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D E C I S I O N
of 10 October 2000

Case Number: T 0237/98 - 3.4.2
Application Number: 91901480.3
Publication Number: 0507814
IPC: H05B 6/64, B65D 81/34, B65D 5/54,
B65D 5/48

Language of the proceedings: EN

Title of invention:

Microwave food carton having two integral layer-divider panels
and blank therefor

Applicant:

THE PROCTER & GAMBLE COMPANY

Opponent:

-

Headword:

-

Relevant legal provisions:

EPC Art. 56

Keyword:

"Inventive step (after amendments - yes)"

Decisions cited:

-

Catchword:



Case Number: T 0237/98 - 3.4.2

D E C I S I O N
of the Technical Board of Appeal 3.4.2
of 10 October 2000

Appellant: THE PROCTER & GAMBLE COMPANY
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Cincinnati, Ohio 45202 (US)

Representative: Brooks, Maxim Courtney
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Longbenton
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 7 November 1997
refusing European patent application
No. 91 901 480.3 pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: E. Turrini
Members: R. Zottmann
V. Di Cerbo

Summary of Facts and Submissions

I. The appellant (applicant) lodged an appeal against the decision of the Examining Division to refuse European patent application No. 91 901 480.3 with the publication No. 0 507 814.

II. The reasons given for the refusal were that the subject-matters of the claims lacked inventive step in the meaning of Articles 52(1) and 56 EPC referring to prior art documents

D1: US-A-2 850 224;

D2: US-A-4 590 349;

D3: US-A-4 836 383; and

D4: US-A-4 777 053.

III. In a communication pursuant to Article 110(2) EPC, the Board of Appeal expressed its preliminary opinion that the application did not meet the provisions of the EPC and informed the appellant by which amendments the existing deficiencies probably could be removed.

To meet these objections, the appellant filed amended documents with letters of 6 September 2000.

IV. According to the letters the appellant requested that the decision under appeal be set aside and that the application be granted on the basis of the following documents:

Description: pages 1, 2, 2a, 3, 8, 10 and 11 as filed

with the letter dated 6 September 2000;
pages 4 to 7 and 9 as originally filed;

Claims: 1 to 4 as filed with the letter dated
6 September 2000;

Drawings: sheets 1/7 to 7/7 as originally filed.

V. The single independent claim reads as follows:

"1. A microwave carton (20) formed from a one piece blank comprising a top panel (21), a bottom panel (26) and two layer-divider panels (32, 34), said carton being sized to accommodate three layers of food pieces (45), said carton comprising means (22, 23, 31, 33) for being erected, filled with three layers of food pieces and closed, each of said layer-divider panels (32, 34) being adapted to be disposed between each two adjacent layers of said food pieces, and said carton further comprising microwave susceptor means (40) disposed on each said layer-divider panel (32, 34), said top panel (21) and said bottom panel (26) such that the upper and lower surfaces of each food piece (45) are in contacting relation with adjacent portions of the corresponding microwave susceptor means (40) when using food pieces (45) of uniform thickness and with oppositely facing planar surfaces."

The remaining claims 2, 3 and 4 are dependent on claim 1.

VI. The arguments of the appellant are summarized as follows:

Prior to the invention, there have been no practical

proposals in the art directed to the problem of browning and/or crispening food items in multiple layers, nor for that matter to the problem of providing a simple unitary design of microwave carton for multi-layered food packages. To adapt the microwave carton of D4 to contain three food layers as disclosed in D1 is contrary to the teaching of that document. Additional heating panels within the food cavity would be quite at odds with the gist of the invention disclosed in D4, i.e., the placement of reflective shields in the outer surface of the food carton in order to provide an improvement in the ratio of dielectric heating to sear.

Reasons for the Decision

1. *Formalities*

- 1.1 The Board of Appeal is satisfied that the claims do not contain subject-matter extending beyond the content of the application as originally filed (requirements of Article 123(2) EPC). The description is brought into conformity with the amended claims and takes into account the relevant prior art in conformity with Rule 27 EPC.

2. *Novelty*

- 2.1 D1 describes a one-piece paperboard container with divider panels for separating various superimposed layers of bakery products and other fragile articles especially adapted for packing, shipping and storing them. Any hint at a use or suitability for heating the product in a microwave oven or the like or any hint at a microwave susceptor or the like are missing.

