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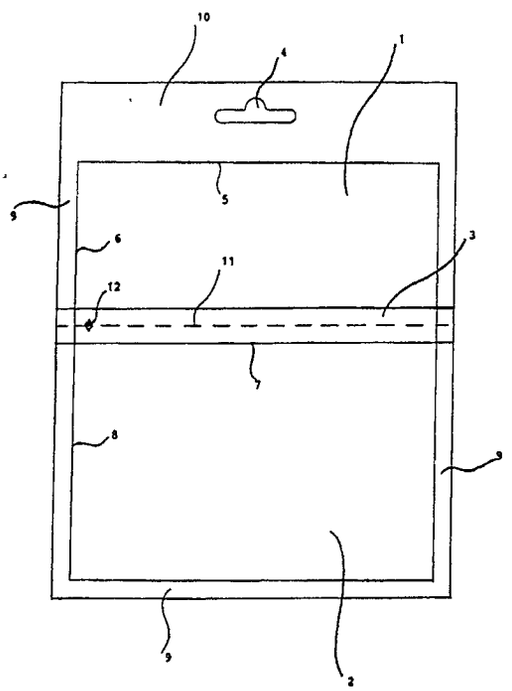
(54) A suspended bag.

(57) The invention relates to a suspended bag comprising two sheets of foil welded or bonded together at margins (9) thereof and a suspending means (4) arranged centrally at the top, whereby the interior space of the bag is subdivided into two chambers (1, 2) by a horizontally arranged welded or bonded seam (3) preferably in such a manner that each chamber forms a horizontally aligned rectangle, whose horizontal side length is substantially longer than its vertical side length.



EP 0 411 367 A1

A SUSPENDED BAG

The invention relates to a suspended bag consisting of two sheets of foil welded or bonded together along the margins thereof and a suspending means arranged centrally at the top.

The suspended bag in accordance with the invention is intended to separate the packaging of two different materials, particularly in the case wherein one packaged material is a solid with a low packing density and the other material is a liquid. The necessity of packaging such different materials together occurs for instance in the case of salad dressings when one component is in the form of finely comminuted herbs, which may be dried, and the other component is a two-phase one such as a salad dressing composed of salad oil, vinegar, water and spices.

Such a dried packaged material does not offer any resistance to external forces acting on the bag so that a bag with such a filling may be easily bent, dented and creased. On the other hand, such a liquid filling is difficult to package since (a) the oil is likely to get on the parts of the material to be seamed, (b) is sensitive to the atmosphere so that it sometimes has to be packaged under nitrogen, and (c) has a gas cushion in the package.

The suspended package in accordance with the present invention is able to meet all these requirements in an excellent manner and substantially ensures that the bag retains its shape, as well as offering other advantages.

It has been seen that a dual chamber bag with dimensions in accordance with the rule of the golden section (sectio aurea) as tentatively aimed at for esthetic reasons, is not suitable.

Therefore, in accordance with the present invention, it is proposed that the interior space of the bag be subdivided into two chambers, by a horizontally arranged welded or bonded seam, of which the upper chamber is smaller than the lower one and the welded or bonded seam dividing the two chambers from each other bears such a relationship to the dimensions of the overall bag that each of the two chambers form a horizontally aligned rectangle with a horizontal side length substantially longer than the vertical side length thereof.

The expressions "upper", "lower", "horizontal" and "vertical" are used herein as relating to the dependant bag which may be suspended using the top, centrally placed suspending means.

The invention will be described in detail with reference to the drawing.

The suspended bag in accordance with the present invention comprises two sheets of foil welded or bonded together at their margins. The interior space in the bag is subdivided by a horizontally extending welded or bonded seam 3 into two chambers 1 and 2. At the top the suspended bag has a centrally arranged suspending means 4.

It is necessary for the sheets of foil to be made of a suitable material selected in accordance with the requirements of the different materials to be packaged. Preferably the sheets of foil consist of a composite foil, a thin aluminum foil sheet has been found to be advantageous as one component of such a composite foil. For packaging a salad dressing the sheets of foil have to be in the form of a composite foil which is liquid- and gas-tight and is resitant to the components of the material to be packaged therein.

The upper chamber 1 of the suspended bag is to be smaller than the lower chamber 2. The dimensions and the placing of the welded or bonded seam 3, which separates the two chambers from each other, bear such a relationship to the overall dimensions of the suspended bag that the two chambers 1 and 2 each form a horizontally aligned rectangle, whose horizontal side length is substantially longer than its vertical side length. Preferably the external dimensions of the suspended bag are about 14 by 17 cm. It is convenient if the upper chamber is such that the ratio between its long side 5 to its short side 6 is about 12:5 and the lower chamber is such that the ratio of the long side 7 to the short side 8 is about 12:8.

