Jan. 3, 1950 A. PASCOO 2,493,083

COLLAPSIBLE BEDS, CRIBS, AND THE LIKE

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Fig. 1.

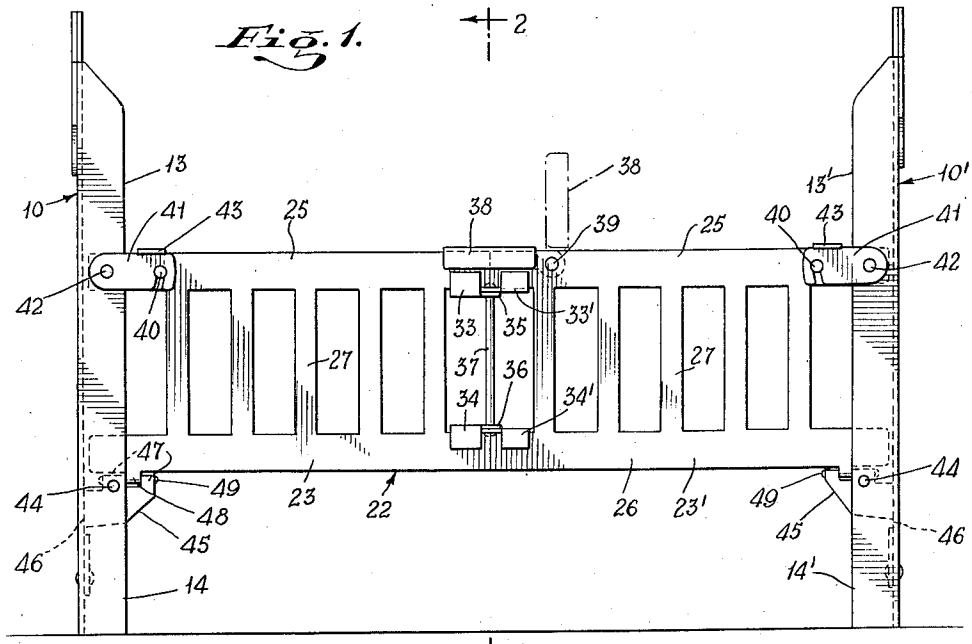


Fig. 2.

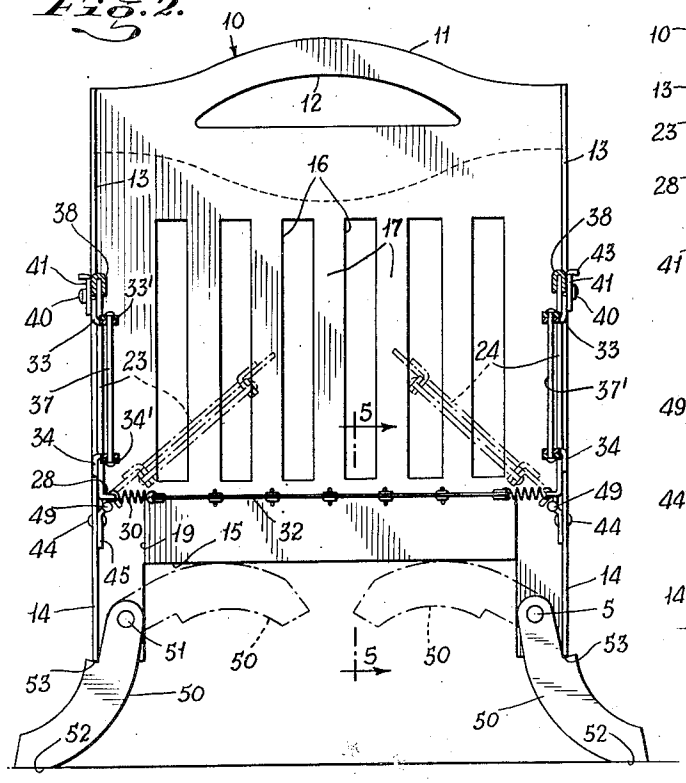
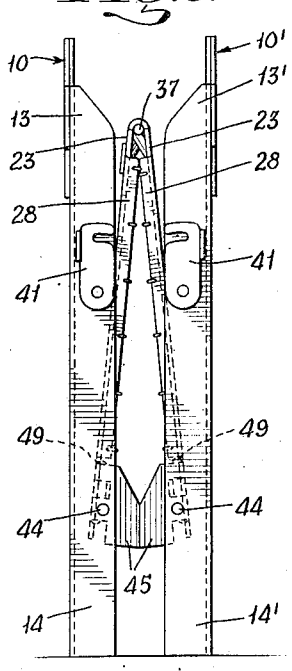


Fig. 3.



