March 4, 1941. J. MARTIN 2,233,893

COUCH BED

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Fig. 6.

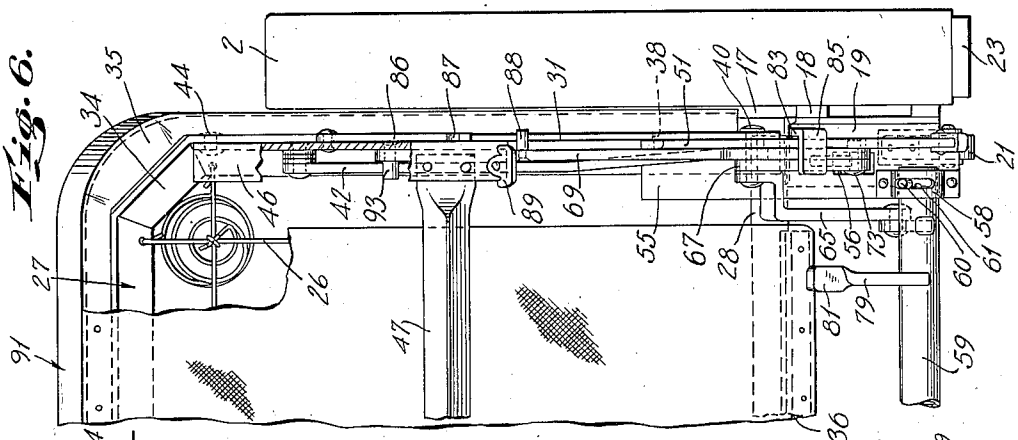
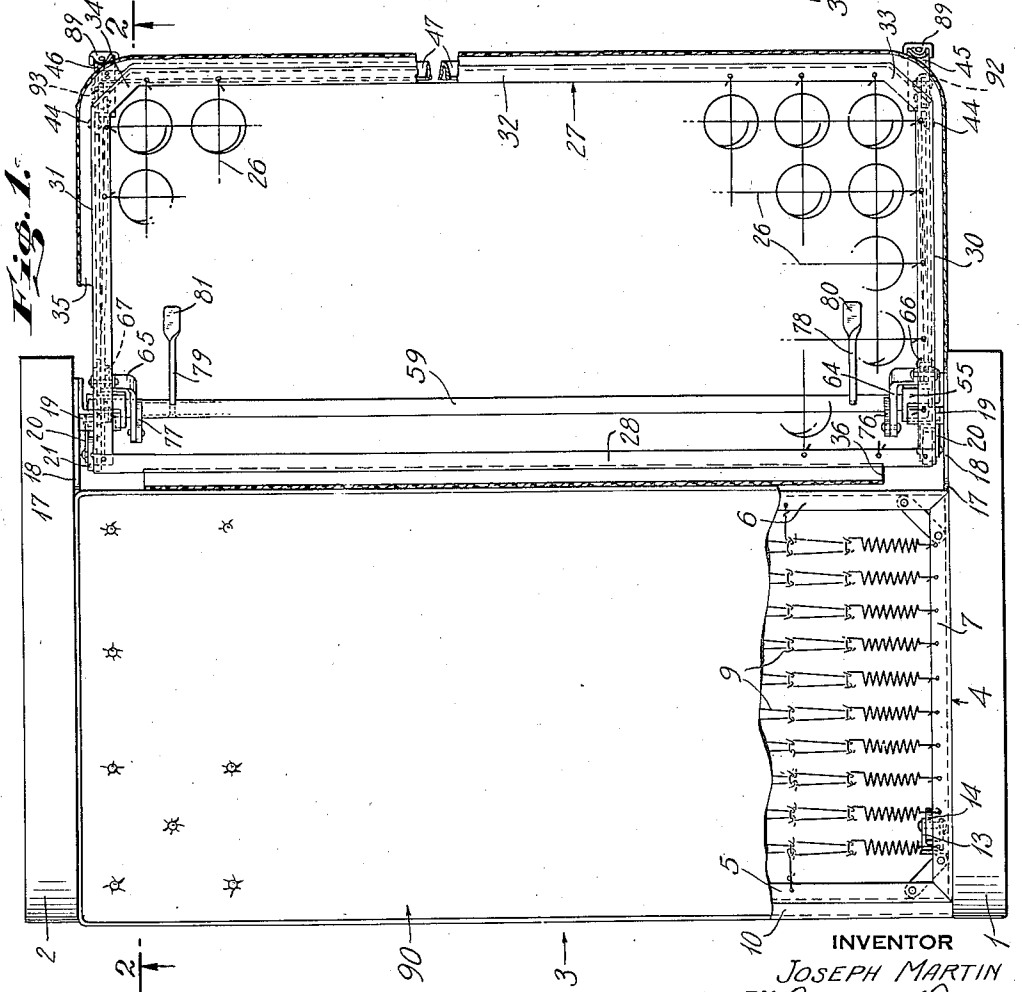


Fig. 1.



