EASY-OPEN MOISTURE RESISTANT PACKAGES

Inventors: Rachel P. Conrad, Gilbertsville, PA (US); Josephine A. Forman, Pennsburg, PA (US)

Correspondence Address:
SEALSTRIP CORPORATION
200 N. WASHINGTON STREET
BOYERTOWN, PA 19512 (US)

Related U.S. Application Data
Continuation-in-part of application No. 10/911,591, filed on Aug. 5, 2004, now abandoned.

Publication Classification
Int. Cl.
B65D 65/26 (2006.01)
U.S. Cl. 229/87.05

ABSTRACT
Novel package wrappers made of humidity resistant plastic, utilizing a tear tape disposed proximate to, but spaced inward from, one edge of the package, extending substantially linearly continuously about three adjacent sides. The tear tape in one form of the invention is a separate tape adhered to the package wrapper, and in another form of the invention is integral with and formed from the package wrapper itself. The package is completely sealed but does not require the use of any tool to open it. After the tear tape has been removed, fingers or a thumb may be inserted beneath the revealed torn edge of the wrapper and the wrapper torn downward through slits in the then exposed portions of the ends of the package wrapper which had been previously overlaid by the tear tape ends, such slits being concealingly disposed and sealed beneath the overlying ends of the intact wrapper before removal of the tear tape. By locating the tear tape fairly closely to one edge of the package and providing the underlying tear down slits in the package wrapper ends, the intact upper corners of the opened package are able to slide smoothly over and down around the corners of the contained product without exerting any substantial pressure thereon, so that no corner curling force is exerted on the sheets sufficient to cause corner distortion. The wrapper is quickly and easily removable from the contents, so that the dry undisrupted paper may be quickly loaded into a copy machine.
EASY-OPEN MOISTURE RESISTANT PACKAGES


[0002] This invention relates to packages, and more particularly to quickly openable moisture resistant packaging for products adversely affected by humidity, as for example, packages of copy paper used in photocopy machines. The invention is also useful for other products having similar humidity resistance packaging requirements.

BACKGROUND OF THE INVENTION

[0003] Conventionally, in the past, photocopy paper has been packaged in adhesively sealed paper wrappers. Such wrappers are not humidity proof, and during shipping and storage, over time, some moisture penetrates the wrapper and the sheets of paper within. Such moisture causes clumping of the adjacent sheets of paper so that they do not slide easily over one another when the package has been opened. With the advent of ubiquitous high volume photocopyers, which feed paper at high speed, two problems arose in connection with the supply paper.

[0004] The first problem was that the humidity, which causes variable adherence of adjacent sheets of the supply paper to one another, causes erratic simultaneous feeding of multiple sheets of paper, resulting in numerous paper jams. The occurrences of such jams require shutting down the copier, clearing the jams, and restarting the machine. Apart from the waste of paper due to wrinkling, which renders the paper non-feederable, the production time lost is sufficiently high to be unacceptably costly. Accordingly, a demand has arisen for packages of substantially humidity free supply paper. The solution to this first problem was to package the stacked copy paper in sealed humidity resistant plastic wrapping instead of in paper wrapping. Unfortunately, while this solved the first problem, it created a second problem.

[0005] The second problem is that, while the formerly used paper wrapping was easily torn open and quickly removed so that little time was lost in reloading the copier with a new paper supply, the new plastic wrappers cannot be easily and speedily removed because the wrappers do not tear easily, cleanly, or in a directionally controllable way. They have to be cut with a knife, razor cutter, or other sharp implement. This is time consuming and can nick the paper edges, again giving rise to misfeeds and jams in the copier. If care is not taken when removing the wrapper to insure that the corners of the paper stack are clear of the wrapper, and excessive pulling force is used, the corners of the paper stack can be bent, again resulting in subsequent misfeeds and paper jams. These factors have combined to uneconomically substantially extend the time needed to open a plastic wrapped package of paper and load it into the copier. The novel wrappers according to the invention economically solve all of these problems.

