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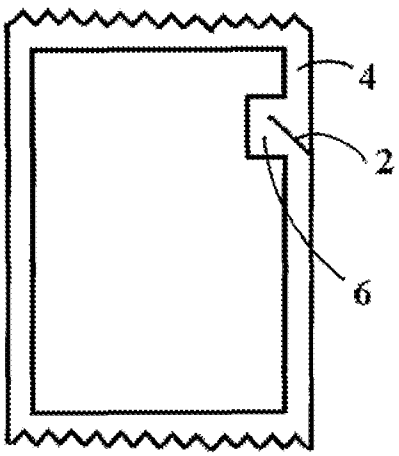
(54) **Title:** POUCH WITH WIDENED SEAL FOR ELONGATED DIAGONAL CUT



(57) **Abstract:** A pouch-style containment package for containing and dispensing products is provided, comprising a front film and a back film sealed to the front film along a series of edge seals. In accordance with an embodiment of the invention, the pouch-style containment package comprises a widened seal portion extending inwardly from a first edge seal of the series of edge seals and an elongated diagonal cut extending substantially across the first edge seal and into the widened seal portion. The widened seal portion and elongated diagonal cut facilitate simple, directionally controlled tearing. In an embodiment of the invention, the pouch-style containment package has a preformed bulge, a widened seal portion extends inwardly from two edge seals adjacent the corner where the two edge seals meet, and two elongated diagonal cuts extend into the widened seal portion, facilitating tearing off a generally triangular corner portion.

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POUCH WITH WIDENED SEAL FOR ELONGATED DIAGONAL CUT

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Application No. 60/737,802, filed November 18, 2005, which is hereby expressly incorporated by reference herein.

BACKGROUND OF THE INVENTION

[0002] The invention is directed to an improvement in what is known as "pouch" or "pouch-style" packages. Pouch packages are the well-known type of dispensing packages that are used, for example, in the packaging of condiments such as ketchup as may be found at typical fast-food restaurants. Pouch packages are formed of thin films (e.g., of aluminum foil or foil/plastic laminates) sealed together to form a containment pouch for a product to be dispensed. The product to be dispensed is contained within the pouch package until the package is opened, for example by tearing.

[0003] U.S. Patent No. 6,783,030 relates to pouch packages and explains their universal use. It states, at col. 1, lines 44-48, "The universal use of pouch style packages for a broad spectrum of products ranging from ketchup and other condiments to health and beauty aids as well as medical products in addition to various other foods and technical products is well known." U.S. Patent No. 6,783,030 discloses layered films and aperture forming means for pouch packages. U.S. Patent No. 6,783,030 also discloses the formation of preformed bulges in pouches to increase product containment capacity, reduce materials costs and/or eliminate wrinkles in the pouches. U.S. Patent No. 6,783,030 is hereby expressly incorporated by reference herein.

[0004] Regular pouches often have tear directions written on the end corner of the pouch and depend on a serrated cut at the end to start the tear. An example is shown in Figure 1. The pouch 1 in Figure 1 has an edge seal 3 which extends around all four edges of the pouch 1. The edge seals on the two side edges (the right and left edges) of the pouch are substantially uniform in width and may have substantially the same width as each other. The edge seals on the top and bottom edges of the pouch may also be substantially uniform in width and may have substantially the same width as each other. The edge seals on the top and bottom edges of the pouch may also have substantially the same width as the edge seals on the side edges of the pouch. The pouch 1 has tear directions written on the end corner.

However, forming a tear in this prior art package is often difficult and is not directionally controlled.

BRIEF SUMMARY OF THE INVENTION

[0005] A pouch-style containment package for containing and dispensing products is provided, comprising a front film and a back film sealed to the front film along a series of edge seals. In accordance with an embodiment of the invention, the pouch-style containment package comprises a widened seal portion extending inwardly from a first edge seal of the series of edge seals and an elongated diagonal cut extending substantially across the first edge seal and into the widened seal portion. The widened seal portion and elongated diagonal cut facilitate simple, directionally controlled tearing.

