(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 627 825 A1

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
22.02.2006 Bulletin 2006/08

(21) Application number: **04077341.8**

(22) Date of filing: **18.08.2004**

(51) Int Cl.:
B65D 81/34 *(2006.01)* ***B65D 1/42*** *(2006.01)*
B65D 25/42 *(2006.01)* ***B65D 25/28*** *(2006.01)*
B65D 25/20 *(2006.01)* ***B65D 21/02*** *(2006.01)*
B65D 51/20 *(2006.01)* ***B65D 51/16*** *(2006.01)*
A23L 1/39 *(2006.01)*

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL HR LT LV MK

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(54) Ready to use, microwavable, pourable sauce in a container

(57) The invention relates to a package (1) comprising sauce inside a sealed plastic container.

According to the present invention there is provided a sterilised package (1) comprising sauce inside a sealed plastic container, which sauce and container are heatable to serving temperature in a microwave oven, wherein the container comprises a bottom side; an enclosing side wall (2) extending from the bottom side; and a substantially open top side, provided with a plastic seal. The invention further provides a method for packaging a heatable sauce, comprising providing a plastic container of the present invention; filling the container with the sauce; then sealing the open top side with a plastic seal (3); sterilising the sealed container with the sauce; then cooling the sterilised container with the sauce; and optionally applying a lid (7) over the sealed top side. It further is directed to a container and to the use of such a container.

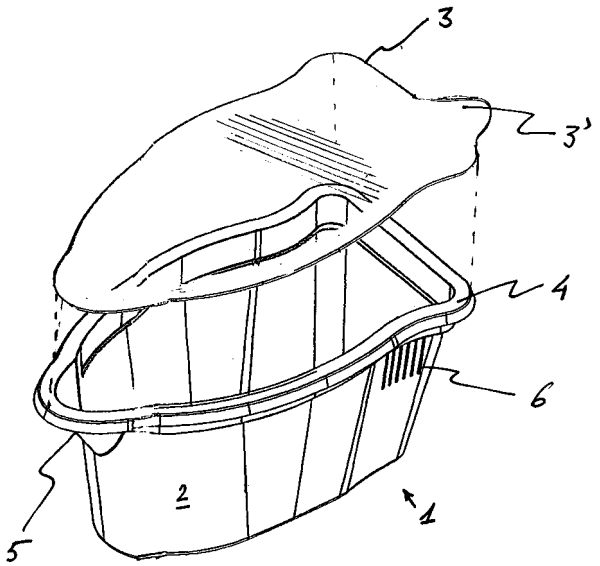

Fig. 1

EP 1 627 825 A1

Description

[0001] The invention relates to a package comprising sauce inside a sealed plastic container.

[0002] The average time spent by consumers for preparing hot meals has declined considerably in the last decade. Convenience in food preparing has become an important issue, as is illustrated by the popularity of microwave ovens in the preparation of full meals.

[0003] However, it has been found that the preparation of tasty warm sauces in microwaves is still a challenge. Warm sauces have a tendency to boil-over, unless the heating is carried out in a multi step heating process, with the requirement of manual stirring in between heating steps. Further, browning of the sauce due to excessive heating (Maillard reaction), is often observed. In addition, in sauces comprising garnish, *viz*. particles of considerable size (*e.g.* 1 mm or more), these particles tend to discolour and/or lose texture.

[0004] Further, the inventors realised that for reasons of convenience it would be desirable to allow both heating of the sauce in a microwave oven and the serving of the warm sauce in the package in which it is sold, whilst maintaining good flavour and scent. This combination of properties of container and content to make them suitable for microwaving is not readily feasible with existing packages.

[0005] In addition, it is desirable to provide a heatable sauce with a low amount of food grade additives such as preservatives, whilst maintaining a reasonably long shelf-life at ambient conditions.

[0006] It is an object of the present invention to provide a novel package comprising a heatable sauce, in particular a package that overcomes one or more of the problems identified herein.

[0007] It has now been found possible to provide a package of a heatable sauce that can be heated in the microwave and has a good shelf-life, with a specific container and which package has been treated in a specific manner.

[0008] Accordingly the present invention relates to a sterilised package comprising sauce inside a sealed plastic container, which sauce and container are heatable to serving temperature in a microwave oven, wherein the container comprises

- a bottom side;
- extending from the bottom side, an enclosing side wall; and
- a substantially open top side, provided with a plastic seal.

BRIEF DESCRIPTION OF THE FIGURES

[0009]

Fig. 1 is a schematic representation of a package in accordance with the present invention. Fig. 2 is a schematic side view of a package according to the present invention. Fig. 3 is a schematic representation of a lid for a package of the present invention. Fig. 4 shows schematically *inter alia* the bottom of the package of the present invention.

