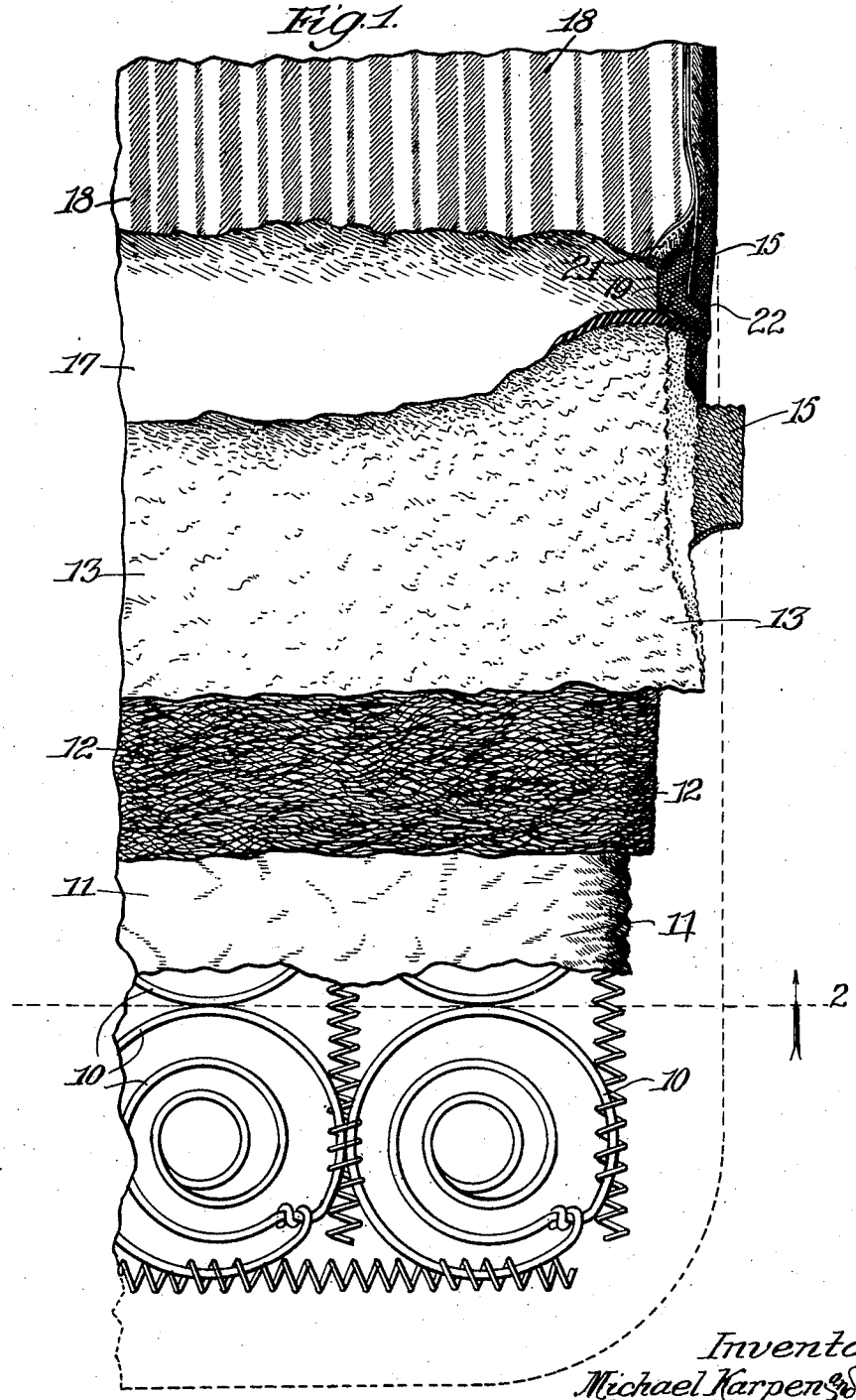
Dec. 15, 1942. M. KARPEN ET AL 2,305,430

MATTRESS, CUSHION, AND THE LIKE

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Fig. 1.



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Fig. 2.

