Sept. 1, 1970 P. VANDERS 3,526,317

COMBINATION DRINKING-CUP WRAPPED PRODUCT PACKAGE

Filed Jan. 15, 1969

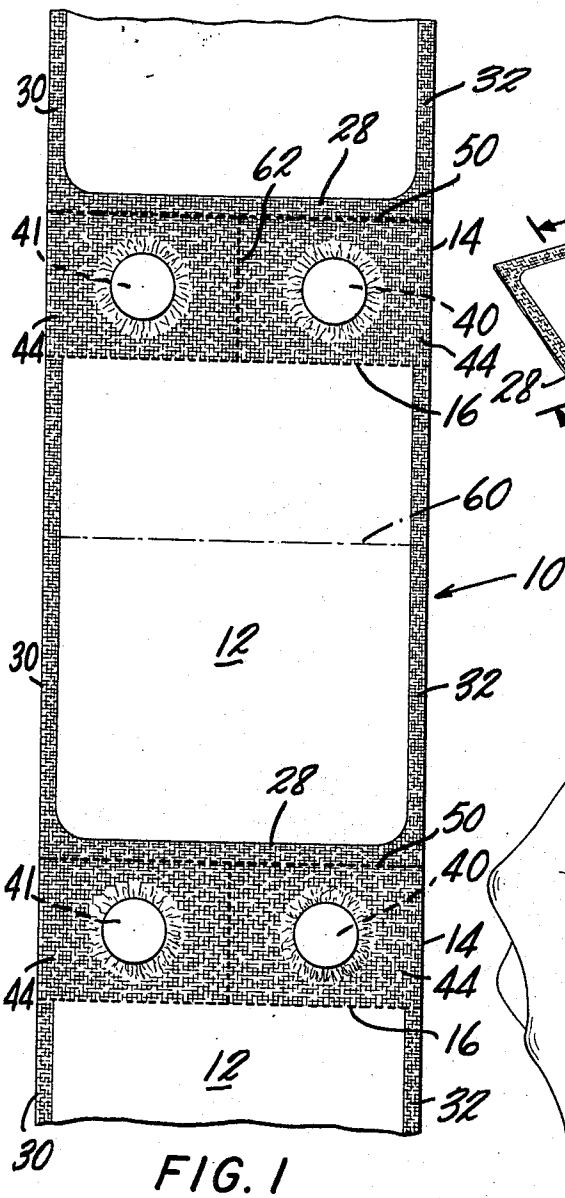


FIG. 1

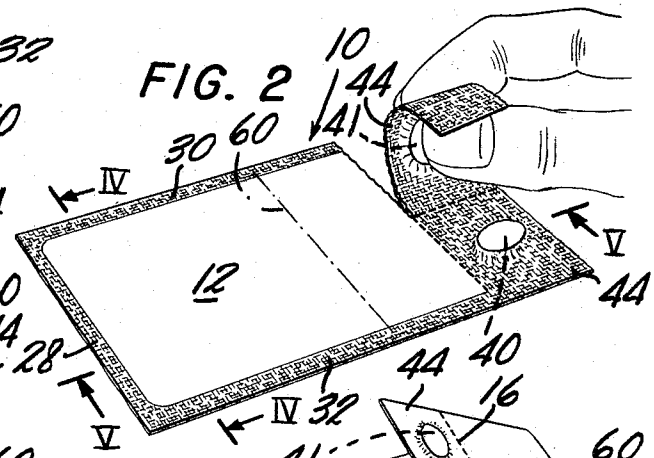


FIG. 2

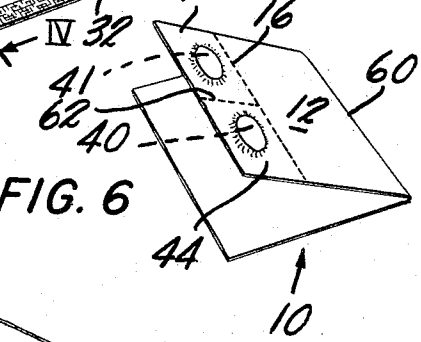


FIG. 6

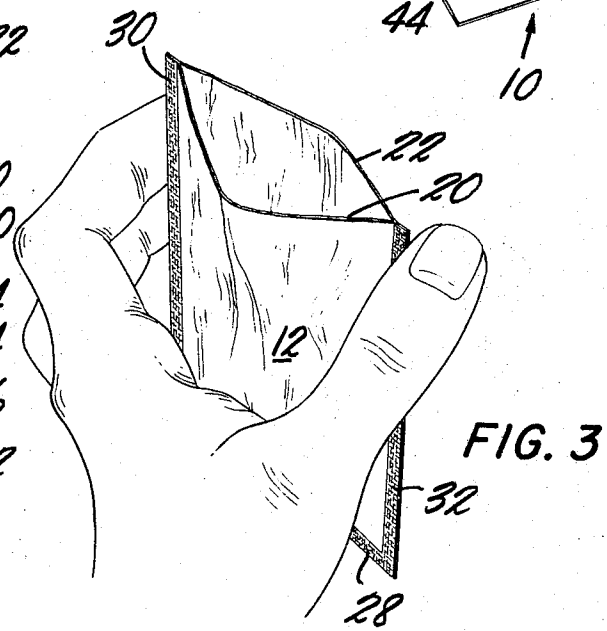


FIG. 3

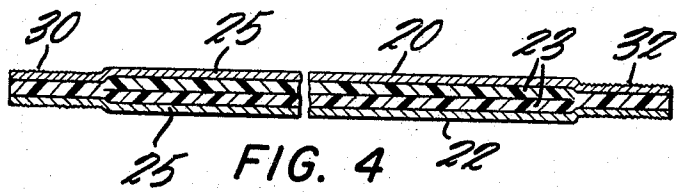


FIG. 4

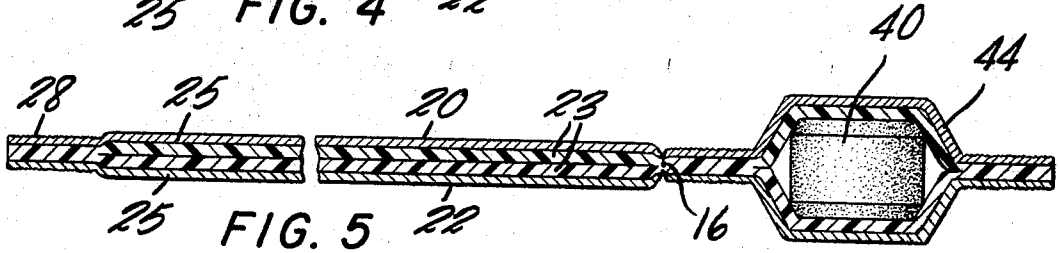


FIG. 5

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COMBINATION DRINKING-CUP WRAPPED PRODUCT PACKAGE

Paul Vanders, 345 58th St., Apt. 3J,
New York, N.Y. 10019

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U.S. Cl. 206—47 10 Claims

ABSTRACT OF THE DISCLOSURE

A combined drinking-cup wrapped product package is disclosed. The package includes a drinking-cup section made integral with a wrapped product section, the latter having hermetically wrapped therein a product, as for example, an aspirin, which normally is consumed by the user in accompaniment with taking a drink of water. The wrapped product section of the package is joined in frangible juncture with the drinking-cup section at a tear line along which tearing action can be applied to separate the wrapped product section from the drinking-cup section.

BACKGROUND OF THE INVENTION

Certain types of medicament products such as aspirin, vitamins and the like are most usually consumed by the user in accompaniment with taking a drink of water to facilitate swallowing the product as well as to initiate dissolution of the same. Certain medicaments are taken by first dissolving them in a cup of water before consuming them. While the packaging of the medicament product so that it may be carried in single, double or other specific dose quantity on the user's person is a relatively simple matter, the user does not always find it convenient to carry a drinking-cup or like liquid retaining receptacle with him when