[0006] The series of edge seals may comprise edge seals at two side edges and top and bottom edges of the pouch. The edge seals at the two side edges of the pouch may be substantially uniform in width and substantially the same width as each other. Similarly, the edge seals at the top and bottom edges of the pouch may be substantially uniform in width and substantially the same width as each other. The edge seals at the two side edges and the top and bottom edges of the pouch may be substantially the same width as each other.

[0007] The widened seal portion may extend inwardly from one of the side edge seals, the top seal, or the bottom seal. More than one widened seal portion may be provided, extending from any combination of these seals. The elongated cut may extend substantially across the edge seal from which the widened seal area extends, and the elongated cut may extend into the widened seal portion. The elongated cut may extend substantially across the widened seal portion.

[0008] The width of the widened edge seal may be substantially the same as, greater than, or less than the width of the edge seal from which it extends.

[0009] In an embodiment of the invention, a pouch-style containment package for containing and dispensing products is provided, comprising a front film and a back film sealed to the front film along a series of edge seals. In accordance with this embodiment, the pouch-style containment package has a preformed bulge in the front film, the back film, or both. The pouch-style containment package comprises a widened seal portion extending inwardly from at least a first edge seal of the series of edge seals and an elongated diagonal cut extending substantially across the first edge seal and into the widened seal portion. In a specific embodiment, the pouch-style containment package comprises a widened seal portion extending inwardly from two edge seals adjacent the corner where the two edge seals meet.

The widened seal portion can form a generally triangular shape. An elongated diagonal cut can extend substantially across one of the edge seals and into the widened seal portion. In a specific embodiment, two elongated diagonal cuts can extend substantially across adjacent edge seals into the widened seal portion, facilitating tearing off a generally triangular corner portion.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] Figure 1 shows a prior art pouch.

[0011] Figure 2 shows an embodiment of a pouch in accordance with the present invention.

[0012] Figure 3 shows the pouch of Figure 2 with an end corner torn off.

[0013] Figure 4 shows a second embodiment of a pouch in accordance with the present invention.

[0014] Figure 5 shows the pouch of Figure 4 with an end corner torn off.

DETAILED DESCRIPTION

[0015] Figure 2 shows an embodiment of a pouch in accordance with the present invention. The pouch may be made of any pouch material known in the art. In the embodiment of Figure 2, the pouch-style containment package is rectangular and the series of edge seals comprises four edge seals, with one edge seal extending along each side of the rectangular pouch-style containment package.

[0016] The pouch shown in Figure 2 has an elongated diagonal cut 2 made into a smooth edge seal 4, with the cut 2 extending well beyond the width that the seal would have if the seal were just the straight seal. However, this cut 2 does not extend into the product containment area of the pouch because the invention includes sealing a small widened portion 6 from the straight seal 4. The cut 2 extends into this widened seal portion 6.

[0017] The cut 2 provides a directional tearing to the pouch. The widened seal portion 6 allows the long cut 2 which facilitates tearing. The invention allows relatively simple and consistent tearing off of the pouch corner to create an outlet.

[0018] A user of the pouch can simply begin the tear along the cut 2. The cut 2 provides a direction to the tear and allows the tear to easily continue along the direction of cut 2 across the corner of the pouch.

[0019] Figure 3 shows the pouch of Figure 2 with an end corner torn off. As can be seen in Figure 3, the tear continued generally in the diagonal direction of the cut 2. An end corner 8 of the pouch is easily torn off, creating an outlet opening 10 for dispensing the product from the pouch.

[0020] The edge seals and widened seal portion 6 may be made by any suitable means. For example, heat sealing may be utilized. As persons of ordinary skill in the art will appreciate, this may be accomplished by sealing dies.

[0021] Figures 4 and 5 show another embodiment of the invention. Figure 4 shows a pouch-style containment package 20 for containing and dispensing products, comprising a front film and a back film sealed to the front film along a series of edge seals 21, 22, 23, 24. In accordance with this embodiment, the pouch-style containment package has a preformed bulge 32 in the front film. A bulge may also be formed in the back film. The pouch-style containment package 20 comprises a widened seal portion 25, 26 extending inwardly from two edge seals 22, 23 adjacent the corner where the two edge seals 22, 23 meet. The widened seal portion 25, 26 can form a generally triangular shape. A channel 29 is left unsealed. Thus, in the widened seal portion 25, 26, the front film is sealed to the back film, except at the unsealed channel 29. Two elongated diagonal cuts 27, 28 extend substantially across the adjacent edge seals 22, 23 into the widened seal portion 25, 26, facilitating tearing off a generally triangular corner portion. The arrangement of the cuts causes the tear to be made across the unsealed channel 29.

