

Oct. 1, 1968

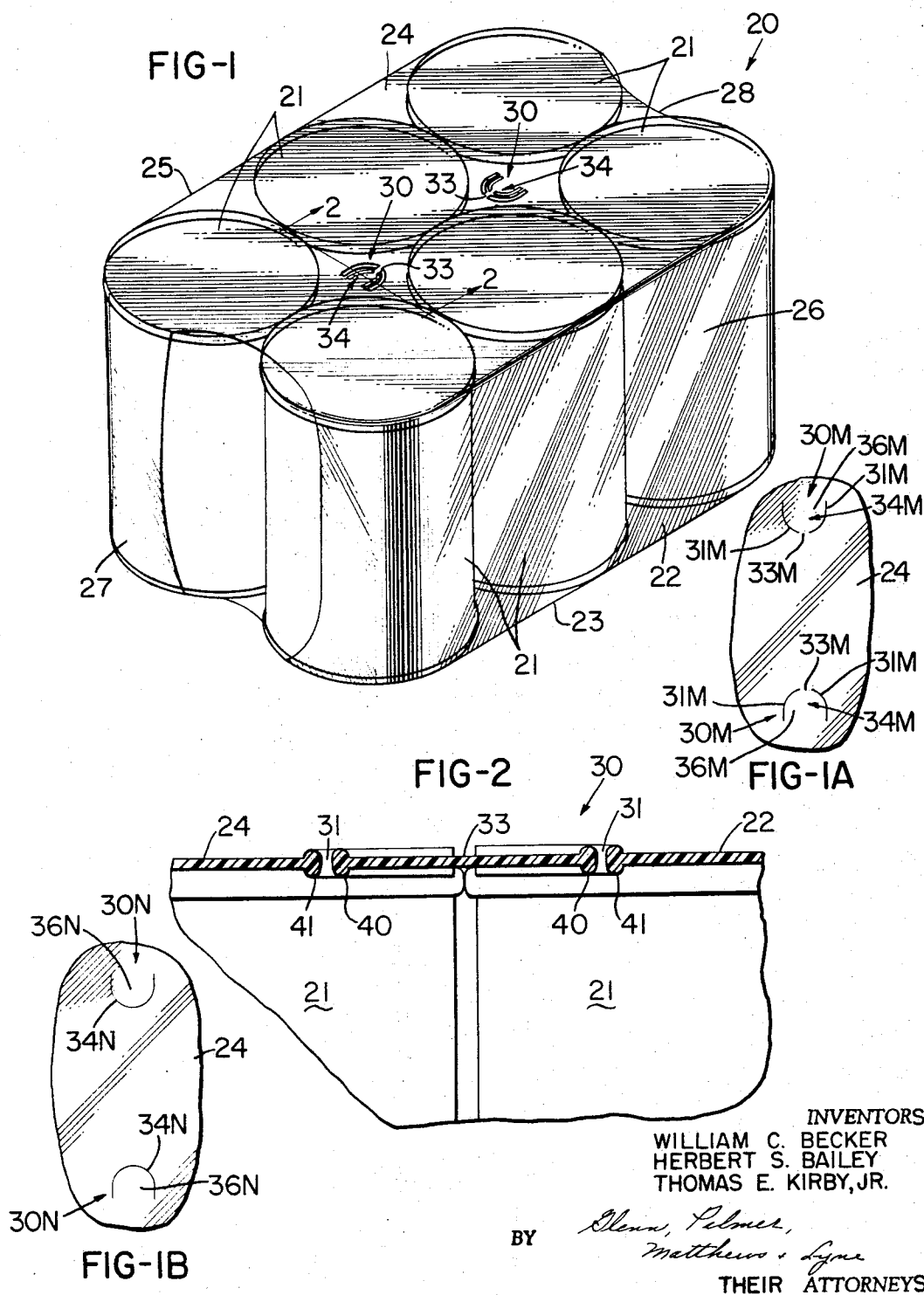
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3,403,779

