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(54) **TAMPER EVIDENT PACKAGING LABELS**

Related U.S. Application Data

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(57) **ABSTRACT**

A bunch wrapped wrapper has a label affixed to it with a die cut portion provided within its perimeter, such that the die cut portion is at least partially torn away from the label when the label is removed to open the package to provide evidence of tampering. The packaging may be used to wrap confectionery pieces, where the edges of the wrapper are gathered at a flat side of the confectionery piece and the label is applied over the gathered edges of the wrapper on the flat side of the piece.

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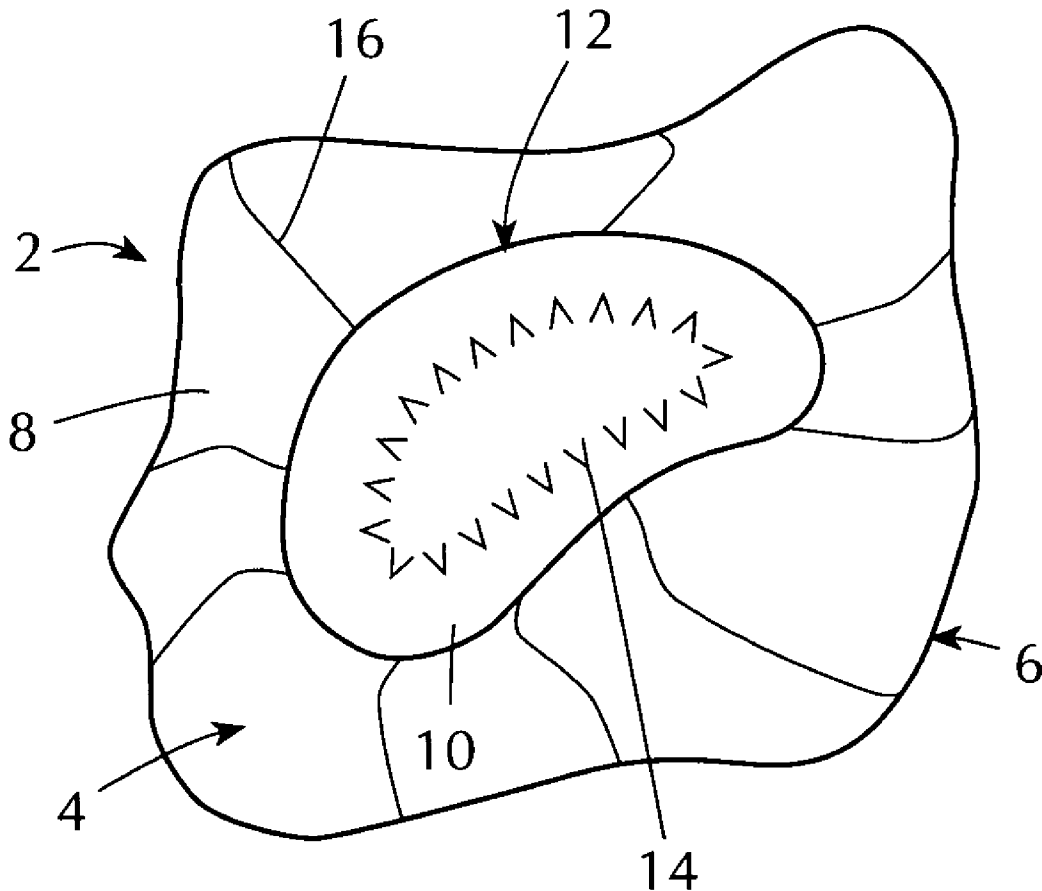


