Jan. 7, 1947. C. E. WEBB 2,414,076

BOTTOM SUPPORT FOR CRIBS

Filed June 18, 1943

Fig. 1

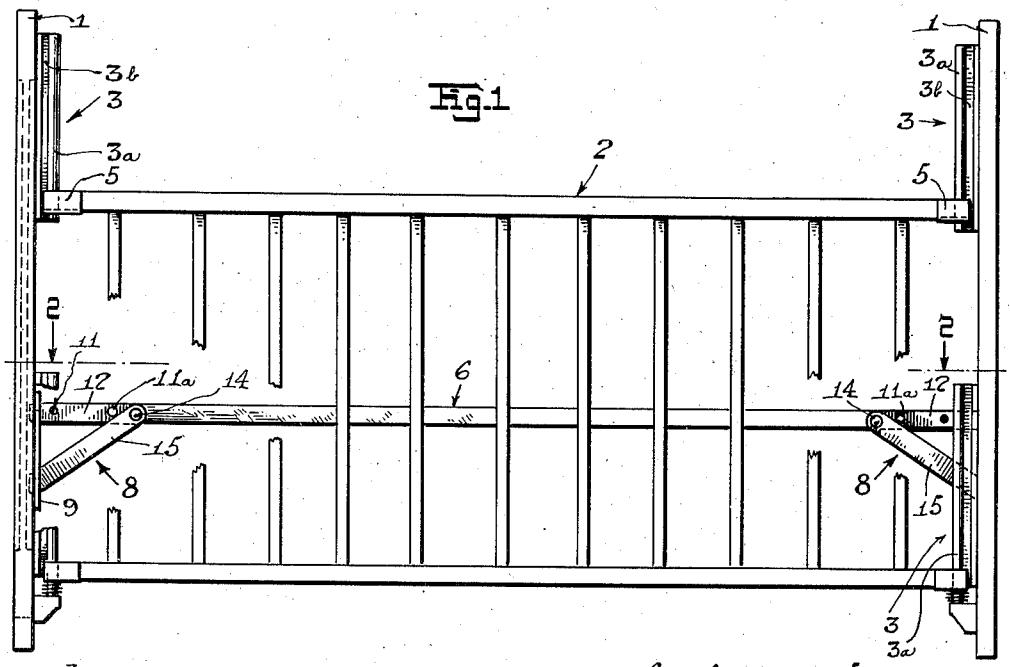


Fig. 2

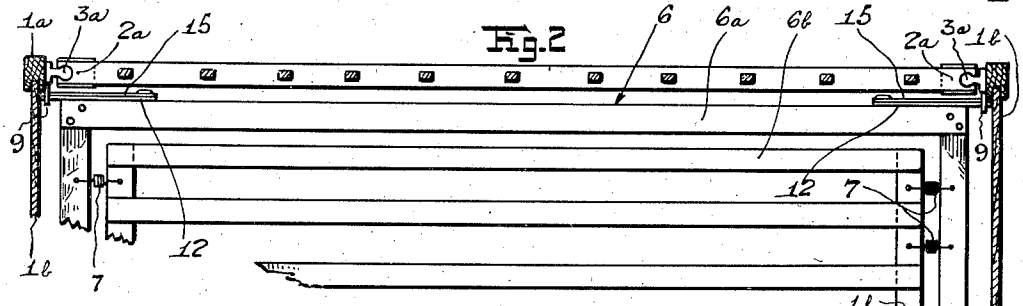


Fig. 3

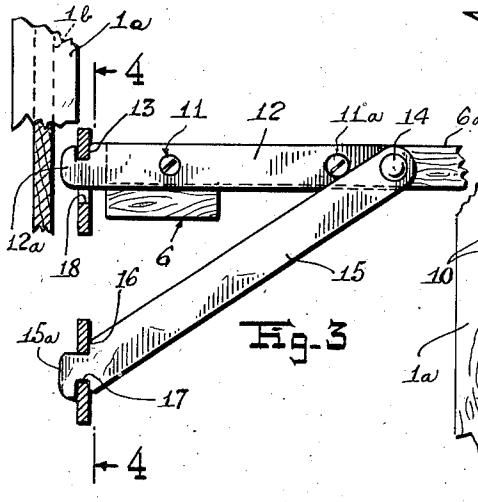
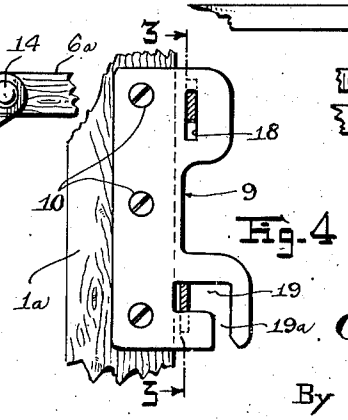