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COUCH BED

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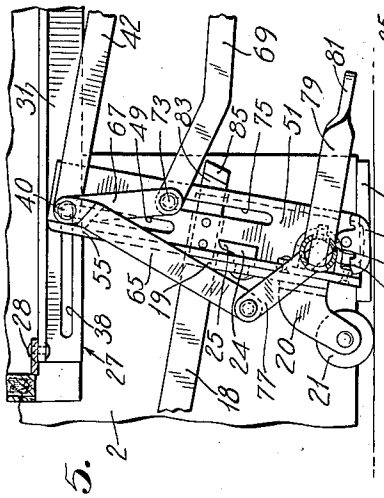


Fig. 5.

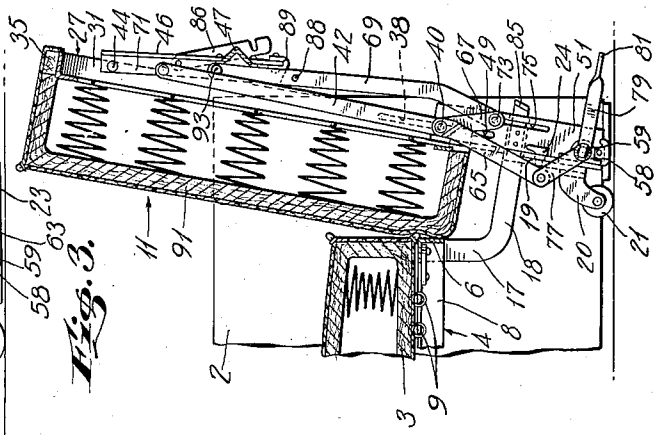


Fig. 3.

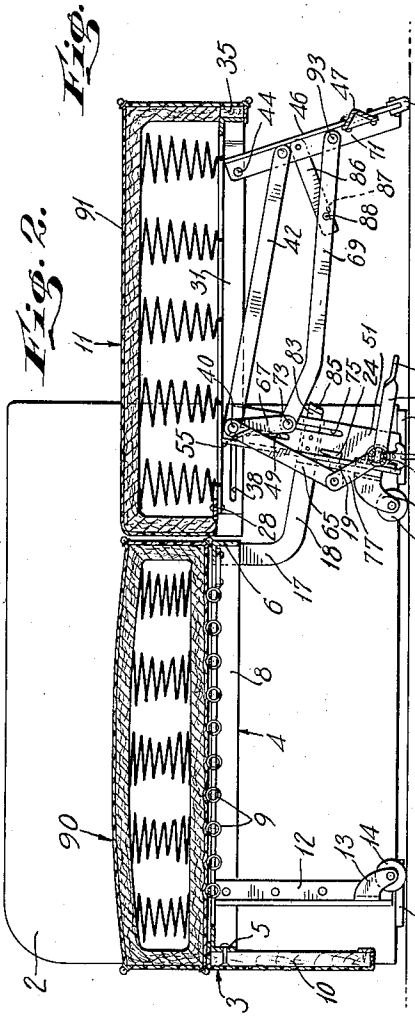


Fig. 2.

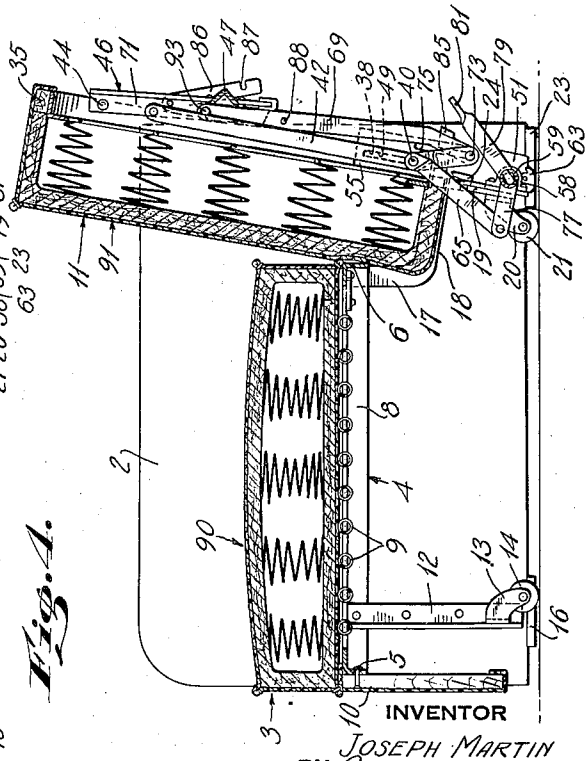


Fig. 4.

