June 2, 1925

1,540,487

E. LYDING

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Filed Jan. 5, 1925

2 Sheets-Sheet 1

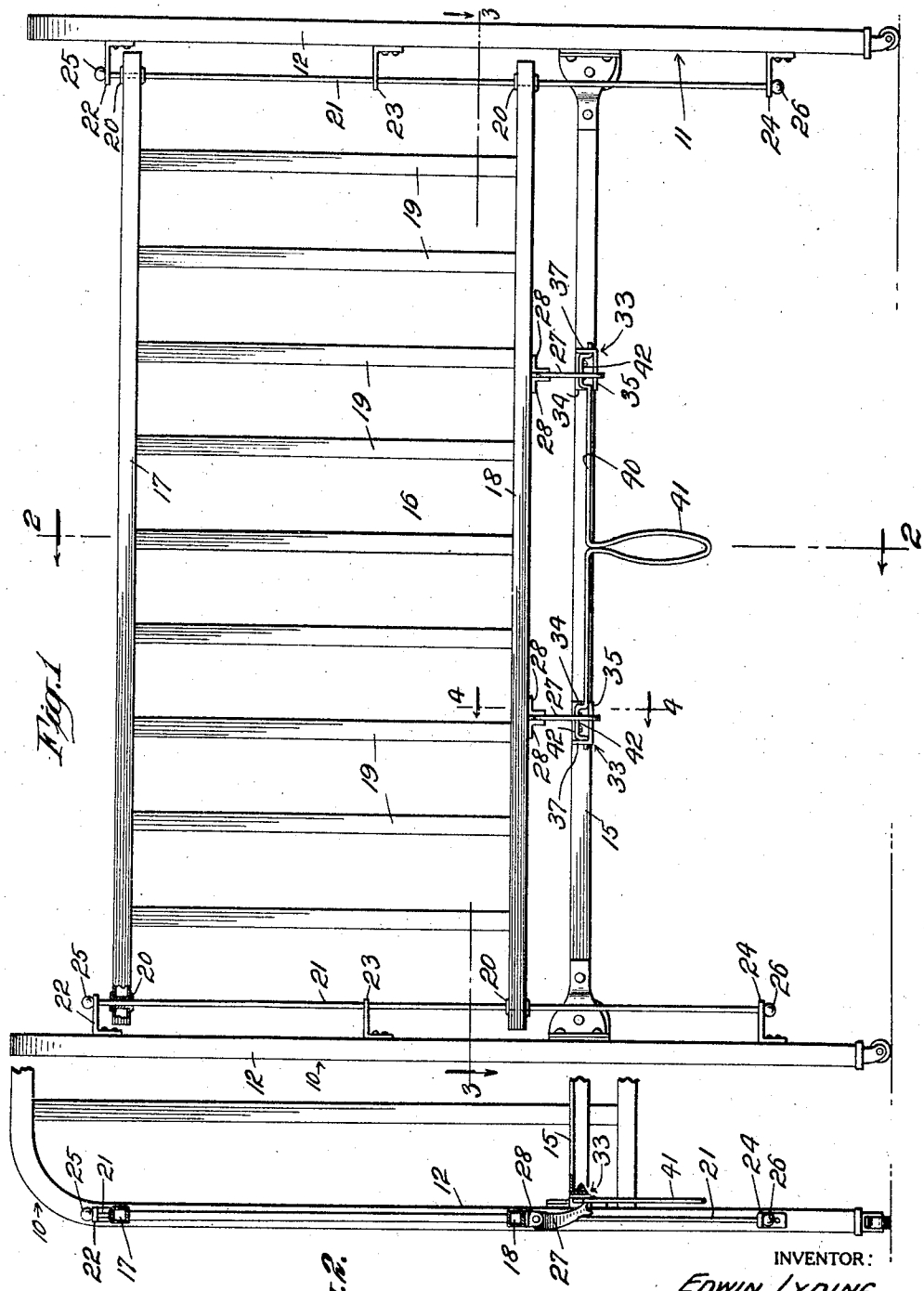


Fig. 1

Fig. 2.

