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W. E. BROYLES

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LONGITUDINAL BED EXTENSION

Filed May 11, 1960

2 Sheets-Sheet 1

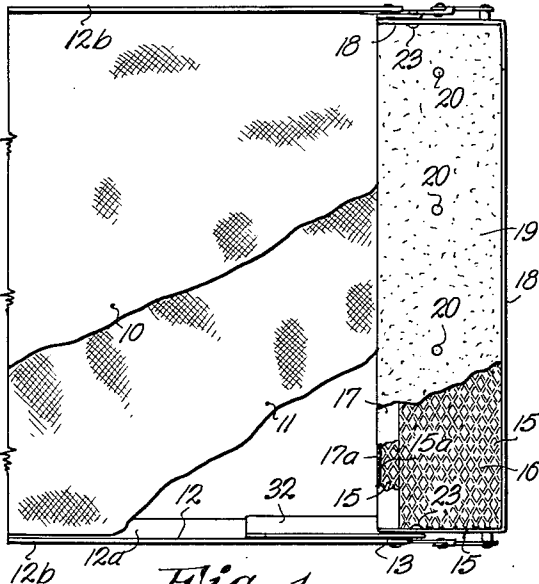


Fig. 1.

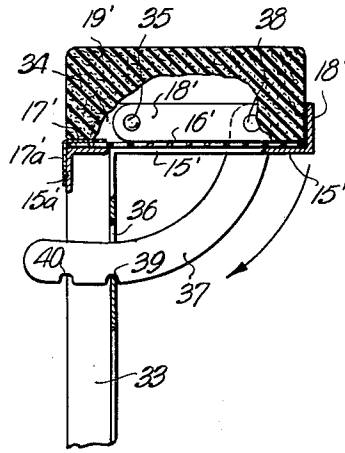


Fig. 4.

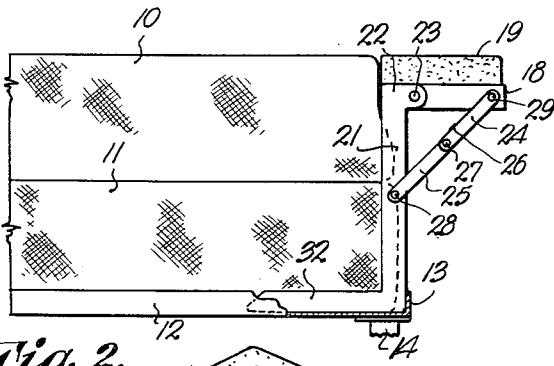


Fig. 2.

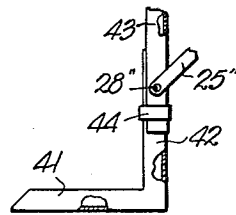


Fig. 5.

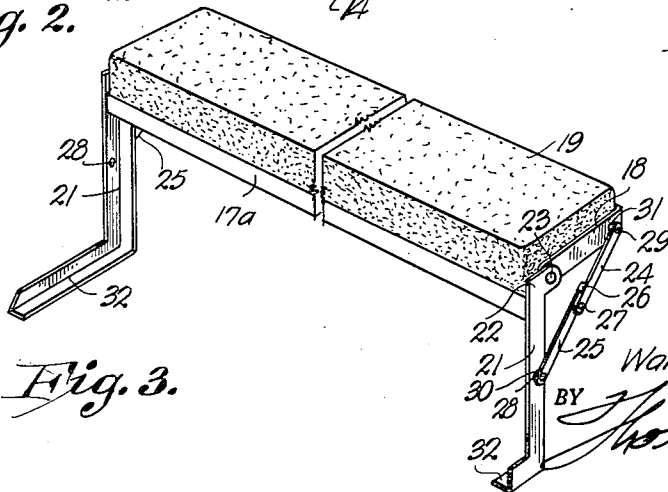


Fig. 3.

