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(72) Inventor: **Martin, Barbara Ann**
Quakertown, PA Pennsylvania 18951 (US)

(74) Representative: **Moore, Christopher Mark**
Avidity IP
Merlin House
Falconry Court
Baker's Lane
Epping, Essex CM16 5DQ (GB)

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(71) Applicant: **Fres-co System USA, Inc.**
Telford, PA 18969-1033 (US)

(54) **Gusseted flexible package with enlarged opening**

(57) A package (20) formed of a flexible material for holding a product (10), e.g., whole bean coffee, is disclosed. The package includes a front panel (22), a rear panel (24), a first side gusset (26) and a second side gusset (28). The front panel has a pair of sides as does the rear panel. The first side gusset connects one side of the front and rear panels together. The second side gusset connects the other side of the front and rear panels together. One of the gussets (28) includes plural fold edges (28A1, 28A2, 28A3, 28B, 28C) forming at least four gusset panels (44A-44D), while the other (26) of the gussets includes plural fold edges (26A-26C) forming at least two gusset panels (42A, 42B). The panels and the gussets are arranged to be initially secured together, e.g., by a peelable seal line (40), to form an enlarged mouth (50) to provide ready access to the product (10) in the package.

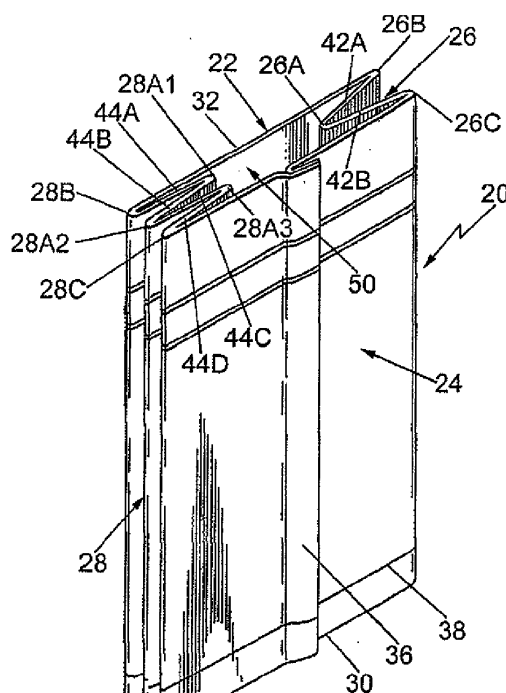


Fig. 1

Description

BACKGROUND OF THE INVENTION

[0001] This invention relates generally to containers and, more particularly, to containers formed of flexible sheet materials.

[0002] Flexible containers formed of sheet materials have gained wide acceptance in the trade for holding foodstuffs, e.g., whole bean or ground coffee, chemicals, or other air perishable materials therein. One common type of flexible package container is the so-called gusseted package. That package is formed from a web of flexible stock material, e.g., polyethylene, polyester, polypropylene, metal foil, and combinations thereof in single or multiple plies, into a tubular body, having a front panel a rear panel, and a pair of gusseted sides. Each gusseted side is formed by a pair of gusset sections and a central fold edge interposed between a pair of outer fold edges. The marginal edges of the front and rear panels form the outer fold edges. The outer fold edges of one side of both panels and the interposed central fold edge define therebetween respective gusset sections. Those sections are subadjacent (underlie) the marginal edges of their associated panels. The other gusseted side of the package is constructed in an identical manner. The lower end of many such prior art gusseted packages are commonly permanently sealed, e.g., heat sealed, along a line extending transversely across the width of the package close to the bottom edge of the package. The upper end of each such package is left open to form a mouth for filling (and in many cases, emptying) the package. Thus, it is a common practice to form the mouth of the package of sealable, (e.g., heat sealable), means to enable the package to be sealed at its mouth after the package is filled with its desired contents.