SUMMARY OF THE INVENTION

[0006] The novel package wrappers according to the invention are made of humidity resistant plastic. The package is completely sealed but does not require the use of any tool to open it. One embodiment utilizes a strip of teartape disposed proximate to, but spaced inward from, one edge of the package, and which, in a generally rectangular package, extends substantially linearly continuously about three adjacent sides. Other package configurations will determine other teartape dispositions. A second embodiment does not utilize a separate physical teartape, but forms a teartape from a portion of the package wrapper material itself. Which form of package wrapper is used will normally be determined by cost and transparency considerations. In the embodiment utilizing a physically separate teartape the package wrapper material could be a single layer or multiple layer bi-axially oriented polypropylene film between 1.75 and 3.25 mils thick, typically 2 mils thick, with a heat seal coating such as ethyl vinyl acetate. This material is crystal clear and is typically used where maximum transparency is desired, as for example to disclose graphics on the packaged item. The teartape could be of 1.5 to 4 mils thick polypropylene or polyester between 4 mm and 20 mm in width, coated with an ultraviolet resistant pressure sensitive acrylic adhesive.

[0007] In the embodiment not including a separate additional piece of teartape material, the package wrapper material could be a composite of a bi-axially oriented polypropylene film laminated to a mono-oriented polypropylene film, in which in package formation the mono-oriented film is the inner layer disposed next to the packaged item. The mono-oriented film is quite strong and the integrally formed teartape will tear along the direction of the film orientation and through the bi-axially oriented outer film layer. As an alternative to the mono-oriented polypropylene film there could be used a mono-oriented polyethylene film. The composite packaging wrapper film could typically be about 3 mils thick with the mono-oriented film being 30% to 70% of the thickness and with the bi-axially oriented film comprising the remainder.

[0008] After the teartape, of whatever form, has been removed, fingers or a thumb may be inserted beneath the revealed torn edge of the wrapper and the wrapper then torn downward through tear-down slits in the then exposed portions of the ends of the package wrapper which had been previously overlaid by the teartape ends, such slits being concealingly disposed and sealed beneath the overlying ends of the intact wrapper before removal of the teartape. When the composite wrapper material is used, the tear-down slits lengths are aligned with the orientation of the mono-oriented laminate.

[0009] By locating the teartape fairly closely to one edge of the package and providing the underlying tear-down slits in the package wrapper ends, the intact upper corners of the opened package are able to slide smoothly over and down around the corners of the contained product without exerting any substantial pressure thereon. Accordingly, in the typical case of a ream of copy paper there is no corner curling force exerted on the sheets sufficient to cause corner distortion. The package is quickly openable and the wrapper quickly and easily removable from the contents, so that the dry undistorted paper may be quickly loaded into the copier.

[0010] It is a primary object of the invention to provide a novel, quickly openable and removable, humidity resistant package wrapping.

[0011] It is another object of the invention to provide a novel, quickly openable and removable, humidity resistant package wrapping as aforesaid which utilizes a novel
tear tape structure in conjunction with aligned slits in the wrapper to provide an easily and cleanly openable and removable package wrapper.

[0012] It is still another object of the invention to provide a novel, quickly openable and removable, humidity resistant package wrapping as aforesaid which utilizes a novel tear tape structure in conjunction with aligned slits in the wrapper to provide an easily and cleanly openable and removable package wrapper, the tear tape in one form being a separate piece of material adhered to the package wrapper, and in another form being a tear tape integral with and formed from a portion of the package wrapper material itself.

[0013] It is a further object of the invention to provide a novel package wrapping as aforesaid that may be removed without causing distortion of the corners of the contents during package opening.

[0014] It is a still further object of the invention to provide novel methods of making novel wrapped packages according to the invention as aforesaid.

[0015] It is yet another object of the invention to provide novel apparatus for making novel wrapped packages according to the invention as aforesaid.