[0022] Figure 5 shows the pouch of Figure 4 with an end corner torn off. As can be seen in Figure 5, a tear started at cut 27 continued generally in the diagonal direction of the cut 27 and through the cut 28, which is generally linearly aligned with the cut 27. With the two cuts 27, 28, the tear may be facilitated by twisting. An end corner 30 of the pouch is easily torn off, creating an outlet opening 31 for dispensing the product from the pouch. Because the tear was directionally controlled across the unsealed channel 29, the channel 29 serves as a dispensing channel for the product, the dispensing channel ending at the outlet opening 31.

[0023] The channel 29 may take various shapes. For example, the channel may be made narrower or wider, longer or shorter. Changes to the channel shape or size can be accomplished by changing the seal areas. For more viscous products, the channel may be wider. For less viscous products, the channel may be narrow to permit a controlled dispensing steam. In fact, the channel may be shaped narrow enough to prevent product from

spilling out, allowing product to be dispensed only when finger pressure is applied to squeeze the pouch.

[0024] Figure 4 shows the two cuts 27 and 28 generally along the same line as each other. In a variation, the cuts may be angled with respect to each other. For example, the two cuts may be angled such that the imaginary continuations of the cuts intersect at an oblique angle.

[0025] It will be appreciated that numerous variations may be made to the embodiments shown and described herein. For example, the widened seal portion may extend inwardly from a side edge seal or a top or bottom edge seal or any combination. The size of the widened edge seal may be any suitable size, for example having a width substantially the same as, greater than, or less than the width of the edge seal from which it extends. The shape of the widened edge seal may also vary. The length and direction of the cut may also vary. It need not be straight, but can be curved. The cut may be a series of smaller cut portions, like a dashed line. The word "cut" is used to include continuous or dashed cuts, continuous or dashed notches of various shapes, and the like. Other variations will be readily envisioned based on the disclosure herein.

What is claimed is:

1. A pouch-style containment package for containing and dispensing products comprising:

a front film; and

a back film sealed to the front film along a series of edge seals;

characterized in that the pouch-style containment package further comprises a widened seal portion extending inwardly from a first edge seal of said series of edge seals and an elongated diagonal cut extending substantially across said first edge seal and into said widened seal portion.

2. A pouch-style containment package as recited in claim 1, wherein said series of edge seals comprises edge seals at two side edges and top and bottom edges of the pouch-style containment package.

3. A pouch-style containment package as recited in claim 2, wherein said edge seals at the two side edges of the pouch-style containment package are substantially uniform in width and substantially the same width as each other.

4. A pouch-style containment package as recited in claim 2, wherein said edge seals at the top and bottom edges of the pouch-style containment package are substantially uniform in width and substantially the same width as each other.

5. A pouch-style containment package as recited in claim 2, wherein said edge seals at the two side edges and the top and bottom edges of the pouch-style containment package are substantially uniform in width and substantially the same width as each other.

6. A pouch-style containment package as recited in claim 2, wherein said first edge seal is at one of said side edges.

7. A pouch-style containment package as recited in claim 2, wherein said first edge seal is at said top edge or said bottom edge.

8. A pouch-style containment package as recited in claim 1, wherein a width of the widened edge seal is substantially the same as a width of the first edge seal.

9. A pouch-style containment package as recited in claim 1, wherein a width of the widened edge seal is greater than a width of the first edge seal.

10. A pouch-style containment package as recited in claim 1, wherein a width of the widened edge seal is less than a width of the first edge seal.

11. A pouch-style containment package as recited in claim 1, wherein the pouch-style containment package is rectangular and the series of edge seals comprises four edge seals, with one edge seal extending along each side of the rectangular pouch-style containment package.

12. A pouch-style containment package for containing and dispensing products comprising:

a front film;

a back film sealed to the front film along a series of edge seals;

a preformed bulge in at least the front film;

a widened seal portion extending inwardly from a corner where two edge seals of said series of edge seals meet; and

an elongated diagonal cut extending substantially into said widened seal portion from a first edge seal of said two edge seals.

