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Dutcher

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[54] **RECLOSABLE PLUG TYPE DISPENSING PACKAGE**

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[52] **U.S. Cl.** **221/63,** 229/43

[51] **Int. Cl.** **B65h 1/00**

[58] **Field of Search** ..... 221/33, 45, 47, 48, 46, 221/63; 222/563; 206/57 R; 220/38 S; 229/43

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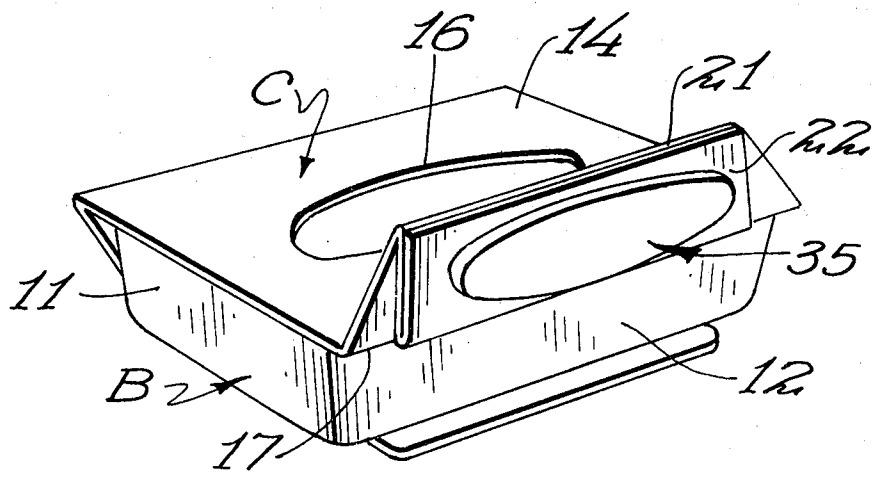
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Attorney, Agent, or Firm—Robert M. Dunning; Jerry F. Best

[57] **ABSTRACT**

A package is provided having a liquid tight tray including at least one straight side edge. A cover panel of liquid resistant material is marginally secured to coplanar outwardly extending flanges on said tray, said cover panel having a dispensing opening therein. A flap structure is hinged to said straight side and supports a resilient plug adapted to engage into and seal said dispensing opening in one position, said flap structure being swingable outwardly of said straight edge in other position of said flap structure to expose said opening.