travelling or being present in public areas such as athletic stadiums, theatres and the like where the availability of a drinking-cup is not a certainty. Provision of a conveniently carried and simply used combination drinking-cup product package is known in the prior art. For example, the Gabbard Pat. 2,967,609 describes a combined paper drinking-cup and package which can be used for the purposes set forth above. According to this patent, the paper package which in opened condition is an essentially flat structure is opened and the medicament or consumable contents packed therein are removed to allow the package to be folded in a manner that permits formation from folded segments thereof of a conical drinking-cup. However, this package has several drawbacks. For one thing, the medicament or product must first be removed before the cup portion thereof can be erected. Moreover, a portion of the product containing part of the package must be folded to form a handle for holding the cup. In addition, the package does not lend itself to manufacture by modern high speed production methods except by use of special equipment both for cutting the package blank and for folding and adhering together the package segments when folded about the product to be contained therein. The Baxter Pat. 3,129,815 describes a package which offers some solution to the problems of simplifying manufacturing techniques and avoidance of the need to first remove the product from the package before it is susceptible for use as a cup. However, according to this patent, the package must include a springy side fold of rounded character which is formed by folding or doubling over the sheet from which the package is made. The folding operation adds to the manufacturing costs of the package and the manner in which the folded sheet is sealed along the one side at an inclined angle so as to rigidize the cup

