J. LUPPINO.

CONVERTIBLE DAVENPORT BED.

APPLICATION FILED AUG. 4, 1917.

1,386,789. Patented Aug. 9, 1921.

3 SHEETS—SHEET 1.

Fig. 1.

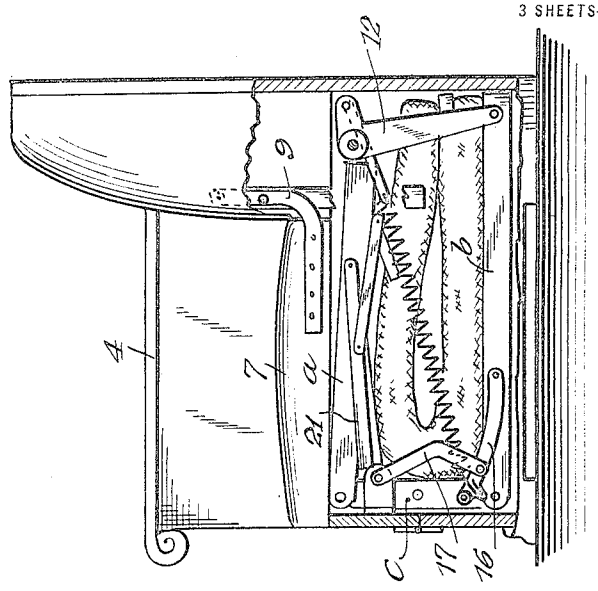
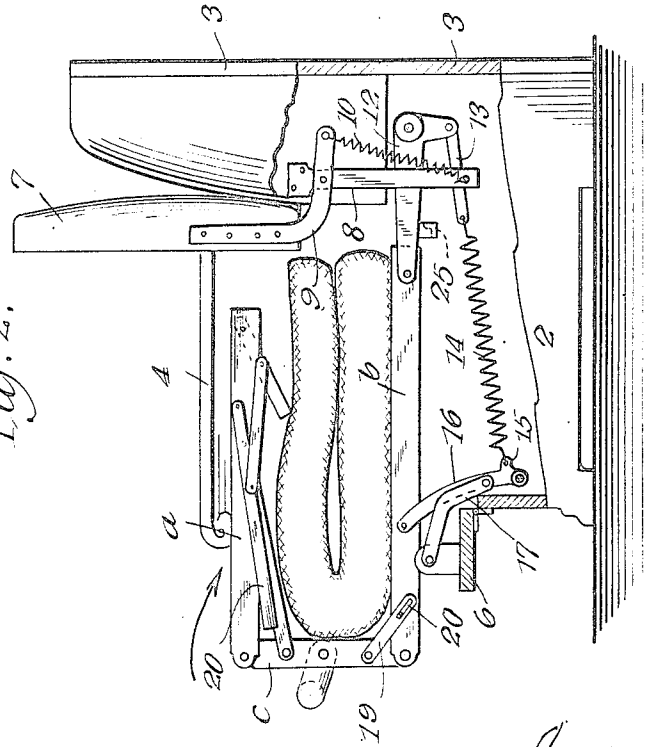


Fig. 2.



WITNESS:

INVENTOR

BY

ATTORNEY

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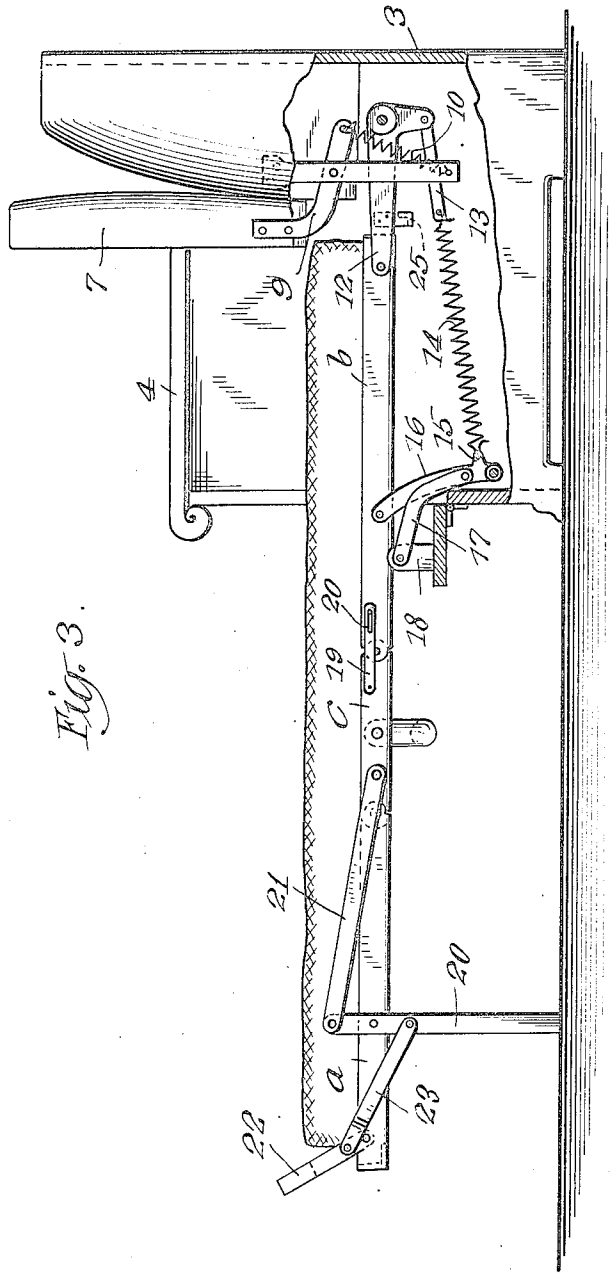


Fig. 3.

WITNESS:

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3 SHEETS—SHEET 3.