INVENTOR.  
Ward E. Broyles  
BY *Sho Esfield*  
ATTORNEY.

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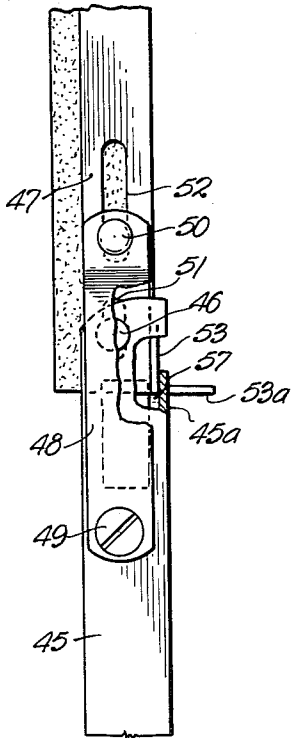


Fig. 6.

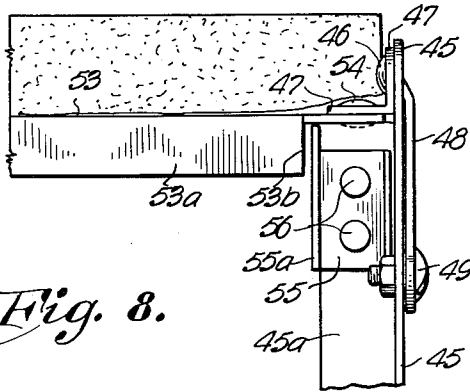


Fig. 8.

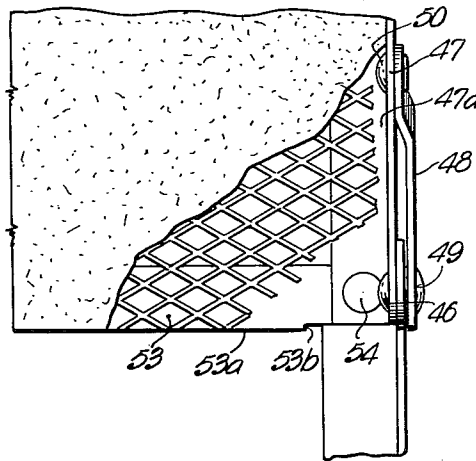


Fig. 9.

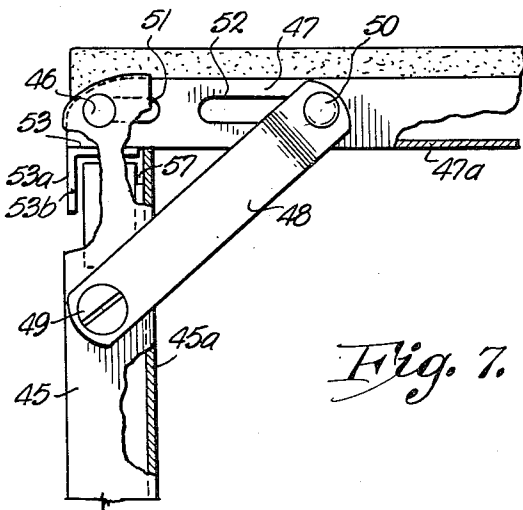


Fig. 7.

INVENTOR.  
Ward E. Broyles  
BY *Harold Koefield*  
ATTORNEY.

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**LONGITUDINAL BED EXTENSION**

Ward E. Broyles, 606 Chestnut, Kansas City, Mo.

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5 Claims. (Cl. 5-184)

This invention relates to elongation of beds and refers more particularly to means which may be removably attached to either end of a conventional bed to increase the effective length thereof without changing the mattress or any of the parts of the bed.

Previously, various bed frame or bed frames and mattress constructions in combination have been developed to provide sleeping means of greater than conventional length. However, such devices have generally required an original bed frame of complicated construction and/or the substitution of an elongated mattress for the original mattress. Such constructions have been very expensive, take up excessive space, have required complicated adjustment of the bed frame and mattress and generally have not proved practical.

