April 29, 1952 K. H. OPIE 2,594,677

PORTABLE BABY CRIB

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Fig. 1

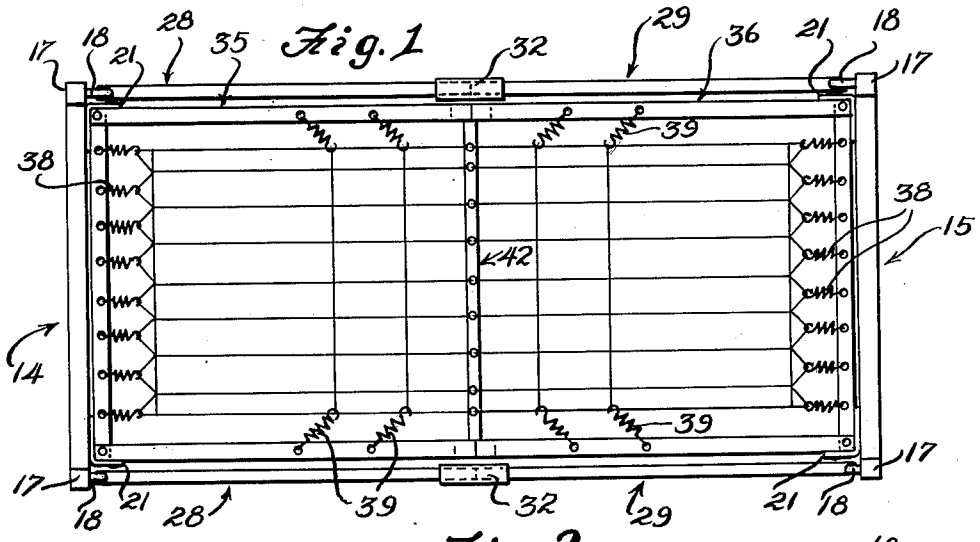
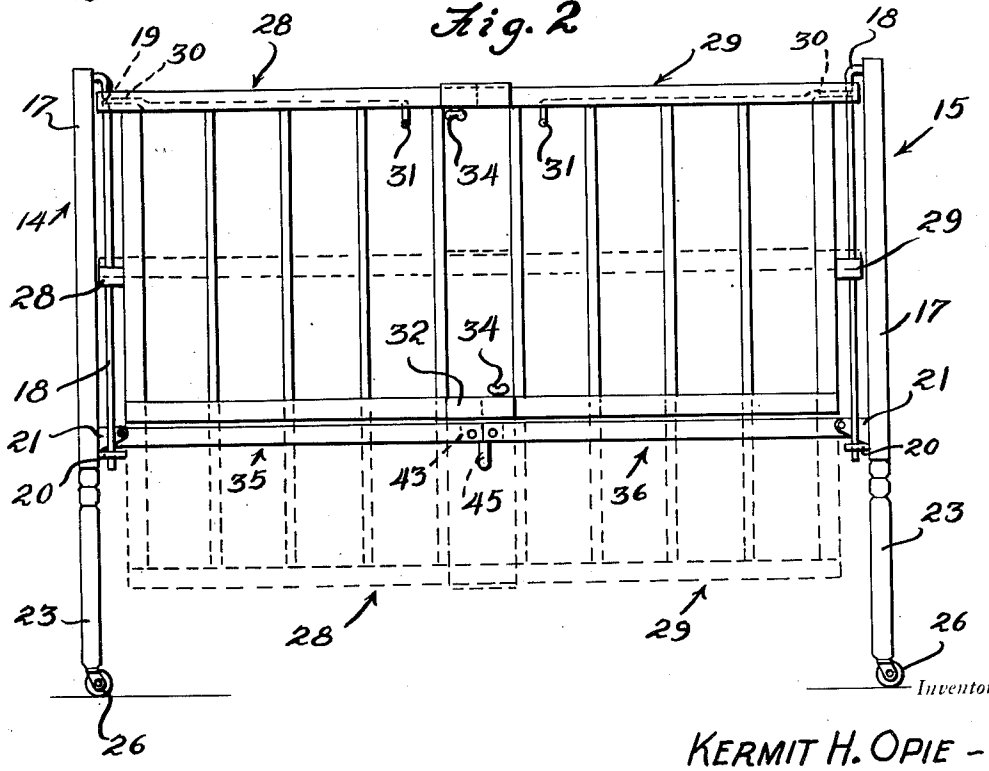


