April 25, 1967 C. H. BERMAN 3,315,718

PACKAGING DEVICE AND METHOD OF MAKING SAME

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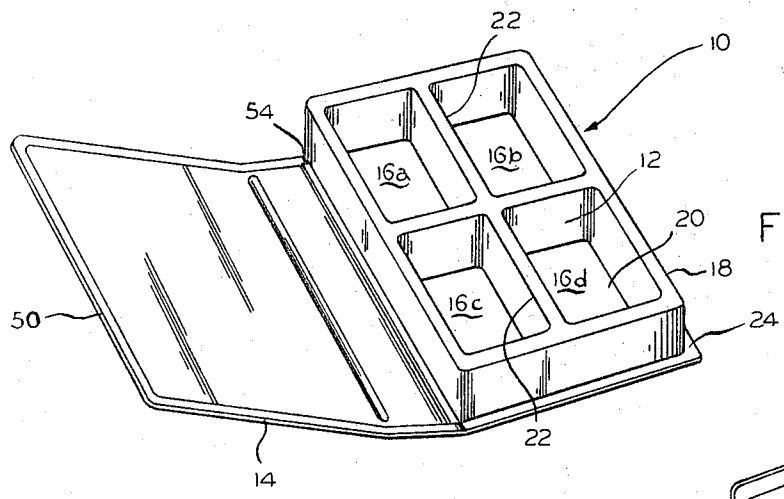


FIG. 1

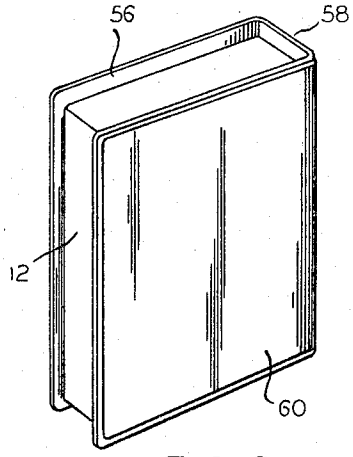


FIG. 2

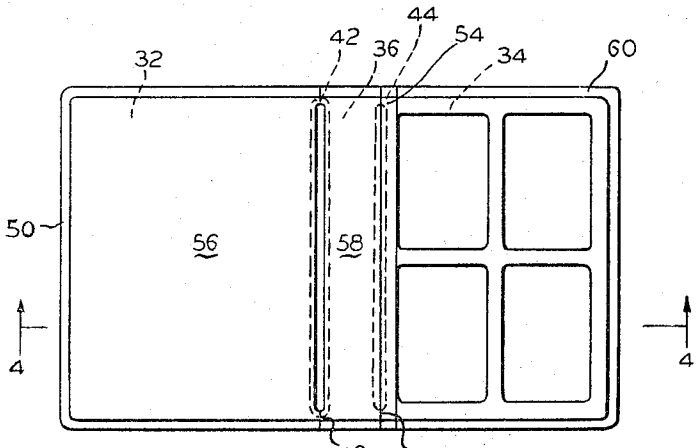


FIG. 3

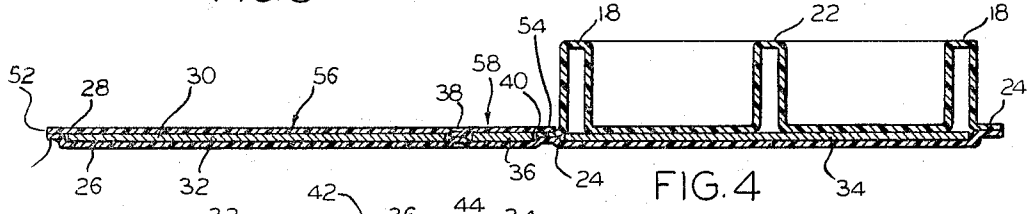


FIG. 4

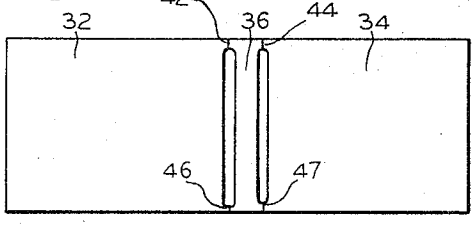


FIG. 5

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PACKAGING DEVICE AND METHOD OF MAKING SAME

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This invention relates generally to the art of packaging and more particularly to an improved low cost but attractive packaging device and the methods of making the same.