OPENING DEVICE FOR PACKAGE MEANS

Filed Oct. 14, 1966

4 Sheets-Sheet 1



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FIG-3

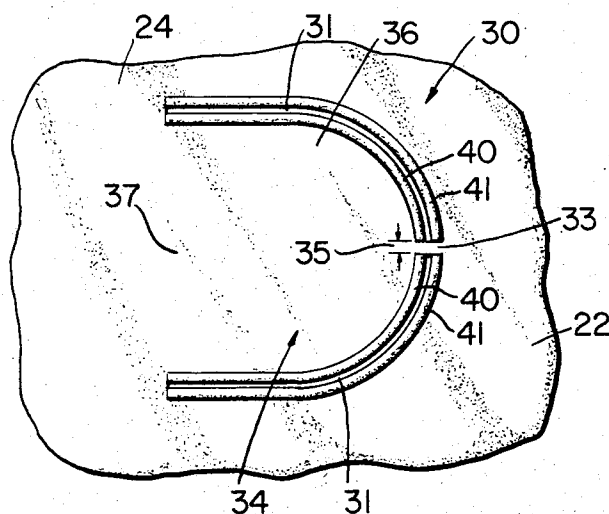


FIG-4

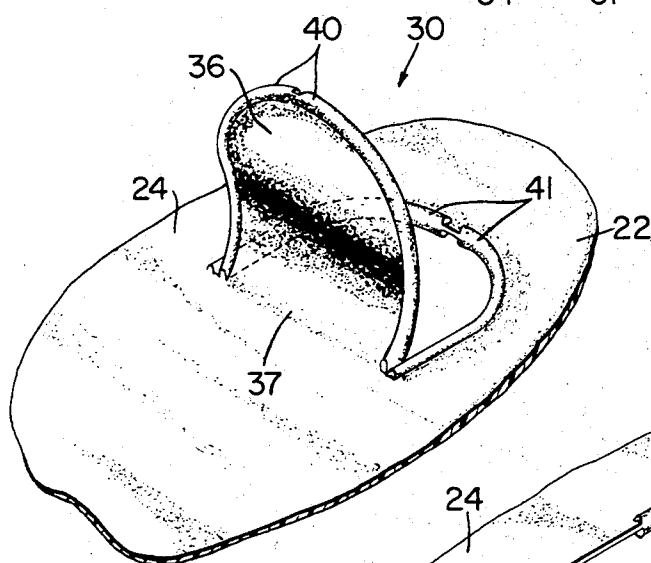
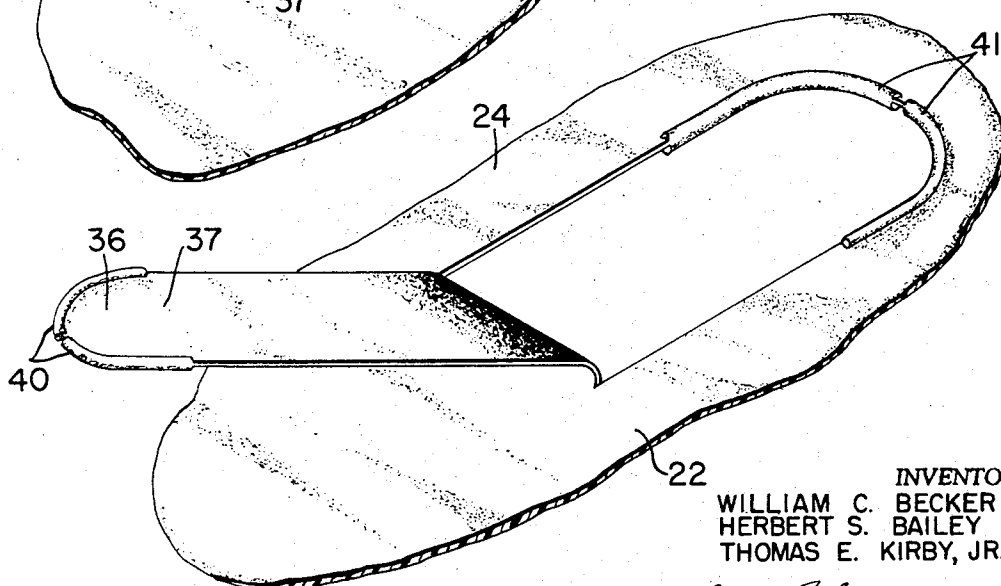


FIG-5



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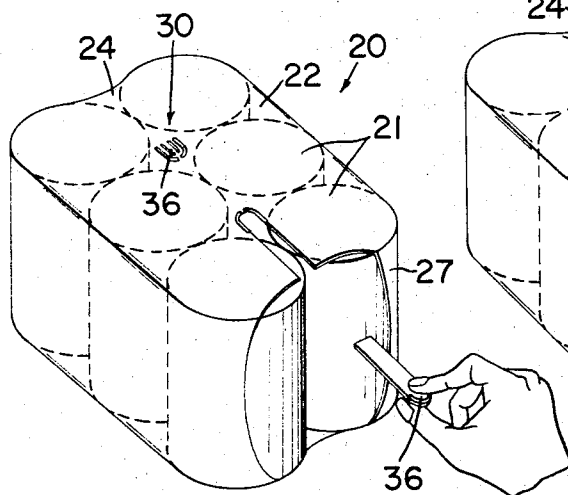
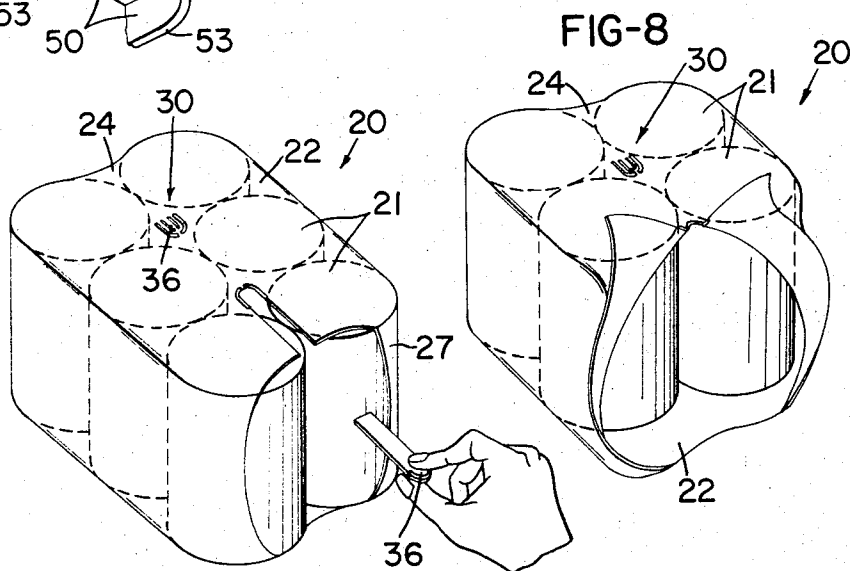
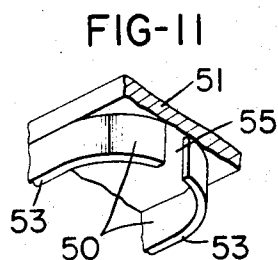
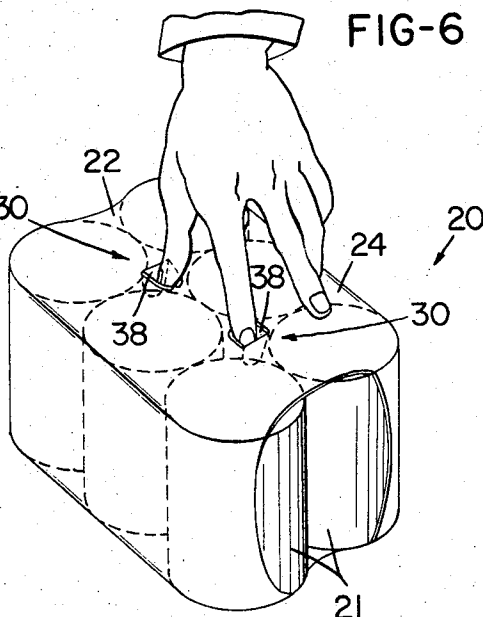
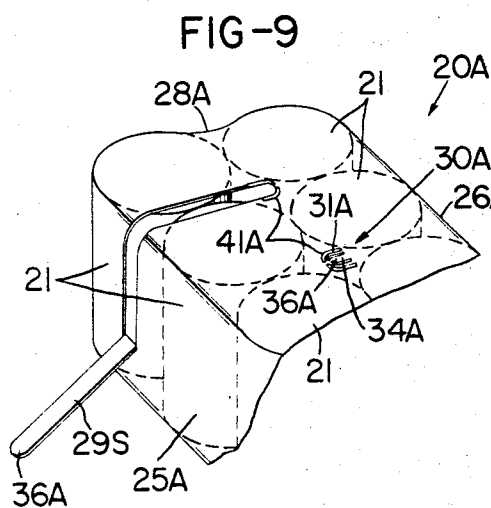
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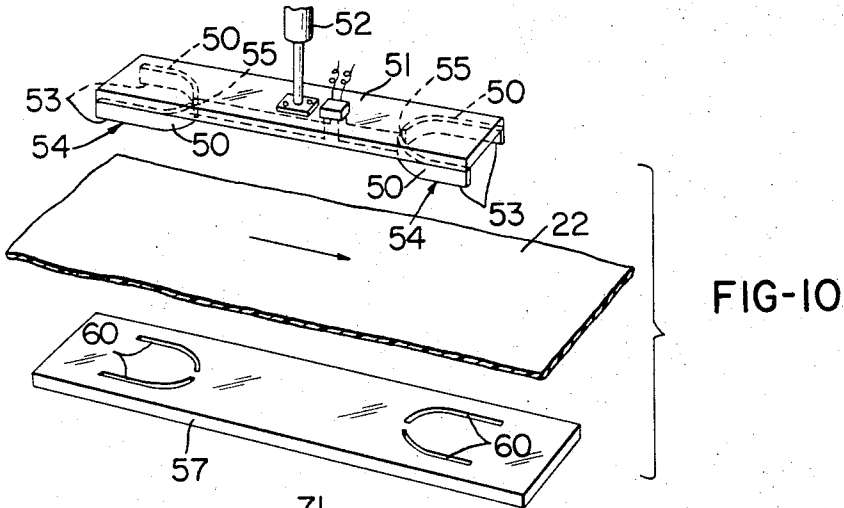