[0010] It has been found that a package according to the invention is particularly suitable to store the sauce for a period of 6 months or more, such as from 6 to 18 months.

[0011] Since the sauce can be heated in the microwave inside the container, its preparation is very convenient. Moreover in contrast to glass or earthenware, the material of which the container (plastic) is found to allow touching the container shortly after heating, without causing burns or the like.

[0012] It has further been found that that sensoric appreciation (taste, texture and smell) of a sauce heated by microwave in a container in accordance with the invention is good.

[0013] Within the context of the invention a sauce and container are in particular considered heatable to serving temperature in a microwave oven if the sauce inside the container can be heated to a temperature of at least 60 °C. More in particular, the sauce should remain a food-grade quality and the container should not deform to such an extent that its volume drops to a value below the volume of the sauce inside the container. Preferably, the container should substantially retain the shape it had before heating in the microwave.

[0014] When the terms "about", "essentially" and "substantially" are used herein, this is at least meant to include a deviation of up to 10 %, in particular of up to 5 %, more in particular of up to 2 %.

[0015] The term "essentially free" is used to describe that no traceable amount (as detectable by conventional means at the filing date) or only a minor amount of a particular component is present in the composition. In particular this term is used to indicate an amount of less than 0.5 wt. %, more in particular an amount of less than 0.1 wt. % of the component of which the composition is essentially free.

[0016] The term bottom-side is used herein to describe the side that would normally be horizontally at the underside of the container when put at rest on a horizontal surface, such that it prevents the sauce from flowing out of the container, also if the top side is not provided with a seal or other closure. Other terms indicating a direction, such as top, vertical or horizontal are to be understood as relative to the bottom side.

[0017] The term sterilised is in particular used herein to indicate that the contents of the container (the sauce) have been treated to achieve an Fo value of at least 3, preferably at least 5. The concept of Fo value is generally known in the art and e.g. described in ECFF Guide 6 (21 April 1993). In particular a value of 3, provides effective killing of Clostridium Botulinium. A value of 5 indicates that a product can be stored at up to 20 °C and remains

consumable for at least about 3 days after opening (and proper treatment) and subsequent cooling in a fridge (at about 4 °C).

[0018] The term "sauce" is defined herein as a pourable food product. Typically, a sauce is served with food to improve its taste. In the context of the invention, a sauce is typically intended to be served warm, and thus maintains or gets a desired appearance at a temperature of at least about 60 °C.

[0019] Usually a sauce is based upon water and at least one food ingredient selected from oils and fats, pastes of a plant material such as tomato paste, a starch,(dried) milk constituents, egg constituents (*e.g.* egg yolk, flavouring agent (salt, herbs, spices, aroma, glucose syrup, broth), particles formed of plant material (e.g. mushrooms, carrots, peppers, tomatoes or other vegetable etc.), emulsifier, thickening agent and the like.

[0020] In principle, the product of the present invention comprises a purely vegetable based sauce, but the addition of non-vegetable or a non-vegetable based ingredients is not excluded. Tasty sauce has been prepared though in the absence thereof.

[0021] Suitable sauces which can be present in a package include sauces in comprising a oil-in-water emulsion (optionally with added solids, such as food chunks). Preferred examples thereof are pepper sauce, vegetable sauce, mushroom sauce, curry sauce, cheese sauce, stroganoff sauce and satay sauce (an oriental style peanut butter based sauce).

[0022] Another suitable sauce is a sauce based upon tomato paste, such as pasta sauce.

[0023] Surprisingly, it is according to the present invention not necessary to add preserving agent in order to maintain a good shelf-life. Accordingly there is no need to acidify the sauce. Thus a sauce according to the invention may suitably be mildly acidic (as is the case for tomato based sauce due to the acidic nature of tomato paste) to neutral. In particular the pH is preferably in the range of about 5.2 to 7, thus providing a mild product.

[0024] In particular for a sauce comprising a oil/water emulsion the pH more preferably is about 6.0 to 6.7. It is surprising that these sauces, which are nearly neutral in pH can still be provided with such a long shelf life in accordance with the present invention. According to the present inventors' best knowledge, these types of long shelf life sauces, which are ready to use in a microwave are not commercially available. Consequently, in a further aspect the present invention is directed to a sterile sauce having a pH of from 6.0 to 6.7.

[0025] It has been found that in accordance with the invention, relatively large food particles such as (parts) of mushrooms and/or other vegetables, can be present in the sauce, whilst maintaining good heating throughout the sauce and maintaining good sensoric properties. In particular particles may be present having a diameter, as determined by the enveloping circle, of at least 4 mm, more in particular of at least 1 cm, up to 2 cm or even more, may be present.

