June 12, 1951 H. S. KARPEN 2,556,924

SPRING AND CUSHION STRUCTURE

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Fig. 1

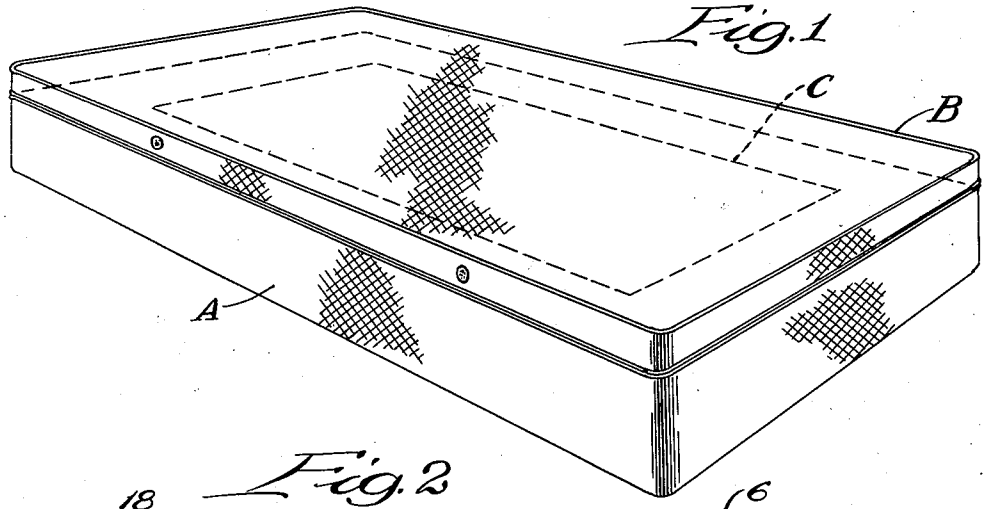


Fig. 2

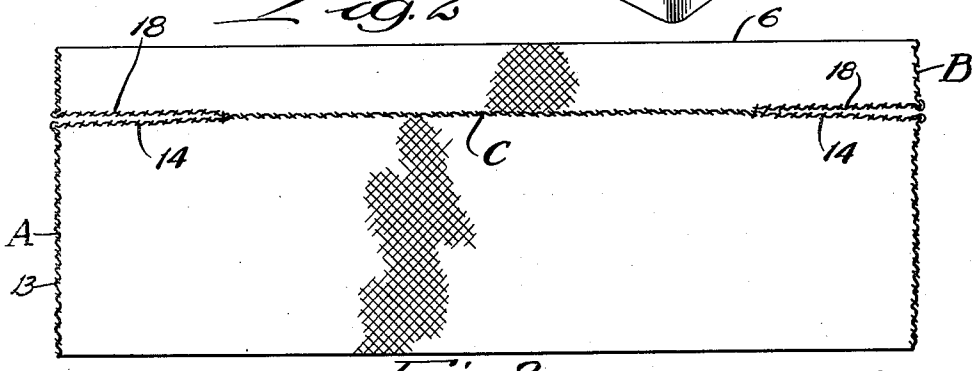


Fig. 3

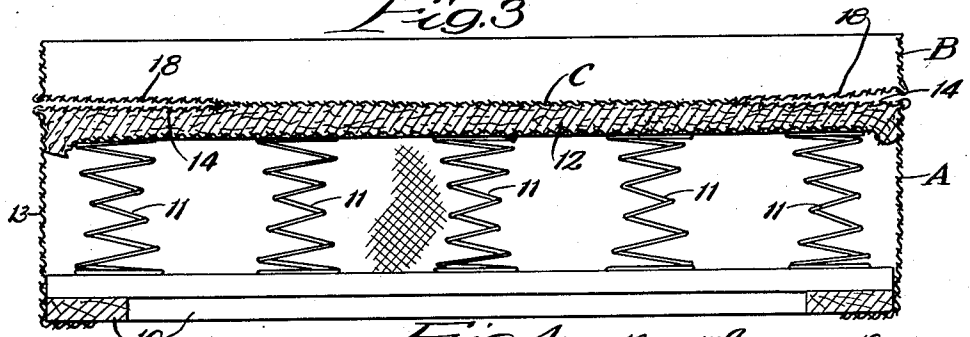
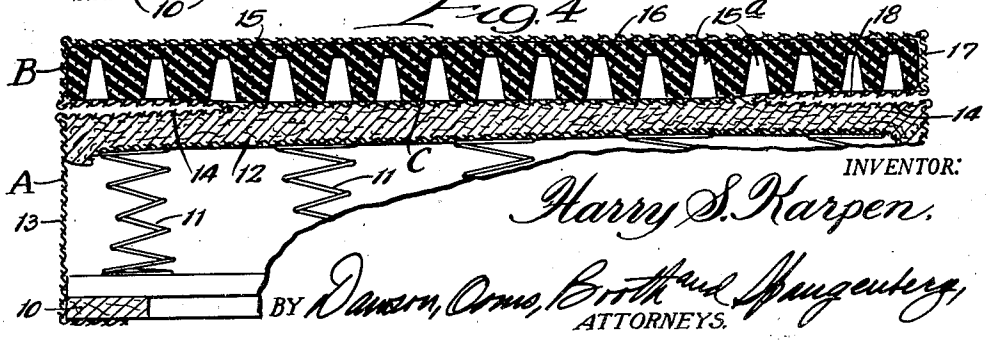