structure, makes it difficult to form the package in a simplified continuous manufacturing procedure. The Smith Pat. 3,363,750 describes a package in which a product in pill form is enclosed, the package being designed such as that when opened the pill can either be removed or left inside the package so that when the seal holding the front panel to the rear panel is broken and the front panel pulled away, a drinking-cup is formed. However, since the front panel must be made with a number of fold lines therein, it is a relatively expensive and complicated matter to make such a package and hence this patent offers little solution to the problems overcome by the present invention.

SUMMARY OF THE INVENTION

The present invention relates to a combined drinking-cup wrapped product package which can be manufactured relatively inexpensively in a continuous manufacturing operation from a continuous stock of material and without need to employ complex manufacturing techniques or machinery. According to the invention, the package is made from two coextensive elongated sheets of material possessing the characteristics of being air-impervious, heat sealable and embodying a certain quality of strength to withstand manufacturing, storage and ultimate use handling. For example, the sheets may embody a layer of a strength providing material such as a metallic foil and a thin layer of a plastic material which is both air-impervious and heat sealable. The sheets preferably are arranged with the plastic layers face-to-face thereby readily adapting the sheets for closure into a package structure and hermetic sealing of same by a heat sealing operation. The package includes a drinking-cup section connected in frangible juncture with a wrapped product section at a transverse tear line formed in the sheets at a location intermediate the ends thereof. The drinking-cup section is closed at one end with a heat sealed narrow band and also at the sides with narrow heat sealed bands, the bands at the sides extending from said one end to the tear line and being of substantially uniform width with each other and with the band of said one end.

The wrapped product section is formed by the sheet portions extending between the tear line and the other ends of the sheets. A medicament or like product in suitable form such as in tablet or granular form is sandwiched between the sheet portions forming the wrapped product section and the sheet portions are joined to each other in a heat sealed connection which completely encircles the product and extends to the tear line. Thus, the product is isolated from the atmosphere in a sealed enclosure of a hermetic character to prevent exposure of the product to moisture or air which over a period of time could stale the product. In use, the user separates the wrapped product section from the drinking-cup section by applying a tearing action along the tear line. Thereafter the medicament can be removed from the wrapped product section by ripping or tearing it apart, the nature of the sheet material and thickness of same being such as to allow tearing it with a deliberate digitally applied tearing action. If the medicament is provided in tablet form and in plural quantity in the package, each tablet may be individually sealed independently of the others and separated therefrom along appropriate detachment lines to allow opening the hermetic sealing of only the actual tablets required for use while retaining the preservative packaging of the remaining tablets. The medicament product once removed from the wrapped product section may then be dissolved in water in the drinking-cup section or consumed directly by the user. The drinking-cup section once separated from the wrapped product section has an open edge where it was joined to the latter at the tear line and thus becomes adapted for

erection into cup form by inserting a finger to separate the sheet parts a distance, or by pressing inwardly at the heat sealed side edges of the drinking-cup section to bulge the two sheet parts outwardly of each other, or both.

Various other objects, features and advantages of the invention will be made apparent from the description that follows, and the illustrative embodiment described herein and depicted in the drawing.

The invention accordingly comprises the article possessing the features, properties and the relation of elements all as exemplified in the following detailed description, and the scope of the invention will be indicated in the claims.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a plan view of a combination drinking-cup wrapped product package made according to the present invention being shown as one of a continuous string of such packages manufactured in continuous manufacturing operation.

FIG. 2 is a perspective view in somewhat smaller scale than employed in FIG. 1 showing the manner in which the wrapped product portion is removed from the drinking-cup section of the package preliminary to use by a user.

FIG. 3 is a perspective view showing the manner in which the drinking-cup section is erected to form a receptacle for holding water or like liquid.

FIGS. 4 and 5 are sectional views on a somewhat enlarged scale and as taken along the lines IV—IV, V—V, respectively, in FIG. 2.

FIG. 6 is a perspective view in reduced scale showing the manner in which the package may be folded to reduce its size for the convenience of user's carrying same.

