Jan. 31, 1933. F. KUSTERLE 1,895,885

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Fig. 1

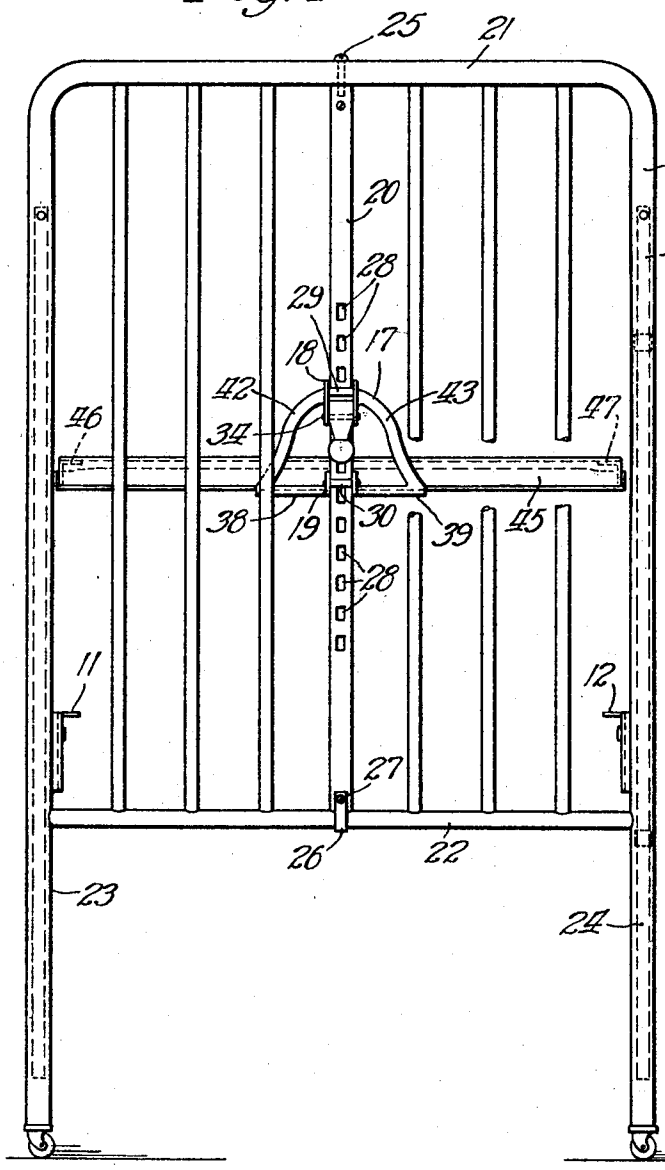
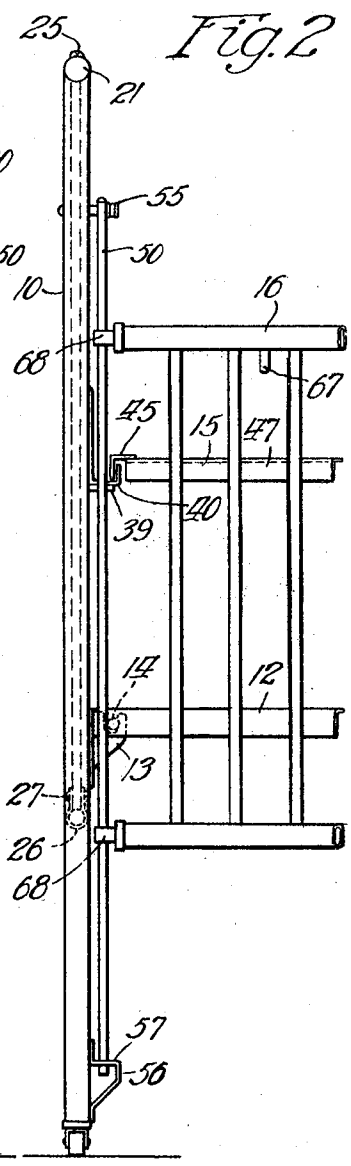