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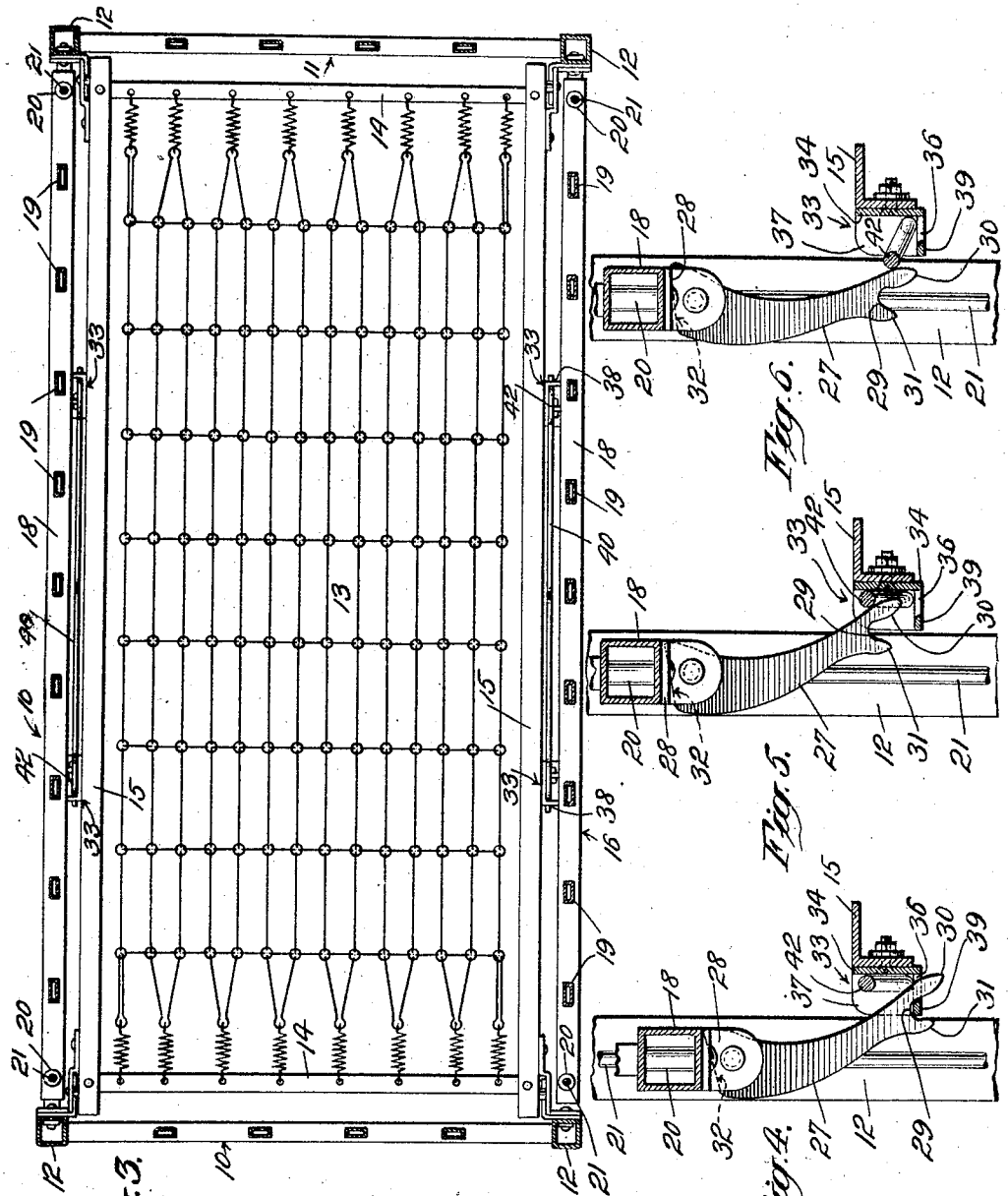


Fig. 3.

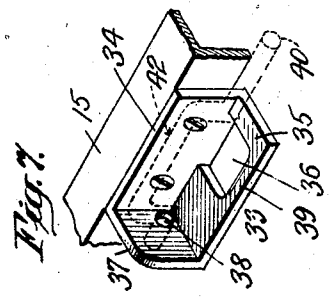


Fig. 7.

Fig. 6.

Fig. 5.

Fig. 4.

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UNITED STATES PATENT OFFICE.

EDWIN LYDING, OF BROOKLYN, NEW YORK, ASSIGNOR TO MONTAUK METALLIC BED CO., INC., OF BROOKLYN, NEW YORK, A CORPORATION OF NEW YORK.

CRIB.

Application filed January 5, 1925. Serial No. 534.

To all whom it may concern:

Be it known that I, EDWIN LYDING, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Cribs, of which the following is a specification.

The invention relates to improvements in the type of beds known as cribs for the use of children, and pertains particularly to means for locking the sliding side of the crib in its upper position and permitting, when manipulated so to do, the descent of said sliding side to its lower position.

