United States Patent [19]

Shave

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[54] **CUSHION CONSTRUCTION**

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[52] **U.S. Cl.** ..... **5/338;** 5/361 B

[51] **Int. Cl.²** **A47G 9/00;** A47C 27/00

[58] **Field of Search** ..... 5/337, 338, 345, 355, 340, 5/361 B; 128/57, 68

[56] **References Cited**

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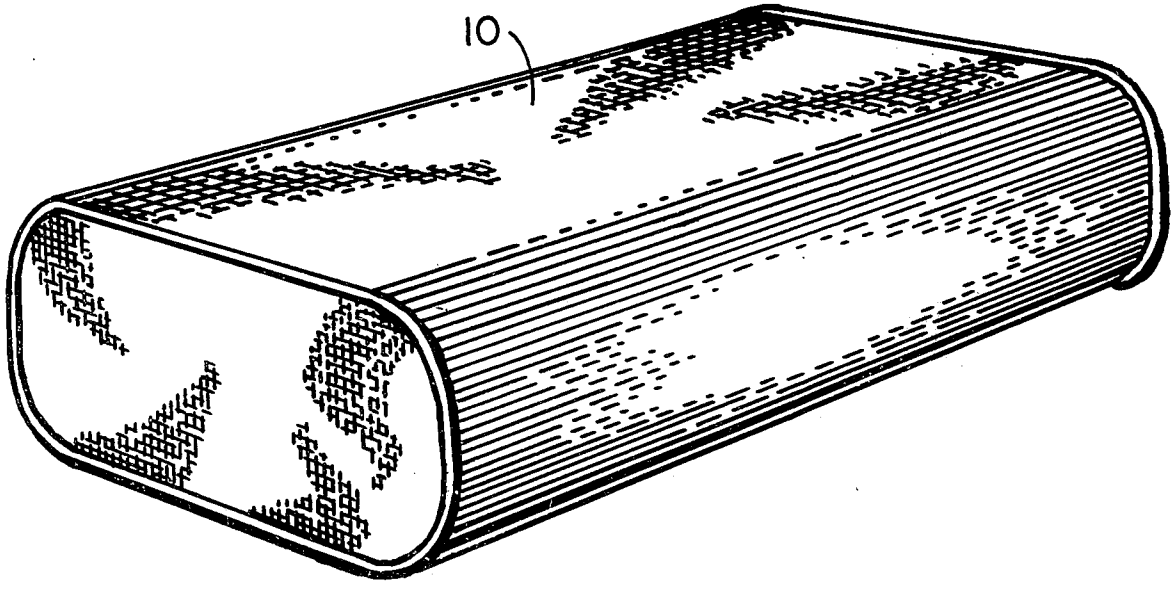
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Assistant Examiner—Andrew M. Calvert

[57] **ABSTRACT**

A cushion of the type having a plurality of forms of resilient material has a core of foam rubber or its equivalent, with a cross-section preferably suggestive of an I beam. The foam rubber slab in the position of the web is normally horizontal, with this characteristic "I" cross-section extending substantially throughout the length of the pillow. The foam rubber core is surrounded by a padding of preferably fibrous batting, and this assembly is surrounded by a cover.