Fig. 2



Inventor
Frank Kusterle
Fisher, Clapp, Soans & Pond
Attys

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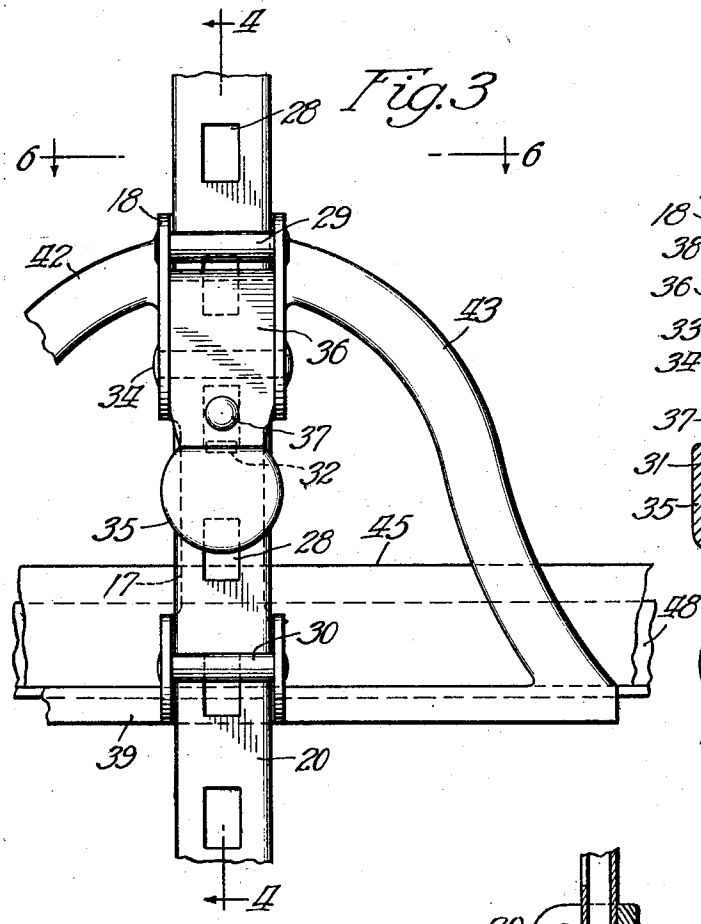


Fig. 3

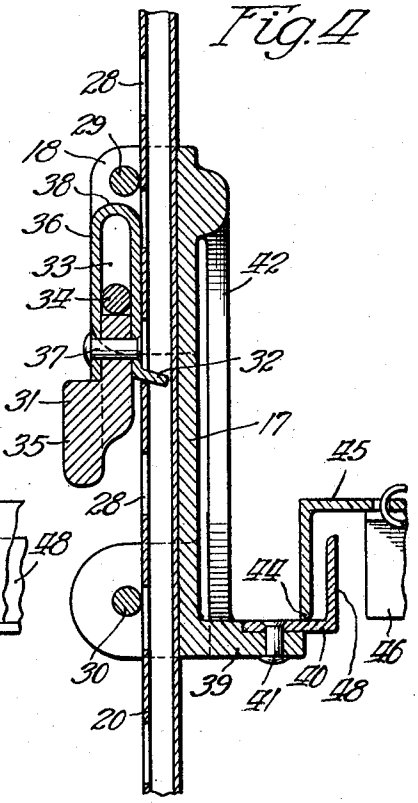


Fig. 4

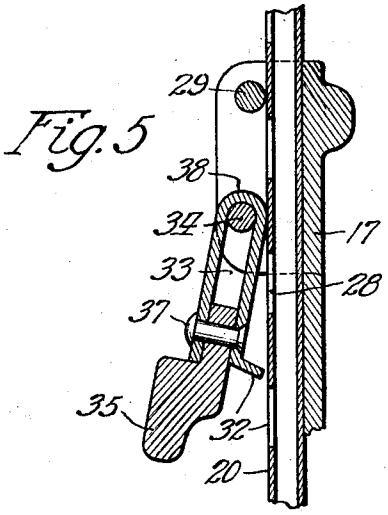


Fig. 5

Inventor
Frank Kusterle

Fisher, Clapp, Looma & Pond
Attys.