[0026] It has further been found that improved taste is achieved (after heating in a microwave oven) when a considerable amount of the fat (lipid) present in the sauce is a solid fat, *i.e.* a fat that is solid at 20 °C (and atmospheric pressure), instead of liquid oil, which is conventionally used to prepare warm sauces. Preferably such fat is of plant origin, such as palm oil or coconut oil. Preferably at least 50 wt.% of the lipid content is formed by one or more solid fats, more preferably about 90-100 wt.% of the lipid content is solid fat, in particular palm oil.

[0027] The total lipid content is preferably up to about 15 wt. %, more preferably up to about 7.5 wt.%.

[0028] The lower limit depends upon the nature of the application. For instance a sauce based upon tomato paste, such as pasta sauce usually comprises hardly any added fat, if any at all. For sauces comprising an oil/water emulsion, the lipid content is preferably at least about 5 wt.%.

[0029] As a plastic for the material, in principle any food grade plastic may be used that is sufficiently stable under sterilising conditions and when heated with the sauce in a microwave oven.

[0030] It was found that a thermoplastic polymer, in particular a polyolefin, having a melting point of 130 °C or more, e.g. up to 170 °C is particularly suitable.

[0031] Good results have been achieved with such a polymer having a density of 0.9-1.0 g/cc and a bulk density of 0.5-0.6 g/cc.

[0032] Very good results have been achieved with a polypropylene copolymer, in particular a block copolymer. A commercially available material is BH345MO™ by Borealis.

[0033] As described above, a container, such as in a package according to the invention is made of plastic and comprises container comprises

- a bottom side;
- extending from the bottom side, an enclosing side wall; and
- a substantially open top side, provided with a plastic seal.

Further one or more of the following features are usually present.

The container has an elongated shape. An elongated shape results in a relatively high container surface to volume ratio, compared to an essentially spherical of cubic shape. It has been found that this is of advantage to the sensoric appreciation of the sauce after preparation. Without being bound by theory, it is thought that this is due to heating effects during sterilisation and/or preparation in the microwave.

It has further been found that centre distance of the container (*viz.* the shortest distance of the centre of the container to the wall) plays a role in the product quality, in particular sensoric appreciation of warm sauce. In addition, the centre distance has been found to be of considerable importance to the sterilising behaviour, thus affecting shelf life and also

taste. Good results have been achieved with a package wherein the centre distance of the container is less than about 2.5 cm, in particular less than about 2.25 cm. If the centre distance is more than 2.5 cm, it becomes more difficult to obtain a homogeneously sterilised product and also a homogeneously heated hot sauce.

Preferably, the end opposite to the bottom side is provided with an edge for attaching the seal, preferably having a width of at least about 2 mm.

For convenience in use, it is advantageous to provide the container with a spout. This allows easy serving directly form the container. Preferably, the container comprises a pouring spout extending to the top side of the container, said spout having a pour opening in the plane of the topside of the container. More preferably it is present at one of the short ends of a container with an elongate shape.

For improving the shape stability during heating (either in the microwave oven or during sterilisation), it is preferred to provide the side wall with reinforcing protuberances, in particular reinforcing ribs. Such ribs can be present at the inner or outer surface of the side wall, e.g. in the form of essentially vertical strips. Such may advantageously be provided as an integral part of the container.

For convenience, at an outer surface of the side wall is provided with a gripping aid, in particular gripping ribs, said gripping aids preferably being positioned in the upper half of the side wall. More preferably to sets of grips are positioned opposite to each other at the opposite elongate part of the side walls. When a spout is present, such grips are preferably placed remote from the spout.

The container is preferably a moulded container, e.g. formed by injection moulding. If provided with a label, the label is preferably applied by In Mould Labelled labelling. This has been found particularly advantageous with respect to the sterilisation, in particular when sterilising under humid conditions, e.g. in an autoclave. The label is preferably printed with UV ink. In particular when a label is present at the outer surface of the bottom side, it has been found advantageous to provide the outer surface of the bottom side with a raised rim. Thus the label can be prevented from deterioration when moving the bottom side over a surface.

The seal preferably comprises a lip for tearing off the seal. Suitable materials for the lid are known in the art, e.g. pealable, cast polyolefins. The seal should also be suitable for sterilisation, and may e.g. have the properties as described for the container with respect to melting temperature. Particular suitable are (laminates comprising) polypropylene (co-)polymers, in particular a laminated structure comprising cast polypropylene and nylon. Such seals are commercially available.

It is further advantageous to provide the container with a plastic lid covering the topside and the seal. Thus, the seal is protected. Further this lid can advantageously be used during heating in the microwave, to prevent excessive loss of fluids from the sauce. In particular, the lid may be made of any food grade plastic that is sufficiently stable when heated with the sauce. *E.g.* a polymer such as described for the container generally suffices. It is generally not necessary that the material can be sterilised.

In view of the use of the lid in the microwave oven, the lid preferably comprises vent holes. In case the container (and thus the lid) are elongate, these may suitably be placed near the short ends of the lid. The ventholes allow a controlled release of steam, from the sauce.

