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L. SHARFE ETAL

3,032,782

POSTURIZING DEVICE FOR BEDS AND THE LIKE

Filed Feb. 10, 1959

2 Sheets-Sheet 1

Fig. 1

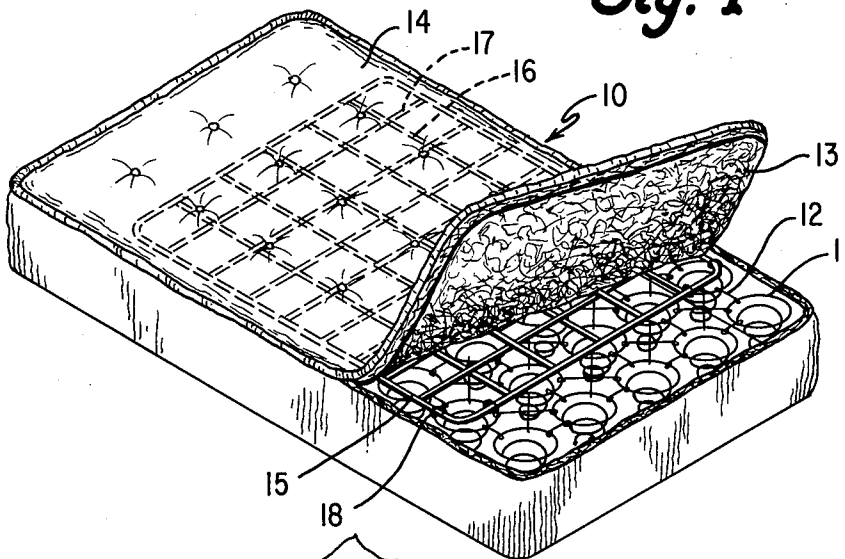


Fig. 2

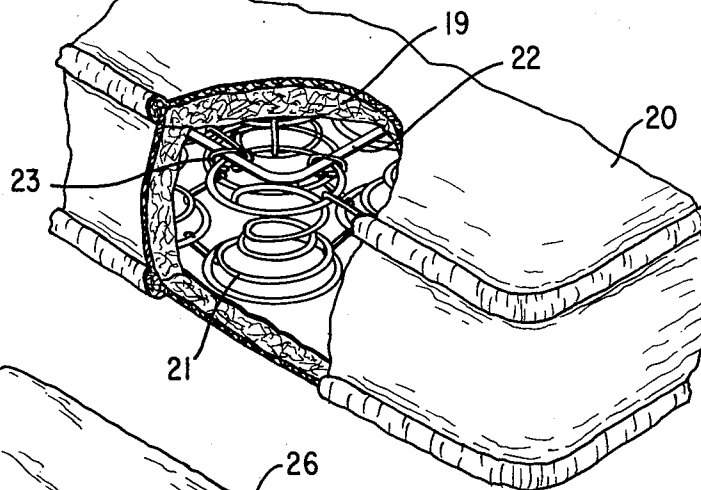
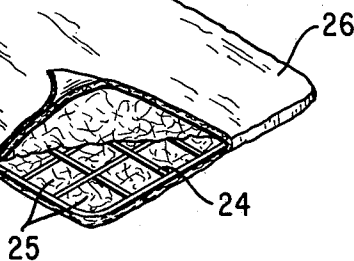