There have been many cribs made having vertically slidable sides and various devices have been heretofore provided for locking the side in its upper position and freeing the side to slide downwardly, when so desired.

The main purpose of the present invention is to provide more efficient, reliable and convenient means for maintaining the slidable side of the crib in its upper position and permitting said side to slide downwardly after a proper manipulation of the supporting devices. In accordance with my invention means are provided to prevent any accidental downward movement of the slidable side of the crib. The means provided by me for locking the side of the crib in its upper position and releasing said side to slide downwardly, when desired, are of very durable and simple nature, and hence may be readily constructed and applied to the crib, and said means have for their chief merit efficiency in operation and safety in the matter of preventing accidental release of the side of the crib to slide downwardly.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which:

Fig. 1 is a side elevation of a crib equipped with the features of my invention;

Fig. 2 is a vertical transverse section, partly broken away, through the same, the section being on the dotted line 2—2 of Fig. 1;

Fig. 3 is a horizontal section through the same taken on the dotted line 3—3 of Fig. 1;

Fig. 4 is a vertical transverse section on a larger scale, and partly broken away, through a portion of the crib, the section being taken on the dotted line 4—4 of Fig. 1 and illustrating the supporting and locking devices of my invention in operative position supporting the side of the crib;

Fig. 5 is a like view of the same showing the position of the mechanism when the side of the crib has been slightly elevated to free the lower end of the supporting members preliminary to the descent of the side of the crib;

Fig. 6 is a corresponding view of the same showing the position of the locking and supporting members after they have been entirely released and the side of the crib is to descend, and

Fig. 7 is a perspective view, partly in section, showing a detail of the locking and supporting mechanism for the side of the crib.

In the drawings 10, 11, respectively, designate the end frames of the crib, and these end frames will be of usual or any suitable construction and embody in their structure corner posts 12, whose lower ends constitute legs or feet of the crib. The head and foot frames 10, 11 detachably support a spring or mattress 13 of any suitable type, the fabric of the mattress being secured at its ends to end rails 14, whose ends are secured to side rails 15 having suitable corner fastening members to cooperate with matching members secured to the corner posts 12. The present invention is not limited to any special construction of spring mattress 13 nor to any special construction of corner fastening members therefor. The present invention has to do with the vertically slidable crib sides 16 and to the mechanism for supporting said sides in their upper position and releasing them to slide downwardly to their lower position. The sides 16 may vary in construction in accordance with the taste of the manufacturer, and the sides 16 shown have upper and lower longitudinal tubular rails 17, 18, respectively, and suitably spaced apart tubular filler rods 19 interposed intermediate said rails 17, 18. The ends of the rails 17, 18 are provided with vertical sleeves or eyelets 20 which are adapted to receive and slide vertically on suitable guide rods 21 connected with the corner post members of the head and foot frames 10, 11. The rods 21 extend

through apertures in angle brackets 22, 23, 24, riveted to the head and foot frames 10, 11, and said rods 21 have knobs 25 on their upper ends to prevent their sliding downwardly through the brackets to an undue extent, and said rods 21 have knobs 26 screwed upon their lower ends as means for finishing or imparting a good appearance to the lower ends of the rods. In assembling the several parts of the crib the rods 21 are first introduced downwardly through the upper brackets 22, then through the eyelets 20, at the ends of the upper rail 17, and then through the brackets 23, and through the eyelets 20 at the ends of the lower rail 18, after which the rods are inserted through the apertures or holes in the brackets 24 and the knobs 26 are applied thereto. When the slides 16 are in their normal upper position, which is that shown in Fig. 1, the upper rails 17 of said sides are spaced below the upper brackets 22, this being for the purpose hereinafter explained, and when the crib sides 16 are in their lower position to permit access to the crib, the ends of the lower rail 18 seat upon the lower brackets 24 and the ends of the upper rail 17 seat upon the intermediate brackets 23, thereby firmly supporting the crib sides.

I secure to the lower rail 18 of each crib side 16 two pivoted dog arms 27, said arms being of corresponding outline and being pivotally secured at their upper ends between the depending members of angle brackets 28 which are securely riveted to the bottoms of the lower rails 18. The dog arms 27 are adjacent to the lower middle portion of the crib, and each is set inwardly from the end of the side rail 18 a distance equal to about one-third of the length of said rail. The form of the dog arms 27 are more clearly illustrated in Figs. 4, 5 and 6, in which it will be seen that the said arms curve downwardly and inwardly and are formed at their lower ends with recesses 29, long inner fingers 30, and shorter outer fingers 31, said recesses 29 being between the upper portions of said fingers. The upper end portions of the arms 27 are broadened, and the extreme upper edge of the arms are cut off at an angle to form an inclined surface 32 which is closely adjacent to the flat bottom of the lower rail 18 and coacts therewith as a stop. In the normal operative position of the dog arms 27, the upper inner end of the flat surface 32 is against the lower rail 18, as shown in Fig. 4. The main portion of the flat upper stop end 32 of the arms 27 only engages the adjacent surface of the lower rail 18 when, by the means hereinafter described, said arms are turned outwardly on their pivots and reach a substantially vertical position, as shown in Fig. 6.