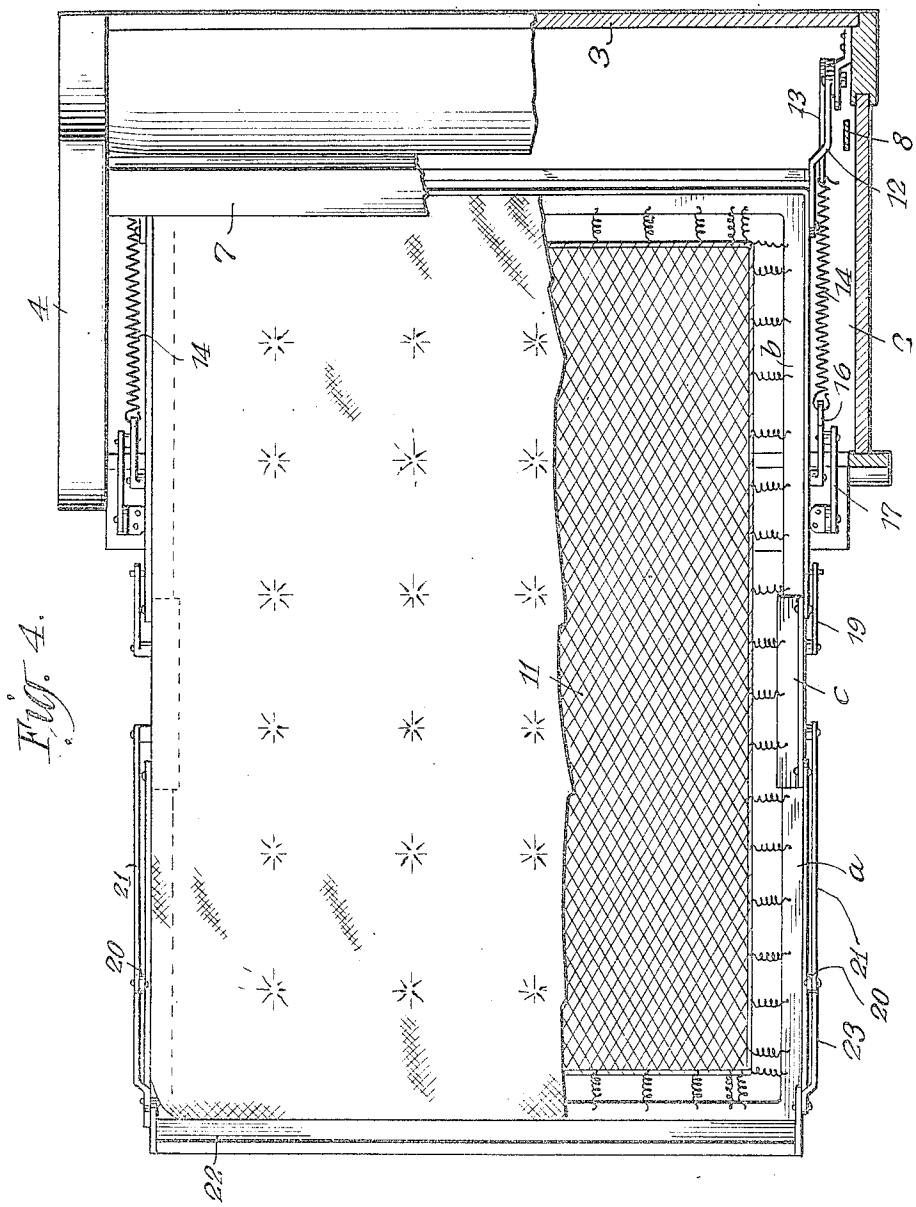


Fig. 4.

WITNESS:

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JOSEPH LUPPINO, OF NEW YORK, N. Y.

CONVERTIBLE DAVENPORT-BED.

1,386,789. Specification of Letters Patent. Patented Aug. 9, 1921.

Application filed August 4, 1917. Serial No. 184,484.

To all whom it may concern:

Be it known that I, JOSEPH LUPPINO, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Convertible Davenport-Beds, of which the following is a specification.

This invention relates to improvements in convertible davenports, the object of the invention being to provide an improved convertible bed consisting of a sectional spring mattress comprising three bed sections, an inner, an outer and a middle section, one forming the head and another the foot thereof and which sectional spring mattress can be readily stowed away in the base or box of the davenport, but by a single movement can be raised therefrom and by continuing this raising movement, opened lengthwise to form a full length bed having its long axis transverse to and greater than its width, while by a similar reverse movement the sectional spring mattress can be readily returned to its closed position whereupon the long axis of the davenport will be greater than the transverse axis of the so folded sectional spring mattress.

A further object of the invention is the provision of a three section spring mattress of the character described, all connected with the frame work of the davenport through the medium of one as the inner section only, whereby a much simplified and more easily operated article of this kind is obtained and which can be readily and easily operated by a woman.

A further object of the invention is the provision of an improved convertible bed of the character specified having so interconnected therewith an automatically operated head or foot rail, supporting legs for one section and a shiftable part of the davenport frame work whereby these parts are all automatically operated on the opening or closing of the sectional spring mattress by the simple movement of raising and opening the sections or vice versa.

In the drawings accompanying and forming a part of this specification,

Figure 1 illlustrates the present improvement applied to a davenport, the view being partly in section and broken away to illustrate the bed sections in their closed positioned; Fig. 2 is a similar view illustrating the bed sections in their raised position in readiness to be opened; Fig. 3 is a similar view illustrating the bed sections in their open position to form a bed; and Fig. 4 is a top view of the improvement partly in section with parts thereof broken away to more clearly illustrate the improvement.

Similar characters of reference indicate corresponding parts in the several figures of the drawings.