FIG. 1

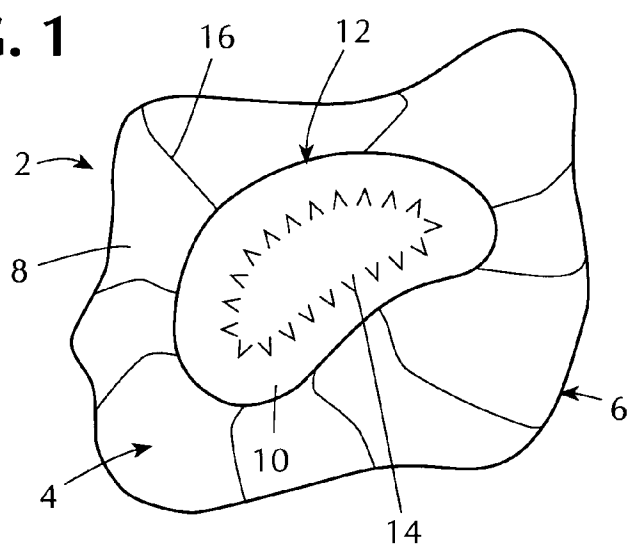


FIG. 2

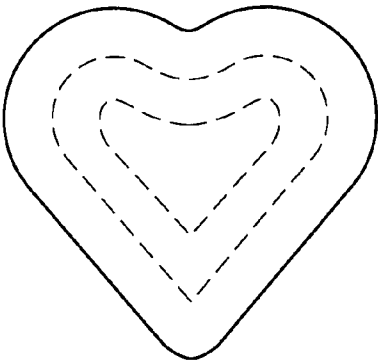
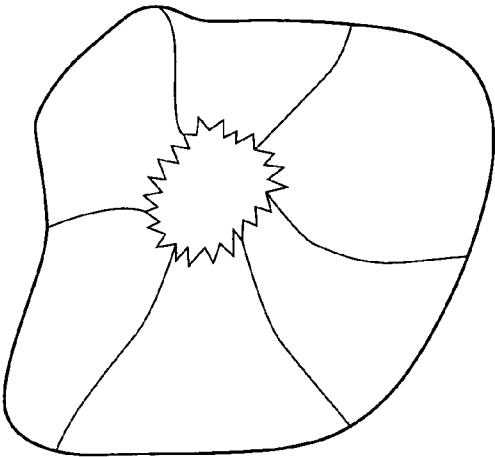


FIG. 3



TAMPER EVIDENT PACKAGING LABELS

BACKGROUND OF THE INVENTION

[0001] This application claims the benefit of priority of U.S. Provisional Application No. 60/402,316, filed Aug. 8, 2002, and incorporated herein by reference.

FIELD OF THE INVENTION

[0002] The invention is directed to packaging that will provide evidence of tampering to packaging of a type typically associated with confectionery products, particularly, bunch wrap packaging.

DESCRIPTION OF THE RELATED ART

[0003] Tamper evident packaging utilizing breakable seals is known. U.S. Pat. No. 4,874,096, for example, is directed to packaging for confectionery having a reclosable adhesive opening strip. The packaging is provided with a supplementary strip which is adhesively attached to the packaging and to the opening strip. The supplementary strip is also provided with pre-cut transverse lines, such that the strip breaks upon opening, which provides evidence of tampering if the package is subsequently reclosed.

[0004] U.S. Pat. No. 5,987,850 discloses a process for applying a revenue seal to a cigarette pack. The seal is applied directly to the packaging, applying a laser beam to a smooth coating in the area where the seal is to be applied so that the seal will adhere better to that area. The seal is applied across a dividing line where the package is opened such that the seal will rupture on opening the cigarette pack.

[0005] U.S. Pat. No. 6,349,828 B1 is directed to a tamper evident packaging for a wound dressing in which two packaging layers are sealed to each other at their perimeter for example by heat sealing, adhesive sealing, RF sealing, or ultrasonic sealing. The layers may be sheets of medical grade paper, plastic, foil or the like. Perforations are provided in one or both packaging layers within the sealing region on the perimeter such that when the package is opened the layer tears along the perforation, leaving a portion of the layers attached, thus providing evidence that the package has been fully or partly opened.

[0006] Confectionery products are handled by a large number of people at the point of sale prior to being finally purchased and consumed. This raises a particular concern that these products are more likely to be subjected to tampering. Thus, it is particularly desirable and an object of the invention to provide evidence of tampering to packaging associated with confectionery, such as a bunch wrap package for a molded piece of confectionery.

[0007] While various labels have been developed for placing on packaging, there continues to be a need in the art for labels which will provide evidence of tampering. None of the above-described prior art addresses the problems associated with providing tamper evident bunch wrap packaging in an attractive and economical format.

SUMMARY OF THE INVENTION

[0008] In one aspect, the invention is a package comprising a wrapper having a label affixed to a surface thereof, wherein the label has a perimeter and is provided with an at least partly removable portion within the perimeter, such

that the label provides evidence of tampering when the package is opened. Preferably, the confection is a molded confection, such as a molded piece of chocolate having a flat side, the wrapper is bunch wrapped around the molded confection, and the label is applied over creases and edges of the wrapper gathered on the flat side of the piece. The label has a pattern of perforations, which may be die cut or formed by another method, laid out in a pattern to increase the likelihood of tearing when tampered with. In some embodiments the label has die cut perforations in a closed shape, such that an attempt to remove the label results in the die cut portion tearing away, providing evidence of tampering.

[0009] In another aspect, a label may be provided according to the invention which provides evidence of tampering but which does not have a region defined by perforations. For example, a multilayer structure may be used such that all or a portion of a top layer is removed by tearing or other means to reveal a layer underneath which may have a different color or other visible indication which provides evidence that the label has been tampered with.