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Fig. 6

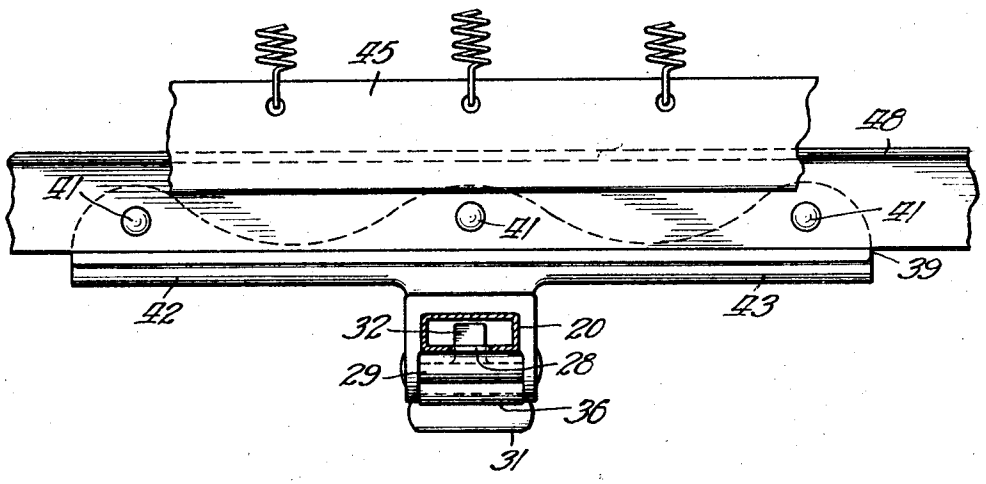


Fig. 9

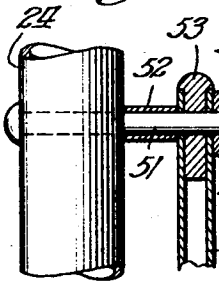


Fig. 10

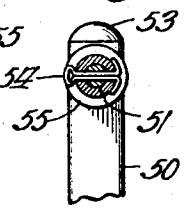


Fig. 7

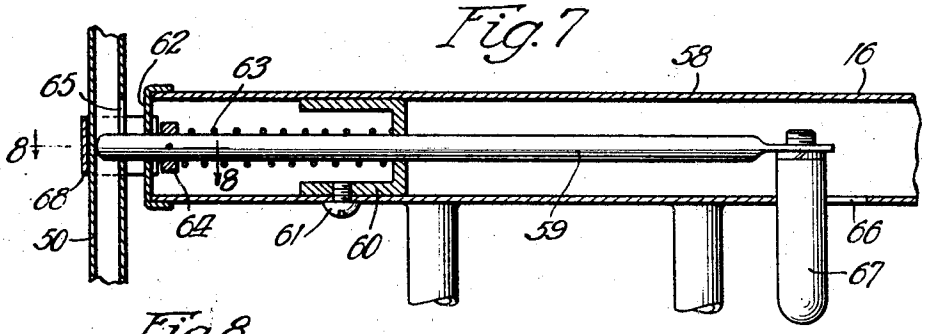
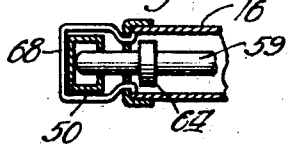


Fig. 8



Inventor
Frank Kusterle

Fisher, Clapp, Soame & Pond Attys.

Patented Jan. 31, 1933 1,895,885

UNITED STATES PATENT OFFICE

FRANK KUSTERLE, OF KENOSHA, WISCONSIN, ASSIGNOR TO SIMMONS COMPANY, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE

CRIB

Application filed April 9, 1928. Serial No. 268,518.

This invention relates to cribs and has particular reference to means for mounting the bed bottom and side guard of a crib on the main frame of the crib so that the bed bottom and side guard will be vertically adjustable relative to each other and relative to the said main frame.

Some of the objects of the invention are; to provide an improved means for adjustably supporting the crib bottom, which means will not readily be disengaged and rendered inoperative when the crib bottom is supported in operative position; to provide such means which will be locked against disengagement when the crib bottom is so supported, but which means will be readily disengageable to permit adjustment of the crib bottom by a simple manipulation of certain parts; and to provide improved adjustable means entirely independent of the crib bottom for supporting the latter on the main frame of the crib.

