Feb. 19, 1952 C. A. PEEBLES 2,586,251

PLAY PEN CONVERTIBLE TO A BED

Filed April 24, 1946 5 Sheets-Sheet 1

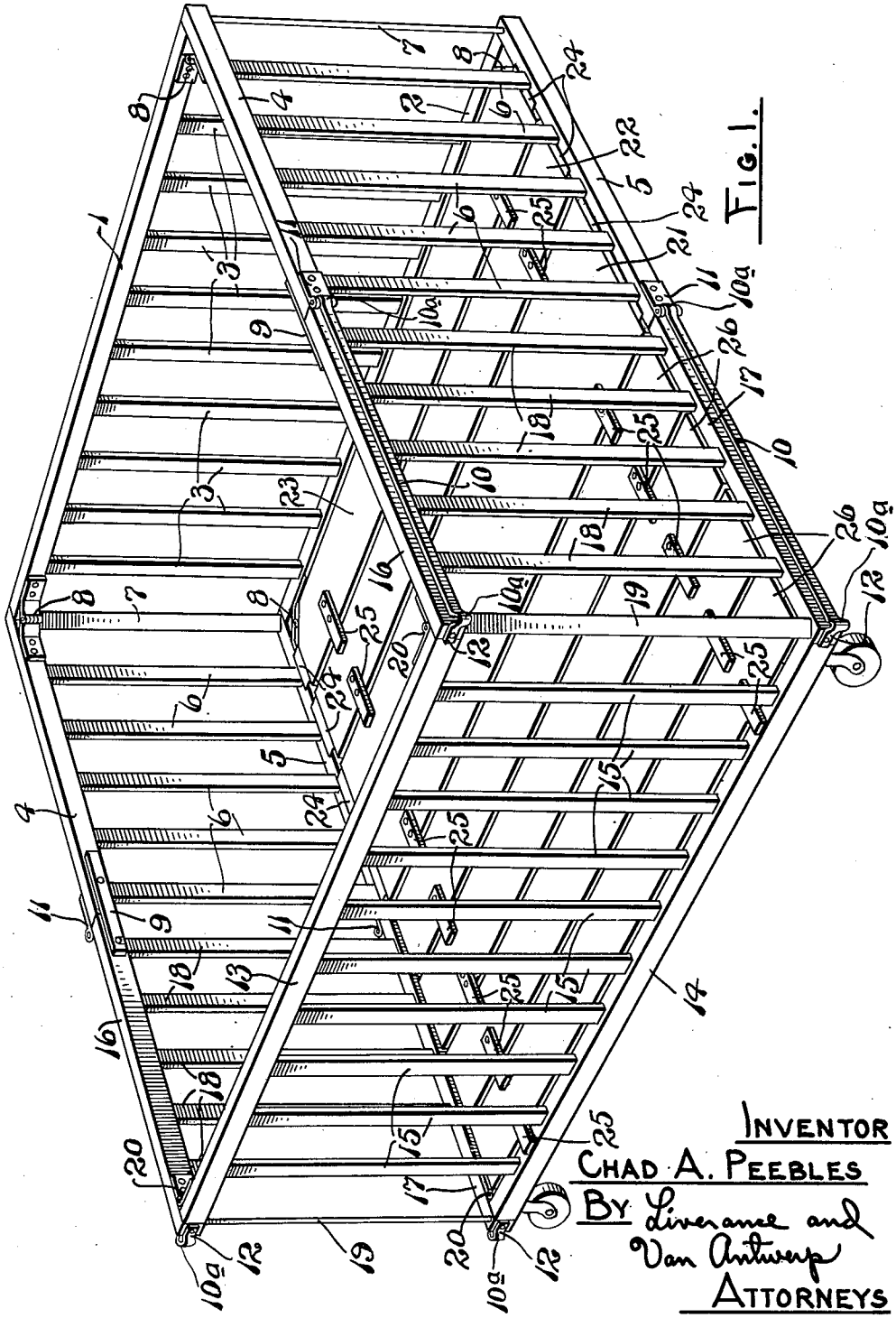


FIG. 1.