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COUCH BED

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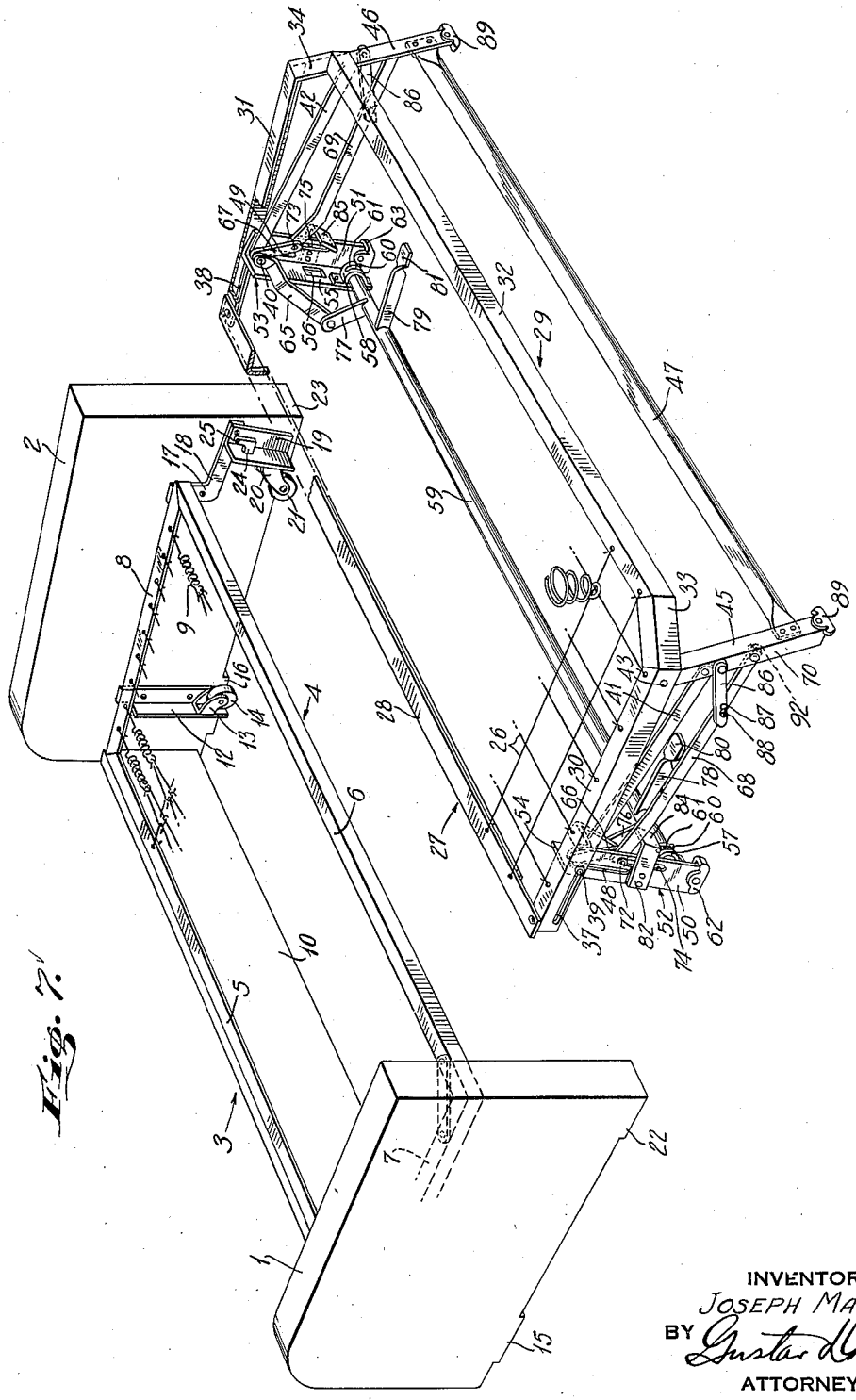


Fig. 7.

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2,233,893

UNITED STATES PATENT OFFICE

2,233,893

COUCH BED

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Application December 14, 1937, Serial No. 179,651

22 Claims. (Cl. 5—33)

This invention relates to couch beds in general and more especially to couch beds in which the extension bed is convertible into the back portion of a couch.

Among the objects of the present invention, it is aimed to provide an improved couch bed in which the extension bed portion may be raised into back formation.

It is still another object of the present invention to provide an improved bed frame which can be folded up, out of the way, into a vertical position and be anchored in such vertical position after having been swung into such position, by descending in a vertical direction into locking position by virtue of its own weight.

It is still another object of the present invention to provide an improved bed couch having a main bed section and an extension bed section which can be converted into couch back formation and moved from a position where its longitudinal sides are disposed adjacent to one another in bed formation into another position where one of the longitudinal sides are disposed below the lower level of the main bed section to form a conventional low couch back.

It is still another object of the present invention to provide an improved couch bed having a main bed section and an extension bed section which can be converted into a couch back and locked in such couch back position after having been swung into such couch back position by descending in a vertical direction into locking position combined with a foot actuating device for raising the extension bed section in couch back position preparatory again to lower the same into bed formation.

These and other features, capabilities and advantages of the invention will appear from the subjoined detail description of one specific embodiment thereof illustrated in the accompanying drawings in which

Figure 1 is a plan of a couch bed in double bed formation;

Fig. 2 is a section on the line 2—2 of Fig. 1;

Fig. 3 is a fragmental section similar to Fig. 2 with the extension bed section in couch back formation immediately before descending into locked couch back position;

Fig. 4 is a section similar to Fig. 3 with the extension bed section lowered into locked couch back position;

Fig. 5 is an enlarged fragmental detail of the foot actuating device and associated linkage in double bed formation;

Fig. 6 is a fragmental enlarged rear elevation of a portion of the extension bed section in couch back position; and

Fig. 7 is a perspective fragmental view of the bed sections in separate bed formation.

In the embodiment shown, there are illustrated two couch ends 1 and 2 which are removably attached to the ends of the main bed section 3. The main bed section 3 consists essentially in the present instance of a rectangular metal frame 4 having longitudinally extending angle irons 5 and 6 connected to the end angle irons 7 and 8 with the vertically extending webs extending down from the outer edges of the horizontally extending webs of the several angle irons, the inner edges of which horizontally extending webs are connected to the flat spring fabric 9.