In the present improvement, the box 2 forms the base of a davenport which may comprise a back 3, and a pair of arms 4, one at each end, the foregoing forming the frame-work for supporting the several parts of this improved convertible bed. The box is provided at its forward side with a hinged closure or board 6 automatically operated in the manner hereinafter described, which shiftable board completely closes the box when the seat 7 is lowered. To a pair of standards 8 carried by the framework one at each end, the seat is suitably pivoted by angle bars 9, a spring or springs 10 being used for facilitating the lifting of the seat which is thrown back against the upholstered back of the davenport when it is desired to open or close the bed. The forward edge of the seat rests upon the shiftable board hereinbefore referred to when the structure is in its closed position. The bed proper comprises three sections,—a head or front section *a*, a foot or rear section *b* and a middle or intermediate section *c*, to which the head and foot sections are pivotally connected or hinged. The middle or intermediate section is provided with a suitable drop-formed brace or bar extending from end to end thereof and in position to prevent the sections from collapsing in use. These three sections are provided with a suitable spring fabric or mattress 11 capable of being folded with the framework forming the sections and which framework consists of suitable side bars hinged in the manner hereinbefore described, the head and foot sections being provided at their outer ends with suitable crosswise extending bars.

In the present instance the middle section is smaller than the head and foot sections. The foot section is pivotally connected to a bell-crank formed lever 12 at each end which in turn is pivotally supported by the framework of the davenport and the shorter end of each bell-crank lever is connected to a link 13, which in turn is connected by means of coil spring 14 with a projecting lug 15

of a link 16 pivotally connected to the framework and also pivotally connected to the foot section somewhat in the rear of its pivotal connection with the middle section. Pivotally connected to the link 16 is a curved arm or link 17, the opposite end of which is connected to a projection or lug 18 secured to the shiftable front board of the box. By means of this linkage connection this shiftable board is opened or closed when the bed sections are manipulated. The foot and middle sections are connected by a short link 19 having a slot 20 working on a pin shown secured to the foot section. The spring 14 facilitates the movement of the structure by the user. Pivotally secured to the head section at each end is a shiftable leg 20 linked at its upper end by a bar 21 to the middle section to which this bar is pivotally secured, and pivotally secured to the outer end of the head section is a pillow or head rest 22 pivotally connected at each end by a link 23 with the leg 20 in such manner that when the bed is folded or opened the pillow rest will be automatically folded down or opened up in readiness for use. The bell-crank levers 12 are connected by a crosswise extending bar 25 which prevents the twisting of the structure. The links 19 hereinbefore referred to connecting the middle and foot sections act as a lock when the bed is open in addition to connecting the two sections together. In manipulating this improved convertible bed to open the same, the seat is first swung upward against the back thereby exposing the bed sections housed in their box, then by grasping the head section the three sections can be readily pulled upward and as they are pulled upward they are swung slightly forward by their supporting connections into the position shown in Fig. 2, whereupon the head section can, by a single movement, be thrown upwardly and outwardly thereby shifting the middle section into a horizontal position from its vertical position which it assumes when the sections are in the box or in the position shown in Fig. 2, thus forming a full-length bed comprised of but three sections raised or lowered in their box by single movement and opened into the full-length bed or returned into the position shown in Fig. 2 by a single movement also.

The present improvement does away with the necessity of providing a fourth section connecting the foot section with the framework of the structure and therefore provides an improved convertible bed much simpler in construction and operation and much less expensive to manufacture.

It will be observed as hereinbefore stated that when the sections are raised from their housed position as shown in Fig. 1 into the position shown in Fig. 2 the pivotal connecting supports therefor are so located that these sections are shifted forward while at the same time the swinging front board of the box is lowered to permit this and in this position of the sections they can be easily manipulated so as to open the same into a full-length bed.