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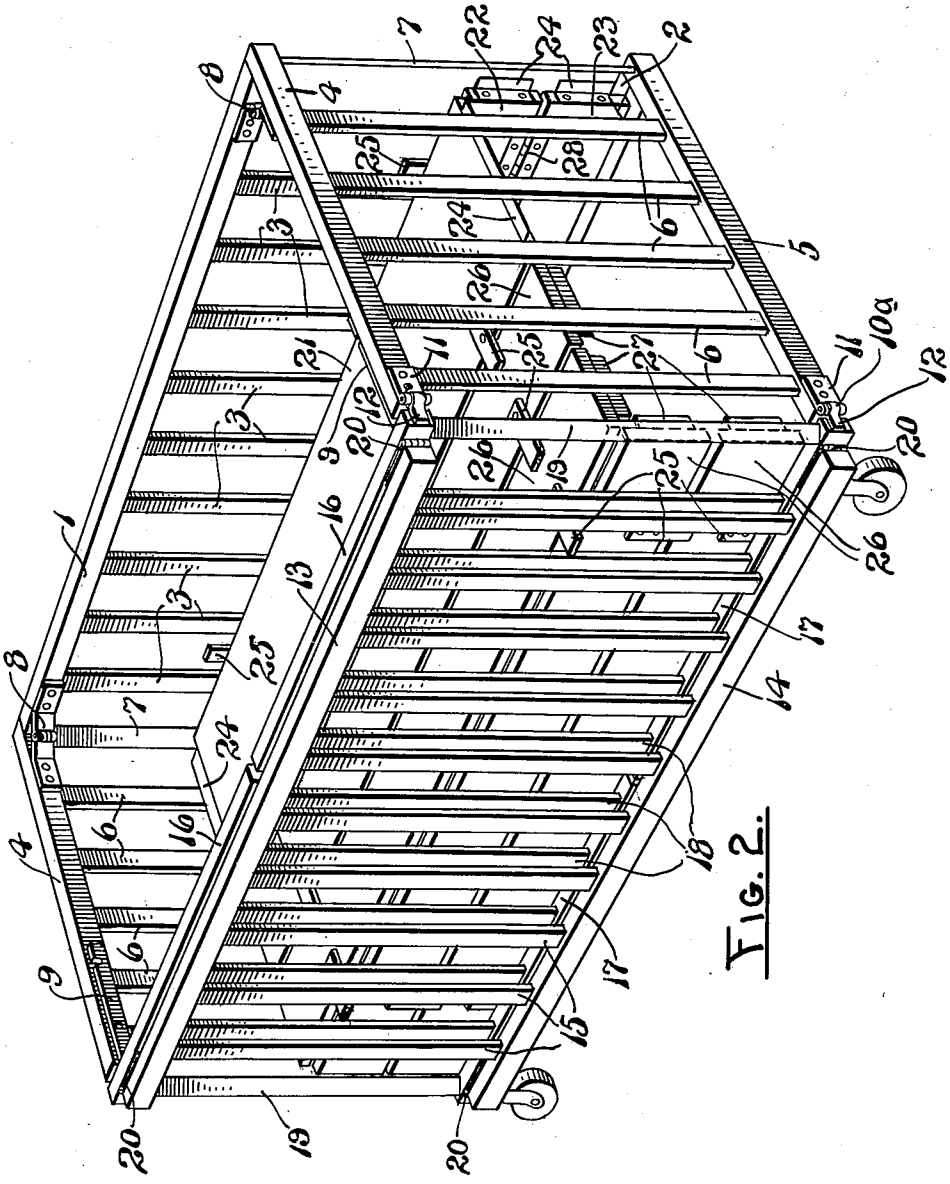


FIG. 2.

