

June 8, 1965

R. GOTTLIEB

3,187,352

PLAY PEN

Filed June 7, 1962

3 Sheets-Sheet 1

FIG. 6

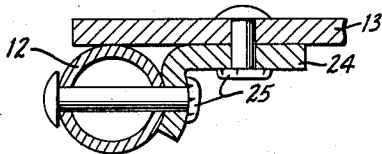


FIG. 7

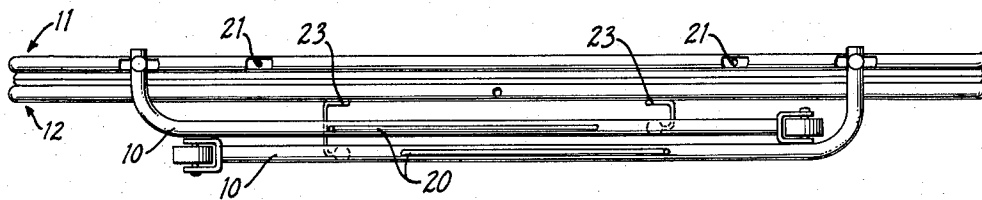
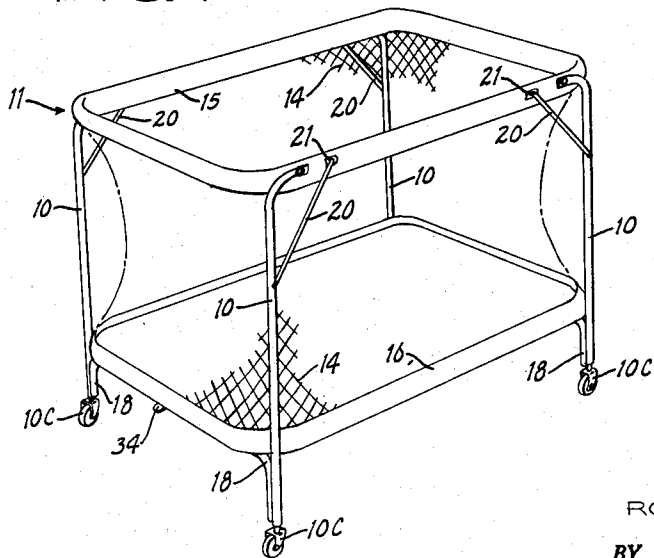