To the front vertically extending web of the angle iron 5, there is secured the front board 10 extending across such angle iron and downwardly from the same the full length of the frame 4. It will also appear, see particularly Fig. 7, that the front board 10 is substantially in alinement with the front edges of the couch ends 1 and 2 and that the rear angle iron 6 is spaced from the rear edges of the couch ends 1 and 2 in the present instance at a distance at least equal to the depth of the extension bed section 11 in couch back position.

To the outer faces of the vertically extending webs of the angle irons 7 and 8 near the front end of the frame 4, there are provided the angle iron standards 12 having caster brackets 13 adjacent their lower ends to receive the casters 14 which are preferably positioned inside of the lower extensions 15, 16 of the couch ends 1 and 2 respectively.

Extending from the rear ends of the outer faces of the downwardly extending webs of the angle irons 7 and 8 are the bent arms 17 which have rearwardly extending portions 18 to the rear ends of which and the inner faces thereof, there are secured the angle iron standards 19 which extend downwardly from the arms 18 inclining away from the rear edges of the couch ends 1 and 2.

In the present instance, caster brackets 20 extending forwardly from the inwardly extending webs of the angle iron standards 19 to support the casters 21 which are positioned inside of the extensions 22 and 23 at the lower ends of the rear portions of the couch ends 1 and 2.

Extending from the rear faces of the inwardly extending webs of the angle irons 19, there are formed the hook members 24 for receiving the frame portions of the extension bed section.

These hook members 24, see particularly Fig. 7, each have an upwardly extending nose 25 spaced from the web portion of the angle iron 19 to form a seat for the frame portion of the extension bed section. The extension bed section includes a spring fabric 26 supported on an angle iron frame 27 having a straight full length angle iron 28 constituting one longitudinal side of the frame connected to a U-shaped angle iron 29 having two end portions 30 and 31, a single longitudinally extending portion 32 and inclined intermediate corner portions 33 and 34. The vertically extending web of the angle iron 28 is cut away adjacent the ends of the angle iron to form a clearance for the mechanism for controlling the movement of the extension bed section relative to the main bed section. The vertically extending webs of the angle irons 28 and 29 extending down from the horizontally extending webs thereof serve as supports for a wood structure or filler 35, 36 cut to conform to the shape desired. In the present instance, the outer surfaces of two corners of the wood portion 35, see particularly Figs. 1 and 6 are rounded and the wood portion 36 is cut away at the ends of the angle iron 28, see Figs. 1 and 6 to conform to the cut away portions at the ends of the angle iron 28.

The end portions 30 and 31 of the angle iron 29 alone are connected to the support and control elements now to be described. As an instance, adjacent the angle iron 28, the vertically extending webs of the portions 30 and 31 are provided with the slots 37 and 38 to receive the pins 39 and 40 connected to the ends of the links 41 and 42. In addition to the slots 37 and 38 adjacent the inclined portions 33 and 34, the vertically extending webs of the portions 30 and 31 are provided with the pivot pins 43 and 44 connected to the upper ends of the legs 45 and 46. The legs 45 and 46 are preferably composed of angle iron with their inwardly extending webs in alinement with one another connected at their lower ends to the angle iron cross bar 47 preferably flattened at the ends as shown and with the outer faces of the angle iron extending outwardly relatively to the frame 27.

The pins 39 and 40 intermediate their engagement with the end portions 30 and 31 and the links 41, 42, pass through the slots 48 and 49 in the extended webs 50, 51 of the angle iron legs 52, 53. The slots 48, 49 extend parallel and adjacent to the corners of the angle irons 50, 51. The inwardly extending webs 54, 55 of the angle irons 50, 51 on the other hand are preferably in alinement with one another as shown and provided with openings or orifices 56 to receive the noses 25 of the hook members 24 on the angle irons 19.

The inner faces of the webs 54, 55 are provided with the journals 57, 58 for the longitudinally extending rod 59. The oscillation of this rod 59 in the journals 57, 58 is limited by the pins 60 cooperating with the slots 61 in the journals 57, 58.

The rod 59 not only serves as a brace for the lower ends of the angle irons 52, 53 but also as an intimate part of the control mechanism now to be described. Assume that the angle irons 19 with the hook members 24 extending through the recesses 56. In this case, the lower ends of the angle irons 52, 53 provided with the shoes 62, 63 are raised from the supporting surface, see Figs. 2 to 5 inclusive. The pins 39, 40 have connected to their inner ends the bent links 64, 65. Between the bent links 64, 65 and the links 41, 42 respectively in the present instance, the pins 39, 40 have pivotally connected thereto the upper ends of the short links 66, 67. The lower ends of the short links 66, 67 are pivotally connected to the ends of the bent links 68, 69, the other ends of which links are pivotally connected to the inner faces of the webs 70, 71 of the legs 45, 46.

The pivotal connection of the links 68, 69 with the legs 45, 46 is disposed between the pivotal connection of the links 41, 42 with the legs 45, 46 and the free ends of the legs 45, 46. The pivotal pins 72, 73 connecting the links 66, 67 with the links 68, 69 are slidably mounted in the slots 74, 75 in the webs 50, 51 of the angle irons 52, 53. The slots 74, 75 are parallel to the slots 48, 49 in the webs 50, 51 but adjacent the free edges of the webs 50, 51 and positioned nearer the shoes 62, 63 than are the slots 48, 49. The pairs of slots 48, 49 and 74, 75 are in addition parallel to the standards 19 and therefore incline away from the rear edges of the couch ends 1 and 2 in their downward direction so that the extension bed section will move to and away from the main bed section when moved into and out of low back position respectively.