4 Claims, 3 Drawing Figures



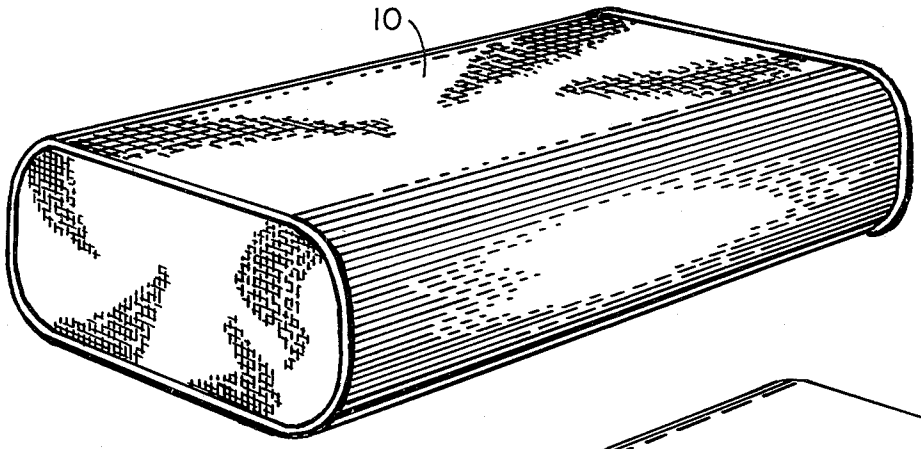


Fig. 1

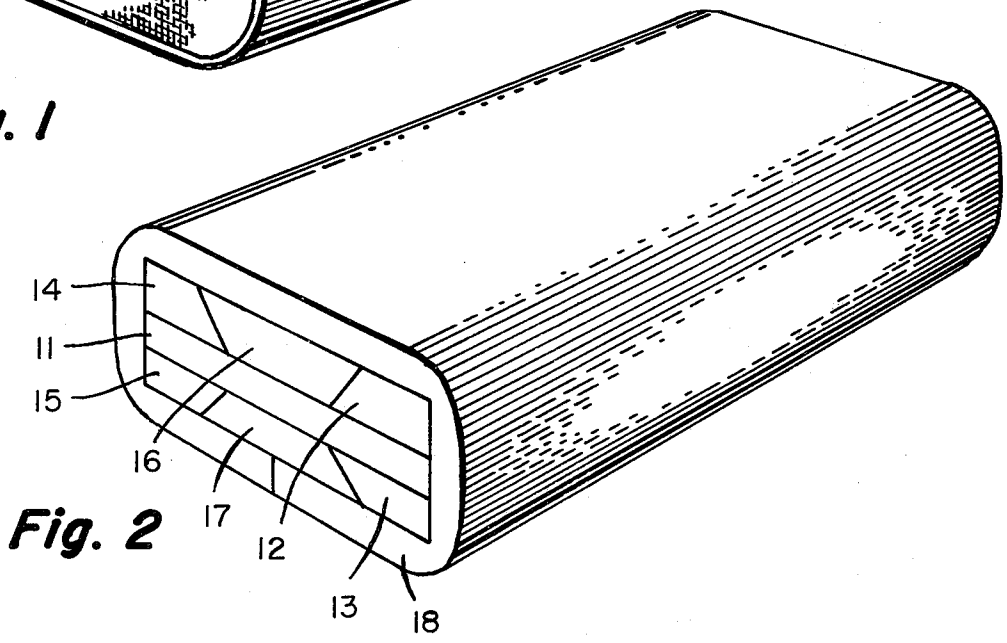


Fig. 2

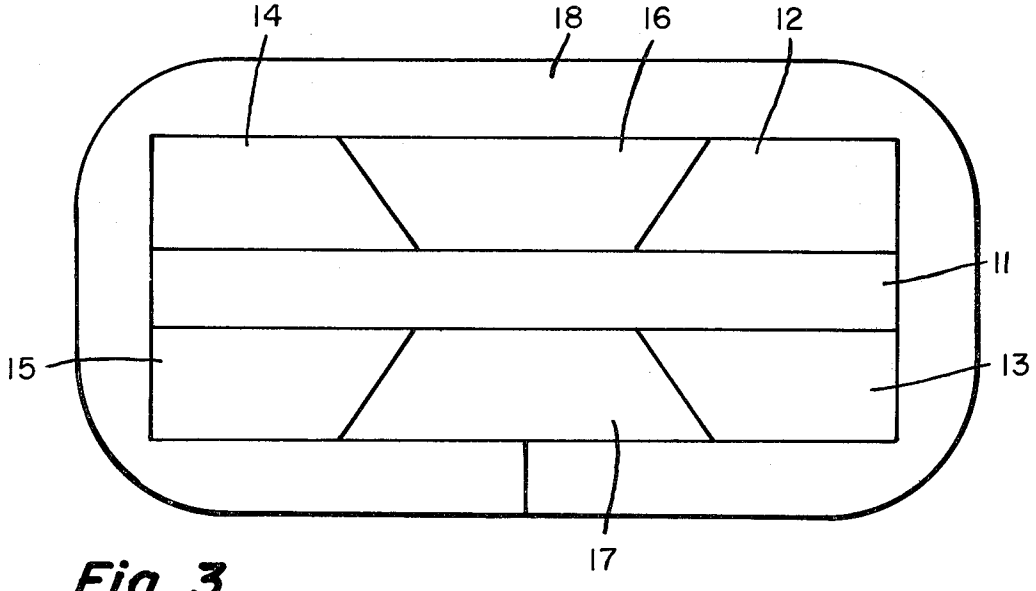


Fig. 3

CUSHION CONSTRUCTION

BACKGROUND OF THE INVENTION

Pillows and upholstered structures have frequently reflected the fact that a soft support may best be combined with at least some ability of the support to maintain its shape. This need has resulted in the use of such materials as foam rubber as a shape-maintaining resilient core, which is surrounded by a padding to provide the feeling of a down-like softness. Composite pillows are shown in a number of patents such as the 1960 U.S. Pat. of Boos, No. 2,940,088. My co-pending application Ser. No. 363,750, filed May 24, 1973 also shows a pillow construction of this general type.