FIG-10

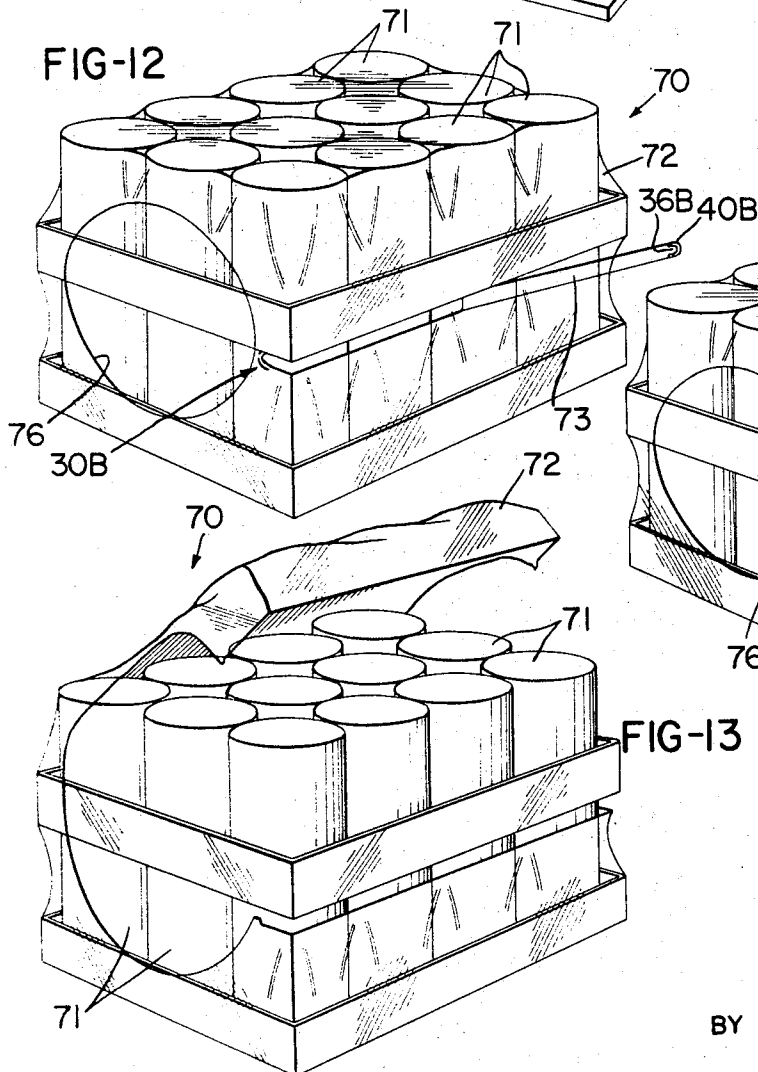


FIG-12

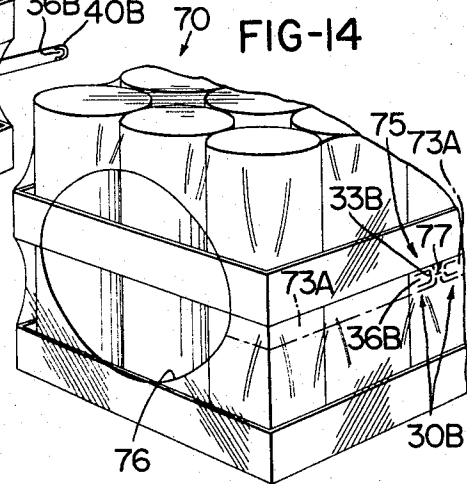


FIG-14

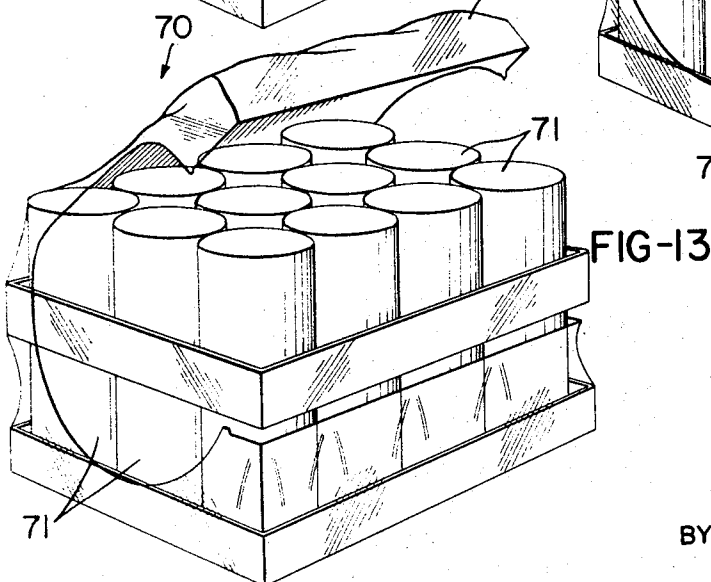


FIG-13

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3,403,779

OPENING DEVICE FOR PACKAGE MEANS

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14 Claims. (Cl. 206—65)