Therefore, an object of my invention is to provide longitudinal bed extension means adaptable to be attached to either the head or the foot of the bed.

Another object of the invention is to provide longitudinal bed extension means which may be both easily and swiftly attached to and removed from the bed frame.

Another object of the invention is to provide longitudinal bed extension means which is readily adaptable and attachable to all types of bed frames, including Hollywood bed frames.

Another object of the invention is to provide a longitudinal bed extension construction which optionally may be folded downwardly when not in use to lessen the total bed length or tilted upwardly when in use to serve as a pillow support or the like.

Still another object of my invention is to provide longitudinal bed extension means which is relatively light in weight, simple in construction, rugged and long lived under continuous use, and cheap and easy to manufacture.

Another object of my invention is to provide longitudinal bed extension means which may be constructed vertically adjustable to adapt to various thicknesses and combinations of mattresses and bed springs.

Another object of the invention is to provide mounting means for longitudinal bed extension constructions particularly adaptable to Hollywood bed frames which permit both easy insertion and removal of the mounting means relative the bed frame and also provide a secure and stable mounting for the bed extension proper.

Yet another object of my invention is to provide a longitudinal bed extension which requires a minimum amount of padding thereon without loss of comfort and, particularly, requires a lesser thickness of padding than that normally found in a conventional bed mattress.

Another object of the invention is to provide a longitudinal bed extension which may be made to fit any width of bed.

Another object of the invention is to provide a longitudinal bed extension which may be made to provide any desired amount of longitudinal extension.

Yet another object of my invention is to provide a longitudinal bed extension which contains padding independent of the bed mattress yet wherein the bed sheets may be readily made thereinto.

Other and further objects of the invention will appear in the course of the following description thereof.

In the drawings, which form a part of the instant invention and are to be read in conjunction therewith, there are shown embodiments of my invention and, in the

2

various views, like numerals are employed to indicate like parts.

FIG. 1 is a plan view with parts cut away to show a first form of my invention.

5 FIG. 2 is a side view of the construction of FIG. 1 with parts cut away to better illustrate the construction.

FIG. 3 is a three-quarter upper perspective view of the longitudinal bed extension of FIGS. 1 and 2.

10 FIG. 4 is a side-sectional view through a second modification of the inventive longitudinal bed extension with parts cut away to better illustrate the construction.

FIG. 5 is a detail view of a vertically adjustable mounting leg adapted to be employed in my invention.

15 FIG. 6 is a side view with parts cut away of one corner of a third modification of the inventive longitudinal bed extension with the platform portion thereof in headboard or vertical position.

FIG. 7 is a side elevation of the same corner of the construction of FIG. 6 with parts cut away, the platform portion in mattress extension or horizontal position.

FIG. 8 is an end view of the same corner of the construction of FIGS. 6 and 7 taken from the left in FIG. 7.

FIG. 9 is a top plan view of the same corner of the construction of FIGS. 7 and 8 with parts cut away.

25 Referring first to FIGS. 1-3, wherein is shown a first modification of the inventive longitudinal bed extension, FIGS. 1 and 2 show one end of a conventional Hollywood bed assembly having a mattress 10 positioned on top of a conventional box spring assembly 11 which in turn, is received in connected longitudinal and lateral angle iron frame members 12 and 13 supported by leg members 14 on which may be mounted casters or wheels (not shown). The supported frame members 12 and 13 comprise a conventional "Hollywood" bed frame. The box spring assembly lower edge is conventionally rigid and is received on the lower face 12a of angle iron 12 with its outer edge close to but not usually resting against the vertical face 12b of the angle iron 12.