Fig. 4



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Fig. 5

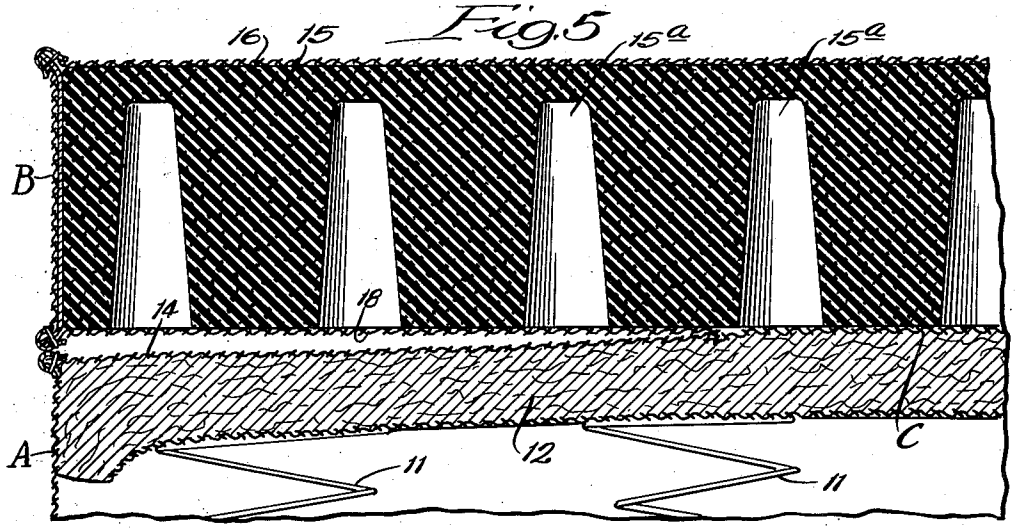


Fig. 6

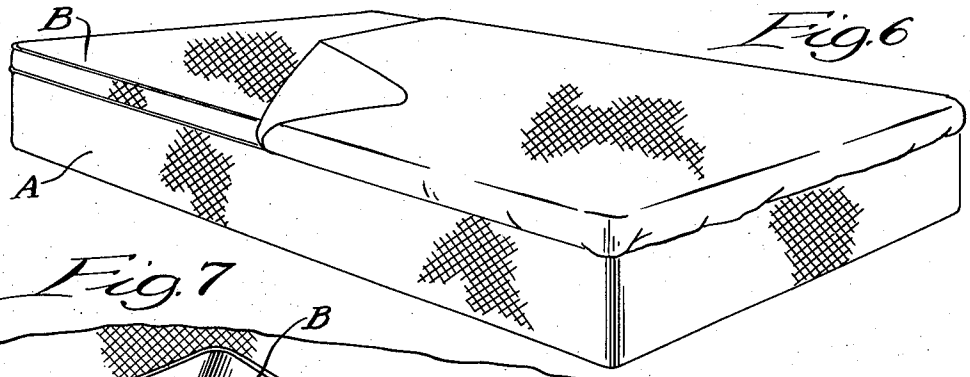
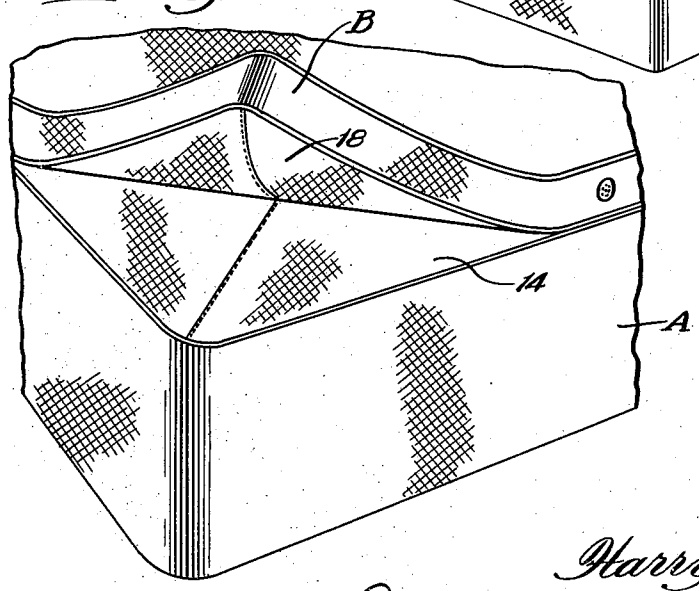