Fig. 2



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Fig. 3

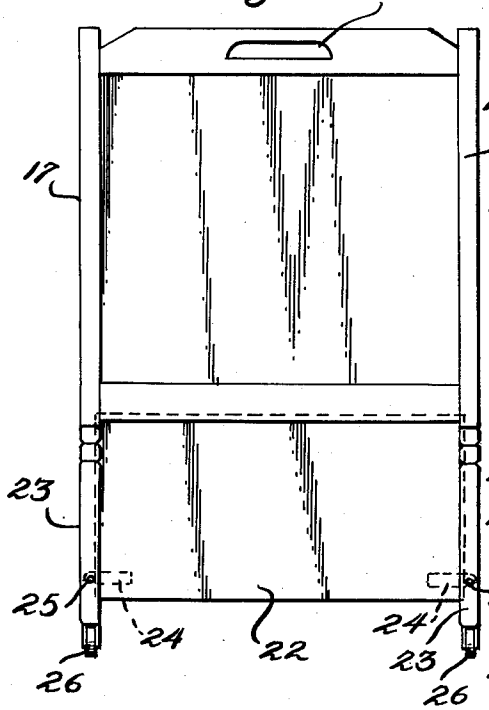


Fig. 4

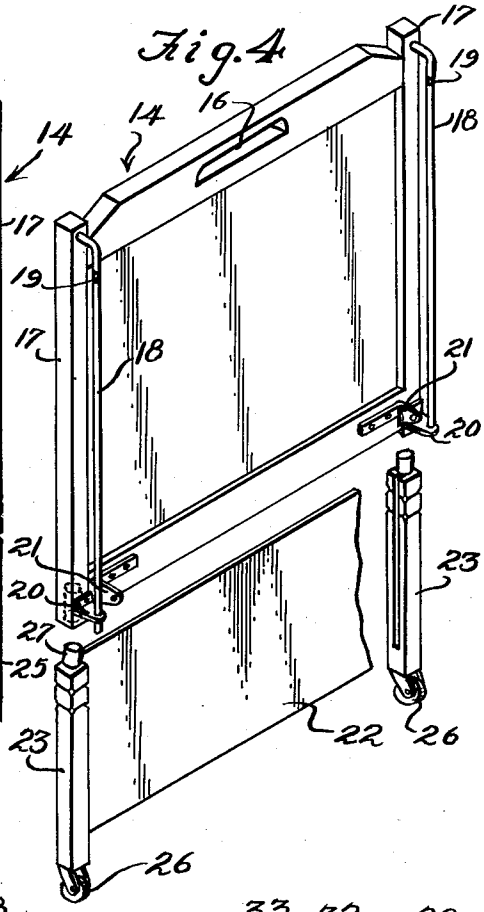
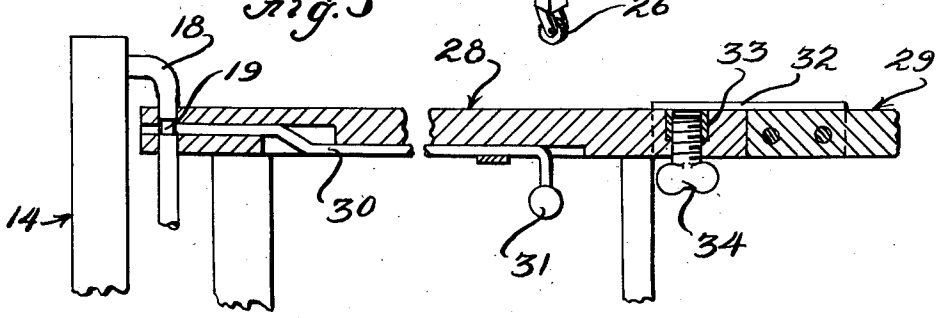


