Oct. 11, 1966 B. SALWAY 3,278,109

BAG, CARTON AND PACKAGE

Filed June 10, 1964 2 Sheets-Sheet 1

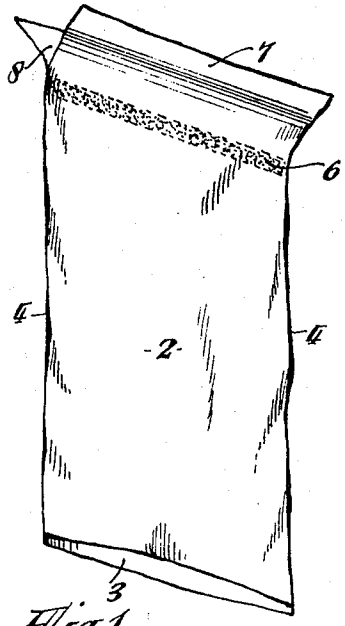



Fig. 1.

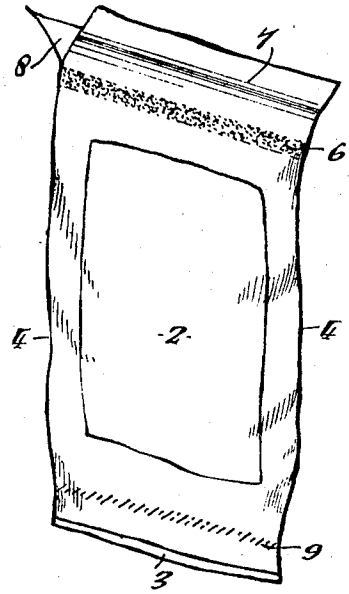



Fig. 2.

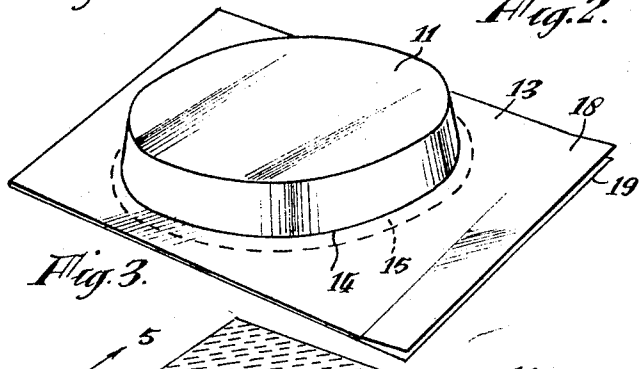



Fig. 3.

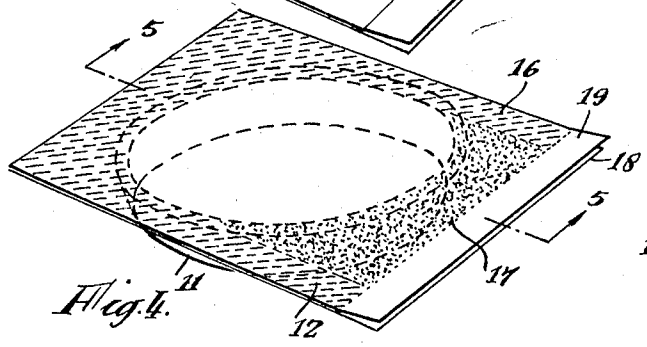



Fig. 4.

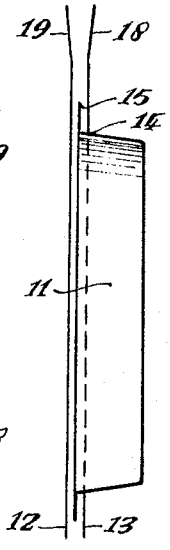



Fig. 5.

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BAG, CARTON AND PACKAGE

Filed June 10, 1964 2 Sheets-Sheet 2

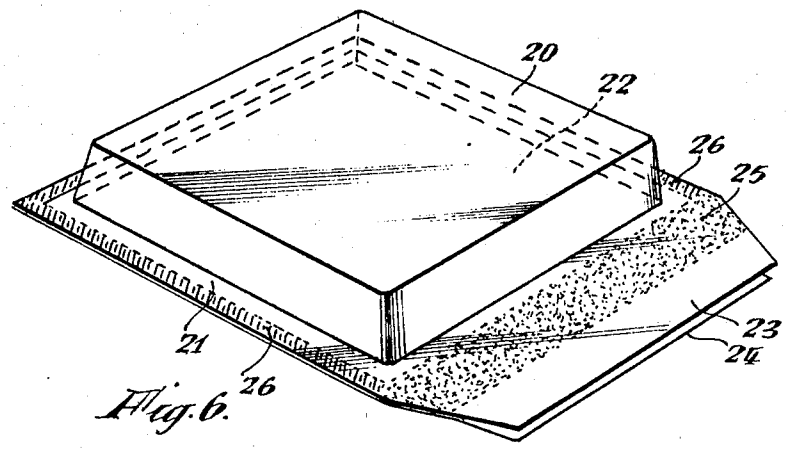



Fig. 6.

