United States Patent [19]

Borel

[11] **3,715,856**

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[54] **PACKAGING METHOD**

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[73] Assignee: **Jules Borel & Co.,** Kansas City, Mo.

[22] Filed: **Aug. 19, 1971**

[21] Appl. No.: **173,102**

[52] **U.S. Cl.** .....**53/41,** 156/69, 156/248, 156/268, 206/56 AB

[51] **Int. Cl.** **B65b 7/28**

[58] **Field of Search** .....53/14, 38, 41, 296; 156/69, 156/248, 249, 253, 257, 263, 268, 516; 206/56 AB

[56] **References Cited**

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Primary Examiner—Robert L. Spruill

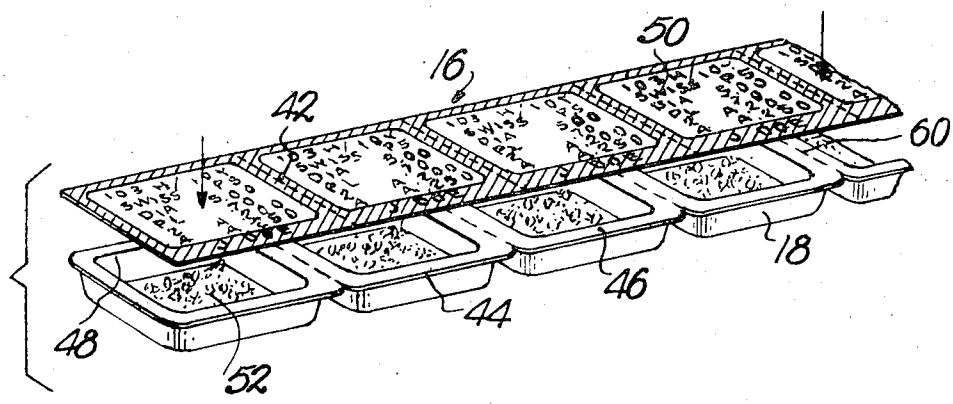
Attorney—Schmidt, Johnson, Hovey & Williams

[57] **ABSTRACT**

A sealed container has a closure which includes a label attached to an outturned flange of the container by a peripheral band of pressure sensitive adhesive on the label such that the label is adapted to be peeled back at one of its corners to dispense articles one at a time from the container and to be then pressed back into place until another article is to be dispensed, the closure being produced by a method which uses a backing sheet to present a path attached to the label by such adhesive and disposed within the confines of the band for protecting the articles against contact with the adhesive.

A single coating of the pressure sensitive adhesive is initially used to laminate the backing sheet with a label sheet and the patches are then preformed by die cutting the backing sheet. The labels may also be preformed by die cutting and/or by die perforating of the label sheet. The waste materials of the sheets are then removed, presenting the closures, each consisting of a patch still glued to the label and exposing only the pressure sensitive adhesive band on the label around the patch.

5 Claims, 10 Drawing Figures



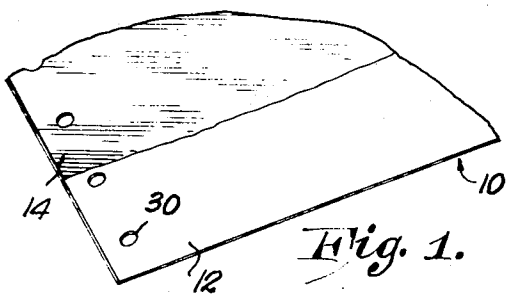


Fig. 1.

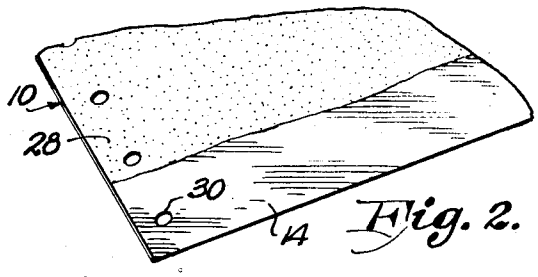


Fig. 2.

