May 16, 1944. C. V. JOHNSON 2,349,172

ADJUSTABLE BED FRAME

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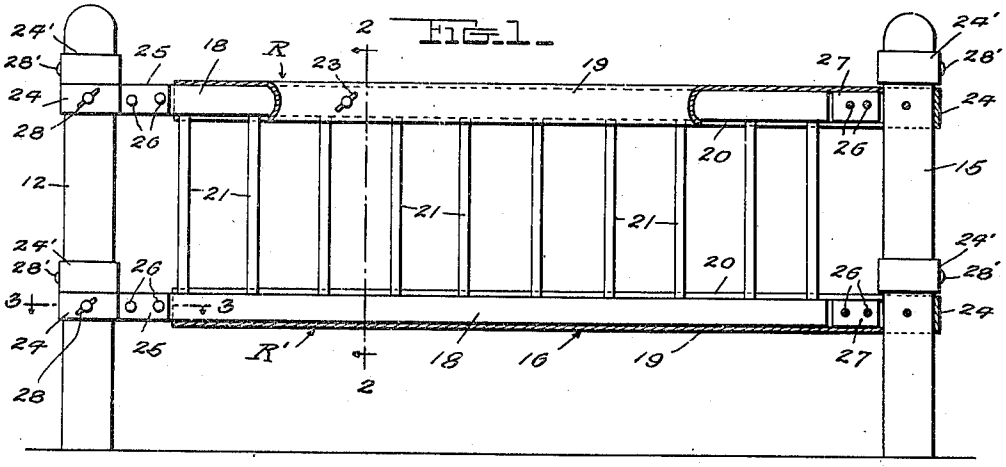

FIG. 1

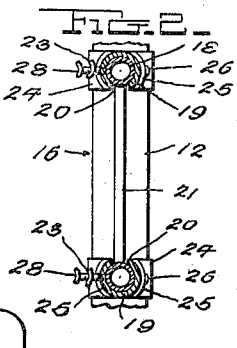

FIG. 2

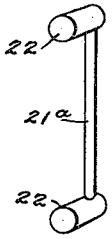

FIG. 5

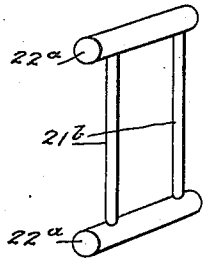

FIG. 6

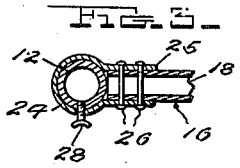

FIG. 3

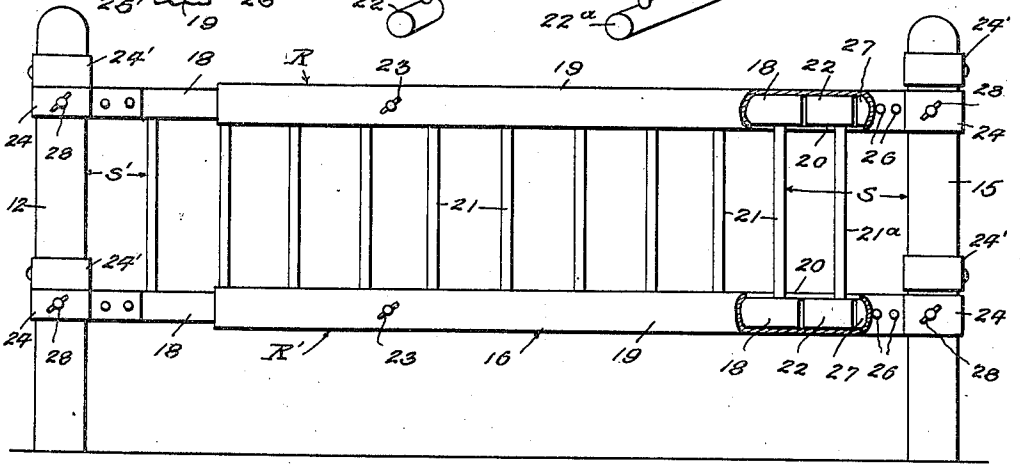

FIG. 4

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FIG. 7.

