March 12, 1968 R. L. WEBER III 3,372,407

MATTRESS AND CUSHION VENTILATING AND AIR TREATMENT MEANS

Filed Feb. 16, 1966

FIG. 1

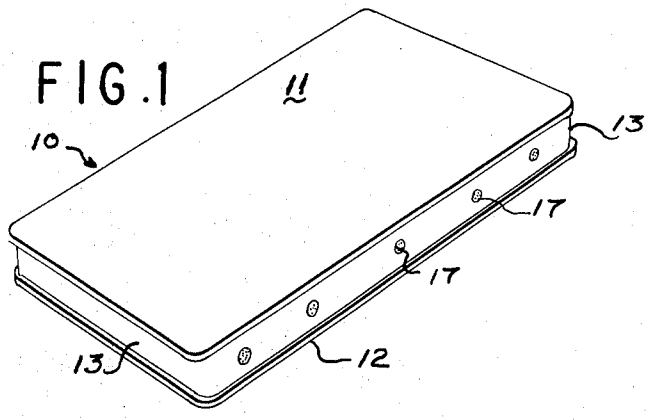


FIG. 2

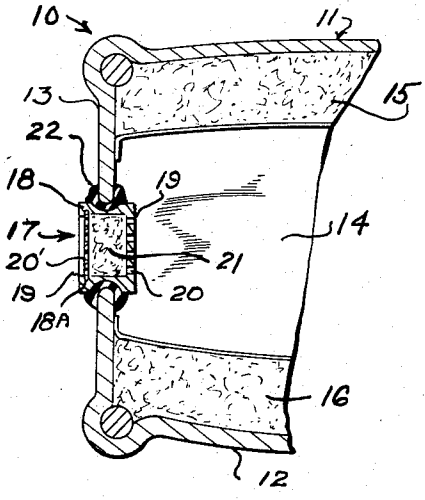


FIG. 3

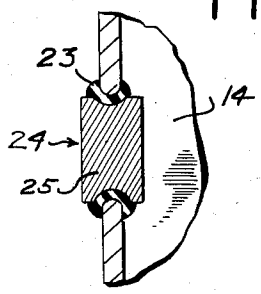
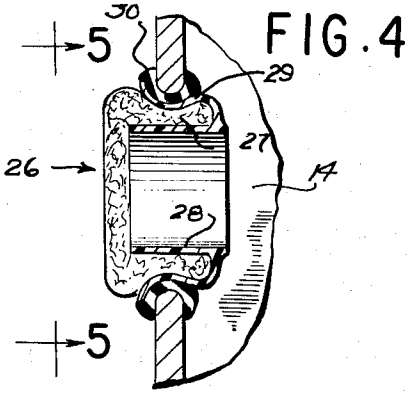


FIG. 4



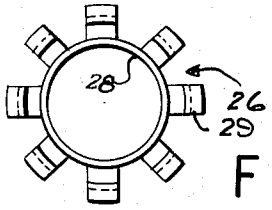


FIG. 5

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MATTRESS AND CUSHION VENTILATING AND AIR TREATMENT MEANS

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ABSTRACT OF THE DISCLOSURE

A mattress having side panels with apertures arranged therein for the insertion of a cylindrical container which is treated with a deodorizing substance. As the mattress is depressed and released the deodorizing container will emit a treated scent of air to the interior of the mattress to deodorize the same.

This invention relates to a mattress, cushion or similar body support, and more particularly to means permitting the interior of the body support to be properly ventilated and at the same time treated to impart a scent, deodorizer or germ-treating material to the air as it passes in and out of the body support.

Prior devices have been arranged to have screens in the apertures or to remove moisture from the air.

One of the objects of the invention is to provide an arrangement for imparting a scenting or volatile material to a space operable by movement of a deformable body support and at the same time provide ventilation to the interior thereof.

Another of the objects of the invention is to provide a simple and inexpensive means for imparting the desired characteristics to the air in a space without using separate mechanical means.

In one aspect of the invention, the deformable cover of the mattress, cushion, or body support has apertures in the side walls or walls thereof. The interior air space is maintained by springs, porous material or by the shape and material of the cover itself. The apertures have a ring, such as a grommet, to receive removably the contained or absorbent material, the absorbent material permitting air to pass therethrough from the inside to the outside of the mattress and vice-versa. Volatile or suitable chemical means or material can be sprayed or introduced into or onto the absorbent body for providing a scent or deodorizing characteristic to the air passing through the absorbent body. The absorbent body may, of course, merely support the particular chemical in its interstices or it may actually be absorbed into the fibers.

Other objects, advantages and features of the present invention will be apparent from the following detailed description and drawings which are merely exemplary.