9 Claims, 5 Drawing Figures



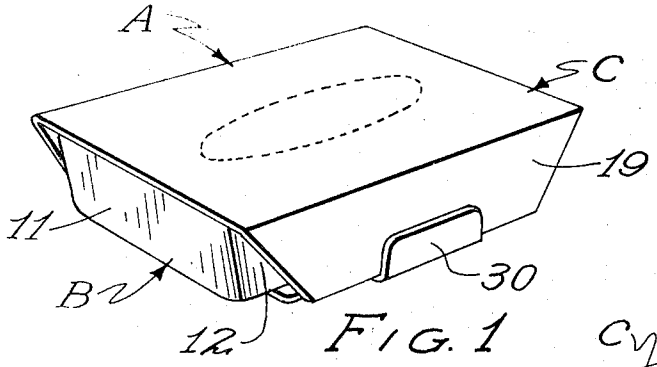


FIG. 1

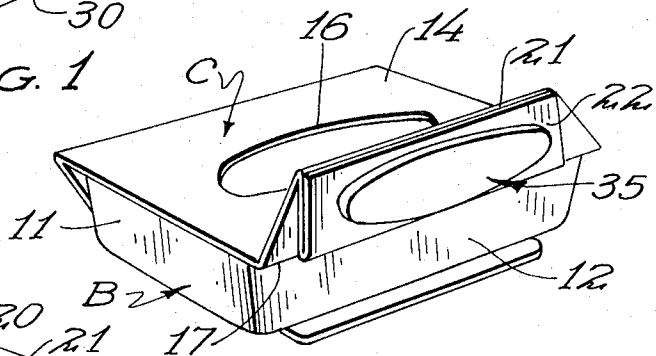


FIG. 2

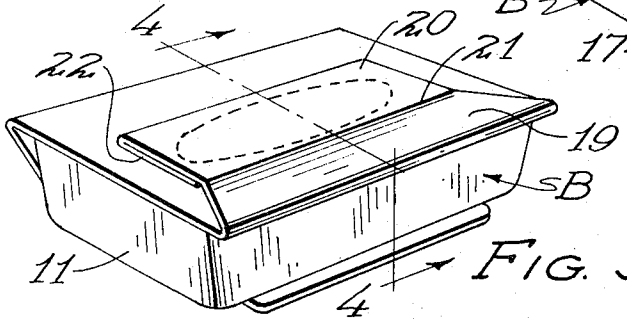


FIG. 3

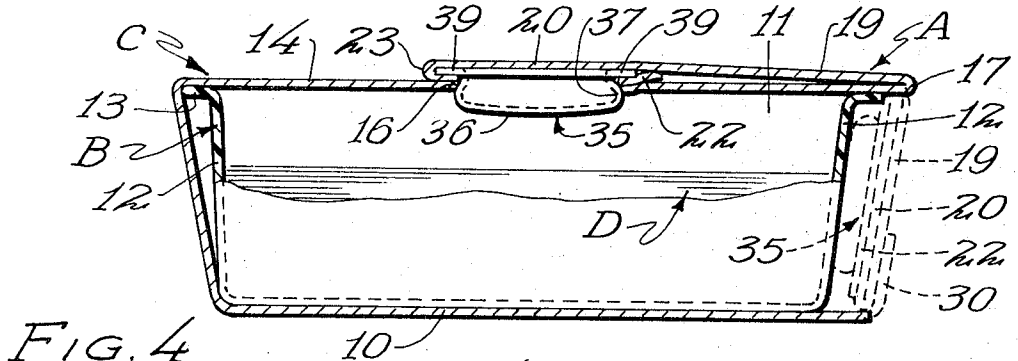


FIG. 4

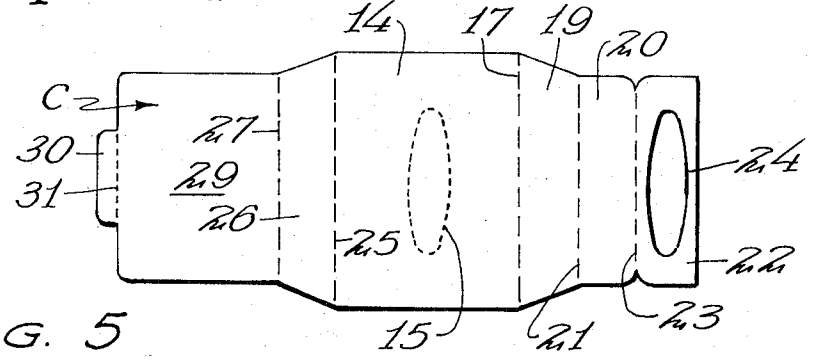


FIG. 5

RECLOSABLE PLUG TYPE DISPENSING PACKAGE

BACKGROUND OF THE INVENTION

This invention relates to an improvement in reclosable plug type dispensing package, and deals particularly with a container capable of containing tissues and the like, and which may be reclosed when desired.

Tissues and the like are normally contained in rectangular paperboard cartons having a removable area in the top panel through which the uppermost tissue may be grasped and removed. In recent years, tissues have been developed for different purposes. In other words, tissues impregnated with an oily material have been developed for use in polishing furniture and the like. Other types of tissues impregnated with other liquid materials have also been developed.

The difference between the packaging of dry tissues and tissues which contain a liquid material, mainly lies in the particular impregnating materials which are used. For example, a paperboard carton may be coated with a coating resistant to the liquid material impregnated in the tissues. However, if, during the cutting and creasing operation the coating is cracked or disrupted in any way, the liquid material will be absorbed into the paperboard. Furthermore, it is difficult to provide a liquid tight closure in a corrugated carton so that the package may be reclosed after use.

SUMMARY OF THE INVENTION

I have found that an effective package may be formed with a combination of plastic and paperboard parts. The main body of the package being an object where the cleaning operation requires a damp or liquid impregnated cloth or wiping tissue, and where a suitable amount of liquid is necessary to clean or polish the surface. These packages differ from the conventional tissue packages in that the entire inner surface of the containing package must be resistant to the liquid with which the tissues are impregnated. Normally, if the package is not reclosed after a tissue has been removed, the liquid impregnated in the tissues or other moist contents will evaporate, leaving the tissues impractical for their intended purpose. It is the purpose of the present invention to provide a package which is formed of material which will not be affected by the liquid contained in the product packaged, and which may be reclosed to form a seal which will effectively prevent the evaporation of the liquid when the package is reclosed.

