April 8, 1947. C. E. WEBB 2,418,680

CRIB

Filed June 16, 1943

Fig. 1

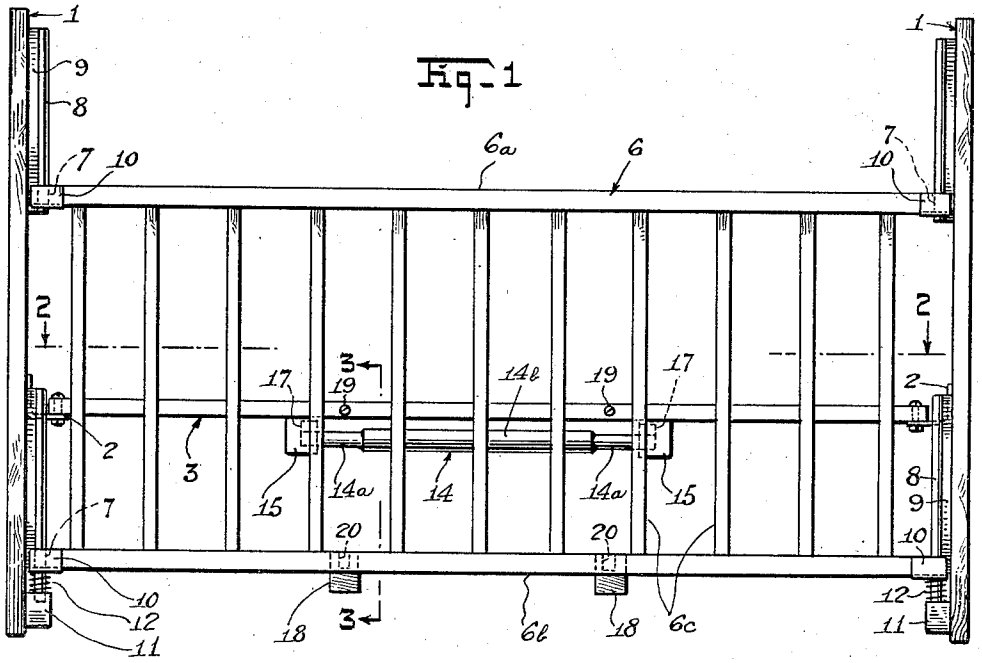


Fig. 2

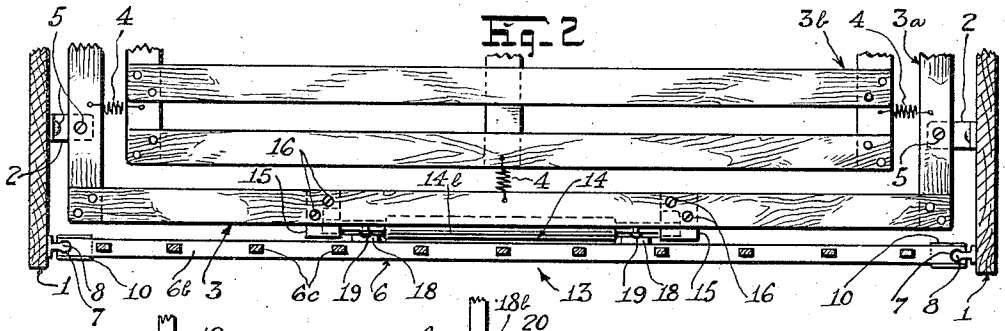


Fig. 3

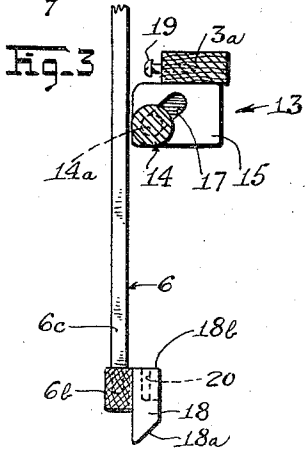
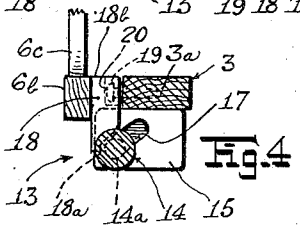


Fig. 4



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2 Claims. (Cl. 5—100)

1

This invention relates to children's cribs and more particularly to an improved latch for the movable side panel of a crib.