[0016] The foregoing and other objects of the invention will appear more fully hereinafter as disclosed by the following description and accompanying drawings, wherein:

DESCRIPTION OF THE DRAWINGS

[0017] FIG. 1 illustrates a typical sealed plastic package of copy paper according to the prior art;

[0018] FIG. 2 is an isometric diagrammatic view from below of apparatus for making a novel package according to the invention, showing the application of a discrete tear tape to the packaging film, and the film slitting devices;

[0019] FIG. 3 is a diagrammatic side elevational view of the apparatus seen in FIG. 2;

[0020] FIG. 3A is an enlarged elevational end view of the packaging film slitting devices as would be seen when viewed along lines 3A-3A on FIG. 3;

[0021] FIG. 4 is a plan view as would be seen when looking downward on a formed package wrapper positioned above a paper stack and about to enter the packaging machine;

[0022] FIG. 5 is an isometric view from above of a packaged paper ream made according to the invention, with several breakaways and a phantom circle to disclose details of the construction;

[0023] FIG. 5A is an enlarged detail of one end of the tear tape as seen from the phantom circle designated 5A on FIG. 5;

[0024] FIG. 5B is a fragmentary end detail of the package of FIG. 5 with the upper end flap turned up to disclose underlying details;

[0025] FIG. 6 is a fragmentary end detail of the package of FIG. 5 with the end of the tear tape lifted as in starting to open the package;

[0026] FIG. 7 is a fragmentary end detail of the package of FIG. 5 with the end of the tear tape lifted further than in FIG. 6 and disclosing the wrapper slits revealed by lifting the tear tape;

[0027] FIGS. 7A and 7B are enlarged details of the end of the package as seen from the phantom circles 7A/7B on FIG. 7 showing two forms of film slitting;

[0028] FIG. 8 is a fragmentary end detail of the package of FIG. 5 at the opposite end of the package from the views of FIGS. 6 and 7, showing the tear tape almost completely removed from the package;

[0029] FIG. 9 is an isometric view from above similar to FIG. 5 of a packaged paper ream made according to the invention, with the tear tape completely removed and with fingers inserted to tear the package side away;

[0030] FIG. 9A is an enlarged detail of the end of the package as seen from the phantom circle 9A on FIG. 9 showing the end of the package wrapper being torn down through one of the wrapper slits;

[0031] FIG. 10 is an isometric view showing completion of the wrapper side tear down shown being started in FIG. 9;

[0032] FIG. 11 is an enlarged cross section through the package according to the invention as would be seen when viewed along lines 11-11 on FIG. 5;

[0033] FIG. 12 is an enlarged fragmentary cross section through the package according to the invention as would be seen when viewed along lines 12-12 on FIG. 5;

[0034] FIG. 13 is an enlarged fragmentary cross section through the package according to the invention as would be seen when viewed along lines 13-13 on FIG. 5;

[0035] FIG. 14 is an enlarged fragmentary cross section through the package according to the invention as would be seen when viewed along lines 14-14 on FIG. 7; and

[0036] FIG. 15 is an enlarged fragmentary cross section through the package according to the invention as would be seen when viewed along lines 15-15 on FIG. 7;

[0037] In the several figures, like elements are denoted by like reference characters.

DETAILED DESCRIPTION

[0038] Considering first the Prior Art showing of FIG. 1, there is seen a package 16 of copy paper having an enclosing wrapper of plastic film with a longitudinally extending seam sealed by a band of adhesive or heat sealing 17, and having opposite ends with down turned end flaps 18A, upturned end flaps 18B, and in-turned end flaps 18C and 18D, similarly sealed all together as at 19. The completely sealed package provides a humidity resistant wrapping, effectively keeping the enclosed contents dry and properly usable when loaded into a copy machine. The film wrapper is typically made of polypropylene, which is tough and does not tear easily or in a directionally predictable manner. Because of these characteristics, it is difficult and time consuming to open the package, and often results in paper that has been so dealt with by nicking and bending that paper jams result when it is installed in a copier. While it may not offhand seem to be of any particular note, in fact it has become such a produc-
tion economic issue to copy businesses that a demand has arisen for a quickly and easily openable humidity resistant package.

