March 22, 1949. L. M. HOLTZ 2,464,866

PLAY PEN

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Fig. 1.

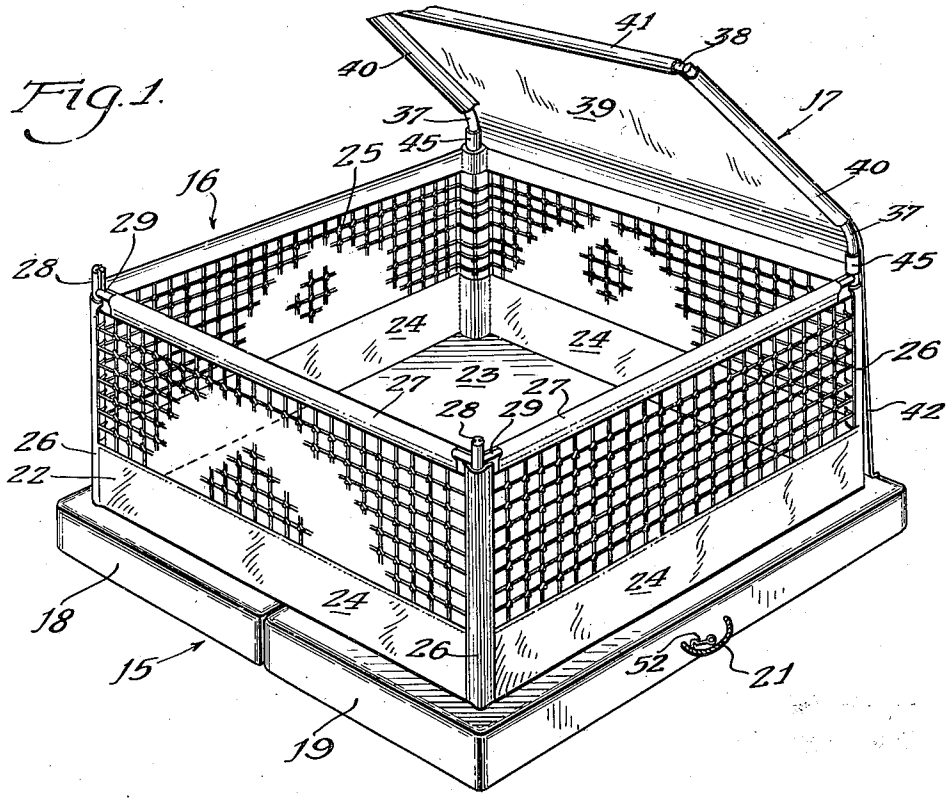
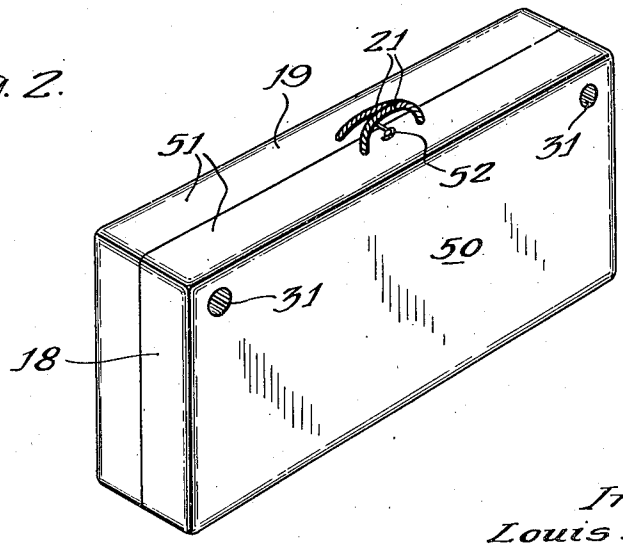


Fig. 2.



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Fig. 3.