Where the pillow is to have some therapeutic value, it is important that the relative distribution of the several resilience materials produce a resiliency gradient across the pillow in conformity with the needs of the human body. Once the gradient is determined, the pillow construction should be easily manufactured, and capable of maintaining its original shape and resiliency characteristics. These considerations form the objectives of the present invention.

SUMMARY OF THE INVENTION

A core preferably of foam rubber has a slab of this material that is centrally relatively thin with respect to the uncompressed thickness of the complete pillow. This slab has an increase in thickness along at least two opposite edges forming a configuration analogous to the web and flanges of either a "channel" or an "I" beam. This core is surrounded by a padding, preferably of a fibrous batting material so that an inner layer may be interposed along the central slab of foam rubber between the opposite portions of increased thickness. The effect of the preferred "I" -shaped configuration of the core produces a reversibility of the cushion both face-for-face, and edge-for-edge. In all of these positions, the cushion provides an increased support under the neck of the user, while providing a soft nest-like receptacle for the head. Maintenance of this type of support has considerable therapeutic value in normalizing the position of the spinal components to eliminate a muscle strain and the pinching of nerves resulting from the distorted relative placement of the vertebrae.

The presence of the continuous "web" slab provides a lateral containment of the shape of the cushion; and also a degree of planar containment as the web deflects under pressure, and then returns to its original configuration on release of the pressure. The entire foam rubber core element is easily manufactured either from slab stock, or molded in one operation from a self-foaming material according to well established industrial techniques.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a complete pillow embodying the present invention.

FIg. 2 is a perspective view showing the core and padding of the material, with the cover removed.

FIG. 3 is an end view of the structure shown in FIG. 2.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The pillow shown in FIG. 1 has a cover **10** surrounding the interior construction shown in FIG. **2.** A central slab **11** of foam rubber has the edge portions **12–13** and **14–15** providing an increase in thickness along these edges. These portions are preferably trapezoidal in crosssection, with the end configuration showing in FIG. **3** extending throughout the length of the pillow. An inner layer of padding is shown at **16** and **17** extending between the edge portions **12–14** and **13–15,** respectively. The outer layer of padding **18** surrounds this entire assembly; and is, in turn, surrounded by the cover **10.**

In a production version of the present invention, the length of the pillow was selected at between 18 and 20 inches. The total uncompressed thickness is about 6 inches. With these proportions, the central slab **11** was selected at ¾ of an inch in thickness and 10 inches in width, with the length extending throughout the length of the pillow (with no provision for padding at the opposite ends). All of the trapezoidal portions **12–15** were an inch and ½ in thickness, 2 inches along the shorter of the parallel sides, and 3 inches along the longer of the parallel sides. A very close approach to this configuration is easily obtainable through molding techniques in which a self-foaming material is injected into a form, and permitted to fully occupy the space of the form as it proceeds to cure into permanent condition. The relationships stated above are preferable, according to experience, and produce a group of interesting ratios. The thickness of the portions **12–15** is approximately twice the thickness of the central web slab **11.** The ratio of the width of the parallel sides of the trapezoidal sections is in the ratio of 2 to 3, and the longer side is approximately twice the distance between the parallel sides. The length of the shorter of the parallel sides is also approximately 1/5 of the width of the central web slab.

It should be noted that the lateral extension of the web slab produces a containment of the padding material, particularly that positioned as shown at **16** and **17.** The permanence of this arrangement is easily assured by spraying them with some form of adhesive prior to assembly. This is standard practice in many forms of upholstered construction. The nature of all of the foam components is best described by reference to standard specification criteria for foam rubber. The production version referred to above utilizes a material generally referred to as "1014". This specification is generally recognized in the industry. The first two digits of the number establish the density of the material (1.0), and the second two specify the weight required to deflect the material to given percentage of its original thickness. The test details associated with these specifications are standard, so that such a number fully identifies the characteristics.

I claim:

1. A pillow having both foamed resilient material and a padding within a cover, wherein the improvement comprises: a configuration of said foamed resilient material including a central slab and portions of substantially increased thickness along at least two opposite edges of said slab, said padding surrounding said foamed resilient material and filling the space between the portions and adjacent said slab to form a faired contour around the periphery of said pillow, wherein said

portions of increased thickness extend from the planes of the opposite sides of said slab, wherein the said portions extend from said planes a distance of substantially twice the thickness of said slab.

2. A pillow as defined in claim **1,** wherein said portions are trapezoidal in cross-section.

3. A pillow as defined in claim **1,** wherein said padding is fibrous bat material.

4. A pillow as defined in claim **3,** wherein an inner layer of said bat material is disposed on opposite sides of said slab exclusively between said portions of increased thickness, and an outer layer surrounds said foamed resilient material and said inner layer.

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