[0003] Special means are commonly provided at the mouth of a gusseted flexible package to facilitate its sealing and easy opening. For example, in U.S. Patent No. 4,705,174, which is assigned to the same assignee as this invention and whose disclosure is incorporated by reference herein, there is disclosed a gusseted flexible package having a mouth portion including means to enable it to be heat sealed to hermetically hold coffee or some other air perishable material therein, while enabling that package to be readily peeled open at its mouth when it is desire to remove the contents of the package. Other U.S. Patents assigned to the same assignee as this invention and relating to gusseted packages with openable mouths are U.S. Patent Nos.: 4,518,087 (Goglio); 4,576,285 (Goglio); 4,705,174 (Goglio); 4,913,561 (Beer); 5,692,837 (Beer); 6,082,897 (Galomb); and 6,234,676 (Galomb); the disclosure of all of which are specifically incorporated herein.

[0004] Gusseted flexible packages containing coffee for sale at retail are generally 80mm to 90mm wide, 60mm to 80mm deep and 150mm to 250mm tall. This package shape is long established and fits the retail shelf very

well. Unfortunately, this long and thin package shape makes it difficult to scoop the product out of the package. Thus, a need exists for a gusseted flexible package of similar size and shape to those commercially available, but having a mouth which of a considerably larger size than that in the prior art to facilitate the scooping of coffee or any other product from the package. The subject invention addresses that need.

SUMMARY OF THE INVENTION

[0005] In accordance with one aspect of this invention there is provided a package formed of a flexible material for holding a product, e.g., whole bean or ground coffee, therein. The package comprises a front panel, a rear panel, a first side gusset and a second side gusset. The front panel has a first side and a second side. The rear panel has a first side and a second side. The first side gusset connects the first side of the front panel to the first side of the rear panel. The second side gusset connects the second side of the front panel to the second side of the rear panel. One of the gussets includes plural fold edges forming at least four gusset panels between the fold edges of that gusset. The other of the gussets includes plural fold edges forming at least two gusset panels between the fold edges of that other gusset. The panels and the gussets are arranged to be initially secured together, e.g., by a peelable seal line, to hold the product within the package and thereafter to be opened, e.g., peeled open, to form an enlarged mouth for said package to provide ready access to the product.

DESCRIPTION OF THE DRAWING

[0006]

Fig. 1 is an isometric view of a package constructed in accordance with this invention;

Fig. 2 is a vertical sectional view of the package of Fig. 1 shown filled with a product, e.g., whole bean coffee;

Fig. 3 is a top plan view of a web of flexible material that has been formed into a tubular arrangement to fabricate the package of Figs. 1 and 2 showing the various panels and fold edge that make up the package; and

Fig. 4 is a top view of a filled package after its enlarged mouth has been opened to provide greater access to the contents of the package than available heretofore.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0007] Referring now to the various figures of the drawing wherein like reference characters refer to like parts, there is shown in Fig. 1 an exemplary embodiment of a package 20 constructed in accordance with this inven-

tion. The package comprises The package 20 basically comprises a front wall or panel 22, a rear wall or panel 24, a first side gusset 26, a second side gusset 28, a bottom end 30, a top end 32 and a one-way venting valve 34. The walls of the package define a hollow interior in which a product, e.g., whole bean coffee 10, is located. The venting (or degassing) valve 34 is located in the front panel and is of any suitable construction, such as those disclosed in the aforementioned patents assigned to the same assignee as this invention. When so disposed the valve enables gases contained within the sealed package 20 to vent to the ambient air without any air gaining ingress to the package's interior.

[0008] The front panel 22, rear panel 24, and the two side gussets 26 and 26 of the package are all integral portions of a single sheet or web of flexible material which has been folded and seamed to form a tubular body such as shown in Fig. 3. Thus, the back panel 24 of the package 20 includes a longitudinally extending (vertical) seam 36. The seam is formed by the marginal edges of the sheet or web section which are brought into engagement with each other. Those edges are permanently secured to one another via any conventional sealing technique, such as heat sealing or welding. The lower end 30 of the package is sealed closed along a permanent seam line 38. That seam line is formed using conventional sealing techniques, such as any of those used to form seam 36.

