Jan. 31, 1967 M. SIEGEL 3,300,795

CRIB SIDE LOCK

Filed June 7, 1965

FIG. 1.

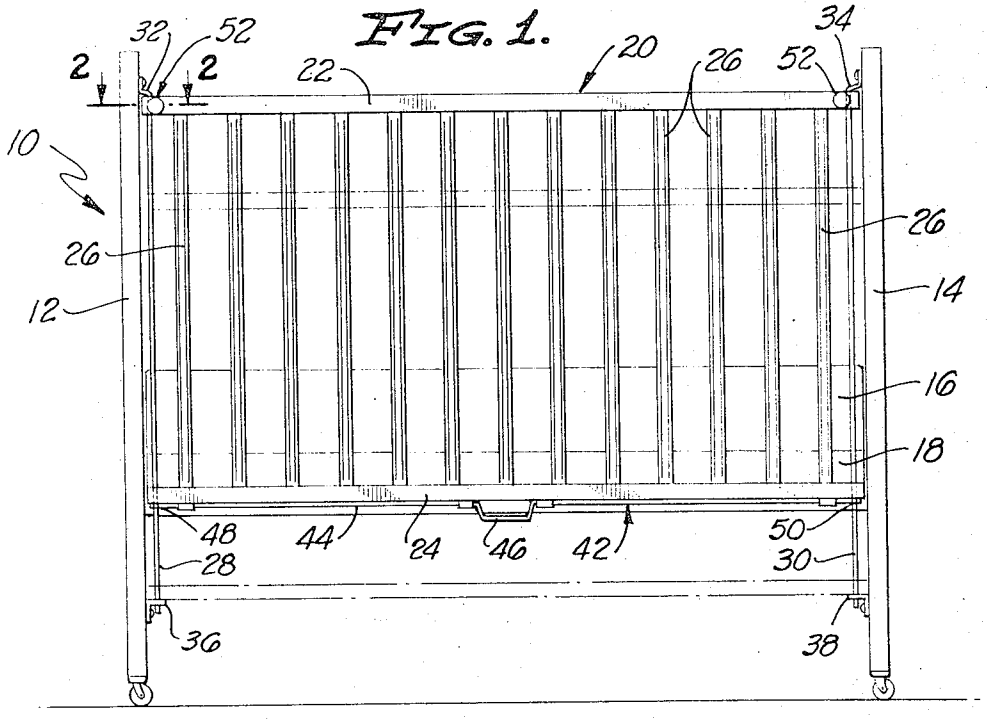


FIG. 2.

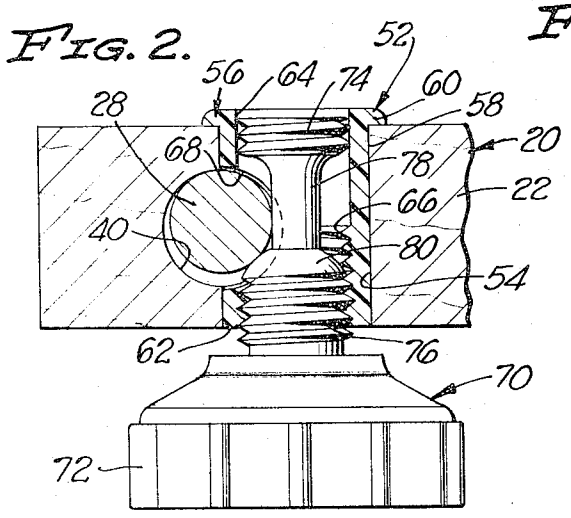


FIG. 3.

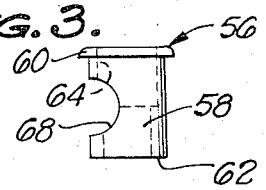
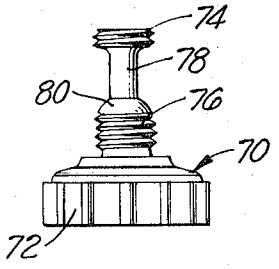


FIG. 4.