In order to ensure a reliable closure or seal and also to ensure that the bag keeps its shape, the welded or bonded seams 3, 9 and 10 should be relatively broad. The central welded or bonded seam 3 between the chambers is to have a breadth of approximately 1.5 cm. The lateral welded or bonded seams 9 should have a breadth of approximately 0.8 cm and the upper welded or bonded seam 10 a breadth of approximately 2 to 3 cm. All of these dimensions are applicable in the case of the particularly preferred use of the suspended bag for packaging a salad dressing.

The suspended bag in accordance with the invention preferably has its upper chamber 1 filled with a solid material having a low packing density and a liquid material in the lower chamber 2.

The suspended bag is preferably used for packaging a salad dressing. In this case the upper chamber 1 of the suspended bag is filled with coarsely chopped and possibly dried herbs while the lower chamber is filled with the liquid portion of the salad dressing.

Once the bag in accordance with the invention has been filled with such materials, its advantageous properties will become particularly evident.

The relatively heavy material in the lower chamber will act as a weight on the bag so as to ensure that the upper chamber keeps its shape. Additionally, having the upper chamber filled with light material and the lower one with heavier material means that in the lower chamber there is a displacement of the center of gravity downwards so that the suspended bag is stabilized. Even though overfilling is avoided, the preferred size ratios of the chambers also prove to be advantageous for the filling operation and to prevent surface tension effects of the liquid fill leading to soiling of the seam which is welded or bonded after the filling operation.

Moreover, the size and shape of the lower chamber ensures that during shipping of the suspended bag, the liquid material is moved, so that in the case of a multi-phase material, such as a salad dressing or mayonnaise, the phases are kept in a satisfactorily mixed and possibly emulsified state.

It is convenient to have a line of weakness or a tear line 11 running through the center welded or bonded seam 3 and preferably parallel thereto so that the two chambers of the suspended bag may be separated from each other along this line.

It is convenient if a start-of-tear notch 12 is provided on both sides of the line of weakness or tearing 11 within the welded or bonded seam 3 at a distance from the outside of the suspended bag which is greater than the breadth of said welded or bonded seam 9. When the chambers of the suspended bag are detached along the line of weakness or tear line 11, this start-of-tear notch 12 will be on the outside of each of the parts of the separated suspended bag at such a position that the two chambers may be opened by tearing at the notch.

The supension means 4 at the top of the bag preferably include an opening within the upper welded or bonded seam 10. The type of opening is conventional.

Claims

1. A suspended bag comprising two sheets of foil welded or bonded together at margins thereof and a suspending means (4) arranged centrally at the top, characterized in that the interior space of the bag is subdivided into two chambers (1 and 2) by a horizontally arranged welded or bonded seam (3).

2. The suspended bag as claimed in claim 1 characterized in that the upper chamber (1) is smaller than the lower chamber (2).

3. The suspended bag as claimed in claim 1 or claim 2 characterized in that its dimensions and the placing of the welded or bonded seam (3) bear such a relationsnip to each other that the two chambers (1 and 2) each have the form of a horizontally aligned rectangle, whose horizontal side length is substantially longer than its vertical side length.

4. The suspended bag as claimed in claim 3 characterized in that the upper chamber (1) has a ratio of its long side (5) to its short side (6) of approximately 12:5 and the lower chamber (2) has a ratio of the long side (7) to the short side (8) of approximately 12:8.

5. The suspended bag as claimed in claim 4 characterized in that its external dimensions are approximately 14 by 17 cm.

6. The suspended bag as claimed in any one of the preceding claims characterized in that the welded or bonded seams (3, 9 and 10) are made relatively broad.

7. The suspended bag as claimed in claim 6 characterized in that the central welded or bonded seam (3) has a breadth of approximately 1.5 cm, the lateral welded or bonded seams (9) have a breadth of approximately 0.8 cm and the upper welded or bonded seam (1) has a breadth of approximately 2 to 3 cm.

