Jan. 24, 1961 H. C. WOLF 2,968,816

BED WITH NOVEL MATTRESS AND SPRING UNIT

Filed Feb. 12, 1958

FIG. 1

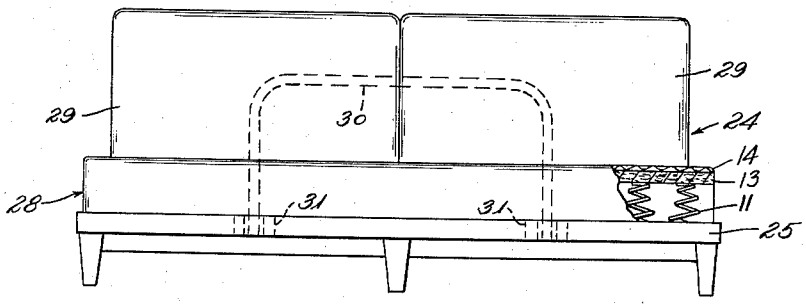


FIG. 2

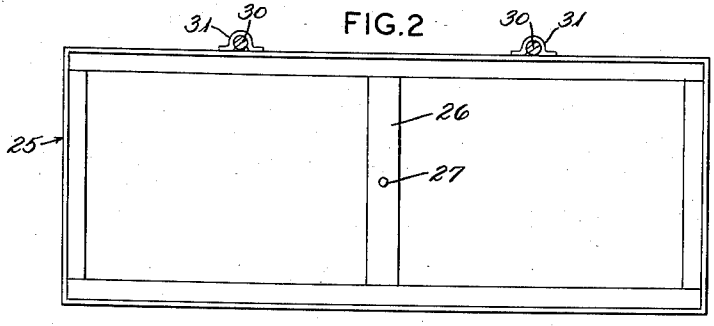
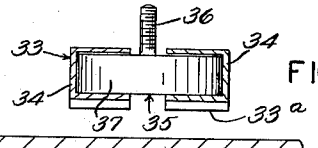


FIG. 3



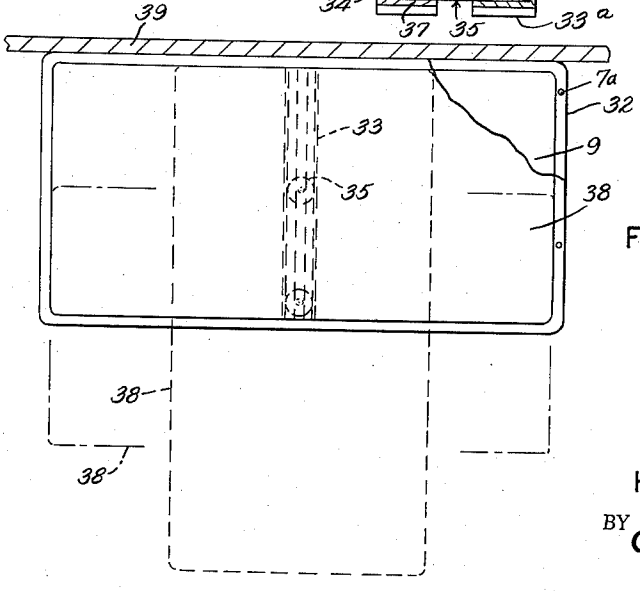


FIG. 4

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BED WITH NOVEL MATTRESS AND SPRING UNIT

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2 Claims. (Cl. 5—18)

This invention relates to beds, especially to a combination bedframe or other support, and a spring unit adapted to have novel movement with relation to its support.

Heretofore nearly all conventional beds have had both a mattress and spring unit provided therefor, except in some special instances, such as cots or the like. These mattresses and springs are bulky, heavy articles of furniture and it is difficult for the housewife to move, or turn the mattress and springs as wear occurs in use of the bed. Thus, it is very hard for the housewife to keep these mattress and spring units turned frequently and wear occurs unevenly on the mattresses and/or springs. Furthermore, by the use of separate mattresses and springs on beds, frequently the beds are too soft and people sleeping thereon tend to have excessive deflection in their spines when resting upon a mattress and spring unit as it may sag in the middle portion of the bed. Many back disorders are believed to be due to such curved back support for a person resting in the bed. It is a well known fact that many doctors suggest that some type of a bed board be placed in the bed intermediate the mattress and springs in order to firm up the support provided for a person in the bed.

Still another disadvantage of the present styles of beds including separate mattress and spring units is that they are relatively costly and increase the cost of the individual bed unit to a high, or expensive total figure.

The general object of the present invention is to provide a novel and improved bed and spring unit characterized by the novel positioning of the spring unit on the bedframe and by the pivotal movement provided for the bed spring unit.

Another object of the invention is to provide a laterally vertically extending pivot in a laterally extending guide on a bedframe to support a sleeping unit for lateral and then pivotal movement on a bedframe even though the bedframe is abutted against a wall.

Another object of the invention is to provide a sleeping unit and bedframe therefor where means are provided to limit and control pivotal and sliding movement of the sleeping unit on the bedframe.