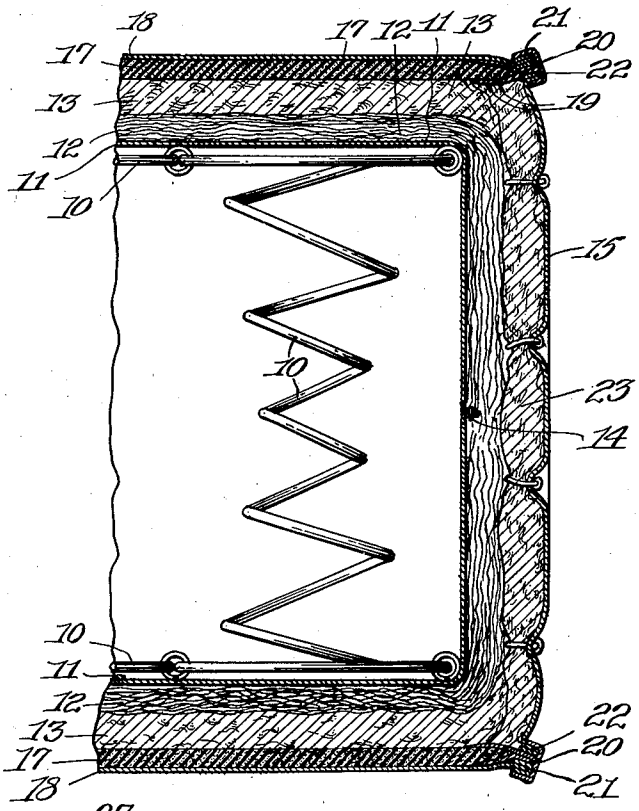
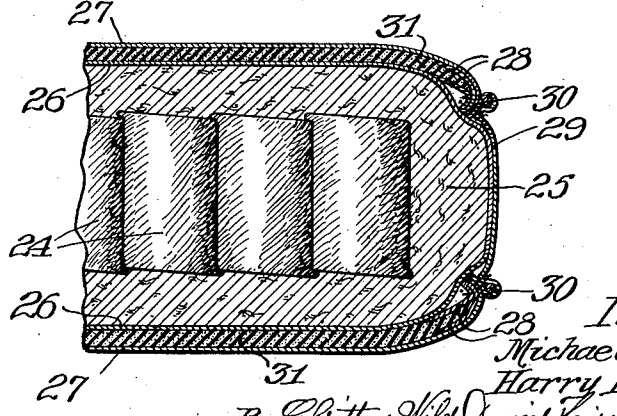


Fig. 3.



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Fig. 4.

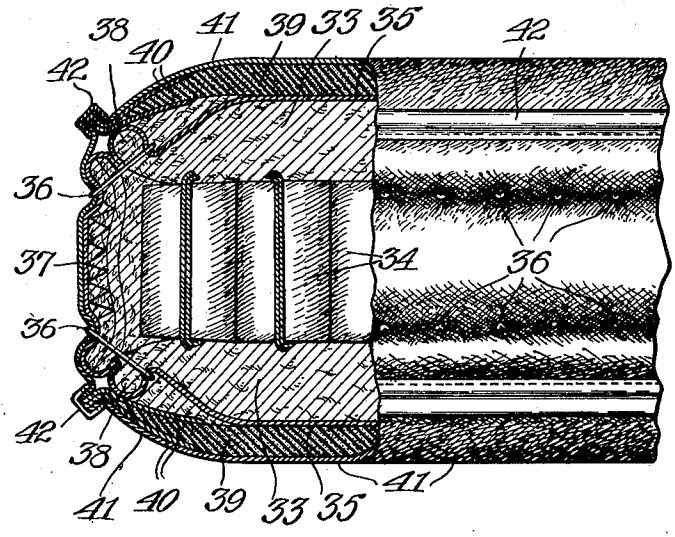
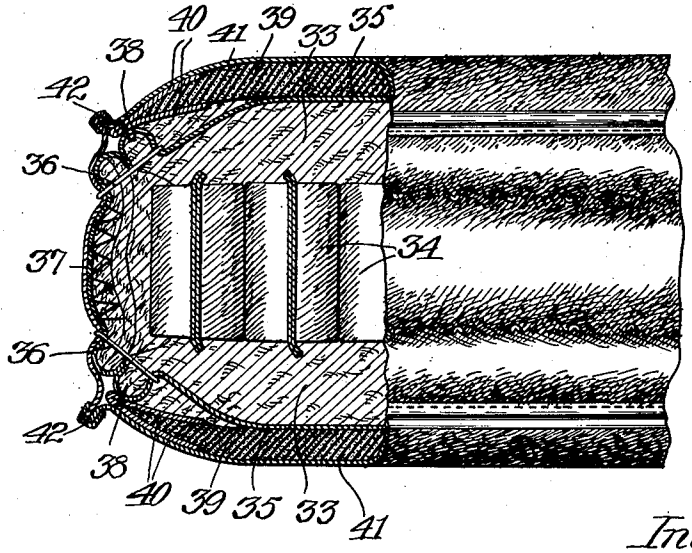