In the drawings:

FIG. 1 is a perspective view of a mattress embodying the present invention;

FIG. 2 is a sectional fragmentary enlarged view of one embodiment of the present invention;

FIG. 3 is a fragmentary view of a modified embodiment of the present invention;

FIG. 4 is a view of another modification of the present invention; and

FIG. 5 is a section taken along the line 5—5 of FIG. 4 without the pad thereon.

Referring to FIG. 1 of the drawing, mattress **10** is provided with a top surface **11**, a bottom surface **12**, and side walls **13**. The side walls **13** are provided with a plurality of venting devices or breathers disposed at spaced intervals. The mattress can be of any well-known construction, the cover being deformable as the body support is used. The interior of the body support

may have springs or a loose compressible material therein which provides an air space as is known in the art. The cover may be of flexible textile material or of a suitable leather or substitute.

Referring to FIG. 2, the interior **14** of the mattress **10** is provided with layers **15** and **16** of stuffing of any well-known material, such as cotton, foam rubber or similar plastic foam material. The air space **14** between the layers **20** and **22** of material generally contains the coil springs (not shown). The side wall **13** of the mattress is provided with the ventilatnig or breathing device **17** of the present invention.

The ventilating devices **17** comprise a cylindrical container **18** that may be made of resilient sheet metal or plastic material having an inner bottom **19** provided with a plurality of uniformly disposed perforations or openings **20** therein. The side of the cylindrical container **18** is not perforated, while the open outer end **19** is provided with a circular perforated disc member **20'** made of resilient material so that it can be readily snapped into the circular recess **18A** disposed on the inner surface of the container **18**.

The interior of container **18** is filled with absorbent material **21** of a porous nature so that the air can freely flow through the container from the interior to the exterior of the mattress and in the opposite direction at all times. The flow is caused by deformation of the cover and walls producing a pressure differential between the space inside the mattress and the room or zone wherein the mattress is located. The material **21** may be of a cellulosic material such as wood pulp, paper pulp or cotton cellulose. These materials may also be mixed with one another as desired.

When a person reclines on the mattress, the weight will normally compress the mattress and cause air within the interior space **14** thereof to be discharged therefrom. Also, when a person reclining on the mattress moves around on the mattress, there will be a natural breathing effect so that air may flow inwardly into the interior of the mattress at one time and outwardly at another, and the cycle will be repeated. This causes the ventilator device **17** to act as a breather element.

When the material **21** is saturated or treated with a scenting liquid or the like, it also acts as a deodorizer or air purifier. The material **21** may be treated with any well-known chemical that is a deodorizer by merely introducing a predetermined quantity into the material **21** with an eye dropper or the like. Merely as an example, a 2% solution of "Diaphene" can be used.

The container **18** is snapped into a conventional circular grommet **22** when it is desired to place the device in the wall **13** of the mattress **10**. The container is readily replaceable by merely snapping the container **18** out of the grommet **22** and replacing it with a new container when desired.

Referring to the embodiment of the invention shown in FIG. 3, such as similar to that described in connection with FIG. 2, except that the grommet **23** may be of plastic material and the ventilator and deodorizer device **24** consists of a cylindrical cartridge or wafer **25** of porous material that is made of one piece, rather than having loose or discrete particles as is the case with material **21**.

The wafer cartridge **25** is treated with a chemical by utilizing an eye dropper or other similar means to spray it with the proper amount of liquid or suitable chemical which will volatilize as air passes therethrough and then impart its characteristic to the air.

Referring to the embodiment of the invention shown in FIGS. 4 and 5, the breather or ventilating device **26** is a pad having a depending skirt **27** that is compressed or sandwiched between the inner sleeve **28** and the fingers

or sleeve means **29** of the holder member. The holder is snapped into the grommet **30** to properly secure the depending skirt **27** of the pad between the inner and outer sleeves **28** and **29**. The pad is stretched like a drumhead over the holder and the absorbent material pad is treated with any suitable deodorizing chemical as described previously.

Inasmuch as various changes may be made in the form and relative arrangement and location of the parts, it is not meant to limit the invention except by the scope of the appended claims.

What is claimed is:

1. In a mattress having a side panel, apertures arranged in said panel to permit free passage of air to and from the interior of the mattress, grommets arranged in said apertures, cylindrical containers seated in each of said apertures and sealably engaging said grommets, each container having an inwardly disposed end wall having apertures therein, the opposing end of said container being open and having an annular internal groove adjacent

the outer end thereof, resilient perforated disc means removably seated in said groove for closing said end, porous absorbent means in said containers between said perforated ends, said absorbent means being treated with deodorizing means whereby movement of said mattress causes air to flow inwardly through said absorbent means to deodorize the mattress.

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