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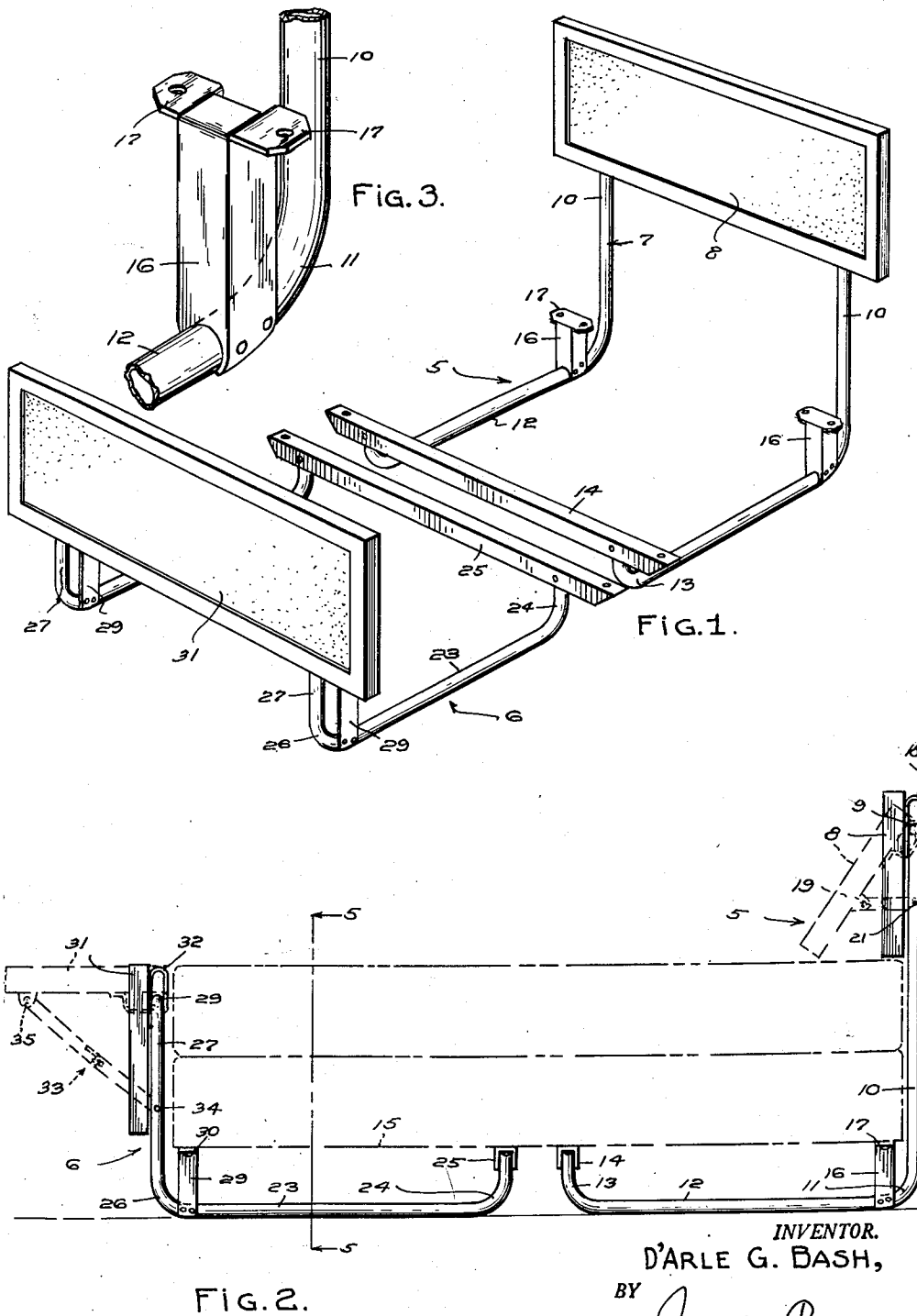
D'ARLE G. BASH