My invention is concerned especially with latches of the unidirectional type—that is, those which are effective in one direction only—and has for an object to provide a latch of simple form which is operable automatically to latch the side panel as the panel is raised to an elevated position and which is easily operable to release the panel for movement to a lowered position.

It is another object of my invention to provide a latch comprising a novel combination of parts which is dependably operable for the purpose mentioned.

A further object of my invention is to provide an improved form of such latch which comprises very few parts of simple design and economical construction.

A further object is to provide such latch in a form which may economically be made of wood, plastic or other non-metallic materials.

A yet further object is to provide an improved latch for cribs or similar articles which has a positive and dependable operation and which may be released by the foot or hand in one operation without necessity for first displacing the latched member from latched position.

These and other objects of my invention will more fully appear from the following description and the appended claims.

In the description of my invention reference is had to the accompanying drawings, of which:

Figure 1 is a front elevational view of the crib into which my invention is incorporated;

Figure 2 is a partial horizontal section taken from the line 2—2 of Figure 1;

Figure 3 is a view of the crib panel latch as it appears from the line 3—3 of Figure 1, the parts of the latch being shown disengaged and in the positions which they occupy when the side panel is in a lowermost position; and

Figure 4 is a view similar to Figure 3 but showing the parts of the latch in engaged relationship.

The crib shown in the accompanying drawings comprises a pair of similar end sections 1 which have brackets 2 secured thereto for supporting a mattress frame 3. The mattress frame includes a rigid rectangular outer section 3*a* and a latticed inner section 3*b* which is resiliently connected to the outer section by springs 4, these frame sections being suitably made of wood as is shown. The outer mattress frame section 3*a* rests on the

2

brackets 2 and is secured thereto by screws 5, the connection of the frame to the crib end sections being made rigid so as to strengthen and rigidify the over-all structure of the crib.

At the front and back of the crib there are side panels of which only the front panel, a movable panel 6, is herein shown. This front side panel comprises top and bottom rails 6*a* and 6*b* which are suitably interconnected by vertical slats 6*c*. The end portions of the top and bottom rails are provided with vertical apertures 7 to receive individual vertical guide rods 8 that are mounted on the end sections 1. In the present illustrative example, the individual guide rods have ribs 9 along the lengths thereof which space the rods from the end sections and secure the rods thereto, and the vertical apertures 7 are open at the ends of the rails so as to clear these ribs, this being a preferable mounting for the movable side panel as disclosed and claimed in my pending application Serial No. 432,574, filed February 27, 1942. A novel improvement in the mounting of the side panel, however, is in the provision of reenforcing brackets 10 on the end portions of the top and bottom rails. These are metal brackets of U-shape which are folded upwardly from the bottom of the rails against the sides thereof and which have suitable apertures or slots in their bottom portions so as to clear the guide rods 8. These brackets serve to reenforce and strengthen the rails so that they will not pull out from the guide rods while yet permitting the rails to be made of uniform thickness.

The mounting above described serves to guide the side panel vertically throughout the lengths of the respective guide rods 8. At the lower ends of the bottom set of guide rods 8 there are stop members 11 for supporting the side panel in lowermost position. Set onto these stop members, however, are compression springs 12 which serve to absorb the momentum of the side panel should the panel be dropped from a raised position. To hold the panel releasably in a raised or elevated position there is provided a latch 13 according to my invention as is now to be described.