Fig. 4



Inventor

Charles E. Webb

By Henry Lanahan

Attorney

Patented Jan. 7, 1947

2,414,076

UNITED STATES PATENT OFFICE

2,414,076

BOTTOM SUPPORT FOR CRIBS

Charles E. Webb, New London, Wis., assignor to Edison Wood Products, Incorporated, West Orange, N. J., a corporation of New Jersey

Application June 18, 1943, Serial No. 491,403

9 Claims. (Cl. 5—93)

1

This invention relates to cribs and more particularly to an improved means for detachably connecting a mattress frame to the supporting structure of a crib.

The objects of my invention are to provide simple means for detachably connecting a mattress frame to a crib supporting structure without the use of any tools or other loose parts, which itself has no parts that need to be removed as the frame is connected and disconnected, which is operable to detachably lock the frame to the crib supporting structure in all directions to produce a rigidifying influence on the crib structure sufficient to hold the same secure against racking, and which when the frame is disconnected may have its movable parts foldable substantially into the confines of the crib components which it is adapted to interconnect so as to permit the components to be crated compactly for shipment.

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 drawing, of which:

Figure 1 is a front elevational view, partly broken away, of a crib into which my invention is incorporated;

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

Figure 3 is a front partially sectional view of the device of my invention for connecting the mattress frame at one corner to the supporting structure of the crib, the view being to enlarged scale and taken substantially on the line 3—3 of Figure 4; and

Figure 4 is an enlarged partially sectional view of the connecting device taken on the line 4—4 of Figure 3.

In the figures there is shown a crib having end sections 1 and side panels 2. On the end sections there are mounted guide structures 3 which connect the side panels to the end sections for up-and-down movement. In the present illustrative example, there are four of these guide structures at each side of the crib—one at each corner of each side panel—and the guide structures are in the form of rods 3a provided with ribs 3b which space the rods from the end sections and secure the rods thereto. The end portions 2a of the top and bottom rails of the side panels are slotted to interlock slidably with the guide structures. To reenforce the end portions 2a so that the rails will not pull out from the guide structures, there are provided metal U-brackets 5

2

which are folded upwardly from the bottom of the rails against the sides thereof.

The end sections 1 constitute the supporting structure for a mattress frame 6. This mattress frame may be of any suitable construction, and for illustrative purposes is herein shown as comprising a rigid rectangular outer section 6a and an inner latticed section 6b which is held to the outer section by springs 7, this being a construction which can be advantageously made of a non-metallic material such as wood.

The outer frame section 6a is connected to the end sections 1 by identical connecting devices 8 provided at the four corners of the crib. These devices comprise vertical bracket plates 9, or catch members as they may be termed, which are held by screws 10 to corner posts 1a of the end sections in positions to project sidewise beyond the inner edges of the corner posts, the projecting portions being accordingly suitably spaced from the panels 1b of the end sections as is shown. Secured against the sides of the outer frame section 6a by screws 11 are horizontal connecting members 12. These connecting members have hooked end portions 12a which project slightly beyond the ends of the frame, there being rectangular indentations 13 in these end portions which extend down from the top edge thereof. Pivoted to the inner end portions of the connecting members 12, by pivot members 14, are brace members 15. These brace members have hooked end portions 15a formed by providing notches 16 in the top edges of the brace members and rectangular indentations 17 in the bottom portions, the inner sides of the notches and indentations being so positioned as to be vertically in line when each brace member is in a normal position, a position for example wherein it is approximately 40° with its associated connecting member 12 as is shown in the figures. These hooked end portions of the horizontal connecting members 12 and inclined brace members 15 are adapted to engage the respective bracket plate 9 and be interlocked therewith as is now explained.