[0039] Turning now to FIGS 2 through 4 which show the apparatus and method for making one embodiment of a novel package according to the invention which incorporates a teartape separate from the wrapper material, there is seen in FIGS 2 and 3 a supply roll of plastic wrapping film 20 from which the film feeds around rollers 21 and 22 toward the packaging machine 23, which latter may typically be a Model 37-HS made by Pemco Inc., and functioning in its normal package wrapping mode. Teartape 24 feeds from a supply roll 25 and between the film 20, which has turned under roller 22, and a heated pinch roller 26 which adheres the teartape 24 to the face of the packaging film 20 that will be the inside of the finished package 27 seen in FIG. 3 emerging from the packaging machine 23. As previously noted, the packaging film 20 may be made of 2 mils thick bi-axially oriented polypropylene coated with a heat fusible plastic such as ethyl vinyl acetate, and the teartape 24 may be 1.5 to 4 mils thick and 4 mm to 20 mm wide, typically about 6 mm wide, coated with an ultraviolet resistant pressure sensitive acrylic adhesive.

[0040] The film 20 with attached tape 24 passes through a timed film slitting device having upper and lower parts, 28A and 28B respectively, movable toward and away from one another as shown by the arrows 29-29 on FIG. 3. As most clearly seen on FIG. 3A, the film slitting device upper part 28A carries two sets of slitting or piercing blades, the teartape tabs forming slitting blades 30 and the wrapper tear-down slits slitting blades 31. When the timed slitting device is actuated, the upper and lower parts 28A and 28B come together and slit the film 20 as seen in FIG. 3A. As most clearly in FIG. 4, the blades 30 producing the slits 32 disposed on opposite sides of the teartape 24 just outward of the teartape locating tabs 33 printed on the wrapper, and the blades 31 producing the wrapper tear-down slits 34.

[0041] After being slit, the film 20 continues to move toward the packaging machine 23, as shown by the arrows 35 on FIG. 3. Prior to reaching the packaging machine 23, the film 20 passes through a film cutter 36 having an upper part 36A carrying a blade 37 and a lower anvil part 36B which, when moved downward another one as shown by arrows 38 on FIG. 2, sever the film 20 centrally transversely through the tabs 33 and slits 32 and 34, into lengths 42 proper for the package to be wrapped, as best seen in FIG. 4.

[0042] When, instead of the just described bi-axially oriented wrapper film, the composite laminate packaging wrapper formed of mono-oriented and bi-axially oriented film is to be utilized to form a package wrapper, the teartape 24 and its supply roll 25, as seen in FIGS 2 through 4 are dispensed with, and the packaging film 20 coming off of the roll is oriented so that the mono-oriented face of the composite film faces downward to engage the ream of copy paper 39, as best seen in FIG. 3. In this embodiment of the invention the package wrapper is also as shown in FIG. 4, except that the teartape 24 is absent. In this form of the invention the finger liftable locating tabs 33 are the actual ends of the teartape, which because of the mono-orientation of the inner layer of the film, can be grasped and pulled to tear along a substantially linear path closely approximating the tear path of the teartape 24.

[0043] While the packaging film being processed as aforesaid, the ream of copy paper 39 is transported to the packaging machine 23 by the moving belt 40 and elevator 41 where it is properly registered with and enters the packager 23 with the prepared package wrapper sheet 42, exiting the packager 23 as the finished package 27 and being conveyed away on moving belt 43.

[0044] Turning now to FIGS. 5, 5B, and the details of FIGS. 5A and 11 to 13, there is seen the configuration and details of the finished package 27 having a wrapper 20 enclosing a ream of copy paper 39 with an integral teartape 24, the package having opposite ends including upturned end flaps 44, downward turned end flaps 45, and in-turned flaps 46 and 47 disposed beneath the end flaps 44 and 45. The end flaps 44, 45, 46, and 47 are sealed together, as is the overlapped longitudinal seam 48 seen on the package end in FIG. 5 but best seen in FIGS. 11 and 5B. The partly unfolded showing of the package end in FIG. 5B discloses the overlying relationship of the teartape to the wrapper tear-down slits 34, and that in the sealed package these wrapper tear-down slits 34 are not overlaid or laid by the in-turned end flap 47, so that the wrapper tear-down takes place through only a single layer of the wrapper film. FIG. 5A shows the lift tab 33 printed on the wrapper film 20 with the slits 32 disposed immediately to each side of the tab, whereby the tab may be lifted so easily that it may be grasped, with or without a separate physical teartape adhered thereto. The tab width should be about ¼" for reliably revealing the underlying slits 34, but preferably should be about ½" for ease of grasping by the fingers.