2,666,213

BED CONSTRUCTION

Filed April 15, 1950

2 Sheets-Sheet 1



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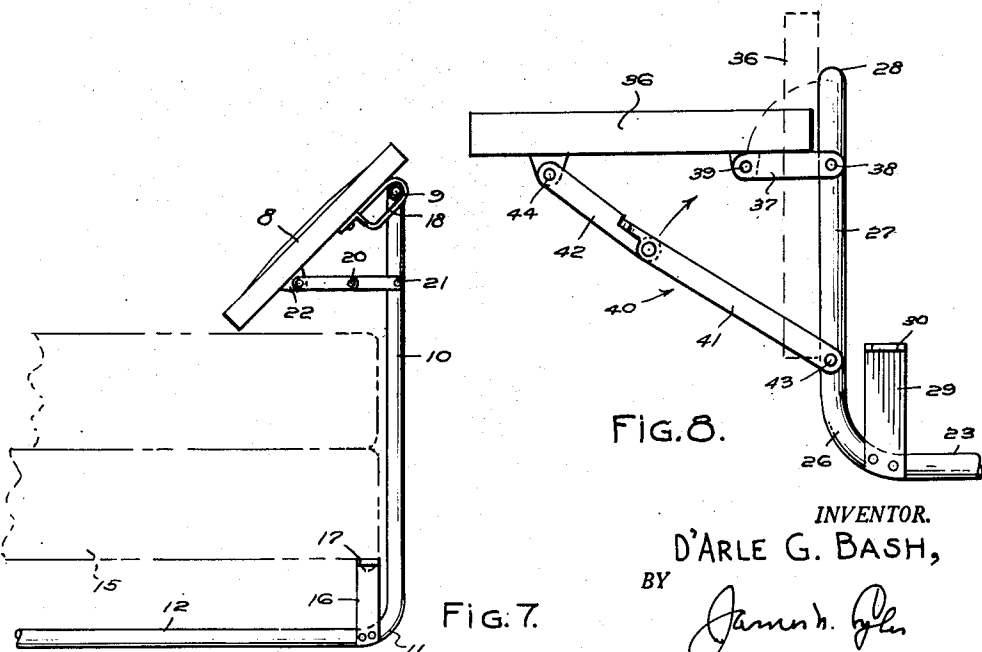
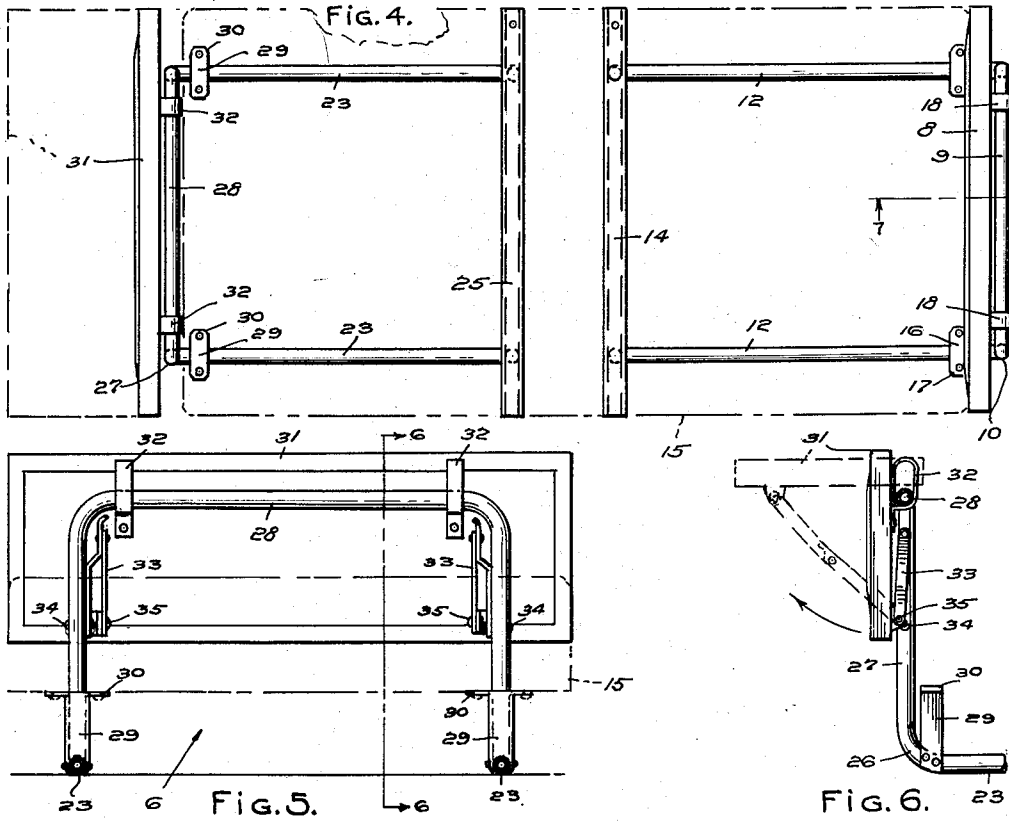
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BED CONSTRUCTION