The bent links 64, 65 are pivotally connected to the arms 76, 77 fixed to the rod 59. The rod 59 also has extending rearwardly therefrom the pedal levers 78 and 79 having the pedals 80, 81 at the free ends thereof.

With the mechanism so far described, it will be seen that when the extension bed section is in bed formation, that shown in Fig. 2, it will only be necessary to engage the bar 47 and raise the same in order to initiate the movement of the extension bed section into couch back formation. Initially it will then appear that the extension bed section rocks about the pins 39, 40 at the upper ends of the slots 48, 49 while sliding outwardly along the slots 37, 38 until the bed section 11 assumes the position shown in Fig. 3 when due to the weight of the bed section 11 and the fact that the slots 37, 38 are now in alinement with the slots 48, 49 and parallel to the slots 74, 75, the extension bed section 11 may by its own weight slide downwardly into the position shown in Fig. 4 where the pins 39, 40 and 72, 73 approach the lower ends of the slots 48, 49 and 74, 75 respectively. In order to steady the section 11 in this couch back position, the brackets 82, 83 are provided, preferably secured to the outer faces of the webs 50, 51 clearing the path of movement of the pins 72, 73 and then extending inwardly toward one another and in alinement with one another to form the stop arms 84, 85 which are positioned to engage the lower or outer edges of the links 68, 69 in this couch back position.

When it is now desired to return the extension bed section 11 into bed formation, that shown in Fig. 2, it is only necessary for the operator or attendant to engage either of the foot pedals 80 or 81 and depress the same, initially to return the extension bed section into the position shown in Fig. 3 when by its own weight, the extension bed section will normally swing outward into the bed formation, that shown in Fig. 2. When so extended in bed formation, the links 68, 69 and 41, 42 will determine the position of the legs 45, 46 so long as the angle irons 52, 53 are secured to the hook members 24. However, should it be desired to separate the extension bed

section 11 from the main bed section 3, into the position shown in Fig. 7, then in order to fix the position of the legs 45, 46, it is desirable to add the link 86 pivoted to the outer face of the web 70 of the leg 45 and have a notch 87 to receive the pin 88 on the outer face of the link 68. As an added precaution, the web 71 of the leg 46 may also be provided with a similar link 86 provided with a similar recess 87 to engage a similar pin 88 on the link 69.

Preferably as shown, the stop portions 84, 85 are inclined to form a wedge with the inwardly extending webs of the angle irons 19 in the interest of steadying the bed section 11 in couch back position.

Preferably the free ends of the legs 45, 46 are also provided with the well known pivotally mounted shoes 89.

While not intended to be limited to the same, the present arrangement of a main bed section 3, extension bed section 11 and control mechanism just described is particularly suited for a couch bed having a built up mattress portion on each of the bed sections, such as the inner spring upholstered portion 90 built up on the frame 4 of the main bed section 3 and the inner spring upholstered portion 91 built up on the frame 27 of the extension bed section 11 so that these inner spring upholstered sections 90 and 91 may have their longitudinally extending faces adjacent to and parallel to one another as shown in Fig. 2 in bed formation and clearance formed between a longitudinal end of the inner spring upholstered portion 90 and the frame 27 to permit actuating the inner spring upholstered portion 91 of the extension bed section 11 into couch back position, that shown in Fig. 4.

The particular control mechanism on the other hand is particularly adapted for this construction since it permits the extension bed section to drop down from the position shown in Fig. 3 to the position shown in Fig. 4 where the present popular low couch back will be formed as shown in Fig. 4 as distinguished from the high couch back shown in Fig. 3. This arrangement also enables one to convert a couch having a back into separate twin beds each of which is of the conventional twenty-six inch width.

It will also appear, especially from Fig. 2 that when the extension bed section 11 is moved into the raised position shown in Fig. 3, preparatory to moving it into bed formation that thereupon the outward swinging of the bed section 11 into the bed formation shown in Fig. 2 will cause the leg members 45, 46 to swing away from the frame 27, the links 41, 42 and 68, 69 determining the position of the legs 45, 46 and the position of the legs 45, 46 through the pivot pins 43, 44 determining the position of the angle irons 30, 31 and the slot 37, 38 respectively. In other words, as the back turns rearwardly the legs 45, 46 act to force the angle irons 30, 31 inwardly moving the slots 37, 38 inwardly on pins 39, 40 until the limited position of Fig. 2 is reached when the horizontally extending webs of the end portions 30, 31 will then rest on the upper ends of the webs 54 and 55 of the angle irons 52 and 53 respectively so that in this position the extension bed section 11 cannot descend along the slots in the direction of the slots in the angle irons 52 and 53 and that this descent of the extension bed section 11 can only take place when the bed section 11 is swung up into the couch back position that shown in Fig. 3 when the horizontally extending webs of the end portions 30 and 31 clear the upper ends of the angle irons 52 and 53 and permit the bed section 11 to descend into the position shown in Fig. 4.