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Filed April 24, 1946

5 Sheets-Sheet 3

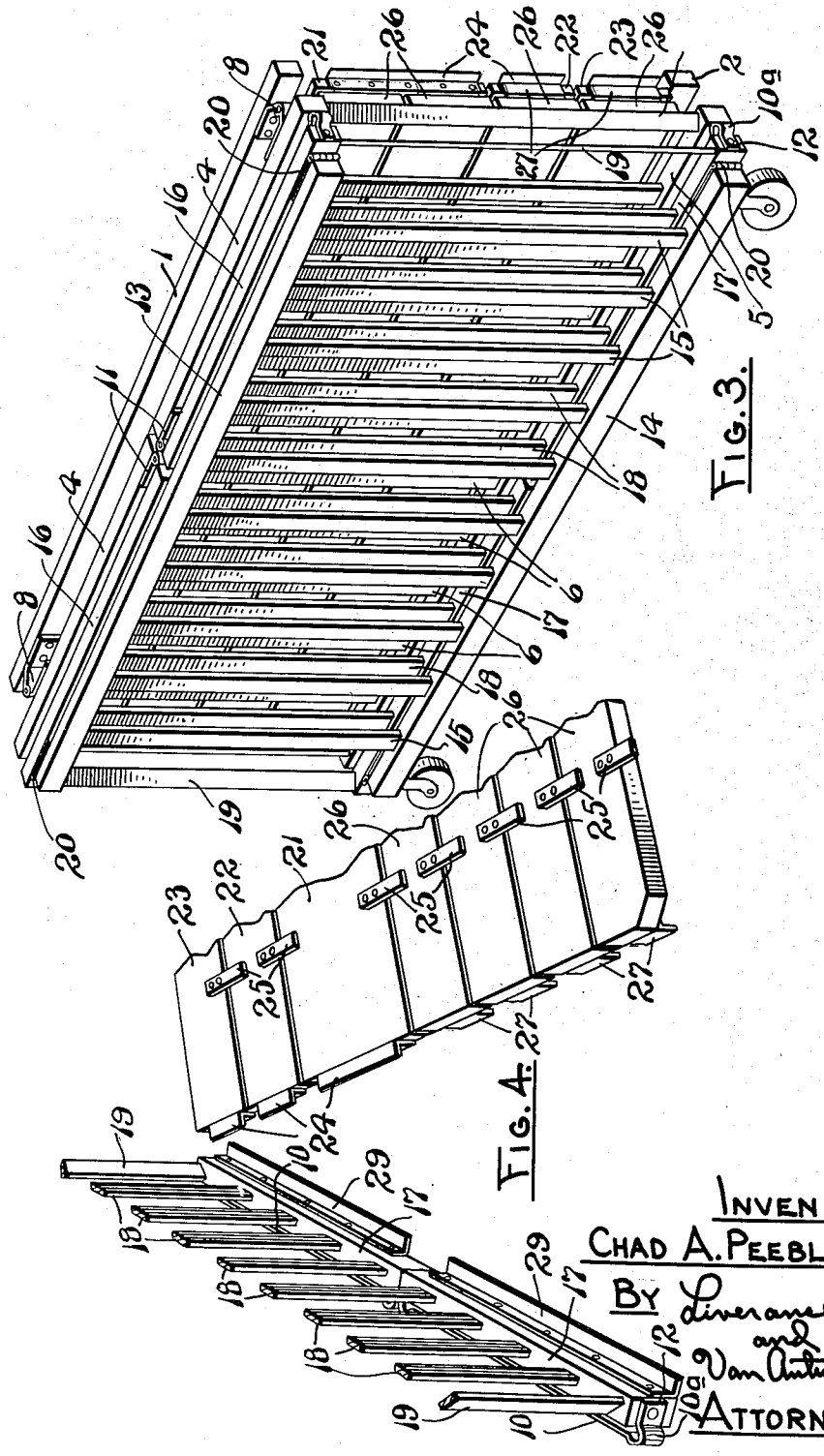


FIG. 3.

FIG. 4.

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PLAY PEN CONVERTIBLE TO A BED

Filed April 24, 1946 5 Sheets-Sheet 4

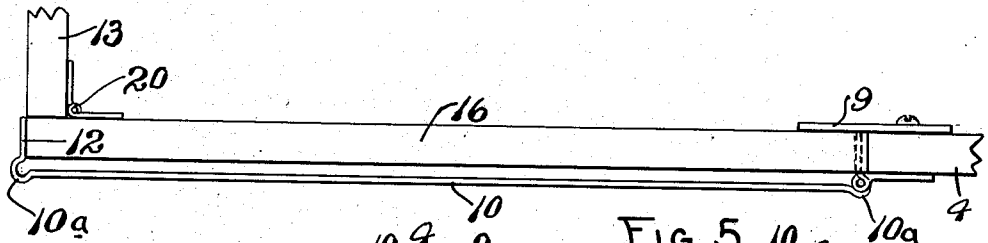


FIG. 5.

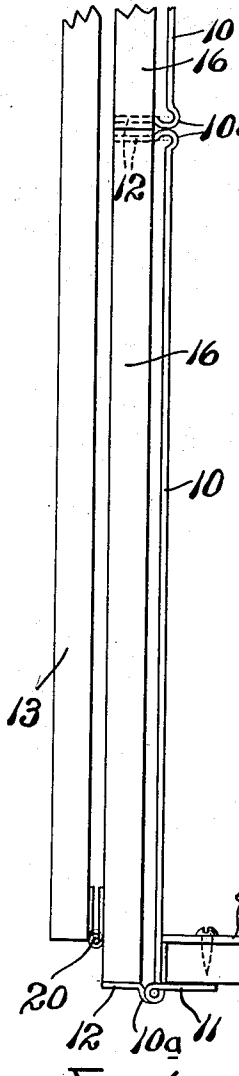


FIG. 6.