Fig. 5



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Fig. 6

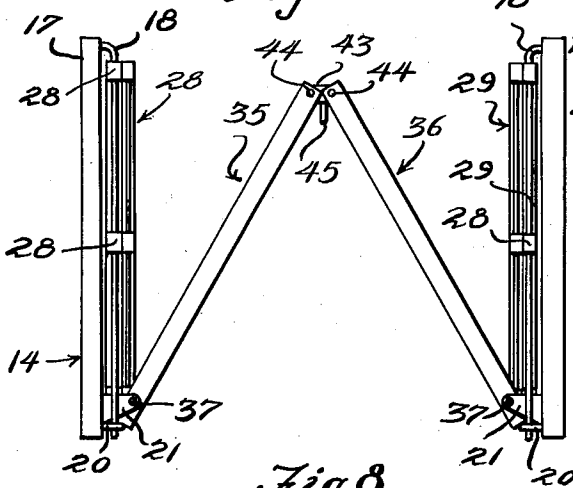


Fig. 7

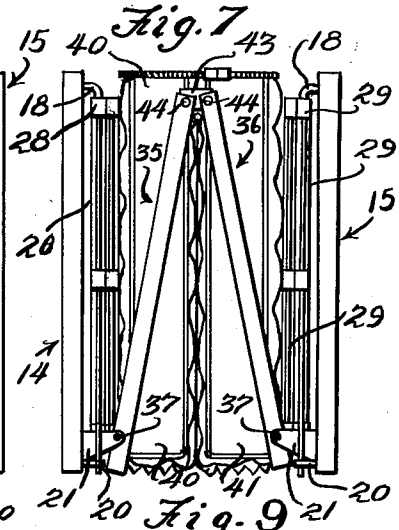


Fig. 8

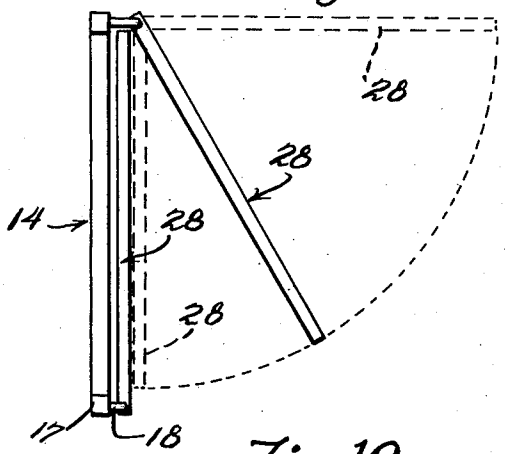


Fig. 9

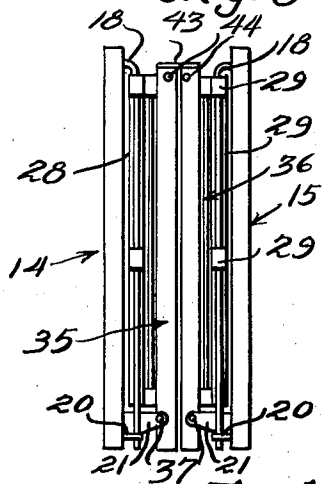


Fig. 10

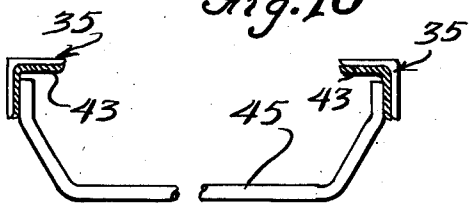
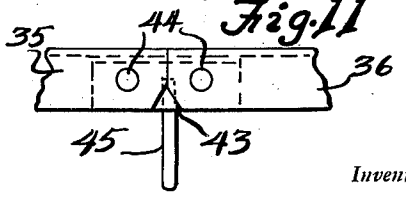


Fig. 11



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PORTABLE BABY CRIB

Kermit H. Opie, Paris, Mo.

Application June 28, 1946, Serial No. 680,298

2 Claims. (Cl. 5—99)

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The present invention relates to a portable baby crib or an equivalent bed construction and has reference in particular to a structure in which the component parts are especially designed and coordinated for folding, whereby to thus provide a crib which may be readily set up for use and just as readily knocked down and folded into compact and convenient form for transportation, if and when needed.

In carrying out the principles of the invention, I have evolved and produced a simple and economical structure possessed of facilities and advantages found in regulation and standard type cribs and which has the added advantages of portability and expediency attending the knock-down, folding, and subsequent erecting steps.

Another object of the invention resides in the provision of a foldable crib in which the longitudinal occupant confining sides or walls are liftable and lowerable and are of sectional construction, adjacent ends of the respective wall sections being connectible with each other when the crib is set up for use and foldable against the head and foot sections when compactly folded for convenient handling and transportation and storage requirements.