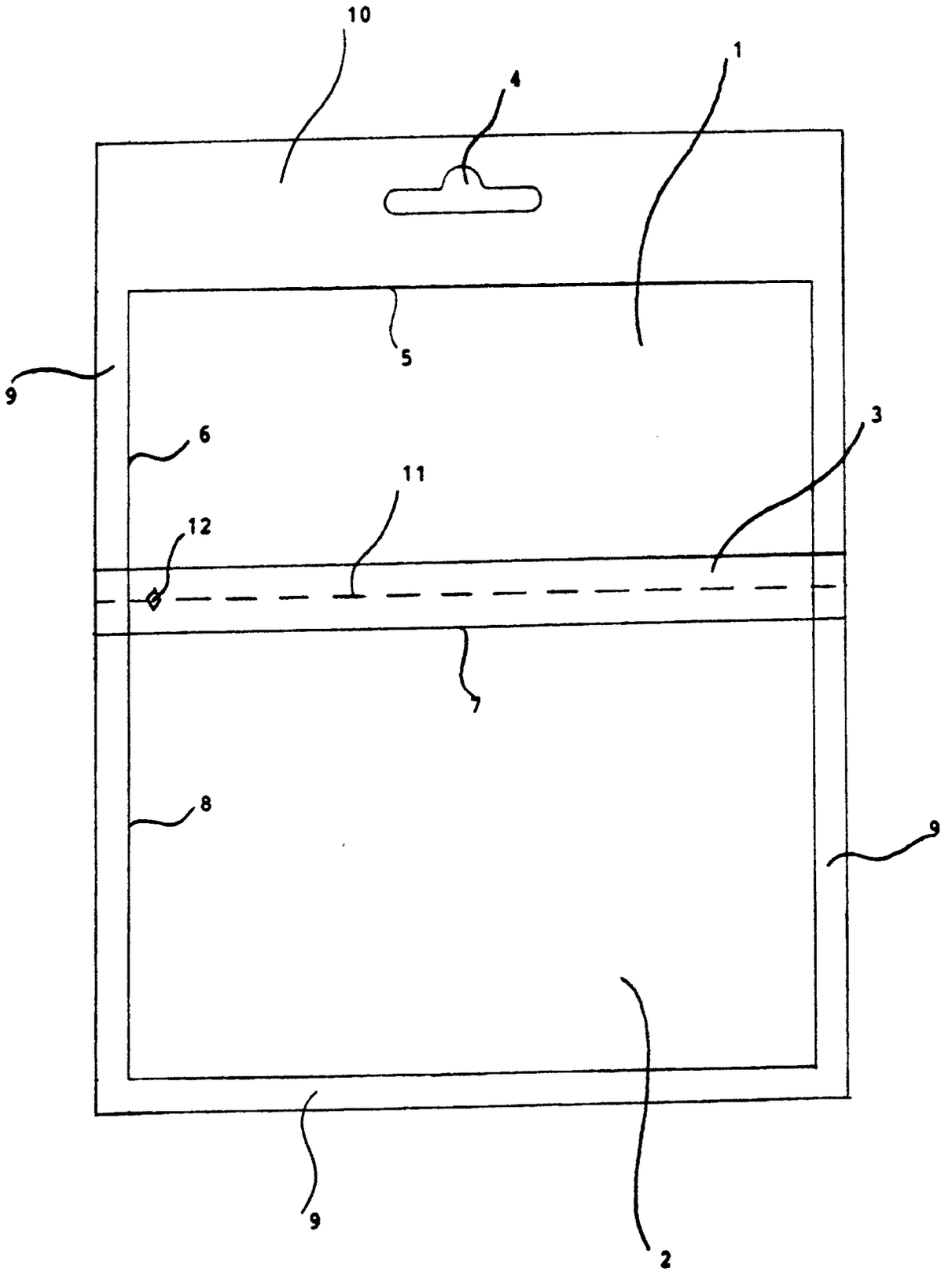
8. The suspended bag as claimed in any one of the preceding claims, characterized in that a line of weakness (11) or tear line is provided to extend through and be parallel to the middle of the central welded or bonded seam (3).

9. The suspended bag as claimed in claim 8 characterized in that a start-of-tear notch is provided on both sides of the line of weakness or tear line (11) within the welded or bonded seam (3) at a longer distance from the outer side of the suspended bag than the breadth of said welded or bonded seam (9).

10. The suspended bag as claimed in any one of the preceding claims characterized in that the suspending means (4) is in the form of an opening within the upper welded or bonded seam (10).

11. The suspended bag as claimed in any one of the preceding claims characterized in that the sheets of foil are made of a gas- and liquid-tight composite foil resistant to the components of the packaged material and which comprises a metal foil.

12. The suspended bag as claimed in any one preceding claim characterized in that the upper chamber (1) is filled with a solid material having a low packing density and the lower chamber (2) is filled with a liquid material.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EUROPEAN SEARCH REPORT

Application Number

EP 90 11 3465

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	US-A-3 623 249 (BROOKS) * column 2, lines 10-21; figure 1 *	1,3,8,10	B 65 D 81/32
A	DE-A-3 426 465 (HOSPIPHARM) * figure 1 *	2,8,12	

TECHNICAL FIELDS SEARCHED (Int. Cl.5)

B 65 D

The present search report has been drawn up for all claims

Place of search	Date of completion of search	Examiner
Berlin	11 October 90	LORENZ P A

CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone
Y: particularly relevant if combined with another document of the same catagory
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
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