United States Patent

Fujio

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[45] **July 25, 1972**

[54] WRAPPER WITH TEAR TABS OF HEAT-SHRINKING SYNTHETIC RESIN FILM

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[21] Appl. No.: **24,629**

[52] **U.S. Cl.** .....**206/46 R,** 53/30, 206/45.33, 206/65 S, 229/51 TS, 229/DIG. 12

[51] **Int. Cl.** **B65d 85/00,** B65d 33/16

[58] **Field of Search** .....206/46 R, 46 F, 65 S, 45.33; 229/51 TS, DIG. 12, 66, 62; 53/39, 30

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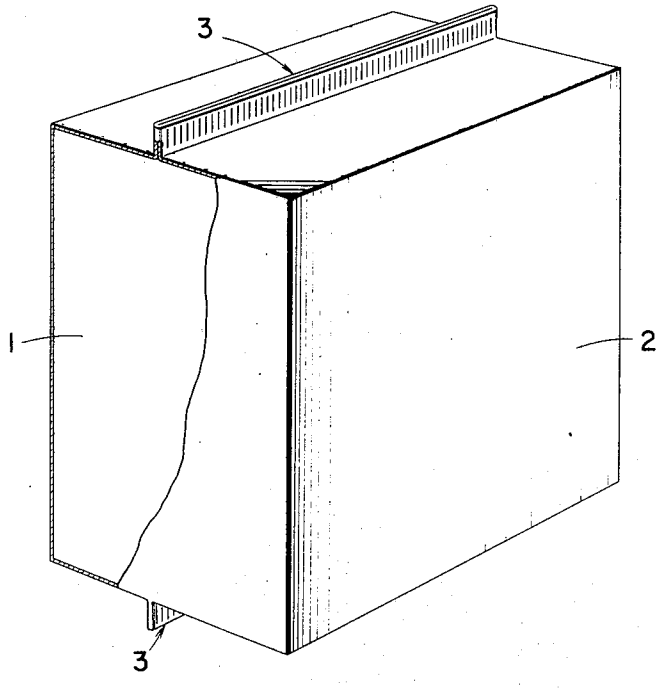
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[57] **ABSTRACT**

A product or article is enclosed in heat-shrinking synthetic resin film having opposite ends which are folded closed to provide tear tabs along the full width of the article. The article in the film is subjected to heat to shrink the film into contact with the article and the folded ends may be subjected to heat to seal them. The tear tabs may include three or more layers of material to give added strength.