[0010] In yet another aspect, a plurality of angles on the perimeter of a label facing away from the center of the label may provide evidence of tampering by providing tear propagation points, such that the label would be virtually impossible to remove without leaving evidence of tampering.

[0011] In yet another aspect, the invention is directed to a method for providing evidence of tampering to confectionery packaging when the packaging is opened or attempted to be opened, comprising the steps of: conforming a wrapper to a surface of a confectionery piece, gathering edges of the wrapper on a side of the confectionery piece, and applying a label with an at least partly removable portion within the label perimeter on the side of the confectionery piece over the edges of the wrapper such that the label provides visible indication when the packaging is opened or attempted to be opened.

BRIEF DESCRIPTION OF THE FIGURES

[0012] **FIG. 1** depicts a foil bunch wrap having a tamper-evident die cut label affixed to it.

[0013] **FIG. 2** depicts a preferred configuration of die cut perforations on a tamper evident label.

[0014] **FIG. 3** depicts a foil bunch wrap having a tamper-evident die cut label affixed to it according to another embodiment of the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0015] A detailed description of the invention will be provided with reference to a particular embodiment thereof, which is not to be considered limiting. **FIG. 1** shows a confectionery piece (2) having a flat side (4) with a perimeter (6). A foil wrapper (8) is shown with creases (16) where its bunched edges have been gathered on the flat side (4) of the confectionery piece. A label (10) having a label perimeter (12) conforming to the perimeter of the flat side of the piece is shown placed on the flat side of the piece over the creases and bunched edges, in effect over the "opening" of the package. Within the perimeter (12) are die cut perforations (14), which partially tear away when the label (10) is removed or tampered with.

[0016] “Tamper evident” as used herein means providing any visible indication that a packaging has been opened or that an attempt has been made to open it. “Bunch wrapping,” as used herein, means wrapping an object with a sheet of material; conforming the material to the outside shape of the object; and bunching the edges of the sheet of material against a surface of the object. This definition is consistent with the usage in the art. The “Glossary of Packaging Terms,” published by the Packaging Institute International, for example, defines bunch wrap as “a method of wrapping with the packaging material gathered on the underside.”

[0017] In a preferred embodiment, the edible piece is a molded chocolate confection which has a flat side owing to the molding process. The flat side makes it easier to bunch the edges of the wrapper against that side, and also makes it easier to place the label securely over the edges of the wrapper to form the package opening.

[0018] Bunch wrapping may be accomplished by methods known in the art, such as by pushing the confectionery piece into a sheet of wrapper material through an orifice with brushing members conforming the wrapper material to the piece. Members then push the trailing ends against the piece. These and other methods, being known in the art, will not be elaborated upon herein, except as pertains to the invention.

[0019] A bunch wrap package according to the prior art is relatively easily opened and tampered with by taking an exposed edge of the wrapped sheet and peeling it away from the confectionery piece. According to the present invention, to prevent a person from unwrapping the packaging, tampering with the confectionery, and then replacing the wrapper, a label is placed over the exposed edges. The bunch wrap and label are provided with an additional tamper evident feature by using a pattern of perforations on the label which tear when the label is opened or tampered with.

[0020] Any wrapper material can be used as a substitute for foil wrapper (8) to wrap the piece, provided it has sufficient “dead fold” properties to permit the wrapper to conform to the shape of the piece. Dead fold is defined in the Glossary of Packaging Terms as “a hand or machine made fold which will remain in position without sealing, such as a soft foil.” Preferred wrapper materials are foils and laminated foils such as a 10 to 20 micron thickness soft temper foil.

[0021] The label (10) has a label perimeter (12) die cut from label stock, and a pattern of perforations (14) which are also formed by die cutting. Any label stock known in the art may be used. Such stock typically comprises an adhesive-backed label material of paper, laminated paper, plastic, or the like on a non-adhesive liner. Typically, the label material bears instructions or regulatory information printed before the label is die cut. Of course, if the label is printed, the die cutting operation must be done in registration with the printing. It has been found, however, that the pattern of perforations (14) formed in the label (10) according to the invention do not interfere with the legibility of the label information.

[0022] Die cutting can be by any means known in the art, such as with a platen die cutter, rotary die cutter, laser cutter, or any other system known in the art or hereafter developed. The die includes a definition of the label perimeter shape and cuts through the label material to the liner and the excess label material is stripped away from the liner.