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2 Sheets-Sheet 2



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## UNITED STATES PATENT OFFICE

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## BED CONSTRUCTION

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5 Claims. (Cl. 5-131)

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This invention relates to bed devices and has particular reference to a pair of cooperating support members for the rigid elevating support of the conventional box spring.

It is an object of the present invention to provide a head and a foot section provided with decorative panels mounted and supported in such manner as to permit the foot panel to be adjusted to provide a combined seat and luggage bench, while the head panel may be angularly adjusted to provide an inclined back rest, such adjustments in no way interfering with the supports for the box springs and its superposed mattress.

The invention further contemplates a pair of frame members of tubular construction, shaped to provide floor runners and vertically disposed head and foot board supporting frames, with the runners equipped with fixed legs and cross bars for rigid attachment with the framing of the box spring, the head and foot boards being so mounted upon their respective frames as to permit their adjustment to form a seat or luggage bench at the foot of the bed or to form an inclined back rest at the head of the bed.

A further object of the invention resides in the novel manner of supporting the head and foot boards upon their respective frames to permit a simple shifting of the boards to their particular angularity without the aid of tools or other devices, such boards being rigidly maintained in their positions of adjustment by past center braces of such character as will support the weight of an individual when used as a seat and which may readily be returned to its normal position when the braces are broken upwardly.

A further object of the invention resides in the extreme simplicity of the structure and cheapness of manufacture; it is strong, durable and highly efficient and advantageous in use.

Other objects and advantages of the invention will be readily apparent during the course of the following description, reference being had to the accompanying drawings, wherein has been shown the preferred examples of the invention and wherein like characters of reference denote like parts throughout the several figures.

In the drawings:

Figure 1 is a perspective view of the bed structure, with the box spring omitted,

Figure 2 is a side elevation thereof, parts being shown in dotted line positions of adjustment,

Figure 3 is a fragmentary perspective view of one leg device,

Figure 4 is a plan view of the structure, with

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the box spring shown in dotted lines and the foot board in the dotted line position of adjustment,

Figure 5 is a transverse section of the foot structure, taken on line 5-5 of Figure 2,

Figure 6 is a longitudinal section taken on line 6-6 of Figure 5, the foot board being shown in elevation,

Figure 7 is a section taken on line 7-7 of Figure 4 with the head board in extended position and shown in elevation and,

Figure 8 is a side elevation of a slightly modified form of foot board mounting.

Referring specifically to the drawings, the numeral 5 designates a head section and 6 a foot section for the bed. The head section 5 comprises a tubular frame of preferably light weight metal, such as aluminum, shaped to provide a U-shaped, vertically arranged support 7 for a head board 8 of any desired material and ornamentation. The support 7 includes a horizontal section 9 and integral posts 10. The posts 10 are bent on an arc, as at 11 and at a right angle to the posts 10, to form a pair of identical horizontally arranged and parallel floor runners 12, the terminal ends of which are bent upwardly at a right angle, as at 13, for the joint support of a channel cross bar 14, serving as an intermediate support for the conventional bed box spring 15, indicated by dotted lines. Adjacent the arcuate bends 11, leg supports 16 are rigidly attached to the runners, such legs 16 serving as supports for one end of the box spring. The legs 16 are preferably rivetted to the tubing of the runners and are provided with apertured attaching ears 17 for rigid connection to the wood frame of the box spring, by screws or like fastening devices. The bar 14 is provided with apertures adjacent its outer ends for attachment to the frame of the box spring inwardly of its end, by screws or the like.