In the following description like reference numerals are used to denote like parts in the drawing.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The present invention provides a combined drinking-cup and wrapped product package of a personal nature which can be easily carried by the user, retains its package integrity until used and which is conveniently employed at the time of use. Moreover, the package is economical and simple to make, is compact in form and easily stored. It will be understood that the package of the present invention is intended for use with products of a wide description both as to character as well as to form. For convenience, the product is referred to herein generally as being a medicament product. Thus the package can be used with aspirin, analgesic alkalizers, vitamin pills and like products usually consumed by the user in conjunction with taking a drink of water, the medicament either being swallowed directly by the user or being dissolved first in the water. However the use of the package is not limited solely to that purpose. For example, the product used therewith could include carbonated beverages, concentrated foods, soups and the like. Moreover the product can be provided in tablet, granular or consumable capsule form.

Turning now to the drawings, and more particularly FIGS. 1, 2, 4 and 5, the package **10** of the present invention includes a drinking-cup section **12** and a wrapped product section **14** with the drinking-cup section **12** being connected in frangible juncture with the wrapped product section **14** at a tear line **16** along which as may be noted in FIG. 2, a tear action can be applied by the user to separate the wrapped product section from the drinking-cup section. The tear line **16** can be a line of spaced perforations, a weakened section or other suitable means by which the two package sections can be separated.

As was indicated earlier, the construction of the present package is such as to lend itself to effective manufacture in a continuous operation and from a continuous stock of material which attributes will be more readily discerned from the package description now to be given.

Package **10** in a preferred and convenient constructional embodiment is formed from a pair of coextensive elongated, preferably rectangular sheets **20** and **22** each possessing properties of strength, air-imperviousness and heat sealability. Such properties can be provided in the sheets by making them as a plural layer structure. Thus each sheet may have a plastic material layer **23** such as a layer of polyethylene .010"–.015" thick to provide the heat sealability and air-imperviousness and a layer **25** of a strength producing material such as a foil of a metal, preferably aluminum. In forming the package, the sheets **20**, **22** can be arranged in plastic face-to-face juxtaposition and heat sealed together in the manner to be described, with the air-imprevious layer thereby providing an impenetrable barrier to the entry of air and/or moisture to the package both in the wrapped product section and the drinking-cup section.

In forming the package, the sheet parts defining or forming the drinking-cup section **12** are joined in a heat sealed connection of a narrow continuous heat seal band which extends at one end of the sheets as at **28** and along the sides from said one end of the sheets to a location intermediate the ends of the sheet and more particularly from said one end to the tear line **16**, with the heat seal bands at the sides being formed as at **30** and **32**. Thus, the continuous heat seal band arrangement **28**, **30** and **32** encloses that portion of the package defining the drinking-cup with the drinking-cup section when separated from the wrapped product section having an open end edge at the tear line to provide access to the drinking-cup for filling same with liquid.

The sheet portions forming the wrapped product section **14**, which are the portions between the tear line **16** and the other ends of the sheets have sandwiched therebetween a medicament product with the product being provided in any one of tablet form, granular form, or consumable capsule form, as earlier described, the product being shown in the drawings by way of convenience as being a pair of tablets **40** and **41**. As can be seen in FIG. 5, the tablets **40**, **41** are sandwiched between the sheet portions at a location between the tear line and the said other ends of the sheets, with said sheet portions being joined in a heat sealed connection which completely encircles the tablets and which extends to the tear line **16**. In this manner, the tablets are completely isolated from the effects of the atmosphere, particularly any moisture therein, and the package possesses a hermetic seal character capable of preserving the quality of the product for an indefinite period of time.

When the medicament product is provided in individual dose quantities such as in the form of one or more tablets, each tablet preferably is arranged in the wrapped product section spaced a distance from the others so that a substantial expanse of heat sealed sheet material separates the respective tablets, thereby allowing that detachment lines **62** extending, for example, longitudinally of the wrapped product section can be provided in the wrapped product section thereby forming individual segments **44** thereof associated each with an individual tablet to permit removal of the respective tablets individually without affecting the hermetically sealed wrapping of the others. The detachment lines **62** can be perforations or easily tearable means similar to tear line **16**.