[0045] The opening of the package 27 is shown in the rest of the drawings, but refer first to FIGS. 6, 7, 7A/7B, 8, 14 and 15, FIGS. 6, 7 and the enlarged details of FIGS. 7A and 14 show the beginning stages of the package opening process in which the tab 33 and teartape end are grasped and lifted out and up from the down turned end flap 45, separation from the wrapper 42 being effected initially by means of the slits 32 in the flap 45 and thereafter by means of the teartape. This reveals the wrapper tear-down slits 34 that underlie the teartape. The detail of FIG. 7B shows an alternative form 49 of tear-down slits having their lower portions angled towards the package corner for more certain tearing direction. This has not been found to be necessary with the usual packaging films, but may be desirable with other films used in different applications. FIG. 8 shows the teartape having torn through one end and the top of the package 27, and about to be completely removed from the remaining end of the package. It is observed that the still affixed end of the teartape with its tab 33 is identical to the end from which the tear was started, so that it is clear that the package may be opened starting at either end.

[0046] Turning now finally to FIGS. 9, 9A and 10, the final opening of the package is started, the teartape having been completely removed to open the top and both ends of the package. As shown in FIG. 9, the fingers, or a thumb, are inserted under the package torn edge 50, and an outward pull is exerted which causes the partially detached side portion of the package 27 to be moved outward as a unit because the end portions of the side portion, consisting of parts of the package end flaps 44, 45 and 47, are heat sealed and locked together. As a consequence, tearing force is exerted on the wrapper tear-down slits 34, causing tearing down of the wrapper through at least one slit at each end, resulting in the
completely open package condition shown in FIG. 10. The paper pack contents 39 of the package 27 are now easily removed from the wrapper.

[0047] As previously described, when the composite wrapper material having mono-oriented and bi-axially oriented layers is utilized without a separate physical tear tape 24, the lift tabs 33 function as the ends of a tear tape integral with and formed from the wrapper material itself. In operation the two forms of the invention function in the same way and produce the same result.

[0048] Having now described our invention in connection with particularly illustrated embodiments thereof, it will be understood that modifications and variations thereof may now occur from time to time to those normally skilled in the art without departing from the essential scope or spirit of the invention, and accordingly it is intended to claim the invention both broadly and specifically as indicated in the appended claims.

What is claimed is:

1. A package wrapper, comprising in combination,
   a) a substantially rectangular flexible sheet of humidity resistant package wrapper material having a first pair of parallel sides and a second pair of parallel sides,
   b) at least one pair of spaced apart slits through said wrapper material extending for a short distance inward from one of said second pair of parallel sides of said wrapper material and spaced away from both of said first pair of parallel sides,
   c) at least one slit through said wrapper material extending for a short distance inward from the same one of said second pair of parallel sides of said wrapper material as the aforesaid pair of slits, said at least one slit being spaced away from and between said pair of slits and one of said first pair of parallel sides.

2. A package wrapper as set forth in claim 1 wherein the slits of said at least one pair of slits are substantially parallel to one another.

3. A package wrapper as set forth in claim 1 wherein said at least one slit through said wrapper material comprises a plurality of substantially parallel slits.

4. A package wrapper as set forth in claim 1 wherein said at least one slit through said wrapper material comprises a plurality of substantially parallel slits substantially parallel to said at least one pair of slits.

5. A package wrapper as set forth in claim 1 wherein said at least one slit through said wrapper material comprises a plurality of substantially parallel slits each of which is formed with two connected segments disposed at an obtuse angle to one another.