Other objects of the invention are to provide means for adjustably supporting the crib bottom, which means will be effective to rigidly support the bottom in any desired position of vertical adjustment and to provide such means which will not require accurately inter-fitting parts on the crib bottom and supporting means. It is also an object of this invention to provide improved means for locking a vertically adjustable crib-side in elevated position; and in general, to provide an improved crib structure having an adjustable bottom and an adjustable side.

Still other objects and advantages of the invention will be understood by reference to the following specification and accompanying drawings in which I have illustrated a crib embodying a selected form of the invention.

In the drawings:

Fig. 1 is an end elevation.

Fig. 2 is a side elevation of an end portion of the crib.

Fig. 3 is a detail elevation and is an enlargement of a part of Fig. 1.

Fig. 4 is a section on the line 4—4 of Fig. 3.

Fig. 5 is a section similar to Fig. 4, showing the parts in a changed position.

Fig. 6 is a plan section on the line 6—6 of Fig. 3.

Fig. 7 is a sectional view of a part of Fig. 2 on an enlarged scale.

Fig. 8 is a section on the line 8—8 of Fig. 7.

Fig. 9 is an enlargement of another part of Fig. 2, partly in section.

Fig. 10 is a section on the line 10—10 of Fig. 9.

Referring now to the drawings, my improved crib includes end frames, one of which is shown at 10, which are connected together by suitable means such as side rails 11 and 12, in accordance with well known practice. The connection between the side rails and end frames may be of any suitable form, and in the present instance I provide a detachable connection such as shown in Fig. 2. This connection includes a bracket member 13 having a hook formed thereon and adapted to receive a pin 14 projecting from the side rail. The edge of the hook is preferably inclined so that the end of the side rail is jammed against a portion of the bracket which is secured to the end frame as clearly shown in the said Fig. 2. The construction of this connection forms no part of the present invention, and hence need not be more specifically described.

A bed bottom 15 is provided for the crib and fits within the space between the end frames 10 and side guards extending between the sides of the end frames, one of which side guards is shown at 16. The bed bottom 15 is supported adjacent its opposite ends by means adjustably connected with the adjacent end frame so that the height of the bed bottom may be adjusted as desired. According to the present invention, the means for supporting the bed bottom at each end includes a bracket member 17, which is provided with vertically spaced pairs 18 and 19 of ears, which project outwardly from the bracket 17 and straddle an upright member 20 which constitutes a part of the end frame 10.

The upright 20 may be secured to the end frame in any suitable manner and in the present instance I have shown an end frame

of tubular metal construction having a top rail 21 and a lower cross member 22 extending between corner posts 23 and 24, the upright member 20 being connected at its opposite ends to the top rail 21 and cross member 22. The upper end of the upright 20 may be secured to the top rail 21 by means of a screw 25 which extends through the top rail and threadedly engages a threaded aperture or nut provided in the upper end of the upright member. The lower end of the upright may be connected to the cross member 22 by similar means or in any other suitable manner, for instance, by a strap 26, which is bent around the member 22 and provided with portions extending upwardly on opposite sides of the upright and secured to the upright by means of a bolt 27. I prefer to make the upright member 20 of tubular metal formation and in the outer wall thereof I provide a plurality of vertically spaced apertures 28, for a purpose which will presently appear.

The bracket member 17 is positioned on the upright member 20 by means of the said pairs of ears 18 and 19 so that the bracket is prevented from wabbling on the upright and the upright serves as a guide or track along which the bracket is vertically slidable. Cross pins 29 and 30, extending through the pairs of ears 18 and 19 respectively, and secured thereto, are provided for preventing removal of the bracket from the upright, while permitting the bracket to be freely slid up or down on the upright.

A supporting pawl 31 is provided for locking the bracket 17 in any desired position of adjustment on the upright and the said pawl includes a part 32 adjacent one end, which is adapted to enter the apertures 28 and to engage the edge of the upright adjacent the lower end of the aperture into which the part 32 is inserted. The pawl 31 is provided with an elongated slot 33 which receives a pivot pin 34 extending between the ears of the upper pair of ears 18, as is clearly shown in Figs. 3 and 4. In the present instance I prefer to make the pawl of two major parts, one being the lower or handle part 35 which may be in the form of a small casting, and a strap member 36 which is bent to form an inverted U. The outer ends of the legs of the U are secured to the handle part 35 by suitable means such as a rivet 37. It will be seen from an inspection of Fig. 4 that the elongated slot 33 is easily formed by the above described pawl construction and the part 32 of the pawl may be formed by bending an end portion of the inner leg member away from the handle part 35 as is also clearly shown in Fig. 4.