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Fig. 4.

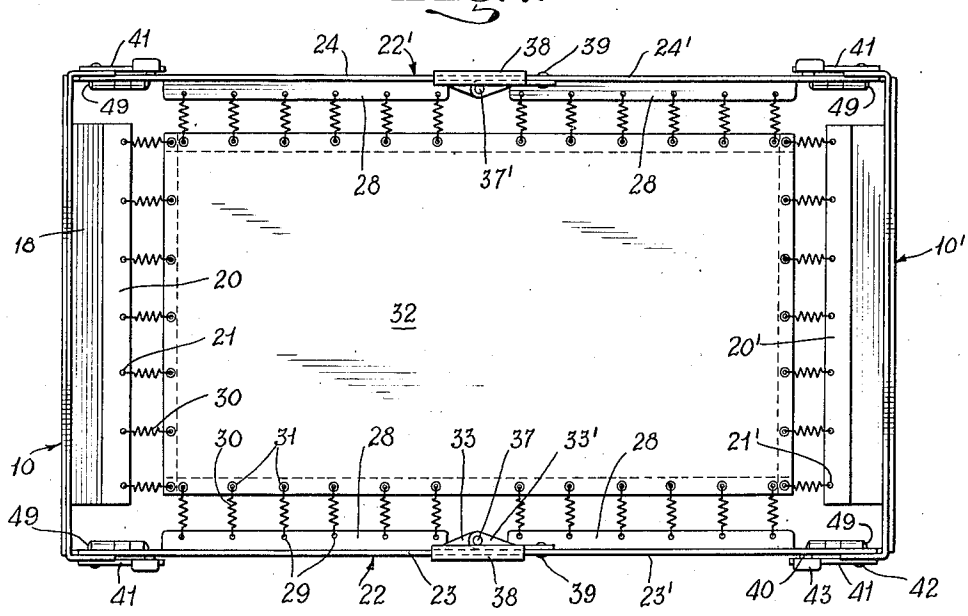


Fig. 5.

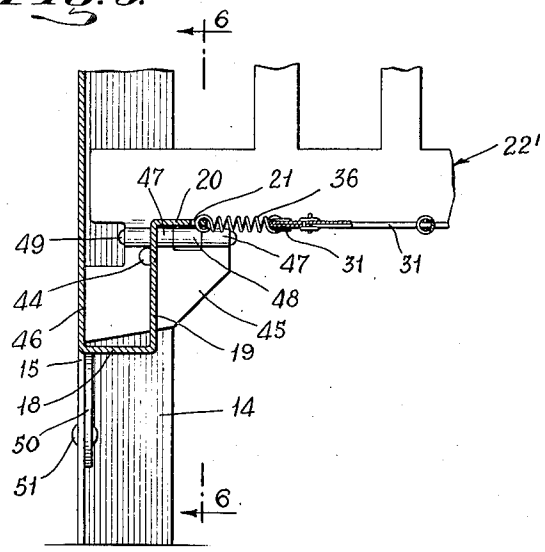
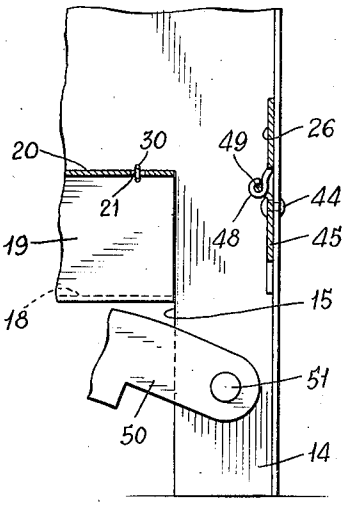


Fig. 6.