ABSTRACT OF THE DISCLOSURE

This disclosure relates to a dual-function device provided in an overwrapping material for overwrapping an associated package construction wherein such device is used to sever an elongated strip from such material to provide access to the package construction and such device also defines handle means for carrying such package construction.

This invention pertains to packages and more particularly to improved opening means provided in overwrapping wall means of package means and to an improved method of making such opening means.

Present packages utilizing overwrapping wall means have opening means therein which are comparatively difficult to open and expensive to produce. In addition, such present packages often employ separate handle means usually defined by a pair of openings in the overwrapping wall means thereof which enable foreign materials such as dust, dirt, and the like, to enter the package.

Accordingly, it is a feature of this invention to provide an improved opening device for easily opening overwrapping wall means of package means which is of simple and economical construction.

Another feature of this invention is to provide an opening device of the character mentioned which prevents foreign materials such as dirt, dust, and the like, from entering the interior of such package.

Another feature of this invention is to provide an improved package construction having overwrapping wall means in which an opening device is provided in such overwrapping wall means which serves the dual function of opening such wall means, as well as providing handle means for such package construction.

Another feature of this invention is to provide an improved package means in which such dual function opening device and handle means comprises integral grommet means therein enabling easier opening of such package means, as well as easy carrying thereof without tearing.

Another feature of this invention is to provide a sheet-like packaging material adapted to be used to overwrap package means and having such improved opening device provided therein as an integral part thereof.

Another feature of this invention is to provide such sheet-like packaging material made of thermoplastic material and having such dual function opening device provided therein in which such opening device has integral grommet means formed therein by localized controlled expansion of such thermoplastic material.

Another feature of this invention is to provide an opening device of the character mentioned in plastic packaging material such as polyvinylchloride, polyethylene, or the like, which can be easily heat shrunk in position around package means to define overwrapping wall means therefor.

Another feature of this invention is to provide such improved dual function opening and handle device in plastic overwrapping means for use on package means in which such device is constructed to assure foreign materials are generally prevented from entering the package means.

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Another feature of this invention is to provide an improved method of making an improved opening device of the character mentioned simply and inexpensively.

Another feature of this invention is to provide an improved method of making such an opening device in a plastic material adapted to be used to overwrap package means in which such opening device can be readily made either before or after overwrapping such package means.

Another feature of this invention is to provide an improved method of making an improved easy-open opening device for plastic overwrapping wall means of package means having integral grommet means provided in such opening means to enable easier opening thereof.

Another feature of this invention is to provide an improved method of making integral grommet means in such opening device provided in plastic overwrapping wall means by utilizing heated cutting means.

Another feature of this invention is to provide an improved method of making a dual function easy-open opening device and handle means in plastic overwrapping material utilizing heated cutting means to simultaneously define both such opening device and handle means.

Therefore, it is an object of this invention to provide an improved packaging material for overwrapping package means having an improved opening device provided therein and an improved method of making such improved opening device in such packaging material having one or more of the novel features of this invention as set forth above or hereinafter shown or described.

Another object of this invention is to provide an improved package construction utilizing such improved multifunction opening device in overwrapping wall means thereof.

Other objects, uses, and advantages of this invention are apparent from a reading of this description which proceeds with reference to the accompanying drawings forming a part thereof and wherein:

FIGURE 1 is a perspective view of package means shown as a package of six cans having plastic overwrapping outside wall means and having the improved dual function opening device and handle means of this invention provided as an integral part of such wall means and showing integral grommet means comprising such dual function device.

FIGURE 1A is a fragmentary plan view of a portion of the plastic top wall of the package of FIGURE 1 illustrating another embodiment of such integral dual function opening device and handle means with the integral grommet means eliminated.

FIGURE 1B is a plan view similar to FIGURE 1A illustrating a modification of the device of FIGURE 1A in which each dual function device is defined by a sharply severed continuous outline U-shaped cut.

FIGURE 2 is a sectional view on the line 2—2 of FIGURE 1 particularly illustrating integral grommet means provided in such plastic wall means.

FIGURE 3 is an enlarged fragmentary plan view showing generally U-shaped cut means provided in the top wall of the package means of FIGURE 1 defining opening flap means which is held in position coplanar with such top wall by integral strip means and showing the integral grommet means outlining such U-shaped cut means.

FIGURE 4 is a fragmentary perspective view illustrating such flap means folded upwardly about its base portion to enable easy grasping and pulling thereof and particularly illustrating such integral grommet means in perspective view.

FIGURE 5 is a fragmentary perspective view illustrating the manner of severing a portion of the plastic overwrapping material coextensive in width with the base

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portion of the flap means of FIGURE 4 upon pulling such flap means.

FIGURE 6 is a perspective view of the package of FIGURE 1 particularly illustrating that such package is easily hand carried by severing the integral strip means holding each flap means in position and inserting one's fingers through the openings thus provided to thereby define handle means.

FIGURE 7 is a perspective view of the package of FIGURE 1 particularly illustrating the manner of severing away one end portion of the plastic outside wall means by utilizing the opening device of this invention to thereby provide an access opening for easily removing the cans contained therein.

FIGURE 8 is a perspective view illustrating two of the cans removed from the access opening provided as shown in FIGURE 7.

FIGURE 9 is a fragmentary perspective view illustrating another package construction utilizing the dual function opening device and handle means of this invention to provide more efficient removal of overwrapping wall means provided thereon.

