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2,491,966

PLAY PEN

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2 Sheets-Sheet 1

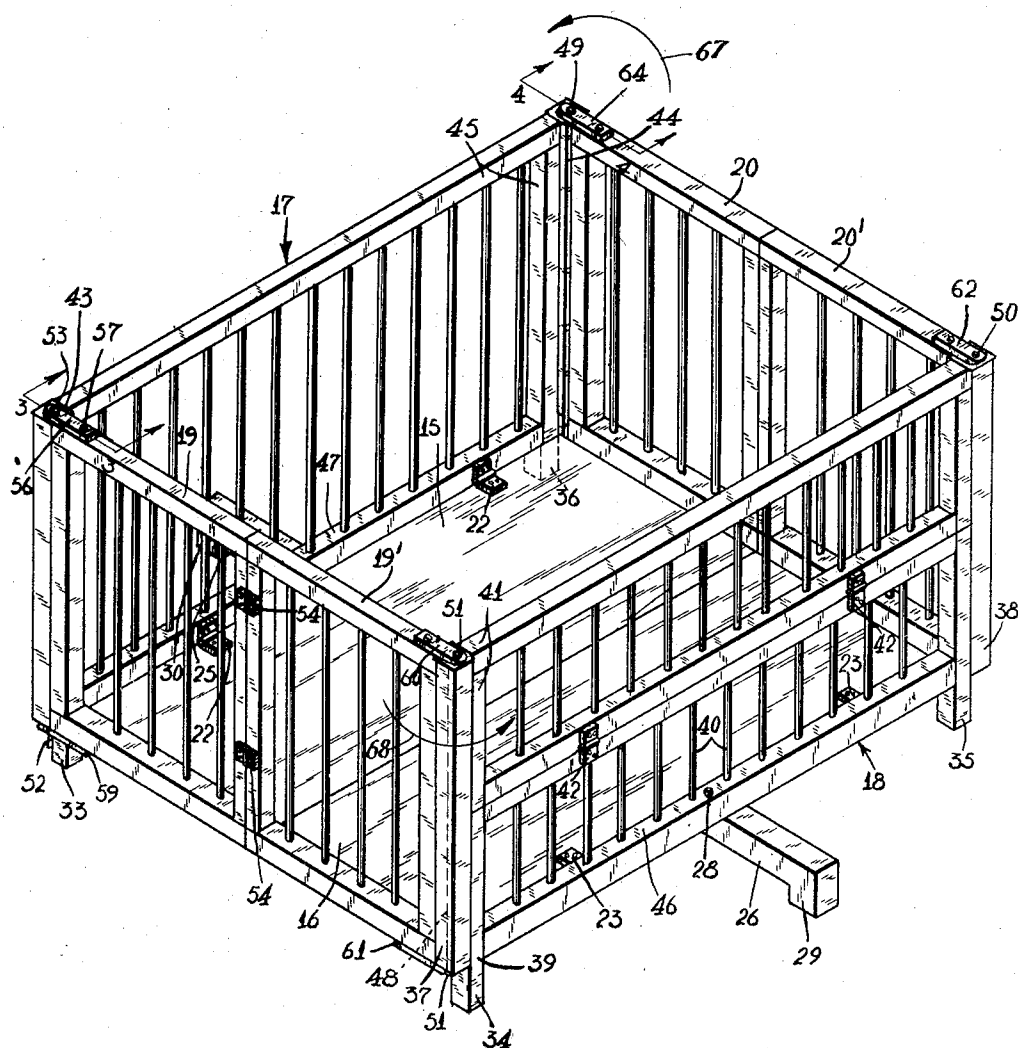


Fig. 1.

