Jan. 7, 1958 R. K. ODOR, JR 2,818,912

AUXILIARY CUSHION FOR AUTOMOBILE SEATS AND METHOD OF PRODUCING THE SAME

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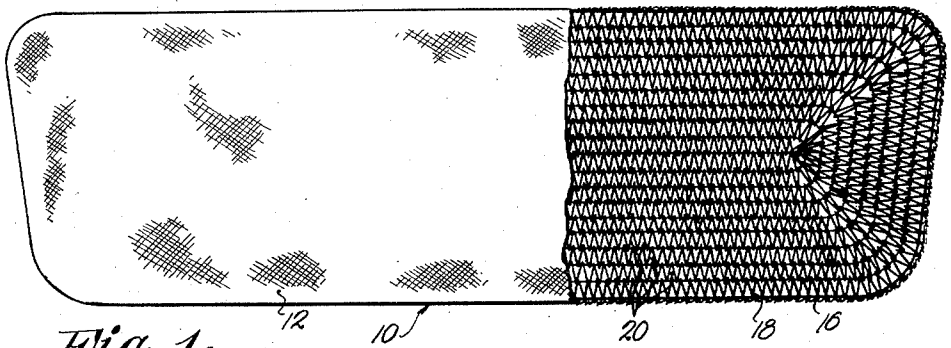


Fig. 1.

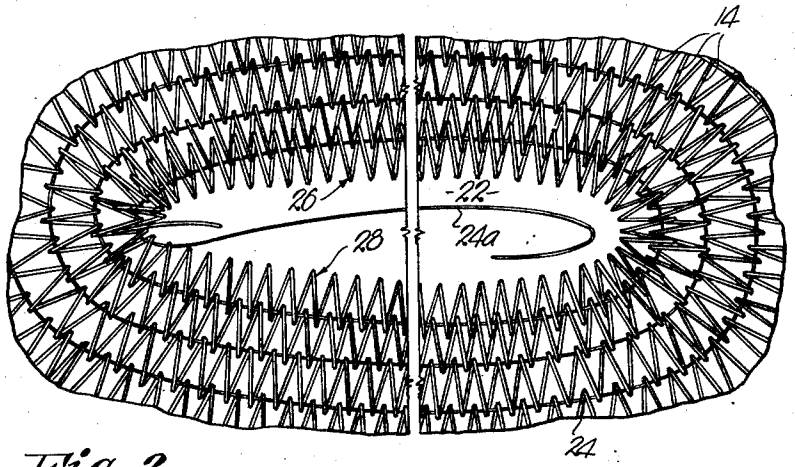


Fig. 2.

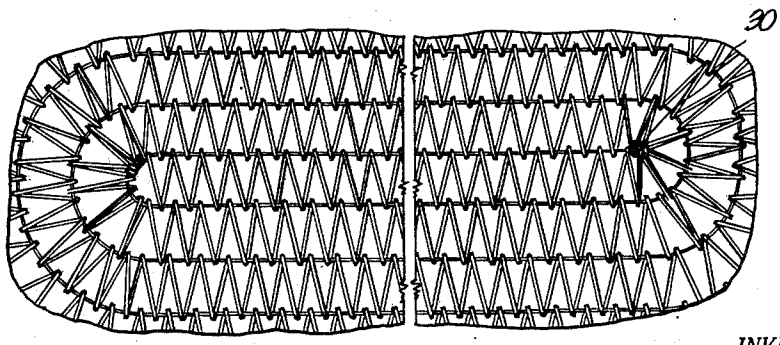


Fig. 3.

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AUXILIARY CUSHION FOR AUTOMOBILE SEATS AND METHOD OF PRODUCING THE SAME

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5 Claims. (Cl. 155—182)

This invention relates to improvements in ventilated cushions or seats and particularly to a resilient mat adapted to be made entirely from metal wire, the primary object being to provide an improved construction not only advantageous from the standpoint of saving of material, but in presenting a taut interconnection of parts while maintaining the initial desired softness and resiliency.

It is the most important object of the instant invention to provide a mat-like device consisting essentially of an elongated coil spring wound into a plurality of convolutions but terminating short of a completely filled mass so that the convolutions may be drawn taut by tying together the spiral rings of the innermost convolution.

Another important object of the present invention is the provision of a device of the aforementioned character that employs a relatively rigid, outermost band cooperable with the tying means at the center of the mat in maintaining the convolutions in a taut condition.

A still further object is to provide a device such as above set forth that utilizes a wire locking element to hold the spiral rings of the coil spring interleaved and which locking element is also employed as the means for tying together the initially spaced-apart stretches of the innermost convolution.