It will also appear that the stops 92 and 93 forming continuations in the present instance of the pivotal pins connecting the links 68 and 69 to the legs 45 and 46 respectively engage the lower or outer edges of the links 41 and 42 in couch back position, see particularly Fig. 4, thereby cooperating with the stop portions 84 and 85 further to steady the extension bed section 11 in couch back position, particularly when pressure is exercised against it, as an instance by the back of the user leaning against the same.

It is obvious that various changes and modifications may be made to the details of construction without departing from the general spirit of the invention as set forth in the appended claims.

I claim:

1. The combination of a main bed section, an extension bed section having a supporting frame including slots and removably connected to said main bed section, supporting members pivotally connected to said extension bed section and cooperating with said supporting frame to support said extension bed section in horizontal bed formation, and control means connecting said supporting members with said supporting frame operable to actuate said supporting members into and out of supporting position and to actuate said extension bed section into or out of initial erect position, said extension bed section having a pin and slot connection with said supporting frame and resting on the upper ends of said supporting frame in horizontal bed formation, said control means including links pivotally connected to said supporting members and slidably connected to slide in the slots of said supporting frame, the slots in said supporting frame being substantially vertical to enable slidable movement of the pivotal connections of said links during the actuation of said extension bed section from initial erect position into and out of low back forming position.

2. The combination of a main bed section having a frame including hook members and slots, an extension bed section having a supporting frame including orifices to receive said hook members, supporting members pivotally connected to said extension bed section and cooperating with said supporting frame to support said extension bed section in horizontal bed formation, and control means connecting said supporting members to said supporting frame and operable to actuate said supporting members into and out of supporting position and to actuate said extension bed section into and out of initial erect position, said extension bed section having pin and slot connections with said supporting frame and resting on the upper ends of said supporting frame in horizontal bed formation, said control means including links pivotally connected to said supporting members and slidably connected to slide in the slots of said supporting frame, the slots in said supporting frame being substantially vertical to enable slidable movement of the pivotal connections of said links during the actuation of said extension bed section from and into initial erect position into and out of final low back formation.

3. The combination of a main bed section, an extension bed section having a supporting frame removably connected to said main bed section, supporting members pivotally connected to said

extension bed section and cooperating with said supporting frame to support said extension bed section in horizontal bed formation, and control means connecting said supporting members to said supporting frame operable to actuate said supporting members into and out of supporting position and to actuate said extension bed section into and out of initial erect position, said extension bed section having slots and resting on the upper ends of said supporting frame in horizontal bed formation, pins slidably mounted in said slots, said control means including links pivotally connected to said supporting members and terminating in said pins, and there being upwardly extending slots in said supporting frame to enable slidable movement of said pins and therewith movement of said extension bed section into or from a descended final low back position from or into a final erect position during the actuation of said extension bed section into and out of final low couch back formation.

4. The combination of a main bed section, an extension bed section, a frame for removably connecting said extension bed section to said main bed section, and means for interchangeably actuating said extension bed section into couch back or bed position, said means including slot and pin connections having slots in said frame and in said extension bed section and common pins extending through the slots of said frame and extension bed section to enable movement of said extension bed section into adjacent longitudinal engagement with said main bed section in double bed formation and into low back couch position where one longitudinal edge of said extension bed section protrudes below said main bed section, said means also including devices cooperating with said slot and pin connections to control and guide said extension bed section in its movement aforesaid.

5. The combination of a main bed section, an extension bed section, a frame removably connecting said main bed section to said extension bed section, and means for interchangeably actuating said extension bed section into couch back or bed position, said means including supporting members pivotally connected to said extension bed section, there being slots in said extension bed section and in said frame, pins slidably mounted in said slots and links pivotally connecting said supporting members to said pins for movement of said extension bed section into adjacent longitudinal engagement with said main bed section in double bed formation and into low back couch position where one longitudinal edge of said extension bed section protrudes below said main bed section, said means also including devices cooperating with said slot and pin connections to control and guide said extension bed section in its movement aforesaid, the pins extending through the slots of said frame also extending through slots in said extension bed section.

6. A supporting frame, a bed section removably connected to said frame, said bed section having a frame, and means for interchangeably actuating said bed section into and out of bed position, said means including supporting members pivotally connected to said bed section frame, there being slots in said bed section frame and in said supporting frame, pins slidably mounted in said slots, and links pivotally connecting said supporting members to said pins for movement of said extension bed section into and out of bed position, said means also including devices cooperating with said slot and pin connections to control and guide said extension bed section in its movement aforesaid, the pins extending through the slots of said frame also extending through slots in said extension bed section.

7. A couch bed comprising a main bed section, a supporting frame having slots therein associated with said main bed section, an extension bed section having slots therein, pins slidably mounted in said slots, supporting members pivotally connected to said extension bed section, links pivotally connected to said supporting members and to said pins to control the movement of said extension bed section into adjacent longitudinal alinement with said main bed section in double bed formation and into low couch back position where one longitudinal edge of said extension bed section protrudes below said main bed section and devices cooperating with said slot and pin connections to control and guide said extension bed section in its movement aforesaid, the pins extending through the slots of said frame extending through the slots in said extension bed section.

