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(54) **Package.**

(57) A disposable package for cooking or heating foodstuffs comprises a heat resistant container (8) made of disposable material and at least one semi-permeable partition (12). The container is divided into upper (13) and lower (14) compartments by the partition. The upper compartment contains the foodstuff to be cooked or heated and the lowermost compartment contains an edible substance comprising aroma and/or flavouring materials. Foodstuffs can be cooked or heated uniformly and at constant temperature using this package.

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Description

PACKAGE

The invention relates to a disposable package for cooking, or heating foodstuffs.

Disposable packages for foodstuffs, such as frozen meals, in which the foodstuffs can be heated or cooked are known. One of the problems associated with such packages is that the foodstuffs are often not cooked or heated uniformly.

We have now found a disposable package that can be used to cook or heat foodstuffs uniformly and at constant temperature in a relatively short period of time, irrespective of the heating source used.

Thus according to the invention there is provided a disposable package for cooking or heating foodstuffs, comprising a heat resistant container, made of disposable material, and divided into at least an upper and lower compartment by a steam-permeable partition, wherein the lowermost compartment contains an edible substance comprising aroma and/or flavouring components and at least one of the other compartments contains the foodstuffs.

Preferably the heat-resistant container is made of aluminium.

The foodstuff to be cooked or heated is preferably contained in the uppermost compartment of the container. The uppermost compartment is the compartment which, during normal use, is closest to the top of the package. The lowermost compartment is the compartment which, during normal use, is closest to the bottom of the package.

The steam-permeable partition may be a perforated partition wall. Preferably the partition is made of a heat-resistant material such as PET, any other heat-resistant plastic or perforated aluminium. If only one partition is used, it is preferably located within container so that it is substantially horizontal with respect to the top or bottom of the package during normal use.

Foodstuffs suitable for cooking or heating are for example foodstuffs composed of loose units such as beans, peas, asparagus, brussels sprouts, potatoes as well as meat pieces such as chicken, veal, beef, fish and pork. Larger pieces of fish, meat and vegetables can also be cooked or heated. The foodstuffs are preferably frozen, although foodstuffs which are chilled or stored at ambient temperature can also be used. Optionally, the foodstuff can be raw or at least partly cooked or baked. Upon heating the foodstuff may be further cooked to give a fully cooked product suitable for direct consumption.

The edible substance, which comprises aroma and/or flavouring components, produces an aromatised or flavoured steam on heating. This can improve the smell and/or taste of the foodstuff after cooking or heating. The edible substance can, for example, be seasoned water, broth and mixtures of fat and water, such as butter and water. To generate sufficient steam during heating, it is preferred that the edible substance comprises at least 80% by weight of water.

Preferably the foodstuff to be cooked or heated and/or the edible substance is frozen or relatively viscous at storage temperatures to prevent admixture of the edible substance and the foodstuff when stored in the disposable package according to the invention.

Optimum cooking or heating is achieved when the weight ratio of the edible substance to the foodstuff is less than 1:3 and is preferably about 1:4.

To facilitate removal of the foodstuff from the package after cooking or heating it is preferred that the container is provided with a lid which is easily removed. Suitable lids are for example, plastic lids or removable foils which are attached to the container, such as aluminium foil.

Preferably, the lid of the container is provided with one or more venting holes which, during use, prevent the generation of excess pressure in the container. These venting holes can be made by piercing holes in the lid prior to heating the package. The escape of steam through the venting holes indicates that the cooking or heating process has commenced.

Preferably the edible substance is removed after cooking or heating the foodstuff. The package is therefore, preferably provided with means for opening the lowermost compartment, such as a removable bottom. Most preferably the steam permeable partition is removable. In use, this partition is removed after the removal of the cooked or heated foodstuffs. Thereafter the edible substance can be taken from the lowermost compartment and, if suitable, used as a sauce to accompany the foodstuff. The removable partition may be provided with two strips, standing up from the partition, which can be used as gripping means.

The package according to the invention can be heated in a variety of ways, such as in a gas oven, hot-air oven, or microwave oven. Particularly preferred is heating the package on an open flame, such as on a gas-cooker or on a single-burner gas-cooker commonly referred to as a camping stove. Due to the fact that the steam generated has a temperature of about 100° C, the required cooking or heating time is independent of the heating source from the moment that steam is generated. Due to the high efficiency of contact between the foodstuffs and the steam, a uniformly heated product may be obtained. If it is desired to increase the area of contact between the foodstuff to be cooked or heated and the steam, a partition in the form of zig-zag can be used.

If more than one foodstuff is to be cooked or heated, further steam-permeable partitions may be arranged in the container.

If two foodstuffs are to be cooked or heated separately, two horizontal steam-permeable partitions are used to form three superimposed compartments within the container. The lowermost compartment contains the edible substance, and the two upper compartments contain the respective foodstuffs.

Alternatively it is possible to use one horizontal steam-permeable partition to separate the container into upper and lower compartments and a vertical partition, which may also be steam-permeable. The vertical partition separates the upper compartment into two juxtaposed compartments.

The invention is further illustrated in the following figures in which preferred embodiments of the package according to the invention are shown:

Figure 1 is a first embodiment of a package according to the invention.

Figure 2 is a second embodiment of a package according to the invention.

Figure 3 is a third embodiment of a package according to the invention.