- 2.2 In D2 a one-piece carton is disclosed for heating a single layer of variously sized food pieces. The carton includes a layer of microwave active material (102) near the top wall and such a layer (16) near the bottom wall. The container is manually inverted after the food surface in contact with microwave active layer (16) has begun to crisp to cause the food piece initially supported by the initial food supporting panel (7) to move under the force of gravity into supporting relationship with the final food supporting panel (9) to crisp the other side of the food piece.
- 2.3 The one-piece carton according to D3 is adapted to accommodate a single layer of food supported on a panel (24) elevated above the carton bottom such that, in use of the carton, the food is elevated above the carton bottom on a false bottom. The panel is provided with a layer of microwave interactive material (94). Said material crisps only the bottom of the food layer.
- 2.4 D4 relates to a carton for microwave heating of one layer of food piece(s) in which a pair of heating panels (40, 42) are mounted on the top and bottom surfaces of the carton. Each panel comprises a semi-conducting heating layer (44) and a microwave shield layer (56) separated therefrom by a spacer (48) wherein said shield is adhesively attached to its corresponding major surface and the heating layer is arranged for direct physical contact with the corresponding upper and, respectively, lower surface of the food layer. Important for the carton is that said shield (56) is acting as a spaced microwave deflector in order to improve the ratio of dielectric heating to sear (see the abstract, column 2 first paragraph and the independent claims).

2.5 Thus, none of said documents D1 to D4 discloses a microwave food container with microwave heating layers and with more than one superimposed compartment each adapted to accommodate a layer of food. Nowhere is the problem of heating and crispening multiple food layers addressed. This applies also to the remaining documents on file. Therefore, the subject-matter of claim 1 is novel in the sense of Article 52 EPC.

3. *Inventive step*

3.1 From the foregoing and the fact that the microwave carton of D4 has two microwave shield layers on each side of the food layer separated from the heating layer by a spacer whereas the carton according to D2 does not comprise such shield layers and such a spacer follows that D2 constitutes the nearest prior art with respect to the carton of claim 1 of the application-in-suit.

3.2 The carton according to claim 1 differs from that of D2 mainly in that the one-piece carton is sized to accommodate three layers of food pieces and has microwave susceptor means (40) disposed on each said layer-divider panels.

These differences have the effect that three layers of food can be accommodated in a compact manner and nevertheless sufficient browning/crisping of upper and lower surfaces of the outer food layers is obtained in one heating step.

The problem underlying the solution when starting from prior art D2 is thus to develop a simple compact design of microwave carton suitable for heating simultaneously a plurality of food items and crispening their upper

and lower surfaces in a cost-effective manner.

- 3.3 When starting from D2 alone, the skilled person would not envisage superposition of three compartments each with horizontal panels whereby the panels comprise one or two microwave susceptor means, since he would expect that such a plurality of susceptor means (which are usually thin metal layers) would cause shielding of the inner food layer against the microwave radiation and at least reduce heating and crispening of said layer.

Neither D3 nor D4 disclose or suggest heating and crispening of superimposed food layers by microwave heating (see section 2. above).

Prior art document D1 belongs to a quite different technical field and thus would not be taken into account by the skilled person when trying to solve the problem. If, nevertheless, he did so, he would be restrained from a combination of the teachings of D1 and D2 - or D1 and D4 - on account of the considerations laid down in the first paragraph of this section.

- 3.4 Therefore, the Board concludes that the subject-matter of claim 1 involves an inventive step as defined in Article 56 EPC.
4. In the result, the Board takes the view that claim 1 complies with the requirements of the EPC. This applies also to the other documents of the application comprising the dependent claims.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the Examining Division with the order to grant a patent on the basis of the following application documents as agreed by the Board of Appeal:

Description: pages 1, 2, 2a, 3, 8, 10 and 11 as filed with the letter dated 6 September 2000;
pages 4 to 7 and 9 as originally filed;

Claims: 1 to 4 as filed with the letter dated 6 September 2000;

Drawings: sheets 1/7 to 7/7 as originally filed.

The Registrar:

The Chairman:

P. Martorana

E. Turrini