In the overhanging portions of each bracket plate 9 there is an upper hole 18 and a lower hole 19. The upper hole 18 is made just wide enough to receive the connecting member 12, but the lower hole 19 which receives the brace member 15 is made wider than that member and provided with an opening 19a at one side such, for example, as is shown in Figure 4. In connecting the frame 6 to the end sections of the crib, the hooked end portion 12a is first in-

serted in the upper hole 18 and is then moved vertically upwardly to bring the bracket plate into engagement with the indentation 13. This interlocking engagement of the connecting member 12 with the bracket plate 9, it will be observed, serves to lock the mattress frame against displacement relative to the end sections 1 in all but a downward direction. When the connecting member 12 is in engagement with the bracket plate 9, the brace member 15 has a normal position in a vertical plane through the inner portion of the hole 19. The brace member may however be sprung sidewise from normal position to pass through the opening 19a and snap into interlocking engagement with the hole 19. Associated with the connecting member 12 is a rest 11a—which may suitably comprise a fillister head on one of the screws 11. This rest acts as a stop for the brace member 15 when the mattress frame and crib end sections are interconnected. The rest is so positioned as to require the connecting member 12 to be in interlocking engagement with the bracket plate 9, as is above explained, before the brace member 15 can be engaged with the bottom hole of the bracket plate. By the same token, when the mattress frame and end section 1 are interconnected, the rest limits the brace member 15 to a predetermined position and the latter firmly holds the frame in a raised position wherein the connecting member 12 is in interlocking engagement with the bracket plate 9. Since the only direction in which the brace member is not locked to the bracket plate is one at right angles to the direction in which the connecting member is not locked to the bracket plate, the mattress frame is locked to the end sections in all directions. The mattress frame may, however, be quickly unlocked from the end sections at each corner of the crib merely by springing the brace member 15 to the side and disengaging it from the bracket plate by way of the opening 19a, and thereupon letting the connecting member 12 fall down against the bottom edge of the upper hole 18 and then withdrawing the connecting member from the bracket plate.

It will be observed that so long as the opposite end sections 1 are held in parallel relation, the connecting members 12 and brace members 15 will remain in stable connected relationship with the bracket plates 9 without need for the rests 11a above explained. When the crib is assembled with the side panels, the end sections 1 will be so held in parallel relationship by the side panels. The rest 11a is, however, important in strengthening the connection of the mattress frame to the end sections and, further, in maintaining the mattress frame in stable connected relationship with the end sections before the side panels are installed in the assembling of the crib.

It will be observed that the mattress frame may be quickly connected to the supporting structure of the crib according to my invention without the use of any tools, screws, bolts or other loose parts, and that the connecting means comprises only parts which are permanently fastened to the mattress frame and crib end sections. Moreover, it will be observed that the only substantially projecting part of the connecting means is the brace member 15, but that this member may be folded back into substantially the confines of the mattress frame so as to permit the frame to be crated compactly for shipment. Yet additionally, the connecting device serves to lock the mattress frame rigidly to the crib end sections in all directions and thus it serves to rigidify the over-all crib structure and hold the frame against racking. As a consequence, when the mattress frame is connected to the crib end sections according to my invention, both side panels may be movably mounted while yet maintaining the crib structure rigid without the use of auxiliary supports or braces.

The embodiment of my invention herein shown and described will be understood to be illustrative and not necessarily limitative of my invention since the same is subject to various changes and modifications without departure from the scope of my invention, which I endeavor to express according to the following claims.

I claim:

1. Means for detachably locking a mattress frame structure at one corner to the supporting structure of a crib comprising a catch member on one of said structures; a connecting member on the other of said structures engageable with said catch member to lock said other structure against movement relative to said one structure in all directions but one; and a brace member on said other structure engageable with said catch member to lock said other structure against movement relative to said one structure in all directions but a predetermined one substantially at right angles to said one direction, said brace member being movable in said predetermined direction from a normal position and engageable with said catch member upon being displaced in said one predetermined direction from normal position.

2. The subject matter as set forth in claim 1 wherein said brace member is pivotally connected to said other structure to be retractable substantially into the confines thereof when the same is disconnected.

3. The subject matter as set forth in claim 1 wherein said brace member is pivoted to said other structure for retraction from a projecting position relative thereto, including a rest on said other structure for limiting said brace member to a predetermined position when said structures are connected.