I secure to the side rails 15 of the spring or mattress 13 metallic brackets 33, one of which is shown in perspective in Fig. 7. The brackets 33 have face plates 34 which are riveted against the vertical faces of the rails 15, lower horizontal plates 35 which extend outwardly from the rails 15 and contain openings 36, and outer end walls 37 which contain openings 38 extending longitudinally of the crib. The opening 36 in each of the brackets 33 creates in the horizontal plate 35 an outer bar member 39. The brackets 33 are of durable character and rigid with the side rails 15. I utilize the brackets 33 to cooperate with the dog arms 27 and also to journal the ends of a longitudinally disposed rod 40 having a depending arm 41 at its central portion, as shown in Fig. 1, and crank formation 42 at its end portions which lie within the brackets 33, as indicated by the dotted lines in Fig. 7. The extreme ends of the rod 40 are pivotally mounted within the openings 38 provided therefor in the ends 37 of the brackets 33. The crank formations 42 are formed by bending the end portions of the rod 40 to form upwardly projecting loops, as will be understood on reference to Figs. 1, 4 and 6.

Normally the rod 40, handle 41 and crank formations 42, constituting an integral frame, turn by gravity to the position in which said frame is illustrated in Figs. 1, 2, 3, 4, 5 and 7, said handle 41 hanging downwardly and the crank formations 42 extending upwardly and lying against the back members 34 of the brackets 33, and I call attention to the fact that the rod 40 and its parts stand inwardly from the front of the crib, where said handle 41 is not likely to be accidentally operated by a person standing at or passing by the side of the crib. The dog arms 27 by gravity swing inwardly to the position in which said arms are shown in Figs. 2, 4 and 5.

The operation of the locking and supporting members 27, 33 and 40 may be understood on reference to Figs. 4, 5 and 6. In Fig. 4 which indicates the normal upper position of the crib side shown in Fig. 1, it may be seen that the fingers 30, 31 at the lower ends of the dog arms straddle the bars 39 of the brackets 33, the longer fingers 30 being projected downwardly through the openings 36 in the brackets 33. When the parts are in the position shown in Fig. 4 the crib-side 16 is supported in its upper position shown in Fig. 1. When it is desired to lower the crib-side 16 said side is lifted upwardly until the ends of the upper rail 17 thereof are arrested by the upper brackets 22 connected with the head and foot frames. The upper position of said crib side when thus elevated, is represented in Fig. 5, wherein it may be seen that this raising of the crib side has lifted the dog arms 27 from the

bars 39 of the brackets 33 and has withdrawn the fingers 30 from the openings 36 in said brackets. While the crib side 16 is in this elevated position against the brackets 22, the attendant will press inwardly against the lower portion of the handle 41 for the purpose of turning the crank formations 42 against the fingers 30 of the dog arms and pressing said arms outwardly from the vertical planes of the brackets 33, this position of the parts being indicated in Fig. 6. When the parts are in the position shown in Fig. 6, the crib side 16 may be lowered directly downwardly until the upper rail 17 thereof meets the brackets 23 and the lower rail 18 thereof meets the brackets 24. If the crib side 16 should be raised against the brackets 22 and then released without the lower end of the handle 41 being pressed inwardly, the dog arms would simply return to the position in which they are shown in Fig. 4 and support the crib side in normal elevated position. Whenever it is desired to lower the crib side 16, said side must first be elevated to free the dog arms 27 from the bars 39 of the brackets 33, and the attendant must press inwardly against the lower end of the handle 41 for turning the crank formations 42 against said dog arms to force them outwardly from alignment with the brackets 33 or to the position shown in Fig. 6, whereupon the crib side may be immediately lowered. After the crib side 16 has been lowered, gravity will return the rod 40, handle 41 and crank formations 42 to their initial position shown in Figs. 1, 4 and 5, and gravity will also turn the dog arms 27 inwardly. When, therefore, the crib side is again elevated, the dog arms 27 will at their inner inwardly inclined edges move against the outer edges of the brackets 33 and finally, when the crib side has reached the upper stop brackets 22, turn inwardly over the lower members 35 of said brackets or to the positioon shown in Fig. 5, and thereupon when the crib side is released to leave the upper brackets 22, the recesses 29 of the dog arms will descend upon the bars 39 of the brackets 33 and attain the position shown in Fig. 4, wherein it may be seen that the dog arms cooperate with the brackets 33 in supporting the crib side in its normal upper position.