30 The inventive bed extension means comprises a platform, padding supportable by the platform and means for supporting the platform relative one end of the bed. The padding supporting portion of the platform may optionally be a flat unperforated plate or sheet (not shown) or, as shown in FIG. 1, it preferably may be formed of a hollow-centered rectangular edge portion 15 which defines the area and periphery of the platform and a preferably metallic mesh or screen 16 which overlies the edge 15 and is fixed thereto. Edge 15 is preferably an angle iron or piece in cross section next the bed proper. Mesh 16 preferably covers substantially the entire peripheral edge portion 15 of the platform and may be welded or otherwise attached thereto. A flange 17 angled in cross section preferably overlies the edge of the mesh next the bed proper and has a downwardly extending portion 17a which may be fixed to the inner face 15a of the edge portion 15 next the bed proper. A flange 18, positioned preferably normal to the edge portion 15 and mesh 16 preferably extends continuously around the three sides of the platform which are not next the mattress. Flange 18 is preferably of lesser height than the height of the padding 19 which is to be employed on the platform. Padding 19 may comprise one or more individual pads of resilient material such as foam rubber, foam resilient plastic, or the like. Padding 19 may lie free on the platform retained thereon only by the confining flange 18 and the mattress 10 or, on the other elongated extension means which pass through the padding and are tied or otherwise fastened to the mesh 16.

70 Turning now to the means for supporting the platform relative the mattress and bed assembly, the modification of FIGS. 1-3 show a mounting particularly adapted to

3

Hollywood beds. However, this identical mounting may be employed with numerous other conventional types of bed frames and slight modifications thereto will encompass still other types of bed frames. It not being practical to illustrate all the many variant forms and types of bed frame, box spring, spring and mattress combinations, I have illustrated only one particular type. However, my invention is not to be limited to the particular bed shown.

Vertical legs 21 preferably comprise angle irons in cross section whereby to fit around the corners of mattress and/or box spring constructions. In the modification shown, the platform is hinged to the tops of the legs 21 so as to be pivotable downwardly to produce the total length of the bed when the bed is not in use. To accomplish this function the legs 21 have flat plates 22 attached to their upper ends having openings therethrough to receive pins or bolts 23 which engage the side extensions of the flange 18. Supporting arms 25 and 24, the latter having locking flange 26 at the upper end thereof to overlie arm 24, are hinged to one another at 27 and attached to arm 21 and flange 18 at their respective other ends. Pins 28 attach arms 25 pivotally to legs 21 and pins 29 pivotally attach arms 24 to the side extensions of flange 18. Spacers 30 and 31 laterally position arms 25 and 24 free of the flanges 22 and pin heads 23 to permit proper functioning.

Vertical arms 21 position the platform vertically relative mattress 10 and box springs 11, while longitudinal angle irons 32, fixed to vertical angle irons 21 at one end and extending normally thereto in the direction opposite the extension of the platform, fit onto the Hollywood bed frame longitudinal angle irons 12 with the joinder between arms 32 and arms 21 fitting into the juncture between the longitudinal and transverse angle irons 12 and 13 of the Hollywood bed frame. Thus, box springs 11 and mattress 10 may be lifted just sufficiently to slide longitudinal angle irons 32 under the box spring lower edge and then the spring and mattress assembly dropped into place over angle irons 32 to securely position and lock the entire bed extension assembly relative the bed frame and overlying padding.

If desired, openings (not shown) may be provided in vertical arms 21 and/or longitudinal arms 32 to permit insertion of screws or bolts therethrough into the bed frame or like holes therein, the bed spring assembly, or other conventional bed structure, depending upon the configuration of the bed frame and/or bed spring construction. It is contemplated that longitudinal arms 32 may not be desirable, depending upon the bed frame construction. Likewise, some modification may be made in the vertical arms 21 to adapt to particular bed frame constructions.