For ease of stapling it has been found advantageous to provide the upper surface of the lid with a raised rim fit to confine the bottom side of the container.

The invention further relates to a method for packaging a heatable sauce, as defined in any of the preceding claim, comprising

- providing a plastic container, as defined hereinabove;
- filling the container with the sauce; then
- sealing the open top side with a plastic seal;
- sterilising the sealed container containing the sauce; then
- cooling the sterilised container containing the sauce; and
- optionally applying a lid over the sealed top side.

[0034] The sterilising preferably takes place while rotating the filled container. This also avoids undesired gel forming. Particularly suitable is a rotating speed of at least about 4 rotations per minute, e.g. about 5-6 rpm. Rotation has been found very advantageous for maintaining a good quality and avoiding browning of the sauce, especially when a container with a spout is used.

[0035] The sterilising preferably takes place by heating, in particular in an autoclave. Very good results have *inter alia* been achieved with a sterilisation at about 110-120 °C and/or for a duration of 15 minutes to 2.5 hours. Preferably the sterilisation is carried out at about 117 °C during 1 hour, or under equivalent conditions.

[0036] Other means of sterilisation processes are also possible within the scope of the present invention, for instance by providing a stream of sterilised sauce and filing the containers with the sterilised sauce.

[0037] The invention further relates to a method of preparing a sauce, comprising, removing the seal of a package as defined herein, and thereafter heating the sauce in the container, using a microwave oven. Preferably the top side of the container is covered with the lid as defined herein, during the heating.

[0038] The invention further relates to a plastic container as described herein, for holding a heatable sauce, optionally provided with the seal and/or the lid.

[0039] The invention further relates to the use of a con-

tainer of the present invention for heating a sauce in a microwave oven.

[0040] Fig. 1 is a schematic representation of a package (1) in accordance with the present invention. In particular, this figure shows the container having an enclosing side wall (2) and a plastic foil, which serves as a seal (3) and which is brought into place at edge or rim (4), as indicated by the dashed lines in Fig. 1, thus sealing the package. The foil (3) for the seal is preferably made from transparent or translucent plastic, preferably based on polyolefins, more preferably polypropylene. Preferably the polypropylene or other foil exhibits a small amount of shrink when brought at sterilising temperatures (e.g. at 117 °C), since this provides for the effect that the foil forms a concave surface after sterilisation and cooling, which provides for a good check that the package is maintained vacuum and sterile during transport and storage. The plastic seal may comprise a portion 3', which is a lip that assists in opening the package by tearing the foil from the edge (4) thus opening the seal. Preferably the lip (3') is provided on the left hand side of the package (as seen from the backside of the container as shown in Fig. 1), since this facilitates opening of the package by a user by holding the package at rims (6) using the thumb and index finger of the left hand and pulling at lip (3') using the right hand. It was found that this manner of opening the package is preferred by the majority of right-handed users, which form the majority of all consumers. The package of Fig. 1 is provided with gripping ribs (6), which ribs assist in getting a firm grip on the package by the user, typically by using thumb and index finger, and at the same time provide for a cooling effect so as to avoid subjecting the user's skin to temperatures that are too high. The edge (4) at which the foil (3) is applied to form the seal, should be wide enough to ensure that the package withstands the sterilising (autoclaving) conditions and that the contents of the package maintains sterile after the sterilisation and cooling step. For this reason it is preferred that the width of edge (4) is at least 2 mm, more preferably at least 2.5 mm, in particular between 3 and 4 mm. The package is further provided with a pouring spout (5), which assists in pouring the sauce after heating when it is ready for use.

[0041] Fig. 2 is a schematic side view. By way of example, typically the container measures 5.8 cm x 12.7 cm x 7.2 cm (height x length x width). At these dimensions it is still possible to obtain a core temperature that is sufficiently high to sterilise the sauce. A suitable filling volume for these dimensions is approximately 200 ml. This is also a desirable amount from a consumer's point of view. Packages of these dimensions are in addition suitable for pellet-stacking in a collomodule environment.

[0042] Fig. 3 schematically shows a lid (7) that can be used to apply on the container to form the package of the present invention. The lid may be applied to the container after the sterilising process. The lid (7) is preferably made from a non-transparent plastic, which may be given a colour to provide a desirable appeal on the product. During transport to the outlet point, *e.g.* shops, as well as when placed on the shelves in the shops, the lid enables stacking of two or more packages and protects the seal from being damaged. A further function of the lid is when the package is opened by the user by removing the seal (3) prior to heating the sauce in the microwave. It was found that the heating process is improved considerably when the lid (7) is provided with one or more venting holes (8). Preferably a multitude of holes, such as 4 to 10, *e.g.* 6, is present, which holes may be more or less evenly distributed over the surface of the lid. The diameter of each of the holes is preferably from 1 to 3 mm, more preferably approximately 2 mm. The total area of the holes for a 5.8 cm $\times$ 12.7 cm $\times$ 7.2 cm package, is preferably approximately between 10 and 30 mm^2, more preferably about 20 mm^2. This on the one hand ensures that no excessive pressure is built up during the microwave heating process and on the other hand avoids that too much water evaporates from the sauce during the microwave heating process.