The head board 8 is adapted to be shifted to a position of angularity from its normal vertical arrangement and includes a pair of elongated brackets 18, fixed to the rear face of the headboard, as shown, and embracing the horizontal section 9 of the support. The brackets 18 permit of the headboard being swung outwardly and downwardly to a position where the lower edge of the board assumes a point of contact with the mattress of the bed. The headboard is limited in its outward swinging movement by a pair of two-part braces 19, hinged together at their ends, as at 20 and also pivotally connected with the posts 10, as at 21 and with brackets 22, carried by the headboard. The braces serve to limit the

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outward movement of the board and also serve to prevent accidental movement of the board rearwardly when employed as a backrest. It is contemplated that the headboard 8 will normally lie against the frame 7 and the obvious vertical shifting movement of the board under the influence of the collapsing of the braces is permitted by the elongated brackets 18 so that the headboard in its normal vertical position has its lower edge slightly spaced from the mattress.

The foot section 9 is formed of a tubular frame similar to the section 5 and includes floor runners 23, the terminal ends of which are curved upwardly at 24, for connection with a channel bar 25, similar to the bar 14 as to length and arranged at an identical elevation. The runners are bent at a right angle, upon an arc, as at 26, to form vertically arranged parallel posts 27, connected together by a horizontal tubular section 28. It is here pointed out, that the tubular frames comprising the head and foot sections of the bed shall be formed of continuous sections of aluminum tubing. Adjacent the arcuate bends 26, the runners 23 are provided with legs 29, rivetted or otherwise permanently attached thereto. The legs 29 carry apertured attaching ears 30 for fixed attachment to the wood frame of the box spring 15 at its end portion. As clearly shown, the foot section including the tubular section 28 and posts 27, are arranged at a lower level than the head section 5, as is customary. The channel bar 25 is rigidly attached to the frame of the box spring inwardly of its end, by screws or the like.

Shiftable supported upon the tubular section 28, is a foot board 31, shiftable with respect to the section 28 to swing in a vertical plane by elongated brackets 32, carried by the rear face of the foot board. The foot board is adapted to swing in an arc of ninety degrees from the normal vertical position to form a combined seat and a luggage bench. The shifting of the foot board 31 is limited in its swinging movement by a pair of identical two part braces 33, pivotally connected together and with the posts 27, at 34 and with brackets 35, carried by the rear face of the foot board. The braces in fully extended position are adapted to move to a past center position for maintaining the foot board in an extended horizontal position and to prevent accidental movement of the board when weight is placed thereon. The foot board 31 in normal collapsed position lies against the posts 27 and cross section 28, with the braces 33 lying in substantial parallelism with the posts in the collapsed position. The foot board in the collapsed position is positioned with its upper edge above the cross section 28 and substantially at a height level with the upper surface of the mattress. The shifting of the board 31 under the action of the braces is permitted by the elongated brackets 32. The foot board may be formed of any desirable construction and ornamentation. The foot board in the fully extended position has its face substantially on a line with the upper surface of the mattress.

In Figure 8, a slightly modified form of the foot board has been illustrated. In this form of the invention, the supporting frame is identical to that previously described, while the foot board 36, in extended position is adapted to be disposed in a horizontal position at a level below the cross member 28, to form a seat more nearly approaching a chair of bench height. The operation of the foot board 36 is substantially identical

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with that previously described, except that the upper portion of the board is supported from the outer sides of the posts 27, by links 37, pivoted to the posts 27, as at 38 and to the board 36, by brackets 39. Braces 40, including a long member 41 and a shorter member 42, are pivotally connected at their adjoining ends and at their opposite ends are pivotally connected to the posts 27, as at 43 and to the lower portion of the board 36, as at 44. The overall lengths of the brace members 40 and the links 37 are such as will permit the collapsing movement of the foot board in an arcuate movement as determined by the collapsing arcuate movement of the brace member 41, the upper edge of the board being elevated by the arcuate swinging of the links 37 to lie in a plane substantially at the same height as the bed mattress. The upper edge of the board 36, in the extended position, is supported upon the links 37, while the board is maintained against accidental collapsing by the past center braces 40. While the board 36 in its extended or seat forming position lies at a level below the cross member 28, the head board 8, in its extended position, overlies the cross member 9.

