

[54] **BED CONSTRUCTION**

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[51] Int. Cl. **A47c 23/00**

[58] Field of Search **5/91, 202, 357, 352, 5/345, 355, 361, 361 B**

[56] **References Cited**

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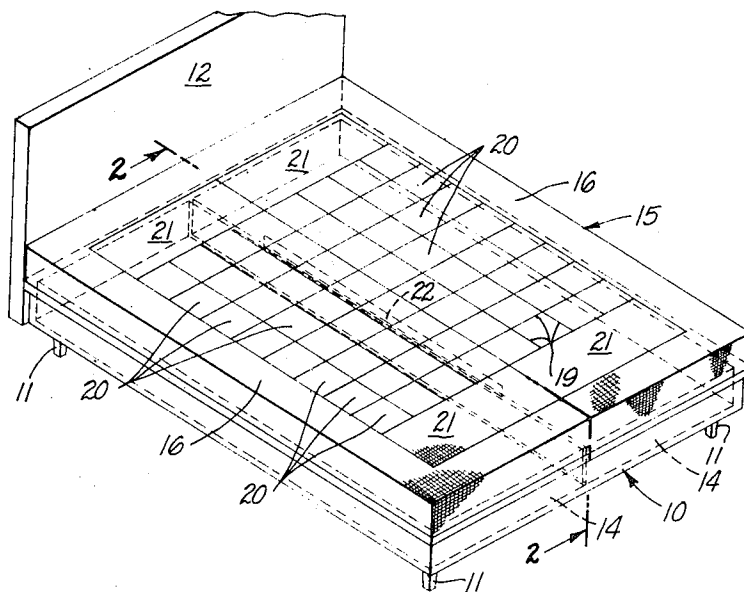
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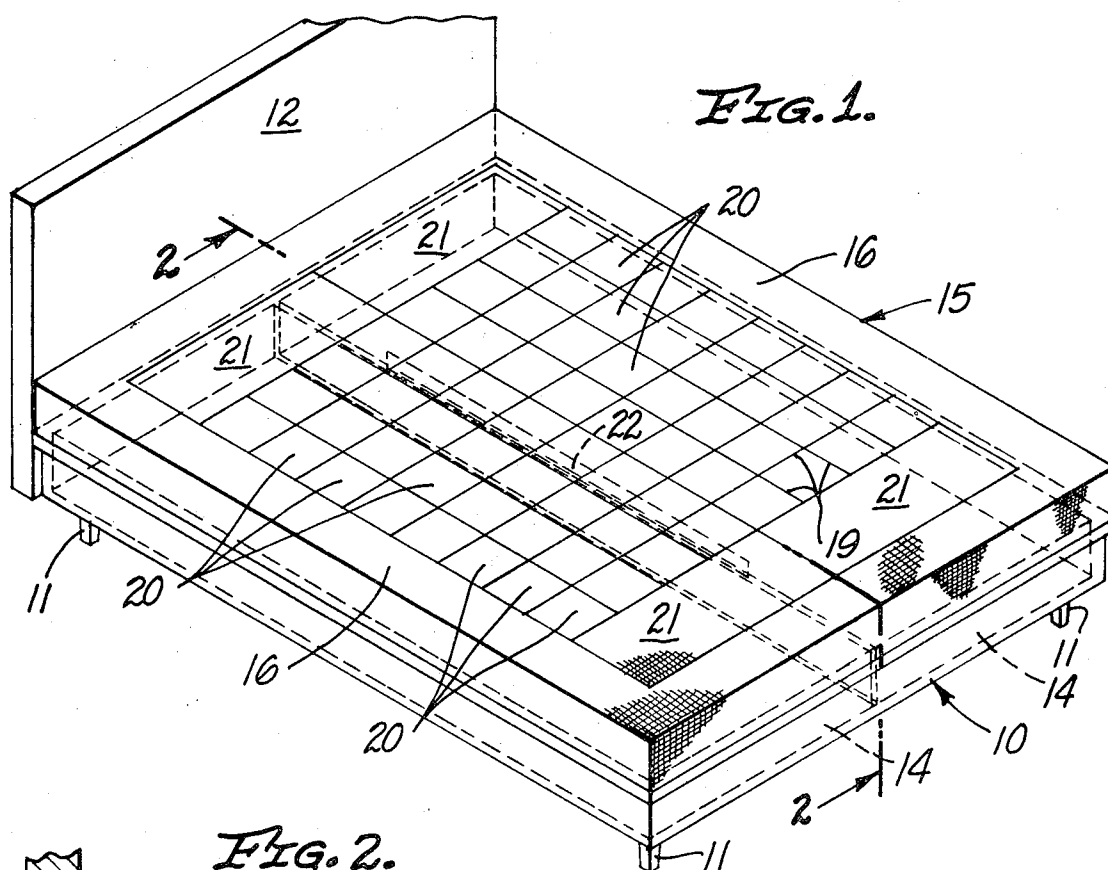
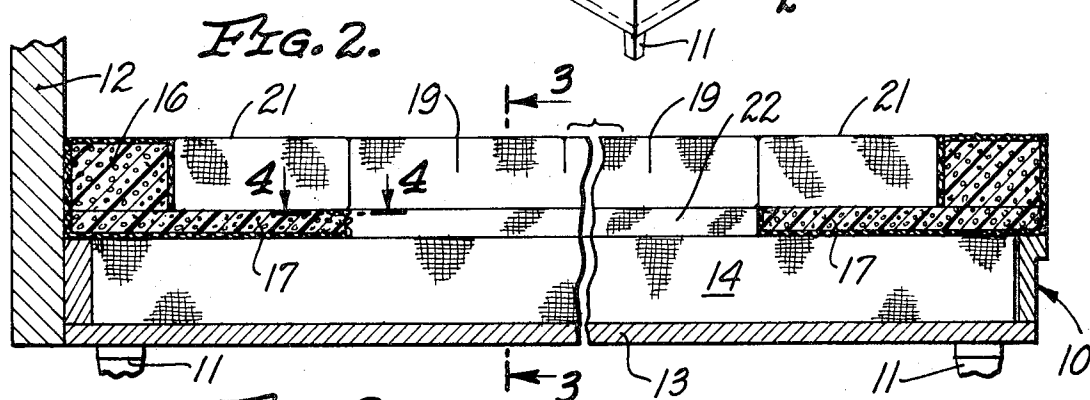
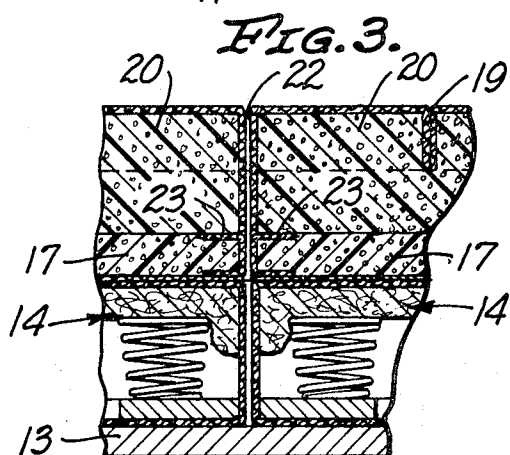
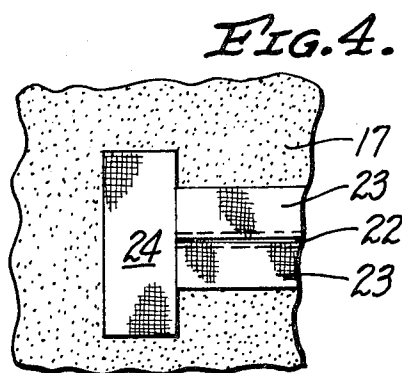
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[57] **ABSTRACT**

A bed construction comprising a unitary frame member within which are removably mounted a pair of separate box spring units. A mattress mounted on the spring units is provided with a slit along its longitudinal axis which is aligned with the dividing line between the spring units. The bed appears to be unitary, but functions like a pair of separate beds, with each half being responsive to the body weight and movements of its occupant without affecting the other half or its occupant. A foldable frame member is provided for a king size bed.

