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(54) **Square cone packaging for frozen confectionaries**

(57) A package (10) for an edible, frozen confectionary. The package (10) includes a sleeve (15) having a closed end, a first conical portion (30) adjacent the closed end and a second portion (35) that is not conical positioned adjacent the first conical portion opposite the closed end, wherein the second portion (35) forms an

opening (40) of the package. The second portion (35) has a cross section that is rectilinear with rounded corners, and in particular has a cross section that is square with rounded corners. The package (10) is used to deliver frozen confections and is configured to facilitate shipping. Also disclosed are methods for making the package (10).

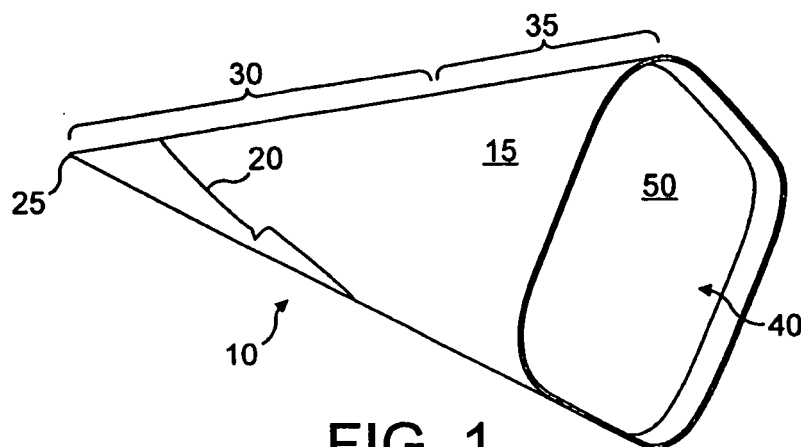


FIG. 1

Description

BACKGROUND

[0001] The present invention relates to a new package for conical products such as ice cream or other novelties that have a generally conical shape. The package includes a sleeve having a conical base portion and non-conical, rounded rectilinear top portion, and a cover. The rounded, rectilinear top portion of the packaging facilitates handling and in particular enables the shipment of multiple packages in an ordered arrangement in a box or other shipping container.

[0002] Currently, ice cream novelties typically include a wafer or sugar cone that retains the confection therein and that provides a shell for the user to hold during consumption. Quite often, these cones have a round cross section and taper either to a point at the bottom, or to a flat bottom surface. These novelties are often packaged in a paper sleeve which conforms to the cone but which extends above the ball or mass of ice cream at the top of the cone. This paper sleeve continues the shape of the cone until it terminates at a top portion that is generally covered with a paper or plastic lid.

[0003] While these types of packaging are convenient to use, they result in a packaged product that is difficult to handle. Generally, a number of such products are simply collected and placed into a box or other container in random fashion. During shipping, the products are subject to movement and possible damage or breakage. Also, such random packaging leads to an efficient use of the volume of the container. Thus, improvements in these types of packages are desired.

SUMMARY OF THE INVENTION

[0004] The invention relates to a package for an edible, frozen confectionary, comprising a sleeve having a closed end, a first conical portion adjacent the closed end and a second portion that is not conical positioned adjacent the first conical portion opposite the closed end, wherein the second portion forms an opening of the package. Advantageously, the second portion has a cross section that is rectilinear with rounded corners, and in particular has a cross section that is square with rounded corners.

[0005] Generally, the package will include a cover operatively associated with the second portion and opening to close off the package. Preferably, the cover fits within the opening and contacts an inside surface of the second portion. The sleeve may be made of paper, foil, plastic or a combination or composite thereof. The lid may be made of the same materials but preferably is made of plastic which can be transparent to allow the consumer to view the frozen confection therein.

[0006] The invention also relates to a combination comprising the package disclosed herein and a frozen confection therein, with the frozen confection including a

cake or wafer cone that holds the frozen confection therein. The frozen confection typically includes a ball or exposed mass extending above the cone, and when so, the first conical portion of the package surrounds the frozen confection cone, and the second non-conical portion surrounds the ball or exposed mass. Other arrangements can be configured depending upon the shape of the frozen confection and sleeve. Also, the sleeve of this combination preferably comprises a cover operatively associated with the second portion and opening to close off the package.