Fig. 7



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SPRING AND CUSHION STRUCTURE

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This invention relates to a spring and cushion structure. The invention is particularly useful in connection with box springs and a mattress which are united in a unique manner.

In the manufacture of mattresses and box springs, it has been the practice to form the box springs and mattresses with separate covers and to use the mattress as a separate article over the box spring. This combination requires separate, complete and relatively expensive covers and, in use, the mattress often gets out of alignment with the box spring therebelow, thus detracting from the neat appearance of the superposed structures and also causing the mattress to become uneven along the edge portions protruding over the box spring unit.

An object of the present invention is to provide a structure in which the mattress is constantly maintained in true alignment with the box springs while at the same time permitting the spring and mattress structures to be united through the use of a single muslin or other strip, the structure being so arranged that a side pocket is provided for the tucking in of sheets, covers, etc. A still further object is to provide a cushion and box spring structure permitting the tucking in of a covering material and the effective locking of the tucked material against removal under ordinary use. Yet another object is to provide a mattress and box springs combination wherein a mattress is secured at points inwardly of the edge of the mattress to the box springs structure so that a gripping flange is thus provided over the box springs, to securely hold sheets and other covers tucked therein and against dislodgment during use. Other specific objects and advantages will appear as the specification proceeds.

The invention is shown in an illustrative embodiment, by the accompanying drawings, in which—

Fig. 1 is a perspective view of a box spring and mattress structure embodying my invention; Fig. 2, an end view in elevation; Fig. 3, a view similar to Fig. 2 but showing a portion of the box springs structure in section; Fig. 4, a view similar to Fig. 3 but showing the mattress structure also in section; Fig. 5, an enlarged broken sectional detail view showing an edge portion of the mattress and box spring structure; Fig. 6, a perspective view of the united spring and mattress structures showing a sheet or cover tucked into the pocket space between the mattress and box spring structures; and Fig. 7, a perspective view showing a corner portion of the mattress lifted to expose the pocket space therebelow.

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In the illustration given, A designates a box spring unit; B designates a mattress unit; and C designates a muslin or other strip which unites structures A and B.

The spring unit A may be of any suitable or desired construction. In the specific illustration given there is provided a frame 10, springs 11, and a layer of fibrous or soft covering material 12 overlying the spring structure. A cover 13 extends about the sides of the spring unit and a border portion 14 extends inwardly from the sides. The width of the border may be approximately one-fourth of the width of the unit A or any desired width.

The mattress B may also be of any desired form of construction. It may be a mattress filled with cushioning material and may contain, if desired, springs or it may be formed of resilient material such as rubber, etc. For the purposes of the present invention, it will be understood that the mattress may be formed in a variety of ways and from a variety of materials. In the specific illustration given, I have shown a mattress filled with a latex body 15 having recesses 15a formed therein. A cover 16 extends over the top of the resilient mattress body 15. A side casing 17 extends about the sides of the mattress and the lower portion of the mattress is provided with a border strip 18 of substantially the same width as the border strip 14 of unit A.

The strip C of muslin or other material is stitched to the ends of the strips 14 and 18 as indicated in Figs. 2 and 3 so as to provide a common casing closing the bottom of the mattress B and the top of the spring unit A. At the same time, the strip C draws the border strips 14 and 18 inwardly so as to maintain them in taut condition and thus to seal the pocket space between the strips 14 and 18. By employing a muslin or inexpensive casing C to unite the border strips 14 and 18 about the units, a considerable saving in expensive material is accomplished while at the same time an attractive structure is produced in which the mattress is maintained always in true alignment with the box spring unit A therebelow. With this structure, a single stitching operation suffices to unite the border strips 14 and 18 with the inner casing member C.