In the use of the invention, the head and foot structures are attached to the conventional box spring by wood screws or the like passing through the bars 14 and 25 and leg ears 17 and 30, rigidly positioning the units 5 and 6 with respect to the box spring and supporting the spring from the floor at a regulation height. The usual wood frames of the box spring readily adapts it to the device without additional connecting means, with the legs supporting the ends of the spring, while the bars support the intermediate section of the spring. When it is desired to employ the foot board as a bench or as a luggage support, the operator merely lifts the foot board from the bottom, swinging it to a horizontal position and permitting the brace members to fall to a past center position. Breaking the braces inwardly will permit the foot board to return to its normal vertical position. The headboard is operated in a similar manner, the operator merely pulling the lower edge of the board outwardly until the braces fall into their position of alignment, which position determines the maximum angle to the head board 8. The elongated brackets of both the headboard and the foot board permit the shifting of the boards with respect to the cross members 9 and 28.

It will be apparent from the foregoing, that a very novel and highly desirable bed structure has been provided. The frames for the head and foot sections provide both an ornamental appearance and a very rigid support for the box spring. The runners permit of shifting the bed upon the floor with a minimum of effort, since there are no abrupt obstructions likely to catch upon rugs, nor to scratch or otherwise mar the floor, such as is the case with the conventional bed legs. The frames are easily and cheaply formed and are extremely light in weight. The shiftable foot board adds greatly to the distinct advantages of the structure, serving both as a luggage bench and a seat, yet not detracting from the ornamental appearance of the device. The head board is most desirable for persons who frequently recline in bed or is particularly desirable for invalids. The head and foot boards lend themselves to a variety of designs and ornamentation and the operating structures are most simple and effective.

It is to be understood, that the invention is

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not limited to the precise arrangement and structure shown, but that various changes in the shape, size and arrangement of parts may be resorted to as will be determined by the spirit or the scope of the subjoined claims.

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

1. In a supporting device embodied in a bed construction for use with a bed box spring wherein the box spring is supported in an elevated position above the floor, a foot section for the elevating support of the box spring at one end and comprising a frame formed of a continuous section of metallic tubing shaped to provide a pair of spaced apart horizontal floor runners having terminal ends that are upturned to an identical height and connected by a horizontally disposed channel iron, the frame being bent inwardly of its terminal ends to form a vertically arranged inverted U-shaped support having parallel vertical legs and a horizontal cross-bar, a footboard swingably supported on the frame, elongated brackets fixed upon the rear face of the footboard and embracing the cross-bar of the frame, the board normally lying in vertical engagement with the support and adapted to swing forwardly on the horizontal axis of the cross-bar, brace means to limit the swinging movement of the board, the footboard adapted to swing through an arc of ninety degrees to dispose its face in a horizontal seat forming position, the brace means comprising past center brace arms connected with the vertical legs of the support and with the rear face of the footboard, supporting legs rivetted to the frame adjacent its points of bending, the tops of the supporting legs being at an elevation corresponding to the elevation of the channel iron, the supporting legs and channel iron being detachably connected to the underside of a frame of the box spring, the footboard adapted for use with a headboard of similar construction.

2. A bed construction comprising a supporting frame for a bed box spring, the frame supporting a footboard, the frame formed of tubular metal and bent to provide parallel and spaced apart floor runners, the frame provided with means for rigid attachment to a frame of the box spring, the footboard frame being bent to provide a vertical inverted U-shaped support for the footboard having parallel side posts and a horizontal connecting cross-bar, the footboard consisting of a rectangular panel that is normally arranged in vertical abutting engagement with the side posts with its upper edge and ends extending above the bar and beyond the legs, elongated brackets fixed upon the rear face of the panel and embracing the cross-bar for shiftable and hinged support of the panel upon the bar, past-center braces pivotally connected with each of the posts and with brackets carried by the rear face of the panel, the panel being swingable from the posts upon the horizontal axis of the cross-bar through an arc of ninety degrees to dispose the footboard in a horizontal seat forming position, the upper edge of the panel when swung to a seat forming position overlying the cross-bar, the attaching means for the box spring comprising a pair of identical rigid legs carried by the frame adjacent the posts, the legs having apertured attaching ears for attachment to the frame of the box spring adjacent its end, the floor runners connected by a transverse channel bar provided with apertures adjacent

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its ends for connection to the frame of the box spring adjacent its intermediate section.