In the packaging arts, a need is constantly present for new and useful packaging devices which are attractive, useful and yet inexpensive to produce. In this art, such devices also obtain additional consumer appeal if the original packaging devices can provide other uses in and about the home or office after the original function of the package has been fulfilled.

It is, accordingly, a primary object of the present invention to provide an attractive versatile low cost packaging device and methods of making the same.

It is a further object of the present invention to provide an improved package device which utilizes inexpensive materials for its production.

It is still another object of the present invention to provide an improved packaging device which comprises containing means having an integrally formed cover member in coaction therewith to provide a base, hinge and enclosure for the device.

Still another object of the present invention is the provision of a novel packaging device in which plastic materials are used in unique coaction with one another to provide a durable lightweight construction.

A still further object of the present invention is to provide a novel packaging device which is adaptable to a myriad of secondary uses once its initial use has been fulfilled.

These and still further objects, as shall hereinafter appear, are readily fulfilled by the present invention in a remarkable unexpected fashion as can be readily discerned from the following detailed description of the illustrative embodiment of the invention, especially when read in conjunction with the accompanying drawing in which:

FIG. 1 is an isometric showing of a packaging device embodying the present invention with the cover member in an "open" position;

FIG. 2 is an isometric showing of a packaging device embodying the present invention with the cover member in a "closed" position;

FIG. 3 is a plan view of a packaging device of FIG. 1;

FIG. 4 is a cross section taken along lines 4—4 of FIG. 3 and looking in the direction of the arrows; and

FIG. 5 is a plan view of the insert member used in this invention.

Referring to FIG. 1, the general reference **10** is used to identify the packaging device of this invention which, as shown, comprises a container member **12** and, in novel coaction therewith as shall be hereinafter described, a cover member **14**.

Container member **12** is preferably constructed to provide one or more containing areas **16** each open at its top, enclosed laterally by side walls **18**, and enclosed at its bottom by bottom wall **20**. Where, as in FIG. 1, a plurality of containing areas **16***a*, **16***b*, **16***c*, **16***d*, are desired, the external side walls **18** may be of integral construction and the internal side walls **22** may be integrally molded therewith or formed as a cross-shaped insert, as desired. Externally, side walls are provided with an outwardly extending flange **24**, the function of which will be described hereinafter.

Cover member **14** comprises a first sheet **26** and a second sheet **28** integrally bonded to said first sheet **26** and having an insert member **30** operatively interposed therebetween as shown in FIGS. 3 and 4.

In practice, sheet **26** is longer than sheet **28** as will, for descriptive purposes, be referred to as a "full sheet" while sheet **28**, while of substantially identical width, will, because of its lesser length, be referred to as a "partial sheet."

Insert member **30** is specially designed to comprise a first end portion **32**, a second end portion **34** and an intermediate portion **36**. In defining insert member **30**, end portions **32** and **34** will be of substantially identical dimensions while intermediate portion **36** is distinguishably smaller. End portions **32**, **34** will be partially separated from intermediate portion by slots **38**, **40**, respectively, cut therebetween to provide upper ligaments **42**, **44** and lower ligaments **46**, **48**, respectively. The unique value of this arrangement will become apparent in the description that follows.

To construct cover member **14**, sheet **26** is laid flat and insert member **30** is laid thereupon. Member **30** is cut to conform to sheet **26** in general shape although slightly smalled in size, that is, sheet **26** will extend beyond member **30** about 1/16 of an inch on all edges to provide borders **50**. Next, sheet **28** is registered with one end **52** of sheet **26** and covers end portion **32** and intermediate portion **36** of member **30** while leaving end portion **34** uncovered.

With these members thus arranged, a heat seal is effected in a conventional manner to bond border **50** to the corresponding portion of sheet **28** and to bond sheets **26** and **28** to each other through slots **38** and **40**. When so sealed, sheet **28** has a flap **54** adjacent slot **40** whose function will be explained.

Thus formed, cover member **14** presents a lid portion **56**, a hinge portion **58**, and a base portion **60**.

In preferred practice of this invention, sheets **26** and **28** will be formed of a suitable heat sealable plastic material such, for example, as vinyl acetate polymers, vinyl chloride polymers, vinyl chloride-acetate copolymers and the like while insert member **30** will be formed of cardboard, stiffened paper, or other suitable relatively inflexible material having sufficient properties to withstand the repeated bending which ligaments **42**, **44**, **46**, **48** will be subjected to in use.