A feature of the present invention resides in the provision of a package including, in preferred form, a tray of sheet plastic or the like having an outwardly turned peripheral flange on a common plane about the periphery of the tray walls at the upper ends thereof. A cover panel is sealed to the peripheral flange about its entire periphery so as to hermetically seal the contents. The tray includes a flap structure supporting a resilient plug which may be inserted through the dispensing opening in the cover panel. The dispensing opening is normally formed by an endless perforated line so that the area within the perforated line may be detached from the opening. The cover panel may be formed of paperboard which is coated with a coating which is impervious to the liquid contained within the package. In this respect, the structure is quite similar to the usual form

of tissue dispensing packages. However, the flap structure is hingedly connected to one edge of the cover panel, and includes a pair of flap sections, one of which forms a side wall, and another of which forms a resilient plug supporting member. The edge of the cover panel which is opposite that to which the flap structure is secured preferably is provided with a tapered side wall which extends along the side wall opposite the first mentioned side wall, a bottom wall which is secured to the bottom of the interior plastic tray, and a glue flap which is secured to the bottom of the interior plastic tray, and a glue flap which may be secured to the side wall forming a part of the flap structure to form a wrapper enclosing the plastic tray having outwardly projecting peripheral flanges. The cover panel is sealed to these flanges, the first side wall and plug supporting wall hinged to one edge of the cover panel, and a second side wall and bottom panel is secured to the opposite edge of the cover panel. A glue flap on the bottom panel folds outwardly of the side wall forming a portion of the flap structure thus forming a wrapper which may be rectangular or trapezoidal in cross section. When the dispensing opening has been opened, the side wall forming a part of the flap structure may be disconnected from the glue flap on the bottom panel, and the flap structure may be folded to fold over the cover panel, and the plug supporting panel may extend over the dispensing opening, and the plug may be inserted into the dispensing opening to effectively seal the same.

A further feature of the present invention resides in the fact that an additional panel or section may be hinged to the plug supporting section and through which the plug may be inserted. The plug may be provided with an outwardly extending peripheral flange which may be sandwiched between the plug supporting panel and the additional panel.

These and other objects and novel features of the present invention will be more clearly and fully set forth in the following specification and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the package in closed condition thereof.

FIG. 2 is a view of the package in partially reclosed position.

FIG. 3 is a perspective view of the package in reclosed condition.

FIG. 4 is a sectional view transversely through the package, the position of the section being indicated by the line 4—4 of FIG. 3.

FIG. 5 is a diagrammatic view of the blank from which the package is partially formed.

DESCRIPTION OF THE PREFERRED EMBODIMENT

In the particular form of construction, the package, which is indicated in general by the letter A, includes a tray shaped receptacle B and a wrapper or folder C. The tray B is preferably formed of sheet plastic or the like and includes a bottom wall **10**, upwardly and outwardly inclined end walls **11**, and upwardly and outwardly inclined side walls **12**. The side and end walls are integrally connected at the corners. A flange **13** extends outwardly from the upper ends of the side and end walls on a common plane.

The wrapper C includes a top panel **14** having an endless weakened line of separation **15** which, when

broken away from the remainder of the top panel **14**, forms an opening **16** (see FIG. 2). Connected to one edge of the top panel **14** along a hinge line **17** is a first tapered side wall panel **19**. A plug supporting panel or section **20** is hingedly connected to the side wall **19** along a fold line **21** which is parallel to the fold line **17**. The plug supporting flap **20** is connected to a reinforcing flap **22** along a fold line **23**. The reinforcing panel **22** is provided with an aperture **24** through which the plug or stopper may extend. The side wall panel is of trapezoidal shape, connected along its longer edge to panel **14** and along its shorter parallel edge to flap **20**.

The opposite edge of the generally rectangular top panel **14** is connected by a fold line **25** to a side wall panel **26**. The side wall panel **26** is trapezoidal in shape. The side wall panel **26** is connected at its shorter parallel edge along fold line **27** to a bottom panel **29**. The sealing flap or glue flap **30** is connected along the edge of the bottom wall **29** along a weakened line of separation **31**. All of the fold lines which have been described are in parallel relation.

The inner surface of the wrapper C is preferably formed of paperboard coated with a coating capable of being heat sealed to the flange **13** of the tray B. Alternatively, the flange **13** may be adhered to the top panel **14** of the wrapper and the top panel adhered or cemented thereto.