Fig. 5.



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UNITED STATES PATENT OFFICE

2,305,430

MATTRESS, CUSHION, AND THE LIKE

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Application August 19, 1939, Serial No. 291,098

3 Claims. (Cl. 5—351)

This invention relates to a mattress, cushion, or the like.

An object of the invention is to provide a mattress or cushion in which porous rubber pads are employed in conjunction with an inner spring core. A further object is to provide a locally resilient or yielding cushion in combination with a main spring core, yielding substantially as a unit and providing a uniform base support for the locally resilient cushion. Other specific objects and advantages will appear as the specification proceeds.

The invention is illustrated in preferred embodiments by the accompanying drawings, in which—

Figure 1 is a broken plan developed view of a portion of the mattress showing the parts thereof in broken away relation; Fig. 2, a transverse sectional view of a portion of the mattress, the section being taken as indicated at line 2 of Fig. 1; Fig. 3, a sectional view, similar to Fig. 2, of a portion of cushion body embodying the invention; Fig. 4, a vertical sectional view of a portion of a modified form of mattress embodying my invention; and Fig. 5, a broken part sectional view of a portion of another modified form of mattress embodying my invention.

In the illustration given, Figs. 1 and 2, 10 designates a spring mattress core formed by hourglass or spiral springs united at their tops and bottoms by spring helicals or other means. Since the spring structure is of well known construction, it is believed unnecessary to describe the same in detail.

About the spring structure 10 is stretched a muslin strip 11 and about the muslin strip 11 is placed a sisal layer 12. About the sisal is a layer of cotton, kapok, or other suitable material 13. The muslin strip 11 is brought into overlapping relation on one side and secured together by fastening staples 14 or by stitching.

We next take each foam rubber pad 17, which is extremely flexible and yielding, and draw it over the cotton layer 13, so that it lies uniformly thereon in a smooth and conforming position. Outer casings 18 are then drawn about the rubber pads 17. Each rubber pad 17 is provided at each margin with a fabric strip 19 which is preferably cemented to the rubber, and the folded edge 20 of the fabric strip is brought into alignment with a folded edge of the border 15 and with the taped end 21 of the outer casing 18. The parts thus brought together are united by a welt or tape 22.

To reinforce the border strip 15, an inner padding 23 is shown stitched thereto.

In the foregoing construction, we utilize the extremely flexible and resilient foam rubber pad 17 without at the same time deforming the top and bottom surfaces of the mattress. The padding or filling material, supported by the spring structure and confined evenly thereover by the cotton layer 13, provides a firm and uniform base for each foam rubber pad 17. The pad is held securely in position by the marginal attaching members 19, and it is held against distortion or wrinkling at intermediate points by close contact with the cotton layer 13.

In the modification shown in Fig. 3, muslin covered coil springs 24 provide a spring core, about which is formed a filling material 25 of cotton, kapok, or other suitable material. The filling 25 is confined in firm and even relation to the spring core by a muslin cover 26. About the taut casing thus provided, we place the foam rubber pads 27, the ends of the pads being provided with tie strips 28 cemented thereto. The ends of the strips 28 are secured to the border member 29, which is provided with a cord gimp 30. The cushion outer casing extends between the attachment strips 28 and the folded edges of the border 29, and the parts are secured together in this position, as illustrated in Fig. 3.

