Dec. 18, 1956 E. J. LUKALA 2,774,081

CONSTRUCTIONS FOR DEMOUNTABLE CRIBS

Filed Oct. 8, 1953

FIG. 1

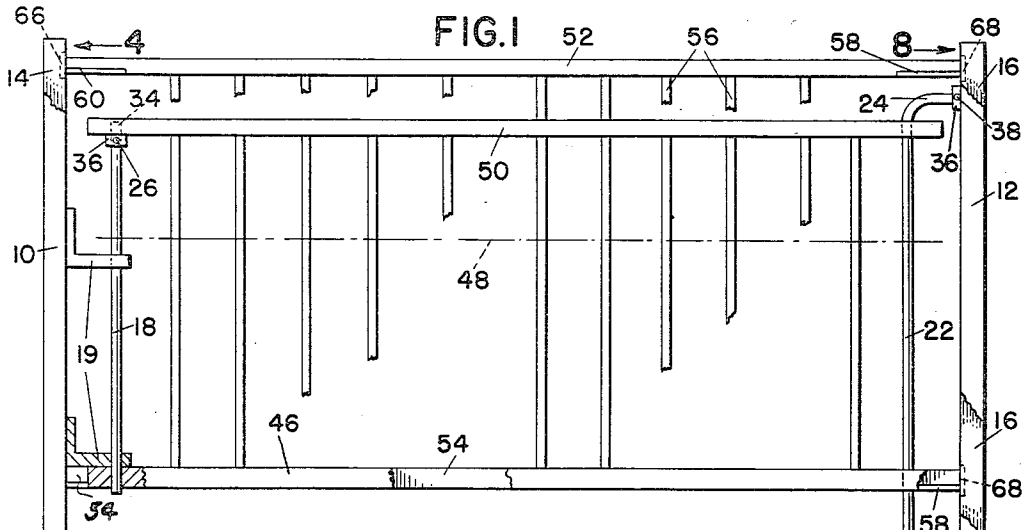


FIG. 2

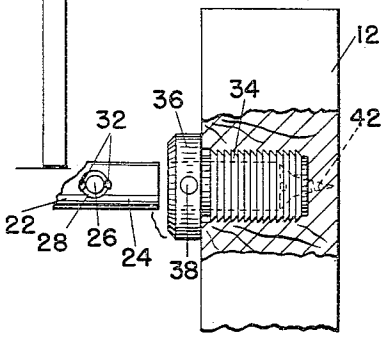


FIG. 3

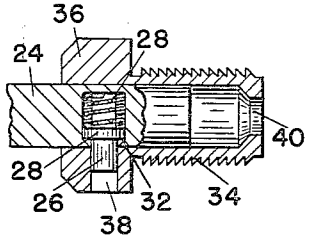


FIG. 8

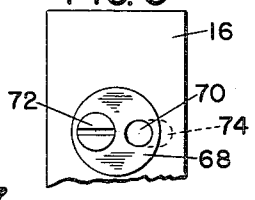


FIG. 4

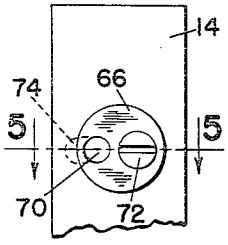


FIG. 5

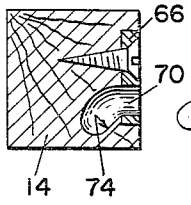


FIG. 7

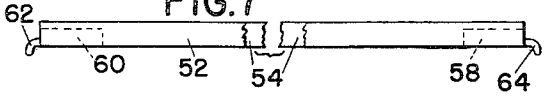


FIG. 6

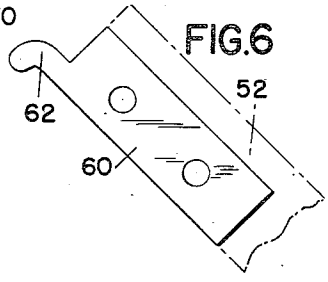


FIG. 10

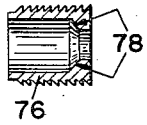
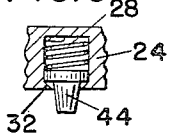


FIG. 9



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CONSTRUCTIONS FOR DEMOUNTABLE CRIBS

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12 Claims. (Cl. 5—99)

This invention relates to new and improved demountable or separable crib constructions, and the principal object of the invention resides in the provision of a crib or the like comprising two end parts or panels, a rear wall, and a front drop side, all of these parts being quickly and easily joined together or separated without tools, so that the crib is assembled or disassembled quickly and easily, and when assembled is strong, firm and rigid.

