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D E C I S I O N
of 22 February 2005

Case Number: T 0077/01 - 3.3.9

Application Number: 91200898.4

Publication Number: 0455288

IPC: A23L 1/19

Language of the proceedings: EN

Title of invention:
Whippable non-dairy creams

Patentee:
UNILEVER N.V., et al

Opponents:
Macphie of Glenbervie Ltd.
Remia B.V.

Headword:
-

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step (main and auxiliary requests 1 to 4) - No"
"Admissibility of auxiliary request 5 - No, late-filed at the
end of oral proceedings without due justification"

Decisions cited:
-

Catchword:
-



Case Number: T 0077/01 - 3.3.9

D E C I S I O N
of the Technical Board of Appeal 3.3.9
of 22 February 2005

Appellant: Macphie of Glenbervie Ltd.
(Opponent 01) Glenbervie
Stonehaven Kincardineshire AB3 2YB (GB)

Representative: Ede, Eric
Fitzpatrick's
1 Blythswood Square
Glasgow G2 4AD (GB)

Appellant: Remia B.V.
(Opponent 02) Willem Arntszlaan 71-77
NL-3734 ED Den Dolder (NL)

Representative: Marsman, Hermanus Antonius M.
Vereenigde
Postbus 87930
NL-2508 DH Den Haag (NL)

Respondents: UNILEVER N.V.
(Proprietors of the patent) Weena 455
NL-3013 AL Rotterdam (NL)

UNILEVER PLC
Unilever House Blackfriars P.O. Box 68
London EC4P 4BQ (GB)

Representative: Mulder, Cornelis Willem Reinier, Dr.
Unilever N.V.
Unilever Intellectual Property Group
Olivier van Noortlaan 120
NL-3133 AT Vlaardingen (NL)

Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
15 December 2000 concerning maintenance of
European patent No. 0455288 in amended form.

Composition of the Board:

Chairman: P. Kitzmantel
Members: J. Jardon Alvarez
B. Günzel

Summary of Facts and Submissions

I. The grant of European patent No. 0 455 288 in respect of European patent application No. 91200898.4 in the names of UNILEVER N.V. and UNILEVER PLC, which had been filed on 16 April 1991, was announced on 27 October 1993 (Bulletin 93/43) on the basis of 15 claims.

Claim 1 read as follows:

"1. Whippable, non-dairy cream (NDC), comprising a water-continuous emulsion of an aqueous phase, containing optionally butter milk component and thickeners and a fat phase in an amount of 15-25 wt% fat, comprising 1) fat selected from the group consisting of palm kernel, hardened palm kernel, palm mid fraction, palm stearin, palm kernel stearin, coconut, hardened coconut, cocoa butter substitutes or mixtures thereof, which fats or mixtures can contain less than 10 wt% butter fat (on NDC) and 2) not more than 0.7 wt% of an emulsifier system, comprising at least a stabilising emulsifier and a de-stabilising emulsifier, which NDC is whippable within 6 min, when using a domestic, electrical whipper, either per se or after a tempering treatment."

II. Two Notices of Opposition requesting the revocation of the patent in its entirety on the grounds of Article 100(a) and (b) EPC were filed against this patent by:

Macphie of Glenbervie Ltd, (Opponent I) on 26 July 1994
and

Remia B.V. (Opponent II) on 21 July 1994.

Out of the 20 citations relied on by the Opponents in support of their requests in the course of the first instance opposition proceedings, the following documents are referred to in this decision:

D2: US - 4 770 892;

D4: Avicel[®] Application bulletin, Number C-29 (1982);

D5: Sales Invoices for HIWHIP, submitted with the opposition brief of Opponent I;

D10: EP - B - 0 294 119;

D12: W. H. Knightly, The role of ingredients in the formulation of whipped toppings. Food Technology 1968 (22), 731 - 744;

D13: R. A. Buchanan, D. R. Smith, "Recombined Whipping Cream", XVII Int. Dairy Congress, 1966, EF, Section F:2, pages 363 to 367;

D14: A. de Vleeschauwer, W. Deschacht and H. Hendrickx, Onderzoekingen over het opslaan van room: Mededelingen van de Landbouwhogeschool Gent 1960, 25, 825 - 826 and

D19: Emulgatoren für Lebensmittel, edited by Gregor Schuster, Springer-Verlag Berlin, Heidelberg 1985, pages 100 to 107, 114 to 124, 137 to 141 and 246 to 248

By its first decision announced orally on 8 October 1996 and issued in writing on 17 October 1996, the Opposition Division revoked the patent for lack of novelty of Claim 1 over the disclosure of Document D10.