Container member **12**, which for illustrative purposes will be considered as having four compartments, although it is understood that it can have any desired number, that is, one or more, is preferably formed of a suitable material such as lightweight but tough plastic polystyrene, cellulose, cellulose-acetate, certain of the acrylics, polyamides, and the like, which is readily formed on plastic-forming equipment, such as presses, injection molding machines and the like, and can be heat sealed. Preferably, member **12** is made of so-called "hollow" construction, see FIG. 4, as this represents the most economical use of material. In another practice, member **12** may be created by forming a sheet of suitable plastic about an appropriate form to provide internal walls **22**, bottom **20**, and external side walls **18**, each having an outwardly extending flange **24**. In final assembly, the flanges **24** of container member **12** are arranged in registry with the border **50** on three sides of base portion **60** while flange **24** adjacent flap **54** is tucked thereunder. Then, suitable bonding is effected, such, for example, as heat sealing, or like conventional methods, whereupon cover member **14** and container member **12** are integrally joined to provide a unique packaging device. In joining container member **12** to cover member **14**, R.F. induction heating is a particularly satisfactory method for it effects the desired fusion without adversely affecting any of the surrounding

portions of the thermosetting compartment of the thermoplastic cover.

In a preferred practice of the invention, a precut full sheet of calendered vinyl plastic is laid out on a work surface and overlaid with an appropriately dimensioned, selectively slotted cardboard insert to provide a small border of vinyl thereabout. Next, an appropriately dimensioned partial sheet of calendered vinyl plastic is placed on the cardboard in register with one end of the full sheet leaving a base portion of cardboard exposed. The container member, formed as indicated, is located on this base portion so that three outwardly reaching sidewall flanges coincide with the exposed portion of the border of the first sheet. The entire arrangement is then subjected to a sealing action peripherally of the full sheet and transversely of this sheet through the slots in the cardboard liner. These later welds coact to define hinges about which the containing members and the cover portions pivot to permit opening and closing of the packaging device through at least 180° or more.

Thus practiced, a unique attractive low cost packaging device is created which not only functions efficiently as a point-of-sale packaging device but which further possesses the desirable attribute of a myriad of secondary uses, both in the home and office.

Further, from the foregoing, it becomes readily apparent that a new and improved packaging device has been herein described and illustrated which fulfills all of the aforestated objectives in a remarkably unexpected manner.

It is, of course, understood that the embodiments and illustrations herein described are done so by way of illustration only and that such applications, modifications, alterations as may readily occur to the artisan confronted with this disclosure are intended within the spirit of this invention, especially as it is defined by the scope of the claims appended hereto.

What I claim is:

1. A packaging device comprising: a full sheet of material; an insert member substantially contiguous with said full sheet of material and coacting therewith to define a border thereabout, said insert member having a pair of spaced generally parallel slots defined therein transversely thereof; a partial sheet of material bonded to said full sheet of material at a portion of said border in common therewith and through said slots; and a preformed container member having an outreaching flange, a portion of said flange extending between said partial sheet and said insert member, the remainder of said flange being bonded to the portion of said border of said first sheet not in common with said partial sheet.

2. A method of manufacturing a packaging device comprising:

(a) cutting a first sheet of heat sealable material to a preselected length and width;

(b) cutting a second sheet of heat sealable material to a preselected length and width, said length being lesser than the length of said first sheet and said width being substantially equal to said width of said first sheet;

(c) cutting a stiffening member of sufficient dimension to provide a slight peripheral border of said first sheet thereabout when said member is superimposed on said first sheet;

(d) cutting first and second substantially parallel spaced slots in said stiffening member in parallel relationship with the ends thereof;

(e) superimposing said stiffening member with said first sheet to define said border;

(f) superimposing said second sheet with said stiffening member in contiguous relationship with one end of said first sheet and coacting with said member to define an exposed and a covered portion thereof;

(g) forming a plastic container member having a length and width substantially conforming to said exposed portion;

(h) superimposing said container member with said exposed portion of said stiffener member;

(i) applying sufficient heat to the periphery of said first sheet to heat seal said first sheet to said second sheet and to said container member;

(j) applying sufficient heat to said second sheet coincident with said slots to heat seal said second sheet to said first sheet through said slots; and

(k) removing said heat from said respective seals.

3. The method according to claim 2 in which said first sheet is formed of calendered vinyl chloride.

4. The method according to claim 2 in which said stiffener member is cardboard.

5. The method according to claim 2 in which said container member is formed of polystyrene.

6. The method according to claim 2 in which said slots are spaced a distance equal to the height of said container member.

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