7 Claims, 10 Drawing Figures





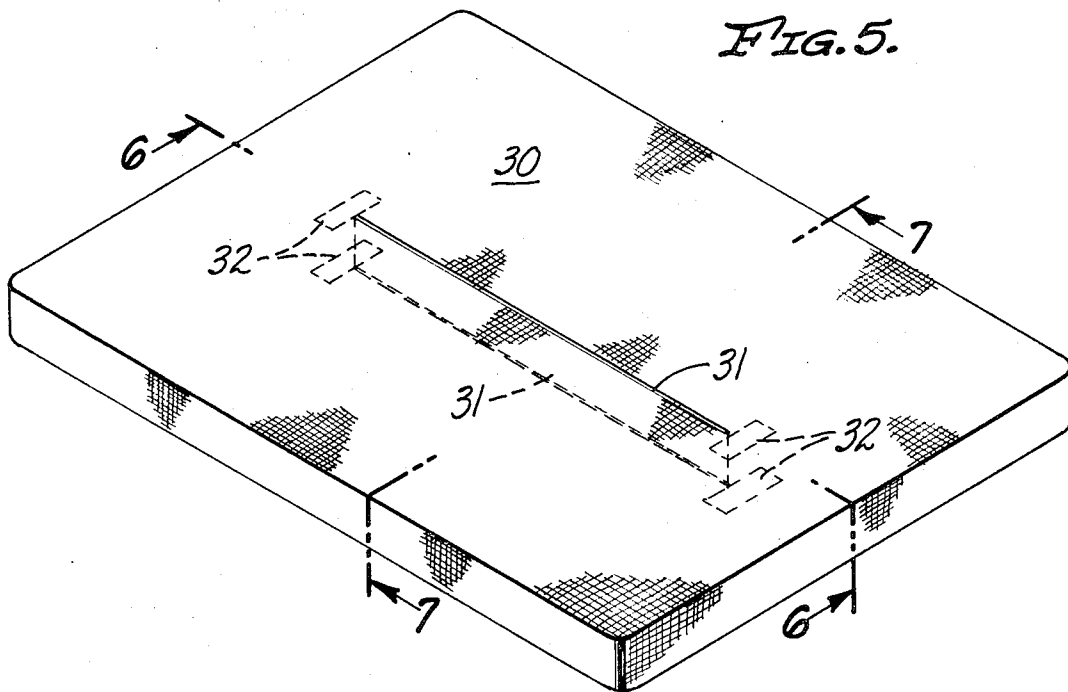
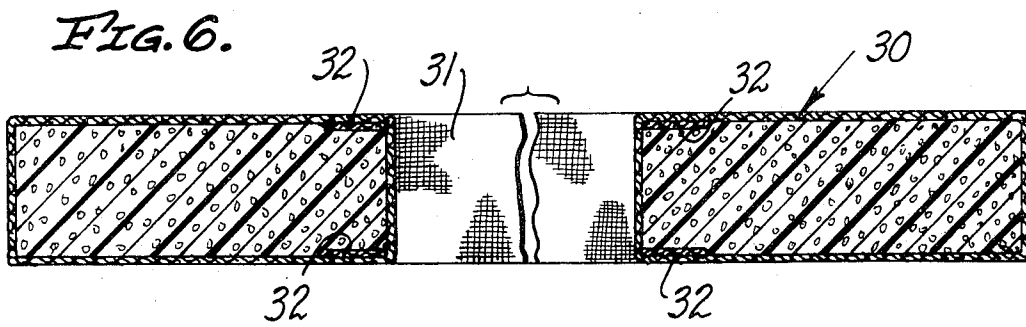
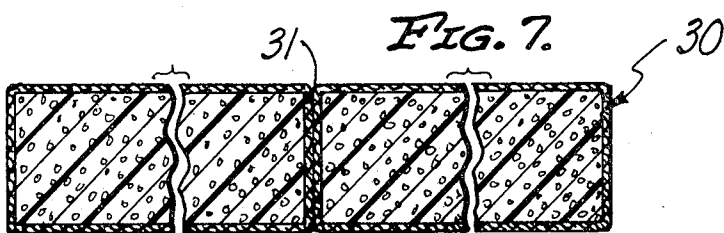


FIG. 8.