[0043] Fig. 4 shows schematically the bottom and the side wall of a package in accordance with the present invention. In this particular embodiment the bottom (9) is provided with a protruding rim (10), which typically has a height of approximately 0.5 to 2 mm, *e.g.* about 1 mm. This rim (10) provides for the advantage that the printed bottom (9), which may *e.g.* bear the barcode of the package product of the present invention, is protected from wear. This is important, because damaged barcodes may result in scan failure during check out *e.g.* at the supermarket, which can be economically very disadvantageous. Also in Fig. 4 reinforcing rims (11) are indicated, which may be present on the inside and/or outside of the enclosing side wall (2). These reinforcing rims (11) may serve to provide extra mechanical stability to the container.

Claims

1. Sterilised package comprising sauce inside a sealed plastic container, which sauce and container are heatable to serving temperature in a microwave oven, wherein
   the container comprises
   - a bottom side;
   - an enclosing side wall extending from the bottom side; and
   - a substantially open top side, provided with a plastic seal.

2. Package according to claim 1, wherein the sauce is essentially free of added preserving agents.

3. Package according to claim 1 or 2, wherein the sauce comprises garnish, preferably with a diameter, as determined by the enveloping circle, of at least 4

mm, more preferably at least 6 mm.

4. Package according to any of the preceding claims, wherein the sauce is essentially free of meat and meat based materials.

5. Package according to any of the preceding claims, wherein the sauce is an emulsion of lipid and water.

6. Package according to any of the preceding claims, wherein at least 50 wt.% of the lipid content, preferably substantially all the lipid content, is formed by one or more lipids that are solid at 20 °C.

7. Package according to any of the preceding claims, wherein the sauce has been sterilised to an F_0 value of at least 3, preferably at least 5.

8. Package according to any of the preceding claims, wherein the container has an elongated shape.

9. Package according to any of the preceding claims, wherein the end opposite to the bottom side is provided with an edge for attaching the seal, preferably having a width of at least about 2 mm.

10. Package according to any of the preceding claims, wherein the centre distance of the container is less than about 2.5 cm, preferably less than about 2.25 cm.

11. Package according to any of the preceding claims, wherein the container comprises a pouring spout extending to the top side of the container, said spout having a pour opening in the plane of the topside of the container.

12. Package according to any of the preceding claims, wherein the side wall is provided with reinforcing protuberances, in particular reinforcing ribs.

13. Package according to any of the preceding claims, wherein the outer surface of the side wall is provided with a gripping aid, in particular gripping ribs, said gripping aids preferably being positioned in the upper half of the side wall, more preferably at the elongate part of the side walls.

14. Package according to any of the preceding claims, wherein the outer surface of the container comprises an In Mould Labelled label.

15. Package according to any of the preceding claims, wherein the outer surface of the bottom side comprises a raised rim.

16. Package according to any of the preceding claims, wherein the seal comprises a lip for tearing off the seal.

17. Package according to any of the preceding claims, provided with a plastic lid covering the topside and the seal.

18. Package according to any of the preceding claims, wherein the lid comprises vent holes.

19. Package according to any of the preceding claims, wherein the upper surface of the lid comprises a raised rim fit to confine the bottom side of the container.

20. Method for packaging a heatable sauce, as defined in any of the preceding claim, comprising

- providing a plastic container, as defined in any of the preceding claims;
- filling the container with the sauce; then
- sealing the open top side with a plastic seal;
- sterilising the sealed container with the sauce; then
- cooling the sterilised container with the sauce; and
- optionally applying a lid over the sealed top side.

21. Method according to claim 20, wherein the sterilising takes place while rotating the container.

22. Method according to claim 20 or 21, wherein the sterilising takes place in an autoclave.

23. Method of preparing a sauce, comprising, removing the seal of a package as defined in any of the claims 1-19, and thereafter heating the sauce in the container, using a microwave oven.

24. Method according to claim 21, wherein the top side of the container is covered with the lid as defined in claims 17-19, during the heating.

25. Container for holding a heatable sauce as defined in any of the claims 8-19, optionally provided with a seal and/or a lid.