The latch 13 includes a latch member 14 which may suitably be in the form of a rolling pin as is shown in the accompanying figures. This latch member is supported between a pair of blocks 15 which are secured by screws 16 to the underside of the mattress frame section 3*a*. These blocks have slots 17 in their adjacent sides which are engaged slidably and pivotally by the reduced di-

ameter end portions *14a* of the latch member. The slots are inclined so as to guide the translational movement of the latch member **14** in a direction oblique to the path of travel of the side panel, the movement of the latch member toward the panel being in a direction at an acute angle with that of the downward movement of the panel—that is, at an acute angle with the direction of movement of the panel in which the latch is to be effective. Under influence of the weight of the latch member **14** the same will be understood to be biased downwardly and to normally occupy a downward-forward position determined by the lower ends of the slots **17**, this being the effective position of the latch as will hereinafter appear. Secured to the bottom rail *6b* against the inner side thereof is a pair of catch members **18**. These catch members are positioned on the side panel to lie vertically in line with the positions occupied by the reduced diameter end portions *14a* of the latch member when the latch member is in effective position. The bottom faces *18a* of the catch members are inclined to be parallel to the line of travel of the latch member; the top faces *18b* of the catch members may, however, be horizontal as is shown.

On raising the side panel the top faces *18b* will engage the reduced diameter end portions *14a* of the latch member and lift the latch member upwardly therewith. However, in doing so the latch member will be moved rearwardly out of the path of the catch members, in view of it being constrained by the slots **17** to oblique movement relative to that of the side panel. When the catch members are so raised above the path of the latch member, the latter will return under influence of its bias to effective position wherein the reduced diameter end portions *14a* will lie directly below the bottom faces *18a* of the catch members. Upon next lowering the side panel the faces *18a* will impinge against the end portions *14a* of the latch member but, being parallel to the line of travel of the latch member, will be ineffective to displace the latch member out of effective position. Accordingly, the side panel will become latched against downward movement. However, since the bottom faces *18a* of the catch members are parallel to the line of travel of the latch member, the latter may be moved out of effective position, without necessity for raising the side panel above latching position, by imparting a small rearward or upward thrust to the central portion *14b* of the latch member. It is to facilitate this releasing of the latch member from effective position that the central portion *14b* is enlarged in diameter so that it will be more conveniently accessible.

To stop the panel as it is raised to an upward position just slightly above that wherein the latch member is released to move down into an effective position, there is provided a pair of stop pins **19** on the mattress frame section *3a*. These stop pins are vertically in line with the catch members **18** and are adapted to limit the upward movement of the side panel by abutment of the catch members thereagainst. In the catch members, however, are vertical grooves **20** running down from the upper sides thereof into which the stop pins pass as the side panel is raised. The engagement of these stop pins with the grooves of the catch members serves to produce

a guiding influence on the side panel as it is raised.

It will be observed that the panel latch hereinabove described comprises very few parts of very simple design and construction which can be economically made in production. Moreover, these parts are relatively large and of such form that they can be easily made of wood or other suitable non-metallic material. It will be noted, however, that the operation of the latch is very dependable and positive and that no sacrifice is made in its operation by the cheapness of its construction.

The embodiment of my invention herein shown and described will be understood to be illustrative and not limitative of my invention since the same may be changed and modified within the range of engineering skill without departing from the scope of my invention, which I endeavor to express according to the following claims.

I claim:

1. In a children's crib including end sections, a mattress-frame structure carried by said end sections, a side panel, and means connecting said side panel to said end sections for vertical movement of the panel between upper and lower positions: the combination of a pair of holding members secured to and depending below said mattress frame structure in positions adjacent said vertically-movable side panel, said holding members being spaced from one another lengthwise of the crib and having grooves which incline downwardly towards said side panel; a latch bar having end portions slidably engaging said grooves, said latch bar being biased by gravity into a lower position adjacent said panel; and an inwardly-projecting catch member on said side panel so spaced and adapted to abut against the top side of said latch bar to latch said panel in said upper position, said slots extending inwardly of said crib a distance sufficient to give said latch bar a range of movement from its said latching position adapted to permit the latch bar to be released from said catch members to unlatch said panel from said upper position.

2. The combination set forth in claim 1 wherein the bottom face of said catch member is substantially parallel to the direction of movement of said latch bar out of said latching position whereby said latch bar is releasable from said catch member to unlatch said panel without requiring that the panel be raised substantially as an incident to the unlatching thereof.

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