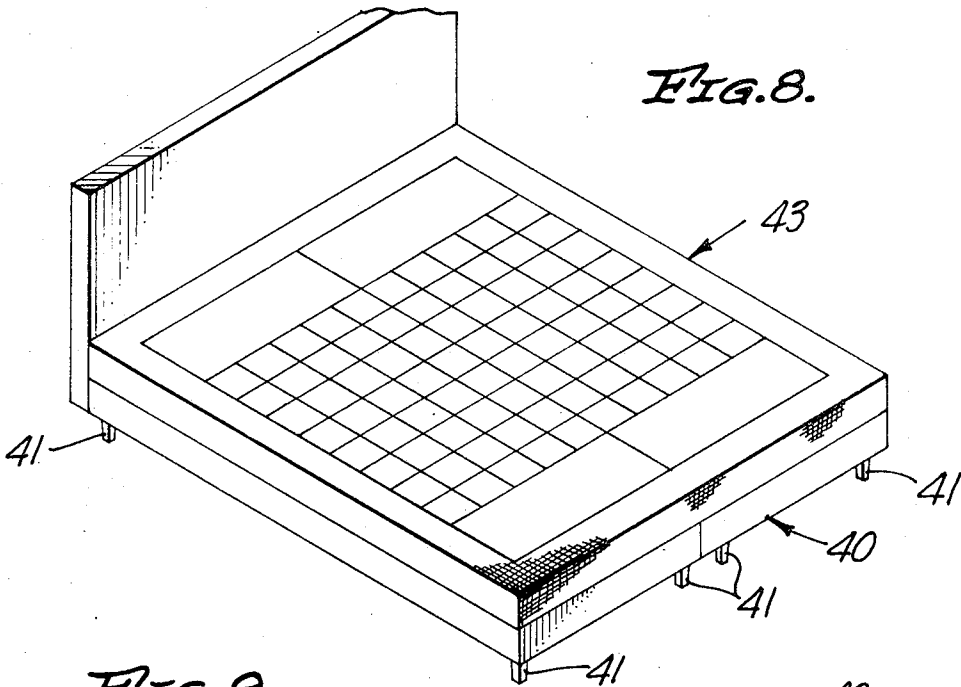


FIG. 9.