III. During the subsequent first appeal proceedings this first instance decision was set aside by the decision T 1075/96 of 25 November 1998. The deciding Board held that the requirements of Article 83 EPC were met and that the subject-matter of Claim 1 was novel within the meaning of Article 54(1) EPC. Because the Opposition Division had not dealt with the issue of inventive step, the Board remitted the case to the Opposition Division for further prosecution.

IV. At the end of the resumed first instance proceedings, by an interlocutory decision announced orally on 9 November 2000 and issued in writing on 15 December 2000, the Opposition Division decided that the patent as amended met the requirements of the EPC, because the subject-matter of Claims 1 to 14 as received on 14 December 1994 was inventive over the cited prior art, especially over D10 and/or D2 which could be considered as representing the closest prior art documents.

In the opinion of the Opposition Division, the technical problem to be solved by the patent in suit was to provide a non-dairy cream being of low fat, whippable within a reasonable amount of time and having a simple emulsifier system. The decision held that the solution to this problem, namely the use of two different types of emulsifiers (a stabilising and a destabilising emulsifier), was not suggested by the available prior art. It was held that the documents D2,

D12, D13 and D19 in fact pointed away from using such a system for low fat non-dairy creams. The teaching of having a stabilising and a destabilising emulsifier could not be derived from said documents since such a concept was not known.

V. Two appeals were filed against the decision of the Opposition Division, on 29 December 2000 by Appellant II (former Opponent II) and on 1 February 2001 by Appellant I (former Opponent I). Both Appellants paid the appeal fee and filed the Statement of Grounds in due time.

VI. Appellant I additionally filed with his Statement of Grounds the following evidence and requested its admission into the proceedings:

D21: US - 4 107 343;

D22: Manufacturing recipe sheets defining the ingredients of the HIWHIP product (cf. D5) which had been made available to the public before the date of the opposed patent;

D23: Comparative tests between products based on the recipes of D4 and D5 as well as corresponding recipes modified by the use of different emulsifiers.

VII. By letters dated 19 October 2001 and 28 January 2005 and during the oral proceedings on 22 February 2005 the Respondent disputed all the arguments submitted by the Appellants and requested that the appeals be dismissed and the maintenance of the patent as maintained by the

interlocutory decision of the Opposition Division (main request).

Claim 1 of this main request received on 14 December 1994 reads as follows:

"1. Whippable, non-dairy cream (NDC), comprising a water continuous emulsion of an aqueous phase, containing optionally butter milk component and thickeners and a fat phase in an amount of 15-25 wt% fat, comprising 1) fat selected from the group consisting of palm kernel, hardened palm kernel, palm mid fraction, palm stearin, palm kernel stearin, coconut, hardened coconut, cocoa butter substitutes or mixtures thereof, which fats or mixtures can contain less than 10 wt% butter fat (on NDC) and 2) not more than 0.7 wt% of an emulsifier system, comprising at least a stabilising emulsifier and a destabilising emulsifier, which NDC contains 1-5 wt% of milk protein, in particular casein and is whippable within 6 min. when using a domestic, electrical whipper, either per se or after a tempering treatment."

The Respondent further filed auxiliary requests 1 to 5 in case the Board of Appeal did not accept the main request. Compared to the main request, the following amendments were made to these requests:

- Auxiliary request 1. In Claim 1 the stabilising emulsifier is defined as "chosen from saturated polyglycerol esters or saturated monoglycerides" and the destabilising emulsifier is defined as "chosen from unsaturated polyglycerol esters, unsaturated monoglycerides or lecithins". This

request also includes a new independent claim, Claim 2, which is identical to Claim 1 of the main request except for the amount of fat, which has been amended to "15-20 wt% fat",

- Auxiliary request 2. Claim 1 is identical to Claim 1 of auxiliary request 1, and independent Claim 2 of auxiliary request 1 has been deleted,
- Auxiliary request 3. Amended Claim 1 of auxiliary request 3 is based on Claim 1 of the main request but the presence of "butter milk component" is no longer optional,
- Auxiliary request 4. Claim 1 of this request corresponds to Claim 2 of auxiliary request 1 and
- Auxiliary request 5. Auxiliary request 5 is based on auxiliary request 2 wherein in Claim 1 the emulsifier system has been limited by replacing the wording "comprising at least a stabilising emulsifier" by "consisting of a stabilising emulsifier" and by deleting the expression "at least" before "a destabilising emulsifier".