It will be observed further that the sole support for the three sections on the framework comprises a pair of levers at each end, one comprising a bell-crank lever pivotally connected to the rear of the foot section and to the framework and the other comprising a link or lever pivotally connected at its lower end to the framework and at its upper end forwardly of the middle of the foot section and that this last lever also constitutes means through a pair of suitable links for swinging the front board open or closed as the bed sections are manipulated.

It will also be observed that the pillow rest is pivotally connected to the head section and to the automatically shiftable leg which in turn is linked to the middle section, so that on the manipulation of the leg sections in the manner hereinbefore described, the leg will either be opened or closed and at the same time the pillow rest will be opened or closed automatically so that all that the operator has to do in manipulating this bed in order to properly position the leg either in its supportng position or its closed position and to properly position the pillow rest either in its open or folded position and to properly manipulate the swinging board of the box so as to swing it open or closed is merely by a single movement to raise the three sections, by grasping the head section from the position shown in Fig. 1 to that shown in Fig. 2 or vice versa, and then by a continued single movement open the structure into the position shown in Fig. 3 or return it from such position to that shown in Fig. 2, the raising and lowering of the sections from and into their housed position in the box being facilitated by the springs 14 connected with the bell-crank levers 12. When the sections are housed in the box the seat is thrown down so that the sections are completely inclosed from sight as well as from dust and dirt.

From the foregoing, it will therefore be seen that I have provided an improved three-section convertible bed supported upon the framework by a very simple arrangement of levers or links comprising merely two short levers or links at each end of the foot section, thus doing away with a complicated system of linkage or lever connections commonly used in convertible bed structures

It will also be observed that in the present improvement the three spring mattress sections form, as it were, a three-sided box or box-like space for the bedding when the

sections are closed, this space being closed by the stationary back or framework while the hanger 12 enables all of the available space in the base of the davenport to be utilized, so that the three sections can be sufficiently wide to form a full length bed without appreciably widening the framework, since there is no rotary seat, which has to be revolved in the framework base in order to open and close the sections.

In my prior Patent No. 1,139,785 dated May 18, 1915, a four section mattress is shown comprising a head section B, a foot section D, a middle section C, and a link or intermediate section F. In the present improvement, however, the bed comprises but three sections, the head section, the foot section and the intermediate or link section, thus doing away with the section C of my prior patent, and I believe that I am the first to provide a full length convertible davenport bed opening lengthwise and consisting of but three sections, spring mattress sections and particularly such a structure in which all of such sections are supported on the frame work through the medium of only one as the inner section, and also believe that I am the first to provide a sectional spring mattress of the character described in which the inner section is supported at the rear thereof by a pair of hanging levers.

It will be observed that the levers 12 suspend the folded sections of the bed, that is to say these links operate as hangers in that they are pivotally connected to the framework of the davenport above the section *b* and practically above the section *a*. These sections are folded so that the folded sections are hung from the davenport frame-work by these hangers, in consequence of which the sections can be more readily raised and carried forward from under the pivotal point of the hangers with the davenport framework without interfering with the bottom of the upholstered back of the davenport. In other words, by using a single hanger at each end of the rear of the inner section the folded sections are thus hung from the davenport frame-work so that they can be readily raised and moved forward as shown in Fig. 2.

Thus it will be observed that in the present improvement it is not necessary that the back usually of an upholstered form be a shiftable or movable back, even though the mattress sections are so housed in the framework that the rear of the two main sections is below and to the rear of the front portion of such back because by providing the automatically shiftable front board 6 I obtain sufficient space to enable the sections to be raised and shifted forward through the swinging linkage connection between the rear section only and the framework.

It will be understood that the various details may be more or less changed without departing from the spirit or scope of the present improvement.