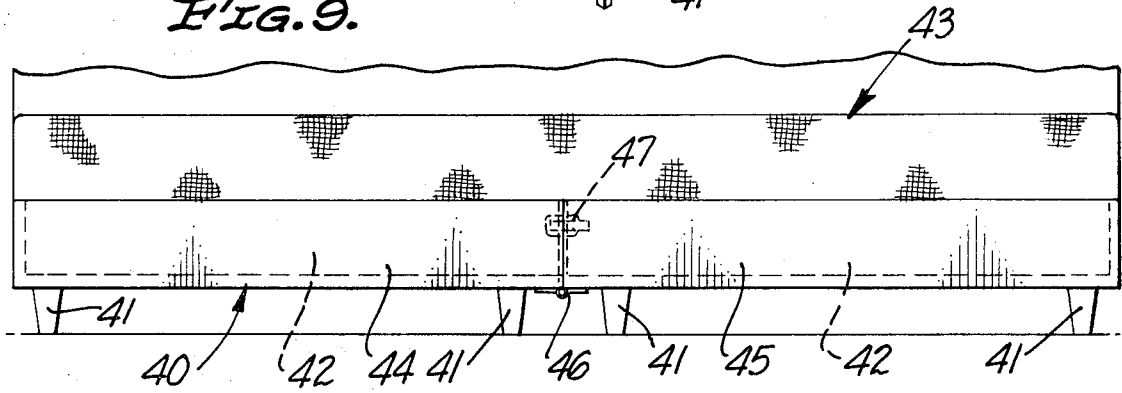
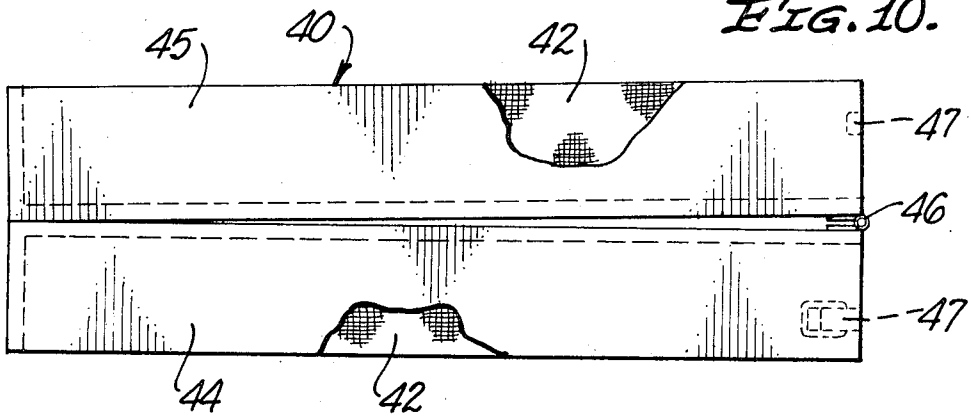


FIG. 10.



BED CONSTRUCTION**BACKGROUND OF THE INVENTION****1. Field of the Invention**

The invention relates to an improved bed construction.

2. Description of the Prior Art

A conventional bed construction comprises a unitary mattress mounted upon a unitary box spring. When the bed is occupied by two people, the body weight and movements of either occupant affect and are transmitted to the other occupant due to the unitary mattress and spring structure. There is also an undesirable hammock effect in which the center of the bed is depressed more than the sides.

Bed springs providing different degrees of support are available, such as soft, medium, firm and extra firm, and different individuals may desire or require different amounts of support. With a conventional unitary spring for a double bed, both occupants must have the same type of spring and the same amount of support.

SUMMARY OF THE INVENTION

The primary object of the present invention is to provide a bed construction for occupancy by two people in which different degrees of support are provided for the two occupants by means of two separate box spring units. One occupant may thus have an extremely firm spring unit which provides strong support, while the other has a softer spring unit with less support.

Another object of the invention is to provide such a bed construction in which the two spring units are removable and changeable, so that springs of any desired type may be inserted at the time the bed is sold, in accordance with the particular desires and requirements of both users. For example, one occupant may have a back injury or illness which requires a particular type of support, while the other has no such problem. In other cases, the difference may be a matter of personal choice. The spring units may also be changed whenever desired.

Another object of the invention is to provide a bed of the type described in which the mattress is divided into two separate sections corresponding substantially in size and shape to those of the spring units, so that while the bed appears to be unitary it in effect comprises two separate beds, each having its own separate spring and mattress.

The separation and individualization of the springs and the division of the mattress into two separate sections combine to provide a novel bed structure in which the weight and movements of one occupant have little or no effect upon the other occupant. The bed structure accordingly provides all of the benefits and advantages of a conventional double bed combined with the advantages and benefits of two completely separate beds.

It is another object of one embodiment of the invention to provide a king size bed which is constructed in the same manner and which is capable of being easily moved in and out of a house or apartment. This is achieved by providing a support member for the box springs which is foldable to one half of its normal size for moving and shipping purposes.

A further object of the invention is to provide a bed of the type described which is capable of being manufactured and sold at a reasonable price.