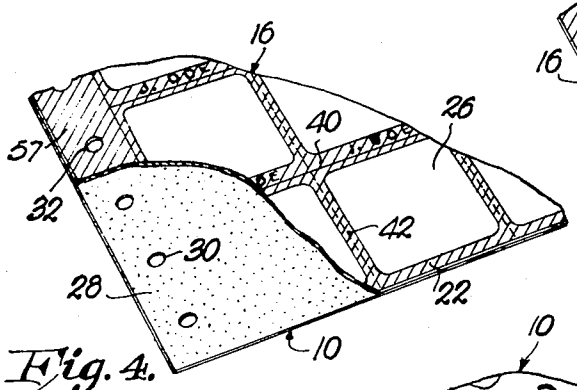


Fig. 4.

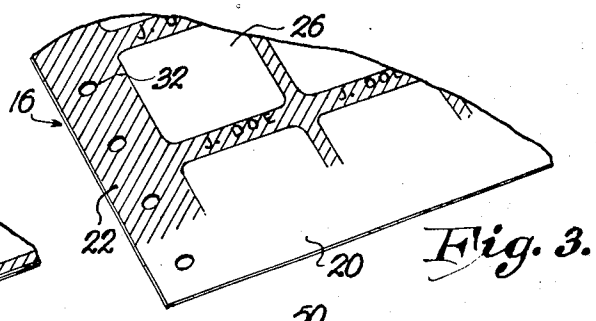


Fig. 3.

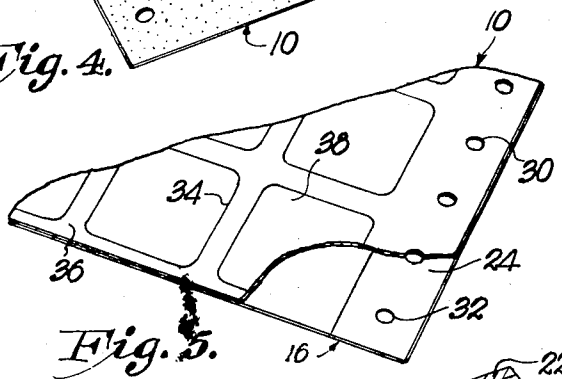


Fig. 5.

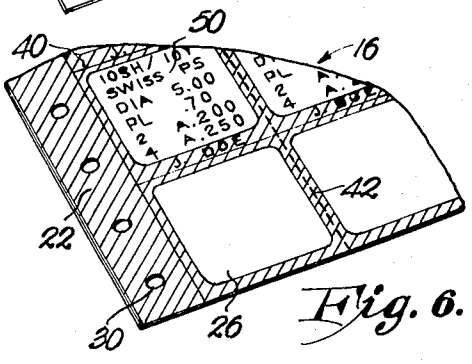


Fig. 6.

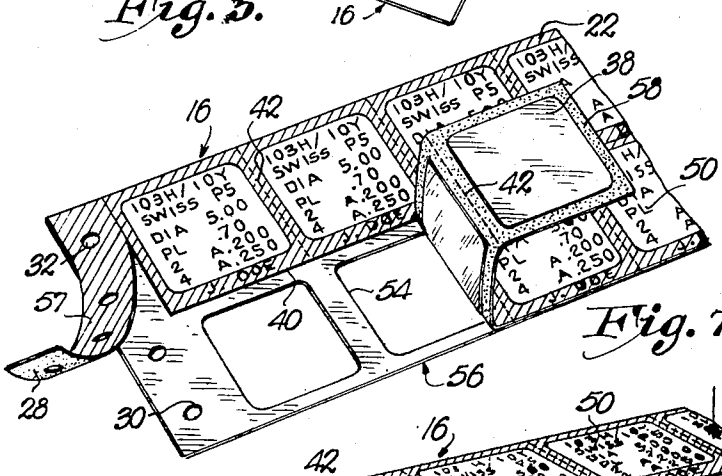


Fig. 7.