FIG. 1



INVENTOR.
ROBERT GOTTLIEB

BY
Morgan, Finnegan, Durham & Pine
ATTORNEYS

June 8, 1965

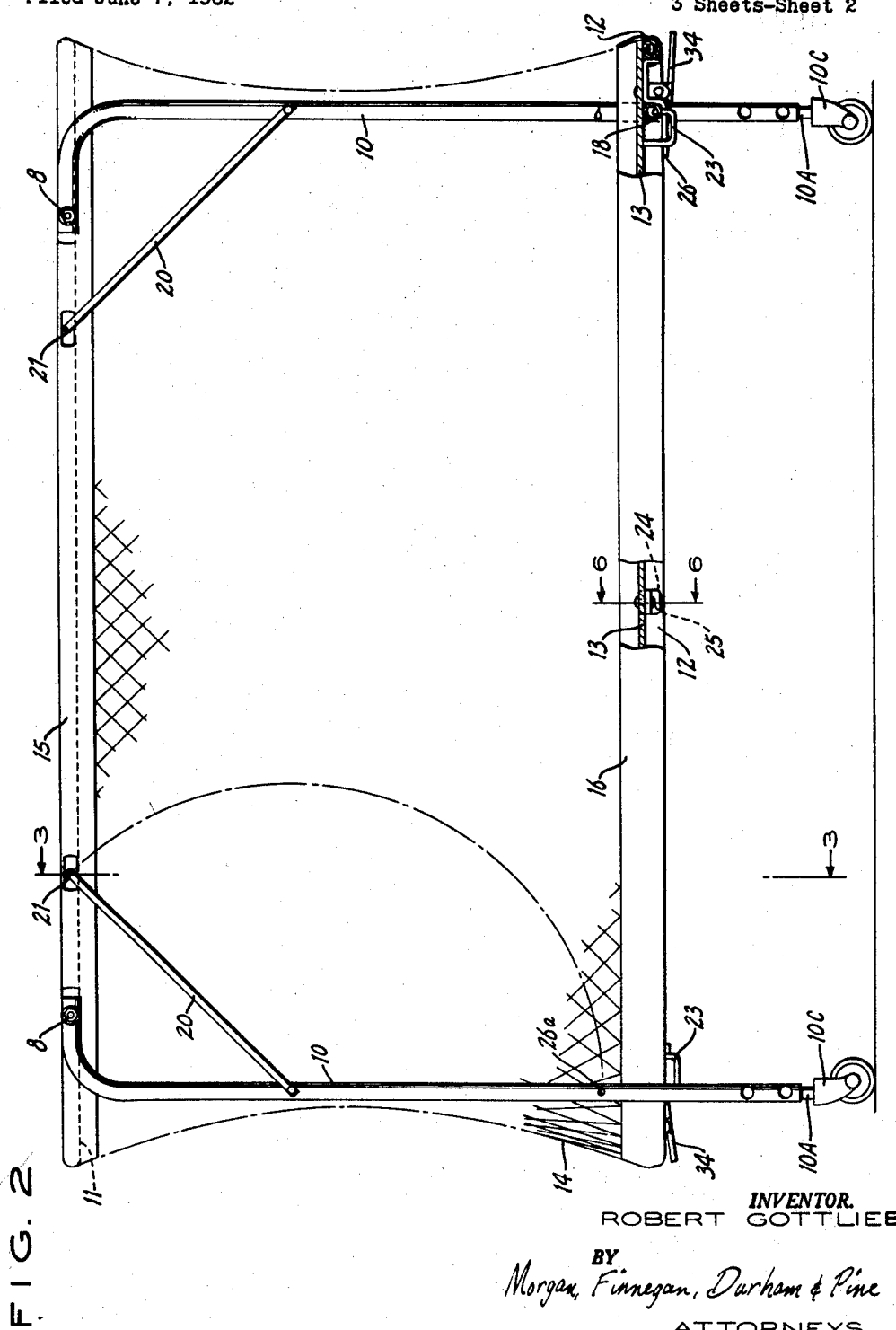
R. GOTTLIEB

3,187,352

PLAY PEN

Filed June 7, 1962

3 Sheets-Sheet 2



June 8, 1965

R. GOTTLIEB

3,187,352

PLAY PEN

Filed June 7, 1962

3 Sheets-Sheet 3

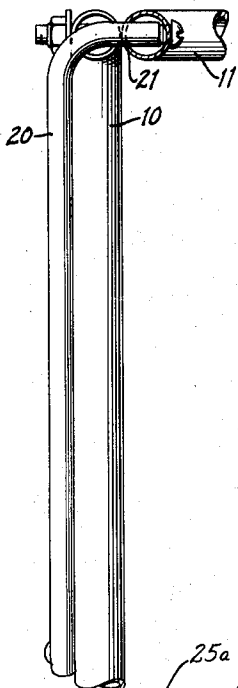


FIG. 3

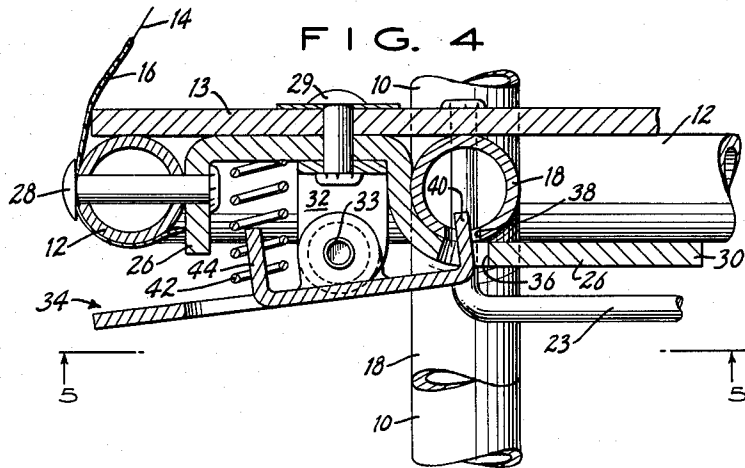


FIG. 4

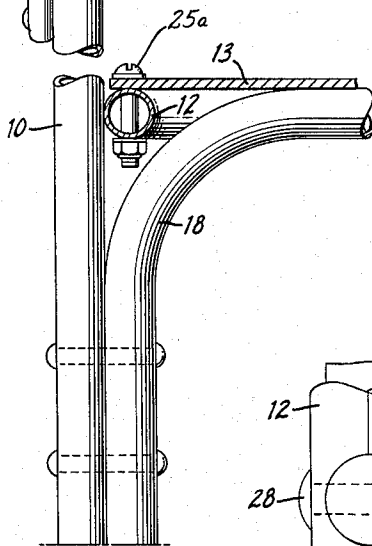
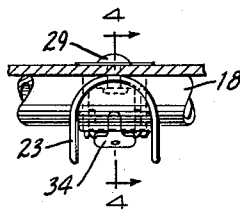
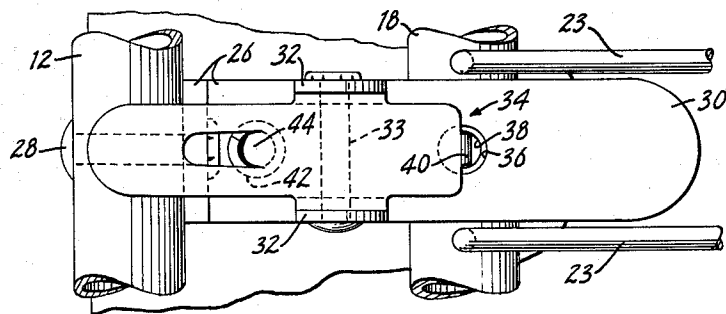


FIG. 5



INVENTOR.
ROBERT GOTTLIEB

BY
Morgan, Finnegan, Durham & Pine
ATTORNEYS

1

3,187,352
PLAY PEN

Robert Gottlieb, 30—20 78th St., Jackson Heights, N.Y.
Filed June 7, 1962, Ser. No. 200,721
4 Claims. (Cl. 5—99)

This invention relates to an improved play pen for children and more particularly to an improved collapsible play pen having novel collapsible features and an improved locking assembly for maintaining the play pen in its assembled position.

In the prior art patents and commercially available on the open market are a large number of different types and forms of children's play pens. By and large these prior art play pens have proved to be not entirely satisfactory from the viewpoint of being capable of being folded into a relatively small volume without sacrificing strength and rigidity. Although there are many forms of collapsible play pens, beds and other similar structures, these devices are frequently complicated, heavy in weight, difficult to assemble and disassemble and generally unsteady and unsafe when in use. Frequently the prior art play pens have sacrificed simplicity and low weight in order to achieve a rugged structure which is safe and in which there is little danger for the user.

In accordance with this invention, an improved collapsible play pen is provided which is extraordinarily light in weight, is easily assembled and disassembled, and which is locked in the assembled position so as to provide a sturdy, rigid and safe structure. The collapsible structural arrangement of this invention permits the play pen to be disassembled or collapsed whereby the pen is in a substantially rectangular form and is only about four inches in width. The play pen structure is improved through the use of a novel latching means which does not distract from the strength and rigidity of the play pen and which maintains the play pen when in its assembled condition in a rigid, non-collapsible position. In the preferred form of this invention, the novel latching means locks the play pen in its assembled position in response to the assembly movement of the play pen.

