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D E C I S I O N
of 21 September 1995

Case Number: T 0099/92 - 3.3.4
Application Number: 85904615.3
Publication Number: 0192753
IPC: A23G 9/02

Language of the proceedings: EN

Title of invention:

Ice-cream confectionery product and a method for its
manufacture

Patentee:

SOREMARTEC S.A., et al

Opponent:

Krayer, Warner Dirk

Headword:

Ice-cream/SOREMARTEC

Relevant legal provisions:

EPC Art. 54, 56

Keyword:

"Novelty (yes)"
"Inventive step (yes)"

Decisions cited:

T 0148/87, T 0129/88

Catchword:

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D E C I S I O N
of the Technical Board of Appeal 3.3.4
of 21 September 1995

Appellant:
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Respondent:
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office dated 25 November 1991
rejecting the opposition filed against European
patent No. 0 192 753 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: U. M. Kinkeldey
Members: L. Galligani
S. C. Perryman

Summary of Facts and Submissions

I. European patent application No. 85 904 615.3 (published as WO 86/01688) was granted as European patent No. 0 192 753 on 17 November 1988 with seventeen claims.

Claim 1 read as follows:

"Ice-cream confectionery product which is normally in a liquid state and consists of a sterilised oil-in-water emulsion comprising edible fats, milk protein, sweeteners and water, the emulsion being physically and chemically stable and preservable at ambient temperature when packaged under aseptic conditions, having a freezing point of -3 to -6°C, and having a substantially homogeneous microcrystalline structure after freezing, even without beating,

the product being characterised in that it can be made by the steps of:

- (a) - preparing an oil-in-water emulsion at a temperature of 55 to 65°C, comprising with reference to the weight of the emulsion:
 - of the order of 10 to 18% by weight of edible fats,
 - of the order of 1 to 5% by weight of milk proteins,
 - up to 32% by weight of sweeteners selected from the group of lactose, sucrose, fructose, and mixtures thereof,

- of the order of 0.1 to 1.6% by weight of a stabilizing and thickening composition consisting of a salt which acts as a protein stabilizer, a gelling agent constituted by an alkali metal alginate, and a thickening agent selected from the group of chemically modified starches,
 - a quantity of liquid and/or solid flavourings sufficient to give the desired taste,
 - the balance to 100 being constituted by the aqueous phase,
- (b) - sterilising the emulsion at a temperature of 140 to 150°C for a period of 15 to 2 seconds,
- (c) - homogenizing the sterilised emulsion at a temperature of 80 to 90°C and a pressure of 70 to 200 bars, so as to give a product having a viscosity no greater than 1200 mPas, (measured at 20°C Brookfield viscosimeter) and
- (d) - cooling the product obtained for its subsequent packaging under aseptic conditions."

Dependent Claims 2 to 12 related to particular embodiments of the process according to Claim 1. Independent Claim 13 related to the method of preparation of said product, while Claims 14 to 17 were concerned with a thickening and stabilizing composition, Claim 14 reading as follows:

" Thickening and stabilising composition for the preparation of an ice-cream food product constituted by an oil-in-water emulsion comprising edible fats, milk proteins, sweeteners and water, which is physically and

chemically stable and has a substantially homogeneous microcrystalline structure on freezing, even without beating, characterised in that it consists of a modified starch, an alkali metal alginate and a protein stabilizer salt. "

II. Notice of opposition against the European patent was filed by the Appellant (Opponent) who requested the revocation of the patent on the grounds of Article 100(a) EPC for lack of novelty and inventive step. The Appellant relied mainly on the following prior art documents:

- (1) ICE CREAM, 3rd Edition, W. S. Arbuckle, 1977, The AVI Publishing Co., Inc., Westport, Conn. US, pages 53, 82, 97, 99, 207, 210 to 211, 213, 219, 285, 387 to 388, 395, 400, 405;
- (2) MODERN DAIRY PRODUCTS, L. M. Lampert, 1970, Chemical Publishing Co., Inc., New York N.Y., US, pages 231 to 249;
- (3) DAIRY HANDBOOK , Alfa-Laval AB, 1980, page 154.

III. By a decision issued on 25 November 1991, the Opposition Division rejected the opposition pursuant to Article 102(2) EPC and, thus, maintained the patent on the basis of the claims as granted. The Opposition Division held that the product of Claim 1 differed from the products disclosed in documents (1) and (2), respectively, and that none of the possible combinations of the cited documents would have led a person skilled in the art to a product having the features of the claimed one. In particular, they observed that

document (2) would have led the skilled person away from the claimed invention because it stated that an ice-cream composition must have an overrun, that is it must have air beaten in.