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Patented Jan. 3, 1950 2,493,083

UNITED STATES PATENT OFFICE

2,493,083

COLLAPSIBLE BED, CRIB, AND THE LIKE

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Application March 15, 1947, Serial No. 734,919

14 Claims. (Cl. 5—99)

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This invention relates to beds, cribs and similar articles of furniture, wherein the several parts are hingedly coupled so that the complete bed may be moved into a compact collapsed position of an area defined substantially by the peripheral contour of the head and foot portions of the bed and the collapsed parts disposed therebetween. More particularly, my invention deals with an article of furniture of the character described employing side rail or wall portions, each of which is foldable centrally of the head, both of which are coupled with end portions of the bedstead or frame through double-action hinges facilitating swinging movement of said side rails or frames into two different collapsed positions, first, horizontally and, then, vertically.

The novel features of the invention will be best understood when taken together with the accompanying drawing, in which certain embodiments of the invention are disclosed and, in which, the separate parts are designated by suitable reference characters in each of the views and, in which:

Fig. 1 is a side view of a bed or crib made according to my invention and in set-up condition.

Fig. 2 is a section on the line 2—2 of Fig. 1, showing parts in different position and indicating parts in a partially collapsed position in dot and dash lines.

Fig. 3 is a view showing the bedstead in collapsed position.

Fig. 4 is a plan view of the construction, as seen in Fig. 1.

Fig. 5 is a partial section on the line 5—5 of Fig. 2 on an enlarged scale; and

Fig. 6 is a section substantially on the line 6—6 of Fig. 5.

According to my invention, it is the purpose of constructing, what can be generally given the classification of a bed, which in smaller sizes is more generally referred to as a crib, of a plurality of parts coupled together in a manner to completely collapse the bed with the head and foot boards or ends disposed one upon the other in close proximity to each other and with the remainder of the bed folded or collapsed within said ends. In accomplishing this result, I provide side rails or wall members on the bedstead which are adapted to first fold flatly upon the top of the spring or other horizontal sustaining member of the bed and then to fold centrally and swing upwardly upon inner surfaces of the bed ends or head and footboards so as to produce a comparatively narrow package of a boundary

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size defined by the contour of said foot and head boards or ends.

In the accompanying drawing, 10, 10' represent head and foot end members or boards of the bedstead, both of which are of the same general size and construction in the accompanying illustration. A face view of one of these members, the member 10, is shown in Fig. 2 of the drawing and it comprises an upwardly curved edge portion 11, below which is a large crescent aperture 12. The members 10, 10' have inturned side walls or flanges, as at 13, 13' forming angle-iron legs 14, 14' at the lower ends of said members and, by reason of cutouts, one of which is shown at 15 in Fig. 2 of the drawing. For sake of lightness, the body portion of each member may be cutout by a series of vertically arranged apertures, as seen at 16 in Fig. 2 of the drawing forming intermediate rails 17.

In forming the cutout 15, the material of said cutout is bent first inwardly, as seen at 18, in Fig. 5, then upwardly, as at 19, and again inwardly, as seen at 20, the latter flange end 20 having a series of longitudinally spaced apertures 21. The companion flange of the member 10' is indicated in Fig. 4 of the drawing at 20', the apertures being shown at 21'. As both walls and many other parts of applicant's structure are identical, the brief description of one part will suffice to be descriptive of the other associated part. In this manner, unnecessary repetitions will be omitted from the specification.

At each side of the bed are side rails or walls generally identified in Fig. 4 of the drawing by the reference characters 22, 22'. These walls are each composed of two common members or parts 23, 23'; 24, 24'. Each member comprises top and bottom horizontal rails 25, 26, joined by vertical rails 27. The bottom rails 26 have inturned flanges for the major portion of the length thereof and terminate short of the adjacent pivotal ends, as clearly seen in Fig. 4 of the drawing, in which the flanges are identified by the reference 28 on all of the side wall parts 23, 23'; 24, 24'. These flanges are apertured, as seen at 29, and are arranged in alinement with the flanges 20, 20'. Mounted in the apertures 21, 21' and 29 are coil springs 30, which are also coupled with eyelets 31, at peripheral edges of a canvas or other bottom wall portion 32. The wall portion 32 may be regarded as a yieldable, horizontal support for a mattress or bedding of any type or kind. It will also be understood that, in some instances, a box or other spring may be supported

on cleats or other supports arranged upon the flanges 28, as in other bedstead constructions.