6. A package wrapper as set forth in claim 1 wherein said at least one slit is spaced away from said pair of slits a distance such that in a package wrapped in said package wrapper said at least one slit is overlaid by and disposed immediately beneath the wrapper material lying between said at least one pair of slits.

7. A package wrapper as set forth in claim 1 further including a visible indicia on said wrapper extending between said at least one pair of slits to provide a visual locator for the end of a lift tab defined by said at least one pair of slits.

8. A package wrapper as set forth in claim 1 further including a second pair of slits through said wrapper material extending for a short distance inward from the other of said second pair of parallel sides of said wrapper material and disposed in substantial alignment with said at least one pair of slits.

9. A package wrapper as set forth in claim 1 further including a second at least one slit through said wrapper material extending for a short distance inward from the other of said second pair of parallel sides of said wrapper material and positioned in substantial alignment with said at least one slit.

10. A package wrapper as set forth in claim 1 further including,
   a) a second pair of spaced apart slits through said wrapper material extending for a short distance inward from the other of said second pair of parallel sides of said wrapper material and disposed in substantial alignment with said at least one pair of slits, and
   b) a second at least one slit through said wrapper material extending for a short distance inward from the other of said second pair of parallel sides of said wrapper material and positioned in substantial alignment with said at least one slit.

11. A package wrapper as set forth in claim 1 further including a tear tape adhered to said wrapper material, said tear tape having side edges and first and second opposite ends and being affixed to said wrapper material substantially parallel to and displaced from said first pair of parallel sides of said sheet of wrapper material, and extending substantially entirely between said second pair of parallel sides, the sides of one of said first and second opposite ends of said tear tape being disposed between said at least one pair of spaced apart slits,

12. A package wrapper as set forth in claim 1 wherein said package wrapper material is made of bi-axially oriented polypropylene coated with a heat seal coating of ethyl vinyl acetate.

13. A package wrapper as set forth in claim 1 wherein said package wrapper material is a composite film made of one layer of bi-axially oriented polypropylene laminated to a layer of mono-oriented polypropylene.

14. A package wrapper as set forth in claim 10 further including a first visible indicia on said wrapper extending between said at least one pair of slits and a second visible indicia on said wrapper extending between said second pair of slits.

15. A package wrapper as set forth in claim 10 wherein said at least one slit and said second at least one slit are spaced away from said pair of slits and said second pair of slits a distance such that in a package wrapped in said package wrapper said at least one slit and said second at least one slit are respectively overlaid by and disposed immediately beneath the package wrapper material between said pair of spaced apart slits and said second pair of spaced apart slits.

16. A package wrapper as set forth in claim 11 wherein said tear tape is between 4 mm and 20 mm in width, is between 1.5 mils and 4 mils thick, and is made of one of polyester or polypropylene coated with an ultraviolet resistant pressure sensitive acrylic adhesive, and wherein said
package wrapper material is made of bi-axially oriented polypropylene coated with a heat seal coating of ethyl vinyl acetate.

17. A package wrapper as set forth in claim 11 wherein said at least one slit is spaced away from said teartape a distance such that in a package wrapped in said package wrapper said at least one slit is overlaid by and disposed immediately beneath one end of said teartape.

18. A package wrapper as set forth in claim 11 further including a first visible indicia on said wrapper extending between said at least one pair of slits and a second visible indicia on said wrapper extending between said second pair of slits, said first and second visible indicia respectively overlying different ends of said teartape to provide a visual locator for each of said teartape ends.