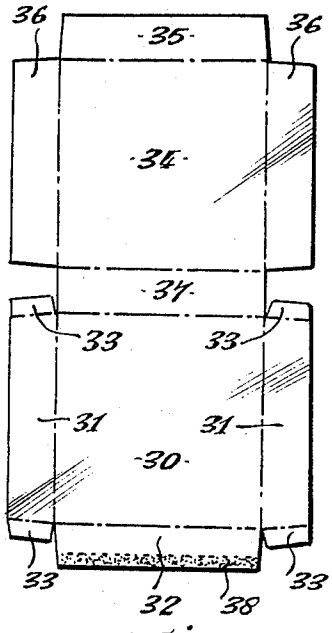



Fig. 7.

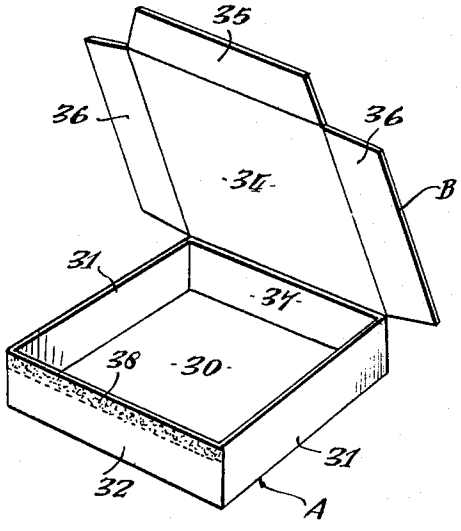



Fig. 8.

United States Patent Office 3,278,109 Patented Oct. 11, 1966



3,278,109

# BAG, CARTON AND PACKAGE

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Claims priority, application Great Britain, June 14, 1963, 23,798/63
8 Claims. (Cl. 229—51)

This invention relates to bags, cartons or packages.

According to this invention we provide a bag, carton or package comprising two layers of material capable of being heat sealed together and between which the contents are packaged, the said two layers being of the same or of different materials and united together along part of their marginal portions by heat sealing. In addition, certain areas of either or both package forming or base layers (hereinafter referred to as base layers) are coated with a heat sealable material (hereinafter referred to in the specification and claims as a peelable coating) which is of such a character that it provides a heat seal of less strength than a seal formed by heat sealing together the two said base layers. A sealer opening is provided by heat sealing an area coated with the peelable coating. The said sealed opening being preferably inset from one edge of the bag or package.

The base layers can be of flexible sheet material, e.g., films, papers, boards, foils and laminates made therefrom which are either of themselves heat sealable or can be made so. Also the base layers can be of a rigid or semi-rigid nature and made by thermo forming or pressure forming a heat sealable material or a material which can be made heat sealable.

The invention is illustrated in the drawings filed herewith which show several different forms of the invention.

FIG. 1 is a perspective view of an empty bag made according to the invention.

FIG. 2 is a perspective view of the same bag filled and closed.

FIG. 3 is a perspective view of a package made according to the invention.

FIG. 4 is an underneath perspective view of the package shown in FIG. 3.

FIG. 5 is a section taken on line 5—5 on FIG. 4 with the parts exploded for clarity.

FIG. 6 is a perspective view of a modified form of package.

FIG. 7 is a blank of a carton, and

FIG. 8 is a perspective view of an erected carton.

Referring to FIGS. 1 and 2 of the drawings, a bag is formed from two webs of polyethylene and comprises front and back panels **2** and **3** respectively, the opposite sides **4** of which are heat sealed for example by a bead seal, that is to say the sead webs are heat sealed transversely of the direction of travel by a hot tool. One end of the bag is left open for filling purposes. The other end portion of the bag is provided with a coating in the pattern of a transverse strip **6** said coating being pre-applied to the inner surface of one or both webs. The coating material is heat sealable but of such a character that the bond is weaker than the bond between the two layers of polyethylene. The front **2** and back **3** of the bag are heat-sealed together where the coating has been applied to provide a sealed opening. The front **2** and back **3** of the bag are unconnected at the extremity beyond the sealed opening so as to provide two flaps **7** and **8** which can be gripped in the hands when it is desired to open the bag. After the contents have been placed in the bag the filling end is heat sealed in the normal way as indicated at **9** in the package shown in FIG. 2.



If desired perishable products, for example tobacco, cooked meat, fresh meat or the like can be vacuum packed, packed under partial vacuum or gas flushed, the base layers being selected which are suitable for the purpose. The method of packaging the product is conventional but by reason of the sealed opening provided by the peelable coating the opening process is facilitated. When it is desired to open the package the heat sealed opening allows the two base layers sealed by the peelable coating to be readily parted without destroying the base layers.