Considering Fig. 1 of the drawing, it will be seen that the hinge brackets 33, 33'; 34, 34' are secured to adjacent end portions of the rails 25, 25' and 26, 26', the brackets having overlapped portions, as at 35, 36, through which a long hinge pin 37 is passed. This construction again is common at both sides of the bedstead and, for identification purposes, the reference character 37' is applied to the other hinge pins, as appearing at the top of Fig. 4 of the drawing. The adjacent ends of the rails 25 and 26 abut and the rails 25 are secured or locked against hinge or swinging movement by U-shaped retaining clips 38, pivoted, as seen at 39. The clips 38 overlap the rails 25 sufficiently to maintain said rails in common alinement, as will be apparent.

The end portions of the rails 25 have, inwardly of the flanges 13, 13', outwardly projecting headed pins 40 adapted to be engaged by latch levers 41, pivoted to the flanges 13, 13', as seen at 42. The levers 41 have outwardly extending finger-pieces 43 to facilitate operation thereof. The levers 41 serve to maintain the rails or side walls 22, 22' in raised position, as well as to couple upper portions of the bed ends 10, 10'.

Pivoted to the lower portions of the flanges 13, 13', below the rails 26, as seen at 44', are hinge and stop plates 45, the edges 46 of which are adapted to engage the inner surfaces of the end walls 10, 10' in maintaining horizontal position of the rails 26. The hinge plates 45 have coiled bearing portions 47, between which is a coiled bearing portion 48 on the ends of the rails 26 and these bearing portions are hingedly coupled by a pin 49, as seen clearly in Figs. 5 and 6 of the drawing. The pins 49 control swinging movement of the side rails or walls 22, 22' from the vertical or extended position to the horizontal or collapsed position upon the top of the support 32. The pins 44 form the hinge axis, upon which the separate parts 23, 23'; 24, 24' of the side rails can swing upwardly in collapse of the bedstead, in which operation the clips 38 have been first moved into the inoperative position shown in dotted lines in Fig. 1 to allow the said parts to swing on the hinge pin 37, 37'. The collapsed position of the several parts is diagrammatically shown in Fig. 3 of the drawing.

It will be apparent that the support or sheet 32, or at least the central portion thereof will have to be flexible to bend or fold in collapsing the parts 23, 23' one upon the other on the hinges 37, 37'; if composed of canvas, this sheet or support 32 will readily fold, as will be apparent. From a consideration of Fig. 3 of the drawing, it will also appear that thin materials or facings can also be folded within the collapsed bedstead by lying over the V-shaped contour of the parts 23, 23' and their companion parts 24, 24', as will be clearly apparent.

Pivotally supported on each of the leg members 14, and preferably upon inner surfaces of the end parts of the legs, are supplemental curved leg members 50, each of which is of the same construction and, therefore, one reference will again be applied to all. The pivot of the supplemental leg members is shown at 51. The leg members are sufficiently curved to extend outwardly beyond the side wall limits of the bedstead and fashioned to form relatively flat surfaces 52 to engage a floor or other support. The

supplemental leg members also are notched, as seen at 53, to engage the lower ends of the legs 14 in checking outward swinging movement and also in taking up the load through the main legs 14.

Particularly dealing with articles of furniture of the kind under consideration, as small cribs or infants' or children's bedsteads, it is often inconvenient for people to travel with children in order to acquire proper bed facilities for small children or infants. An assemblage of the type and kind under consideration can be economically constructed and compactly packed for transportation in a car or shipped by mail, or expressed to be on hand for use in such places where furnishings of this type and kind are not available. Such uses are desirable when people with young children desire to visit another family, who may not be equipped with the required bed or crib or may not have an extra bed or crib available for such use.

It will also be understood that hotels and lodging places can conveniently pack and store in storerooms a number of beds of this type and kind for use by the children of patrons.

In the smaller types of beds or cribs, the side rails or walls will be constructed sufficiently high to retain the occupant against displacement from the bed, whereas in larger beds, these rails or side wall members will be relatively low, as in other beds of conventional construction. In connection with the larger beds, a collapsible bedstead of this type and kind will lend itself for use in homes having a minimum amount of space. In this connection, it will be understood that the bed may be collapsed in a partially collapsed state, rather than the fully collapsed state, particularly when it is desirable to maintain bedding in association with the partially collapsed bedstead.