[0009] The upper end 32 of the package includes a transverse seal line 40, to be described later, that is preferably constructed so that it can be readily opened, e.g., is peelable, to form a mouth 50 for the package. It is through the mouth that the contents of the package may be removed, e.g., whole bean or ground coffee may be scooped out of the package through the mouth when it is opened.

[0010] In accordance with one preferred aspect of this invention the two side gussets 26 and 28 are of asymmetrical construction to result in a mouth 50 having a larger cross-sectional area than heretofore existing in the prior art, for the same size package. To that end, as can be seen clearly in Figs. 1 and 3 the gusset 26 is in the form of a single fold, namely, a central fold edge 26A interposed between a pair of outer fold edges 26B and 26C. The central fold edges and the outer fold edges all are parallel to the longitudinal axis of the package 20. The gusset 28, however, is in the form of a double fold formed by three interior fold edges 28A1, 28A2 and 28A3 interposed between a pair of outer fold edges 28B and 28C. Two of outer fold edges 26B and 28B form the marginal edges of the package's front panel 22, while the other two of the outer fold edges 26C and 28C form the marginal edges of the package's rear panel 24.

[0011] The outer fold edge 26B and the inner fold edge 26A define a first gusset panel 42A between them, while the outer fold edge 26C and the inner fold edge 26A define a second gusset panel 42B between them. The first and second gusset panels, 42A and 42B, respectively, are of the same width and are subadjacent, that is, lie

under, the marginal edge portions of the front and rear panels 22 and 24, respectively.

[0012] The outer fold edge 28B and the inner fold edge 28A1 of the gusset 28 define a first gusset panel 44A between them. The inner fold edge 28A1 and the inner fold edge 28A2 define a second gusset panel 44B between them. The inner fold edge 28A2 and the inner fold edge 28A3 define a third gusset panel 44C between them. The inner fold edge 28A3 and the outer fold edge 28C define a fourth gusset panel 44D between them. The first and fourth gusset panels 44A and 44D are subadjacent the marginal edge portions of the front and rear panels 26 and 28, respectively, while the second and third gusset panels, 44B and 44C are subadjacent the gusset panels 44A and 44D, respectively. Each of the gusset panels 44A - 44D is of the same width as the others and preferably the same width as the gusset panels 42A and 42B of the gusset 26.

[0013] As mentioned above the top portion of the package 20 includes transverse seal line 40. That seal line 40 is located a short distance below the top edge of the package and extends the full width of the package, i.e., between the outer fold edges 42B and 42C on one side of the package and the outer fold edges 44B and 44C on the other side of the package. Thus, the seal line encompasses the subadjacent panels of the two gussets 26 and 28 as well.

[0014] The seal line 40 is preferably formed so that it can be readily peeled open to form the mouth 50 of the package and thus provide access to the contents 10. To that end, the seal line 40 can be constructed in accordance with any conventional prior art technique, such as those disclosed in the aforementioned patents assigned to the same assignee as this invention. For example, a layer of coating of a peelable material 40A, such as shown in Fig. 2, may be disposed on the inner surfaces of the abutting panels forming the package's mouth at the seal line 40.

[0015] Since the seal line 40 is peelable, all that is required to open the mouth 50 of the package is to pull on the edges of the front and rear panels 22 and 24 above the transverse seal line 40 to break the seal line. This has the effect of opening or flattening the gussets contiguous with the top portion of the package. In particular, when the mouth 50 of the package is pulled open, as just described, the top portions of the panels 40A and 40B of the gusset 26 are flattened or coplanar and the top portions of the panels 42A - 42D of the gusset 28 flattened or coplanar as best seen in Fig. 4. Thus, the distance separating the outer fold edges 28B and 28C will be approximately double the distance separating the outer fold edges 26B and 26C, whereupon the mouth 50 of the package will be of a substantially larger area than if the package had two, single-fold gussets like gusset 26. This provides the user with easier access to the contents 10 of the package to enable the user to readily scoop the contents of the package.