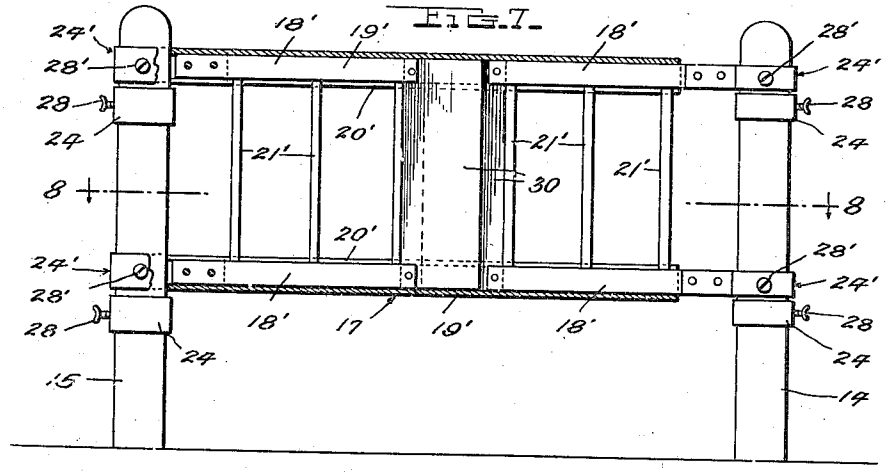


FIG. 8.

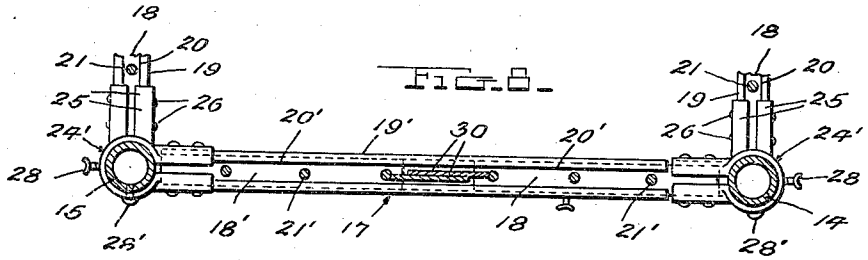


FIG. 9.

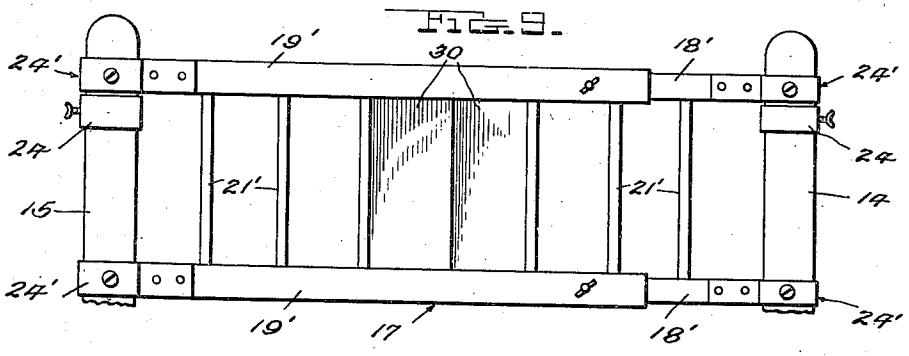


FIG. 11.

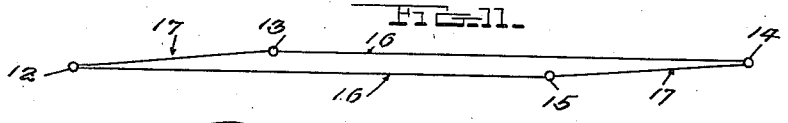
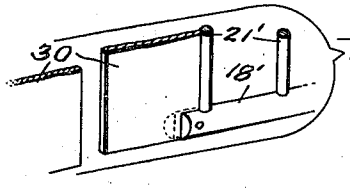


FIG. 10.