By an inspection of Fig. 4, it will be seen that the bracket member 17 is supported in the desired position of vertical adjustment on the upright 20 through the agency of the pivot pin 34, which is seated in the lower end of the slot 33 so as to bear down on the pawl 31. The part 32 of the pawl enters one of the apertures 28 and is seated on the edge of the upright adjacent the lower end of the aperture 28. It will be apparent that the pawl cannot turn about the said edge of the upright as a fulcrum because the pivot pin 34 serves to lock the upper end of the pawl against outward movement and obviously the engagement of the upper end of the pawl with the adjacent side of the upright prevents pivotal movement of the pawl in the other direction about the pivot pin 34. Accordingly, it will be understood that the locking pawl 31 is locked in operative position, as long as the bracket 17 is supported in operative position by the pawl. In order to release the pawl to permit adjustment of the bracket along the upright, the bracket 17 is first moved upwardly along the upright until the pivot pin 34 reaches the upper end of the notch 33 as shown in Fig. 5. When the pin is so disposed, the pawl may obviously be swung thereon since the upper end of the pawl is rounded as shown at 38 and is positioned concentric with the pivot pin 34 so that no upper end part of the pawl will engage the upright member to prevent pivotal movement of the pawl for releasing the same from the upright. When the pawl has been disengaged from the aperture 28 as shown in Fig. 5, the bracket may be freely moved up or down along the upright 28 to the desired position where the pawl is again engaged with one of the apertures 28, and the parts restored to the position shown in Fig. 4, by lowering the bracket part 17 until the pivot pin 34 is again seated in the lower end of the slot 33.

The bracket 17 is provided with a ledge or shoulder 39 which projects inwardly from the adjacent end frame and to which shoulder an angle iron strip 40 is secured by means of rivets 41. The shoulder part 39 of the bracket is disposed adjacent the lower end of the bracket 17 and is connected adjacent its ends by means of arms 42 and 43 with the upper end of the bracket. The angle iron strip 40 extends across substantially the entire width of the end frame as shown in Fig. 1 and the horizontal flange thereof serves to receive the lower edge 44 of the vertical flange part of an angle iron strip 45 which forms part of the bed bottom 15, being connected between the adjacent ends of the side members 46 and 47 of the bed bottom 15. The vertical flange 48 of the angle iron strip 40 fits between the vertical flange of the angle iron strip 45 and adjacent ends of the side rails 46 and 47 of the bed bottom and serves to prevent endwise displacement of the bed bottom from the supporting strip 40.

It being understood that both ends of the bed bottom 15 are similarly connected to the adjacent end frame, it will be apparent that

the above described connection between the end of the bed bottom and the bracket 17, will permit free movement of either end of the bed bottom upwardly or downwardly with respect to the other end. Such movement is permitted because of the loose connection or fit of the vertical flange 48 in the space between the vertical flange of the angle iron strip 45 and ends of the side rails 46 and 47, which loose connection prevents binding between the ends of the bed bottom and parts connected to the end frame.

It will also be understood that adjustment of the bed bottom is facilitated because of the positioning of the single supporting bracket at each end of the bed bottom, intermediate (substantially midway between) the opposite sides of the bed bottom. This arrangement avoids any tendency of the bed bottom to bind with other parts as an incident to the adjusting of the bed bottom, whereby adjustment is made a difficult operation as is often the case in cribs in which the bed bottom is connected by a pair of spaced devices at each end.