To pivot the platform to a downward position, the arms 24 and 25 are merely "broken" at their central juncture and moved upwardly and to the left in FIG. 2. This permits the pivoting of the platform around the pin or shaft 23 to a position substantially parallel to the vertical legs 21. To return the platform to the position of FIG. 2, the free end of the platform is merely grasped and pulled outwardly and upwardly, that is, counterclockwise in FIG. 2, until the flange 26 bears on the top of leg 24. The entire extension assembly may be removed from the bed frame of FIGS. 1 and 2 merely by lifting the box springs and mattress upwardly sufficiently to get the juncture of legs 32 and 21 past the flange of transverse angle iron 13 of the bed frame. To make this action easier, and insertion of the inventive extension easier, as well, the flange 13 of the bed frame may be cut through and removed opposite the ends of the longitudinal angle irons 12. In some actually manufactured Hollywood bed frames, this is presently the situation already and no change need be made. In such case, the bed springs and mattress need be only lifted the slightest amount to slide in the longitudinal legs 32 on top of the

4

longitudinal angle irons 12 and to remove them therefrom.

The modification of FIG. 4 is like that of FIGS. 1-3 in all characteristics except the means for mounting the platform pivotally relative the vertical legs. Therefore, all of the parts which are identical in form and construction to those of the modification of FIGS. 1-3 are numbered the same, but primed. Thus, the padding is numbered 19', the normally horizontal platform peripheral deck 15', the mesh 16', the normally vertical padding supporting flange 18', the deck 15 angle iron lower leg 15a', and the mesh covering flange 17' and 17a'.

Vertical legs 33 are preferably angle irons in cross section except at their upper portions which comprise flat pieces 34 adapted to be engaged by bolts or pins 35 which engage also the rounded ends of side extensions of flange 18' to permit pivotal movement of the platform relative the vertical legs 33. Openings 35 are formed in the faces of the angle irons 33 opposite the end of the bed. Curved members 37 are pivotally fastened by pins 38 to the side extensions of flange 18' and have notches 39 and 40 in their lower edge to engage the lower edges of openings 36. Openings 36 must be slightly greater in span than the widths of members 37. The spacings of the notches 39 and 40 are such that, when the notches 39 are engaged on the lower edges of openings 36, the platform is positioned horizontally or parallel with the surface of the bed. When notches 40 are engaged over the lower edges of openings 36, the platform is tilted upwardly at an angle to the horizontal or to the surface of the bed and, thus, the padding 19' may act as a pillow support or the like. Arms 37 may be extended in length so that more notches than the ones indicated 40 may be provided to give further upward tilt, if desired. Arms 37 may furthermore be passed through openings 36 to permit the platform to be tilted downwardly at an angle substantially parallel to the vertical legs 33, if desired. In such case, the legs 37 slide alongside the mattress and bed proper. Means for attaching the vertical legs 33 to a Hollywood bed frame, or conventional wood bed frames which receive and/or enclose box springs or the like may comprise legs (not shown) attached to legs 33 at right angles thereto, such as legs 32 in FIGS. 1-3 or merely bolts or the like passing through openings (not shown) in the vertical legs 33 to attach to a typical bed frame.

FIG. 5 shows a modification of the construction of FIGS. 1-3 wherein the means supporting the platform are vertically adjustable. In this showing, horizontal angle irons 41 are joined to vertical angle irons 42 which have free upper ends. Secondary vertical angle irons 43 fit over the outside surfaces of angle irons 42 and are fixedly clampable thereon by conventional tightenable clamps 44. If it is desired that the platform be vertically pivotable as in FIGS. 1-3, the arm 25' may be pivotally pinned to leg 43 by pin 28'', whereby the platform may be pivoted vertically relative leg 43 which, in turn, may be located vertically relative leg 42, as desired.