19. In a substantially rectangular parallelepiped package consisting of a flexible package wrapper made of humidity resistant material with a product enclosed therein, said package having top and bottom faces, a pair of opposite side faces, a pair of opposite ends, a package seal extending the length of one of said top and bottom package faces and into both ends, and said ends each having,

(1) a pair of in-turned end flaps turned inward toward one another from said opposite side faces,

(2) an upturned end flap partially overlying and sealed to both of said in-turned end flaps, and

(3) a down-turned end flap partially overlying and sealed to both of said in-turned end flaps and to said upturned end flap,

the combination comprising,

a) at least one pair of spaced apart slits through said package wrapper extending for a short distance upward from the bottom edge of one of said down-turned end flaps to form a first graspable tab, and

b) at least one slit through said package wrapper material extending for a short distance downward from the upper edge of the said upturned end flap which is disposed as aforesaid in underlying relationship to said one of said down-turned end flaps, said at least one slit underlying said first graspable tab.

20. In a substantially rectangular parallelepiped package as set forth in claim 19 further including a visible indicia on said first graspable tab to provide a visual locator for said tab.

21. In a substantially rectangular parallelepiped package as set forth in claim 19 wherein said at least one slit through said package wrapper material comprises a plurality of substantially parallel closely spaced slits.

22. In a substantially rectangular parallelepiped package as set forth in claim 19 further including a second pair of slits extending for a short distance upward from the bottom edge of the other of said down-turned end flaps to form a second graspable tab.

23. In a substantially rectangular parallelepiped package as set forth in claim 19 further including,

a) a second pair of slits extending for a short distance upward from the bottom edge of the other of said down-turned end flaps to form a second graspable tab,

b) a second at least one slit through said package wrapper material extending for a short distance downward from the upper edge of the said upturned end flap which is disposed in underlying relationship to the other one of said down-turned end flaps, said second at least one slit underlying said second graspable tab.

24. In a substantially rectangular parallelepiped package as set forth in claim 19, the combination further including a teartape having length, side edges and first and second opposite ends, said teartape being extended and adhered to the inside of said wrapper and being affixed to the latter substantially parallel to and displaced from said package side faces and extending continuously the length of one of said package top and bottom faces and to the bottom edges of both of said package ends down-turned end flaps, said one end of said teartape underlying and being adhered to said first graspable tab,

25. In a substantially rectangular parallelepiped package as set forth in claim 22 the combination further including a teartape having length, side edges and first and second opposite ends, said teartape being extended and adhered to the inside of said wrapper and being affixed to the latter substantially parallel to and displaced from said package side faces and extending continuously the length of one of said package top and bottom faces and to the bottom edges of both of said package ends down-turned end flaps, said first and second opposite ends of said teartape underlying and being respectively adhered to said first and second graspable tabs,

26. In a substantially rectangular parallelepiped package as set forth in claim 23 further including visible indicia on said first and second graspable tabs to provide visual locators for both of said graspable tabs.

27. In a substantially rectangular parallelepiped package as set forth in claim 23 wherein said at least one slit and said second at least one slit each comprise a plurality of substantially parallel slits each of which is formed with two connected segments disposed at an obtuse angle to one another.

28. In a substantially rectangular parallelepiped package as set forth in claim 23 wherein said at least one slit and said second at least one slit through said package wrapper material comprise a plurality of substantially parallel closely spaced slits.

29. Apparatus for making a package wrapper in the form of a substantially rectangular flexible sheet of package wrapper material having slits for selectively directionally tearing the package wrapper when the package is to be opened, comprising,

a) web feeding means for continuously feeding a web of constant width packaging wrapper material from a supply roll,

b) first slitting means for slitting the wrapper material at predetermined intervals along the length of the wrapper material with a pair of spaced apart first slits of fixed predetermined length, the slits lengths being oriented parallel to the running length of the web,

c) second slitting means for slitting the wrapper material at locations on said wrapper material displaced laterally widthwise away from said first slits with at least one second slit of fixed predetermined length, said locations being at predetermined intervals along the length of the wrapper material, and

d) web cutting means for transversely cutting said web of packaging material at desired fixed interval lengths.
30. Apparatus for making a package wrapper as set forth in claim 29 wherein said web cutting means cuts said web transversely through both of said first slits and said at least one second slit at substantially the mid-points of the lengths of all of said slits.

31. Apparatus for making a package wrapper as set forth in claim 29 wherein said first slits made by said first slitting means are disposed substantially finger-width apart.