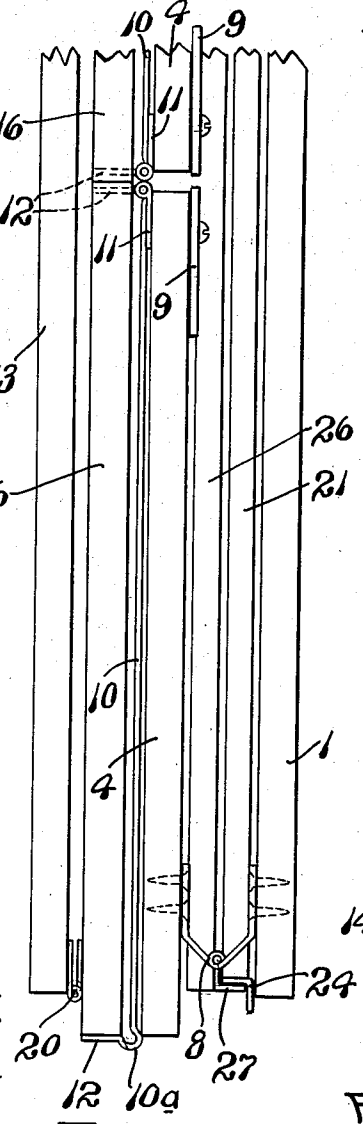


FIG. 7.

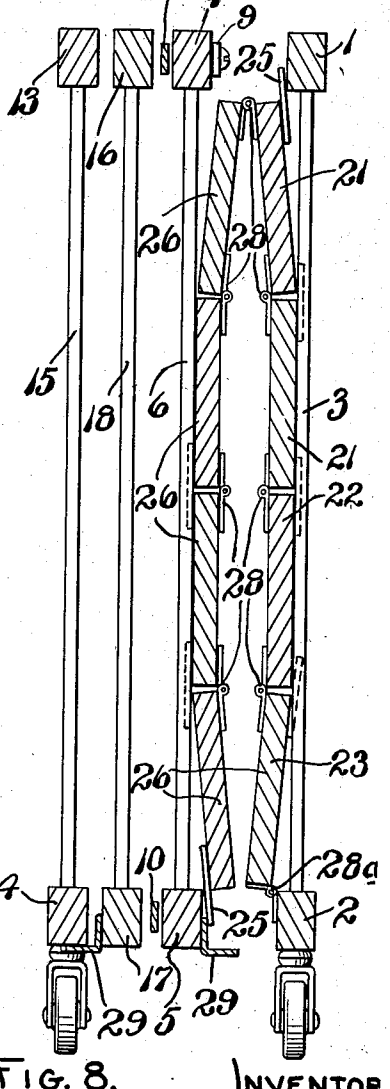


FIG. 8.

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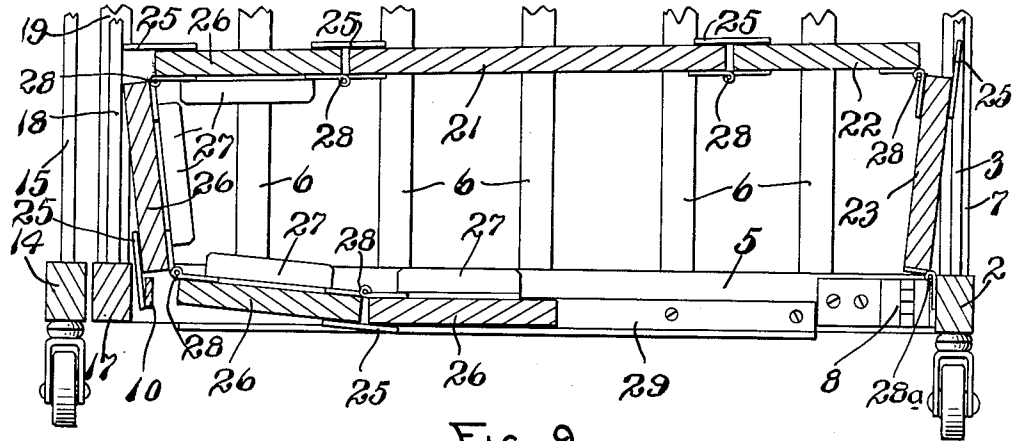


FIG. 9.