The inventive bed extension is particularly adaptable to use at the head of a bed, although it may be suitably employed at either or both the head and foot of a conventional or Hollywood bed. The use at the head of the bed is particularly apt as the total weight of the head, as applied to a sleeping surface is far less than ordinarily realized. Thus, a relatively small amount of padding, as shown, has proved ample to achieve the full effect of a conventional mattress. A conventional pillow may be laid over the platform and/or the mattress, as desired. Likewise, the sheet which is made into the mattress may be tucked around the padding 19 or 19' both at the sides and the end to provide a continuous make up with the bed. When the platform is pivoted to the nonoperational position, the sheet will pull out therefrom. The vertical adjustment of FIG. 5 permits adjustment of the mounting means to any combination of box springs, mattress or plurality of mattresses in any bed frame.

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The modification of FIGS. 6-9, inclusive, show a bed extension adapted to double as a headboard. At 45 is shown a vertical angle iron corresponding to angles 21 and 33 of FIGS. 1-3 which is attached by a suitable enlarged head rivet 46 to a single flange 47 analogous to flange 18 of the modification of FIGS. 1-3. A corner cross arm 48 is pivotally attached to a flange of leg 45 by stud or rivet 49 and likewise pivotally attached to flange 47 by stud or rivet 50. Slots 52 and 51 are formed in flange 47 whereby to permit enlarged headed rivets or studs 50 and 46 to slide therein. Flange 47 is part of an angle iron having other flange or side 47a on which a screen such as screen 16 is mountable. Leg 45 has other flange or side 45a.

Connected to flange 47a is flange 53 of an angle also having flange 53a. Stud or rivet 54 connects flange 53 to flange 47a. Flange 55 of another angle is fixed to flange 45a by studs 56 and has other flange 55a connecting thereto. Flange 55a has greater upward extension than flange 55 whereby to provide a notch 57 (FIGS. 7 and 8) at the upper end thereof between flange 55a and flange 45a. Flange 53a is notched as at 53b whereby to permit passage of flange 55a thereby in pivotal movement. The width of notch 57 is slightly greater than the thickness of flange 53 whereby flange 55a can overlap flange 53 when the platform is in the headboard position.

In the position of FIGS. 6-8, with angle 45 at right angles to angle 47 (whereby the latter may be used for a longitudinal bed extension) slots 51 and 52 must be so sized and so positioned that pin 46 is at that end of slot 51 shown, whereby to abut thereagainst, and pin 50 must be so positioned in slot 52 whereby to abut against that end thereof shown. This positions the angles firmly normal to one another, as illustrated.

In order to position the angles parallel to one another as in FIG. 6, whereby to use the frame defined by angle 47 as a headboard, the operator grasps the angle having flange 47 to the right (in FIG. 7) of the connection with arm 48 and pulls it upwardly. In this process, pins 46 and 50 are free to slide in slots 51 and 52 away from their positions of FIG. 7. Either pin may slide first or they may slide simultaneously as the angle including flange 47 moves upwardly to approach a parallel position with angle 45. Due to the fixed length of arm 48, it is necessary that adjustments of pins 46 and 50 in the slots take place. Slots 51 and 52 must also be so sized that, when (1) pin 46 is in the position of FIG. 7, (2) pin 50 is at the other end of the slot from that shown in FIG. 7 and (3) the angles are parallel, flange 53 can clear the uppermost end of flange 55a and pass thereacross whereby to align vertically with notch 57. The operator then pushes downwardly on the frame defined by flanges 47 and 47a whereby that portion of flange 53 free of flange 53a can slide into notch 57, thus locking flange 47a into parallel alignment with flange 45a.

The same process, of course, takes place at the opposite leg and joint arrangement on the other side of the bed. To return the angle including flange 47 to a horizontal position normal to angle 47, as in FIGS. 7-9, the operator merely grasps the frame defined by the angle including flange 47, pulls it upwardly to a position free of notch 57 and then pivots it back to the horizontal position with adjustment taking place with pins 46 and 50 in slots 51 and 52 returning to the positions of FIG. 7.