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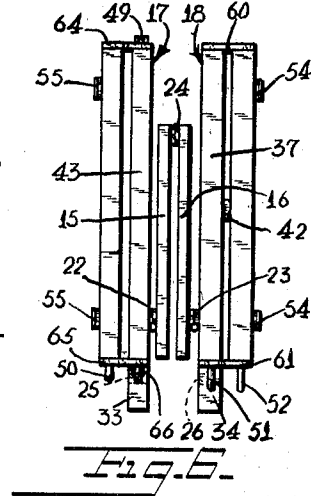
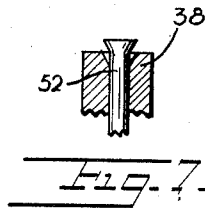
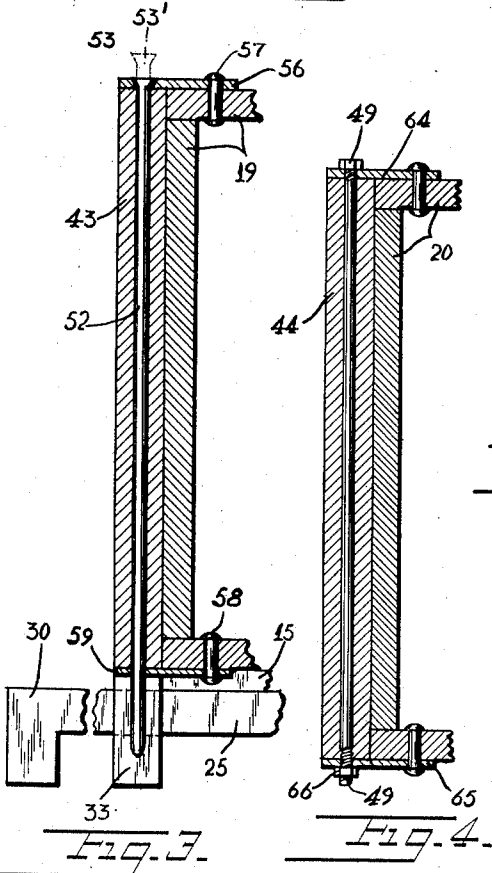
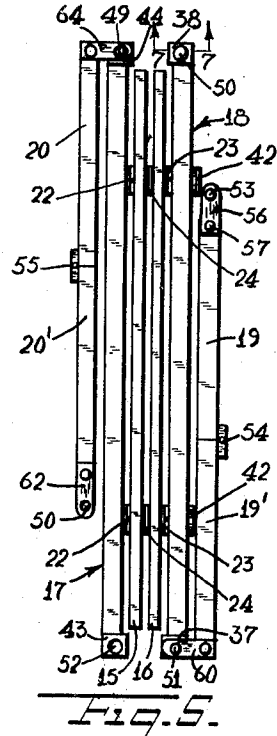
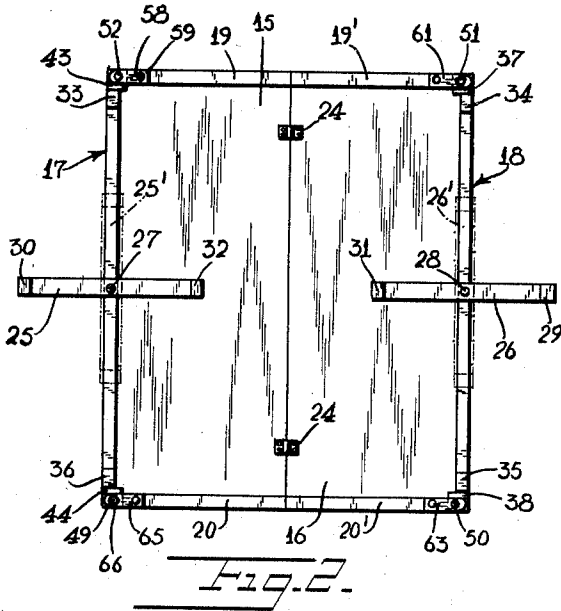
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PLAY PEN

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2 Sheets-Sheet 2



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PLAY PEN

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5 Claims. (Cl. 5—99)

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This invention relates to new and useful improvements in play pens for babies and young children.