Novelty is also predicated upon the aforementioned sectional drop sides or walls for action in conjunction with a mattress supporting spring, the latter embodying sections hinged to the head and foot and hingedly connected together to allow for expeditious and compact folding.

A further and advantageous phase of the invention has to do with the adoption and use of a sectional mattress, the sections of the mattress being connected together by a slide fastener of the zipper type, this so that the mattress sections may be brought close together and lodged between the head and foot and in intimate relation with the other folded parts between said head and foot.

Other and more specific features and advantages of the invention will become more readily apparent from the following description and accompanying illustrative drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is a top plan view of the crib or bed set up for use, the mattress being omitted for clearness of illustration of the other parts.

Figure 2 is a side elevational view of the structure seen in Figure 1, this view showing one of the drop-sides lowered, in dotted lines, to a "down" position.

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Figure 3 is an exterior end view of the crib with the detachable base board or panel attached.

Figure 4 is a perspective view which serves to illustrate the interior side of either head or foot, this to bring out the construction of the detachable base board.

Figure 5 is an enlarged fragmentary sectional view showing details embodied in the sectional hingedly mounted liftable and lowerable side walls.

Figure 6 is an edge elevational view showing the structure in partially folded form.

Figure 7 is a view showing the structure completely folded with the sections of the mattress embodied.

Figure 8 is a top plan view of one end of the structure showing the manner in which the adjacent sections of the vertical side walls are folded into compact form.

Figure 9 is a view like Figure 7 with the mattress sections removed and with the rest of the structure folded into tightly compacted form.

Figure 10 is a slightly enlarged view taken transversely through the central portion of the so-called spring with the spring means removed, this view being what is seen by observing Figure 11 from either left to right or right to left, and

Figure 11 is an enlarged fragmentary view of the central portion of the spring.

By way of introduction to the detailed description, it is to be pointed out that the "head" and "foot" of the bed or crib are the same in construction insofar as the makeup of each is concerned. However, for purposes of differentiation the head is denoted by the numeral 14 (Figs. 1 and 2) and the foot by the numeral 15. Reference being had to the details of construction in Figures 3 and 4, it will be noted that each part has its upper rail provided with a hand-hole 16 which, incidentally, is usable to accommodate a rope or the like (not shown) which may be used in tying the head and foot together when the structure is folded as seen in Figures 7 and 9. The vertical members 17 are provided with L-shaped rods 18, the upper portions having keeper notches 19 which serve a purpose to be hereinafter described. The lower ends are suitably stabilized and mounted in assembling fixtures 20 secured to the lower ends of said members 17. I also direct attention to L-shaped brackets 21 which serve in a manner to be hereinafter described. The detachable skirt or base section comprises a base board or panel 22 having its ends mounted in grooves formed in the posts 23 and held detachably in place by

assembling hooks 24 engageable with fixed retaining pins 25 (see Fig. 3). The lower ends of the posts are provided with casters 26 while the upper ends are provided with dowels 27 which fit removably into sockets provided in the lower ends of the members 17, as is obvious. It is understood that the crib, as a unit, is usable with and without the leg equipped base board. That is to say, the latter board or panel 22 is applied or removed according to needs and requirements.

Each confining wall or drop-side is the same in construction and the description of one will suffice for both. It follows, therefore, that each side wall is made up of openwork companion sections 28 and 29. These sections are respectively mounted to hinge and slide on the aforementioned rods 18. They are also provided with latch pins 30 (see Fig. 5) engageable in endless annular grooves functioning as appropriate keeper seats 19. The latches are provided with knob equipped finger-grips 31 to facilitate projection and retraction, as is obvious. When projected as seen in Figure 5, the sides are held up in the full line position shown in Figure 2. By releasing the latches the side may be dropped down to the dotted line position here shown. It will be noted too that the endless form of the keeper seat or channels allows the sections to fold inwardly and into overlapping relation while the latches are still engaged. Further, the sections 29 are provided with suitable coupling clips 32 and each clip is in turn, provided with a screw-threaded socket 33 which fits into a bore provided therefor in the co-acting rail of the section 28. A thumb-screw 34 is threaded into place through the bore and into the socket 33, this in a manner to separably adjoin the rail portions of the respective sections 28 and 29. By removing the thumb-screws (it being necessary to use four for stability), the sections are then free to swing and may be folded against the head and foot sections as brought in the drawings, particularly Figures 6 to 9 inclusive. Taking up now the crib bottom, this may be generally referred to as the mattress "spring." It comprises complemental sections 35 and 36 hingedly mounted at their outer ends, as at 37, in the supporting and assembling brackets 21. The frames of the respective sections are of angle-iron construction as shown in Figure 10 and the longitudinal and transverse wires are connected to the end members of the frames by customary coiled springs 38 as shown in Figure 1. The longitudinal side wires are anchored by diagonal or slanting coiled springs, these being employed to allow sufficient freedom and play to accommodate the sections 40 and 41 of the sectional mattress. The spring equipped wires are hingedly linked together for proper folding, this in any suitable manner as generally denoted by the numeral 42 in Figure 1. The adjacent ends of the angle-irons of the respective sections 35 and 36 are hingedly connected to L-brackets 43, the pivots being denoted at 44. The brackets 43 on the respective sides of the spring are connected by the reinforcing rod or truss 45, as shown in Figures 10 and 11. Thus, the frame parts of the spring are hinged to the head and foot of the bed and hingedly connected together and the spring means is such as to accommodate the hinging and folding steps.