The features of my invention may be applied, as I indicate in the drawings, to both of the crib sides, or they may only be applied to one of the crib sides, as may be found necessary or convenient. The features constituting my invention are very durable, efficient and convenient in use, and are largely automatic in operation. I regard the rod 40 having the handle 41 and crank formations 42 for cooperation with the dog arms 27, pivoted to swing transversely of the crib, as desirable and contributing safety in respect to the support, control and manipulation or operation of the crib-side. The construction and arrangement is such that when the crib side is supported in its upper position, any accidental or other inward turning of the lower end of the handle 41 will not release the dog arms 27 from the brackets 33, but on the contrary will result in the crank formations 42 pressing the lower ends of said dog arms more firmly against the bars 39 of said brackets 33. When the crib side is moved to its upper position preparatory to descending, the crib side will not be permitted to descend until the attendant has deliberately operated the handle 41 to turn the crank formations 42 against the dog arms for moving them out of the plane of the brackets 33 or to the position shown in Fig. 6. It will thus be seen that my invention prevents or minimizes the results which might ensue from the accidental or premature descent of the crib-side. It will be obvious, also, that the handle 41 may be conveniently pressed inwardly by the knee of a nurse standing at the side of the crib and holding the crib-side up against the stop-brackets 22 preparatory to the descent of said crib-side. It will be understood, also, that when the crib-side is again elevated against the stop-brackets 22 and released, said side will become automatically arrested in its normal upper position by the dog-arms 27 and brackets 33.

In the construction of my crib I preferably make use of the side rails 15 of the spring or mattress 13 as the side-rails of the crib, and in this way I omit the use of additional side-rails and form the crib-structure on the lines of a three-piece bed. I do not limit myself to this particular three-piece bed feature, but I regard it as desirable in the manufacture of cribs having slidable sides.

What I claim as my invention and desire to secure by Letters-Patent, is:—

1. In a crib of the character described having end-frames, side-rails and a vertically slidable side mounted on vertical guide rods secured to said end-frames, means for supporting said side in its upper position and trip mechanism for cooperation with said supporting means, said supporting means comprising dog-arms pivotally connected at their upper ends to said side and to swing transversely of the crib and brackets secured to a side rail and adapted to be engaged by and interlock with said arms when the side is in its upper position, and said trip mechanism comprising a longitudinal rod carried by said side rail and adapted to have rocking motion, said rod having a depending handle to be turned transversely of the crib for turning said rod, and crank members back of the lower

ends of said arms for pressing against and moving said arms, when said handle is turned inwardly, out of the vertical planes of said brackets, for permitting the crib-side to move to its lower position.

2. A crib as claimed in claim 1, in which said dog-arms are adapted by gravity to swing inwardly above said brackets when the crib side is elevated, and in which said longitudinal rod is adapted by gravity to turn to its normal position after being released on the descent of the crib-side, thereby restoring said crank members to a position where they will be back of the dog arms when said arms again engage said brackets.

3. A crib as claimed in claim 1, in which said dog arms are recessed at their lower ends and are adapted to automatically swing inwardly above said brackets when the crib-side is elevated, and in which said brackets are formed with longitudinal bars to receive the recesses of said arms, and in which said longitudinal rod is adapted to automatically turn to its normal position after being released on the descent of the crib-side, thereby restoring said crank members to a position where they will be back of the dog arms when said arms again engage said brackets.

4. A crib as claimed in claim 1, in which said dog arms have inner and outer depending fingers at their lower ends and are adapted to automatically swing inwardly above said brackets when the crib-side is elevated, and in which said brackets have back plates secured to said side rail and horizontal plates apertured to receive the inner fingers of said dog arms and formed with bars to be straddled by said fingers, and in which said longitudinal rod is adapted to automatically turn to its normal position after being released on the descent of the crib-side, thereby restoring said crank members to a position where they will be back of the dog arms when said arms again engage said brackets.

5. A crib as claimed in claim 1, in which said brackets have outwardly extending members to be engaged by said dog arms and end members in which the ends of said longitudinal rod are mounted.

Signed at New York city, in the county of New York and State of New York, this 29th day of December A D. 1924.

EDWIN LYDING.