An object of the invention is to provide a play pen having a floor, side walls and end walls; which is readily collapsible; and which when collapsed includes, coupled together, all the parts just enumerated.

Another object is to provide a play pen as above, having an upper part of a side wall lowerable, to facilitate easy reach into the erected play pen.

A further object is to provide a play pen having the advantages already recited, wherein the same includes one or more end gates, a selected one of which may be swung open to obtain access to the play pen by walking into the same.

Still another object is to provide simple and practicable means for locking said lowerable part in normal or raised position, for locking closed the gate or gates provided, and for interlocking the side walls and the end walls at the four corners of the play pen, with such means readily unlockable by the mother or a nurse from the exterior of the play pen but absolutely beyond chance of being unlocked by the child in the play pen.

Still a further object is to provide a floor supporting means which serves when the play pen is erected to hold the floor against sagging at its central portion, and which when the play pen is collapsed will not interfere with compact collapsing thereof.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is a perspective view, showing one possible form of play pen according to the invention erected.

Fig. 2 is a plan view thereof on a reduced scale, with the bottom of the play pen turned up and revolved 90° to the right.

Fig. 3 is a considerably enlarged detail view, being a vertical section taken on the line 3—3 of Fig. 1.

Fig. 4 is a similar view, being a vertical section taken on the line 4—4 of Fig. 1.

Fig. 5 is a top plan view of the play pen, fully collapsed.

Fig. 6 is an end elevation of the thus collapsed play pen.

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Fig. 7 is an enlarged fragmentary detail view, being a vertical section taken on the line 7—7 of Fig. 5.

The play pen, according to the present invention, includes a pair of floor sections 15 and 16, a pair of side sections 17 and 18, and a pair of end sections each including a pair of like gates 19 and 19' or 20 and 20'.

The floor section 15 is hinged to the side section 17 at 22, 22, and the floor section 16 is similarly hinged to the side section 18 as indicated at 23, 23; said floor sections being hinged together as shown (Fig. 2) at 24, 24. Thus, when the play pen is collapsed, the floor sections 15 and 16 are able to be folded up inverted-V fashion for finally lying between the side sections 17 and 18 as shown in Figs. 5 and 6.

The central portion of the floor 15—16 is prevented from sagging by supporting members 25 and 26 (Figs. 1 and 2), each swingable about a pivotal mounting pin 27 or 28, these on the bottoms of the side sections 17 and 18.

When the play pen is erected, said members are arranged at right angles to the meeting lines of the floor sections 15 and 16, so that then the feet 29 and 30 on ends of the members 25 and 26 will be beyond the side limits of the play pen, and like feet 31 and 32 on the other ends of said members will be below the floor 15—16 near its center. Said feet are of a height such that, with their bottoms on the lawn or other area where the play pen is erected and with the latter resting on its own four feet 33, 34, 35 and 36, the tops of the members 25 and 26 will be at such a height above said area that the floor 15—16 will be sustained parallel therewith.

The members 25 and 26 are pivotally mounted on the pins 27 and 28, so that on collapsing the play pen they may be swung through 90° to lie as indicated in broken lines at 25' and 26' in Fig. 2, and as shown in Fig. 6. Otherwise, it would be impossible to arrange the floor sections 15 and 16 in the facewisely compact relation shown in Figs. 5 and 6 when the play pen is collapsed.

Forming suitably inbuilt permanent parts of a lower rectangular frame 39 of the side section 18 are two like vertical posts 37 and 38. Thus these posts form continuations of the length of said section 18, beyond the portion thereof comprising said lower frame 39, carrying a plurality of spaced vertical bars such as ordinary wooden dowels 40, and an upper similar and similarly bar-equipped rectangular frame 41, the latter hinged to the lower frame 39 as at 42, 42.

Likewise forming suitably inbuilt permanent

parts of the side section 17 are two vertical posts 43 and 44, both alike, and like the posts 37 and 38; said section 17, however, comprising a single rectangular frame 45, also provided with bars such as wooden dowels, as shown.