26. Use of a container according to claim 25 for heating a sauce in a microwave oven.

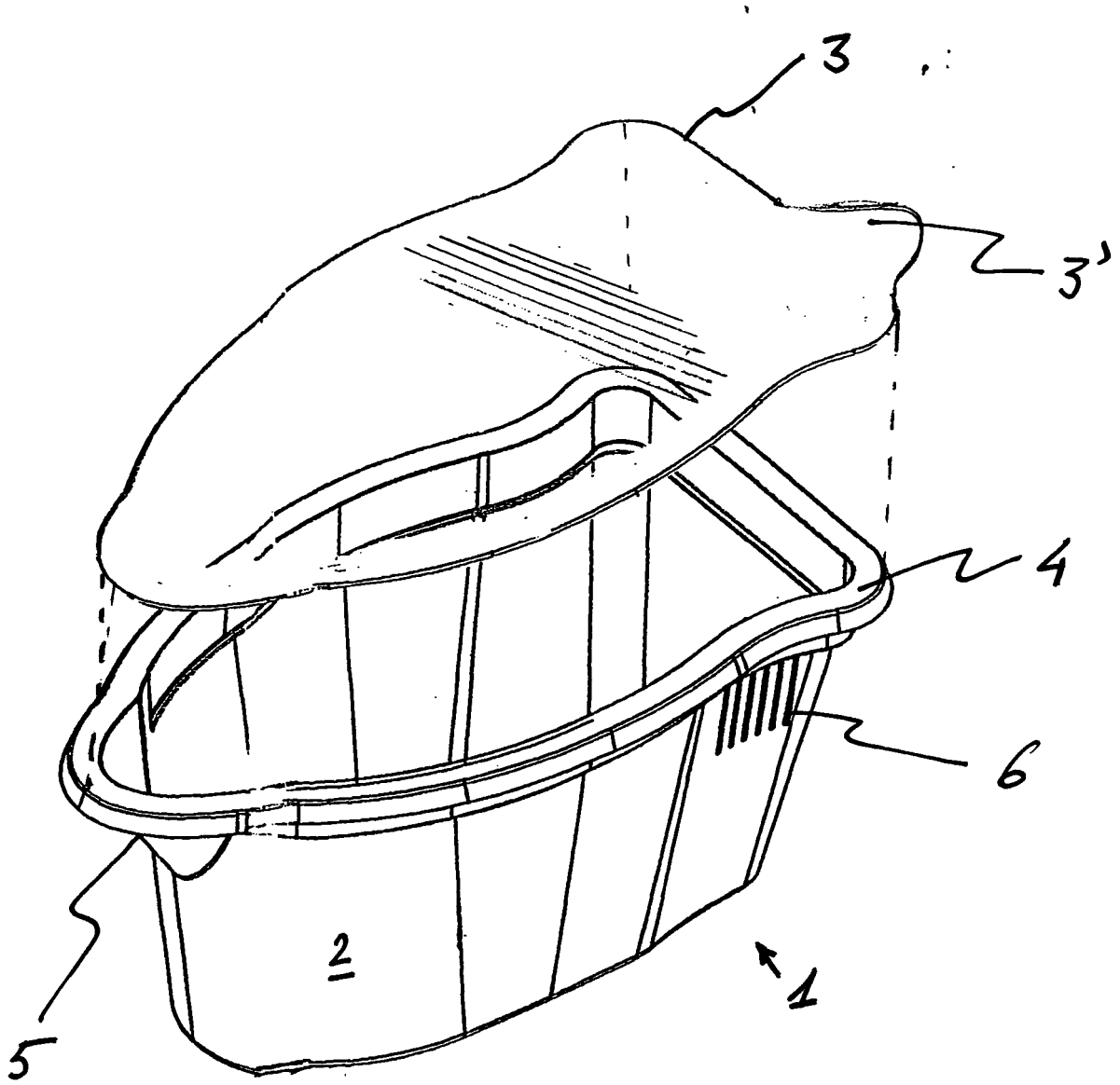

Fig. 1

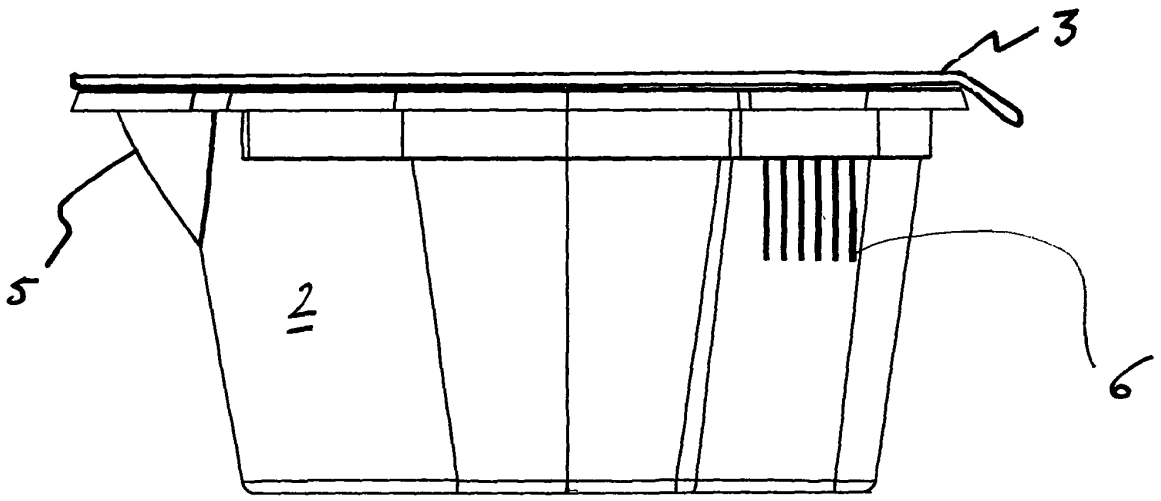

Fig. 2

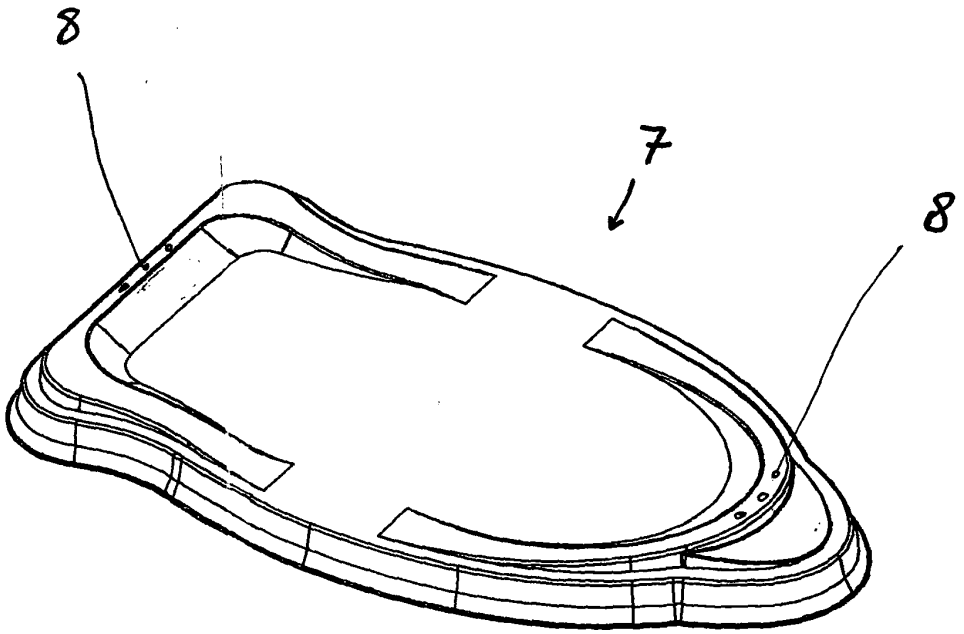

Fig. 3

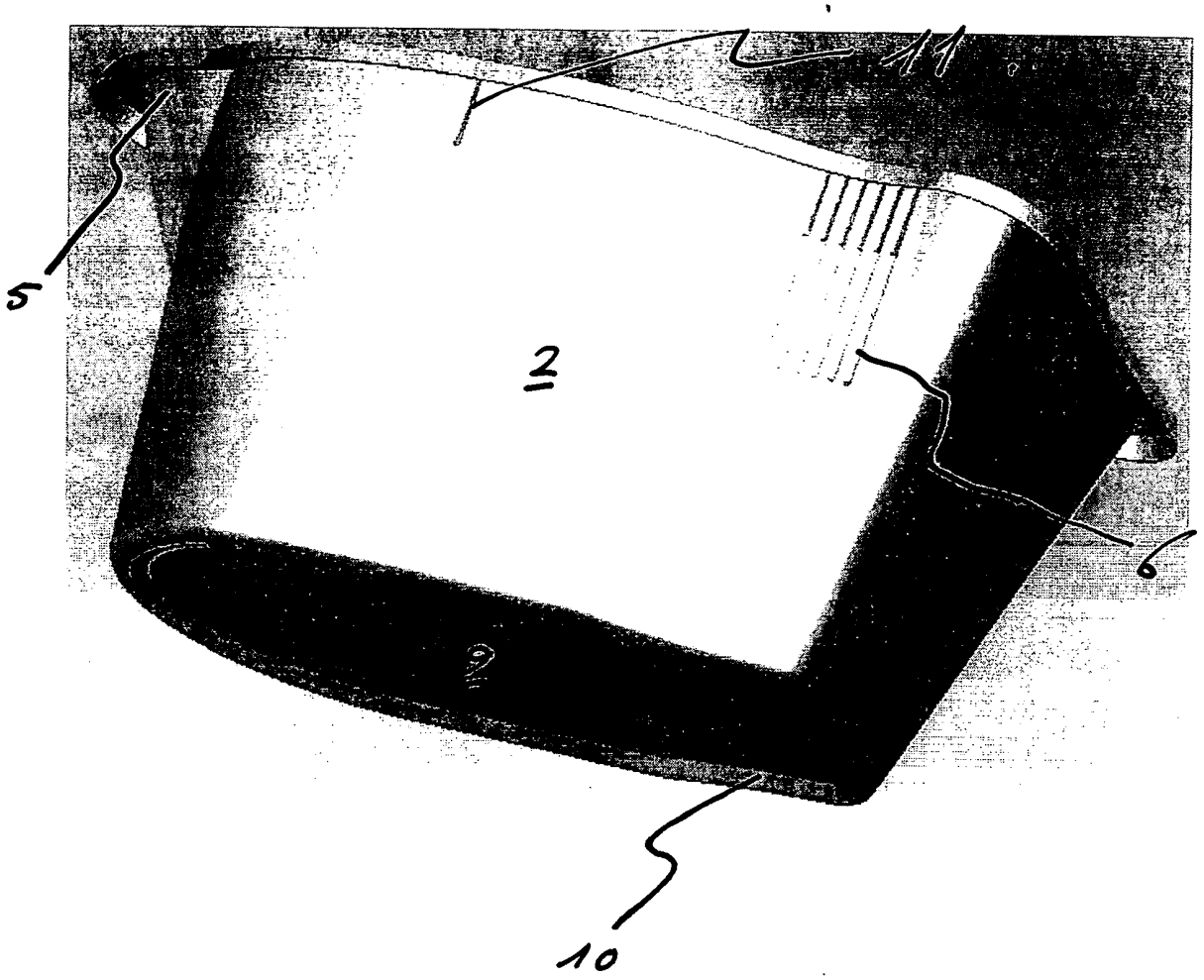

Fig. 4

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 04 07 7341

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.7)
X	US 5 085 348 A (VAN MEIR EUGENE ET AL) 4 February 1992 (1992-02-04) * column 3, lines 9-62; figure 1 *	1-7	B65D81/34 B65D1/42 B65D25/42 B65D25/28
X	US 2003/141218 A1 (JOHNSON MITCHEL EMANUEL ET AL) 31 July 2003 (2003-07-31) * paragraph '0026!; figure 4 *	1-7	B65D25/20 B65D21/02 B65D51/20 B65D51/16
X	FR 2 765 468 A (FLEURY MICHON) 8 January 1999 (1999-01-08) * page 6, lines 1-28; claim 8; figure 3 *	1	A23L1/39
X	PATENT ABSTRACTS OF JAPAN vol. 2003, no. 12, 5 December 2003 (2003-12-05) & JP 2003 341698 A (TOPPAN PRINTING CO LTD), 3 December 2003 (2003-12-03)	1-7,23, 26	