VIII. The arguments presented by the Appellants in its written submissions and at the oral proceedings held on 22 February 2005 may be summarized as follows:

- Appellant I pointed out that the terms "stabilising" and "destabilising emulsifiers" used in Claim 1 had no universally accepted meaning in the art. It furthermore argued that the claimed

subject-matter lacked inventive step over D4 in combination with D21.

- Appellant I submitted further manufacturing recipe sheets of the product according to D5 and additional experimental data (D22 and D23) in order to supplement the allegation of prior public use raised in its opposition statement and argued that the claimed subject-matter lacked inventive step over the product of D5.
- Appellant II argued that the claimed subject-matter did not involve an inventive step over the combined disclosure of documents D2 and D12 because D12 suggested incorporating milk protein into the compositions of D2, which otherwise met all the requirements of Claim 1. It further argued that the claimed subject-matter was obvious over the disclosure of D10 alone or in combination with any of the documents D12, D13, D14 or D19.
- Concerning the auxiliary requests, both Appellants argued that the arguments against the main request also applied to auxiliary requests 1 to 4 because they did not include any further technical feature which could make them inventive. Concerning auxiliary request 5, they argued that it was filed too late and should not be admitted into the proceedings.

IX. The arguments presented by the Respondent in its written submissions and at the oral proceedings may be summarized as follows:

- The late filed evidence (D21 to D23) should not be admitted into the proceedings because its inclusion would raise a case which differed from that on which the decision under appeal had been based. The evidence regarding the composition of Appellant I's own commercial product, HIWHIP, should have been available to it before the beginning of the opposition proceedings. Thus, its late filing was not justified.

- The Respondent considered D10 as the closest prior art. In this document a low fat non dairy cream whippable with an ordinary domestic electrical whipper was disclosed, but it did not disclose (i) a fat content of 15 to 25 wt%, (ii) an emulsifier system comprising a stabilising and a destabilising emulsifier in an amount of at most 0.7 wt% and (iii) a cream whippable within 6 minutes. Moreover, the only example of D10 had a relatively fat content of 35 wt% and therefore it would not have been considered by the skilled person in relation to a low fat non dairy cream.

Thus, the Respondent argued, the claimed subject-matter was non-obvious over D10 because the skilled person looking for a low fat cream whippable within 6 minutes had no reason to select and combine specific individual embodiments (stabilising and destabilising emulsifier; low fat content and the amount of emulsifier) which constituted unrelated aspects of the teaching of D10.

- D2 related to a process for producing an emulsion which was stable for extended periods of time at room temperature and therefore could not be considered as the closest prior art document. Moreover D2 failed to disclose the presence of milk protein at a level of 1 to 5 wt%. The emulsifier in D2 (col. 4, lines 15 - 38) was carefully balanced to obtain certain properties and the absence of protein was a deliberate choice. Even if one considered that this was not the case, D12 provided no motivation to include a milk protein in the emulsions according to D2, because the skilled person following the teaching of D12 would not include a milk protein but would rather change the whole emulsifier system. In addition D12 taught away from the use of surfactants based on unsaturated fatty acids (see last paragraph of page 78).

 - Auxiliary requests 1 to 4 were limited to preferred embodiments of the invention. In particular the addition of a butter milk component (auxiliary request 3) modified the flavour and the emulsifying properties of the non dairy cream. The combination of butter milk with the emulsifiers reduced the whipping time. The Respondent justified the late filing of auxiliary request 5 by the fact that it resulted from the discussion during the oral proceedings.
- X. The Appellants requested that the decision under appeal be set aside and that the European patent No. 0 455 288 be revoked.