13. A pouch-style containment package as recited in claim 12, further comprising a second elongated diagonal cut extending substantially into said widened seal portion from a second edge seal of said two edge seals.

14. A pouch-style containment package as recited in claim 12, wherein the widened seal portion forms a generally triangular shape.

15. A pouch-style containment package as recited in claim 12, further comprising an unsealed channel extending into said widened seal area.

16. A pouch-style containment package as recited in claim 15, wherein said elongated diagonal cut extends in a direction for creation of a tear, said direction for said tear extending across said channel.

17. A pouch-style containment package as recited in claim 16, further comprising a second elongated diagonal cut extending substantially into said widened seal portion from a second edge seal of said two edge seals, said second elongated diagonal cut extending in the same general direction as said direction for said tear.

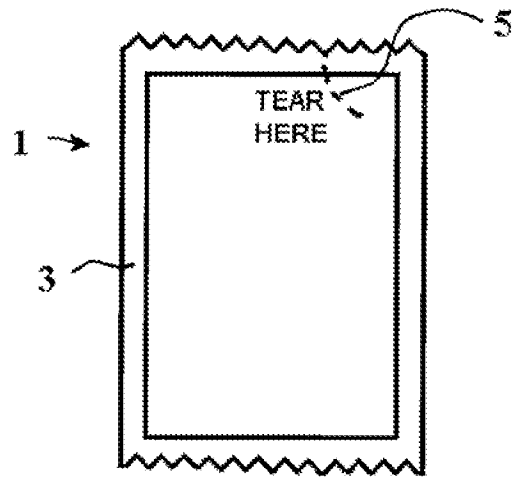

FIG. 1 (PRIOR ART)