This frame 45 is of the same length as the two frames 39 and 41 of the side section 18, and has a height equal to the sum of the heights of said two frames. The post 43 is hidden in Fig. 1, but the same is shown in Figs. 2, 3, 5 and 6.

The tops of said posts 37, 38, 43 and 44 (see Fig. 1, taken with Fig. 6) are level with the tops of the side sections 17 and 18; but the posts 37 and 38 end at their bottoms about level with the bottom of the lower horizontal rail 46 of the lower frame 39, and, similarly, the posts 43 and 44 end at their bottoms about level with the bottom of the lower horizontal rail 47 of the side section 17.

As a result, the vertical rails of said lower frame 39 project below the posts 37 and 38, to provide the feet 34 and 35; and, likewise, the vertical rails of the side section 17 project below the posts 43 and 44, to provide the feet 33 and 36.

Each post 37, 38, 43 and 44 is centrally bored throughout its length, as indicated at 43 in Fig. 1 in the case of the post 37. Such bore through the post 44 is for the reception of a long bolt 49, and such bore through each of the posts 37, 38, 43 is for the reception of a long pin 50, 51 or 52. All these three pins are alike, each having a countersunk head at its upper end as shown in Fig. 3 in the case of the pin 52, where such head is marked 53.

By means including said bolt and pins, the side section 17 at one of its ends is vertically pivotally connected to an end of the end gate 19, and at its other end is similarly connected to the end gate 20, and the side section 18 at one of its ends is similarly connected to the end gate 19' and at its other end is similarly connected to the end gate 20'; the gates 19 and 19' being hinged together as at 54, 54, and the gates 20 and 20' being hinged together (see Figs. 5 and 6) as at 55, 55.

For coaction with the pin 52, the gate 19 carries at its top a plate 56, secured to said gate by a rivet 57 and projected over the top of post 43. As shown in Fig. 3, the plate 56 has a conical aperture, in line with the bore through said post, for seating the countersunk head 53 of said pin in such manner that said head is inaccessible for removing the pin by upward grasp of said head. On the bottom of the gate 19, secured thereto as at 58, is a plate 59 like the plate 56 except that the plate 59, where it projects under the post 43, is merely cylindrically apertured for easy endwise movement therethrough of the lower end of the pin 52.

It will be noted from Fig. 3 that the lower end of the pin 52 projects below the plate 59, to the extent of about half the height of the foot 33.

The arrangement just described provides a corner locking for the erected play pen, as between the side section 17 and the gate 19, such that the child in the play pen cannot break such lock, as to do so he must lift up the top of the pin 52, which he cannot do. However, his mother or nurse can easily break the lock, whenever desired, simply by using her foot to lift the bottom of pin 52 such a slight distance as to raise its head 53 a trifle above the plate 56, as indicated at 53' in Fig. 3, and so to dispose said head for easy finger grasp to wholly withdraw the pin.

A precisely similar arrangement is provided at the corners of the play pen occupied by the posts

37 and 38. Thus, a plate 60, corresponding to the plate 56, is on the top of the gate 19', and a plate 61, corresponding to the plate 59, is on the bottom of said gate, while with these plates 60 and 61 the pin 51 is used; and a plate 62, corresponding to the plate 56, is on the top of the gate 20', and a plate 63, corresponding to the plate 59, is on the bottom of said gate, while with these plates 62 and 63 the pin 50 is used.

However, in the case of the plates 61 and 62, the means by which each of said plates is connected to the gate 19', such means being a rivet such as shown in Fig. 3 at 57, is a rivet which is not headed over so tightly as to preclude rotational movement of the plates relative to said gate 19'; thereby to permit collapsing of the play pen as shown in Figs. 5 and 6.

For the remaining corner of the play pen, that at the location of the post 44, a withdrawable pin is not used, but, instead, the bolt 49, as best shown in Fig. 4; thus to provide a permanent pivotal connection, by the aid of plates 64 and 65, respectively similar to the plates 56 and 59, between the end gate 20 and said post 44, and, consequently, between said gate and the side section 17.