[0016] It should be pointed out at this juncture that the

width of the panels of either of the gussets 26 and 28 can be selected as desired. Thus, a package 20 can be constructed in accordance with this invention wherein the panels of the double fold gusset 28 may be of a different width than the panels of the single fold gusset 26. In fact, the width of the any of the gusset panels of the double wall gusset may be different that the width of other panels of that gusset. Moreover, while the preferred embodiment of the package 20 is disclosed as having a single fold gusset 26 on one side and a double fold gusset 28 on the other side, such an arrangement is merely exemplary. To that end, both gussets can have double folds. In fact, the subject invention contemplates gussets having more than two folds, with the only limitation being the amount of flexible material desired to fabricate the package.

[0017] Without further elaboration the foregoing will so fully illustrate my invention that others may, by applying current or future knowledge, adopt the same for use under various conditions of service.

Claims

1. A package formed of a flexible material for holding a product therein, said package comprising a front panel, a rear panel, a first side gusset and a second side gusset, said front panel having a first side and a second side, said rear panel having a first side and a second side, said first side gusset connecting said first side of said front panel to said first side of said rear panel, said second side gusset connecting said second side of said front panel to said second side of said rear panel, one of said gussets including plural fold edges forming at least four gusset panels between said fold edges of said one gusset, the other of said gussets including plural fold edges forming at least two gusset panels between said fold edges of said other gusset, said panels and said gussets are arranged to be secured together to hold the product within said package and thereafter to be opened to form an enlarged mouth for said package to provide ready access to the product.
2. The package of Claim 1 wherein said gussets and said front and rear panels are releasably secured together at peelable seal line to form said enlarged mouth of said package.
3. The package of Claim 1 wherein said package is arranged to hold whole bean or ground coffee therein and includes a venting valve in one of said panels.
4. The package of Claim 3 wherein said venting valve is located in said front panel.
5. The package of Claim 3 wherein said package when filled with the product is in the range of 80 - 90 mm wide, 60 - 80 mm deep, and 150 to 250 mm tall.
6. The package of Claim 2 wherein said package is arranged to hold whole bean or ground coffee therein and includes a venting valve in one of said panels.
7. The package of Claim 6 wherein said venting valve is located in said front panel.
8. The package of Claim 6 wherein said package when filled with the product is in the range of 80 - 90 mm wide, 60 - 80 mm deep, and 150 to 250 mm tall.