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UNITED STATES PATENT OFFICE

2,349,172

ADJUSTABLE BEDFRAME

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Application April 28, 1942, Serial No. 440,835

3 Claims. (Cl. 5—184)

The invention aims primarily to provide an adjustable bed frame which may be used as a crib for an infant, may be extended in length and width when the child is say eighteen months or two years old, and may then be further extended for use by the same child until he is large enough to occupy a full size bed without danger of rolling therefrom.

A further object is to provide a bed frame which is not only telescopic both transversely and longitudinally, but may be folded into the form of a narrow parallelogram to permit storage or carrying in minimum space.

A still further object is to provide a novel construction which will be relatively simple and inexpensive, yet efficient, durable and in every way desirable.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, description being accomplished by reference to the accompanying drawings.

Figure 1 is a side elevation partly broken away and in section showing the frame adjusted to its shortest length.

Fig. 2 is a fragmentary transverse sectional view on line 2—2 of Fig. 1.

Fig. 3 is a detail horizontal sectional view on line 3—3 of Fig. 1.

Fig. 4 is a view similar to Fig. 1 but showing the frame extended to greater length.

Figs. 5 and 6 are perspective views of inserts which are used when lengthening the frame.

Fig. 7 is an end elevation partly broken away and in section showing the bed adjusted to minimum width.

Fig. 8 is a horizontal sectional view on line 8—8 of Fig. 7.

Fig. 9 is a fragmentary view similar to Fig. 7 but showing the frame extended to greater width.

Fig. 10 is a sectional fragmentary perspective view of a portion of the construction shown in Figs. 7, 8 and 9.

Fig. 11 is a diagrammatic plan view showing the frame in folded condition.

Four corner posts 12, 13, 14 and 15 are employed, and two side fences or guards 16, as well as two end guards or fences 17, are so connected with said corner posts that the entire frame may be folded into the form of a narrow parallelogram as shown diagrammatically in Fig. 11. Moreover, the side guards 16 and end guards 17 are telescopic, not only to increase the size of the frame as the child demands such size increase, but to permit said frame to have minimum size when it is to be folded.

Each side guard or fence 16 comprises an upper telescopic rail R and a lower telescopic rail R'. Each of these rails comprises an inner longitudinal section 18 attached to one corner post, and an outer tubular longitudinal section 19 attached to the other corner post, the two sections 18 and 19 being slidably engaged with each other. The rail section 19 of each rail R and R' is formed with a longitudinal slot 20, the slot of the rail R being disposed downwardly while that of the rail R' is disposed upwardly. The upper and lower inner rail sections 18 are connected by spaced vertical rungs 21 which are suitably secured thereto, said rungs passing slidably through the slots 20.

The side construction so far described, permits the length of the sides to be extended as desired. When the rail sections 18 and 19 are relatively pulled outwardly as seen in Fig. 4, a space S exists between the rung 21 at one end of the series and one of the corner posts (say 15) and this space is considerably greater than the space S' then existing between the rung 21 at the other end of said series and the other corner post (12 for instance). To prevent the child from possibly crawling through the space S, I provide an additional rung 21^a (Figs. 4 and 5) or additional rungs 21^b (Fig. 6) to be placed in the space S, the upper and lower ends of the rungs 21^a and 21^b being secured to inserts which are received in the outer tubular rail sections 19. The inserts to which the single rung 21^a is secured, are denoted at 22, and those carrying the rungs 21^b are shown at 22^a. When the rail sections 19 are pulled entirely from the sections 18, the inserts with one or more of the additional rungs may be slid into said rail sections 19 and these sections are then again telescoped with the sections 18, thus increasing the length of the bed as required and leaving no gap through which the child may crawl or fall.

For normally locking the rail sections 18 and 19 with respect to each other, any desired means may be employed. For illustrative purposes, set screws 23 are shown.