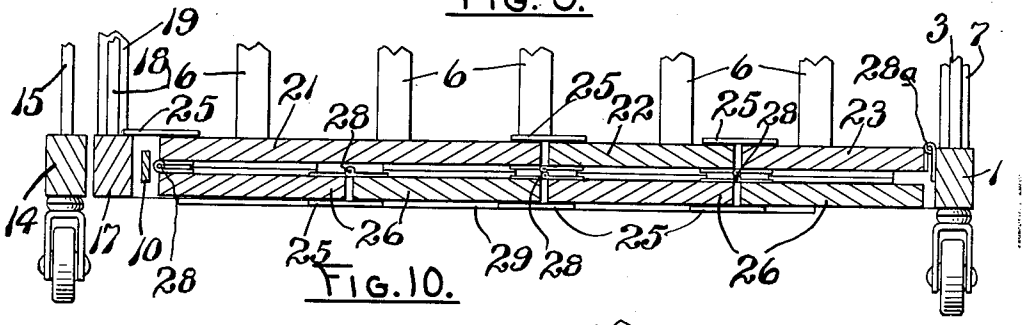


FIG. 10.

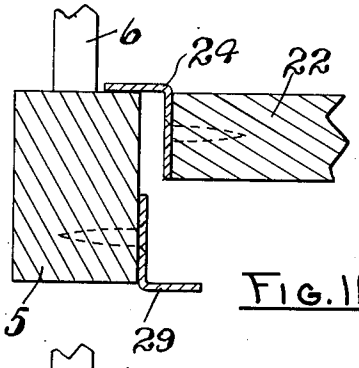


FIG. 11.

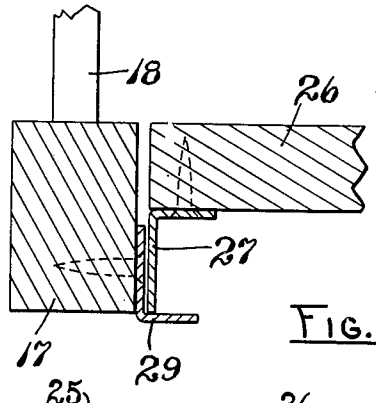


FIG. 12.

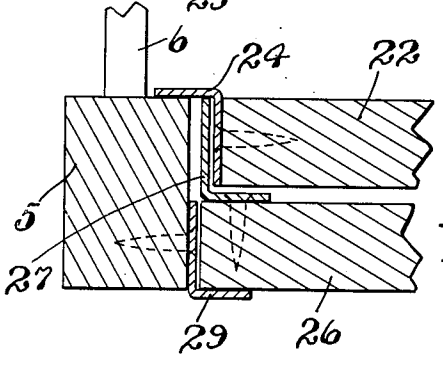


FIG. 13.

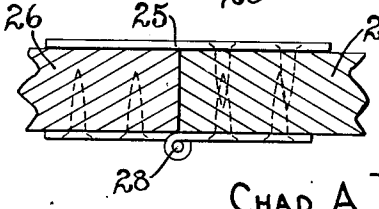


FIG. 14.

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Patented Feb. 19, 1952

2,586,251

UNITED STATES PATENT OFFICE

2,586,251

PLAY PEN CONVERTIBLE TO A BED

Chad A. Peebles, Newaygo, Mich.

Application April 24, 1946, Serial No. 664,622

9 Claims. (Cl. 5—99)

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This invention relates to a combination play pen and crib or bed, being directed to a very novel, practical and effective structure which may be readily set up as a play pen for a child, converted into a bed or crib and with support for the mattress and bed covers at different heights as desired, and which when not in use or when it is to be carried or transported, may be collapsed into a relatively small size.

It is an object and purpose of the present invention to provide a structure of the type indicated which is readily made and assembled and can be produced economically, which is sturdy and dependable in service, and in which all of the parts are securely connected together, there being no separate parts in the structure which might make them liable to loss or mislaying.

An understanding of the invention may be had from the following description, taken in connection with the accompanying drawings:

Fig. 1 is a perspective view showing the structure as a play pen.

Fig. 2 is a similar perspective view illustrating the structure converted into a bed or crib.

Fig. 3 shows it in its completely collapsed form.

Fig. 4 is a fragmentary perspective showing the manner in which the floor of the play pen is supported.

Fig. 5 is a fragmentary somewhat enlarged plan, at one side and at an end of the play pen structure.

Fig. 6 is a fragmentary plan at a side of the structure when converted into a bed or crib.

Fig. 7 is a fragmentary plan view of the structure in its collapsed position, showing one end portion thereof.