From the foregoing it will be seen that this invention is one well adapted to attain all of the objects and ends hereinabove set forth together with other advantages which are obvious and which are inherent to the invention.

It will be understood that certain features and sub-combinations are of utility and may be employed without reference to other features and sub-combinations. This is contemplated by and is within the scope of the claims.

6

As many possible embodiments may be made of the invention without departing from the scope thereof, it is to be understood that all matter hereinabove set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim:

1. A bed extension for longitudinally extending a bed including an angle iron bed frame, box spring and mattress comprising, in combination, a platform having a deck portion which, in operating position, extends in substantial horizontal alignment whereby to receive and support resilient padding, a pair of first angle irons spaced laterally from one another a distance which permits placing of each said first angle iron on the inner surface of a bed longitudinal angle iron and on the inner surface of a bed transverse angle iron beneath the box spring, and means connecting each of said first angle irons to said platform adjacent a lateral extremity thereof whereby to vertically space the platform above said bed frame, said connecting means comprising a pair of vertically extending members, each one attached at the lower end thereof to one of the bed frame engaging first angle irons and at the upper end thereof to a lateral extremity of the platform.

2. A bed extension as in claim 1 wherein said connecting means comprises a pair of second angle irons attached at one end thereof substantially at right angles to the first angle irons receivable by the bed frame angles and attached at their other ends to the lateral extremities of the platform.

3. A bed extension as in claim 1 wherein the means connecting the first angle irons to the platform comprise vertically extending members having the platform pivotally connected to the upper ends thereof and including means cooperating between the platform and the said vertically extending members permitting positioning the platform at at least two different positions, the first said position substantially horizontal and the second at a substantial angle upward relative thereto.

4. A bed extension as in claim 1 wherein said connecting means comprises a pair of sets of second angle irons each set of second angle irons having one iron thereof attached at one end thereof substantially at right angles to the first angle irons receivable by the bed frame angles and having the other iron thereof attached at one end thereof to a lateral extremity of the platform, each set of second angle irons comprising two like angle irons slidably mounted relative to one another in a vertical direction and means for adjustably clamping the latter together relative to one another whereby to adjustably fix the vertical level of the platform.

5. A bed extension for longitudinally extending a bed and providing a headboard therefor, which bed includes an angle iron bed frame, box spring and mattress, comprising, in combination, a platform having a deck portion which, in one operating position, extends in substantial horizontal alignment whereby to act as a bed extension and, in a second operating position, extends in a substantial vertical alignment whereby to act as a headboard for the bed, a pair of first angle irons spaced laterally from one another a distance which permits placing of each said first angle iron on the inner surface of a bed longitudinal angle iron and on the inner surface of a bed transverse angle iron beneath the box spring, means connecting each of said first angle irons to said platform adjacent a lateral extremity thereof whereby to vertically space said platform above said bed frame, said connecting means comprising a pair of vertically extending members, each one attached at the lower end thereof to one of the bed frame engaging first angle irons and at the upper end thereof to a lateral extremity of the platform, and means pivotally engaging the platform with the said connecting means adjacent the upper ends of the latter and lateral extremities of the former, said pivotal con-

7

nection means including a pair of arms, one of said arms pivotally connected at a lower end thereof to one vertically extending member spacing the platform above the bed frame and one upper end of each said arm pivotally connected to the lateral extremity of said platform by a pin slidably received in a first slot in said lateral extremity, said pivotal connection means also including a second pin pivotally connecting the upper end of each vertically extending member and the lateral extremity of the platform inboard of the last named connection, said second pin received in a second slot in said lateral extremity whereby the second pin is slidably as well as pivotally connected to said lateral extremity, said slots of such length as to permit 90° rotation of said platform around said pivotal connections from a horizontal to a vertical position of said platform and vice versa, and means connected to said vertically extending members and co-operating therewith to provide engaging notches to receive a portion of said platform and lock

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same relative to said vertically extending members when the platform is in vertical position.

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