FIGURE 10 is an exploded perspective view with parts in section and parts broken away illustrating generally U-shaped heated knife edge means and cooperating back-up plate means for such knife means and also showing plastic overwrapping sheet means arranged therebetween prior to engagement by such knife edge means to thereby define the opening device of this invention illustrated in FIGURE 3.

FIGURE 11 is an enlarged fragmentary perspective view of the central portion of the U-shaped heated knife edge means.

FIGURE 12 is a perspective view illustrating another package incorporating the opening device of this invention in its outside overwrapping wall means solely because of the unique easy-open features of such device.

FIGURE 13 is a perspective view of the package of FIGURE 12 showing the upper portion of its overwrapping wall means severed free by the opening device of this invention and folded in a hinged manner over the top of the package to provide easy access to cans provided in such package.

FIGURE 14 is a fragmentary perspective view illustrating another arrangement of the opening device of this invention to open the package of FIGURE 12.

While the various features of this invention are hereinafter illustrated and described as being particularly adaptable for providing an improved packaging material adapted to be used to overwrap package means and having an improved integral opening device provided therein and a method of making such improved opening device in such packaging material, as well as illustrating such improved opening device in exemplary packages of overwrapped cans, it is to be understood that the various features of this invention can be utilized singly or in any combination thereof for use in package means of all types and for other uses as desired.

Therefore, this invention is not to be limited to only the embodiments illustrated in the drawings because the drawings are merely utilized to illustrate examples of the wide variety of uses of this invention.

In the exemplary embodiment of this invention illustrated in FIGURES 1-8 of the drawings, an improved package means shown as a package 20 containing a plurality of cans each designated by the numeral 21 is illustrated. Cans 21 in package 20 are overwrapped by a sheet-like packaging material preferably made of comparatively thin transparent plastic material designated by the numeral 22 and defining overwrapping wall means for package 20.

Plastic material 22 is preferably a thermoplastic material such as polyethylene, polyvinylchloride, or the like, which is overwrapped about cans 21 in any suitable manner and then preferably heat shrunk in position to

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hold such cans together as unitary package construction 20.

Package 20 in this exemplary embodiment of the invention is generally in the shape of a parallelepiped having a bottom wall 23, a top wall 24, a pair of oppositely arranged side walls 25 and 26 and a pair of oppositely arranged end walls 27 and 28 which comprise the overwrapping wall means.

A pair of dual function opening devices and handle means each designated by the numeral 30 is provided in top wall 24 of package 20, see FIGURE 1. The description will now proceed referring to only one device 30; however, it will be appreciated such description is applicable to both. Device 30 will be referred to in most instances hereinafter as an opening device notwithstanding its dual function in some applications. Opening device 30 is particularly illustrated in FIGURES 2-5 of the drawings and is defined by cut means shown as a plurality of two spaced apart cuts in top wall 24 each designated by the numeral 31. Cuts 31 are separated by integral strip means of the plastic material shown as an integral strip 33 arranged therebetween.

Cuts 31 have similar arcuate configurations and extend symmetrically in opposite directions from strip 33 to define a generally U-shaped cut indicated by the numeral 34. Strip 33 is provided between the pair of arcuate cuts 31 at the central base portion of U-shaped cut 34.

The width of strip 33, indicated at 35, is such that it can be easily severed by exerting a force thereagainst either inwardly toward the interior of package 20 or outwardly away from such interior to define integral flap means or a flap 36 having a terminal end portion which is generally semicircular in outline. Integral flap 36 has a base portion shown at 37 about which flap 36 is folded inwardly to define handle means for carrying of package 20 and outwardly for easy grasping and severing during use of opening device 30 to sever the overwrapping plastic material 22 both of which functions will be described in more detail subsequently.

Arcuate cuts 31 illustrated in FIGURES 2-5 are provided in top wall 24 using heated knife means thereby locally expanding the plastic material adjoining such knife means to thereby produce integral grommet means and such grommet means will be described in detail subsequently.

A pair of opening devices is illustrated in FIGURE 1A and as in the case of device 30 only one of the devices of FIGURE 1A will be described in detail. Each device of FIGURE 1A is an alternate form or embodiment which may be used in lieu of the device 30 to open top wall 24 of package 20 and is basically similar to device 30. Therefore, the device of FIGURE 1A will be designated by the same numeral 30 followed by the letter designation M and component parts of device 30M corresponding to device 30 will also be designated by the same numeral followed by the letter designation M.

Device 30M is defined by a pair of sharply severed arcuate cuts 31M extending symmetrically in opposite directions from an integral strip 33M left intact therebetween. Cuts 31M cooperate to form a substantially U-shaped cut designated generally by the numeral 34M and strip 33M is provided at the central base of cut 34M. Upon severing strip 33M a flap 36M is defined which is used to open top wall 24.

Cuts 31M are provided in any suitable manner as by a sharp knife edge severing sharply through the plastic material and do not cause local expansion adjoining the knife edge.

FIGURE 1B illustrates a pair of devices which may be provided in plastic top wall 24 of package 20 in lieu of devices 30 and 30M. As before only one of such devices will be described in detail and because of its basic similarity to devices 30 and 30M will be designated by the numeral 30N and similar corresponding parts will

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be designated by the same numeral as devices 30 and 30M and followed by the letter designation N.

Each device 30N is defined by a single substantially U-shaped cut 34N which outlines a flap 36N. Flap 36N is not held coplanar with top wall 24 in this embodiment of the invention and is used to sever away a portion of its associated top wall in the same manner as flaps 36 and 36M.

Substantially U-shaped cut 34N as shown in FIGURE 1B is formed by a knife means having a continuous U-shaped knife edge. Such knife edge may be of any suitable type to form a sharply severed cut similar to cuts 31M. However, it will be appreciated that cut 34N may be formed by heated knife edge means to form a pair of integral grommets extending in a continuous U-shaped outline on either side of the U-shaped opening severed by such heated knife means.

Devices 30M and 30N as seen in FIGURES 1A and 1B respectively have been introduced at this point in the disclosure of this invention to highlight possible modifications of device 30. However, for ease of presentation and to avoid repetition, the detailed description will now proceed referring again to device 30, its associated structure, and the manner of using each device 30. Such detailed description of device 30 is basically applicable to devices 30M and 30N; therefore, such latter devices will not be similarly described individually.