Fig. 8 is a transverse vertical section through the structure in its collapsed position.

Fig. 9 is a vertical section from side to side of the structure converted to a crib or bed, the mattress supporting portion being located at a lower position than in Fig. 2.

Fig. 10 is a similar view with the mattress support located at its lower-most position, or in the same position as the floor when used as a play pen, and,

Figs. 11, 12, 13, and 14 are fragmentary enlarged sections or details of structure showing the end supports of the members which make up the floor of the play pen or the mattress support in the bed or crib conversion.

Like reference characters refer to like parts in the different figures of the drawings.

In the preferred construction embodying my invention, one side of the play pen structure, as shown in Fig. 1, has an upper horizontal bar 1, a lower parallel horizontal bar 2 with intermediate vertical spaced bars or slats 3 permanently secured to and connecting the upper and lower bars in spaced relation.

At each end of said side of the play pen thus produced, sections to provide substantially one-

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half of sides lying at right angles thereto are made, each comprising an upper bar 4 and a lower bar 5, a plurality of spaced, vertical, bars 6 between them and corner bars 7 disposed at an angle to the vertical bars 6.

The bars 4 and 5 at their ends adjacent the ends of the bars 1 and 2 are hingedly connected by hinges 8 disposed diagonally across the corners as shown in Fig. 1 so that when the play pen is set up, as in Fig. 1, the ends of the bars 1 and 2 are covered by the adjacent end portions of bars 4 and 5. At what may be termed the inner ends of the bars 4, latches 9 are pivotally mounted of the form shown, the functions of which will later be described.

Flat metal strips or bars 10 are formed with outwardly pressed loops 10*a* near their ends and each terminates in inwardly extending fingers 12 at their ends, one of such bars 10 being connected to each of the upper and lower bars 4 and 5 described by means of pivot pins passing through brackets 11 permanently secured at the outer sides and at the inner ends of said bars 4 and 5. Said metallic bars 10 are adapted, as will hereinafter appear, to extend outwardly from the bars 16 and 17 as shown in Fig. 1, with the outer fingers 12 substantially flush with the outer sides of the upper and lower bars 13 and 14, which with spaced vertical bars 15, provide a side of the play pen structure parallel to and opposite the first described side consisting of the upper and lower bars 1 and 2 and the vertical spaced bars 3 between them. The pivot pins on the brackets 11 extend through the spaces between the bars 10 and 16 and 17 and form slidable pivotal connections for the ends of the bars 4 and 5.

At each end of the described bars 13 and 14 other bars 16 and 17 respectively with vertical spaced flat bars 18 and corner angle bars 19 between them are located and hingedly connected by hinges 20. The frame of the play pen is made up of the opposed sides having upper bars 1 and 13 respectively and lower bars 2 and 14 and other sides at right angles thereto, each of two sections, one having the upper bars 4 and lower bars 5 hinged adjacent the ends of bars 1 and 2; and the other sections consisting of upper and lower bars 16 and 17 hinged at adjacent ends to the opposite side of upper and lower bars 13 and 14.

The floor for the play pen (Figs. 1 and 4) is made of a plurality of flat boards. As best shown in Fig. 4, an intermeiate board 21 has lying outside of it two boards 22 and 23 of the same width, and each half of the width of the board 21. The combined widths of the boards 21, 22 and 23 equal substantially the length of the bars 5. At each end of each of the floor boards 21, 22 and 23, angle brackets 24 are permanently secured having outwardly extending legs or flanges which, as shown in Fig. 11, are

adapted to extend over and rest upon the upper sides of the lower bars 5. Each of said floor boards 21, 22 and 23 have brace members, shown as two spaced short bars 25 permanently secured adjacent its inner edge and extending beyond said edges so as to overlap and rest upon the adjacent boards. For example, as shown in Figs. 1 and 4, the members 25 connected to the outer floor board 23 extend partly over the next adjacent inner board 22 and, similarly, said members 25 connected to the floor boards 21 and 22 extend in the same direction.

The floor is completed by additional floor boards 26, four being shown, each of the same width as the boards 22 and 23; and the combined widths of boards 26 substantialy equals the combined widths of the boards 21, 22 and 23. Such boards 26 have like bars 25 secured at their upper sides so as to extend over the next succeeding boards. Each floor board 26 at each end and at its under side, has an angle bracket 27 permanently secured each with a downwardly extending leg or flange as shown.

