

[54] **DESICCANT CAPSULE AND PACKAGE EMBODYING THE SAME**

[76] Inventor: John S. Cullen, 138 Wesley Avenue, Buffalo, N.Y. 14214

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[51] Int. Cl.B01d 53/14

[58] Field of Search.....55/384, 387-389, 55/361; 312/31.1; 206/DIG. 18

[56] **References Cited**

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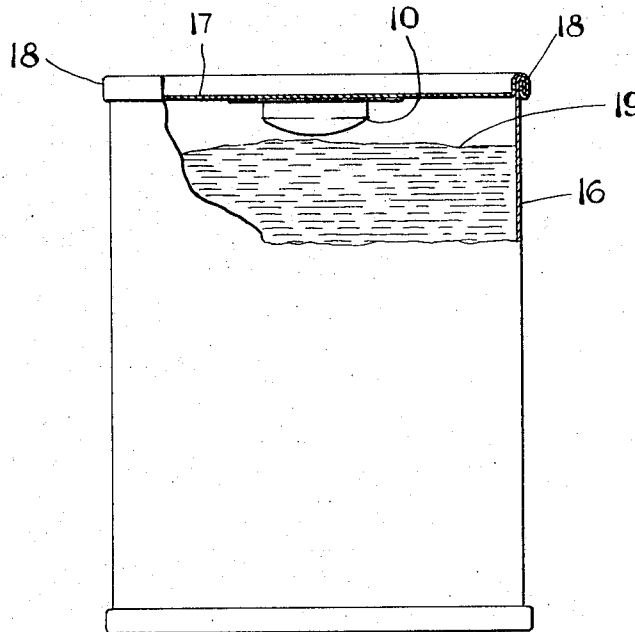
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Primary Examiner—Bernard Nozick
Attorney—Christel & Bean

[57] **ABSTRACT**

A capsule of a synthetic moisture-permeable material such as cellulose acetate contains a desiccant material such as calcium oxide and has an adhesive surface which is applied to the interior of a container whereby the capsule is exposed to moisture in the container or in the contents thereof but with the capsule attached to an interior container wall to prevent the same from being commingled with the contents of the container.

2 Claims, 3 Drawing Figures



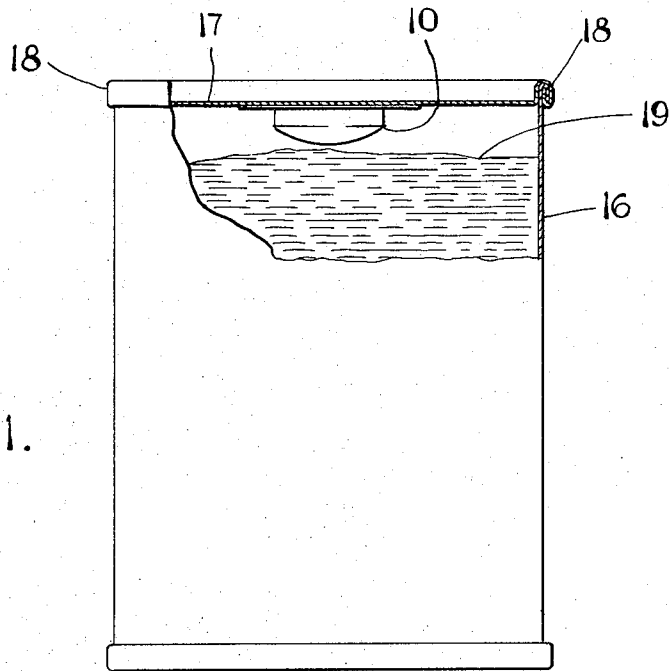


FIG. 1.

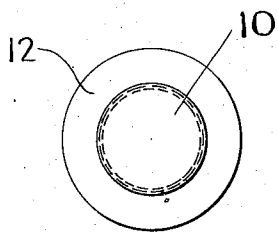


FIG. 3.

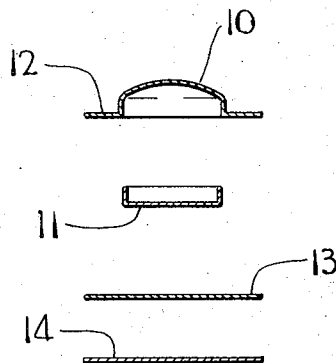


FIG. 2.

INVENTOR.
JOHN S CULLEN
BY

Christel + Beau
ATTORNEYS

DESICCANT CAPSULE AND PACKAGE EMBODIING THE SAME

BACKGROUND OF THE INVENTION

This invention relates to desiccant devices and particularly to a desiccant capsule and a package employing the same.