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3,300,795

Patented Jan. 31, 1967

3,300,795

CRIB SIDE LOCK

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Filed June 7, 1965, Ser. No. 461,692
5 Claims. (Cl. 5—100)

This invention is directed to a lock for a crib, and particularly a lock for use with the side of a crib so as to selectively prevent dropping of the crib side and prevent looseness thereof with respect to the remainder of the crib.

Baby cribs are well known. Such baby cribs normally have solids ends which are rigidly connected to the springs of the crib. Such cribs are provided with sides so that when a mattress is placed on the springs, and a child is placed on the mattress, a child cannot fall out of the crib. Furthermore, to aid the person caring for the child, the sides are normally arranged so that they are vertically movable to enhance access to the mattress and to the child. Since the crib ends are not dependent upon sides for support, the sides are relatively loose. Such looseness permits rattling of the sides due to external influences, and such rattling can make objectionable noises. Thus, it is desirable to be able to adjust such crib sides with respect to their vertical guidance structure so as to selectively lock them or reduce the clearance therebetween so as to lock them in place or permit relative vertical movement without slack to prevent the rattling thereof.

Accordingly, it is an object of this invention to provide selective locking means at the junction between movable sides on a baby crib and the stationary structure which permits locking of the sides thereto and permits the removal of the slack therebetween so that looseness is eliminated.

It is a further object of this invention to provide selectively engagable locking means on a movable crib side which engages with the track structure on the stationary portion of the crib so as to prevent relative lateral movement therebetween and selectively prevent vertical movement therebetween.

It is another object of this invention to provide selective vertical locking means on the top rail of a movable crib side which selectively locks the crib side with respect to the remainder of the crib structure to operate in conjunction with the conventional crib side locking structure to more rigidly lock the crib side.

It is another object of this invention to provide selective crib side locking means at the top rail of the crib side which engages with the crib side guide means secured to the crib ends so that upon locking thereof the crib ends are locked to the crib sides to provide a rigid crib structure wherein motion of the crib ends with respect to each other is prevented.

Other objects and advantages of this invention will become apparent from a study of the following portion of the specification, the claims and the attached drawings in which:

FIG. 1 is a side elevational view of a crib showing the crib side locking structure of this invention applied thereto;

FIG. 2 is an enlarged section taken generally along the line 2—2 of FIG. 1;

FIG. 3 is a side elevational view of the insert portion of the lock of this invention; and

FIG. 4 is a side elevational view of the locking screw which operates in conjunction therewith.

As an aid to understanding this invention it can be stated in essentially summary form that it is directed to crib side locking structure which acts in cooperation with the crib sides and crib ends so as to selectively lock the crib side for constrained vertical sliding motion or completely lock it to prevent such motion and prevent all relative motion between the crib sides, the crib side guides and the crib ends. Such cribs conventionally have vertical guide means secured to the crib ends and structure on the crib sides which permits the crib sides to vertically move in accordance with the control of the guide means. Furthermore, such sides are provided with locks which permit the side to be locked in the raised position and in some cases in intermediate positions. This invention provides selectvie locking structure which acts between the crib sides and the crib side guides. The locking means interengage therebetween so as to lock the side with respect to the guide, or simply to reduce the play therebetween so as to eliminate rattling while still permitting relative vertical movement. The locking means comprises an insert engaged in the crib sides at its top rail. This insert has an opening therethrough for a locking screw and has an opening which permits the guide rail to pass at least partially therethrough. A screw is screwed into this insert so that it is engageable both with the insert and with the guide. Tightening of the screw locks the guide with respect to the crib side, and slight loosening thereof permits relative motion without play.

This invention will be understood in greater detail by reference to the following portion of this specification wherein the drawings are described. Referring now to FIG. 1, a crib is generally indicated at **10**. The crib **10** has a head end **12** and a foot end **14**. Furthermore, crib **10** has a mattress **16** supported on a spring **18**. This spring **18** is secured to both the head end **12** and foot end **14** in such a manner as to make them a rigid, self supporting structure which stands even in the absence of crib sides. Both the head end and foot end are provided with legs and casters so as to make the crib **10** of such height as to be able to properly stand on the floor.

The near side of the crib is generally indicated at **20**. The far side of the crib is not shown, and may be identical to the near side **20** or may be rigidly secured to both the head end **12** and foot end **14**. The near side **20** comprises top rail **22**, bottom rail **24** and a plurality of vertical rails **26** extending therebetween and secured thereto.