3. A bed construction that comprises an elevating support arranged at an end of a bed box spring, the frame adapted for use in connection with a similar support at the opposite end of the box spring the support formed of continuous section of aluminum tubing, the support bent to form spaced apart parallel floor runners that are horizontally arranged and with the support bent upwardly to provide a vertically arranged inverted U-shaped frame having parallel side posts and a connecting straight horizontal bar, means carried by the frame for rigidly supporting one end of the box spring in an elevated horizontal position, a footboard carried by the frame, the footboard consisting of a rectangular panel that is swingably supported upon the horizontal bar of its respective frame, the footboard being normally vertically arranged with its upper edge projecting above the bar, links pivotally connected to each of the posts of the footboard frame adjacent to and below the bar and with brackets carried upon the rear face of the panel, a pair of past-center braces, each having a long arm and a short arm, the long arm of each brace pivotally connected to a post and the short arm of each brace pivotally connected to a bracket carried by the rear face of the panel adjacent its lower edge, the panel being swingable in a vertical arc upon the links for disposing the face of the panel in a horizontal seat forming position, the upper edge of the panel when in extended position being supported upon the links, the past-center braces supporting the panel in seat forming position against accidental shifting movement.

4. In a structure of the character described for use with a bed box spring wherein the box spring is supported in elevated position above a floor, a foot section for the elevated support of the box spring at one end and comprising a frame, the frame adapted for use with a corresponding frame for the support of the opposite end of the box spring, the frame being formed of a one-piece continuous tube, the frame embodying horizontally arranged and spaced apart parallel floor runners having their terminal ends upturned, the terminal ends of the frame being connected by a channel bar, the tubing of the frame being bent intermediate of its length to form a vertically arranged inverted U-shaped support, the frame at its points of bending being provided with rigid legs, the legs being at an identical elevation to the channel bar, the legs and the channel bar adapted to jointly support the end area of the box spring, the legs and the channel bar being adapted to be detachably connected to the underside of the box spring, the support having shiftablely attached thereto a footboard, brackets carried by the footboard for supporting the board on the supports to be shifted on a horizontal axis, the board normally resting against the supports with its top and ends projecting above and beyond the support, a pair of braces for limiting the shifting movement of the footboard, the braces being of the past center type and pivotally connected at their opposite ends to the footboard and the support, the footboard being shiftable through an arc of 90 degrees to dispose the face of the footboard in a horizontal seat forming position, the braces of the footboard being movable to a past center position for maintaining the footboard in its seat forming position.

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5. An elevating support for one end of a box spring included in a bed construction, the elevating support adapted for use with an elevating support for the opposite end of the box spring, the support comprising a frame formed of a continuous section of metallic tubing that is shaped to provide a pair of spaced apart and parallel floor runners of identical length with their terminal ends upturned and rigidly connected by a transverse channel iron, the frame being bent at identical points in its length to form a vertically arranged inverted U-shaped support having vertical legs and a straight horizontal connecting section, a footboard hingedly supported upon the horizontal section to swing in a vertical path on a horizontal axis, brace arms connected to the footboard and the legs to limit the vertical swinging movement of the board to a position to dispose its face in a horizontal seat forming position, the brace arms having past center means to retain the footboard in the seat forming position against accidental downward swinging movement, the channel iron adapted to be secured to the underside of the box spring transversely thereof at a point intermediate the length

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of the box spring, supporting legs rigidly connected to the frame adjacent each point of bending of the frame to form a support for the end of the box spring, each leg having a flat supporting end that is adapted to be connected to the underside of the box spring adjacent its corners, the flat supporting ends being at an identical elevation to the channel bar.

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