Fig. 3



INVENTORS.
LOUIS SHARFE
OSCAR SOLDINGER
BY
Robert W. Fraser
ATTORNEY

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L. SHARFE ETAL

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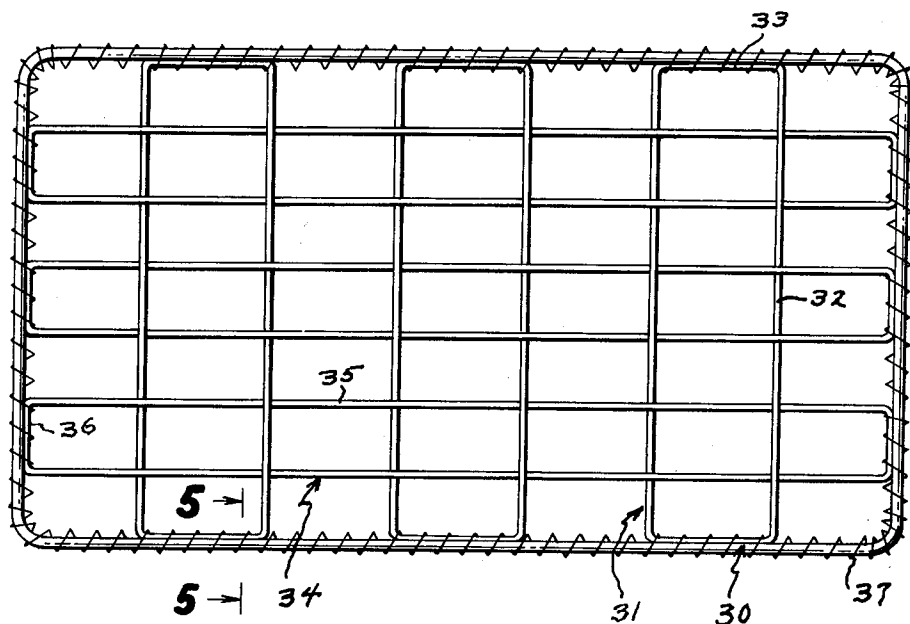


Fig. 4

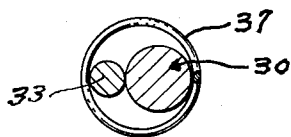


Fig. 5

INVENTORS
LOUIS SHARFE
OSCAR SOLDINGER
BY
Thalco W. Fraser
ATTORNEY

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3,032,782

POSTURIZING DEVICE FOR BEDS AND THE LIKE

Louis Sharfe, 4860 Overland Drive, and Oscar Soldinger, 22 Broadway, both of Toledo, Ohio
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4 Claims. (Cl. 5—354)

This invention relates to resilient posturizers for establishing a relatively stiff yet yielding body support for beds and other similar articles of furniture, thereby to improve posture for comfort as well as to cope with various skeletal, muscular and organic ailments or infirmities.

Many people find that for one reason or another a stiffener for the body supporting position of the bed is desirable, if not actually necessary for the proper prone rest. Not infrequently rigid, inflexible stiffeners are employed, such as a board, between the springs and mattress, but these do not afford the proper weight distribution for the body and the rigidity of the board militates against its usefulness and the results desired. It is a desideratum to provide a bed and like article of furniture with a stiffener, which not only contributes to the proper posture but effects beneficial weight distribution and is of proper resilient character. An important object is therefore to overcome objections heretofore encountered and to cope successfully with problems which have arisen in this connection.

Other objects and advantages of the invention reside in details of construction and arrangement herein shown and described and for purposes of illustration but not of limitation, embodiments of the invention are shown in the accompanying drawings in which

FIGURE 1 is a top perspective view of a box spring for a bed, a portion thereof being folded back and showing the stiffener unit incorporated as a part thereof;

FIGURE 2 is a fragmentary perspective view of an innerspring mattress in which the stiffener unit is embodied;

FIGURE 3 is a perspective view on a reduced scale of a stiffener unit, a portion being broken away, the same being adapted for interposition between the box springs and mattress;

FIGURE 4 is a plan view of an alternate form of stiffener unit; and

FIGURE 5 is an enlarged sectional view on the line 5—5 of FIGURE 4.

The illustrated embodiment of the invention shown on FIGURE 1 is a box spring assembly 10 for a bed which in general is of the usual construction having a series of coil springs 11 arranged in transverse and longitudinal rows, adjacent springs being connected to each other by wire ties 12, thereby securing the springs together to provide a substantially self-sustaining unit of rectangular elongate form suitable for a bed of the desired size, either twin or double size as will be readily understood. Above and below the coil spring structure is a fibrous pad 13 of such size to cover the top as well as the bottom of the spring assembly. As usual, a textile fabric cover or envelope 14 snugly encloses the springs and pads.