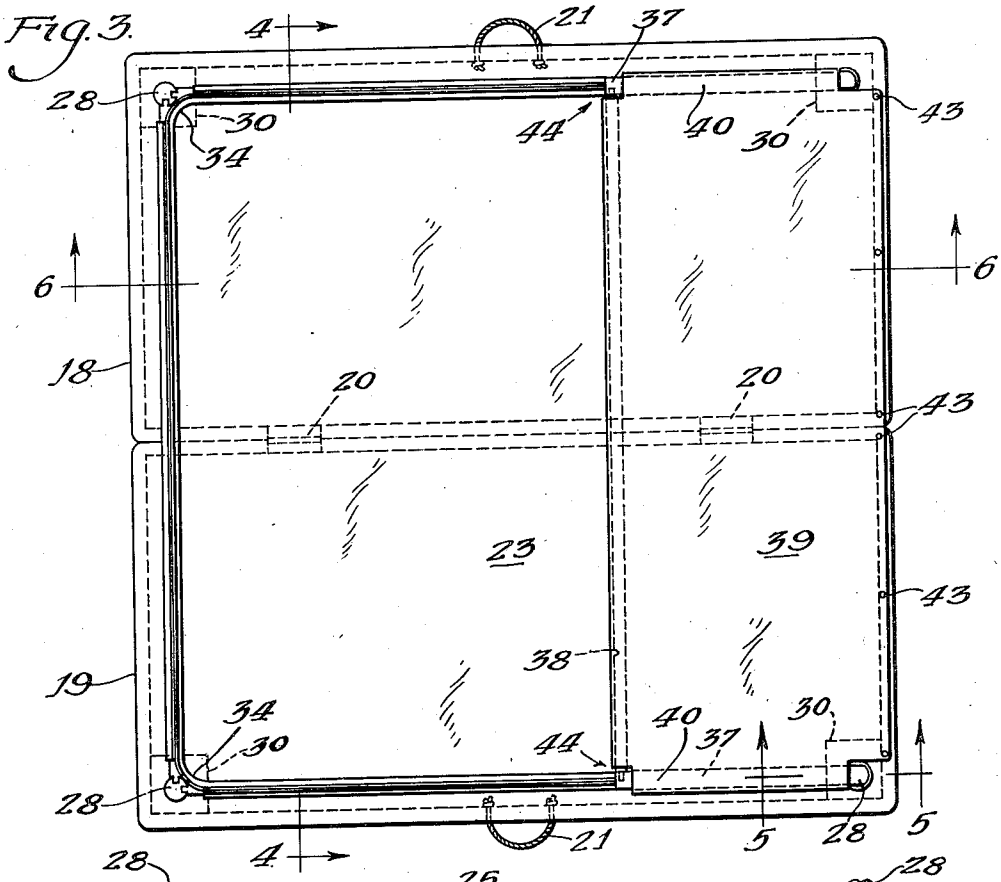


Fig. 4.

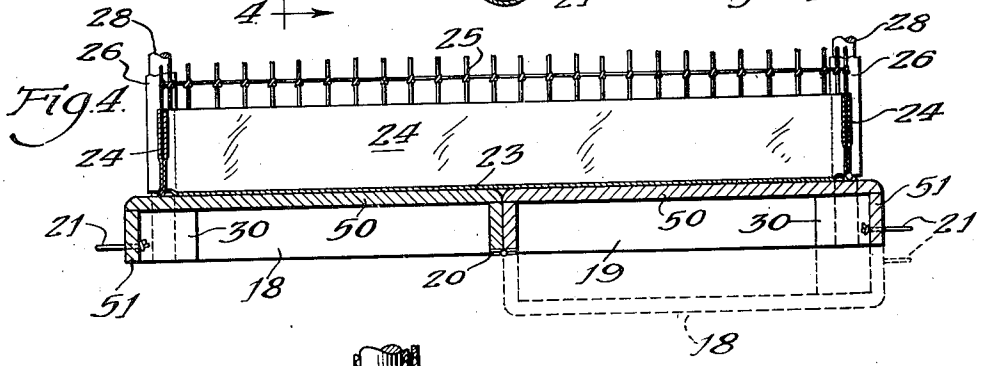
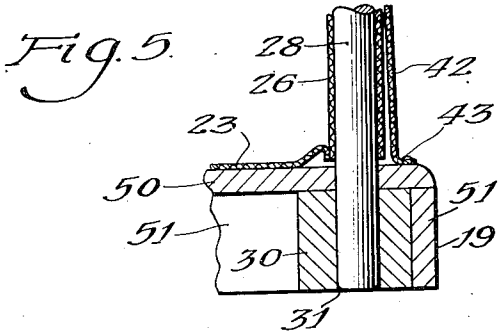


Fig. 5.



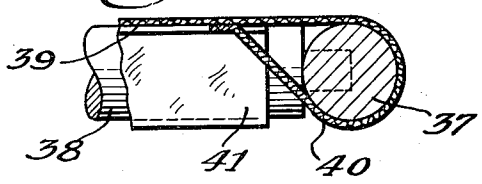
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Fig. 7.



