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J. H. KING ET AL

1,887,310

CUSHION STRUCTURE

Filed Aug. 20, 1930

Fig. 1.

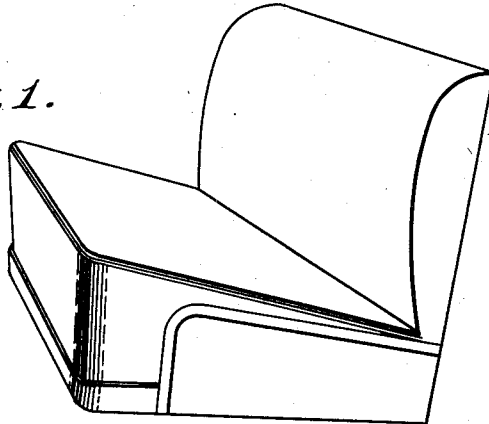


Fig. 2.

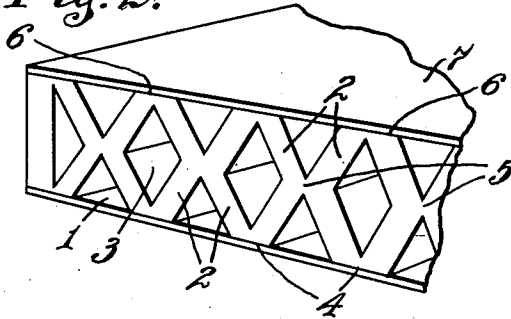


Fig. 3.

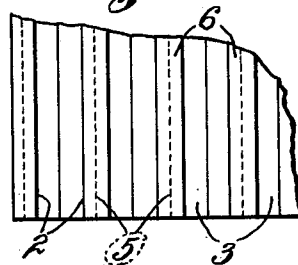
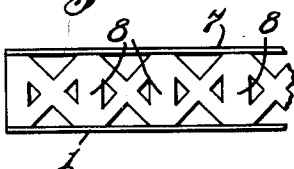


Fig. 4.



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CUSHION STRUCTURE

Application filed August 20, 1930. Serial No. 476,556.

Our invention relates to improvements in cushions primarily of the type used in automobile seats, although our invention is applicable to various other uses such, for instance, as substitute for the springs of spring beds, couch cushions and in fact in any use where the ordinary spring cushion is now adapted.

It is one of the objects of our invention to provide a cushion in which the use of coiled or metal springs of any character is entirely dispensed with and at the same time retain all of the advantages of the shock absorbing qualities imparted by said springs and in fact, improve upon the supporting and shock absorbing qualities of the cushion or other article in which our invention is used.

For the purpose of disclosing our invention we have illustrated certain embodiments thereof in the accompanying drawing in which

Fig. 1 is a perspective view of an automobile seat showing the type of cushion to which our invention is particularly applicable;

Fig. 2 is a partial perspective end view of the seat structure illustrated in Fig. 1 with the side cover removed to illustrate the inner construction of the cushion;

Fig. 3 is a partial plan view of the structure illustrated in Fig. 2 with the cover removed; and

Fig. 4 is a partial end view of a modification.

In the structure illustrated, having particular reference to Fig. 2, the cushion structure is preferably formed of a bottom sheet 1 which may be of stiff material, or if desired may be of any other desired material, such for instance as a rubber sheet having a certain amount of stiffness therein, a board or any other suitable base. If desired this bottom sheet may even be formed of sponge rubber. Mounted upon this base is a hollow structure constituting a plurality of diamond shaped parallel ribs 2, formed of sponge rubber and each rib has a diamond shaped opening 3 extending therethrough. The bottom of the diamond shaped figure is preferably flattened off as at 4 to engage the bottom sheet 1 and the ribs are preferably secured to this bottom sheet against displacement.

The adjacent corners of the ribs contact with one another as at 5 and the top of the ribs are preferably flattened off as at 6 to receive the top cover member 7. This top cover member may be of any suitable material such as sponge rubber and if desired may be of other material having preferably, however, a certain amount of pliability to permit the same to give under the weight imposed thereon.

In actual practice we preferably form the structure formed of the parallel ribs in a one-piece unitary structure, the ribs all being molded together as illustrated and if desired, even the top cover may be molded with the parallel ribs to make a unitary structure.

In Fig. 2, we have illustrated a modification of the structure illustrated in Fig. 1 wherein the hollow diamond shaped ribs are braced vertically by vertical ribs 8.

It will be understood that where we have, throughout the specification and claims, used the term "cushion" this term is used in its generic sense and is intended to include such articles as mattresses and springs combined, couch cushions, chair cushions, seat cushions and seat backs and articles adapted for the above use. We have found that our invention is particularly applicable to mattresses in that we can with our invention accomplish the result which is now accomplished by the use of springs and a mattress.

We claim:

1. A cushion structure comprising a base, a plurality of substantially diamond shaped parallel ribs formed of soft rubber mounted on said base and each having a diamond shaped opening extending throughout the length thereof to form a hollow rib structure, the corners of adjacent ribs contacting with one another to thereby prevent lateral sway, and a cover member for said ribs.
2. A cushion structure comprising a base and a one-piece integral soft rubber cushion member mounted on said base, said member having oppositely disposed V-shaped notches running parallel to the upper and lower edges and forming a plurality of substantially diamond shaped parallel ribs, each of which has a diamond shaped opening extending

throughout the length thereof to form a hollow rib structure, the joined adjacent corners of the ribs preventing lateral sway, and a cover member for said ribs.

5 3. A cushion structure comprising a base, a plurality of substantially diamond shaped parallel ribs formed of soft rubber secured on said base and each having a diamond shaped opening extending throughout the length thereof to form a hollow rib structure, the adjacent corners of the ribs being secured together to thereby prevent lateral sway, and a pliable cover member for said ribs secured to the tops thereof.

10 4. A cushion structure comprising a base, a plurality of substantially diamond shaped parallel ribs formed of soft rubber secured at their bottom corners to said base and each having a diamond shaped opening extending throughout the length thereof to form a hollow rib structure, the corners of the adjacent ribs contacting to brace one another against lateral sway and a pliable cover member secured to the top corners of said ribs.

20 In witness whereof, we have hereunto set our hands at Indianapolis, Indiana, this 14 day of August, A. D. one thousand nine hundred and thirty.

JOHN H. KING.
JOSEPH A. ALLISON.

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