The several boards at their adjacent edges are hinged at their under sides by hinges 28 (Figs. 8 and 9). It is of course to be understood that the double width of the floor board 21 is not an essential to the present invention, as it may be replaced by two boards having a combined width equal to the board 21, as shown in Fig. 8. At the inner sides of the lower bars 17 longitudinal angle bar supports 29 (Fig. 4) are permanently secured upon which the downwardly extending legs of the bracket supports 27 may rest as shown in Fig. 12.

The outermost board 23, as shown in Figs. 8 and 9, is hinged at its outer edge at 28*a* to the bar 2. Thus the floor at one edge is securely connected with the lower bar 2 of the side of the play pen, as shown in Fig. 1, and may be unfolded to lie horizontal with the various bars or fingers 25 on the several floor boards extending over and resting upon the upper sides of the next adjacent floor boards and with the outermost board 26, which reaches substantially to the bar 14, having its projecting finger members 25 resting upon the upper side of said bar 14. The flanges of the end supports 24 on the floor boards 21, 22 and 23 reach to and rest upon the upper sides of the bars 5, and the downwardly extending flanges or legs of the end brackets 27 on the floor boards 26 bear upon and are carried by the angle bars 29.

The structure shown in Fig. 1, that is, in its play pen form, may be converted into a bed or crib as in Fig. 2. The inner loops 10*a* on the bars 16 receive the pins of the brackets 11 when the structure is in the play pen form as in Fig. 1. With the latches 9 each turned to the position shown therein and releasably connected with pins at the inner sides of the bars 16, the play pen structure is held securely in place. When the structure is to be converted into the bed or crib form as in Fig. 2, the floor boards may be swung upwardly about the hinges 28*a*, and may be folded to occupy the position illustrated in Fig. 8. The latches 9 are then turned to disengage from their pins whereupon the inner ends of the bars 16 and 17 may be moved toward each other with the pins carried by the brackets 11 transversing the spaces between bars 16 and 10 and 17 and 10, until the upper bars 16 and lower bars 17 have their inner ends brought together substantially midway between the ends of the crib structure as shown in Fig. 2. Simultaneously, the side construction consisting of the upper and lower bars 13 and 14 and the vertical bars associated therewith moves to lie parallel to and overlap said bars 16 and 17, the loops 10*a* at the outer ends of the bars 16 and 17 receiving the pins carried by the brackets 11. The latches 9 are turned to abut adjacent bars 16 and provide stops which prevent disengagement of the pins from the loops 10*a*, thus insuring a fixed structure when connected to a crib. When reduced in size by such operation the floor boards may be located in various positions. For example in Fig. 10 the boards 21, 22 and 23 lie in the same plane as before, with the floor boards 26 located underneath and parallel thereto; and having been turned over they are supported at their ends by resting upon the angle bars 29 as in Fig. 13. Such crib floor as thus provided may have a mattress placed thereon and other bedding supplied in the usual manner.

In Fig. 9 the floor is located at a higher level by locating the hinged floor board 23 substantially vertical with the two boards 21 and 22 and the board 26 hinged to the board 21 extending horizontally across between their upper edges. The next adjacent floor board 26 is positioned vertically with the bars 25 thereto inserted between the metal bars 10 and the adjacent bars 17 with the remaining floor boards 26 located horizontally and supported by the angle bars 29 at their ends.

Again, as in Fig. 2, the floor board 23 hinged to the bar 2 and board 22 may be located vertically, the board 21 and two of the boards 26 extended horizontally, and the remaining floor boards 26 positioned vertically thereby locating the horizontal mattress supporting portion of the crib at a still higher level.

In Fig. 14 the edges of the floor boards are shown in abutting engagement providing a better support for the floor. The spacing of the floor boards at their edges, as in Fig. 10, for example, is not required, in fact the boards at their edges, preferably will be in contact engagement.

When the structure is to be collapsed for moving or transporting the floor boards are moved into a vertical position and folded as shown in Fig. 8, whereupon the sections consisting of the upper bars 4, lower bars 5 and the vertical bar 6 between them may be moved inwardly toward each other through the hinges 8, the pins of the brackets 11 moving in the guides supplied by the bars 16 and 17 and connected metal bars 10, the structure collapsing to the relatively small space shown in Fig. 3, and making it easy to carry or to crate or pack for shipment.

The novel structure described is very practical, may be economically produced, is made of parts securely connected together so that no separation with mislaying or loss occurs, is quickly collapsed to small space occupying condition for carrying or transport, and can be very easily converted to any of the uses which it is designed to serve.

The claims appended hereto define the invention, which is to be considered comprehensive of forms of structure coming within their scope.