The side guard 16 in the present instance is preferably connected to the end frames at each end so that it may be raised or lowered as desired, to permit free access to the crib bottom. For so connecting the side, I provide a guide 50 secured adjacent its upper and lower ends to each end frame. The upper end may be connected by means of a headed pin 51 which extends through the corner post 24 and through the guide 50 as shown in Fig. 9, a spacing sleeve 52 being provided between the post and guide to maintain the same in spaced relation. A trimming member 53 may be provided in the upper end of the guide 50 which is preferably of tubular metal construction, and the pin 51 may be locked in place by means of a cotter pin 54 which extends through the collar 55 and the end of the pin, as clearly shown in Figs. 9 and 10. The collar 55 is preferably grooved as shown, to receive the head of the cotter pin and bent-over ends of the same within the periphery of the collar so that there will be no projecting parts on which bed clothing might be caught. The lower end of the guide 50 may be secured in place by means of a bracket member 56 which is riveted or welded to the corner post and provided with a substantially horizontal portion 57 having an aperture for receiving the lower end of the guide, as clearly shown in Fig. 2.

The side guard 16 is provided with a tubular metal top rail 58 within which I slidably mount a spring pressed plunger 59. The plunger 59 is slidably supported by means of a bearing 60 disposed on the inside of the top rail 58 and locked in position by suitable means such as a screw 61. A cap member 62 fitting over the end of the top rail 58 and secured thereto by welding or other suitable means is apertured to receive the end of the plunger 59 and also serves to support the said plunger in the desired position. A spring 63 compressed between a collar 64 carried by the plunger 59 and a part of the bearing member 60 serves to normally urge the plunger to move outwardly so that the outer end of the plunger will enter an aperture 65 provided in the guide member 50, and thereby support the adjacent end of the side guard. (See Fig. 7.)

The lower wall portion of the top rail 58 is provided with an elongated slot 66 through which a handle member 67 extends to the inside of the top rail and is secured to an end portion of the plunger 59. The plunger may conveniently be withdrawn from the aperture 65 in the guide by lifting the side guard slightly to relieve the plunger from the supporting load and then forcing the handle 67 towards the center of the side guard, after which the side guard may be raised or lowered as desired. Other apertures such as shown at 65, in the guide 50, may be provided for supporting the side guard in the desired position of vertical adjustment. A strap member 68 bent so as to embrace the guide 50 is secured adjacent its end to the adjacent ends of the top and bottom rails of the side guard and such strap members serve to guide the side guard in its movement along the guide member 50.

I am aware that changes may be made in the above described features of construction of my improved crib without departing from the spirit of my invention, the scope of which should therefore be determined by reference to the following claims, construing the same as broadly as possible consistent with the state of the art.

I claim as my invention:

1. In a crib, the combination of an end frame, a bracket vertically adjustably mounted on the inside of said frame, means on the outside of said frame connected to said bracket for releasably locking the latter in positions of vertical adjustment on said frame, said means comprising a member loosely pivoted to said bracket and engageable with said frame at a plurality of points along the length thereof, said member being adapted to be released by an upward movement of said bracket and locked to said frame by a downward movement of said bracket relative to said frame, a bed bottom supported by said bracket so as to be vertically adjustable thereby, and means connecting said bed bottom and said bracket permitting limited lateral movement of said bottom toward and away from the plane of said frame.

2. In a crib, the combination of an end frame, a bed bottom, and means for vertically adjustably supporting said bed bottom on said frame, said means comprising a

bracket vertically slidably mounted on said frame, a member engageable with a portion of said frame for locking said bracket in positions of vertical adjustment, a pintle secured to said bracket and loosely pivoting said member, and means unitary with said member and engageable with another portion of said frame for locking said member against lateral displacement when said member is in locking position.

3. In a crib, the combination of an end frame having an upright member, a bed bottom, and means for vertically adjustably supporting said bed bottom on said end frame, said means comprising a bracket member provided with means for receiving and supporting an end portion of said bed bottom, guide means carried by said bracket and engaging said upright frame member for vertically slidably mounting said bracket on said upright, a supporting pawl pivotally and vertically slidably mounted on said bracket and provided with means for engaging a part of said upright member to lock the bracket in the desired position of vertical adjustment, the pivot for said pawl being normally disposed at a point spaced downwardly from the upper end of said pawl and said upper end being disposed closely adjacent the upright member so as to prevent unlocking pivotal movement of the pawl, and said pivot being relatively shiftable to a position adjacent the upper end of said pawl as an incident to relative vertical adjustment between the pawl and said bracket, thereby to permit said unlocking pivotal movement and disengagement of the pawl from the upright member.