I claim as my invention:

1. A convertible davenport bed comprising a framework, a plurality of spring mattress sections hinged together and openable to form a bed and including a rear section, and means for supporting said sectional mattress on the framework through the medium only of the rear section and including a pair of hangers, each pivotally connected at one end to the rear section and at its opposite end to the framework, said pivotal connections with the rear section and the framework being in substantially horizontal alinement when the sections are opened to form a bed and in substantially vertical alinement when the sections are folded, whereby the sections are hung from the framework at the rear thereof when in folded position.

2. A convertible davenport bed comprising a frame-work having a fixed back section, a three-section spring mattress, all the sections of which are of less width than the width of the framework but of sufficient width when unfolded to form the ordinary full length bed transversely of the length of the sections, and means connecting the inner section only with the framework below the back whereby when folded the rear of a pair of sections will be below and to the rear of the front of the back and comprising only a swinging linkage connection including a linkage connection between the rear of the inner section and the framework, said framework having a shiftable front board operatively connected with said sections and automatically operative to permit said sections to be raised from under the back and shifted forward to be opened without moving said back, the linkage connection between the rear of the inner section and the framework having connection with the framework above the inner section when the sections are folded whereby said sections are suspended from the framework.

3. A convertible davenport bed comprising a framework having a fixed back section, a three-section spring mattress, all the sections of which are of less width than the width of the framework but of sufficient width when unfolded to form the ordinary full length bed transversely of the length of the sections, and means connecting the inner section only with the framework below the back whereby when folded the rear of a pair of sections will be below and to the rear of the front of the back and comprising only a swinging linkage connection including a linkage connection between the rear of the inner section and the framework, said framework having a shiftable front board operatively connected with said sections and automatically operative to permit said sec-

tions to be raised from under the back and shifted forward to be opened without moving said back, the linkage connection between the rear of the inner sections and the framework having connection with the framework above the inner section when the sections are folded whereby said sections are suspended from the framework, said linkage connection also comprising a pair of links pivotally connected to the inner section and the framework and spring connected with said hanging links.

4. A convertible davenport bed consisting of a three-section spring mattress comprising a front, a middle and a rear section hinged together and openable to form a bed, a framework constructed to support said sections and to house the same when closed, and means for supporting the three sections on the framework and comprising a pair of links at each end thereof, one of said links pivotally connected at one end to the rear section and at its opposite end to the framework, said last link connections with the rear section and the framework being in substantially horizontal alinement when the sections are opened to form a bed and in substantially vertical alinement when the sections are folded, whereby the sections are hung from the framework in the rear thereof when in folded position and the other of said links pivotally connected to the rear section forwardly of the middle thereof and to the framework.

5. A convertible davenport bed consisting of a three-section spring mattress comprising a front, a middle and a rear section hinged together and openable to form a bed, a framework constructed to support said sections and to house the same when closed, means for supporting the three sections on the framework and comprising a pair of links at each end thereof, one of said links pivotally connected at one end to the rear section and at its opposite end to the framework, said last link connections with the rear section and the framework being in substantially horizontal alinement when the sections are opened to form a bed and in substantially vertical alinement when the sections are folded, whereby the sections are hung from the framework in the rear thereof when in folded position and the other of said links pivotally connected to the rear section forwardly of the middle thereof and to the framework, and a spring connecting said links.

6. A convertible davenport bed consisting of a three-section spring mattress comprising a front, a middle and a rear section hinged together and openable to form a bed, a framework constructed to support said sections and to house the same when closed, means for supporting the three sections on the framework and comprising a pair of links at each end thereof, one of said links pivotally connected at one end to the rear section and at its opposite end to the framework, said last link connection with the rear section and the framework being in substantially horizontal alinement when the sections are opened to form a bed and in substantially vertical alinement when the sections are folded, whereby the sections are hung from the framework in the rear thereof when in folded position and the other of said links pivotally connected to the rear section forwardly of the middle thereof and to the framework, and a spring connecting said links, said spring having its connection with one link below its pivotal connection with the framework and its connection with the other link above its pivotal connection with the framework.