A further important object of the instant invention is to provide a novel method for producing a cushion or the like made from wire and having the aforementioned advantages.

In the drawing:

Figure 1 is a plan view partially broken away illustrating one form of auxiliary cushion for automobile seats or the like made according to the present invention.

Fig. 2 is an enlarged, fragmentary view showing the cushion immediately prior to the tying and drawing step; and

Fig. 3 is an enlarged, fragmentary, plan view showing the finished structure at the center thereof.

The mat-like device shown in the drawing is designed particularly to present an auxiliary cushion **10** adapted to cover the entire seat of an automobile, but it is manifest that cushions of various types and shapes may be produced in accordance with the concepts of the invention and that the same may be employed for various purposes. For example, the same may form the seat and back of a chair if desired by attaching the peripheral edge thereof to a suitable framework.

Except for a cover **12** that is desirably placed on the device, it preferably consists entirely of metal wire that includes a continuous coil spring having a series of spaced-apart, spiral rings **14**. In carrying out the method contemplated by the instant invention, such coil spring is first threaded onto a continuous outermost, peripheral band **16** of relatively rigid, strong wire material having the ends thereof joined in any suitable manner such as by a clip or by welding (not shown). This presents an outermost convolution **18**. Thereupon, the coil spring is wound into a plurality of additional convolutions **20** within the

confines of the band **16** terminating in an innermost convolution broadly designated by the numeral **22**. Simultaneously, all of the convolution **18**, **20** and **22** are so disposed as to interleave the rings **14**, as clearly seen in the drawing.

A locking element in the nature of a continuous, relatively thin wire **24** is threaded through the rings **14** of the coil spring to hold the rings **14** so interleaved. Finally, the two stretches **26** and **28** of the innermost convolution **22** are drawn inwardly together into interlaced relationship and tied together in some suitable manner. The terminal end **24***a* of the locking element **24** may be employed for such purpose and is threaded through the rings **14** of both stretches **26** and **28** as best seen in Fig. 3, to hold all of the convolutions **18**, **20** and **22** in a taut condition between the outermost band **16** and the take-up means **24***a*. A suitable knot **30** in the wire **24***a* is employed at one end of the stretches **26**—**28** and when the stretches are thus tied together, the various convolutions of the locking element **24** are held spaced-apart and in engagement with the rings **14** which it interlocks.

It is important to note therefore, that by virtue of discontinuing the coiling operation prior to completely filling the area bounded by the band **16** and thereupon filling the gap shown in Fig. 2 by drawing the stretches **26** and **28** together, there is a substantial saving in material.

Furthermore, when mats of this type are produced by continuing the coiling operation until a sufficient number of convolutions **20** are presented to provide a continuous mat, the rings **14** remain loose on the locking element **24** and the cushioning effect is diminished.

While the mat is normally mashed prior to encasing the same within the envelope **12**, holding of the convolutions **20** in a taut condition, prolongs the life of the device and even after substantial use, the rings **14** maintain their ring-like spiral configuration. The manner of so mashing the rings **14** and shaping the band **16**, as well as the nature of the machine for producing the entire device automatically, forms no part of the instant invention and has, therefore, not been shown or described.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:

1. A device of the kind described comprising an elongated, continuous coil spring having a series of spiral rings, said coil spring being wound into a plurality of convolutions with the rings of each convolution interleaved with the rings of next-adjacent convolutions; a continuous locking element threaded through the rings for maintaining the same in interleaved relationship; and take-up means drawing the innermost of said convolutions inwardly to hold all of the convolutions in a taut condition.

2. A device as set forth in claim 1 made entirely of metal wire.

3. A device as set forth in claim 1 wherein said take-up means is a continuation of said locking element.

4. A device of the kind described comprising an elongated, continuous coil spring having a series of spiral rings, said coil spring being wound into a plurality of convolutions with the rings of each convolution interleaved with the rings of next-adjacent convolutions; a continuous locking element threaded through the rings for maintaining the same in interleaved relationship, the innermost of said convolutions having a pair of initially spaced stretches; and take-up means tying together the rings of said stretches and drawing the same inwardly into interlaced relationship to hold all of the convolutions in a taut condition.

5. A device of the kind described comprising an elongated continuous coil spring having a series of spiral rings, said coil spring being wound into a plurality of convolutions with the rings of each convolution interleaved

with the rings of next adjacent convolutions; a continuous locking element threaded through the rings for maintaining the same in interleaved relationship; take-up means drawing the innermost of said convolutions inwardly to hold all of the convolutions in a taut condition; and a continuous band threaded through the outermost of said convolutions for holding the convolutions taut between the band and the take-up means.

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