The Respondent requested as main request that the appeals be dismissed. As auxiliary requests 1 to 3 the Respondent requested that the decision under appeal be set aside and the patent be maintained on the basis of auxiliary requests 1 to 3 filed on 31 January 2005. As auxiliary request 4 the Respondent requested that the patent be maintained on the basis of the claims filed as auxiliary request 5 on 31 January 2005 and as auxiliary request 5 the Respondent requested that the patent be maintained on the basis of the claims of auxiliary request V filed during the oral proceedings.

Reasons for the Decision

1. The appeals are admissible.

2. *Admissibility of auxiliary requests 1 to 5*
 - 2.1 The Respondent filed auxiliary requests 1 to 4 on 31 January 2005, that is to say, after the final date (22 January 2005) established by the Board for making any written submissions.
 - 2.1.1 The amendments introduced in these requests are minor and/or correspond to amendments already contained in previous requests. They concern the introduction of features of dependent claims into independent Claim 1. They are easily understandable and amount to a limitation to embodiments already contained in the granted claims. They did not lead to a substantial change in the subject-matter of the proceedings, such as would have needed major reconsideration by the Appellants.

- 2.1.2 Therefore, the Board finds that these requests, even though late filed, amount to a fair attempt by the Respondent to defend its patent and accordingly auxiliary requests 1 to 4 are admitted into the proceedings.
- 2.2 Auxiliary request 5 was filed towards the end of the oral proceedings, after the Board had deliberated upon the allowability of the previous requests, i.e., at the very last moment. Auxiliary requests filed at such a late stage of the proceedings are usually only admitted into the appeal proceedings under exceptional circumstances.
- 2.2.1 The Respondent justified the late filing of auxiliary request 5, which represents a further limitation of the definition of the emulsifier system according to auxiliary request 2, as resulting from the discussion during the oral proceedings.
- 2.2.2 The Board cannot agree with this. In both Statements of Grounds reference was made by the Appellants to the fact that no limitations were made to the emulsifier system (see Appellant I, Statement of Grounds, point 4 and submission dated 15 February 2002, point 4.4, and Appellant II, Statement of Grounds, page 6, third full paragraph). Moreover, the Board also pointed this out in its provisional opinion dated 23 December 2004 (see point 5.2.3). The argument of the Respondent that the late filing arose from the discussion during the oral proceedings cannot be accepted.

Moreover, owing to the open-ended definition of the claimed non-dairy cream which results from the maintenance in Claim 1 of this request of the term "comprising", the presence of emulsifiers other than those enumerated is still not ruled out.

2.2.3 Consequently, the Board exercises its discretion not to admit the auxiliary request 5 of the Respondent because it was filed at an extremely late stage and there were no exceptional circumstances justifying such late filing.

3. *Amendments (Article 123 EPC).*

All amendments made to the claims according to all the requests comply with the requirements of Article 123(2) and (3) EPC. Since this issue was no longer in dispute, it is not necessary to give reasons for this finding.

Main request

4. *Inventive step (Article 56 EPC)*

4.1 The patent in suit concerns a whippable non-dairy cream.

Claim 1 of the main request is directed to a whippable, non-dairy cream comprising the following features:

- (a) a water continuous emulsion of an aqueous phase,
- (b) a fat phase in an amount of 15-25 wt% fat,
- (c) the fat selected from the fats listed in Claim 1,
- (d) not more than 0.7 wt% emulsifiers, comprising
- (e) at least a stabilising emulsifier and
- (f) a destabilising emulsifier,
- (g) 1-5 wt% milk protein and

(h) being whippable within 6 min using a domestic, electrical whipper.

Features (e) and (f) define the emulsifiers used as "stabilising" or "destabilising"; these are relative terms and, according to the Appellants, not generally applied to emulsifiers. Thus, lecithins are defined as "destabilising emulsifiers" in the patent (page 2, lines 41 - 44) while in D2 they are used "to provide stability" (col. 4, lines 16 - 19). In the following discussion emulsifiers will be classified as "stabilising" or "destabilising" in accordance with the terminology used in the patent.

4.2 Closest prior art

4.2.1 Document D2 represents the closest state of the art. D2 discloses a whippable emulsion of a water phase and a vegetable fat phase in an amount of 16 to 24 wt % (col. 2, lines 3 - 15), the fat includes coconut, palm kernel, etc. (col. 3, lines 35 - 39). The emulsions include emulsifiers such as lecithin, sorbitan monostearate, glyceryl monostearate and sodium stearoyl-2-lactylate (col. 4, lines 15 - 38) as essential ingredients and are whippable using a standard beater in less than about 4 minutes (col. 5, lines 19 - 21).