I claim:

1. In a structure as described, a vertical unitary side, two partial side sections hingedly connected one at each end of said vertical side and adapted to be extended at right angles thereto, two additional partial side sections, horizontal guide means extending substantially the entire

length of said first partial sections, pivotal connecting means at an end of said additional partial sections said pivotal connecting means being traversably mounted in said horizontal guide means, whereby said two first mentioned partial side sections may be alined with the additional side sections or extended inwardly toward each other at right angles thereto, and an additional vertical unitary side paralleling the first mentioned side hingedly connected at its ends to said second partial side sections, and movable therewith, whereby an enclosure having four vertical sides may be provided having the first and last mentioned vertical unitary sides spaced from each other a distance equal substantially to the combined lengths of a first and second mentioned partial side sections, or said enclosure reduced in size so that said first and last mentioned unitary sides thereof are spaced a distance equal substantially to the length of the first of said partial side sections, plus the thickness of said second mentioned partial side sections.

2. A construction as defined in claim 1, and a horizontal floor for said enclosures comprising a plurality of floor boards located side by side and hingedly connected at their longitudinal edges, and means for supporting said floor boards at their ends and at the side edges of the outermost of said boards by the sides of said enclosure.

3. A construction as defined in claim 1 and a floor for said enclosures including, a plurality of elongated floor boards hingedly connected at adjacent edges and adapted to be located horizontally in the same plane, one of the outermost of said floor boards having a hinged connection at its outer edge to the lower portion of a unitary side of said enclosure, and means carried by the other of said outermost floor boards to rest upon and be carried by the lower portion of opposite unitary side when said floor boards are located in the same horizontal plane.

4. A construction as defined in claim 1, and a plurality of floor boards of a length to extend between opposed sides of the enclosure and of a combined width to extend between the remaining sides of the enclosure with longitudinal edges closely adjacent, hinges at the under sides of the floor boards for hingedly connecting adjacent floor boards together, a plurality of spaced bar members secured at the upper side of the outermost floor board to extend over the next adjacent floor board, and like bar members connected to all of the floor boards extending in the same direction over the upper sides of the next adjacent floor boards, except the other outermost floor board, which has said bars extending over a lower portion of the side of the enclosure opposite that to which the first mentioned outermost floor board is hingedly connected.

5. A convertible play pen structure comprising, four vertical sides located at right angles to each other, two of said sides opposed to each other being unitary and each being equal in length substantially to the full width of the play pen between the other sides thereof, each of said vertical sides of the play pen at each corner thereof having hinged connections to the adjacent sides of the pen, each of said remaining sides of the pen comprising two sections adapted to be moved into longitudinal alinement to complete the play pen, a horizontal guide secured at the outer side of each of the upper and lower portions of the side sections which are hingedly connected to one of the unitary sides, pivotal

connecting means connected to the adjacent ends of the other of said side sections and each mounted in a respective horizontal guide, and releasable latching means for holding the upper and lower bars of said side sections in longitudinal alinement when they have been brought to such position.

6. A convertible play pen comprising four vertical sides located at right angles to each other, two of said sides being unitary and in length equal substantially to the full width of the play pen between the other sides thereof, each of said vertical sides of the play pen, at each corner thereof, having hinged connections to the adjacent sides of the pen, two of said sides of the pen comprising two sections each adapted to be moved into longitudinal alinement to complete the play pen, a horizontal guide member secured at the outer faces and adjacent the upper and lower edges of two of the four sections which are hingedly connected to the unitary sides, and secured in parallelism and in spaced relation thereto, pivotal connecting means attached to adjacent ends of the other of said sections and traversably mounted in said horizontal guide members, and releasable latching means for holding said side sections in longitudinal alinement when they are brought to said positions.

7. A convertible play pen comprising four vertical sides located at right angles to each other, each of the adjacent sides at the respective four corners of the pen being hinged together, two of the opposite sides being full unitary sides, and the other two sides each comprising two sections hinged together, each hinge having two members, one of the members of each hinge being fixed to one of said sections adjacent a vertical edge thereof, and the other member of each hinge being mounted on the other of said sections for movement to positions adjacent either vertical edge of said other section.

8. The elements of claim 7 combined with a floor shaped to fit within said vertical sides and means for supporting said floor midway between the lower and upper edges thereof.

9. The elements of claim 8 combined with supporting means near the lower edges of said sides, said floor comprising a central portion with parts hinged to opposite edges thereof, said hinged parts extending downwardly and engaging said supporting means and acting as said means for supporting the floor in said midway position.

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