[0023] The perforations (14) are provided in a pattern on the label, and may be cut at the same time as the label perimeter or in a different die cutting step. Preferably, the perforations are cut at the same time that the perimeter of the label is cut, and thus the same die is used. The perforations are provided in a pattern to increase the likelihood that the label will tear upon opening. This will provide a tamper evident feature to the bunch wrap/label combination. The perforation pattern is preferably not plainly visible, and during manufacture of the packaging combination, the label is handled as a single piece such that the perforations do not tear away. Accordingly, some lands (spaces between the cut portions) in the perforation design are necessary so that portions of the label do not tear away during handling of the label and during the process of affixing the label to the bunch wrapped piece. Likewise, although perforations extending to the perimeter of the label are possible, this configuration is less preferred because it would be expected to cause tearing of the label when the label is removed from the liner.

[0024] In a preferred embodiment shown in FIG. 2, the perforations (24) follow the shape of the perimeter (26) of a flat side of the piece being wrapped. Several concentric shapes following the perimeter shape may increase the tendency of the label to tear during tampering.

[0025] A series of points or near points as shown in FIG. 1 may provide better tamper evidence than a smooth shape, because tearing appears to propagate most easily at a sharp point in the perforation pattern. Of course, the ability to have a die economically prepared may impose constraints on the design that is used. It is preferred, but not necessary, that the die cut perforations (14, 24) define a closed shape. Thus, when a person pulls the label off, an entire portion tears away from the rest of the label.

[0026] In another embodiment, the label is made tamper evident by die cutting a label perimeter having numerous relatively sharp angles (18) as shown in FIG. 3. The label perimeter is thus provided with a plurality of tear propagation points (20). A label having this configuration is extremely difficult to remove without leaving evidence of tampering. However, with existing technology, such a label presents significant challenges in terms of handling, and it would be difficult to reliably and rapidly remove such a label from the liner and apply it to the bunch wrap. Configurations according to any of the foregoing embodiments prevent tampering.

[0027] The foregoing description is for the purposes of illustration and is not to be deemed to limit the invention, which is defined by the following claims.

We claim:

1. A packaging comprising a wrapper having a label affixed thereto, wherein the label has a perimeter and is provided with an at least partly removable portion within the perimeter, such that the label provides evidence of tampering when the package is opened.
2. The packaging according to claim 1, wherein the wrapper is bunch wrapped around a confectionery product.
3. The packaging according to claim 2, wherein the wrapper is foil or paper laminated foil.
4. The packaging according to claim 1, wherein said at least partly removable portion is defined by a pattern of perforations.

5. The packaging according to claim 4, wherein said perforations are formed with a platen die, rotary die or laser cutter.

6. A packaging according to claim 4, wherein the die cut perforations are provided in a substantially closed shape.

7. A packaging according to claim 1, wherein the foil wrapper is a single sheet having edges gathered on a surface of a bunch wrapped piece, and the label is applied over the edges of the wrapper.

8. A packaging according to claim 1, wherein the packaging is bunch wrapped around a confection having a substantially flat rear surface, and the edges of the wrapper are gathered at the rear surface, and the label is applied over the edges of the wrapper.

9. A tamper evident bunch wrap package comprising:

a wrapper material conforming to a surface of an object and having edges gathered on a side of the object, and

a label applied over said gathered edges and having a pattern of perforations.

10. The tamper evident bunch wrap package of claim 9, wherein the object has a flat side having a perimeter and the wrapper material edges are gathered on the flat side, the label has a label perimeter approximately the same shape as the perimeter of the object, and the pattern of perforations comprises a plurality of concentric shapes conforming to the label perimeter.

11. The tamper evident bunch wrap package according to claim 9, wherein said object is confectionery.

12. The tamper evident bunch wrap package of claim 9, wherein said object is a molded piece of chocolate having a substantially flat side.

13. A tamper evident bunch wrap package comprising:

a wrapper material conforming to a surface of an object and having edges gathered on a flat side of the object, and

a label applied over said gathered edges having a label perimeter with a plurality of angled tear propagation points.

14. A method for providing evidence of tampering to confectionery packaging when the packaging is opened or attempted to be opened, comprising the steps of:

conforming a wrapper to a surface of a confectionery piece,

gathering edges of the wrapper on a side of the confectionery piece,

applying a label having a perimeter and provided with an at least partly removable portion within the perimeter over the edges on said side of the confectionery piece,

such that the label provides visible indication when the packaging is opened or attempted to be opened.

15. The method of claim 14, wherein said step of conforming a wrapper comprises providing a wrapper of foil or paper laminated foil.

16. The method of claim 14, wherein said step of applying a label includes a step of providing a pattern of perforations defining said at least partly removable portion.

17. The method of claim 14 wherein said side is flat and has a perimeter.

18. The method of claim 17, wherein said pattern of perforations is a closed shape conforming to the perimeter of said side of said confectionery piece.

19. The method of claim 14, wherein said step of applying a label includes a step of providing a label having a plurality of layers and said at least partly removable portion comprises all or part of one of said plurality of layers.

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