While the casing C may be formed of muslin or other inexpensive sturdy material, and in this way a considerable saving is accomplished, it will be understood that other cloth materials may be used and, if desired, either of the strips 14 or 18 may be extended entirely across the structures to provide an integral casing C and in this event, the other border strip would be stitched to the

continuous strip extending across the top of unit A or bottom of mattress B.

In the preferred assembly operation, the unit A is enclosed by the cover 13 and at the same time the mattress portions 17 and 18 are formed, the inner portions of the mattress casing 17 being stitched to the muslin strip C and to the inner portions of the box spring border 14. The insert 15 for the mattress is then placed over the casing A and the border casing 17 is drawn about the sides of the mattress body 15. The top ticking or cover 16 may then be stitched to the top of the side strip casing 17, the usual tape being employed in this operation.

Operation

In the use of the combined mattress and box unit structure, the muslin strip C serves to maintain the units A and B in true alignment while at the same time the tension exerted by the strip C upon the border portions 14 and 18 of units A and B tends to aid in the drawing of the mattress downwardly into close relation about its borders to the box spring unit therebelow. At the same time, the border portion of the mattress provides a resilient flange which may be lifted, as illustrated in Fig. 7, to expose the pocket space therebelow so that the sheets, etc. may be readily tucked into this space. The lateral depth of the pockets affords ample room for the surplus portion of the sheets, etc. and at the same time the V-shaped inner recesses where the muslin strip C is stitched to the portions 14 and 18 provides a firm grip upon the sheets or covers, etc. The resilient flange afforded by the mattress portion tends also to grip the sheets, etc. and to lock them securely in position. With the structure shown, sheets of smaller dimensions, etc. may be employed effectively because the resilient flange provided by the border portion of the mattress is effective in securing the marginal portions of the sheet firmly within the pockets. There is no tendency for the mattress to become bent along its sides because the mattress does not protrude at any time over the sides of the unit A therebelow and thus after long use the mattress still retains its even lines due to the maintaining of the marginal portions of the mattress in accurate alignment with the marginal portions of the box spring unit A therebelow.

The combined mattress and box spring structure described may be made at lower cost than the separate mattress and box spring units while at the same time a superior product is obtained, affording better means for locking marginal sheet portions about the mattress and affording means for maintaining the mattress and box spring structures in constant alignment. While I have described the invention particularly in connection with a mattress and box spring structure, it will be understood that the invention is also applicable to davenport beds, sofa beds, studio couches, day beds, and similar structures. As already pointed out, the spring unit portions and mattress or cushion portions may be formed in a great variety of ways and of different materials while utilizing the invention.

While in the foregoing specification I have set forth a single illustrative embodiment of the invention in considerable detail, it will be understood that such details of structure may be varied widely by those skilled in the art without departing from the spirit of my invention.

I claim:

1. A cushion and spring structure comprising a spring unit and a cushion unit, a cover for said spring unit having a border strip extending inwardly from the sides of the unit, a cover for the cushion having a border portion extending inwardly over the bottom thereof, and a common cover connecting said border strips and extending between the two units, said border strips and common cover strip providing a sheet-receiving pocket between said units.

2. A mattress and box spring structure comprising a box spring unit and a mattress unit, said box spring unit having a cover extending about the sides thereof and inwardly a spaced distance along the top of the box spring unit to provide border strips, a cover for said mattress extending over the top and sides thereof and inwardly of the bottom to provide bottom strips, a muslin strip stitched to the border strips of said box spring and mattress units and serving to draw said border strips inwardly under tension, said border strips providing between them a sheet-receiving pocket.

3. A mattress and box spring structure comprising a box spring unit having a cover extending over the sides thereof and inwardly along marginal portions of the top thereof, a mattress of lesser depth than said box springs and consisting of a rubber body having a cover extending about the top and sides thereof and having marginal portions extending along the bottom of said mattress, and a tie member secured to the border portions of said covers at opposite sides of the mattress whereby sheet-receiving pockets are provided on opposite sides of said combined structure and said mattress providing a resilient flange above the pocket.

4. A cushion and spring structure comprising a spring unit having a cover extending along the sides and over a marginal portion of the top thereof, a cushion unit having a cover extending over the top and sides thereof and over a marginal portion of the bottom thereof, and a tie strip secured to the marginal portions of said cushion cover and spring cover and maintaining said marginal portions under tension to provide sheet-receiving pockets along the sides of said cushion and spring structure.

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