It will be apparent that my improved bed is of simple construction from the standpoint that it comprises two similar head and foot members and four substantially similar side rail or wall parts and the mattress supporting element or parts. These parts are maintained in unit assemblage for extension into set-up condition and for compact collapsing within limits defined substantially by the head and foot members when arranged in close proximity to each other.

Having fully described my invention what I claim as new and desire to secure by Letters Patent is:

1. A collapsible bed of the character described comprising two similar head and foot members, side rails, means horizontally hingedly coupling the lower end portions of the side rails with lower side portions of said members, each side rail comprising a pair of rail parts vertically hingedly coupled centrally thereof, means maintaining the separate parts of each side rail in alinement with each other, means detachably coupling upper end portions of the side rails with said members when said rails are in raised position, a mattress supporting element coupled with lower portions of said rails and said members, and said first named means including pivot means for swinging the rail parts to a vertical position whereby said rail parts and said mattress supporting element lie between the head and foot members.

2. A collapsible bed of the character described comprising two similar head and foot members, side rails, means horizontally hingedly coupling the lower end portions of the side rails with lower side portions of said members, each side rail com-

prising a pair of rail parts vertically hingedly coupled centrally thereof, means maintaining the separate parts of each side rail in alinement with each other, means detachably coupling upper end portions of the side rails with said members when said rails are in raised position, a mattress supporting element coupled with lower portions of said rails and said members, said first named means including pivot means for swinging the rail parts to a vertical position whereby said rail parts and said mattress supporting element lie between the head and foot members, and said element being foldable centrally in alinement with the hinge connection of the parts of said rails when the bed is collapsed.

3. A collapsible bed of the character described comprising two similar head and foot members, side rails, means horizontally hingedly coupling the lower end portions of the side rails with lower side portions of said members, each side rail comprising a pair of rail parts vertically hingedly coupled centrally thereof, means maintaining the separate parts of each side rail in alinement with each other, means detachably coupling upper end portions of the side rails with said members when said rails are in raised position, a mattress supporting element coupled with lower portions of said rails and said members, said first named means including pivot means for swinging the rail parts to a vertical position whereby said rail parts and said mattress supporting element lie between the head and foot members, said element being foldable centrally in alinement with the hinge connection of the parts of said rails when the bed is collapsed, and the coupling of the element with said rails and members comprising a plurality of coil springs.

4. A collapsible bed of the class described comprising end members, side members, means hingedly coupling the side members with the end members to collapse said side members horizontally between said end members, each side member being composed of two hingedly coupled parts, said first named means including means for collapsing the separate parts of the side members between the end members in movement of said end members into adjacent position, said parts swinging on the pivotal connection therebetween in said operation, and means on the end members and said side members providing a support for a mattress when the bed is in extended position.

5. A collapsible bed of the class described comprising end members, side members, means hingedly coupling the side members with the end members to collapse said side members horizontally between said end members, each side member being composed of two hingedly coupled parts, said first named means including means for collapsing the separate parts of the side members between the end members in movement of said end members into adjacent position, said parts swinging on the pivotal connection therebetween in said operation, means on the end members and said side members providing a support for a mattress when the bed is in extended position, and said last named means comprising inwardly extending flanges at lower portions of the separate parts of said side members.

6. A collapsible bed of the class described comprising end members, side members, means hingedly coupling the side members with the end members to collapse said side members horizontally between said end members, each side member being composed of two hingedly coupled parts,

said first named means including means for collapsing the separate parts of the side members between the end members in movement of said end members into adjacent position, said parts swinging on the pivotal connection therebetween in said operation, means on the end members and said side members providing a support for a mattress when the bed is in extended position, said last named means comprising inwardly extending flanges at lower portions of the separate parts of said side members, and inwardly extending flanges on said end members.