8. A couch bed comprising a main bed section, a supporting frame having slots therein associated with said main bed section, an extension bed section having slots therein, pins slidably mounted in said slots, supporting members pivotally connected to said extension bed section, links pivotally connected to said supporting members and to said pins, and stop brackets forming wedges with said supporting frame to receive said links and steady said extension bed section in low couch back position.

9. A couch bed comprising a main bed section, a supporting frame having slots therein associated with said main bed section, an extension bed section having slots therein, pins slidably mounted in said slots of which pins, the pins extending through the slots of the frame also extend through slots in the extension bed section, supporting members pivotally connected to said extension bed section, links pivotally connected to said supporting members and to said pins, a rod rockably mounted in said supporting frame, arms fixed to said rod, link members connecting said arms to said links, and foot control levers on said rod actuatable to raise said extension bed section while in couch back position before moving the same into bed formation.

10. A couch bed comprising a main bed section, a supporting frame having slots therein associated with said main bed section, an extension bed section having slots therein, pins slidably mounted in said slots of which pins, the pins extending through the slots of the frame also extend through slots in the extension bed section, supporting members pivotally connected to said extension bed section, and links pivotally connected to said supporting members and to said pins, said extension bed section in bed position resting on the upper edges of said supporting frame and on said supporting members.

11. A couch bed comprising a main bed section, a supporting frame having slots therein associated with said main bed section, an extension bed section having slots therein, pins slidably mounted in said slots of which pins, the pins extending through the slots of the frame also extend through slots in the extension bed section, supporting members pivotally connected to said extension bed section, links pivotally connected to said supporting members and to said pins, locking arms having notches therein pivotally connected to said supporting members, and locking

pins on said links to receive the notches of said locking arms to anchor the supporting members in supporting position when said extension bed section is in bed formation.

12. A couch bed comprising a main bed section having an inner spring mattress member, an extension bed section having an inner spring mattress member, a supporting frame having slots therein spaced from said main bed section a distance corresponding to the depth of the inner spring mattress member of said extension bed section, there being slots in said extension bed section, pins slidably mounted in said slots of which pins, the pins extending through the slots of the frame also extend through slots in the extension bed section, supporting members pivotally connected to said extension bed section to cooperate with said supporting frame to support said extension bed section in bed formation, and links pivotally connected to said supporting members and to said pins to control the movement of said extension bed section into adjacent longitudinal alinement with said main bed section in double bed formation and into low couch back position where one longitudinal edge of said extension bed section protrudes below said main bed section.

13. A couch bed comprising a main bed section having an inner spring mattress member, an extension bed section having an inner spring mattress member, a supporting frame including standards, each having a pair of substantially vertically extending slots therein, said supporting frame being spaced from said main bed section a distance corresponding to the depth of the inner spring mattress member of said extension bed section, there being a slot in each end of said extension bed section and in substantial alinement with the end thereof and adjacent to a longitudinal edge thereof operable adjacent to said main bed section, pins slidably mounted in said slots of which pins, the pins extending through the slots of the frame also extend through slots in the extension bed section, supporting members pivotally connected to said extension bed section to cooperate with said supporting frame to support said extension bed section in bed formation, and links pivotally connected to said supporting members and to said pins to control the movement of said extension bed section into adjacent longitudinal alinement with said main bed section in double bed formation and into couch back position where one longitudinal edge of said extension bed section protrudes below said main bed section.

14. A couch bed comprising a main bed section having an inner spring mattress member, an extension bed section having an inner spring mattress member, a supporting frame including standards, each having a pair of substantially vertically extending slots therein, said supporting frame being spaced from said main bed section a distance corresponding to the depth of the inner spring mattress member of said extension bed section when in back formation, there being a slot in each end of said extension bed section and in substantial alinement with the end thereof, said longitudinal edge of said extension bed section being and adjacent to a longitudinal edge thereof operable from and to back formation into and out of bed formation adjacent to said main bed section, two pairs of pins, one pair common to and slidable in the slots of said extension bed section and one of the pairs of slots in said supporting frame, the other pair of pins slidably mounted in the other pair of slots in the supporting frame, supporting members pivotally connected to said extension bed section to cooperate with said supporting frame to support said extension bed section in bed formation, two pairs of links, one link of each pair pivotally connected to one of said supporting members and to one of said common pins, the other link of each pair pivotally connected to one of said supporting members and to the other of said pins, a connecting link connecting the pins in each standard to one another, a rod rockably mounted in said supporting frame, arms fixed to said rod, link members, each connecting one of said arms to the pin at the upper end of one of said connecting links, and foot control levers on said rod actuatable to raise said extension bed section while in back position before moving the same into bed formation.

15. A couch bed comprising a main bed section, a supporting frame having a pair of substantially vertical slots therein and associated with said main bed section, an extension bed section having a slot in one end thereof adjacent a longitudinal edge of said extension bed section, said longitudinal edge being operable adjacent said main bed section, a pin slidable in, and common to, one of the slots in said supporting frame and to the slot in said extension bed section, a second pin slidably mounted in the other slot in said supporting frame, a supporting member pivotally connected to said extension bed section, an upper link pivotally connected to said supporting member and to said common pin, a second link pivotally connected to said supporting member and to said other pin, a connecting link connecting said pins to one another, a rod rockably mounted in said supporting frame, an arm fixed to said rod, a link member connecting said arm to said other pin, and a foot control lever on said rod actuatable to raise said extension bed section while in back position before moving the same into bed formation.