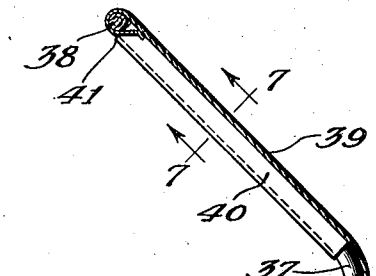
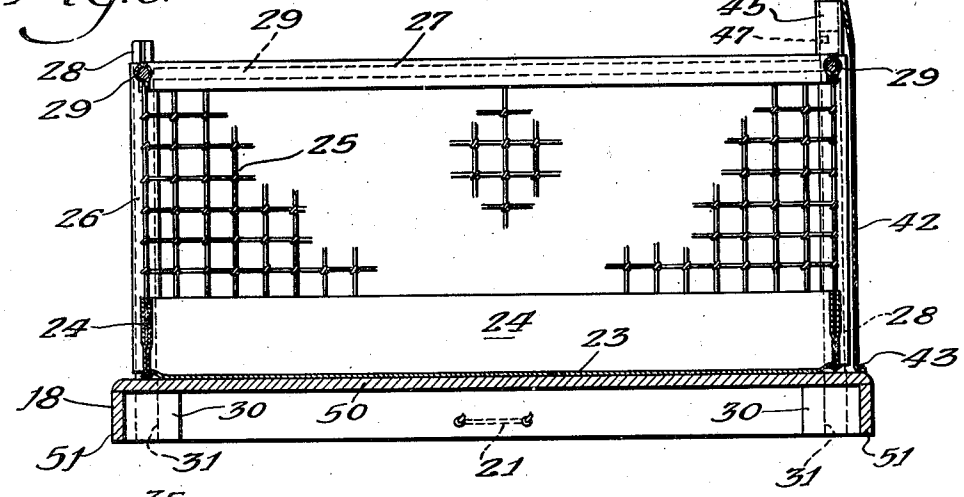


Fig. 6.



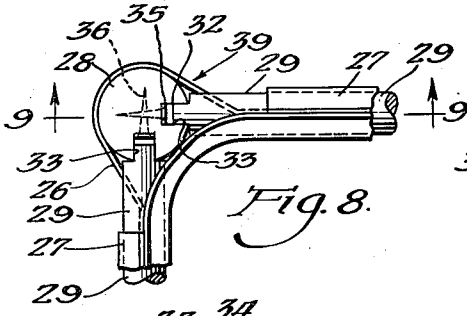


Fig. 8.

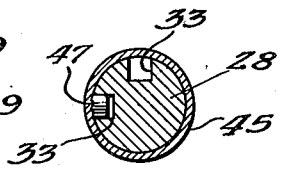


Fig. 11.

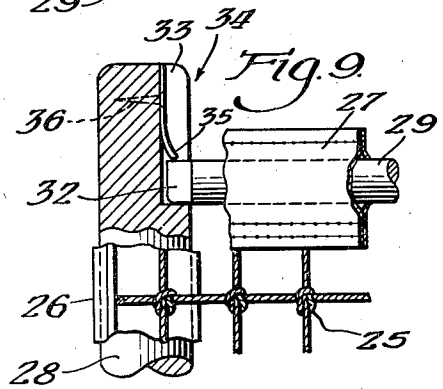
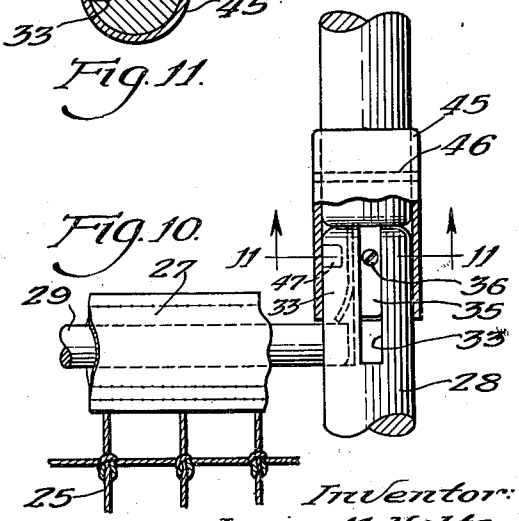


Fig. 9.

Fig. 10.



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UNITED STATES PATENT OFFICE

2,464,866

PLAY PEN

Louis M. Holtz, Chicago, Ill.

Application December 2, 1946, Serial No. 713,535

8 Claims. (Cl. 5—98)

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This invention relates to an improved play pen for infants.