Briefly described, the invention comprises, as embodied herein, a play pen having an upper frame and a lower frame, wherein the lower frame has a floor member attached thereto. A flexible shroud is provided which is attached to the upper and lower frame to form thereby a semi-enclosed structure having one side open. Leg means are provided, in accordance with this invention, for supporting the semi-enclosed structure and permitting it to be collapsed for storage purposes. As embodied herein, the leg means includes legs which are pivotally attached to the upper frame so that they may be pivoted to a position wherein they are substantially parallel to the upper frame. These above-mentioned features are combined with novel locking means which cooperate with the leg means and the floor supporting means for preventing pivotal collapsing movement of the leg means and for preventing movement of the floor and floor support towards the upper frame, when the play pen is in its assembled position.

As used herein, for the purpose of clarity, it will be understood that the terms "assembly" and "disassembly" refer to the play pen when in position for normal usage and when in the collapsed position, respectively.

The invention consists in the novel parts, constructions, arrangements, combinations and improvements shown and described.

With the foregoing in mind, it is an object of this invention to provide an improved children's play pen.

Another object of this invention is to provide an improved children's play pen which is light in weight, simple in construction and collapsible into a relatively

2

small size, wherein locking means are provided which result in a sturdy, rigid play pen when in use.

A further object of this invention is to provide an improved collapsible play pen having means for locking the play pen in its assembled position, wherein the play pen, as assembled, is locked in its assembled position in response to the assembly movement.

Another object of this invention is to provide an improved collapsible play pen having an upper frame and lower frame with leg means pivotally attached to the upper frame and a flexible shroud means attached to said upper and lower frames, wherein a means for locking is provided for releasably locking the assembled play pen in position for use.

Still another object of this invention is to provide an improved collapsible play pen having an upper frame and a lower frame and including leg means pivotally attached to the upper frame and a flexible shroud attached to the upper and lower frame, wherein means for locking is provided for preventing pivotal movement of the leg means into the disassembled or collapsed position.

A still further object of this invention is to provide an improved collapsible play pen structure having an upper and lower frame and leg means pivotally attached to said upper frame and a flexible shroud attached to the upper and lower frames wherein means for locking are provided for preventing collapsing movement of the leg means and for preventing movement of the lower frame towards the upper frame.

Additional advantages and objects of the invention will be set forth in the description which follows and in part will be obvious from the description, or may be learned from practice of the invention, the objects and advantages being realized and attained by means of the instrumentalities and combinations pointed out in the appended claims.

The accompanying drawings which are incorporated in and constitute a part of this specification, illustrate an embodiment of the invention, and together with the description, serve to explain the principles of the invention.

Of the drawings:

FIGURE 1 is a perspective view of a collapsible play pen constructed according to this invention.

FIGURE 2 is a front elevational view of the play pen illustrated in FIGURE 1.

FIGURE 3 is an enlarged sectional view taken along line 3—3 of FIGURE 2.

FIGURE 4 is a sectional view taken along lines 4—4 of FIGURE 3.

FIGURE 5 is a view taken along lines 5—5 of FIGURE 4.

FIGURE 6 is a detailed sectional view taken along line 6—6 of FIGURE 2.

FIGURE 7 is an elevational view illustrating the play pen in collapsed condition.

Reference will now be made in detail to the present preferred embodiment of the invention, an example of which is illustrated in the accompanying drawings.

As illustrated in the drawings, the invention includes means for forming semi-enclosed open sided play pen structure. As embodied herein, this structure comprises an upper substantially rectangular frame 11 and a substantially rectangular lower frame 12. Each of these frames, of course, has four sides and, in order that the play pen be constructed from as light weight materials as possible, it is preferred that the upper and lower frames be formed of tubular material. As shown in FIGURE 6, a floor member 13 is attached to the lower frame 12 by means of bracket 24 and rivets 25 to form a bottom for the play pen. A similar connecting arrangement is pro-

vided at the opposite side of frame 12. Further attachment is provided at spaced intervals around frame 12 by screw attachments such as illustrated at 25a in FIGURE 3. Desirably, the floor member 13 may comprise a composition board or the like and is advantageously provided with a covering such as cloth backed vinyl on its upper surface. A flexible shroud 14 preferably made of an open net construction such as nylon is attached to the upper frame 11 and the lower frame 12 by means of upper and lower hems 15 and 16, respectively, to form thereby a wall which encloses the area bounded by the sides of the frame members 11 and 12.