My invention also comprises such other objects, advantages and capabilities as will later more fully appear and which are inherently possessed by my invention.

While I have shown in the accompanying drawings preferred embodiments of my invention, it should be understood that the same are susceptible of modification and change without departing from the spirit of my invention.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is an isometric view of one embodiment of bed construction in accordance with my invention in which the mattress is divided into two sections, each of which includes a plurality of block-like segments;

FIG. 2 is a longitudinal section view of the same taken on line 2—2 of FIG. 1;

FIG. 3 is a transverse sections view of the same taken on line 3—3 of FIG. 2;

FIG. 4 is a sectional view of the same, taken on line 4—4 of FIG. 2;

FIG. 5 is an isometric view of a more conventional mattress of unitary structure which is divided into two sections in accordance with my invention;

FIG. 6 is a longitudinal sectional view of the same, taken on line 6—6 of FIG. 5;

FIG. 7 is a transverse sectional view of the same taken on line 7—7 of FIG. 5;

FIG. 8 is an isometric view of a king size bed of the type shown in FIG. 1;

FIG. 9 is an end view of the same, in open position for use;

FIG. 10 is an end view of the same in folded position with the legs removed for moving or shipping.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIG. 1 of the drawings, one preferred embodiment of my invention comprises a rectangular box spring frame member 10, which is supported by conventional legs 11 and which is secured to a conventional headboard 12. The bottom 13 of the frame member 10 may be solid or slatted to provide support for a pair of box spring units 14, which are removably mounted within the frame member 10. Each of the box spring units 14 occupies one half of the interior area of the frame member 10.

Mounted above and supported by the spring unit 14 is a rectangular mattress 15. The mattress 15 shown in FIG. 1 of the drawings is constructed substantially in accordance with my U.S. Pat. No. 3,191,197. This type of mattress is formed of resilient foam material. It includes an integral border 16, which extends around all four sides of the mattress and an integral lower portion 17, which extends across the bottom of the entire area defined by the border 16.

The central upper portion 18 of the mattress which is disposed above and rests upon the lower portion 17 is provided with a plurality of intersecting vertical and horizontal slits 19, which extend downwardly approximately half the thickness of the upper portion 18. The slits 19 divide the upper portion 18 into a plurality of adjacent block-like sections 20, each of which is capable of substantially independent vertical movement.

The block-like sections 20 may extend across the entire area defined by the border 16. They may also cover only the major portion of this area, as shown in FIG. 1

of the drawings, with a pair of larger rectangular blocks 21 being disposed adjacent to the head and foot of the mattress between the sections 20 and the border 16. The blocks 21 are mounted upon and supported by the lower portion 17.

The upper portion 18 and lower portion 17 of the mattress are provided with an elongated slit 22, which extends along the longitudinal axis of the mattress 15 for the major portion of the length of the mattress. The slit 22 divides the mattress 15 into two separate sections, each of which is capable of independent vertical movement with respect to the other, due to the slit 22. Each half of the bed is accordingly separately depressible in response to weight placed thereon in use and separately responsive to the movements of the occupant without affecting the other half of the bed or its occupant.

The length of the slit 22 may vary, as desired. It is important that the center portion of the mattress be divided by the slit. In the embodiment shown in the drawings, the length of the slit 22 coincides with the length of the sections 20, but the slit may be made longer or shorter.

The longitudinal edges of the portion of the slit which extend through the lower portion 17 may be reinforced by U-shaped reinforcing members 23, which may be formed by treated buckram or other suitable material. The reinforcing members 23 may be adhered or otherwise secured to the lower portion 17 along its top and bottom and along the sides of the slit 22. The ends of the slit 22 may be similarly reinforced by a pair of transverse reinforcing members 24 which extend transversely across the top and bottom of the lower portion 17 adjacent to the opposite ends of the slit 22.

The various portions of the mattress may be covered with suitable cloth, flocking or other covering material, as desired.