[0007] The invention also relates to a method for making a package for an edible, frozen confectionary, which comprises forming a sleeve having a first conical portion and a closed end; and forming a second portion of the sleeve in a shape that is not conical, with the second portion positioned adjacent the first conical portion opposite the closed end, wherein the second portion forms an opening of the package. The second portion may be formed by holding the sleeve while conforming the opening of the second portion to the desired shape with a tool. This is conveniently achieved by holding the sleeve in a rectilinear mold having rounded corners, and introducing the tool into the opening to press it against the mold and conform the opening to the rectilinear shape of the mold.

[0008] To complete the packaging operation, a frozen confection is inserted into the formed sleeve through the opening. Typically, the method further comprises closing the opening of the second portion to provide a closed package. This is easily achieved by providing a lid or cover that is operatively associated with the opening. In a preferred arrangement, the lid or cover is placed within the opening and contacts an inside surface of the second portion to close the package.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009]

Figure 1 is a perspective view of a first package according to the invention;
Figure 2 is a side view of the package of Figure 1;
Figures 3A and 3B are perspective views of other packages according to the invention, illustrating different covers;
Figure 4 is a perspective view of a mold for use in forming the second portion of the sleeve;
Figure 5 is a perspective view of the mold with the sleeve situated therein and with a tool that is used to conform the sleeve to the desired shape of the mold.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0010] The invention relates to a new package preferably for frozen confections. One embodiment of this package is illustrated in Figure 1, wherein the package

10 is in the form of a closed sleeve 15 that is wrapped around a mold that is shaped in the form of the frozen confection that it will package. The sleeve terminates in an end portion 20 that is adhered to the wrapped portion of the sleeve that is located beneath it to seal the package. The sleeve has a closed end 25, which typically terminates at a point and forms a bottom seal for the package. Instead of a point, the closed end can terminate in a flat wall that is formed by folding and gluing or otherwise adhering the wall to the sleeve. Typical adhesives are those that are acceptable for contact with foodstuffs and these are generally known in the art. The sleeve is typically made of paper, foil, plastic or a combination or composite thereof. A paper/aluminum composite is preferred for simplicity as it can retain its shape after being configured and because it can be readily printed with advertising, tradenames or other indicia or information.

[0011] Adjacent the bottom or closed end 25, the sleeve has a first portion 30 which extends from the bottom or closed end 25. This first portion 30 is typically conical but is required to conform to the shape of the frozen confection configuration. In a preferred embodiment, the frozen confection includes a conically shaped wafer or cake cone shell that is configured to hold an ice confection therein, and the first portion 30 conforms closely to the shell with the outer surface of the cone of the shell being in full contact with the inner wall of the sleeve 15.

[0012] Extending from the first portion 30 of the sleeve is a second portion 35 that is not conical. The second portion 35 is positioned adjacent the first conical portion 30 opposite the closed end 25, with the second portion 35 forming an opening 40 of the package. While the first and second portions can be made of different materials that are adhered to or otherwise joined together to form a continuous sleeve, for convenience, the second portion is integral with the first portion. Conveniently, these portions can be formed in a sleeve made of a single material, such as the preferred paper/aluminum composite material disclosed herein.

[0013] In a preferred embodiment, the first portion extends along the entire cone of the frozen confection, while the second portion extends from the first portion and surrounds the ball or exposed mass of frozen confection. For a frozen confection that is 125 to 175mm tall, the cone is about 100 to 150mm high and the ball or exposed mass of frozen confection is about 25 to 50mm tall. Thus, the first portion has a size that represents more than half of the height of the frozen confection, and in particular, is between about 65 to 90% and preferably about 70 to 85% of the height of the frozen confection, while the second portion represents the balance of the height of the frozen confection, and in particular, is between about 10 and 35 % of the height of the frozen confection and preferably about 15 to 30%.

[0014] As noted, the second portion has a cross-section that is not round and conical. Advantageously, the second portion has a cross section that is rectilinear, i.e.,

in the shape of a polygon, and preferably in the shape of a square or rectangle. While it is acceptable to have sharp or truly intersecting polygonal corners, it is preferable to have rounded corners to enable a good seal to be made between the sleeve and shell. In particular, the second portion of the sleeve preferably has a cross-section that is square with rounded corners and that increases with distance along the height from the end of the first portion.