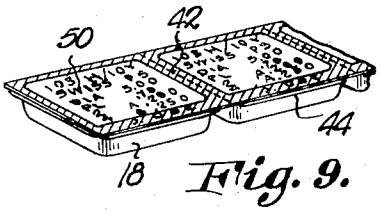


Fig. 9.

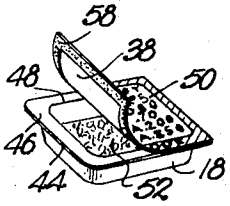


Fig. 10.

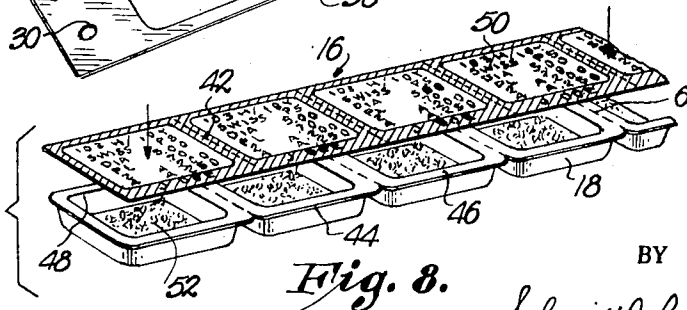


Fig. 8.

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PACKAGING METHOD

An important object of my present invention is to provide a packaging method which permits the entire range of short-run to long-run packaging jobs to be carried out more efficiently and less expensively than has heretofore been made possible through use of previously suggested methods.

Another important object of the instant invention is the provision of a packaging method which may be performed without need for heat-sealing devices or other special equipment as has, for the most part, been required in known methods used in attempts to accomplish the advantageous end results hereof.

Still another important object of the present invention is to provide a packaging method which permits the container closures to be produced and supplied in any one of a number of different forms according to the desires of the packer or his particular needs.

In the drawing:

FIG. 1 is a fragmentary, perspective view of a backing sheet used in the packaging method forming the subject matter of my present invention, showing the step of applying a releasing agent to one face thereof;

FIG. 2 is a fragmentary, perspective view of the backing sheet showing the step of applying adhesive to the coating of said agent;

FIG. 3 is a fragmentary, perspective view of a label sheet showing the step of printing the opposite face thereof;

FIG. 4 is a fragmentary, perspective view of the laminated sheets showing the die cutting and perforating of the label sheet;

FIG. 5 is a fragmentary, perspective view showing the die cutting of the backing sheet;

FIG. 6 is a fragmentary, perspective view showing identification indicia on the labels for the contents of the packages;

FIG. 7 is a fragmentary, perspective view showing the step of separating the sheets;

FIG. 8 is a fragmentary, perspective view of the step of applying the closures to the containers;

FIG. 9 is a fragmentary, perspective view of the closed containers; and

FIG. 10 is a perspective view showing one of the containers partially opened for dispensing its contents.

While the use of pressure sensitive adhesive in the production of container closures is well known, it is usually necessary in conventional methods for the packer to utilize special equipment in the application of the closures to the containers. The closure to which the present invention relates includes a label that has a continuous band of such adhesive along the marginal edge of the inner face of the label. The label is releasably attached to the container by the adhesive of such band being bonded to the normally upper face of a flat, continuous, outturned flange on the container disposed flush with its access opening so that the contents of the container may be dispensed from time to time by merely peeling back one corner of the label and then pressing it back into place. Such closures are also provided with a patch glued to the inner face of the label within the confines of the adhesive band and fitting across the access opening of the container to protect its contents.

