to the end frame of the spring 33. A second flexible wire or cable 40 has one end secured to the end of the bar 16 closely adjacent the point of attachment of the cable 39, and extends upwardly and over the other groove on the pulley 37, rearwardly of the crib, over the pulley 38 and downwardly whence its end is rigidly secured to the end frame of the spring 33 at a point spaced from the point of attachment of the wire or cable 39. It will be understood that the cable and pulley arrangement above described is associated with each end

of the crib and spring, and that the lengths of the wires or cables 39 and 40 are such that when the spring 33 rests on the brackets 35 the vertically movable front panel occupies its upper, confining position in which it is securely locked or latched by engagement of the bolts 26 with the notches 14. In the form of our invention shown in Figs. 1 and 2, the ends of the wires or cables 39 and 40 are attached directly to the end frame members of the spring 33, but in the slightly modified form shown in Fig. 3 said ends are attached to spaced lugs or brackets 41 which extend outwardly from the ends of said frame members and are adapted to move vertically within the slots 23 and 24 in the inner end panels 22. In the form of our invention shown in Figs. 1 and 2, the pulleys 37 and 38 are covered or protected by the casing 20, while in the form shown in Fig. 3, these pulleys are protected by the top walls 21 and inner panels 22.

Referring now to the operation of the improved crib of our present invention, and assuming that the parts thereof occupy the positions illustrated in Fig. 1, the portion 32 of the latch operating mechanism 30 is moved in a counterclockwise direction about its pivot pin 31 which pulls the wires or rods 29 inwardly as illustrated in dotted lines in Fig. 6, and withdraws the bolts 26 from engagement with the notches 14. The front panel is forced downwardly in a vertical direction until the bolts 26 are forced by their springs 27 into the notches 15, at which time the front panel is securely locked in its lowermost position. During the aforesaid vertical downward movement of the front panel, the flexible wires or cables 39 and 40 which pass over the pulleys 37 and 38, lift the spring 33 and the mattress 34 thereon, from the low, normal position shown in Fig. 1 to the higher position shown in Fig. 2, where the level of the mattress coincides substantially with the level of the upper edge of the vertically slidable front panel. When it is desired to return the parts of the crib to their normal positions, the latch operating member 30 is again actuated to release the bolts 26 from engagement with the notches 15 whereupon the spring 33 and mattress 34 will move downwardly to a position of rest on the brackets 35, and the front panel will move upwardly in a vertical direction until the bolts 26 again engage within the notches 14. True vertical movements of the spring and mattress are assured by virtue of the sliding engagement of the guide rods 36 with the apertured brackets 35.

It will thus be seen that we have provided an infant's crib in which the mattress-supporting spring and the mattress thereon, can be moved to a level where the infant may be conveniently placed in or removed from the crib, or may be fed, bathed or otherwise cared for without inconvenient and tiresome bending or stooping by the parent, nurse or other attendant.

It is to be understood that the several forms of our invention shown and described herein are to be taken as preferred examples of the same, but

that various changes may be made in the size, shape and arrangement of parts without departing from the spirit of our invention or the scope of the subjoined claims.

Having thus described our invention, we claim:

1. In an infant's crib and the like, a side panel vertically slidable to and from upper confining and lower non-confining positions, a mattress-supporting spring within the crib and movable to and from normal low and higher positions within said crib, pulleys rotatably mounted on each end of the crib above the mattress-supporting spring therein, and flexible connections between said panel and spring at each end of the crib, each of said connections extending upwardly from said panel over the pulley at that end of the crib, and downwardly to said spring whereby downward vertical movement of said panel will move said spring from its normal low position to its higher position and upward vertical movement of said panel will permit said spring to return to its normal low position within the crib.

2. In an infant's crib and the like, a side panel vertically slidable from an upper confining position to a lower non-confining position, a mattress-supporting spring supported at a normal low level in the crib, flexible cables at each end of the crib and attached at one of their ends to the spring and at their opposite ends to said panel, and a pulley rotatably mounted on each end of the crib and above the spring therein, the cable at each end of said spring passing upwardly from the spring and over said pulley and downwardly to its connection with the side panel, whereby vertical sliding movement of said panel in a downward direction from its upper confining position to its lower non-confining position will pull on said cables to move them over said pulleys to elevate said spring from its normal low level to a higher level within the crib.

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