In accordance with this invention, leg means are provided for supporting the semi-enclosed, open sided play pen from the upper frame member and for permitting folding and disassembly of the same. The leg means, as embodied herein, includes the legs 10 which are located adjacent the four corners of the upper frame. The legs 10 are L-shaped with the short ends of the L being pivotally attached to the upper frame by means of the conventional pivot construction 8.

Conveniently, the legs may have adjustable extensions 10A with casters 10C at the free end thereof to permit the play pen to be adjusted to different heights and to permit it to be easily transported from place to place. The leg means includes a pair of cross braces 18 having a generally U-shaped construction which are secured to leg 10 as by riveting (FIGURE 3) and extend between the legs 10 at each end of the play pen. By virtue of this construction the upper frame 11 and the flexible shroud 14 are supported from the ends of the legs 10, and the cross braces 18 in conjunction with the legs serve as a further support for the lower frame 12 and floor 13. In order to stabilize the legs 10 when the play pen is in use, angle braces 20 are provided for each leg. These angle braces are pivotally attached to each leg 10 and removably engaged in the apertures 21 in the upper frame 11. Secured to the bridge section of the cross braces 18 are tubular loops 23 which serve as spacers when the play pen is in its folded position, illustrated in FIGURE 7.

In accordance with this invention, locking means is provided for releasably locking the leg means in their assembled position and for preventing movement of the floor and floor support towards the upper frame, when the play pen is in use. As embodied in FIGURE 4, this means comprises a bracket 26 which is secured to the lower frame 12 through rivet 28 and to the floor 13 by rivet 29. The bracket thus also serves as additional means for securing floor 13 to frame 12. The bracket 26 includes free end portion 30 which is substantially parallel to and spaced from the floor 13. The distance between free end portion 30 and floor 13 is sufficient to permit the cross brace 18 to be located in the space between the floor and the free end, when the play pen is in its assembled position. It will be appreciated that, when the brace 18 is in this location, the bracket 26 and the free end portion 30 serve to prevent movement of the floor 13 towards the upper frame 11. The locking means also includes means for preventing pivotal movement of the legs towards their collapsible position. This means, as embodied herein, includes a substantially U-shaped bracket 32, which is fixedly secured to the bracket 26 and floor 13 by the rivet 29. The ends of the U-shaped bracket 32 pivotally support a latch member 34 on the shaft 33. The free end 30 of the bracket 26 is provided with aperture 36 and the brace 18 is provided with an aperture 38. The latch member 34 has a leg 40 at its free end which is adapted to fit within the apertures 36 and 38 to releasably attach the leg means and floor means. In the preferred embodiment, means are provided for biasing the latch member into the latching position and for permitting latching in response to the assembly movement. This means, as embodied herein, includes a spring 42 and one end of which engages the bracket 26, the other end of which surrounds a tab 44 on the latching member 34. The spring 42, it

will be understood, biases the latch member into latching position, as shown in FIGURES 4 and 5.

Operation

The operation of this device is best shown with reference to FIGURES 1, 2 and 4. The play pen is in its assembled condition and ready for use in FIGURE 1. In this position, the legs 10 are in a vertical position, are maintained in such condition by virtue of the leg 40 which is engaged in the apertures 36 and 38 of the bracket 26 and the brace 18, respectively. In FIGURES 3, 4 and 5, as noted previously, when in this position, the free end 30 of bracket 26 serves to prevent upward movement of the floor 13. The angle braces 20 serve to provide an additional stabilizing function in this position.