It is well known in the packaging arts to include in packaged material a capsule of moisture permeable material such as cellulose acetate containing a desiccant material such as calcium oxide. Moisture in the package permeates the capsule wall and combines with the highly hygroscopic calcium oxide, thus avoiding undesirable dampness in the material in the package.

When such desiccant capsules are commingled with the contents of a package they are often difficult to locate and remove when the package is opened and in some cases become punctured with very harmful effect on the packaged material.

SUMMARY OF THE INVENTION

The present invention provides a capsule or similar moisture permeable receptacle of desiccant material which is adapted to be attached to an interior wall of a container or package in such manner that it presents a moisture permeable face to the interior of the container and the contents thereof but remains securely attached to such interior wall of the container when the contents of the container are removed therefrom.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is an elevational view of a conventional metal can partly in cross section with one form of the desiccant capsule of the present invention associated therewith;

FIG. 2 is an exploded cross sectional view of the capsule of FIG. 1; and

FIG. 3 is a top plan view of the capsule of FIGS. 1 and 2.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring first to FIG. 2, the capsule shown herein by way of example comprises a cup-shaped flanged receptacle 10 of a cellulose acetate sheet material which is inherently permeable to moisture. A companion cup-shaped member 11 telescopes snugly within receptacle 10 to complete the capsule structure. The capsule thus provided contains calcium oxide or other similarly hygroscopic material. Upon exposure to moisture the calcium oxide is irreversibly converted to calcium hydroxide.

When the capsule is assembled the bottom wall of member 11 is preferably co-planar with the flange 12 of receptacle 10 and an adhesive sheet 13 is applied across the bottom surfaces of member 11 and flange 12. The sheet 13 may comprise simply a sheet of adhesive material or may comprise a substrate having adhesive applied to its opposite surfaces.

The adhesive employed is preferably of the pressure-sensitive type and the usual protective sheet 14 is applied to the exposed adhesive surface of sheet 13, to be removed in the usual manner when the capsule is ready for application.

One preferred method of completing the combination of the present invention is illustrated in FIG. 1 wherein a conventional sheet metal can 16 has a lid 17 with the capsule of FIGS. 2 and 3, after removal of protective sheet 14, adhesively attached to the bottom (interior) surface of lid 17. In this instance of use the capsule will be applied to lid 17 before the latter is secured to the body of can 16, such securement being in the usual manner as generally indicated at 18 in FIG. 1. The can and lid may also be of the type wherein the lid may be removed and replaced.

The desiccant means of the present invention may be employed with a wide variety of packaged products and in a variety of packages or containers. Products in which desiccant means are particularly useful are dehydrated citrus fruit juices which take the form of a powder, other dehydrated food products, vitamin pills and other pharmaceutical products, and many others. The desiccant not only prevents hydration of the packaged product but also removes final traces of moisture therefrom.

In FIG. 1 the contents of can 16 are indicated at 18, such contents being usually in powdered or granular form or in layer particles such as pills or pellets. Where desired the capsule may be disposed directly in the contents as by attaching the same to a side or bottom wall of the container.

It will be seen from the foregoing that the contents of the container may be poured or otherwise removed therefrom without any danger of the desiccant capsule being dispensed with the contents or overlooked and lost therein. Also, the danger of the capsule being punctured during opening of the container or dispensing of the contents is minimized and the likelihood of the desiccant material coming into harmful contact with the packaged product is virtually eliminated.

A preferred embodiment of the present invention is shown in the drawings and described herein to illustrate the principles of the invention but it is to be understood that numerous modifications may be made without departing from the broad spirit and scope of the invention.

I claim:

1. A container for material which is to be kept in a relatively anhydrous condition having in combination therewith a desiccant capsule comprising a moisture-permeable cup-shaped part containing hygroscopic material, a second cup-shaped part telescoped into the first cup-shaped part with the side walls of the cup-shaped parts in contact to complete the capsule with the bottom wall of the second cup-shaped part and the annular rim of the first cup-shaped part being substantially coplanar, a double-faced adhesive sheet applied across the bottom wall of said second cup-shaped part and the rim of said first cup-shaped part to retain the parts in assembled relation and with its opposite face adhesively secured to an interior surface of said container.

2. A capsule according to claim 1 wherein said first cup-shaped part has an outward annular flange at the rim thereof substantially coplanar with the radial wall of said second cup-shaped part and with said adhesive sheet applied across the outer surfaces of said flange and said second cup-shaped part.

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