The base layers of which the package is made is a heat sealable material or material coated with a heat sealable material and can include laminated materials including polyolefins, for example, paper/foil/polythene. The peelable coating may be formulated to make the package re-sealable if desired.

According to a modification shown in FIGS. 3–5 a package comprises a flanged, thermo-formed plastic container **11** and two polyethylene coated boards **12** and **13**, the latter being provided with an aperture **14**. The plastic container **11** projects through the aperture **14** of the board **13** and the two parts **11** and **13** constitute one base layer and the board **12** the other base layer. The flange **15** of the container **11** is sandwiched between the boards **12** and **13** which have been coated at the area **17** with the peelable composition over the polyethylene. After filling, the boards are heat sealed together over the areas **16** and **17**. The unadhered areas **18** and **19** at the edge of the boards form flaps by which the pack may readily be opened by peeling the board surfaces apart. One or both boards **12** and **13** may be replaced by paper or film. The flange **15** of the container **11** need not necessarily be sealed to the boards.

FIGURE 6 shows another form of the invention. The package comprises two parts, one said part being a shallow rectangular container **20** with an out-turned flange **21** at its peripheral edge, said container being thermoformed and made of thermoplastic material, e.g., unplasticised polyvinyl chloride which is pigmented and/or printed if desired. The other part comprises a cover **22** the area of which is equal to or greater than the outer edge of the flange **21** of the first part. This is also made of thermoplastic material and the inner surface of the marginal portion is coated with a peelable coating on an area indicated at **25**. After the product to be packaged has been placed in the container **20**, the cover **22** is applied and the two parts are heat sealed together as indicated at **25** and **26**. The marginal parts **23** and **24** are not adhered and these form flaps for opening. The container **20** can be circular, polygonal or other shape in plan and the cover shaped to suit, free tabs **23** and **24** on both parts being provided to facilitate opening. Instead of a flat cover two flanged containers can be arranged with their flanges abutting, the two parts being of the same or different depths. The cover **22** can be made of paper or board.

A further form of the invention is illustrated in FIGS. 7 and 8 wherein a frozen food carton comprising a body A and lid B is formed from a one piece blank of board lined with polyethylene or other heat sealable material. The body A comprises a main panel **30** with hinged wall panels **31**, **32** on three sides. Flaps **33** are provided on the wall panels **31**. The lid B also comprises a main panel **34** with hinged wall panels **35** and **36** on three sides. The body A and lid B are connected by a common panel **37**. The wall panels **35** and **36** of the lid overlap the wall panels **32** and **31** of the body when the carton is closed. The lid wall panel **35** is coated on the inside with a peelable coating or the abutting wall panel **32** of the body is coated on the outside with the peelable coating **38** to provide the heat sealed opening.

After filling, the carton is closed by heat sealing the wall panels **36** to the wall panels **31** and heat sealing the panel **35** to the area **38** on the panel **32**. The panels **35** and **32** are not adhered except at the area **38** so as to leave flaps on the front of the body A for opening purposes.

The heat sealable peelable coating used may be the heat sealable coating composition described and claimed in U.S.A. application No. 371,118, filed May 28, 1964.

What I claim and desire to secure by Letters Patent is:

**1.** Container comprising two layers of material capable of being heat sealed together and between which said layers the contents are packaged, the said layers being united by a first heat seal along their marginal portions to form the container, one or both layers having an area adjacent to the place of opening precoated with an adhering heat sealable and peelable coating of less strength when same is heat sealed throughout its whole area than the first seal whereby is provided a peelable access opening for said container.

**2.** A container according to claim **1** wherein the two said layers are of the same material.

**3.** A container made according to claim **1** which is in the form of a bag comprising front and back panels heat sealed along two opposite sides and an end, the other end portion of said bag constituting the place of opening and joined together with a peelable heat sealed coating of less strength than the other heat sealed portions.

**4.** Bag made according to claim **1** made of heat sealable film material.

**5.** A container according to claim **1** wherein the said two layers are heat sealed together around their peripheries except for an area constituting an access opening,



which area is sealed by means of a peelable coating applied between the said layers and inset from the edges of said layers.

**6.** A container according to claim **1** wherein one said layer is a thermo formed plastic container and a surround of sheet material and the other said layer is sheet material.

**7.** A container according to claim **1** wherein one layer comprises a moulded container and the other said layer comprises sheet material or a second container.

**8.** Container according to claim **1** wherein the two layers are a body and a lid made from board coated with a heat sealable coating both body and lid each having a main panel and hinged wall panels, the wall panels of the one overlapping the wall panels of the other in the closed position, one of said overlapping wall panels being provided on part of its area with the said peelable coating.


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