Another object of the invention resides in the provision of new and improved slide rods for the front drop side, said rods including spring-pressed pins adjacent the upper ends thereof for cooperation with receiving holes in a special new and improved fitting applied to the front corner posts of the crib, or to all the corner posts if it is desired to provide a double drop side crib, the pins being very easily and quickly retracted for disassembly of the slide rods and therefore the drop side, the latter being mounted to slide on the slide rods.

A still further object of the invention resides in the provision of a new and improved supporting and connecting joint for the rigid rear wall of the crib, there being four of these joints, two at each end of the rear wall at the upper and lower edges thereof, said joints each comprising in general a hook-shaped member on the rear wall for insertion in an aperture in a novel plate secured to each corner post, said plate having an aperture therethrough and the corner post itself being undercut to receive the hook in such a way that by inserting the hooks in the apertures in the plates at an angle thereto and rotating the rear wall relatively to the corner posts, the hooks are fully and firmly seated; and this forms a firm, rigid joint for the purpose described.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings, in which

Fig. 1 is a view in front elevation of a crib according to the present invention in fully assembled condition, parts being broken away for clarity of illustration;

Fig. 2 is an exploded view on an enlarged scale, part being in section, and illustrating the means of connecting the slide rods to the corner posts;

Fig. 3 is a horizontal section through the connection of Fig. 2, part being broken away;

Fig. 4 is a view in elevation showing a hook receiving plate on the rear corner post, looking in the direction of arrow 4 in Fig. 1;

Fig. 5 is a section on line 5—5 of Fig. 4;

Fig. 6 is a view in elevation of one of the hooks for the rigid rear side wall, this figure being in relation to Fig. 5 for insertion of the hook;

Fig. 7 is a top plan view, part being broken away, of the rear side wall;

Fig. 8 is a view in elevation of a hook receiving plate on a rear corner post, looking in the direction of arrow 8 in Fig. 1;

Fig. 9 shows a modified spring-pressed pin for the slide rods; and

Fig. 10 is a section of a modified fastener.

This invention comprises two end panel members, a rigid rear wall, and a front drop side. Each end member is provided with two corner posts, the corner posts as usual being connected by either spindles or solid panels as is well known in the art. For purpose of illustration of the present invention, these corner posts are referred to as the front left corner post **10**, the front right corner post **12**, the rear left corner post **14**, and the rear right corner post **16**.

Two different slide rods that can be used are illustrated. The left-hand slide rod is indicated at **18** and it is fixed to the drop side and slidably extends through holes in brackets **19** fixed to the corner posts. The upper bracket **19** stops the downward motion of the drop side, and the lower bracket stops the upward motion thereof. The right-hand slide rod is indicated at **22** and it extends through its bracket **23**, this rod being fixed to the corner post. Conventional bumper springs may be applied to these slide rods. Each slide rod is detachably connected by a novel fastener to be described.

The upper end of slide rod **22** is turned at a right angle (see Fig. 1). This bend is indicated at **24** and it is provided at one side thereof with a spring-pressed pin **26** better illustrated in Fig. 3. This pin **26** is provided with an enlargement **28** received within a small lateral bore in the bent portion **24** of the slide rod. Behind this enlarged portion, there is a spring **30** tending to push pin **26** outwardly into the position of Fig. 3. The pin may be limited and held against escape by peening the edges of the bore in the rod as it is indicated at **32** or by any other well known means. The rod **18** is detachably held to rail **50** of the drop side by a construction similar to that shown in Figs. 2 and 3.

Each of the slide rods is provided with this same pin construction, but it is preferred that the pins shall extend towards the front of the crib, so that they may not be easily actuated by the occupant, and of course this requires that the pin shall appear at opposite sides of the slide rods. This construction is also usable at the rear corner posts if a double drop side crib is to be made.