For connecting the rail sections 18 and 19 with the corner posts, I prefer to employ collars 24 surrounding said posts and having arms 25 secured against opposite sides of said rail sections. Rivets or the like 26 may be employed to secure the arms 25 to the rail sections, and to prevent these rivets or the like from having any tendency to transversely collapse the rail sections

19, spacing blocks 27 are preferably employed. Set screws 28 are shown in the collars 24 for normally securing them to the posts but when these set screws are loosened and the spring and mattress (not shown) removed, the bed may be folded as indicated in Fig. 11.

Each of the end fences or guards 17 is constructed as shown in Figs. 7 to 10 inclusive. The upper and lower rails each include two inner sections 18' attached to the corner posts, and an outer tubular section 19' telescoped with said sections 18'. These sections 18' are connected by vertical rungs 21', and the sections 19' have slots 20' through which said rungs pass. Two vertical slidably overlapped panel-forming plates 30 are provided, one of these plates 30 being secured to the section 18' attached to one corner post, while the other plate 30 is secured to the section 18' attached to the other corner post. When the bed frame is adjusted to minimum width, the plates 30 overlap to the maximum as seen in Figs. 7 and 8 but when the frame is adjusted to widen it, the plates 30 overlap less. In either instance, they represent a center panel at the bed end and they of course prevent the formation of any gap between the relatively adjusted sections when the frame is widened.

The sections 18' may be secured to the posts in any suitable way but I prefer to provide means 24' which may be considered as identical with the means 24, 25, 26 above described. Ordinary screws or other fasteners 28' may be employed for securing the connections 24' to the bed posts if desired.

It is preferable that two of the connections 24' secure the rail sections 19' to one of the posts in addition to securing two of the inner sections 18' to said posts.

From the foregoing taken in connection with the accompanying drawings, it will be seen that novel and advantageous provision has been made for carrying out the objects of the invention. While preferred details have been disclosed, numerous variations may be made within the scope of the invention as claimed, and obviously I am not restricted to any particular materials. While metal will usually be preferred, it is of course possible to make use of other appropriate materials.

The invention is particularly advantageous for tourists as it can be readily carried in an automobile and the baby or child can always have his own bed with no extra trouble or expense when stopping at tourists camps, hotels, etc. Moreover, when the bed frame is inverted, it will form an excellent play pen.

I claim:

1. In a bed frame, two corner posts; upper and lower telescopic rails extending between said posts; each of said rails comprising an inner rail section attached to one post, and an outer tubular rail section attached to the other post and slidably receiving said inner rail section; each of said outer tubular rail sections having a longitudinal slot, the slot of the upper rail being disposed downwardly and the slot of the lower rail being disposed upwardly; and a series of vertical rungs extending between said inner rail sections and passing through said slots, the ends of said rungs being secured to said inner rail sections, there being a much greater space between the aforesaid other post and the rung at one end of said series than between the aforesaid one post and the rung at the other end of said series; at least one additional rung in said greater space and extending through said slots; and upper and lower inserts fixedly carrying said additional rung and disposed within said outer tubular rail sections between the free ends of said inner rail sections and said other post; said inserts being slidable longitudinally out of said outer tubular rail sections when the latter are longitudinally slid from said inner rail sections; the free ends of said outer rail sections being so spaced from said one post that said rails may be telescopically shortened after removal of said inserts.

2. In a bed frame, two corner posts; upper and lower telescopic rails extending between said posts; each of said rails comprising one inner rail section attached to one post, a second inner rail section attached to the other post, and an outer tubular rail section receiving the two inner rail sections and slidably engaged with at least one of said inner rail sections; each of said outer tubular rail sections having a longitudinal slot, the slot of the upper rail being disposed downwardly and the slot of the lower rail being disposed upwardly; and spaced vertical rungs extending between and secured to said inner rail sections and extending slidably through said slots.

3. A structure as specified in claim 2; together with two slidably overlapped panel-forming plates extending through said slots, one of said plates being secured to the free ends of the inner rail sections attached to said one post; the other of said plates being secured to the free ends of the inner rail sections attached to said other post.

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