The plate 55, at the bottom of the gate 20, is exactly like the plate 59, and the plate 64, at the top of said gate, differs from the plate 56 in only one particular, that is, the aperture through the plate 64 is merely a cylindrical one for taking the shank of the bolt 49. The bottom portion of said bolt is threaded, to which threaded portion of the bolt is applied a nut and lock-nut couple as indicated at 66 in Fig. 4.

For a purpose analogous to that mentioned in the second paragraph preceding, the rivet by which each of said plates 64 and 65 is connected to the gate 20 is not headed over so tightly as to preclude rotational movement of these plates relative to their gate when the play pen is collapsed.

When the play pen is erected as in Fig. 1, a child placed therein is unable to break the lock at any of the four corners thereof, as he cannot remove the bolt 49, nor lift free any of the pins 50, 51 and 52. Nevertheless, whenever the mother or nurse desires, a side portion, the upper frame 51 of the side section 18, may be readily lowered; or an end gate readily opened; or the play pen readily collapsed.

For easy reach toward the child, said upper frame 41 may be lowered, on the hinges 42, as soon as the pins 50 and 51 are first slightly raised by upward thrust on their bottoms and then pulled upward by grasp at their tops, as previously explained.

For opening either or both of the gates 19 and 19', it is merely necessary to withdraw the pin 51; and for opening either of the gates 20 and 20', it is merely necessary to withdraw the pin 50.

After withdrawing merely the pins 50 and 52, it is simple and easy to collapse the play pen to dispose its various parts as shown in Figs. 5 and 6; by swinging the gates 20 and 20' as a single structure about the bolt 49 in a counterclockwise direction as per the arrow 67 of Fig. 1, swinging the gates 20 and 20' about the pin 51 in a counterclockwise direction as per the arrow 68 of Fig. 1, and then moving the sections 17 and 18 parallelly toward each other, this last causing the floor sections 15 and 16 to rise inverted-V fashion. When said floor sections become disposed as in Figs. 5 and 6, the members 25 and 26 are rotated through 90° to dispose them as shown in Fig. 6,

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that is, in their positions indicated at broken lines at 25' and 26' in Fig. 2, and so parallel with the side sections 17 and 18.

The bored posts 37, 38, 43 and 44 are important, as, with the bolt 49 inside the post 44, the posts 37, 38 and 43 act as shields to prevent the child in the play pen from reaching the shanks of a pin 50, 51 or 52 and there lift such a pin to break its lock at its corner of the play pen.

The plate pairs 60 and 61, and 64 and 65, or equivalents, are important; as otherwise, and as already mentioned, the end gates 19, 19', 20 and 20' could not be arranged, when the play pen is collapsed, in that desirable close parallelism with the side sections 17 and 18 illustrated in Figs. 5 and 6.

The only separable parts are the pins 50, 51 and 52. Yet these are so long that there is no chance of loss or inadvertent misplacement thereof, as would be the case were short pins used; in which latter case chains for tethering such pins would suggest themselves. The pins 50, 51 and 52, however, will be dropped into their bores through the posts 37, 38 and 43, as soon as the play pen is collapsed, as illustrated in Fig. 7 in the case of the post 38 and its pin 50; there safely to remain until the play pen is again desired to be erected.

While I have illustrated and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

1. A collapsible play pen comprising permanently interconnected but relatively movable floor sections, side wall sections and end wall sections, said end wall sections being pivotally connected to said side wall sections to form an enclosure, at least one of said end wall sections comprising a pair of relatively movable end gates, at least one of said side wall sections comprising a lower part and an upper part movable relatively to the lower part, there being two floor sections, one pivotally connected to one of the side sections and the other pivotally connected to said lower part of the other side section, the two floor sections being pivotally interconnected, and elongated members pivotally mounted on the bottom of said side wall sections intermediate of their ends to have portions extend beneath and support said floor sections against sagging when said elongated members are turned into operative positions extended at right angles to said side wall sections.