32. Apparatus for making a package wrapper as set forth in claim 29 wherein said first slits made by said first slitting means are substantially parallel to said at least one second slit.

33. Apparatus for making a package wrapper as set forth in claim 29 wherein said at least one second slit is a plurality of closely spaced parallel slits.

34. Apparatus for making a package wrapper as set forth in claim 29 wherein said first slitting means comprises a pair of parallel spaced apart slitting blades, and wherein said second slitting means comprises at least one slitting blade parallel to said first slitting means slitting blades, and further including actuating mounting means carrying both of said first and second slitting means slitting blades, and means for actuating said mounting means to slit said web of package wrapper material and simultaneously form said first and at least one second slits.

35. Apparatus for making a package wrapper as set forth in claim 29 further including:

a) tape feeding means for continuously feeding teartape from a supply roll, said teartape having substantially parallel side edges, and

b) sealing means for continuously sealing the teartape to the wrapper material longitudinally in the running direction of the web of wrapper material,

36. Apparatus for making a package wrapper as set forth in claim 34 wherein said web cutting means cuts said web transversely through both of said first slits and said at least one second slit at substantially the mid-points of the lengths of all of said slits.

37. Apparatus for making a package wrapper as set forth in claim 35 wherein said web cutting means cuts said web transversely through said teartape and both of said first slits and said at least one second slit at substantially the mid-points of the lengths of all of said slits.

38. Apparatus for making a package wrapper as set forth in claim 35 wherein said first slits made by said first slitting means are substantially parallel to one another and to the said substantially parallel side edges of said teartape, and wherein said at least one second slit is substantially parallel to said first slits.

39. A method for making a package wrapper in the form of a substantially rectangular flexible sheet of package wrapper material having visible tear ends lift tabs, and slits for selectively directionally tearing the package wrapper when the package is to be opened, consisting of the steps of:

a) continuously feeding a web of constant width packaging wrapper material from a supply roll, and

b) slitting the wrapper material at predetermined intervals along the length of the wrapper material with first slits of fixed predetermined length,

c) slitting the wrapper material at locations on said wrapper material displaced laterally widthwise away from said first slits with at least one second slit of fixed predetermined length, said locations being at predetermined intervals along the length of the wrapper material, and

d) transversely cutting said web of packaging material at desired fixed interval lengths.

40. A method for making a package wrapper as set forth in claim 39 wherein said step of transversely cutting said web of packaging material cuts said web transversely through both of said first slits and said at least one second slit at substantially the mid-points of the lengths of all of said slits.

41. A method for making a package wrapper as set forth in claim 39 wherein the step of slitting the wrapper material at predetermined intervals along the length of the wrapper material forms said first slits substantially parallel to one another, said first slits being disposed at finger-width spacing.

42. A method for making a package wrapper as set forth in claim 39 wherein said step of slitting the wrapper material at predetermined intervals along the length of the wrapper material with first slits of fixed predetermined length, and said step of slitting the wrapper material at locations on said wrapper material displaced laterally widthwise away from said first slits with at least one second slit of fixed predetermined length, are performed simultaneously.

43. A method for making a package wrapper as set forth in claim 39, in which after the step of continuously feeding a web of constant width packaging wrapper material from a supply roll, performing the further steps of,

a) continuously feeding teartape from a supply roll, said teartape having substantially parallel side edges,

b) continuously sealing the teartape to the wrapper material longitudinally in the running direction of the web of wrapper material,

and wherein the subsequent step of slitting the wrapper material at predetermined intervals along the length of the wrapper material with first slits of fixed predetermined length consists of slitting the wrapper material on opposite sides of the teartape.

44. The method for making a package wrapper as set forth in claim 43 wherein said step of continuously sealing the teartape to the wrapper material seals said teartape to said web at a fixed selected distance from an edge of said web.

45. The method for making a package wrapper as set forth in claim 43 wherein said step of transversely cutting said web of packaging material cuts said web transversely through said teartape and both of said first slits and said at least one second slit at substantially the mid-points of the lengths of all of said slits.

* * * * *