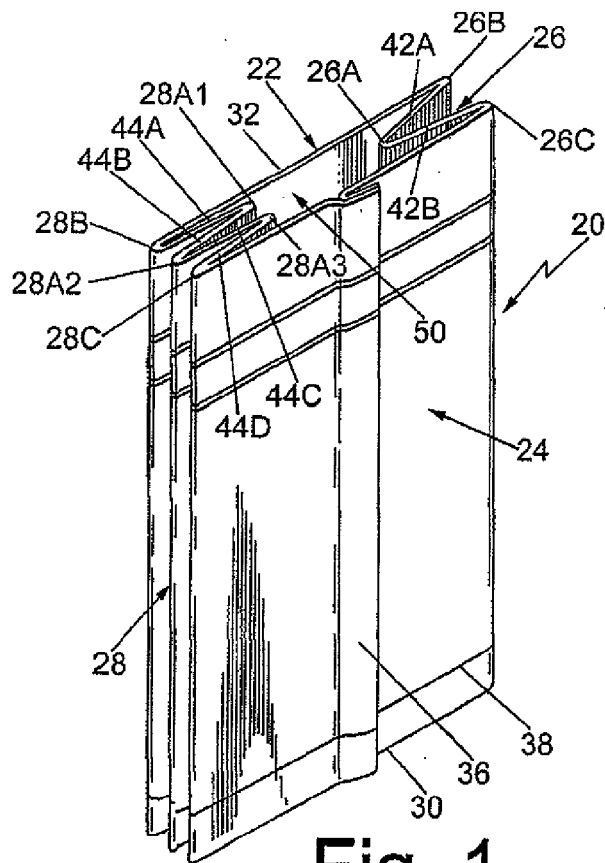


Fig. 1

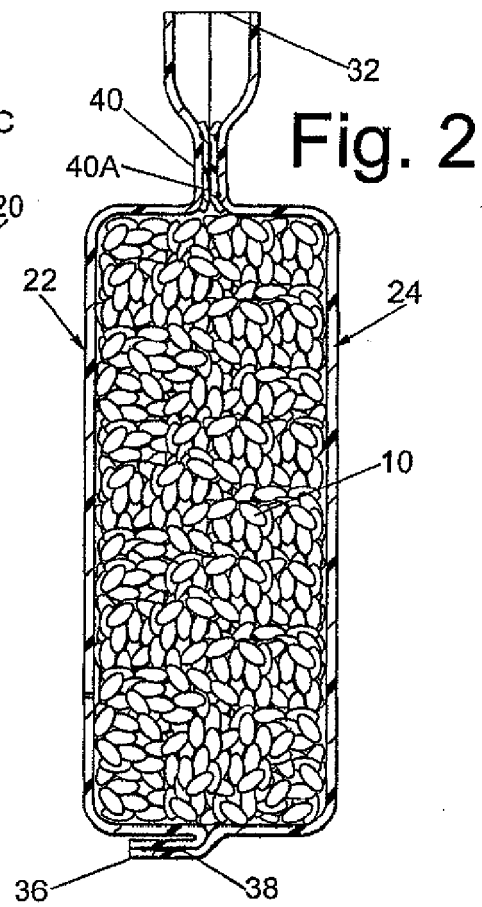


Fig. 2

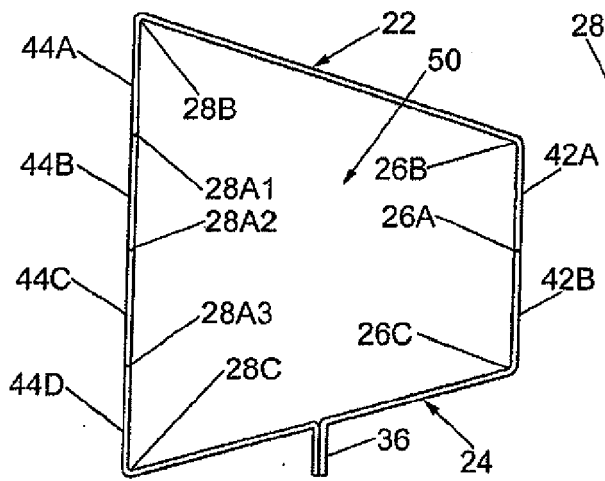


Fig. 3

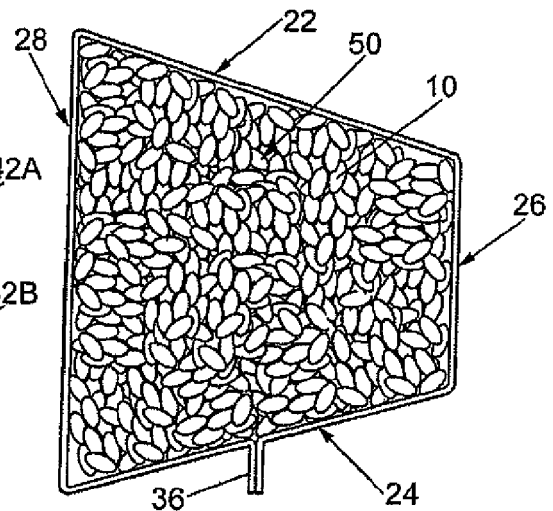


Fig. 4



EUROPEAN SEARCH REPORT

Application Number
EP 11 19 2911

DOCUMENTS CONSIDERED TO BE RELEVANT			
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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 17 February 2012	Examiner Leijten, René
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 11 19 2911

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17-02-2012

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