7. A convertible davenport bed comprising a framework, a three-section spring mattress comprising a front, a middle and a rear section hinged together and openable to form a bed, and means for supporting said sectional mattress on the framework through the medium only of the rear section and including a pair of hangers, each pivotally connected at one end to the rear section and at its opposite end to the framework, said pivotal connections with the rear section and the framework being in substantially horizontal alinement when the sections are opened to form a bed and in substantially vertical alinement when the sections are folded, whereby the sections are hung from the framework at the rear thereof when in folded position, each of said hangers comprising a bell crank lever.

8. A convertible davenport bed comprising a three-section spring mattress consisting of a front, a middle and a rear section hinged together and openable to form a bed, a framework constructed to support said sections and to house the same when closed, and means for supporting the three sections on the framework and comprising a pair of links at each end pivotally connected to the rear section and to the framework, one of said links having substantially a horizontal position when the structure is opened and substantially a vertical position when closed, whereby the sections are hung from the framework at the rear thereof when in folded position.

9. A convertible davenport bed comprising a three-section spring mattress consisting of a front, a middle and a rear section hinged together and openable to form a bed, a framework constructed to support said sections and to house the same when closed, and means for supporting the three sections on the framework and comprising a pair of links at each end pivotally connected to the rear section and to the framework, one of said links having substantially a horizontal

position when the structure is opened and substantially a vertical position when closed and the other link having a substantially vertical position when the structure is opened and a substantially horizontal position when closed, whereby the sections are hung from the framework at the rear thereof when in folded position.

10. A convertible davenport bed comprising a framework, said framework having a shiftable front board, a three-section spring mattress comprising a front, a middle and a rear section hinged together and openable to form a bed, means for supporting said sectional mattress on the framework through the medium only of the rear section and including a pair of hangers, each pivotally connected at one end to the rear section and at its opposite end to the framework, said pivotal connections with the rear section and the framework being in substantially horizontal alinement when the sections are opened to form a bed and in substantially vertical alinement when the sections are folded, whereby the sections are hung from the framework at the rear thereof when in folded position, and means for automatically opening and closing said board on the manipulation of the sections.

11. A convertible davenport bed comprising a framework and a three-section shiftable spring mattress consisting of a front, a middle and a rear section hinged together and openable to form a full length bed transversely of the length of the framework, said sectional mattress being supported on the framework through the medium only of the rear section and including a pair of hangers, one at each end pivotally connected to the rear section and said framework, whereby said sections are hung from the framework at the rear thereof when in folded position.

12. A convertible davenport bed comprising a framework and a three-section shiftable spring mattress consisting of a front, a middle and a rear section hinged together and openable to form a full length bed transversely of the length of the framework, said sectional mattress being supported on the framework through the medium only of the rear section and including a pair of hangers, one at each end pivotally connected to the rear section and said framework, whereby said sections are hung from the framework at the rear thereof when in folded position, said framework having a shiftable front board operatively connected with said sections and automatically operative to permit said sections to be raised and shifted forward when the sections are manipulated.

13. A convertible bed structure comprising a frame work and a three section spring mattress consisting of an inner, an outer and an intermediate section hinged together and openable to form a full length bed transversely of the length of the frame work, said sectional mattress being pivotally linked to the frame work through the medium of the inner section only, such linkage connection including a link pivotally connected to the rear of the inner section and having a horizontal position when the sections are opened.

14. A convertible bed structure comprising a frame work and a three section spring mattress consisting of an inner, an outer and an intermediate section hinged together and openable to form a full length bed transversely of the length of the frame work, said sectional mattress being pivotally linked to the frame work through the medium of the inner section only, such linkage connection including a link pivotally connected to the rear of the inner section and having a horizontal position when the sections are opened and a link adjacent to the forward side of the inner section and spring connected with said pivoted link.

Signed at 1822 Park Row Building this 18th day of July, 1917.

JOSEPH LUPPINO.