As before stated, the mattress is made up of the complemental sections or halves 40 and 41 and these are interconnected by a slide fastener means of the "zipper" type. This allows the mattress sections to be folded in with the rest of the structure as shown in Figure 7. The flexibility of the coiled springs 29 permits proper distortion of the spring anchored wires to allow the mattress sections to be compactly lodged in place in the respective positions illustrated in Figure 7.

The preceding detailed description referring to parts by distinguishing reference numerals seems to comprehensively cover the features and parts in an orderly manner. The drawings show the crib set up for use and also knocked down and folded for transportation. In addition, the drawings in Figures 3 and 4, bring out the fact that the base panels 22 and their associated caster equipped legs 23 may be detached to decrease the dimensions of the crib so that it may be carried on the rear seat of an automobile in set-up form. It is obvious that the crib or bed herein shown and described constitutes a structure possessed of requisite parts and refinements susceptible of fulfilling my aims and in particular, the principal object of the invention which is to provide a compact and convenient knock-down and foldable crib for expedient handling and transportation.

A careful consideration of the foregoing description in conjunction with the invention as illustrated in the drawings will enable the reader to obtain a clear understanding and impression of the alleged features of merit and novelty sufficient to clarify the construction of the invention as hereinafter claimed.

Minor changes in shape, size, materials and rearrangement of parts may be resorted to in actual practice so long as no departure is made from the invention as claimed.

I claim as my invention:

1. In a portable folding crib of the class described, a head section, vertical rigidly mounted side wall attaching rods secured to and disposed in spaced parallelism with vertical end portions of said head section, the upper portions of said rods being provided with oppositely aligned endless grooves, said grooves functioning as constantly available keeper seats, a pair of duplicate vertical side wall sections, corresponding ends of said side wall sections being hingedly mounted on said rods, each side wall section being of a length corresponding to the width of said head section and said side wall sections being swingable inwardly against the head section and into compact overlapping relation, the upper hinged portions of said side wall sections being provided with manually operable projectible and retractible latch pins, said latch pins being frictionally and slidably mounted and corresponding ends thereof being releasably engaged in said keeper seats, said latch pins and keeper seats serving to permit the aforementioned folding of the side wall sections while the latch pins are still engaged in said seats and further permitting the side wall sections to be temporarily unlatched and dropped for vertical slidable movement on said rods.

2. In a bed construction of the class described, a folding mattress supporting spring structure of general rectangular form and made up of complemental frame sections, said frame sections being of general U-shaped form in plan and having spaced parallel arms, said frame sections being arranged with the free ends of the arms thereof in juxtaposition, clips located at the joints between the ends of the respective arms, said arms being pivotally connected to said clips, a trans-

verse truss member connected at its opposite ends with and reinforcing said clips and end portions of the arms of said frame sections, sets of rigidly interconnected longitudinal and transverse wires, said sets of wires being confined within the limits of the respective frame sections, marginally arranged side and end coiled springs connecting adjacent wires of the sets to the coacting members of said frame sections, the side springs being diagonal to said longitudinal wires and said coacting frame members adjacent inner ends of the longitudinal wires of said respective sets of wires being hingedly linked together, whereby to permit said frame sections to fold into compact relationship, the folding steps being permitted by the hinging clips, hingedly connected respective sets of wires, and yieldable coiled springs between the sets of wires and frame sections.

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