When the user wishes to utilize the package **10**, the wrapped product section **14** is removed from the drinking-cup section **12** in the manner indicated in FIG. 2, by applying a tearing action along the tear line **16**, thereby opening one end of the drinking-cup where it was attached to the wrapped product section to allow for filling with water. The user then obtains the required tablets by tearing the wrapping segment **44** enclosing same. This is easily accomplished with deliberate digitally applied tearing force since the thickness of the material of the sheets **20**, **22** while adequate for packaging purposes is not such

as to make it difficult to open same at the time of use by application of a deliberate tearing force. The user then erects the drinking-cup section to form the cup structure shown in FIG. 3, the drinking-cup section being sufficiently deformable to shape it into a cup structure by spreading the sheet parts a distance apart. This can be done by inserting a finger between sheets **20**, **22** at the open end edge of the section **12**. A squeezing pressure applied against the cup section side edges as at **30**, **32** and tending to squeeze them together will also aid the sheet parts of the cup section to bulge away from each other in the manner shown in FIG. 3.

As was indicated earlier the package **10** of the present invention is such that it can be made in endless form from an endless stock of materials by feeding two sheets of plastic coated metallic foil stock along a production line producing a succession of packages **10** joined at the ends along tear lines as at **50** in FIG. 1. The string can thereafter be cut into individual packages to facilitate use of the package in vending machines, etc. Moreover, the package may be provided with a fold line or crease as at **60** to facilitate folding the package in half to reduce its size to a further extent for ease of carrying on one's person.

It will thus be seen that the objects set forth above among those made apparent from the foregoing description, are efficiently attained and, since certain changes in the package construction set forth above, may be made without departing from its scope, it is intended that all matter contained in the above description shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. A combined drinking-cup wrapped product package including a drinking-cup section and a wrapped product section connected in frangible juncture with said drinking-cup section at a tear line along which a tearing action can be applied to separate said wrapped product section from said drinking-cup section, said package comprising

first and second coextensive elongated sheets of heat sealable and air-impervious material, the sheets being superposed face-to-face, said tear line extending across said sheets intermediate the ends thereof, said sheets being joined to each other in heat sealed connection of a narrow continuous band extending at one end of said sheets and along the sides from said one end to said tear line to form said drinking-cup section, said wrapped product section being formed by said sheets between said tear line and the other ends thereof,

a medicament product sandwiched between the portions of said sheets forming said wrapped product section, said portions of said sheets also being joined to each other in heat sealed connection which completely encircles said product and extends to said tear line, separation of said wrapped product section from said drinking-cup section by tearing along said tear line exposing an open end edge in said drinking-cup section, said cup section being a sufficiently deformable structure to be shaped into cup form by spreading the sheet parts forming said cup section a distance apart.

2. The package of claim **1** wherein the medicament product is in the form of at least one tablet sandwiched between said sheet portions.

3. The package of claim **1** wherein each of said sheets is comprised of a layer of strengthening material and a layer of heat sealable and air-impervious material.

4. The package of claim **3** wherein the strengthening material layer in each of said sheets is a foil of a metal.

5. The package of claim **4** wherein said metal is aluminum.

6. The package of claim **3** wherein said heat sealable and air-impervious material is a plastic material.

7. The package of claim **6** wherein the plastic material is polyethylene.

8. The package of claim **1** wherein the medicament product is in the form of a plurality of tablets sandwiched between said sheet portions, the heat sealed connection between said portions of said sheets completely encircling each tablet independently of the others.

9. The package of claim **8** wherein each tablet is associated with its own segment of said wrapped product section, each segment being separated from the others by detachment lines permitting removal of the tablets individually from said wrapped product section.

10. A combined drinking-cup wrapped product package including a drinking-cup section and a wrapped product section connected in frangible juncture with said drinking-cup section at a tear line along which a tearing action can be applied to separate said wrapped product section from said drinking-cup section, said package comprising

first and second rectangular sheets each having a plastic layer and a metal foil layer, the sheets being superposed with the plastic layers face-to-face, said tear line extending transversely across said sheets intermediate the ends thereof, said sheets being joined to each other in heat sealed connection of a narrow continuous band of generally uniform width extending at one end of said sheets and along the sides from said one end to said tear line to form said drinking-cup section, said wrapped product section being formed by said sheets between said tear line and the other ends thereof,

at least two tablets of a medicament product sandwiched in side-by-side spacing between the portions of said sheets forming said wrapped product section, said portions of said sheets also being joined to each other in heat sealed connection which completely and separately encircles each of said tablets and which extends to said transversely directed tear line, separation of said wrapped product section from said drinking-cup section by tearing along said tear line exposing an open end edge in said drinking-cup section, said cup section being a sufficiently deformable structure to be shaped into cup form by spreading the sheet parts forming said cup section a distance apart.

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JOSEPH R. LECLAIR, Primary Examiner

J. M. CASKIE, Assistant Examiner