2 Claims, 4 Drawing Figures



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2 Sheets-Sheet 1

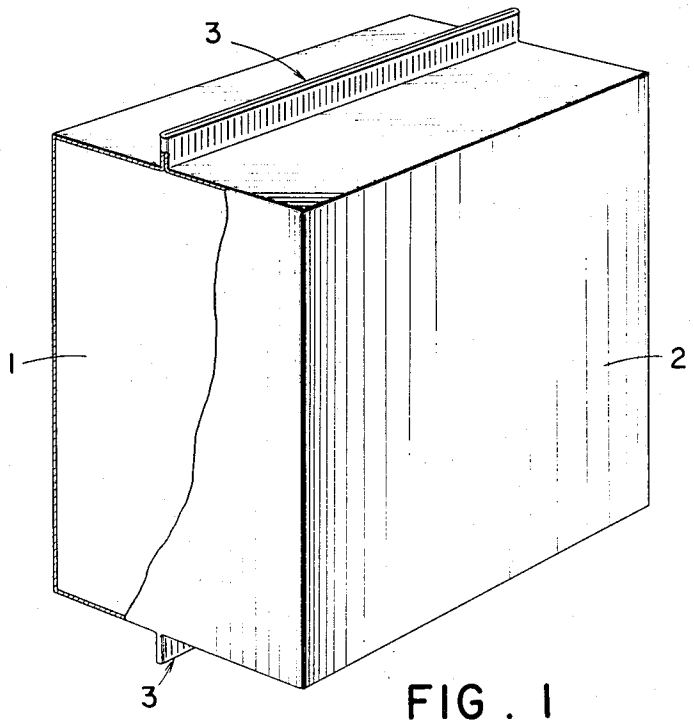


FIG. 1

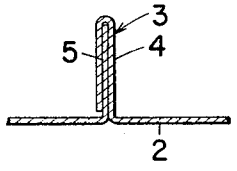


FIG. 4

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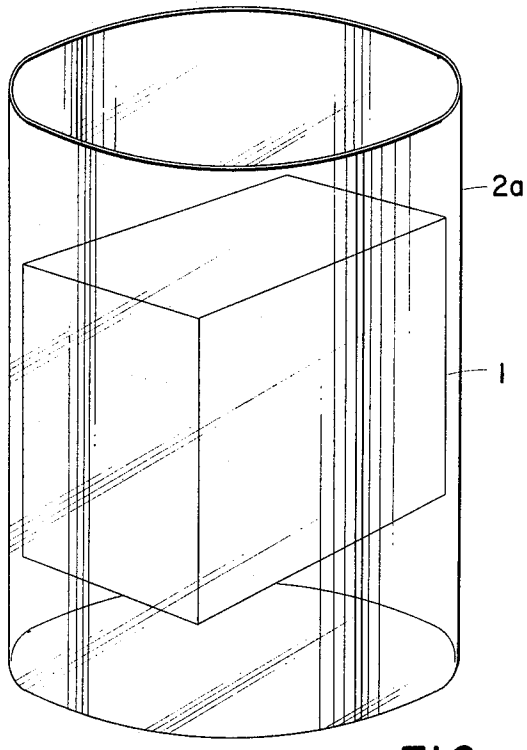


FIG. 2

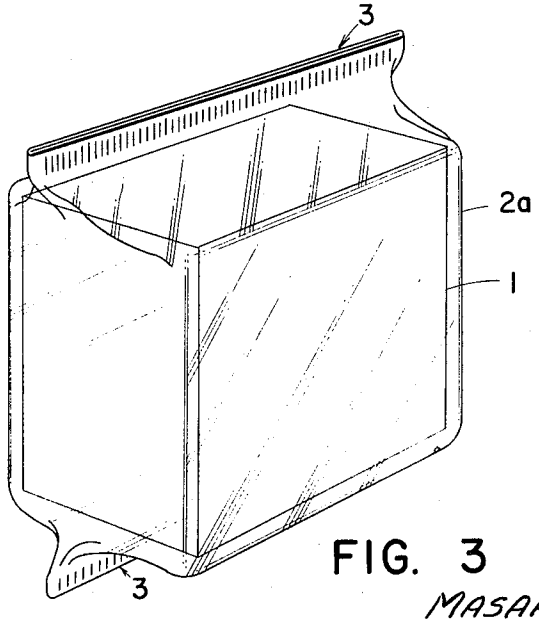


FIG. 3

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WRAPPER WITH TEAR TABS OF HEAT-SHRINKING SYNTHETIC RESIN FILM

This invention relates to a wrapper formed of synthetic resin film which tends to shrink when heated, and more specifically to a wrapper of heat-shrinking synthetic resin film provided with tear tabs of the same material and which is adapted to be torn open by the tabs.

For protection against staining and moisture and also for aesthetic appeal, it has been a widespread practice to wrap products with heat shrinkage film, as of polyethylene, apply heat to the film thereby allowing it to shrink into close contact with its contents, and at the same time seal the open end or ends by heating. The facilitate subsequent opening, the film bar or overwrap is usually provided with a perforated line on a suitable part along which it may be torn open. However, each perforation which is originally very small, is made so large upon the thermal contraction of the film that it can admit air, dirt and dust therethrough into the bag or wrap. Another possibility is that the bag while being handled may be torn open along the enlarged perforation, at a substantial sacrifice of the display effect.