4. Means for detachably locking a mattress frame structure at one corner to the supporting structure of a crib comprising means rigidly secured to one of said structures and having a pair of vertically displaced holes therein, one of said holes being relatively narrow and the other being relatively wide and the wide one of said holes being open at one side thereof; a connecting member secured to the other of said structures and having an end portion interlockingly engageable with said narrow hole without substantial sidewise play; and a brace member secured to said other structure and having a portion adapted to be passed through the opening of said wide hole into interlocking engagement with the latter, said brace member being mounted normally to engage said wide hole and being movable sidewise to be passed through said opening into and out of engagement with said wide hole while said connecting member is in engagement with said narrow hole.

5. Means for detachably connecting a mattress frame structure at one corner to the supporting structure of a crib comprising means rigidly secured to one of said structures and having a pair of vertically displaced holes therein, one of said holes being relatively narrow and the other being relatively wide and the wide one of said holes having an opening at one side thereof; a

connecting member fixedly secured to the other of said structures and having a projecting portion adapted to engage the narrow one of said holes vertically without substantial sidewise play; a brace member on said other structure having a portion interlockingly engageable with an inner portion of said wide hole, said brace member being positioned on said other structure normally to engage the inner portion of said wide hole when said connecting member is in engagement with said narrow hole, said brace member being adapted to be sprung sidewise so as to be passed through said opening into and out of interlocking engagement with said wide hole.

6. Means for detachably connecting a mattress frame structure at one corner to a crib supporting structure comprising a bracket member on one of said structures having vertically displaced holes therein, one of said holes having an opening at one side thereof; a connecting member on the other of said structures having an end portion adapted to fit the other of said holes substantially without sidewise play, said connecting member being movable vertically relative to said narrow hole into interlocking engagement with said bracket member; and a projecting brace member on said other structure movable by way of said opening into interlocking engagement with said one hole, said brace member being aligned with said one hole but movable sidewise to be engaged with and disengaged from said one hole by way of said opening when said connecting member is interlocked with said other hole, said brace member serving by its engagement with said bracket member to hold said connecting member interlocked with said bracket member, and said brace member being pivoted to said other structure to be retractable into a substantially non-projecting position relative thereto when said structures are disconnected.

7. Means for detachably locking a mattress frame at one corner to an end section of a crib comprising a bracket member rigidly secured to said end section and having therein a narrow upper hole and a relatively wide lower hole, said lower hole being open to the bottom at one side thereof; a connecting member rigidly secured to said frame and engageable with said upper hole to lock the frame to said end section against movement relative thereto in horizontal and upward directions; a brace member pivoted to said connecting member and depending angularly downwardly to engage said wide hole and be locked to said bracket member in all directions

except those sidewise of the crib, said brace member being adapted to be moved sidewise to be engageable with and disengageable from said wide hole by way of the side opening therein; and means associated with said connecting member and forming a stop for said brace member to permit the brace member to be interlockingly engaged with said bracket member only while said connecting member is held vertically in locked relationship with said bracket member.

8. In a crib including vertical end sections, side panels interconnecting said end sections and a mattress frame adapted to be supported by said end sections: the combination of bracket members on said end sections at the four corners of said crib, each of said bracket members having upper and lower holes therein, said upper and lower holes being respectively narrow and wide and said lower hole being open to the bottom at one side thereof; connecting members secured to said frame at the four corners thereof and engageable with the narrow holes of said bracket members respectively to lock said frame against movement relative to said end sections in horizontal and upward directions; brace members at the four corners of said crib pivotally connected to said frame, said brace members being movable sidewise to engage said lower holes by way of the side openings thereof; and rests on said connecting members for angularly supporting said brace members.

9. Means for detachably connecting a mattress frame at one corner to the supporting structure of a crib comprising a member on said supporting structure having vertically-displaced apertures therein; a connecting member on said frame receivable in one of said apertures in interlocking engagement with said apertured member; and a brace member on said frame flexibly movable sidewise from a normal position, said brace member having a hooked end portion and a second one of said apertures being transverse to said brace member and having a widened end portion spaced sidewise from the normal position of the brace member and adapted to receive said hooked end portion when the brace member is displaced sidewise from said normal position while said connecting member is in engagement with said apertured member, said brace member being adapted to engage said second aperture in interlocking relationship with said apertured member when the brace member is in normal position.

CHARLES E. WEBB.