4. In a crib, the combination of an end frame having an upright member, a bed bottom, and means for vertically adjustably supporting said bed bottom on said end frame, said means comprising a bracket member provided with means for receiving and supporting an end portion of said bed bottom, vertically spaced pairs of ears embracing said upright frame member for vertically slidably mounting said bracket on said upright, a supporting pawl pivotally and vertically slidably mounted on said bracket and provided with means adjacent one end for engaging a part of said upright member to lock the bracket in the desired position of vertical adjustment, the pivot for said pawl being normally disposed intermediate its ends and the normally free end of said pawl being disposed closely adjacent the upright member so as to prevent unlocking pivotal movement of the pawl, and said pivot being relatively shiftable to a position adjacent the free end of said pawl as an incident to relative vertical adjustment between the pawl and said bracket, thereby to permit said unlocking pivotal movement and disengagement of the pawl from the upright member.

5. In a crib, the combination of an end frame having an upright member, a bed bottom, and means for vertically adjustably mounting one end of said bed bottom on said end frame, said means including a bracket member having a part adapted to receive an end portion of the bed bottom and vertically spaced pairs of ears embracing said upright frame member whereby the bracket is vertically slidably mounted on the upright member, a supporting pawl provided with means adjacent one end for engaging a part of said upright member to lock the pawl against downward vertical movement relative to the upright and an elongated slot adjacent its other end, a pivot pin carried by said bracket and extending through said slot, normally seated in the lower end of said slot so that the bracket is supported on the pawl, the portion of said pawl extending above said pivot, being disposed closely adjacent the upright member so as to prevent inward turning of said portion about said pivot, thereby to prevent disengagement of the pawl and upright when the bracket is supported by the pawl, said bracket being adapted to be elevated relative to the pawl, thereby to move said pivot pin in said elongated slot to the free end of the pawl whereby said pawl may be swung about the pivot and disengaged from the upright member.

6. In a crib, the combination of an end frame having an upright member, a bed bottom, and means for vertically adjustably supporting said bed bottom on said end frame, said means including a bracket vertically slidably mounted on said upright, a locking member pivotally connected with said bracket and having a portion adapted to engage said upright for locking said bracket in the desired position of vertical adjustment, said locking member also having a part vertically slidable relative to the pivot connecting said member with the bracket, and normally disposed closely adjacent the upright at a point spaced from said pivot, thereby to prevent unlocking pivotal movement of said member, said slidable part being adapted to be moved relative to the pivot and out of said normal position so as to permit the member to be swung on the pivot in unlocking direction.

7. In a bed, the combination of an end frame, a bed bottom having a depending member adjacent an end thereof, and means for vertically adjustably mounting said bed bottom on said frame, said means comprising a supporting member vertically slidably carried by said end frame, said supporting member being adapted to receive an end of said bed bottom and having an upstanding member normally horizontally spaced from said depending member to permit limited horizontal movement of said bottom, whereby the respective ends of said bed bottom may be independently vertically adjusted.

8. In a crib, the combination of a bed bottom, an end frame, a bracket vertically adjustably mounted on said end frame for receiving and supporting one end of said bed bottom, means carried by said bracket for engaging a part of said frame to lock the bracket in vertically adjusted position, said locking means being connected to said bracket so as to be movable relative to the bracket in two, relatively transversely extending directions, said locking means being engageable and disengageable with said frame part by movement thereof in one of said directions, and means whereby said locking means is locked in operative position as an incident to movement thereof in the other direction.

9. In a bed, the combination of an end frame, a bed bottom, and means for vertically adjustably mounting said bed bottom on said frame, said means comprising a bracket vertically slidably carried by said end frame and adapted to be locked in positions of vertical adjustment thereon, an upstanding flange carried by said bracket, and a depending flange secured to an end of said bed bottom normally horizontally spaced from said upstanding flange and co-operating therewith so as to limit the horizontal movement of said bed bottom toward or away from the plane of said frame, whereby the ends of said bed bottom may be independently vertically adjusted.

FRANK KUSTERLE.