The fitting for receiving the pins is best shown in Figs. 2 and 3, and comprises a ferrule or barrel **34** having a head or flange **36**, the head **36** having a lateral bore therein at **38** for reception of the pin **26** (see Fig. 3). The barrel or ferrule **34** is generally cylindrically hollow for reception of the bent end of the slide rod, but it has a restricted portion at one end at **40** for the reception of a fastening screw **42** in the inner end of the ferrule securing the same to the corner post, as shown, with the head **36** extending outwardly thereof. The barrel **34** may be plain or serrated as shown.

It is believed that the method of attaching and assembling the slide rods to the respective fittings will be clear from the above description. The fitting of the corner post **12** is exactly like that shown in Figs. 2 and 3, with the hole **38** thereof arranged to receive the pin **26** as described. A lead pencil will be sufficient to depress the pin in order to remove the slide rod. When the slide rod is being inserted, the pin is held with the finger and entered into the fitting, whereupon the pin will of course snap into the hole **38**. The hole **38** and the pin **26** are too small to allow actuation by human fingers, even of infants. If desired, the pin **26** may be tapered as shown at **44** in Fig. 9, and this will provide for a wedging action more firmly locking the slide rod into the position shown in Fig. 3.

The front drop side generally indicated at **46** may be provided with the usual latching means for holding the same in the raised position of Fig. 1, and it is to be noted

that the rails of the drop side rest on the brackets **23** and **19** or on the springs (not shown) but above described when in the lower position thereof, and in this position the broken line **48** illustrates the approximate level of the top rail **50** of the drop side.

The rear rigid wall of the crib is illustrated as provided with a top rail **52** and a bottom rail **54**, these rails being connected by the usual spindles **56** or by any other desired means. At each end of both rails at the under sides thereof, they are provided with in-set plates **58** at the right-hand ends thereof and **60** at the left-hand ends thereof. These plates are each provided with a hook shown at **62** in Fig. 6, and these are the same at the right-hand end thereof but reversed as illustrated at **64** in Fig. 7. It will be seen that there are four of these hooks and that all are directed inwardly of the crib, i. e. toward the drop side thereof.

Each of the rear corner posts **14** and **16** is provided with a pair of spaced in-set circular plates **66** and **68**. These plates are generally the same but are reversed and each comprises an aperture at **70** for the reception of the respective hooks, and each also has another aperture for the reception of a screw **72** for securing the plates to their respective corner posts. The material of the corner posts to which the plates are secured is undercut as indicated at **74**, this undercut extending to the left at Fig. 4 and to the right in Fig. 8, so that the respective hooks **62** and **64** may be entered in the holes **70** and extend therethrough upon pivoting action of the ends of the crib with respect to the rigid back member **52, 54**. When the four hooks are completely seated within the undercut portions **74**, then the hooks are supported in substantially rigid relation with respect to the plates **66** and **68** and the back of the crib is therefore held in rigid fixed position, due to the camming action of the surface at **74**. A fully recessed fitting **76** (Fig. 10) may be pushed wholly into the respective corner posts, the hooks **62, 64** will ride up the inclined edges **78** to be firmly wedged, in the manner of a cam.

When the conventional crib spring is arranged on the crib in the usual manner, it will aid in strengthening and rigidifying the construction described above. However, even without such aid, the solid rigid support is suitable for cribs and the like and it may be easily and quickly assembled or disassembled without the use of any tools whatsoever with the possible exception of the common lead pencil or other small pin-like member for depressing the pins **26** when it is desired to take the slide rods from the corner posts **10** and **12** for dis-assembly of the drop front. It will be seen that the invention is simple and inexpensive to manufacture and it is very simple and quick to put together and take apart.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:

1. A crib construction comprising end panel members, a detachable rear wall and a front drop side, quick detachable hook joints at both the ends of the rear wall for swinging separable connection to the end panel members, a fitting on each end panel member, a slide rod for detachable securement to each fitting, said front drop side being slidably mounted on said slide rods when the latter are assembled to the end panel members, and said drop side tending to spread the end panels.

2. The construction of claim 1 wherein said detachable joints comprise horizontal uni-planar hook-like members on the rear wall and undercut apertures for the reception thereof in the end panel members, the hook-like members seating firmly against the side walls of the undercuts, and the drop side holding the joints tight.

3. The construction of claim 1 wherein said detachable joints comprise horizontal hook-like members on the rear wall and undercut apertures for the reception thereof in the end panel members, said undercut apertures being undercut only in a direction to receive the hooks upon a swinging motion on a vertical axis between the rear wall and the end members.