In accordance with this invention, a resilient posturizing unit 15 is embodied in the assembly and as shown is disposed on the upper side of the spring assembly intermediate the coil springs and the respective fibrous pad 13. The unit 15, which is made of a series of wires of sufficient strength and desired spacing to stiffen the action of the springs, effect a weight distribution thereon, and as shown, the unit is somewhat shorter than the box spring assembly, being spaced from the upper and lower ends. However the side edges or rim of the unit is close-

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ly spaced from the sides of the box spring assembly 10 so that a person sitting on an edge of the bed will have his weight somewhat distributed by the stiffener unit. As shown, the unit 15 is composed of a plurality of parallel longitudinally extending wire strands 16 and a series of transverse parallel wire strands 17, the longitudinal and transverse wires being woven. The wires are free of rigid connection to each other but are welded to the rim wires and thus a sturdy structure is effected, but one which has sufficient flexibility and resilience to distribute the weight of the body over the coil springs 11, and although the same will flex under the weight of the body, ample resilience is afforded so that the unit will return to its normal position after the weight is removed. We have found that 9-gauge wire containing approximately 60% carbon is satisfactory for this purpose. As shown, the corners of the unit are rounded and for securing the unit to the springs, a series of wire ties 18 connect various portions of the unit to the adjacent coil springs to afford a reasonably flexible connection between the stiffener unit and the springs. It should be understood that the wire ties 18 are only for positioning the unit relative to the coil springs 21 and do not interfere with the flexing of the wire strands.

The form of the invention shown on FIGURE 2 shows a stiffener incorporated in one side of an innerspring mattress so that one side of the mattress may be used to secure the advantages of the stiffener but if the stiffener is not desired, the mattress may be turned over and the other side of the mattress used which is free from the stiffener unit. As shown, the innerspring mattress is provided with the usual padding 19 and a textile fabric covering or envelope 20. Within the padding are rows of coil springs 21 which may be connected together by ties similar to the springs shown in FIGURE 1. In this instance, the stiffener unit 22 which is similar to that above described, is disposed in this figure on the upper side of the mattress so that the arrangement is a reversible one enabling the person either to make use of the advantages of the stiffener unit 22 by sleeping on that side of the mattress or reversing the position of the mattress so that the stiffener unit 22 is on the bottom of the mattress and not in use.

According to the form shown in FIGURE 3, the posturizing unit 24 is similarly constructed to that heretofore described. In this instance the fibrous pads are disposed on top and the bottom of the wire network and over the pads is a suitable textile cover or envelope suitably sewn in position. Manifestly this unit may be interposed between the springs and mattress of a bed to afford the desired posturizing effect and distributing the weight of the body resiliently over the springs.

The alternate form of the invention shown in FIGURES 4 and 5 comprises a posturizing device in which a rim member 30 is formed of wire bent into a rectangular shape with parallel ends and sides, the ends of the wire being welded together to form a one piece unit. Carried by the rim is a series of transverse units 31, in this instance there being three in number equidistantly spaced from each other and from the ends of the rim 30. Each of the units 31 has parallel longitudinal body strands 32 and end strands 33 which are parallel to each other, each of these units being of one length of wire bent into the desired configuration with the ends welded together to provide a unitary structure. It will be observed that the longitudinal strands 32 are equidistantly spaced from the ends of the rim and equidistantly spaced from each other, the space between the longitudinal wires 32 of each unit being approximately the same as the spacing between adjacent units and the spacing between the end units and the ends of the rim. The end strands 33 are disposed

parallel to and in close relation to the sides of the rim 30.