16. A couch bed comprising a main bed section having an inner spring mattress member, an extension bed section having an inner spring mattress member, an inclined supporting frame having slots therein on the upper outwardly inclined end spaced from said main bed section a distance corresponding to the depth of the inner spring mattress member of said extension bed section, there being slots in said extension bed section, pins slidably mounted in said slots of which pins, the pins extending through the slots of the frame also extend through slots in the extension bed section, supporting members pivotally connected to said extension bed section to cooperate with said supporting frame to support said extension bed section in bed formation, links pivotally connected to said supporting members and to said pins, a rod rockably mounted in said supporting frame, arms fixed to said rod, link members connecting said arms to said links, foot control levers on said rod actuatable to raise said extension bed section while in back forming position before moving the same into bed formation, and stop brackets inclined outwardly from said supporting frame to form wedges with said supporting frame to receive said links and properly position said extension bed section in rearwardly inclined back forming position.

17. The combination of a main bed section, an extension bed section having an interchangeable back and bed frame with slots therein, a supporting frame removably connected to said main bed section and having slots therein, supporting members pivotally connected to said interchange-

able frame, common pin connections extending through the slots in said interchangeable frame and said supporting frame, and control means including links pivotally connected to said supporting members at one end and to said common pin connections at their other end, and lifting links connecting said common pin connections with the lower end of said supporting frame, the slots in said supporting frame being substantially vertical to enable slidable movement of the pin connections of said links during the actuation of said extension bed section from and into initial erect position into and out of final low back formation and also to enable movement of said interchangeable frame to and from said main bed section during the actuation of said interchangeable frame into and out of back formation.

18. The combination of a main bed section, an extension bed section, a frame for removably connecting said extension bed section to said main bed section, and means for interchangeably actuating said extension bed section into couch back or bed position, said means including slot and pin connections having slots in said frame and in said extension bed section with the slots in the frame and extension bed section transverse to one another in bed formation and parallel to one another in couch formation and common pins extending through the slots of said frame and extension bed section to enable movement of said extension bed section into adjacent longitudinal engagement with said main bed section in double bed formation and into low back couch position where one longitudinal edge of said extension bed section protrudes below said main bed section, said means also including devices cooperating with said slot and pin connections to control and guide said extension bed section in its movement aforesaid.

19. The combination of a main bed section, an extension bed section, a frame removably connecting said main bed section to said extension bed section, and means for interchangeably actuating said extension bed section into couch back or bed position, said means including supporting members pivotally connected to said extension bed section, there being slots in said extension bed section and in said frame, pins slidably mounted in said slots and links pivotally connecting said supporting members to said pins for movement of said extension bed section into adjacent longitudinal engagement with said main bed section in double bed formation and into low back couch position where one longitudinal edge of said extension bed section protrudes below said main bed section, said means also including devices cooperating with said slot and pin connections to control and guide said extension bed section in its movement aforesaid, the pins extending through the slots of said frame also extending through the slots in said extension bed section with the slots in the frame and extension bed section transverse to one another in bed formation and parallel to one another in couch formation.

20. A supporting frame, a bed section removably connected to said frame, said bed section having a frame, and means for interchangeably actuating said bed section into and out of bed position, said means including supporting members pivotally connected to said bed section frame, there being slots in said bed section frame and in said supporting frame, pins slidably mounted in said slots, and links pivotally connecting said supporting members to said pins for movement of said extension bed section into and out of bed position, said means also including devices cooperating with said slot and pin connections to control and guide said extension bed section in its movement aforesaid, the pins extending through the slots of said frame also extending through the slots in said extension bed section with the slots in the frame and extension bed section transverse to one another in bed formation and parallel to one another in couch formation.

21. A couch bed comprising a main bed section, a supporting frame having slots therein associated with said main bed section, an extension bed section having slots therein, pins slidably mounted in said slots, supporting members pivotally connected to said extension bed section, links pivotally connected to said supporting members and to said pins to control the movement of said extension bed section into adjacent longitudinal alinement with said main bed section in double bed formation and into low couch back position where one longitudinal edge of said extension bed section protrudes below said main bed section, and devices cooperating with said slot and pin connections to control and guide said extension bed section in its movement aforesaid, the pins extending through the slots of said frame also extending through the slots in said extension bed section, with the slots in the frame and extension bed section transverse to one another in bed formation and parallel to one another in couch formation.

22. The combination of a main bed section, an extension bed section, a frame removably connecting said main bed section to said extension bed section, and means for interchangeably actuating said extension bed section into couch back or bed position, said means including supporting members pivotally connected to said extension bed section, there being slots in said extension bed section and in said frame, pins slidably mounted in said slots and links pivotally connecting said supporting members to said pins for movement of said extension bed section into adjacent longitudinal engagement with said main bed section in double bed formation and into low back couch position where one longitudinal edge of said extension bed section protrudes below said main bed section, said means also including devices cooperating with said slot and pin connections to control and guide said extension bed section in its movement aforesaid, the pins extending through the slots of said frame also extending through the slots in said extension bed section with the slots in the extension bed section horizontal and the slots in the frame transverse to the slots in the extension bed section in bed formation and parallel to the slots in the extension bed section in couch formation.

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