While in the mattress and cushion illustrated, we have shown certain specific arrangements, it will be understood that considerable variation can be made in such arrangements and materials without departing from the spirit of our invention.

It is important to note that in the mattress and cushion as illustrated, we have provided a muslin enclosed resilient center, the muslin cooperating with filling layers and an inner spring core to provide a firm but yielding base for the porous rubber pad. At the same time, the yielding of the foam rubber pad on one side of the mattress will place no strain whatever upon the other side of the pad.

The uniformity and smoothness produced by the inner cotton layers 13 enable highly resilient and flexible pads 17 to be maintained in a desired even shape adjacent the exterior portions of the mattress top and bottom, whereby the highly flexible character of the sponge rubber is utilized for giving a local surface resiliency and yielding quality. The inner yielding cotton-covered spring core provides a form preserving base for the porous pad while, at the same time, adding

resiliency of a secondary and sturdier character to the local resiliency of the sponge rubber pad.

In the modified structure shown in Fig. 4, a cotton layer **33** is formed about the muslin-covered spring core **34**. A muslin layer **35** is then drawn about the cotton and a stitch **36** engages the forward portion of the muslin **35** and extends through the front wall of the border casing **37**, thus forming a roll **38** at the upper and lower corners of the mattress.

A foam rubber pad **39** is provided with a tape member **40** which is secured to the border casing **37** and the outer ticking **41** by the tape or welt **42**.

In this structure, the muslin **35** provides a smooth even base for the extremely resilient porous pad **39**. Further, the rolls **38** provide a sturdy support for the ends of the pad where they are united to the mattress ticking and border ticking.

The structure shown in Fig. 5 is identical with that shown in Fig. 4 except that the tape **40**, cemented to the rubber pad **39**, is stitched at its forward end to the roll **38** rather than being secured to the outer ticking and the border ticking by the tape **42**.

While we have shown a fabric mattress border strip, it will be understood that, if desired, the porous rubber pad may be extended about the sides of the mattress to form border strips. Or, if desired, a border strip of porous rubber may be secured to the upper and lower pads and form therewith an enclosure for the spring structure.

It will be understood that the tape cemented to the rubber pads may, if desired, be secured to the muslin or other parts of the mattress by cementing as well as by stitching.

The detailed description has been given for the purpose of illustrating a specific manner in which the invention may be carried out. Obviously wide changes in details may be made without departing from the spirit of our invention as claimed. We wish it to be understood that we do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

We claim:

1. In a mattress structure of the character set forth, an interlocking spring core, a fabric web about said core enclosing the same, filling material about said fabric web, a second fabric web about the filling material, a border casing, stitching extending obliquely through said border casing and the top and bottom portions of said second web providing edge rolls extending about the upper and lower surfaces of the mattress, a pair of continuous elastic porous rubber pads over said second web and extending over and covering substantially the entire upper and lower surfaces of the spring core, said pads being provided with tapes secured along the upper and lower marginal edges thereof, means for securing said tapes to said edge rolls along the edges of the mattress structure, and top and bottom tickings extending respectively over said pads and secured to said border casing.

2. In a mattress structure of the character set forth, an interlocking spring core, filling material about said core, a fabric web about said filling material, a border casing, stitching extending through said border casing and the top and bottom portions of said web providing edge rolls extending about the upper and lower surfaces of the mattress, a pair of continuous elastic porous rubber pads extending over said web and extending over and covering substantially the entire upper and lower surfaces of the spring core, said pads being provided with tapes secured along the upper and lower marginal edges thereof, means for securing said tapes to said edge rolls along the edges of the mattress structure, and top and bottom tickings extendings over said pads and secured to said border casing.

3. In a mattress structure of the character set forth, a spring core, filling material about said core, stitching extending through said filling material and providing edge rolls about the upper and lower surfaces of the mattress, a pair of continuous elastic porous rubber pads extending over the filling material and extending over and covering substantially the entire upper and lower surfaces of the spring core, said pads being provided with means along the upper and lower marginal edges thereof for securing the same to said edge rolls along the edges of the mattress structure, a border casing, and top and bottom tickings extending over said pads and secured to said border casing.

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