Grommet means is provided on flap 36 of device 30 and such grommet means comprises a grommet provided in two sections on either side of severed integral strip 33 and each designated by the numeral 40. Each grommet 40 forms the peripheral edge means or the peripheral edge of flap 36 as will be readily apparent from FIGURES 3-5 of the drawings. Grommet means is also provided in top wall 24 adjoining cuts 31 and such grommet means is provided in two sections each designated by the numeral 41.

As seen particularly in FIGURE 2 of the drawings, each grommet 40 and 41 is of substantially circular cross-sectional configuration in which the diameter of such cross-sectional configuration is substantially thicker than the thickness of the plastic sheet 22 defining the overwrapping for package 20. In this example of the invention grommets 40 and 41 are generally equal in diameter and approximately twice the thickness of the overwrapping plastic sheet 22. The unique and inexpensive manner of forming grommets 40 and 41 as an integral part of the overwrapping plastic material 22 will be described later.

The grommet means 40 enables easier grasping and pulling of flap 36 to provide an easy-open opening device. While the grommet means 41 provides a reinforcing multiple thickness bearing surface against which to bear carrying means, such as one's fingers, for easy carrying of package 20 without likelihood of tearing plastic overwrapping material 22.

Each strip 33 defines integral holding means for holding an insulated flap 36 coplanar with top wall 24. It will be readily apparent that by thus holding flap 36 in position there is little chance for foreign materials such as dirt, dust, and the like, to enter package 20. In this example such foreign materials would tend to accumulate on the top of each can 21.

Generally, package 20 will be transported, stored, and suitably displayed for retail sale with each flap 36 held in position by strip 33. Strip 33 is easily severed for carrying package 20 usually at the time of sale merely by pressing one's fingers thereagainst, for example.

Upon severing integral strip 33 a pair of openings each designated by the numeral 38 is provided in top wall 24 as seen in FIGURE 6 of the drawings.

Thus, it is a simple matter to insert carrying means such as one's fingers through openings 38 to provide handle means or an easy handle for carrying package 20.

If it is desired to open package 20 it is, of course, a simple matter to lift each flap 36 upwardly for easy

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grasping and then pulling as shown in FIGURE 7. The pulling of flap 36 severs a portion of the plastic material defining top wall 24 which is the same width as the base portion 37 of flap 36, see FIGURE 5, to define an access opening to the interior of package 20.

The severing or tearing action may be achieved by pulling each flap 36 simultaneously to provide access to both ends of package 20 or merely by pulling one of such flaps to enable removal of two cans, as seen in FIGURE 8, with the remaining four cans being held in their overwrapped positions.

Another exemplary embodiment of this invention is shown in FIGURE 9 of the drawings in which another package 20A is shown in fragmentary perspective view. Package 20A is practically identical to package 20 hence it has been designated by the same numeral followed by the letter designation A. The component parts of package 20A are also identical in general construction to corresponding ones of package 20 and such component parts have also been designated by the same numeral also followed by the letter designation A and not described again. Only a few of the pertinent components have been indicated in FIGURE 9 to explain the improved features of package 20A.

The opening means 30A provided in package 20A are arranged so that the generally U-shaped cuts 34A thereof defined by arcuate cuts 31A are arranged with the open end of each U-shaped cut opening toward an associated side wall 25A or 26A instead of an associated end wall 27 or 28 as in package 20. This arrangement of each opening device 20 enables complete severing of a strip 29S of plastic material which extends about the entire periphery of package 20A and thus enables the two end cans 21 adjoining strip 29S, for example, to be in effect severed away from the rest of package 20A.

Obviously the arrangement of each opening device 30A of FIGURE 9 enables even easier removal of cans 21 from package 20A. Also, the arrangement of each opening device provides adequate handle means upon folding each associated flap 36A inwardly and inserting one's fingers through the opening thus provided and into engagement with grommets 41A as will be explained later.

As shown particularly in FIGURE 10 of the drawings, the spaced apart pair of U-shaped cut means 34 is provided in top wall 24 of package 20 preferably utilizing knife means shown in this example as a pair of knives each designated by the numeral 50 and each mounted on a common movable support 51. Support 51 carrying knives 50 is moved into and out of engagement with a plastic material defining overwrapping wall means using suitable actuation means shown as an actuator 52.

The present description of each knife 50 and associated structure refers only to package 20. However, it will be appreciated that each knife could be easily arranged to provide the desired cuts as shown in package construction 20A of FIGURE 9 or the construction to be later described in connection with FIGURES 12-14.

Each knife 50 has a plurality of two spaced apart cutting edge means or heated cutting edges each designated by the numeral 53 and each corresponding in contour to an associated cut 31 to thereby define generally U-shaped cutting edge means designated by the numeral 54. The heated cutting edges 53 are held by support 51 so they are spaced apart at central base portion of the U-shaped cutting edge 54 defined by the individual edges 53 as indicated at 55 to define interruption means or an interruption in the heated cutting edge at that point.

The spacing at 55 corresponds to the width 35 of strip 33 to thus define the integral holding means or holding strip 33 for each flap 36.

A back-up plate 57 is also shown in FIGURE 10 for use in supporting plastic material once knives 50 are brought into cutting engagement thereagainst. Plate 57 has grooves 60 therein corresponding in outline to U-shaped edge 54. It will be understood, however, that a

back-up plate for the plastic material need not be provided and that the resulting cutting action without a back-up plate is entirely satisfactory.

Each U-shaped knife edge 54 of each knife 50 is preferably electrically heated to provide an accurately controlled temperature therefor. The electrical apparatus required for this purpose may be of any known suitable type.

While heated knife edge 54 preferably provides the desired degree of cutting action by engaging and cutting through the plastic wall means through the action of the heat provided, it will be appreciated that other varieties of heated knife edge means may be employed that do not require contact or where the cutting provided is due to the combined action of shearing plus heat.

Thus, it is seen that by bringing heated generally U-shaped knife edge 54 into heat cutting engagement with the plastic material defining top wall 24 of package 20, a cutting action is provided defining U-shaped cut 34. However, the interruption provided at 55 assures that integral strip 33 is formed in the central base portion of the U-shaped outline cut 34 to define holding means holding flap 36 coplanar with its associated wall.