Normally the precut patches are laid in place into the access opening of the containers and upon its contents, one at a time, by hand or by use of machinery, whereupon the top or label sheet is coated with the adhesive. It is then necessary to feed the label sheet onto the container flanges and onto the patches, press it into place and cut it into individual labels, again by hand or by use of special equipment. Such delicate procedure is expensive, slow, complicated and not universally adaptable to the many different procedures demanded by present-day packaging requirements.

Other methods of producing closures of the particular nature above outlined require the use of heat sealing equipment in their application to the container, a decided drawback from the standpoint of the packer whose demands call for the much simplified method of the present invention and the wide variances in form and procedures made possible thereby.

To be made clear at the outset is the fact that pressure sensitive adhesives hereinafter referred to, as well as their compositions and characteristics, are well known, and various types are readily available on the open market. Moreover, the nonfibrous backing sheet from which the patches are formed, together with the release coating thereon, as well as the paper label sheet, may all be of conventional nature. It is contemplated that my method shall have the important advantage of requiring neither the use of equipment nor of materials not previously used and well known in one form or another in the fields of packaging, closures and labels.

Referring then to FIG. 1 of the drawing, a nonfibrous backing sheet **10** may be initially coated on one face **12** thereof with a suitable releasing agent **14** to facilitate separation of a paper label sheet **16** (FIG. 3) therefrom prior to closing of containers **18** (FIGS. 8–10). One face **20** of the sheet **16** may be provided with printing **22** (including advertising matter if desired) to set off a number of blank spaces **26** in preference, perhaps, to such printing being provided on face **20** after sheets **10** and **16** are laminated together (FIG. 4) by pressure sensitive adhesive **28** coated over the releasing agent **14** of sheet **10** (FIG. 2), it being understood that in FIGS. 4 and 5 the coating **28** is in direct contact with that face **24** of sheet **16** opposite to face **20** thereof.

The aforementioned steps may be performed by supplying a collating machine with rolls of sheets **10** and **16** such that the coatings **14** and **28** are applied as the sheet **10** is advanced. To this end, the longitudinal margins of the sheets **10** and **16** may be provided with sprocket openings **30** and **32** respectively in the usual manner. The sprocket wheels of the machine advance the sheets **10** and **16** in unison between a pair of pressing rollers or the like to effect the lamination thereof by adhesive **28** between the proximal inner faces of the sheets **10** and **16**.

Thereupon, by use of aligned holes **30** and **32**, the joined sheets **10** and **16** are advanced to a die cutter which operates on outer face **36** of the sheet **10** so as to provide polygonal cuts **34** in sheet **10** only, presenting a plurality of protective patches **38** in the sheet **10** held in place solely by the adhesive **28** between the patches **38** and the label sheet **16**.

Prior to, at the same time, or subsequently, the sheet **16** may, if desired, be die cut and/or perforated. For example, longitudinal die cut lines **40** and transverse lines of perforation **42** are shown in FIG. **6**. Either or both of

these lines **40** and **42** may be omitted and whether either is die cut or perforated depends on the manner of subsequent use. Lines **40** and **42** are so spaced along the outlines of the spaces **26** that the latter become slightly larger in both directions than the corresponding patches **38**.

Spaces **26** are of the same size and shape as peripheries **44** of continuous flanges **46** extending outwardly from and flush with access openings **48** of containers **18**. Patches **38** have the same configuration as that of spaces **26** and openings **48** but are slightly larger in both directions than the openings **48** and are somewhat smaller in both directions than spaces **26**.

The finished product shown in FIG. **6**, when supplied to the user may then, through use of computers, or otherwise, be supplied with indicia **50** in the spaces **26** which constitutes the data necessary for designating the nature of the contents **52** (such as watch parts) of the containers **18**.

In the event that lines **40** are die cut into sheet **16**, each series of closures may then be peeled from the sheet **10** in strips as illustrated by FIG. **7** which causes the patches **38** to separate therewith from sheet **10**, leaving openings **54** in scrap piece **56**. The releasing agent **14** facilitates such separation, and the marginal strips **57** of the sheet **16** which contain the sprocket wheel holes **32** also become scrap.