Guides to constrain the motion of side **20** with respect to the remainder of crib **10** comprises rods **28** and **30**. Guide rods **28** and **30** are bent at **32** and **34** and are respectively secured to ends **12** and **14** above the bends. This spaces the main portion of the guide rods away from the crib ends. The main portion of the guide rods is vertical, and is parallel to the crib ends so as to permit side **22** to be movably vertical with respect thereto. The lower ends of guide rods **28** and **30** are secured by angle iron stops **36** and **38** which are respectively secured to ends **12** and **14**. Stops **36** and **38** each have a hole in their horizontal surfaces to permit the rods **28** and **30**, respectively, to pass therethrough. The upper and lower rails **22** and **24** each have a vertical hole positioned therethrough at each end. One of these vertical guide holes is shown at **40** in FIG. 2. The guide rods **28** and **30** are engaged in these holes so as to permit vertical motion of side **20**.

Vertical motion of side **20** is constrained by means of lock **42**. Lock **42** comprises a longitudinal bar **44** positioned beneath bottom rail **24**. Lock bar **44** has a release lever **46** positioned so as to be readily engagable, and lock bar **44** extends toward each end of bottom rail **24** and terminates in structure which locks with respect to guide rods **28** and **30**. Such locking structure is generally indicated at **48** and **50**, and is well known in the art. The locking structure **48** and **50** can comprise a round hole through the flattened ends of bar **44**. These holes embrace the guide rods **28** and **30** and spring urged rotation of bar **44** causes locking by binding of these holes around

the guide rods. In other structure, the lock structures **48** and **50** can comprise latches which are spring urged into notches in the guide rods **28** and **30**. In either case actuation of the release lever **46** causes unlocking thereof to permit vertical motion of the side **22** with respect to the remainder of the crib.

The holes in the crib side **20** through which the guide rods **28** and **30** pass, are of relatively large size, as is indicated in FIG. 2. Since they are of large size, the top rail **22** has a tendency to be able to be laterally movable with respect to the guide rods, and such limited lateral freedom permits a child in the crib to rattle the side **20** and make a considerable amount of noise.

This invention is directed to the crib side locking structure **52** indicated in detail in FIG. 2. A transverse hole **54** intersects with the hole **40**. Insert **56** is inserted in hole **54**. Insert **56** has a cylindrical outer surface **58** arranged to firmly engage within the hole **54** and a shoulder **60** which is arranged to engage upon the inner surface of top rail **22** to limit the outward motion of insert **56**. Insert **56** is of such dimension that the length from the under surface of shoulder **60** to outer end **62** is substantially equal to the thickness of top rail **22**. Insert **56** has an axial inner opening **64** therethrough. Inner opening **64** is threaded adjacent outer end **62** and is of cylindrical nature on the end adjacent shoulder **60**. Threads **66** extend approximately half-way through insert **56**. A cylindrical half bore **68** is provided through insert **56** at substantially right angles to the axis of the insert and is positioned slightly away from the axis and about half-way between the ends of insert **56**. The cylindrical half bore **68** corresponds substantially to hole **40** when the insert **56** is inserted in hole **54**, as is shown in FIG. 2.

Lock screw **70** comprises manually operable handle **72** and threaded portions **74** and **76**. It further comprises reduced center section **78** and lock shoulder **80**. This structure is arranged so that threads **74** prevent inadvertent removal of the lock screw **70** from insert **56** while the reduced center section **78** permits guide rod **28** to extend therepast as is shown in FIG. 2. As is seen in FIG. 2, the tightening of thread **76** within thread **66** causes lock shoulder **80** to bear upon rod **28**. When fully tightened, such engagement locks rod **28** between lock shoulder **80** and the interior of hole **40** to prevent relative vertical movement of crib side **20** with respect to the remainder of crib **10**. Such locking supplements the locking of lock **42** and further make the top rail **22** rigid with respect to head end **12**. A similar crib side lock is provided at each end of the top rail **22**, and is provided at each end of the top rail on the other crib side when the other crib side is provided for such vertical motion. Another valuable function of lock **52** is the situation where it is tightened with its shoulder against rod **28**, but only tightened enough to eliminate play of rod **28** within hole **40** but still permits longitudinal motion of the rod **28** through the hole **40** and past lock shoulder **80**. In this situation the side **20** can be raised and lowered, but there is no play between the top rail **22** and rods **28** and **30**. In this situation the opportunity to rattle the side **20** is removed so that loud noises resulting from such rattling are eliminated.