The action of heated generally U-shaped edge 54 and the composition of the thermoplastic material 22 is such that as such heated knife edge 54 comes into contact with the plastic material there is a tendency for plastic material immediately adjoining such heated edge to form an integral bead-like means defining the grommet means or grommets 40 and 41 previously discussed. The bead-like configuration of each grommet 40 and 41 thus defined is of generally circular cross-sectional configuration and as seen particularly in FIGURE 2 and previously mentioned each grommet expands to a diameter about double the thickness of the plastic material employed in top wall 24. Of course, it will be appreciated that the overall thickness of each grommet is controlled not only by the characteristics of the thermoplastic material defining the overwrapping wall means but also by the thickness of such plastic material.

The integral grommets 40 and 41 formed by the expanded plastic material provide definite structural advantages heretofore unknown in an easy-open opening device as will be presently explained.

As each flap 36 is folded about its base portion 37 to enable insertion of one's finger through the openings thus provided, the expanded plastic grommet 41 provides a substantially larger surface area against which to bear. Such larger surface area is not only stronger and not susceptible to tearing but also assures one's fingers are not subjected to sharp uncomfortable edges upon lifting and carrying package 20.

Grommet 41 is also U-shaped and extends about the periphery of U-shaped cut 34 and in surrounding relation about flap 36. Upon grasping flap 36 and pulling to open package 20, grommet 41, in effect, confines the initial severing of plastic material to a strip coextensive in width with base portion 37.

In package 20, devices 30 are arranged in spaced apart relation and symmetrically about a common axis with their U-shaped cut means 34 opening in diametrically opposite directions. This is the optimum arrangement for carrying because upon inserting one's fingers in carrying position, force is exerted against the arcuate base portion of each U-shaped outline grommet 41 for optimum transfer of the weight of the package in a uniform manner to top wall 24 adjoining grommet 41.

In package 20A, the devices 30A are also arranged in spaced apart relation with the open ends of their U-shaped outline cuts 34A also opening in generally opposite directions; however, in package 20A each device 30A is arranged with its cut 34A symmetrically about a separate axis which is spaced apart and preferably parallel to the axis of the other cut 34A. Upon inserting one's fingers in carrying position in package 20A

force is exerted against a parallel side of each U-shaped grommet 41A and also provides an effective bearing surface for comfortably carrying package 20A.

Thus, it is seen that the arrangement of the handle means in packages 20 and 20A as defined by devices 30 and 30A respectively can vary between placement of their associated U-shaped cuts 34 and 34A so as to require exerting a force against cooperating parallel sides (as in package 20A) of the associated U-shaped grommet means to exerting a force against the base portion of the U-shaped grommet means (as in package 20). Of course the U-shaped cuts may extend at any intermediate position between the arrangement of packages 20 and 20A as long as one's fingers do not exert a clamping force toward the open end of each U-shaped cut 34 or 34A. Each U-shaped cut 34A in package 20A may also open toward the same side of such package; however, the arrangement illustrated is preferred.

As previously mentioned the raised bead-like configuration of each grommet 40 and 40A provides a ledge-like structure enabling easier grasping of the associated flap 36 or 36A. In addition, during the process of opening a package in the manner illustrated in FIGURE 7, each of such grommets assures that there is no tendency for such associated flap to slip from between one's fingers.

In the exemplary embodiment of this invention illustrated in FIGURES 12 and 13, the opening device of this invention is provided for opening overwrapping plastic wall means of a package 70 containing a plurality of cans 71. Package 70 is overwrapped by a thermoplastic material 72 similar to plastic material 22. The opening device provided in this latter embodiment is identical to opening devices 30 and 30A of the previous embodiments; therefore, in this latter embodiment all identical component parts of such device will be given the same numeral designation as before followed by the letter B and not described again.

Only one device 30B is used in package 70 and such device is utilized to sever away a strip 73 from vertical outside wall means comprising package 70. Strip 73 is shown practically torn away from package 70 in FIGURE 12 enabling the upper half of plastic overwrapping material for such package to be folded back as shown in FIGURE 13 for unobstructed access to cans 71.

The use of opening device 30B enables package 70 to be opened without requiring separate knife means, or the like, merely by grasping flap 36B with its protruding grommet 40B and pulling.

It may be desired to provide two opening devices 30B in each package 70 arranged in a vertical wall as shown at 75 in the modification of FIGURE 14. Such arrangement enables a more efficient severing of a pair of strips, each designated by the numeral 73A, from the center portion of package 70 to an opening 76 usually remaining in each end wall of the type of overwrapping illustrated, in which a tubular plastic sleeve having open ends has been shrunk in position around such package. The pair of opening devices 30B preferably have a slit 77 arranged therebetween, such that upon severing their associated holding strips 33B, flaps 36B are pulled to provide a cut from one end opening 76 to the opposite end opening 76 in a rapid manner.

Cans 21 contained within package 20 shown in FIGURE 1 are preferably assembled in any suitable manner preferably using automatic assembling equipment and plastic sheet 22 is provided in the form of a tubular sleeve-like overwrap which is heat shrunk in position thereabout in a known manner. Such tubular plastic overwrap usually leaves openings in the ends of package 20. If it is desired to provide a package construction which is completely sealed, the plastic material 22 may be suitably wrapped therearound and it will be seen that the opening device 30 with its flap 36 held in place by integral strip 33 assures the interior of package 20 is not

contaminated in an intolerable manner through opening device 30.

The use of a pair of opening devices 30A of this invention in the manner illustrated in FIGURE 9 enables the severing away of a portion of a plastic overwrapping material 22A using one of such pair of devices while allowing the remainder of the cans 21 to remain held in position. When it is desired to remove the rest of the cans from within package 20A it is a simple matter to continue the severing action using the other device 30A.

While in this disclosure of the invention packages have been illustrated containing 6 and 24 cans, it will be appreciated that the opening device of this invention could be utilized in a package construction having any number and shape of container means therein.