[0015] To protect the frozen confection therein, the sleeve opening is provided with a cover or lid 50 as shown in Figures 3A and 3B. This lid may be made of the same materials as the sleeve. In one embodiment, the lid can be made of paper which is fit inside of the opening 40 to close the package. The lid can also engage the outer surface of the second portion of the sleeve to act as a cap. If desired or necessary, the lid can be adhered to the sleeve using an adhesive that is suitable for food contact. Alternatively, the lid can be placed into the sleeve by a friction fit that retains the lid therein until removed by the consumer. To assist in such removal, the lid can be provided with one or more recesses 55 or other grasping means. Preferably, the lid is made of a transparent plastic to allow the consumer to view at least the ball or exposed mass of frozen confection therein.

[0016] Figures 4-and 5 illustrate certain equipment that can be used to easily facilitate formation of the second portion of the sleeve. Figure 4 shows a mold 100 that has a desired shape which is intended to be imparted to the second portion. In particular, this mold has a cavity with a generally square configuration with rounded corners. The sleeve material is placed into the mold, as shown in Figure 5, and a forming tool 105 having a forming head 110 is used to urge the material against the mold surfaces and to deform the material so that it conforms to the desired shape. When a paper/aluminum composite is used for the sleeve, it can readily be conformed to the shape of the mold and it can retain that shape after formation. The conical base of the sleeve, i.e., the first portion, is placed into the mold 105 where it is supported during the forming operation on the second portion. The tool forming head 110 has a perimeter that corresponds to the desired cross-sectional shape of the second portion of the sleeve. The insertion of the tool into the sleeve in cooperation with the configuration of the supporting mold results in the forming of the second portion of the sleeve. As noted, the material used for the sleeve is preferably one that retains the formed shape with the aluminum/paper composite being preferred. The rectilinear cross-section of the second portion provides unexpected advantages in the transport and shipping of the package and frozen confectionary therein. That cross-section, being present near the opening of the product, allows the package to easily stand on that opening. When packaging these products into a larger container, each product can be arranged so that they stand on the bottom of the container. The upright standing of the products enables the products to be built up in towers or on different levels, aerated by a sheet material such

as cardboard, that is placed upon the closed ends of the products, thus facilitating the addition of a further level. This results in a convenient way to store or display such products.

[0017] Alternatively, when one level of products are provided in an upright position, with each product placed as close together as possible to an adjacent product, then it would be possible to place other products in-between the upstanding ones so that the container is packaged to be as full as possible. These packaging arrangements are marked improvements over current packaging, in that they are packaged in a more dense manner.

[0018] Other advantages and enhancements are readily discernable to a skilled artisan based on his or her review of the present application and it is intended that the appended claims cover all such embodiments and modifications that are within the true spirit and scope of the present invention.

Claims

1. A package for an edible, frozen confectionary, comprising a sleeve having a closed end, a first conical portion adjacent the closed end and a second portion that is not conical positioned adjacent the first conical portion opposite the closed end, wherein the second portion forms an opening of the package.
2. The package of claim 1 wherein the second portion has a cross section that is rectilinear with rounded corners.
3. The package of claim 1 wherein the second portion has a cross section that is square with rounded corners.
4. The package of claim 1 further comprising a cover operatively associated with the second portion and opening to close off the package.
5. The package of claim 4 wherein the cover fits within the opening and contacts an inside surface of the second portion.
6. The package of claim 4 wherein the sleeve is made of paper, plastic, foil or a composite thereof, and the lid is made of plastic.
7. A combination comprising the package of claim 1 and a frozen confection therein, with the frozen confection including a cake or wafer cone that holds the frozen confection therein.
8. The combination of claim 7, wherein the frozen confection includes a ball or exposed mass extending above the cone, the first conical portion of the package surrounds the frozen confection cone, and the

second non-conical portion surrounds the ball or exposed mass.

9. The combination of claim 8, further comprising a cover operatively associated with the second portion and opening to close off the package.
10. A method for making a package for an edible, frozen confectionary, which comprises:
 - forming a sleeve having a first conical portion and a closed end; and
 - forming a second portion of the sleeve in a shape that is not conical, with the second portion positioned adjacent the first conical portion opposite the closed end, wherein the second portion forms an opening of the package.
11. The method of claim 10, wherein the second portion is formed by holding the sleeve while conforming the opening to the desired shape with a tool.
12. The method of claim 11, wherein the sleeve is held in a rectilinear mold having rounded corners while the tool having a shape that corresponds to that which is desired for the second portion of the sleeve of is introduced into the opening to press the second portion of the sleeve against the mold to conform the opening to the rectilinear shape of the mold.
13. The method of claim 11, which further comprises inserting a frozen confection into the formed sleeve through the opening.
14. The method of claim 13 which further comprises closing the opening of the second portion to provide a closed package.
15. The method of claim 14, wherein the opening is closed by providing a lid or cover that is operatively associated with the opening.
16. The method of claim 15, wherein the lid or cover is placed within the opening and contacts an inside surface of the second portion to close the package.