2. A collapsible play pen comprising permanently interconnected but relatively movable floor sections, side wall sections and end wall sections, at least one of said end wall sections comprising a pair of relatively movable end gates, and at least one of said side wall sections comprising a lower part and an upper part movable relatively to the lower part, there being two floor sections, one pivotally connected to one of the side sections and the other pivotally connected to said lower part of the other side section, the two floor sections being pivotally interconnected, said upper and lower parts of a side wall section being pivotally interconnected whereby the upper section may be lowered to reduce the height of said wall section, there being at each of the four corners of the play pen a coupling means for an end of a

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side wall section and the meeting end of an end wall section, one of said end wall sections incorporating two of said gates so that an end of each gate is engaged by one of said coupling means, said gates at their meeting ends being pivotally interconnected, one of said coupling means including an upwardly withdrawable pin.

3. A collapsible play pen comprising permanently interconnected but relatively movable floor sections, side wall sections and end wall sections, at least one of said end wall sections comprising a pair of relatively movable end gates, and at least one of said side wall sections comprising a lower part and an upper part movable relatively to the lower part, there being two floor sections, one pivotally connected to one of the side sections and the other pivotally connected to said lower part of the other side section, the two floor sections being pivotally interconnected, said upper and lower parts of a side wall section being pivotally interconnected whereby the upper section may be lowered to reduce the height of said wall section, there being at each of the four corners of the play pen a coupling means for an end of a side wall section and the meeting end of an end wall section, one of said end wall sections incorporating two of said gates so that an end of each gate is engaged by one of said coupling means, said gates at their meeting ends being pivotally interconnected, each of three of said coupling means including an upwardly withdrawable pin.

4. A collapsible play pen comprising permanently interconnected but relatively movable floor sections, side wall sections and end wall sections, at least one of said end wall sections comprising a pair of relatively movable end gates, and at least one of said side wall sections comprising a lower part and an upper part movable relatively to the lower part, there being two floor sections, one pivotally connected to one of the side sections and the other pivotally connected to said lower part of the other side section, the two floor sections being pivotally interconnected, said upper and lower parts of a side wall section being pivotally interconnected whereby the upper section may be lowered to reduce the height of said wall section, there being at each of the four corners of the play pen a coupling means for an end of a side wall section and the meeting end of an end wall section, one of said end wall sections incorporating two of said gates so that an end of each gate is engaged by one of said coupling means, said gates at their meeting ends being pivotally interconnected, each of three of said coupling means including an upwardly withdrawable pin, two of said end wall and side wall sections each including at each of its opposite ends a post affixed thereto, whereby four posts are provided one at each corner of the play pen, each of said posts having a cavity comprising a part of the coupling means at that corner of the play pen.

5. A collapsible play pen comprising permanently interconnected but relatively movable floor sections, side wall sections and end wall sections, at least one of said end wall sections comprising a pair of relatively movable end gates, and at least one of said side wall sections comprising a lower part and an upper part movable relatively to the lower part, there being two floor sections, one pivotally connected to one of the side sections and the other pivotally connected to said lower part of the other side section, the two floor sections being pivotally interconnected, said up-

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per and lower parts of a side wall section being pivotally interconnected whereby the upper section may be lowered to reduce the height of said wall section, there being at each of the four corners of the play pen a coupling means for an end of a side wall section and the meeting end of an end wall section, one of said end wall sections incorporating two of said gates so that an end of each gate is engaged by one of said coupling means, said gates at their meeting ends being pivotally interconnected, each of three of said coupling means including an upwardly withdrawable pin, two of said end wall and side wall sections each including at each of its opposite ends a post affixed thereto, whereby four posts are provided one at each corner of the play pen, each of said posts having a cavity comprising a part of

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the coupling means at that corner of the play pen, and two of said end wall and side wall sections each carrying at each of its opposite ends a play pen supporting foot, the bottoms of said feet being below the bottoms of said posts.

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