The original package A in its simplest form is formed by sealing the under surface of the top panel **14** to the flange **13**. The under surface of the top panel **14** is coated with a composition which is impervious to the moisture which is impregnated in the stack of tissues indicated in general by the letter D. The tray B is also formed of a material which is nonaffected by the liquid content of the tissues. While the stack of tissues D normally comprise liquid impregnated tissues which may be dispensed one at a time, quite obviously the package is capable of holding other products having liquid therein or thereon. In the closed form of the package, the bottom wall **29** of the wrapper C is adhered to the bottom wall **10** and the flap **30** is folded against the outer surface of the side wall **19** and adhered thereto. The side wall **19**, the plug supporting panel **20**, and the reinforcing panel **22** form a flap structure connected to the top panel **14** along the fold line **17**. As is indicated in FIG. **4** of the drawings, the plug **35** includes a bottom closure panel **36** which is completely encircled by side walls **37** which taper in form, the periphery of the plug most remote from the closure panel **36** being smaller than the periphery of this wall adjoining the closed ends **36**. Thus in inserting the plug through the opening **16**, the plug must flex sufficiently to extend through the aperture which is of somewhat smaller periphery than the periphery of the plug near the closed end **36**. An outwardly turned flange **39** entirely encircles the smaller periphery portion of the side walls **37**.

In forming the device, the plug **30** is preferably secured to the under surface of the flange **20**, and the reinforcing panel or section **22** is folded against the section **20** and secured in face contact therewith, sandwiching the flange **39** between the panels **20** and **22**. The panels **20** and **22** which have been secured together are folded upwardly from the lower edge of the side wall panel **19** as indicated in dotted outline in FIG. **4** of the drawings, and the locking or glue flap **30** is secured to the outer surface of the side wall **19**. After the perforated area has been separated from the top panel **14**, and a tissue or other object contained removed, through the aperture **16**, the package may be reclosed by tearing the tab from the bottom panel along the weakened line of separation **31**. When the combined panels **20** and **22** are alined with the wall panel **19**, the plug **35** may be snapped through the aperture **16**, reclosing the carton with a tight seal as indicated in FIG. **3** of the drawings.

In accordance with the Patent Statutes, I have described the principles of construction and operation of my "Reclosable Plug Type Dispensing Package;" and while I have endeavored to set forth the best embodiment thereof, I desire to have it understood that obvious changes may be made within the following claims without departing from the spirit of my invention.

I claim:

1. A package for liquid bearing tissues and the like, the package including:

a tray having a bottom and upwardly extending connected side and end walls thereon;

said side and end walls including an encircling outwardly extending flange on a substantially common plane throughout;

a cover panel sealed to said outwardly extending flange about the entire upper surface of said flange;

said tray and under surface of said cover panel being resistant to the absorption of the liquid absorbed in the tissues and the like;

an aperture opening in said cover panel;

a flap structure hingedly secured to one edge of said cover panel;

a resilient plug secured to said flap structure and extending in one position of said flap structure and into said aperture to form a seal with the edges of said aperture; and

a side wall hinged to the edge of said cover panel opposite to said one edge to which said flap structure is secured, and a bottom panel hingedly connected to said side wall and secured to the under surface of said tray bottom.

2. The structure of claim **1** and in which said plug is formed of resilient plastic film.

3. The structure of claim **1** and in which said plug includes a closure wall encircling walls which are of smaller periphery spaced from said closure wall, and a peripheral outwardly extending flange sealed to the under surface of said flap structure when said flap structure overlies said cover panel.

4. The structure of claim **1**, and including a projecting flap hingedly connected to said bottom panel along the edge of said bottom panel opposite the edge thereof hinged to said side wall.

5. A package for liquid bearing tissues and the like, the package including:

a tray having a bottom and upwardly extending connected side and end walls thereon;

said side and end walls including an encircling outwardly extending flange on a substantially common plane throughout, a cover panel sealed to said outwardly extending flange about the entire upper surface of said flange;

said tray and under surface of said cover panel being resistant to the absorption of the liquid absorbed in the tissues and the like;

an aperture opening in said cover panel;

a first flap structure section hingedly connected to one edge of said cover panel;

a second flap structure section hinged to said first flap structure section; and

a resilient plug secured to said second flap structure section and extending in one position of said first and second flap structure sections into said aperture to form a seal with the edges of said aperture.

6. The structure of claim **5** and in which said first and second flap structure sections are foldable into face contact.

7. The structure of claim **5**, and including a third flap structure section hingedly attached to said second flap structure section, said second and third sections foldable into face contact with each other, and an aperture formed in said third section to permit said resilient plug to extend therethrough when said second and third sections are in face contact.

8. The structure of claim **7** in which said resilient plug includes a periphery outwardly extending flange which is sandwiched between said second and third sections.

9. The structure of claim **5** in which said resilient plug is made from resilient plastic film.

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