Figure 1 shows a package comprising a heat-resistant container 1, made of aluminium, and a removable aluminium foil lid 2 attached to the container at its rim. Venting holes 3 are arranged in the lid. The container is separated into two compartments by a perforated aluminium partition 4 which has been folded into a zig-zag shape. The container 1 is provided with a shoulder 5 on the inner surface thereof. The partion 4 is supported by this shoulder 5. The upper compartment 6 contains a frozen meal 7 which comprises 400g of a mixture of precooked beans and pieces of par-fried meat and pieces of raw carrots. The lowermost compartment contains 80g of seasoned water.

Figure 2 shows a package comprising a heat-resistant container 8, made of aluminium, and provided with a rim and a heat-resistant plastic lid 9. The lid is provided with venting holes 10, 11. The container is separated into two compartments by a dish shaped plastic partition 12, the bottom of which is perforated. The partition bears on the rim of the container. The uppermost compartment 13 of the container contains 300g of uncooked, chilled asparagus. The lowermost compartment 14 contains a mixture of 80g of water and 15g of butter at a temperature of 2°C.

Figure 3 shows a package comprising a heat-resistant container 15, made of aluminium and a plastic lid 16. The lid has venting holes 17 arranged therein. The container is separated into three compartments by two partitions 18 and 19, consisting of perforated plastic and bearing on the shoulders 20 and 21 of the container. The lowermost compartment 22 contains 100g of broth. The uppermost compartment 24 contains 200g of precooked potatoes. The middle compartment 23 contains 150g of diced raw chicken meat mixed with 75g of par-dried peas.

Claims

1. A disposable package for cooking or heating foodstuffs comprises a heat resistant container (8), made of disposable material, and divided into at least an upper (13) and lower (14) compartment by a steam-permeable partition (12), wherein the lowermost compartment contains an edible substance, comprising aroma and/or flavouring components, and at least one of the other compartments contains the foodstuffs.

2. A disposable package according to Claim 1, wherein the container (8) is made of aluminium.

3. A disposable package according to Claims 1 or 2, wherein the container (8) is provided with a lid (9).

4. A disposable package according to Claim 3, wherein the lid (9) is provided with one or more venting holes (10,11).

5. A disposable package according to Claim 1, wherein the steam-permeable partition (12) is removable.

6. A disposable package according to Claim 1, wherein the edible substance and/or the foodstuff is frozen.

7. A disposable package according to Claim 1, wherein the weight ratio of the edible substance to the foodstuff is less than 1:3.

Fig.1.

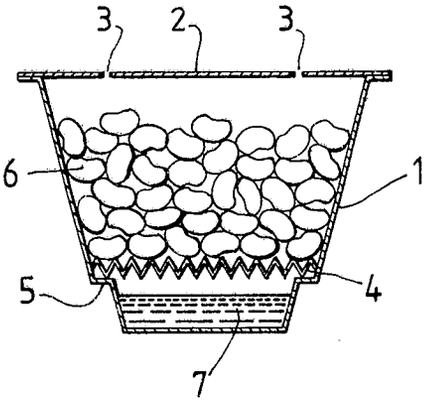


Fig.2.

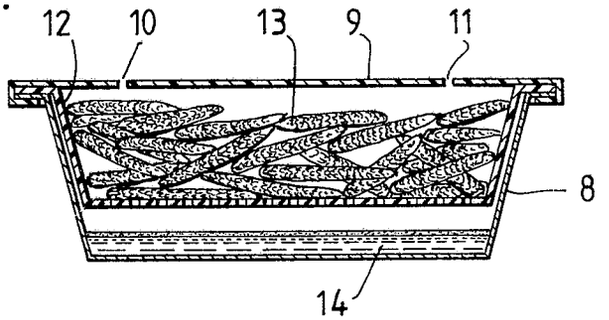
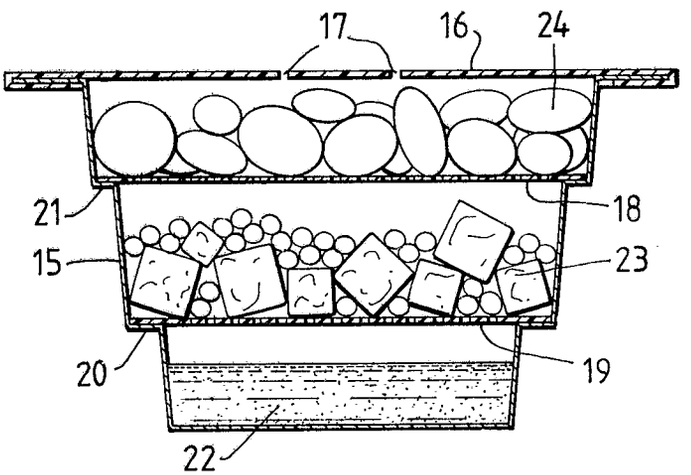


Fig.3.



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EUROPEAN SEARCH REPORT

Application Number

EP 88 30 6751

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.4)
A	US-A-3 717 478 (GENERAL FOODS CORP.) * Column 1, lines 15-23 *	1,3-6	B 65 D 81/34
A	US-A-3 659 584 (CONTINENTAL CAN) * Whole document *	1-5	
A	US-A-2 850 391 (GUNSBERG) * Whole document *	1,3,6	

TECHNICAL FIELDS SEARCHED (Int. Cl.4)

B 65 D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	25-10-1988	MARTIN A.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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