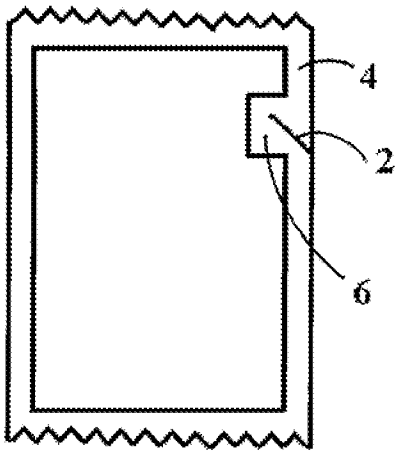

FIG. 2

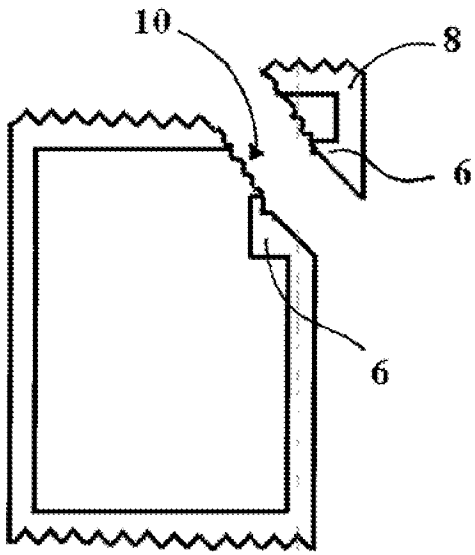

FIG. 3

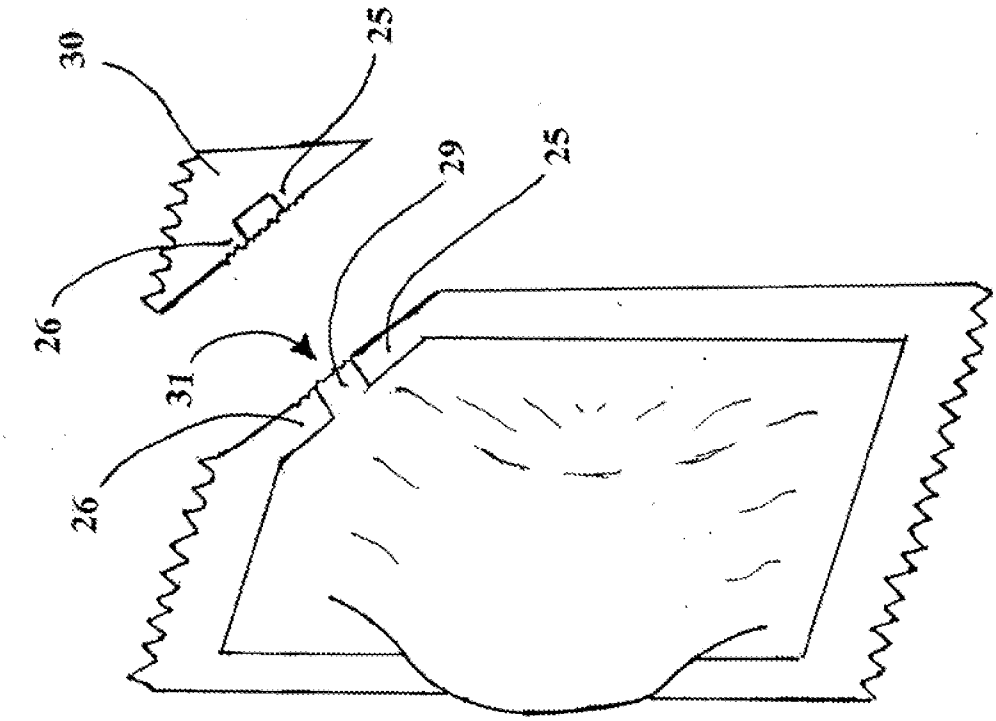

FIG. 5

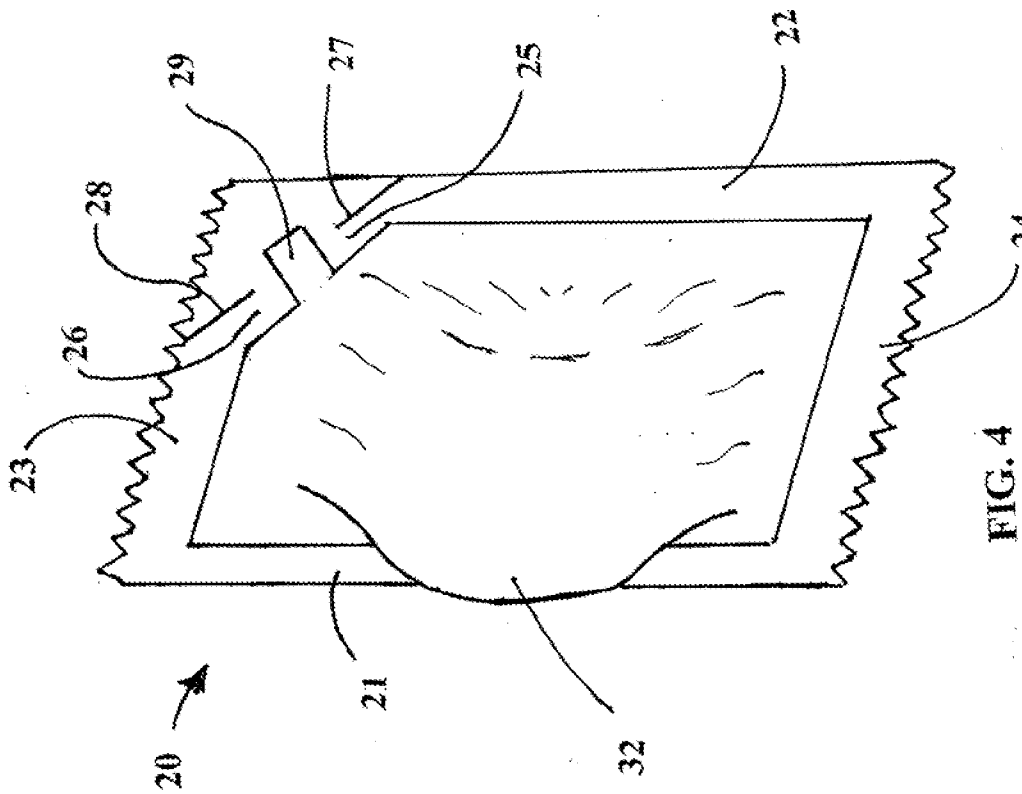

FIG. 4