A further object of the invention is to provide a vertically directed pivot member on bedframe means and to provide a cooperative socket member on the bottom portion of a mattress and/or spring unit in the bed whereby the mattress and/or spring unit can be pivotally supported on the bedframe to facilitate changing the position of the mattress and/or spring unit in the bed.

Another object of the invention is to provide a bed construction particularly adaptable for use with built-in frame means in a house and where the sleeping unit can have pivotal and lateral, or axial movement with relation to the frame and support means.

A further object of the invention is to provide a novel spring unit for a bed wherein the mattress and coil spring means are of a unitary construction, where all the padding is on the sleeping or top surface of the spring unit, and where a separating board is provided on the bedframe to aid in supporting the bed spring and covers thereon.

Additional objects of the invention are to provide a

novel pivotal positioning for a spring support unit which can be used in the production of divans that have removable bolster support means associated therewith; to provide a bed unit having a unitary spring and mattress member therein and wherein the bedding covers on the sleeping unit can readily be tucked in underneath the sleeping unit between it and a supporting frame means; to provide a separating fiber board member or the like intermediate the bedframe means and the sleeping unit positioned thereon; to provide integral or built-in bed boards in a mattress and spring unit for reinforcing same; and to provide pivotal movement in a bed spring unit to facilitate making the bed.

The foregoing and other objects and advantages of the invention will be made more apparent as the specification proceeds.

In the accompanying drawings:

Fig. 1 is an elevation view of the invention comprising a divan, or day couch structure, or the like;

Fig. 2 is a plan view of the structure shown in Fig. 1 with the cushions and/or spring unit thereon removed;

Fig. 3 is an enlarged fragmentary vertical section through a novel support unit of the invention comprising a laterally movable pivotal support member;

Fig. 4 is a plan view of a modified type of bedframe and support unit therefor embodying the principles of the invention and including the support unit of Fig. 3, the arcuate movement of the mattress and spring unit on the bedframe being indicated on dotted lines.

When referring to corresponding parts shown in the drawings and referred to in the specification, corresponding numerals are used to facilitate comparison therebetween.

The present invention relates to a bed, divan or the like wherein frame means are provided, a spring and mattress unit is supported on the frame means, and a board member is carried by the frame means to provide a continuous member intermediate the spring and mattress unit and the frame means. The bed, divan or the like, as a further feature, has a vertically extending pivot carried by a cross member in the frame and projecting upwardly therefrom, which pivot may be movable laterally of the frame means along the cross member and is held in a fixed vertical position thereby, and socket means are operatively positioned by the spring unit and receive the pivot to position such spring unit for pivotal movement on the frame means provided.

In Fig. 1, a davenport, divan or the like is indicated as a whole by the numeral **24**. Such divan includes a support frame **25** that has a cross bar **26** provided therein. This cross bar **26** has a support pivot **27** provided thereon and extending upwardly therefrom. The frame **25** provides a flat or planar supporting surface thereon and the pivot **27** extends upwardly therebeyond. A spring unit **28**, which may be of the same construction as the spring unit **2** referred to hereinbefore, or it may be of other construction, is provided and it has a suitable socket, or equivalent member so that the pivot **27** can be either removably or fixedly engaged with such spring unit **28** to retain the spring unit and frame **25** in engagement with each other for any desired arcuate or pivotal movement of the spring unit **28**.

On divans and other equivalent structures, it frequently is desirable to provide bolsters or cushions **29** extending vertically at the back portions of these divans. Thus, a pair of cushions **29** are shown and they are at least partially supported on the divan **24** by means such as a removable, inverted U-shaped bolster support bracket **30** that is positioned by sockets **31** secured to a rear portion of the frame **25**. Hence, these cushions or bolsters **29** can be retained in a desired operative position on the divan **24**. However, when it is desired to move the spring

unit 28 to change the exposed edge thereof and to equalize wear on the spring unit, the bolsters or cushions 29 can be removed, as can the bracket 30, so that the spring unit 28 can be rotated on the pivot 27 provided therefor. Thus, after the spring unit has been rotated through 180°, the bracket 30 can be re-engaged with the socket 31, the cushions repositioned and the divan is ready for service, but with a clean or new section on the spring unit 28 being provided for taking the primary wear on the divan.

Figs. 3 and 4 show a slight modification to the structures shown in the drawings and in this instance, a frame 32 is shown. The frame 32 has any desired support means provided therefor. The frame 32 has a center channel unit 33 extending transversely thereof and made from a pair of U-shaped channels 34 positioned in opposed relationship to each other. A pivot 35 is provided and is received in the center channel unit 33 for movement laterally thereof. This pivot 35 is shown as comprising a tapped stud 36 extending vertically upwardly from the spaced channels 34 and carried by a suitable base or block 37. The base 37 is snugly received in the channels 34 for movement laterally thereof, but with the pivot 35 being retained in a fixed vertical position by the channels 34 at all times. If desired, a suitable stop member could be provided in the center channel unit 33 to limit lateral movement of the pivot 35 in one direction to aid in telling the user when the pivot 35 is centrally positioned, but in all events such pivot 35 can be moved to the lateral extremity of the channels 34 which extend completely across the frame 32. Thus a spring unit 38 positioned on the frame 32 can be swung about this pivot 35 at any time after the pivot has been slid to a side extremity of the frame 32, even if the frame 32 is against a wall.