IV. The Appellant lodged an appeal against this decision.

V. In a communication dated 11 August 1995, the Board made some preliminary remarks on novelty and inventive step.

VI. Oral proceedings took place on 21 September 1995.

During oral proceedings the Respondent submitted an auxiliary request to meet objections to the words "even without beating" in the main claim of the main request.

VII. The Appellant conceded that the prior art documents (1) and (2) neither anticipated nor rendered obvious a fluid edible ice-cream composition which could be caused to solidify by freezing "without mechanical beating" (cf. patent-in-suit page 2, lines 40 to 43). However, he argued that, in consequence of the use in Claim 1 of the expressions "even without beating" and "it can be made" for the characterisation of the product, the said claim covered also "beaten" products which differed only slightly from the known prior art products disclosed in documents (1) and (2). He argued that said products were absolutely obvious. In his submissions, the difference between the product of Claim 1 of the patent-in-suit and the known "beaten" products of documents (1) and (2) resided merely in the presence of a chemically modified starch in the former product. However, document (1) pointed to starch derivatives as to possible stabilizers in ice cream (cf. page 97, third paragraph). As regards the process parameters used to further characterise the claimed product, these hardly differed from those known from the literature, a slight difference being found

only in respect of the temperature range of sterilisation. In this respect, the Appellant observed that the sterilisation temperature range given in Claim 1 was fully in line with the newest state of the art relating to heat treatment of dairy products [cf. document (3)] which had already been anticipated in document (1) with the sentence "there is a trend toward higher temperature processes" (cf. page 213, second paragraph in combination with Table 11.1). The Appellant considered that a deletion of the word "even" from the expression "even without beating" and the change of the expression "it can be made" to read "it is made" would have removed all the outstanding objections to Claim 1 on file. Failing that, Claim 1 and also - mutatis mutandis - Claim 14 encompassed obvious subject-matter.

VIII. On behalf of the Respondent it was acknowledged that the composition features of Claim 1 were intended to be an essential feature of the product. In the Respondent's view, the Appellant's objections to Claim 1 were clarity objections falling under the terms of Article 84 EPC which could not be raised in an opposition. Further the Respondent submitted that in any case the expression "even without beating" constituted a structural limitation of the product in that it required the product to have a substantially homogeneous microcrystalline structure after freezing already before "beating" and that "beating" did not change it. This language had been adopted because some consumers might decide to "beat" the product. No prior art product was known with such a feature. Nor did documents (1) and (2), which related to conventional ice-cream products, provide any hints as to the preparation of a product having the whole of the features recited in Claim 1.

- XI. The Appellant requested that the decision under appeal be set aside, that the main request be rejected and that the patent be maintained on the basis of the auxiliary request.

The Respondent requested that the appeal be dismissed and that the patent be maintained on the basis of the main request (i.e. claims as granted) or that the decision under appeal be set aside and the patent be maintained on the basis of the auxiliary request submitted at oral proceedings, i.e. Claim 1 as amended and the other claims as granted.

Reasons for the Decision

1. The appeal is admissible.
2. *Novelty*

During oral proceedings, the Appellant no longer relied on the objection of lack of novelty against Claim 1 that he had put forward in the written submissions and conceded, that, strictly speaking, the subject-matter of Claim 1 could be seen as novel.

3. The product of Claim 1 is characterised by a combination of product and process features. This form of claiming is acceptable under the established case law provided it contributes to an unambiguous characterisation of the product (cf., for example, decisions T 148/87 dated 24 November 1989, not published in the OJ EPO, and T 129/88 OJ EPO 1993, 598). In the context of Claim 1, the Board construes the feature "having a substantially homogeneous microcrystalline structure after freezing, even without beating" as making it an essential

requirement that the emulsion has a substantially homogeneous microcrystalline structure if frozen without beating, and that there are excluded from the scope of the claim emulsions, such as those known from the prior art, where a homogeneous microcrystalline structure after freezing is obtained only if the emulsion is beaten. The use of "even" merely serves to bring out the contrast between the claimed emulsions which have a homogeneous microcrystalline structure after freezing whether or not they are beaten, and the prior art emulsions where beating is essential to produce a homogeneous microcrystalline structure.