The slit 22 is aligned vertically with the line which separates the two box spring units 14. The entire bed is accordingly effectively divided into two substantially separate spring and mattress units which are capable of independent vertical movement with respect to each other. The weight and movements of one occupant of the bed have substantially no effect upon the other occupant or upon the other mattress and spring. The spring frame member and mattress are unitary and give the appearance of a single bed, while the structure actually functions in the manner of two separate beds.

Also important is the fact that since the spring units 14 are independent of each other and are freely interchangeable within the frame member 10, each of the occupants may have the particular type of spring support unit desired and both need not be the same.

Referring to FIGS. 5, 6 and 7 of the drawings, these show a conventional unitary mattress 30, which is divided into two sections by an elongated vertical slit 31. Reinforcing members 32 reinforce the opposite units of the slit 31. The mattress 30 may be formed of resilient foam material or it may comprise an innerspring mattress or any other mattress structure or material whatsoever, including water or other liquid. The upper part of the mattress may also be divided into longitudinal sections, as shown in FIG. 5 of my U.S. Pat. No. 3,191,197. It is important only that the mattress be slit along the central portion of its longitudinal axis so that

it is divided into two independently movable sections which are aligned with two independent box spring units disposed therebeneath.

Referring to FIGS. 8-10 of the drawings, these show a king size bed which is constructed in accordance with my invention. The bed includes a box spring support member 40 which is provided with a plurality of removable legs 41. Removably mounted within the support member 40 are a pair of separate box spring units 42. A mattress 43 is shown as similar to that of FIG. 1 of the drawings, but it may be formed as shown in FIG. 5 or otherwise as set forth above.

The support member 40 is divided into two halves 44 and 45, which are connected to each other by an elongated continuous hinge 46, which preferably extends along the entire length of the support member 40. A latch 47 which may be of the type used on luggage or which may comprise any other suitable type of latch or fastening means is provided on the inside of the support member 40 at the head and foot of the bed to connect the two halves 44 and 45 to each other when the bed is in open position for use.

As shown in FIG. 10 of the drawings, the support member 40 may be folded upon itself along the hinge 46 to provide a compact unit for shipping and moving purposes. It may be moved or shipped with or without the box spring units 42.

This structure permits the use of the present invention in a king size bed, which would otherwise be impossible because a unitary spring or spring support member of such size could not be moved into or out of most houses or apartments and would present shipping problems as well.

I claim:

1. A bed construction comprising a pair of box spring units, each of said spring units comprising substantially one-half of the width of said bed, and a single mattress mounted on both of said spring units, said mattress having an elongated slit extending completely through the midportion of said mattress substantially along its longitudinal axis and in alignment with the dividing line between said spring units, the opposite ends of said slit being disposed substantially inwardly from the head and foot of said mattress, said slit and dividing line separating the midportion only of said bed into two separate adjacent sections, each of which is separately depressible in response to weight placed thereon in use without substantially affecting the other of said sections, the head and foot portions of said mattress beyond the opposite ends of said slit being unslit.

2. The structure described in claim 1, said slit extending along the major portion of the longitudinal axis of said mattress.

3. The structure described in claim 1, said mattress having a substantially rectangular integral border extending around all four sides of said mattress, said border being unslit.

4. The structure described in claim 3, the portion of said mattress within said border being divided into a plurality of portions which are independently compressible in response to weight placed thereon in use.

5. The structure described in claim 4, and a pair of rectangular blocks mounted within said border adjacent to the head and foot of said mattress, said rectangular blocks being unslit.

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6. The structure described in claim 5, said border having a lower portion of reduced thickness underlying the entire portion of said mattress within said rectangular border.

7. The structure described in claim 2, and a unitary box spring frame member, said spring units being removably mounted within said frame member, said box spring frame member having a dividing line extend-

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ing along its longitudinal axis separating said frame member into two halves, and hinge means disposed along said dividing line, said frame member being foldable along said hinge means for moving and shipping purposes to a position wherein one of said halves is disposed in overlying relationship to the other.

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