7. A collapsible bed of the class described comprising end members, side members, means hingedly coupling the side members with the end members to collapse said side members horizontally between said end members, each side member being composed of two hingedly coupled parts, said first named means including means for collapsing the separate parts of the side members between the end members in movement of said end members into adjacent position, said parts swinging on the pivotal connection therebetween in said operation, means on the end members and said side members providing a support for a mattress when the bed is in extended position, said last named means comprising inwardly extending flanges at lower portions of the separate parts of said side members, inwardly extending flanges on said end members, and means on the end members and upper ends of the parts of the side members for supporting the side members in raised position.

8. A collapsible bed of the class described comprising end members, side members, means hingedly coupling the side members with the end members to collapse said side members horizontally between said end members, each side member being composed of two hingedly coupled parts, said first named means including means for collapsing the separate parts of the side members between the end members in movement of said end members into adjacent position, said parts swinging on the pivotal connection therebetween in said operation, means on the end members and said side members providing a support for a mattress when the bed is in extended position, said last named means comprising inwardly extending flanges at lower portions of the separate parts of said side members, inwardly extending flanges on said end members, means on the end members and upper ends of the parts of the side members for supporting the side members in raised position, and a mattress supporting element coupled with the flanges of said end members and side members.

9. A collapsible bed of the class described comprising end members, side members, means hingedly coupling the side members with the end members to collapse said side members horizontally between said end members, each side member being composed of two hingedly coupled parts, said first named means including means for collapsing the separate parts of the side members between the end members in movement of said end members into adjacent position, said parts swinging on the pivotal connection therebetween in said operation, means on the end members and said side members providing a support for a mattress when the bed is in extended position, said last named means comprising inwardly extending flanges at lower portions of the separate parts of said side members, inwardly extending flanges on said end members, means on the end members and upper ends of the parts of the side

members for supporting the side members in raised position, a mattress supporting element coupled with the flanges of said end members and side members, and the coupling of said element with said flanges comprising coil springs.

10. A collapsible bedstead of the class described comprising head and foot members and side rails, each side rail comprising separate parts hingedly coupled centrally of the rails, and means comprising a pivoted hinge structure for movably coupling the side rails with said head and foot members, whereby the rails may be first collapsed horizontally within boundaries of said head and foot members and then collapsed vertically between said members with said members in juxtaposition to each other.

11. A collapsible bedstead of the class described comprising head and foot members and side rails, each side rail comprising separate parts hingedly coupled centrally of the rails, means comprising a pivoted hinge structure for movably coupling the side rails with said head and foot members, whereby the rails may be first collapsed horizontally within boundaries of said head and foot members and then collapsed vertically between said members with said members in juxta position to each other, and a mattress supporting element coupled with said rails and members and collapsible with said rails.

12. A collapsible bedstead of the class described comprising head and foot members and side rails, each side rail comprising separate parts hingedly coupled centrally of the rails, means comprising a pivoted hinge structure for movably coupling the side rails with said head and foot members, whereby the rails may be first collapsed horizontally within boundaries of said head and foot members and then collapsed vertically between said members with said members in juxta position to each other, a mattress supporting element coupled with said rails and members and collapsible with said rails, and means for supporting the separate parts of the rails in alined position one with the other when in raised operative position.

13. A collapsible bedstead of the class described comprising head and foot members and side rails,

each side rail comprising separate parts hingedly coupled centrally of the rails, means comprising a pivoted hinge structure for movably coupling the side rails with said head and foot members, whereby the rails may be first collapsed horizontally within boundaries of said head and foot members and then collapsed vertically between said members with said members in juxta position to each other, a mattress supporting element coupled with said rails and members and collapsible with said rails, means for supporting the separate parts of the rails in alined position one with the other when in raised operative position, and means detachably coupling upper portions of the separate parts of the rails with said head and foot members.

14. A collapsible bedstead of the class described comprising head and foot members and side rails, each side rail comprising separate parts hingedly coupled centrally of the rails, means comprising a pivoted hinge structure for movably coupling the side rails with said head and foot members, whereby the rails may be first collapsed horizontally within boundaries of said head and foot members and then collapsed vertically between said members with said members in juxta position to each other, a mattress supporting element coupled with said rails and members and collapsible with said rails, means for supporting the separate parts of the rails in alined position one with the other when in raised operative position, and means movably coupled with the head and foot members for raising the height of the bedstead with respect to a supporting surface.

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