4. Further the Board construes the feature "it can be made by the steps of" as making the compositional features in step (a) essential characteristics of the ice-cream confectionery product claimed. Where a product is claimed by reference to a process which includes selecting stated ingredients in stated proportions, and these ingredients are not used up in the process but appear in the final product, then the stated proportions of the stated ingredients will be characteristic of any product that can be made by that process. Thus, if a product with those ingredients in those proportions has not previously been proposed, novelty will be established for such a product-by-process claim, irrespective of whether any other novel product features are necessarily implied by the requirement that the claimed product can be made by the stated process.

5. Thus, the requirement in step (a) of Claim 1 of preparing an oil-in-water emulsion containing *inter alia* "of the order of 0.1% to 1.6% by weight of a stabilizing and thickening composition consisting of a salt which acts as a protein stabilizer, a gelling agent constituted by an alkali metal alginate, and a thickening agent selected from the group of chemically

modified starches", must be construed as making it an essential feature that the ice-cream confectionery product contains this percentage of this particular stabilizing and thickening composition. This was acknowledged by the Respondent during the oral proceedings. Neither document (1) nor document (2) describe an ice cream confectionery product having this feature, so that the novelty of Claim 1 can be acknowledged already because of this essential feature required by the claim.

6. The feature of Claim 1 of the ice cream confectionery product "having a substantially homogeneous microcrystalline structure after freezing, even without beating" is not disclosed in relation to any prior art before the Board, nor is there even a suggestion that it is possible or desirable. The Appellants have not challenged this.
7. The stabilizing composition component as required by Claim 1 is essentially identical to the stabilizing composition claimed *per se* in Claim 14. Novelty of Claim 14 was not challenged by the Appellant and the Board agrees that it is novel over the documents it has considered.
8. Claim 13 is essentially directed to the process of steps (a) to (d) of Claim 1, so that as this requires use of the novel stabilizing composition of Claim 14, novelty of Claim 13 can be acknowledged on this basis.
9. The other claims are dependent on one of Claims 1, 13 or 14 so that the novelty of these means that novelty can be acknowledged for all claims.

10. *Inventive Step*

The Board regards document (1) as the closest prior art. In the Chapter on "Stabilizers and emulsifiers" there is a revue of known stabilizers for ice cream, and reference is made *inter alia* to starch derivatives (page 97, 3rd paragraph, line 7). On page 99 (cf. last paragraph) of the same chapter, as an alternative to previously mentioned stabilizers, sodium alginate combined with phosphate salts is reported as being "a rather widely used vegetable stabilizer for ice cream".

11. In the light of this prior art, the technical problem to be solved can be seen in the provision of a stabilizing composition which allows an ice cream product with new advantageous properties to be made. It is plausible on the basis of the description of the patent-in-suit (see page 3 line 58 to page 4 line 6) that this problem has been solved by the provision of the stabilizing composition of Claim 14, the process of Claim 13, and the product of Claim 1, having the advantageous property of a homogeneous microcrystalline structure after freezing whether or not it is beaten.

12. The Board observes that the fact that the individual ingredients of a composition were all separately known to be suitable for use as stabilizers in ice cream does not necessarily imply that their combination lacks an inventive step. The relevant question is whether or not the skilled person would have readily envisaged their combination in a thickening and stabilizing composition.

13. Neither document (1) nor any other document cited gives the skilled person any reason for making the stabilizing composition of Claim 14, or any reason which would lead him or her to suppose that an ice cream made containing such a stabilizing composition would have any

advantageous property, let alone the property of a homogeneous microcrystalline structure after freezing whether or not it is beaten because it is made according to the method of Claim 13, or meets the requirements of Claim 1. The starch derivatives in document (1) are stated as alternative stabilizers to the alginate. There is no hint in this prior art that the now claimed more complex combination might prove advantageous. In the absence of any such a hint the skilled person would have no incentive to make the combination. Nor would the skilled person have derived a suggestion in that direction from the combination of document (1) with document (2), which contains only a general reference to stabilizers such as vegetable gums in ice cream (cf. page 240), or with document (3) which is not even concerned with stabilizers and thickening agents. On this basis, an inventive step can be recognized for each of the stabilizing composition of Claim 14, the method of Claim 13 and the ice cream confectionery product of Claim 1. The other claims depend on these, so an inventive step can be recognized for all the claims of the main request.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairwoman:

L. Mc Garry

U. Kinkeldey