The present invention pertains to a wrapper which is provided, by simple means, with tear tabs which enable the film to be readily torn open, when desired, despite the fact that the wrapper is completely sealed without the provision of perforation as in conventional packages.

For a better understanding of the present invention, description will now be made of the invention in conjunction with an embidiment thereof shown in the accompanying drawings, in which:

FIG. **1** is a partly broken perspective view of an embodiment of the invention.

FIGS. **2** and **3** are perspective views illustrating a manner for overwrapping a product with a tubular film of heat shrinkage resin; and

FIG. **4** is a fragmentary enlarged sectional view of a tear tab in a modified form.

The tear-tabbed wrapper according to this invention consists of a wrapper **2** of synthetic resin film that covers a product or item **1** and tear tabs **3** provided on suitable parts of the wrap as extensions of film edges bent and projected outwardly and jointed together to form tabs protruding from the faces of opposite sides or ends of the resulting package.

As shown in FIG. **1**, the tear tabs **3** are preferably formed over the entire distances between opposite sides or ends of the package.

The tear tab **3** may be formed during the packing operation of the article **1**. As illustrated in FIG. **2**, the article **1** is first put into a tubular film **2***a* of heat-shrinking resin, and then, the opening ends of the tubular film may be heat-sealed thereby forming the tear tabs **3** of desirable height (FIG. **3**). Then the whole article is subjected to heat for shrinking the wrapper film **2***a* into close contact with the outer surface of the article (FIG. **1**). The tear tab may be preformed, as an alternative, by heat-sealing an open end of a tubular film for forming a bag.

After putting an article into the bag, the mouth of the latter may be heat-sealed thereby forming there a second tear tab. Thereafter, the sealed bag may be heated for shrinking it into close contact with the content or the article.

An aperture (not shown) may be formed at a suitable point in the tab **3** for providing a small passageway communicating between the interior of the wrap and the external atmosphere in order to vent air during the shrinkage of the wrapper film.

For added strength the tear tabs **3** may be formed in three or more layers or thicknesses at suitable parts of the wrap **2**. This is realized, for example, by making an edge **4** of the wrapper film longer than the other edge **5** and folding the longer edge **5** down beyond the outer side of the matching edge **4**, in such a manner as to cover the latter edge. A three-layer tab is thus formed (FIG. **4**).

As stated above, the tabs **3** of the wrapper according to the present invention are twice or more as thick as the film of the wrap **2** itself, and protrude from the surface of the film wrap, substantially at right angles thereto, so that the film wrap **2**, when caught by the tabs **3** and pulled out, can be readily torn open along the roots of the tabs.

In this sense the roots of the tabs according to the invention are equivalent to the usual perforated lines, and hence no perforation is required.

Therefore, the wrapper of the invention not merely permits packaging of products in perfectly sealed state but, in addition, has no such drawbacks of ordinary wrappers with perforations that dirt and dust deposit in the perforations or the wrapper is torn open along the perforations.

Although the tear tabs **3** of the embodiment above described are shown in the accompanying drawings as formed in the middle parts of opposing faces of the package, they may be provided on an edge or edges of the package as well.

I claim:

1. A wrapper comprising:

a single ply sheet member of heat shrinking material formed into a tube with opposite open ends, said tube having continuous peripheral opening edges adjacent said opposite ends;

said peripheral edges of each of said opposite ends being closed in flat facing relationship and joined together in an air tight seal to form a tear tab,

said tear tab being elongated in shape and having a double ply thickness along its entire length;

said tear tab extending approximately perpendicularly outwardly with respect to said sheet member so as to be free for grasping;

said tabs being double ply and the entire remainder of said sheet member being single ply whereby tension applied to said tear tab will cause tearing closely adjacent said tear tab.

2. The structure of claim **1** wherein said tear tab is formed by the peripheral opening edge being folded and laminated to provide three thicknesses of material.

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