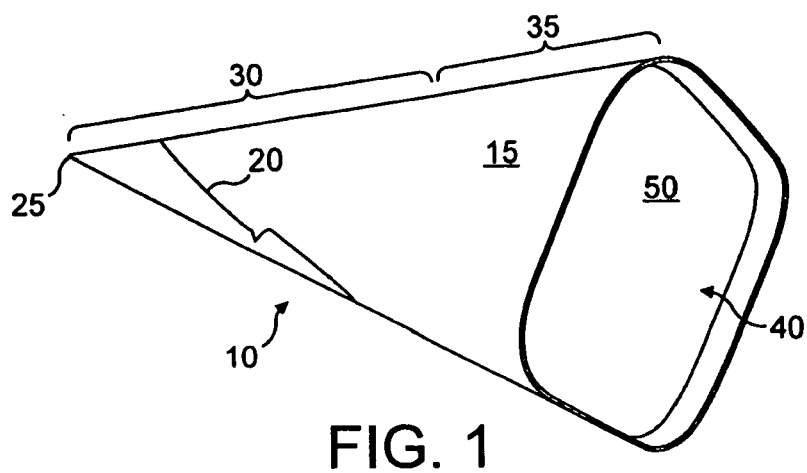


FIG. 1

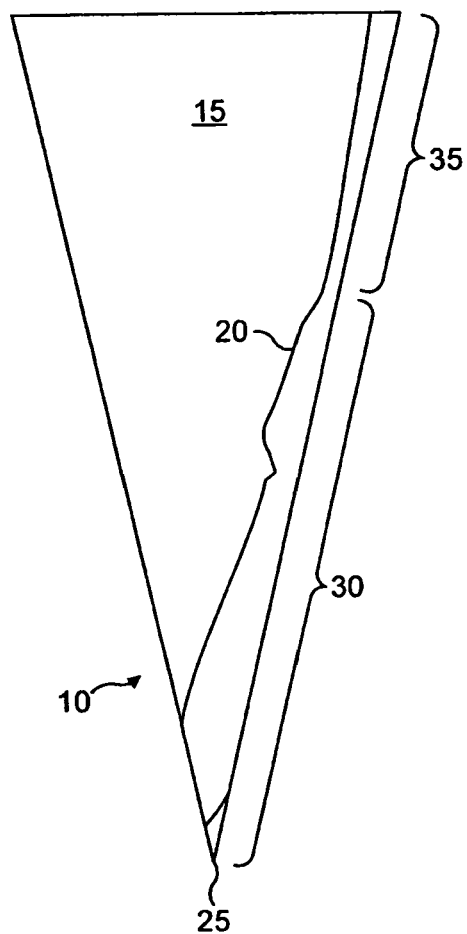


FIG. 2

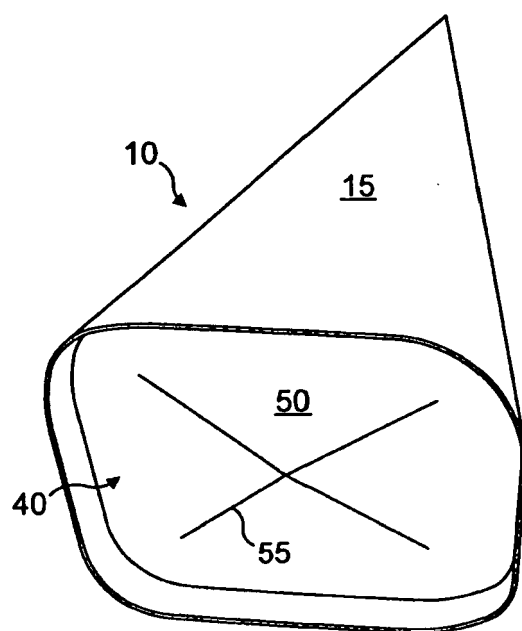


FIG. 3A

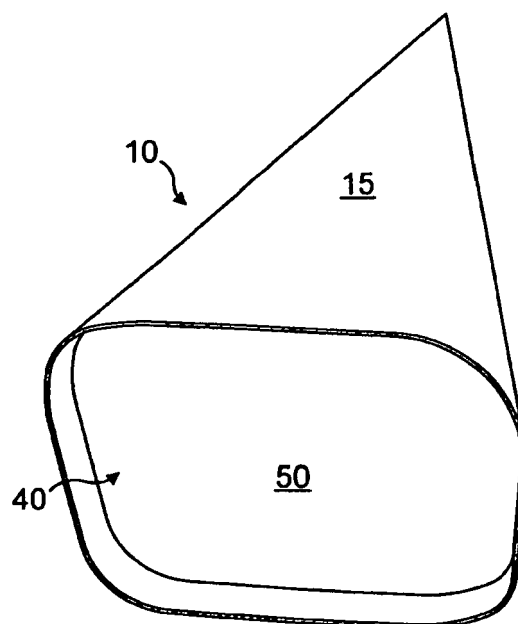
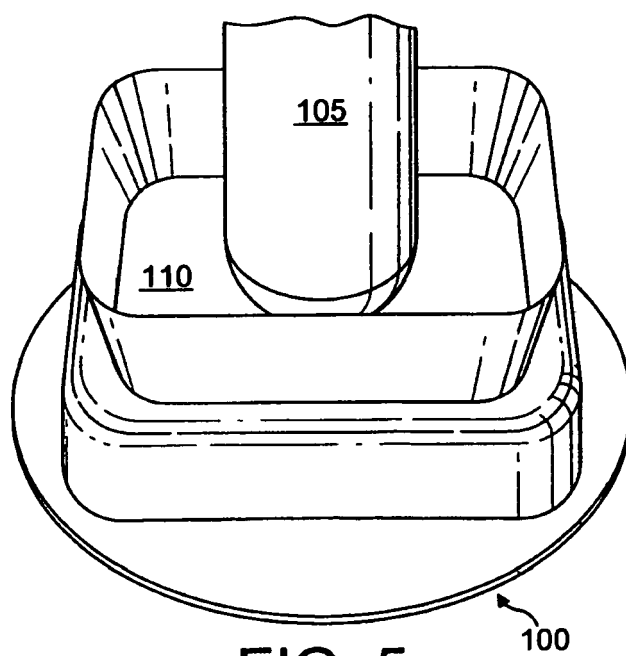
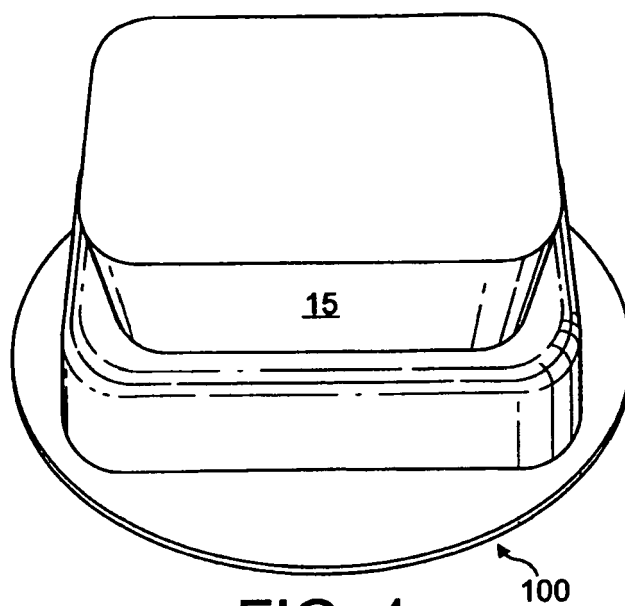


FIG. 3B





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 06 12 6064

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	GB 1 510 635 A (UNILEVER LTD) 10 May 1978 (1978-05-10) * page 1, column 1, line 29 - line 39; figures 8-11 *	1	INV. B65D3/08
Y	DE 87 00 831 U1 (FRAENKISCHE HARTPAPIERWAREN GMBH, 8564 VELDEN, DE) 14 May 1987 (1987-05-14) * abstract; claim 1; figures 1-3 *	1-16	
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A	EP 1 471 014 A (NESTEC SA [CH]) 27 October 2004 (2004-10-27) * paragraph [0029] - paragraph [0032]; figures 1,4 *	1-16	
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 8 May 2007	Examiner Segerer, Heiko
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03/82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 06 12 6064

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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