There is presented, therefore, bands **58** of adhesive **28** around each patch respectively, and when a series of closures is applied to a row of containers **18**, having their flanges **46** joined by lines of perforation **60** in the manner shown by FIG. **8**, the bands **58** become attached to the flat top faces of corresponding flanges **46**. The patches **38** slightly overlap the flanges **46** adjacent the openings **48** to preclude all contact of the parts **52** with the adhesive **28**.

The row of closed containers **18** shown in FIG. **9** may then be separated by tearing along lines of perforations **42** and **60** or, if perforations **42** and **60** are not initially provided, the top paper portion and the flanges **46** may be cut apart to present individual closed containers **18** as seen in FIG. **10**.

As an alternative, the entire sheet **16** may be applied to banks of containers **18** and thereafter cut apart or be separated along lines **40**, **42** and **60** if such lines are initially provided. Still further, individual closures may be stripped away and then applied one at a time to containers **18**.

That is to say, the method as hereinabove described permits the closure or top for the container **18** to be initially manufactured in any one of a number of desirable configurations. These include continuous forms to be printed with the indicia **50** by any pin-fed unit, such as a computer. Or the product may be produced in rolls to be subsequently provided with the indicia by tag type imprinters. Still further, the entire label may be preprinted by the original manufacturer of the package tops. These are in addition to the illustrated form of individual sheets as shown in FIG. **5**.

In any event, the method permits use of individual labels for separate containers or of groups of labels suitably perforated so that a number of labels are simultaneously affixed to a plurality of containers in one operation, and then torn apart by hand or, if volume justifies, the groups of finished containers may be die cut apart or otherwise separated.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. In a method of packaging through use of containers having access openings surrounded by outwardly extending flanges, said method including the steps of:

laminating a pair of sheets by use of a pressure sensitive adhesive between the proximal inner faces thereof;

thereupon cutting one of said sheets while the same are stuck together to present a plurality of individual protective patches attached to said inner face of the other sheet by said adhesive;

separating said sheets such as to leave only the patches connected by said adhesive to said inner face of said other sheet with each patch surrounded by a band of said adhesive remaining on said inner face of said other sheet;

closing said openings of a bank of said containers by placing the patches over the openings of corresponding containers and pressing the bands into attachment with proximal flanges of the containers; and

subdividing said other sheet to present an outer cover attached by its band to the flange of each container respectively with each cover having a patch still connected to said inner face by said adhesive.

2. In a method of packaging as claimed in claim **1** wherein prior to lamination of said sheets said inner face of said one sheet is first coated with a releasing agent and then coated with said adhesive.

3. In a method of packaging as claimed in claim **1** wherein prior to the separation step, and while the sheets are stuck together, said other sheet is cut to present a series of elongated strips, each strip being subdivided transversely thereof after the openings are closed to present said covers.

4. In a method of packaging as claimed in claim **1** wherein prior to the separation step, and while the sheets are stuck together, said other sheet is cut to present a series of elongated strips and perforated transversely of said strips to present a plurality of said covers, each strip being subdivided along the perforations after the openings are closed.

5. In a method of packaging through use of containers having access openings surrounded by outwardly extending flanges, said method including the steps of:

laminating a pair of sheets by use of a pressure sensitive adhesive between the proximal inner faces thereof;

thereupon cutting one of said sheets while the same are stuck together to present a plurality of individual protective patches attached to said inner face of the other sheet by said adhesive;

separating said sheets such as to leave only the patches connected by said adhesive to said inner face of said other sheet with each patch surrounded by a band of said adhesive remaining on said inner face of said other sheet;

subdividing said other sheet to present a plurality of outer covers each having a patch still connected to its inner face by said adhesive; and

closing the openings of said containers by placing one patch over the opening of each container

respectively and pressing the bands into attachment with prominal flanges.

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