In the prior art portability of play pens has been generally accomplished by providing a collapsible structure. There are many varieties of collapsible play pens. Collapsibility is often obtained by making the base in two parts which are hinged to each other, and by hingedly mounting two of the four walls to the base member. Various expedients have been employed for constructing the remaining two walls so that the structure as a whole will be collapsible. However, it has been found that in carrying the collapsed structure from place to place, the base and wall members tend to unfold, thereby causing great inconvenience and oftentimes requiring the assistance of another person when the collapsed structure is moved from place to place.

A further objection to the usual collapsible play pen is that the two piece hinged base in combination with the usual means by which the walls are secured to each other, do not provide a rigid structure which can be moved with facility from place to place within a room without collapsing the same.

In other words, the advantage of portability provided by the usual collapsible play pen, is offset in large measure by the inconvenience involved in handling the collapsed structure. Furthermore, the collapsible features detract from the rigidity of the play pen when opened up for use.

It is an object of my invention to provide an improved play pen which combines the advantages of portability with ease in handling the collapsed or demounted structure, and which also provides, when fully assembled, a comparatively rigid structure. In this connection, I have provided a play pen in which the base also serves as a carrying case, the several parts of the structure being demountably mounted on the base, and being of such dimensions that they can be entirely received within the carrying case which is formed from the base.

A further object is to provide a play pen which is improved with respect to sanitation and safety. In this connection, I have provided a play pen which is in the form of a fabric enclosure which is supported on demountable members. Thus, a construction is provided in which the infant comes in contact only with the fabric enclosure. The fabric enclosure may be washed as often as necessary, thereby providing a play pen which is much more sanitary than the usual collapsible wooden structure. Furthermore, the fabric enclosure prevents the infant from picking up slivers from the wooden members. Also, there are fewer rigid parts against which the infant can fall and receive bumps.

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A still further object is to provide in combination with a portable play pen a removable and demountable canopy or sunshade. Thus, the play pen can be set up out of doors and means are provided for protecting the infant from sun or wind.

Other objects, features and advantages will become apparent as the description proceeds.

With reference now to the drawings in which like reference numerals designate like parts—

Fig. 1 is a perspective view of a preferred embodiment of my invention in fully assembled form;

Fig. 2 is a perspective view of the play pen in portable form, the base serving as a carrying case for the various demountable parts;

Fig. 3 is a top view of the play pen as shown in Fig. 1;

Fig. 4 is a vertical section taken along line 4—4 of Fig. 3, the dotted line showing the base in folded position;

Fig. 5 is an enlarged section taken along line 5—5 of Fig. 3, showing the manner in which the corner post is mounted on the base;

Fig. 6 is a section taken along line 6—6 of Fig. 3;

Fig. 7 is a detail section view taken along line 7—7 of Fig. 6;

Fig. 8 is a detailed enlarged plan view of the corner construction;

Fig. 9 is a section taken along line 9—9 of Fig. 8;

Fig. 10 is a view similar to Fig. 9, but showing the manner in which one of the canopy supports is mounted on the corner post; and

Fig. 11 is a section taken along line 11—11 of Fig. 10.

The reference numeral 15 designates generally the base of the play pen, upon which is mounted an enclosure 16. A canopy 17 is removably mounted on certain of the structural members of the enclosure 16, as will be hereinafter pointed out.

The base 15 comprises two box-like members 18 and 19, which are secured to each other by hinges 20, as shown in Figs. 3 and 4. Each of the box-like members is approximately twice as long as it is wide, so that the two members together form a substantially square base. As shown in Figs. 4 and 6, the box-like members comprise supporting surfaces 50 and flanges 51.

In operative position, flanges will rest on the ground or the floor and maintain the supporting surface out of contact therewith. The hinges are secured to the edges of the abutting pair of flanges, so that the box-like members may be folded together to form a carrying case, as shown in Fig. 2. In this position of the parts the corresponding flanges 51 of each box-like member abut each other at their edges, thereby forming the top, bottom and end walls of the carrying case, while the supporting surfaces 50 form the side walls thereof. Suitable handles 21 may be provided to facilitate the carrying of the base, and a suitable latch 52 may be provided to keep the parts in closed position.

The enclosure 16 comprises a fabric enclosure 22 and a supporting structure formed from corner posts 28 and horizontal rails 29. The fabric enclosure 22 comprises a bottom wall 23 and side walls 24, which may be made of any suitable fabric such as canvas. In the embodiment shown, the upper portions of the side walls 24 are made of netting 25.