In Fig. 4 of the drawings, the frame 32 is shown abutted against a wall 39, and should the spring unit 38 be tightly positioned against the wall, it may be necessary to move the frame 32 slightly from the wall before rotating the spring unit 38. However, should such spring unit be originally spaced several inches from the wall, then the frame 32 would not require any movement away from the wall prior to swinging the spring unit 38 180° about its positioning means. Obviously the pivot 35 can be tapped to engage with a tapped socket or nut means positioned by the spring unit 38, or the pivot may merely directly be received for rotation in some type of a receiving sleeve or socket carried by the spring unit 38 on the base surface thereof.

The frame 32 is adapted to be moved in a horizontal plane on the support means provided therefor without any interference with such movement by the support means. The base 37 may have bearings thereon to ease sliding movement of it in the channels 34. The channel unit 33 may be recessed at the center thereof, as at 33*a*, to receive the pivot 35 therein when it is operatively and properly centered in the frame 32.

A sheet or board 9 forms a covering member which extends beneath the horizontal leg of the L-shaped frame 32. The sheet or board 9 may be made from any suitable material such as cardboard, fiber board or the like and is usually secured to the frame as by means of bolts, screws, rivets 7*a* or the like. The spring unit 38 has a base 12, springs 11 on the base 12, and a cushion 13 made of foam rubber, felt or the like on top the springs 11. A fabric cover 14 extends over the cushion 13 and its marginal portions are drawn around and are secured to the base 12.

Furthermore, it will be seen that an effective, novel type of a spring unit has been provided in a bed, which spring will be adapted to function as both a mattress and spring means in a bed unit, if desired. Obviously, a separate mattress could be placed on top of the spring means shown, if desired, and then both the mattress and springs could be moved as a unit from one end position to the other in the bed construction shown. The construction of the invention is particularly suitable for use when only one spring and mattress unit is provided inasmuch as covers applied to such spring and mattress unit can then be tucked between the lower portion of the spring and mattress unit and the sheet or board 9 carried by the supporting frame 7 provided in the bed. However, the invention can be used to position any sleeping unit on a bed support for pivotal movement of the sleeping unit.

The pivotal means used in the invention may be of any desired construction and may be secured to either the sleeping unit and/or the support therefor, or to both, as desired. Such pivotal means may be engaged with either the sleeping unit or the support by gravity action. Pivot means, in this invention, is broadly used and includes any type of a rotary support for a sleeping unit, as for example an annular bearing unit with top and bottom support surfaces to provide centered arcuate motion of the sleeping unit. Normally the sleeping unit has frame means to provide both lateral and longitudinal stability and substantial rigidity at its base section to make the unit self-supporting for pivotal movement thereof.

The novel pivotal action provided for the spring or sleeping unit of the invention permits such spring to be moved readily from end to end of the bed to equalize wear action on the spring and mattress unit. The rotation or turning of the spring unit can be readily performed by the average housewife without any great physical exertion and will permit the owner of the bed unit to get longer, satisfactory life from the bed unit. In addition, the spring unit has a built-in support or backboard provided thereon and this aids in obtaining effective support action for a person resting upon the bed. In view of the foregoing, it is believed that the objects of the invention have been achieved.

While several complete embodiments of the invention have been disclosed herein, it will be appreciated that modification of these particular embodiments of the invention may be resorted to without departing from the scope of the invention as defined in the appended claims.

What is claimed is:

1. The combination comprising a bed frame including a peripheral frame member and a plurality of transversely extending cross bars, means defining a transverse track at substantially the mid point along the length of said frame, said track extending throughout substantially the width of said frame, a combined spring and mattress unit overlying said bed frame, said unit including a relatively rigid base substantially coextensive with said bed frame and spring means mounted on the upper side of said base, and pivot means fixed on the underside of said base substantially at the center thereof and engaging said track, said pivot means being shiftable along substantially the entire length of said track and being rotatable relative to said track at any position of said pivot means along said track, whereby said spring unit is movable bodily relative to said frame and rotatable on said pivot means at any position of said pivot means along said track.

2. The combination set forth in claim 1 wherein said peripheral frame member of said bed frame has an L-shaped cross section comprising a horizontal leg and a vertical leg extending downwardly from the periphery of said horizontal leg, a board of solid material mounted on said frame, said board having its periphery extending beneath the horizontal leg of said frame member.

References Cited in the file of this patent

UNITED STATES PATENTS

793,168	Abrams	June 27, 1905
1,113,996	Hunter	Oct. 20, 1914
1,389,480	Berman	Aug. 30, 1921
2,462,524	Mattedi	Feb. 22, 1949
2,670,479	Gottlieb	Mar. 2, 1954