4. A crib construction comprising end panel members, a rear wall, a front drop side, detachable means connecting the rear wall to the end members, a slide rod for each end member, the drop side being slidably and detachably arranged on said slide rods, means to secure the slide rods to the end panel members, the latter holding the drop side in vertically slidable relation to the crib, said slide rod securing means comprising a fitting in each end panel member and a laterally arranged spring-pressed snap action pin in each drop rod for detachable connection respectively to said fitting, each fitting comprising a generally cylindrical hollow member received within a portion of each end panel member, an enlarged head on each fitting extending exteriorly of said end panel member, said head having a lateral aperture for reception of the pin.

5. A crib construction comprising end panel members, a rear wall, a front drop side, detachable means connecting the rear wall to the end members, a slide rod for each end member, the drop side being slidably and detachably arranged on said slide rods, means to secure the slide rods to the end panel members, the latter holding the drop side in vertically slidable relation to the crib, said slide rod securing means comprising a fitting in each end panel member and a laterally arranged spring-pressed snap action pin in each drop rod for detachable connection respectively to said fitting, each fitting comprising a generally cylindrical hollow member received within a portion of each end panel member, a head on each fitting extending exteriorly of said end panel member, said head having a lateral aperture for reception of the pin, said pin being wedge-shaped for wedging reception in said aperture.

6. A crib comprising a pair of end panel members, a front and a rear corner post on each member, a pair of plates on each rear corner post, each said pair of plates being mutually vertically spaced, each plate having an aperture therein, each corner post being slantingly undercut in the region of the aperture, a rear crib wall, a pair of horizontal hooks at each end of the wall, the hooks being mutually vertically spaced to correspond with the apertures, the hooks being receivable in the apertures and bearing on the slanted undercuts upon a swinging motion of the rear wall relative to the end panel members, and means connecting the latter at the front of the crib.

7. The crib of claim 6 wherein said last-named means comprises a drop side, vertical guide rods therefor, and means to detachably secure the upper ends of the guide rods to the front corner posts, said securing means comprising a hollow horizontal fitting countersunk into each front corner post, an enlarged head on each fitting located exteriorly of the respective corner post, an aperture in each head extending into the interior of the fitting, a pin on each guide rod, a spring tending to push the respective pins outwardly thereof, said pins selectively entering the apertures and being retractable therefrom.

8. A crib comprising ends, a detachable rear wall, and a front drop side, a short straight vertical slide rod at each end of the drop side, means detachably securing the rods to the drop side, and slide rod guide means secured to the end panels at the front of the crib to slidably receive and guide the drop slide rods, said first-named means comprising a hollow fitting in the drop side at each end of the latter, a head on each fitting, each head having a lateral aperture, a lateral pin on each rod adjacent the end thereof, said pins being retractable and enterable into the apertures with the ends of the rods in the fittings.

9. The crib of claim 8 including a top rail and a bottom rail for the drop side, the slide rods fitting loosely in vertical holes in one of the rails, the fittings being located in the other rail.

10. A crib construction comprising end panel members, a detachable rear wall and a front drop side, detachable joints at the ends of the rear wall for separable connection to the end panel members, a fitting on each end panel member, a slide rod for detachable securement to each fitting, said front drop side being slidably mounted on said slide rods when the latter are assembled to the end panel members, each joint comprising a hook on the rear wall and a cooperating fitting in the respective end panel member, each fitting having an interior surface slanted relative to the rear wall and receiving the hook and camming the same inwardly upon a pivoting motion between the rear wall and the respective end panel member.

11. A crib construction comprising end panel members, a detachable rear wall and a front drop side, detachable joints at the ends of the rear wall for separable connection to the end panel members, a fitting on each end panel member, a slide rod for detachable securement to each fitting, said front drop side being slidably mounted on said slide rods when the latter are assembled to the end panel members, each joint comprising a hook on the rear wall and a cooperating fitting in the respective end panel member, each fitting having an interior surface slanted relative to the rear wall and receiving the hook and camming the same inwardly upon a pivoting motion between the rear wall and the respective end panel member and imparting a tension on the rear wall tending to swing the latter toward the front wall, the front drop side resisting the tension and holding the crib rigid.

12. The crib construction of claim 11 wherein the said tension between the rear wall and the end panel members causes an opposing tension between the drop side and the slide rods, the latter being narrow and capable of slight lateral distortion.

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