Y	* abstract *	20-22,24	
X	PATENT ABSTRACTS OF JAPAN vol. 2003, no. 12, 5 December 2003 (2003-12-05) & JP 2004 083073 A (MEIWA PAX CO LTD), 18 March 2004 (2004-03-18) * abstract *	1-7,23, 26	TECHNICAL FIELDS SEARCHED (Int.Cl.7) B65D A23L B65B
Y	DE 44 42 709 A1 (HERMANN STOCK MASCHINENFABRIK GMBH, 24537 NEUMUENSTER, DE) 13 June 1996 (1996-06-13) * column 3, line 41 - column 4, line 54; claims 1,2 *	20,22,24	
Y	GB 1 220 849 A (MARIETTE OTT; P.J. SPECK) 27 January 1971 (1971-01-27) * page 2, line 105 - page 4, line 26 *	21	

~~The present search report has been drawn up for all claims~~

Place of search	Date of completion of the search	Examiner
Munich	10 May 2005	Cazacu, C

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

EPO FORM 1503 03.82 (P04C01)

European Patent Office

Application Number
EP 04 07 7341

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☒ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

1-7 and 20-24, 26

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

European Patent Office

LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 04 07 7341

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-7

type of sauce (for claims 2-7)
---

2. claims: 8, 10, 25

elongated shape of the package
---

3. claim: 9

edge of the package
---

4. claim: 11

pouring spout
---

5. claim: 12

reinforcing protuberances
---

6. claim: 13

gripping aid
---

7. claim: 14

label
---

8. claim: 16

seal lip
---

9. claim: 17

plastic lid
---

10. claim: 18

vent holes
---

11. claims: 15, 19

European Patent Office

LACK OF UNITY OF INVENTION SHEET B

Application Number
EP 04 07 7341

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

bottom/rim fit
---

12. claims: 20-24, 26

methods of sterilising/using the package

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 04 07 7341

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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

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