This invention having been described in its preferred embodiment, it is clear that it is susceptible to numerous changes and modifications within the scope of this invention without the exercise of the inventive faculty. Accordingly, the scope of this invention is defined by the scope of the following claims.

I claim:

1. A crib side lock for a crib having a vertically movable side and having a guide secured to the crib and engaged in an opening in the crib side so as to guide the crib side, said crib side lock comprising:

a member having an axial opening therethrough, said member having ends, screw threads within said opening in said member extending from substantially one end thereof partially toward the other end thereof, said member being positioned so that the guide opening in the crib side intersects with said member, a guide opening in said member at substantially right angles to said opening through said member and intersecting therewith, said guide opening in said member being generally aligning with the guide opening in the crib side;

a lock screw postioned within said member, said lock screw having a manually operable handle, a screw shank secured to said handle, said screw shank having first and second screw threads thereon and an elongated reduced central section between said screw threads, a lock shoulder adjacent said reduced central section and said first screw threads, said first screw threads being engaged with said screw threads within said member, said lock shoulder being adapted to engage against the crib guide within the opening in the crib side to lock said member with respect to the guide to prevent motion of the crib side with respect to the guide.

2. The crib side lock of claim **1** wherein said member is an insert and is inserted at least substantially through the crib side.

3. The crib side lock of claim **2** wherein said insert has a shoulder thereon adapted to engage the crib side, said shoulder on said insert being on the end away from the screw threads therein, said manual handle on said lock screw being away from said shoulder on said insert.

4. The crib side lock of claim **3** wherein the crib side is provided with a lock adjacent its lower edge, said crib side lock aiding said lower edge lock in maintaining the crib side in locked position.

5. A crib having a crib side lock, said crib comprising:

a head end and a foot end, structure connected between said head end and said foot end to firmly maintain said head end and said foot end with respect to each other, at least one vertically movably crib side on said crib, said crib side being positioned so as to extend substantially from said head end to said foot end, a guide rod on said head end and a guide rod on said foot end, each of said guide rods being spaced from their respective ends;

said crib side having a top rail and a bottom rail, means spacing said top rail and said bottom rail from each other and securing them with respect to each other, openings in each end of each of said top rail and bottom rail, said openings on one end of said top rail and said bottom rail embracing said guide rod on said head end of said crib and said openings on said other end of said top rail and said bottom rail embracing said guide rod on said foot end of said crib, holes through said top rail adjacent the ends thereof and intersecting said guide rod openings;

crib side lock means positioned at each of said holes, each of said crib side lock means comprising:

an insert positioned within each of said holes, said insert comprising a cylindrical outer surface and a shoulder extending radially outward from said cylindrical outer surface, an interior opening through said insert, said insert having a shoulder end on which said shoulder is positioned and an outer end, threads within said opening of said insert, said threads extending from said outer end substantially halfway to said shoulder end, a cylindrical half bore through said insert, said cylindrical half bore being positioned substantially at right angles with respect to said opening through said insert and extending substantially halfway through said insert, said cylindrical half bore being positioned substantially axially with respect to said hole through said top rail so that said guide rod extends through said cylindrical half bore;

a lock screw positioned within said insert, said lock

screw having a manual handle and a shank secured to said handle, said shank having first and second sets of screw threads thereon and having a reduced central section therebetween, a shoulder between said reduced central section and said first set of screw threads, said shoulder being engagable with said guide rod so as to lock said guide rod with respect to said top rail, said manual handle on said lock screw being positioned away from said shoulder on said insert and said first threads on said lock screw being engaged with said threads in said insert.

References Cited by the Examiner

UNITED STATES PATENTS

2,383,167	8/1945	Shaw	5—100
2,621,094	12/1952	Brown	287—58

FOREIGN PATENTS

550,493	12/1957	Canada.

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