Extending longitudinally of the rim 30 is a series of wire units 34, each unit consisting of a pair of parallel longitudinal body strands 35 and end strands 36 which are parallel to each other and which abut against the inside of the rim at the ends thereof. It will be observed that in this instance there are three longitudinal units 34 and they are spaced equidistantly from each other and as above pointed out the space between the parallel body strands 35 of each unit is equivalent to the space between the rim wires and the adjacent body longitudinal strands, thereby to effect uniform spacing transversely of the posturizing device.

It will be observed that the body strands of the units 31 and 34 are interwoven, that is that the strands of a longitudinal unit extend freely over a strand of one of the transverse units 31 and thence freely under the next strand of that transverse unit and so on. This effects a woven structure which contributes to the desired weight distribution as above pointed out, the adjacent strands which cross being free to slide relative to each other.

For connecting the end strands of the longitudinal units 34 and transverse units 31 to the rim 30, a single wire helix 37 extends entirely around the rim 30 and over the adjacent end strands 33 of the transverse units 31 as well as the end strands 36 of the longitudinal units 34. Thus the wire helix is wound about both the rim wire and the adjacent end strand of the respective transverse and longitudinal units. This affords an exceedingly simple and practical connecting device which affords limited amount of flexibility so far as positioning is concerned, between the longitudinal and transverse units and the portions of the rim 30.

Although the drawings show the wire of the rim member 30 to be of greater diameter than that of the units 31 and 34, thus thereby affording greater stiffness of the rim, if desired the same diameter wire may be used throughout to afford more uniform resilience and flexibility of the device.

From the above, it will be manifest that we have produced an extremely simple and inexpensive posturizing device, which is yielding and resilient and is effective in distributing the weight of the body over the springs, either or both the mattress or box springs, as the case may be. The device has limited movement due to the manner in which it is tied or attached to the spring elements and thus has limited floating ability. By incorporating the unit in an inexpensive spring assembly or using it in connection therewith, it affords the attributes of a more expensive structure due to the weight distribution feature above pointed out.

This application constitutes a continuation in part of our application Serial No. 673,505, filed July 22, 1957, entitled, "Posturizing Device For Beds and the Like", and now abandoned.

Numerous changes in details of construction, arrangement and choice of materials may be effected without departing from the spirit of the invention, especially as defined in the appended claims.

What we claim is:

1. A posturizing device for beds and the like comprising a self-sustaining structure having an endless encompassing rim of wire, and sets of transversely and longitudinally arranged loop units each unit having a substantially parallel pair of wire body strands integrally joined by end strands arranged adjacent a portion of the rim, the body strands of the transverse and longitudinal units extending respectively over and then under each other but free from connection thereto, and means for securing the end strands of the several units to the rim.

2. A posturizing device for beds and the like comprising a self-sustaining structure having an endless encompassing rim of wire, and sets of transversely and longitudinally arranged loop units each unit having a substantially parallel pair of wire body strands integrally joined by parallel end strands arranged adjacent a portion of the rim, the body strands of the transverse and longitudinal units extending respectively over and then under each other but free from connection thereto, the transverse units being identical to each other and the longitudinal units being identical to each other, and the space between the body strands being equal to the space between adjacent units as well as the space between the units and the rim, and means for securing the end strands of the several units to the rim.

3. A posturizing device for beds and the like comprising a self-sustaining structure having an endless encompassing rim of wire, and sets of transversely and longitudinally arranged loop units each unit having a substantially parallel pair of wire body strands integrally joined by parallel end strands arranged adjacent a portion of the rim, the body strands of the transverse and longitudinal units extending respectively over and then under each other but free from connection thereto, the transverse units being identical to each other and the longitudinal units being identical to each other, and the space between the body strands being equal to the space between adjacent units as well as the space between the units and the rim, and wire helix means joining the several units to the rim.

4. A posturizing device as claimed in claim 3 characterized in that the wire helix means comprises a continuous helix extending entirely around the rim and surrounding the end strands of the units and adjacent portions of the rim, thereby to securely position the several units within the rim.

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