In order to collapse the play pen to the position shown in FIGURE 7, the angle braces 20 are disengaged from the upper frame 11 and the free end of the angle brace 20 is placed in the aperture 26a in the legs 10 (see FIGURE 2). At this time the latch member 34 is pivoted about its shaft 33 to release the locking means from the brace 18 (dotted lines FIGURE 4). The legs 10 are then pivoted about their pivot point 8 by moving these legs toward one another until the brace 18 is no longer in the space between the free end 30 of bracket 26 and the floor 13. The floor 13 and the lower frame 12 are then moved toward the upper frame 11 until they are in engagement therewith. The pivoting movement of the legs 10 is continued until the spacers 23 engage the floor 13. The spacers limit movement of the legs 10 toward floor 13 and prevent scratching or damage to the play pen when in this disassembled or collapsed position.

The mode of assembly of the play pen to place the play pen in position for use is virtually just the opposite of the disassembly or collapsing operation. The legs 10 are opened until they are almost perpendicular to the frame members. The lower frame 12 and floor 13 are then moved towards the ends of the legs 10 until they are adjacent to the bracket 26 and associated structure. The opening of the movement of the legs 10 is then continued so that the brace 18 will be located in the space between the free end 30 of the bracket 26 and the latch means is engaged in the position shown in FIGURE 4. It will be understood that under normal conditions the periphery of the brace 18 will serve to automatically cam the spring biased lever 34 into a position where it will snap into engagement with the brace 18, as aforesaid.

It is to be understood that the invention in its broader aspects is not limited to the specific details shown and described, but also includes within the scope of the accompanying claims any departures made therefrom which do not sacrifice its chief advantages.

What is claimed is:

1. A collapsible play pen comprising, an upper closed frame and a lower frame, leg means pivotally attached to said upper frame to permit said legs to be folded to a position wherein said legs are substantially parallel to said upper frame, said lower frame including a floor attached thereto, a flexible shroud attached to said upper and lower frame to enclose the area bounded by said upper and said lower frame, diagonally disposed means connected between said legs and said upper frame to prevent pivotal movement of said legs beyond a perpendicular position relative to said upper frame when the play pen is in position for use and releasable means engaging said legs and lower frame for preventing movement of said floor towards said upper frame when the play pen is in position for use.

2. A collapsible play pen comprising an upper closed frame, a lower frame, legs pivotally attached to said upper frame, a flexible shroud attached to said upper and said lower frame to enclose the areas bounded by said upper and said lower frame, a floor attached to said lower frame, support brackets extending between and attached to said legs to form one pair of leg means adapted to support

5

said lower frame and said floor, a releasable locking mechanism fixed relative to said lower frame and to said floor and engaging said leg means to prevent pivotal movement of said leg means and movement of said floor towards said upper frame when the play pen is in condition for use.

3. A collapsible play pen comprising an upper closed frame, a lower frame, leg means pivotally attached to said upper frame and movable substantially wholly relative to said lower frame, a flexible shroud attached to said upper and said lower frame to enclose the area bounded by said upper and said lower frame, a floor attached to said lower frame, support braces extending between and attached to said legs to form two pairs of leg means adapted to support said lower frame and said floor, a locking mechanism including a spring biased latch member adapted to engage said brace to prevent pivotal movement of said leg means when the play pen is in its position of use, and means associated with said locking mechanism for engaging said support brackets for preventing upward movement of said floor when the play pen is in its position of use.

4. A collapsible play pen comprising an upper closed

6

frame, a lower frame assembly, leg means pivotally attached to said upper frame to permit the legs to be folded to a position wherein said legs are substantially parallel to said upper frame, said lower frame assembly including a frame and a floor carried thereby, a flexible shroud attached to said upper frame and said lower frame assembly to enclose the area bounded by said frames, diagonally disposed means connected between said legs and said upper frame to prevent pivotal movement beyond a predetermined position relative to said upper frame when the play pen is in position for use, and releasable means carried by said lower frame assembly to retain the legs in said predetermined position when the play pen is in position for use.

References Cited by the Examiner

UNITED STATES PATENTS

2,776,441 1/57 Strom ----- 5—99.0

FOREIGN PATENTS

682,102 11/52 Great Britain.

768,344 5/34 France.

FRANK B. SHERRY, *Primary Examiner.*