The device of this invention has been illustrated in use as a combination opening means and handle means as well as strictly as an opening means for a package construction having separate handle means. In both of these types of use each of the various embodiments of this invention utilizing flap holding means provides a minimum of exposure of the interior of its associated package to dirt, dust, and the like.

In the exemplary embodiment of this invention illustrated in FIGURE 1B wherein the continuous U-shaped cut 34N of device 30N is formed by heated knife means (as previously mentioned) it will be appreciated that the integral grommet means formed on either side of such continuous cut is of improved strength and enables carrying comparatively heavy overwrapped packages with less likelihood of tearing. Obviously, as previously indicated, device 30N may be substituted for device 30 of FIGURE 1, device 30A of FIGURE 9, and device 30B of FIGURES 12 and 14.

Terms such as "top," "bottom," "side wall," "end wall," and the like, have been used in this disclosure of the invention to describe various components as illustrated in the drawings. Such terms have been used simply for ease of description and are not to be considered as limiting the scope of this invention in any way.

Thus, it is seen that an improved package construction has been provided having improved combination opening means and handle means.

Further, this invention provides an improved thermoplastic overwrapping material having such improved opening means and handle means therein and an improved method of inexpensively and efficiently making such improved opening means in such overwrapping material.

While the form of the invention now preferred has been disclosed as required by statute, other forms may be used, all coming within the scope of the claimed subject matter which follows.

What is claimed is:

1. In a package means having overwrapping wall means made of a plastic material, an opening device for opening said wall means comprising substantially U-shaped cut means provided in said wall means defining integral foldable flap means having a base portion and adapted to be folded thereabout away from said wall means, and holding means for holding said flap means in position generally coplanar with said wall means to prevent foreign matter from entering said package means, said flap means being easily grasped upon disabling said holding means and said wall means being easily opened by pulling said flap means to sever a ribbonlike portion thereof coextensive in width with said base portion.

2. Package means as set forth in claim 1 in which, said substantially U-shaped cut means is defined by a cooperating pair of spaced apart cut means having an integral strip means of said plastic material therebetween, said holding means is defined by said integral strip means which is disabled by tearing thereof, and upon severing said strip means and folding said flap means about its associated base portion an opening is provided defining handle means for insertion of carrying means there-

through for carrying said package means, said device thus providing the dual-function of enabling opening of said wall means and serving as handle means.

3. Package means as set forth in claim 2 and further comprising a second cooperating pair of cut means in said wall means arranged adjacent said first pair of cut means and having a second integral strip means therebetween to define a second substantially U-shaped cut means and second flap means in said wall means, and upon severing each strip means and folding each associated flap means about its base portion a pair of openings is provided defining said handle means.

4. In a package means having overwrapping wall means a dual-function device in said wall means for carrying said package means and for opening said wall means comprising, a pair of substantially U-shaped cut means in said wall means, each U-shaped cut means defining an associated integral foldable flap means having a base portion and adapted to be folded thereabout away from said wall means, each U-shaped cut means being defined by a cooperating pair of spaced apart cut means having an associated single strip means of said overwrapping wall means therebetween and each of said strip means holding its associated flap means in position generally coplanar with said wall means to prevent foreign matter from entering said package means and upon severing thereof provides an associated opening defining handle means for insertion of carrying means therethrough to carry said package means, first grommet means comprising peripheral edge means of each of said flap means, and second grommet means in said wall means adjoining each of said U-shaped cut means, said wall means being easily opened by grasping and pulling one of said flap means to sever a ribbonlike portion thereof while utilizing the associated first grommet means to enable easier grasping of said one flap means and each of said grommet means provides a larger surface area for easier grasping by said carrying means and confines the initial severing of said wall means to a portion thereof coextensive with its base portion.

5. Package means as set forth in claim 4 in which said wall means is made of a plastic material.

6. Package means as set forth in claim 4 in which each of said grommet means is of substantially circular cross-sectional configuration.

7. Package means as set forth in claim 5 in which said plastic material has said grommet means integrally formed therein, each with a substantially circular cross-sectional configuration having a diameter appreciably greater than the thickness of said plastic material defining said wall means.

8. A sheet-like packaging material adapted to be used to overwrap a package means and having an opening device provided therein comprising substantially U-shaped cut means in said packaging material defining integral foldable flap means having a base portion and adapted to be folded thereabout away from adjacent portions of said material, said U-shaped cut means being defined by a cooperating pair of spaced apart cut means having single integral strip means of said material therebetween defining holding means for holding said flap means in position generally coplanar with the plane of adjacent portions of said packaging material to prevent foreign matter from entering said package means overwrapped thereby, and said packaging material being easily removed from said package means overwrapped thereby by tearing said strip means and grasping and pulling said flap means to sever a ribbonlike portion thereof coextensive in width with said base portion.

9. A packaging material as set forth in claim 8 made of a plastic material.

10. A packaging material as set forth in claim 8 and further comprising a second cooperating pair of cut means in said material arranged adjacent said first pair of cut means with a second integral strip means of said

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material therebetween to define a second substantially U-shaped cut means and second flap means in said material, and upon severing each strip means and folding each associated flap means about its base portion a pair of openings is provided defining said handle means for insertion of carrying means therethrough for carrying said package means overwrapped by said material, said material thus having an integral opening device also serving as handle means.

11. A packaging material as set forth in claim 8 and further comprising first integral grommet means in said material comprising peripheral edge means of said flap means, and second integral grommet means in said material adjoining said cut means, said first grommet means enabling easier grasping of said flap means to sever said ribbonlike portion and said second grommet means provides a larger surface area for easier grasping by an associated carrying means and confines the initial severing of said material to a portion thereof coextensive with said base portion.

12. A packaging material as set forth in claim 11 made of a plastic material and in which said grommet means is integrally formed in said material each with a substantially circular cross-sectional configuration having a diameter appreciably greater than the thickness of said plastic material.

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13. A packaging material as set forth in claim 10 and further comprising first integral grommet means in said material comprising peripheral edge means of each of said flap means and second integral grommet means in said material adjoining each of said U-shaped cut means, each of said first grommet means enabling easier grasping of an associated flap means and each of said second grommet means providing a larger area for easier grasping by an associated carrying means and confining the initial severing of said material to a portion thereof coextensive with said base portion.

14. A packaging material as set forth in claim 13 made of a thermoplastic material.

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