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S. I. WARD

3,309,849

AIR TREATING DEVICE

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Fig. 1.

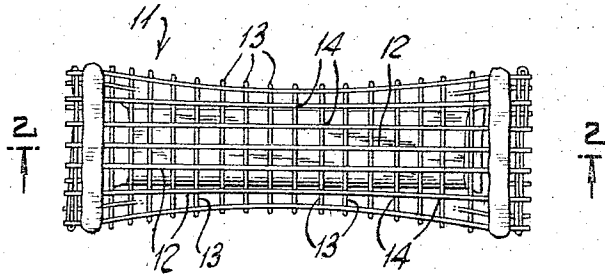


Fig. 2.

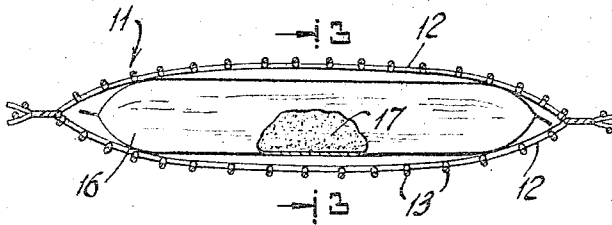
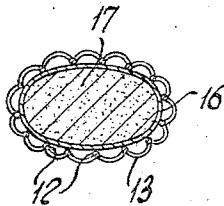


Fig. 3.



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## AIR TREATING DEVICE

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3 Claims. (Cl. 55—387)

This invention relates to air treating devices for deodorizing or dehumidifying air.

This invention comprises, particularly, a package device that is useful for deodorizing or absorbing odors from air or dehumidifying moisture from the air in small or confined spaces.

An object of the invention is to provide a special container for an odor absorbing or dehumidifying cartridge which may be readily placed in such things as drawers of furniture, silver chests, refrigerators, shoes, pockets of clothes, handbags, and the like.

A further object of the invention is to provide a simple, disposable container with at least one cartridge sealed therein which may be inexpensively produced and which may be readily discarded when the cartridge therein has become exhausted of its odor absorbing capacity or dehumidifying capacity.

Still other objects and advantages of the invention will be apparent from the specification.

The features of novelty which are believed to be characteristic of the invention are set forth herein and will best be understood, both as to their fundamental principles and as to their particular embodiments, by reference to the specification and accompanying drawing, in which:

FIGURE 1 is a top view of the cartridge containing package of the present invention;

FIGURE 2 is a partial section view taken on line 2—2 of FIGURE 1, some parts being broken away and some parts being in elevation; and

FIGURE 3 is a view taken on line 3—3 of FIGURE 2.

Referring now to the drawing in detail, the device shown in FIGURES 1, 2 and 3, comprises a unitary container, generally designated 11, made of a tubular webbed structure comprising a plurality of longitudinal strands 12 of flexible plastic material and a plurality of annular strands 13 of flexible plastic material arrayed at substantially right angles to strands 12. In some embodiments strands 12 and 13 are made of a heat sealable plastic material. Strands 12 and strands 13 are bonded or integrally united at their intersections 14 to form the unitary flexible and pliable tubular container 11 which may have a somewhat flat, oval contour as shown in FIGURE 2. Container 11 is initially open ended. Prior to closing the ends of container 11, at least one cartridge 16 comprising a permeable fabric or paper material is inserted into said container. The permeable or porous walls of cartridge 16 permit the passage of air therethrough into the interior thereof where there is located a plurality of particles, granules, or crystals of odor absorbing material such as activated charcoal or the like. In some cases, crystals or granules 17 may comprise silica gel or the like where dehumidifying action is desired, while other materials may be utilized for preventing silver from tarnishing, or the like.

After cartridge 16 is inserted into container 11, each end of said tube is heat sealed by means of any one of

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a number of suitable pressure and heat sealing devices well known in the art whereby the self-contained unitary package is achieved. In some embodiments, the ends of container 11 may alternatively be stapled, stitched, or otherwise closed by suitable means to retain cartridge 16 secured therein.

Not only do strands 12 and 13 have sufficient stiffness to protect the walls of cartridge 16 from fracture or rupture, but they are sufficiently resilient to absorb impacts by dropping or falling objects or other accidents to protect the cartridge. At the same time, the open mesh structure of container 11 permits easy access of surrounding air to enter into and be treated by the contents of cartridge 16.

In some embodiments, strands 12 and 13 may be arrayed at acute angles, rather than right angles, relative to each other.

It is understood that container 11 may alternatively be made of flexible sheet plastic material in which a multitude of apertures of suitable contours have been punched or otherwise formed in order to permit passage of air therethrough to be treated by cartridge 16.

What is claimed is:

1. An air treating device comprising a tubular, open mesh container made of a plurality of criss-cross flexible plastic strands, and at least one cartridge within said container, said cartridge comprising air permeable walls and particles of air-treating materials within said cartridge, the ends of said container being sealed permanently to enclose said cartridge therein.

2. An air treating device comprising an open mesh container made of flexible plastic material, and at least one air-treating cartridge sealed within said container, said cartridge having air permeable walls and particles of air-treating materials contained therein, said cartridge being protected from rupture by the flexibility and resilience of said container.

3. An air treating device comprising a cartridge having air permeable walls, particles of air-treating materials within said cartridge, and a tubular container for said cartridge, said container being made of a plurality of spaced apart longitudinal strands of flexible plastic material and a plurality of spaced apart annular strands of flexible plastic material, said annular strands being arrayed at an angle relative to said longitudinal strands, said longitudinal and annular strands being bonded at their intersections to form a resilient container for said cartridge, the ends of said container being heat sealed permanently to enclose said cartridge therein.

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