The fabric enclosure is provided with four sleeves 26 at the corners thereof to receive the corner posts 28. Four sleeves 27 are provided along the upper edges of the side walls 24 to receive the horizontal rails 29. Thus, the fabric enclosure 22 may be supported from the horizontal rails 29 and each of its side walls 24 will be tensioned in a horizontal direction between the corner posts 28.

Blocks 30 are suitably secured to the supporting surfaces 50 and the flanges 51 of the box-like members 18 and 19 at the four corners of the base 15. Bores 31 extend through the supporting surfaces and the blocks, as shown in Figs. 2 and 6, and the corner posts 28 are received in these bores. By means of this construction, the corner posts are quite firmly anchored.

The joints 34 between the horizontal rails 29 in the corner posts 28 are shown in Figs. 8 and 9. The end portions of the horizontal rails are slabbed as indicated by the reference numeral 32, and these slabbed ends fit into slots 33 which extend downwardly a short distance from the ends of the corner posts. As shown in Fig. 8, there are two slots in each corner post. The rails are held against the end of the slot by means of a spring strip 35 which is secured by one or more screws 36 to the wall of the slot. The spring strip is biased outwardly so as to engage the upper surface of the rail and hold it in position. Thus, the rail may be slid downwardly into the slot without flexing the corner post, and the rail will be automatically locked into position. To remove the rail, the lower end of the spring strip is depressed with the finger to clear the end of the rail, and then the rail may be lifted upwardly and removed from the slot.

In assembling the parts, the base is first opened up from its carrying case position, as shown in Fig. 2, and as shown in dotted lines in Fig. 4, into its operative position. The corner posts 28 and the horizontal rails 29 are then inserted within the sleeves 26 and 27, respectively. The corner posts are then positioned in the bores 31. The joints 34 are then assembled, by slipping the slab ends 32 of the rails into the slots 33 of the corner posts to complete the assembly. It is desirable to dimension the fabric enclosure 22 so that the distance between the sleeves 26 correspond rather closely to the distance between the corner posts. Thus, the side walls 24 of the enclosure act as tension members and prevent the corner posts from spreading. This feature is particularly desirable inasmuch as the base 15 is formed of two hinged members, for the reason that the tension on the side walls will prevent the base from buckling when the play pen is lifted and moved from place to place. The joint construction 34 permits the parts to be assembled even though the tension of the side walls might be sufficient to make it very difficult to bend the corner posts outwardly, as would be necessary if merely a socket were provided.

In the event that it is desired to use the play pen out of doors, a canopy 17 is provided which may serve as a sunshade or as a wind breaker. The canopy comprises a supporting structure formed of a pair of bent arms 37, and a cross bar 38. These may be secured to each other by a joint construction 44 similar to the joint construction 34 which has already been described. The bent arms and the cross bar support a fabric sun shade 39 which is formed with sleeves 40 for the bent arms 37, and with a sleeve 41 for the cross bar 38. The fabric shade is extended downwardly to form a back flap 42, as shown in Fig. 6, which may be secured to the base 15 by suitable clips 43.

The lower ends of the bent arms 35 terminate in metal sleeves 45 which are adapted to fit over the upper ends of two of the corner posts 28. As shown in Fig. 10, the sleeve 45 may be secured to the bent arm 37 by one or more rivets 46. The sleeves may also carry one or more projections 47 which fit into the slots 33 of the corner posts, thereby maintaining the bent arms in proper alinement.

It will be seen that the canopy construction is demountable, in the same manner as the enclosure construction, and may be readily mounted over any wall, and on any pair of corner posts of the enclosure. The back flap 42 serves as a wind breaker, but of course this would not be necessary if the side walls 24 of the fabric enclosure were formed entirely from canvas, instead of partially from netting, as shown.

All of the structural members, both of the canopy and of the enclosure, are of such dimensions that they can be readily placed within the box-like members 18 and 19, and carried from place to place in the carrying case formed therefrom. The fabric enclosure 22 and the fabric shade 39 will also fit within the carrying case.

The construction herein provided not only adapts itself to convenient portability, but presents an attractive article, both when fully assembled and when packed away in its carrying case. The exterior surfaces of the carrying case may be decorated but the infant is protected from contact with any painted decorations due to the provision of the fabric enclosure 22. The latter may be washed and maintained in sanitary condition.

I claim:

1. A play pen comprising a base having apertures located at the four corners thereof, corner posts fitting into said apertures, horizontal rails connecting the posts near the tops thereof, a fabric enclosure provided with sleeves to receive said rails and said corner posts so that the walls thereof are supported from said rails and are tensioned between said posts.

2. A demountable play pen comprising a base having apertures located at the four corners thereof, corner posts fitting into said apertures, horizontal rails connecting the posts near the tops thereof, a fabric enclosure supported from said rails and engaging said corner posts so that

the walls thereof are tensioned between said posts, and means for facilitating the assembly of said rails with said posts comprising slots in said posts extending downwardly for a short distance from their upper ends, the end portions of said rails fitting within said slots, and a plate secured at its upper portion to one wall of said slot and having its lower portion biased away from said wall so as to engage said rail and lock it in position against the end of said slot.

3. A demountable play pen comprising a base having apertures located at the four corners thereof, corner posts fitting into said apertures, horizontal rails connecting the posts near the tops thereof, a fabric enclosure supported from said rails and engaging said corner posts so that the walls thereof are tensioned between said posts, and means for facilitating the assembly of said rails with said posts comprising slots in said posts extending downwardly for a short distance from their upper ends, the end portions of said rails being of reduced dimensions to fit within said slots, and a spring strip secured at its upper portion to one wall of said slot and having its lower portion bent away from said wall so as to engage said rail and lock it in position against the end of said slot.

4. A play pen comprising a base formed from two box-like members which are hingedly connected with each other so as to provide a carrying case, corner posts demountably secured to said base, rails demountably secured to said corner posts, and a fabric enclosure provided with sleeves for said rails and for said posts whereby said fabric enclosure may be supported at its upper edge from said rails and the four walls thereof tensioned between said posts, the tensioned walls of said fabric enclosure serving to impart rigidity to the structure when the parts are assembled, and the lengths of said corner posts and rails being sufficiently less than the length of the interior diagonal of one of said box-like members that all of said rails and posts and said fabric enclosure may be received within said carrying case.

5. A play pen comprising a base formed from two box-like members, each having a supporting surface and marginal flanges, and which are hingedly connected with each other so as to provide a carrying case of which the top, bottom and end walls are formed by said flanges disposed in edge to edge relationship, and of which the side walls are formed by said supporting surfaces, corner posts demountably secured to said base, rails demountably secured to said corner posts, and a fabric enclosure having a bottom and four walls provided with sleeves for said rails and for said posts whereby said fabric enclosure may be supported at its upper edge from said rails and the four walls thereof tensioned between said posts, the flanges of said box-like members extending downwardly when the parts are assembled so that said supporting surfaces will underlie the bottom of said fabric enclosure, the tensioned walls of said fabric enclosure serving to prevent hinging movement of the box-like members when the parts are assembled.

6. A demountable play pen structure comprising a pair of hinged base members, each having a supporting surface and downwardly extending marginal flanges, blocks secured to the under side of said supporting surface at the two outer corners of each of said base members, said blocks and said supporting surfaces being apertured, corner posts disposed in said apertures, the upper portions of said posts being provided with vertical slots, horizontal rails disposed between said corner posts, and having end portions received within said slots, a pair of canopy posts supported on two of said corner posts, each canopy post terminating at its lower end in a sleeve fitting over a corner post and interlocking therewith, and being provided at its upper end with a slot, a cross bar disposed between the upper ends of said canopy posts and having end portions received within said slots, a fabric cover having sleeves for said canopy posts and said cross bar to keep said canopy posts from spreading, and a fabric play pen enclosure having sleeves for said corner posts to keep said corner posts from spreading and having sleeves for said horizontal rails from which said fabric enclosure may be supported.

7. In a demountable play pen structure, a corner post provided with a vertically arranged slot at its upper end and intersecting the end surface thereof, and a resilient metal strip disposed in said slot and having its upper end secured to one of the vertically disposed walls of said slot, and having its lower end bowed away from said wall.

8. In a demountable play pen structure, a corner post provided with a vertically arranged slot at its upper end and intersecting the end surface thereof, a resilient metal strip disposed in said slot, and having its upper end secured to one of the vertically disposed walls of said slot, and having its lower end bowed away from said wall, a canopy post provided at its lower end with a sleeve adapted to fit over the upper end of said corner post, and an inwardly extending projection secured to said sleeve and adapted to interlock with said slot to prevent relative rotation of said posts.

LOUIS M. HOLTZ.

REFERENCES CITED

The following references are of record in the file of this patent:

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Number	Name	Date
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