Example 1 of D2 (see also Claim 6) is directed to a whippable emulsion containing water (feature (a) of Claim 1 of the patent in suit), 20 wt % of a combination of hydrogenated coconut oil and hydrogenated palm kernel oil (features (b) and (c)), 0.65 wt % of an emulsifier system (feature (d))

comprising glyceryl monostearate as stabilising emulsifier (feature (e)) and lecithin as destabilising emulsifier (feature (f)). The time of whipping can vary depending on the type of beaters used but should take no longer than about 4 minutes (col. 5, lines 17 - 22 and col. 6, lines 26 - 27) (feature (h)).

Thus, the only difference between the subject-matter of Claim 1 of the patent in suit and the disclosure of D2 is feature (g), that is to say, the presence of a 1-5 wt% milk protein.

4.2.2 The Board does not share the Respondent's view that D10 represents the closest prior art. The closest prior art for the purpose of objectively assessing inventive step is generally that which corresponds to a similar use requiring the minimum of structural and functional modifications.

In the present case the patent in suit aims to obtain a low fat cream which is whippable within 6 min. As pointed out above, D2 discloses such a cream having all the features of Claim 1 of the patent with the exception of feature (g). D10 discloses an artificial cream comprising a dispersion in an aqueous phase of edible fat, an emulsifier composition and protein (see Claim 1) having high stability in whipping (page 3, lines 27 - 42). However D10 embraces emulsions having 10 to 50 % of fat content (see Claim 1) and it provides no example of an emulsion having a fat content within the range of 15 to 25% now claimed. The only example in D10 relates to an emulsion containing 35% fat, with a different emulsifier system, and gives no information of its whipping time. The subject-matter of D10 is

consequently further away from the subject-matter of the patent in suit than that disclosed in D2.

4.3 Problem to be solved

As pointed out above, the only distinguishing feature with respect to document D2 resides in the fact that the claimed emulsions contain 1-5 wt % milk protein (feature (g)).

Since the patent in suit does not attribute any specific effect to this distinguishing feature, the objective technical problem to be solved is thus how to provide an alternative composition to the emulsions known from D2.

4.4 Solution to the problem

4.4.1 The solution to this problem is the provision of the compositions exhibiting the features of Claim 1.

4.4.2 Having regard to the worked examples of the patent in suit the Board accepts that the problem has been credibly solved.

4.4.3 It remains to be decided whether, in view of the available prior art documents, it was obvious for the person skilled in the art to solve this technical problem by the means claimed, namely by incorporating 1-5 wt % of milk protein into the emulsions known from D2.

4.4.4 Document D12 is a review article in Food Technology and deals with the influence of ingredients in the

formation of whipped toppings, generally based on vegetable fats (see page 731). According to page 732, right-hand column, proteins are common ingredients of such toppings and serve several functions. Their primary function is that of a film-former to entrap aerating gases and also to aid in emulsification, impart body and contribute to flavour (page 732, right-hand column, paragraphs 2 and 3). The preferred source of protein is non-fat dry milk (fifth paragraph) and it is used in an amount of about 2 % (see Table 1).

- 4.4.5 Hence the use of a milk protein in the amounts used in the patent is already well known in the field. Therefore, the Board concludes that a person skilled in the art, looking for an alternative composition to those known from D2, would have used a milk protein in the amounts claimed according to the teaching of D12. The skilled person would thus arrive in an obvious manner at the claimed subject-matter by combining D2 with D12.
- 4.4.6 It has been argued by the Respondent that document D2 included a very special emulsifier system carefully balanced to obtain specific characteristics and that the absence of protein was a deliberate choice. Thus the skilled person would not add protein to such a system but would rather modify the whole emulsifier system. The Respondent argued this was confirmed by the list of optional ingredients in D2 which did not include proteins (see col.3, lines 22 - 34). Moreover there was no motivation to combine the disclosure of D2 with D12 because D12 also taught that the use of proteins with surfactants based wholly on or

predominantly on unsaturated fatty acids should be avoided (page 736, penultimate complete sentence).

- 4.4.7 This argument is not convincing because the realisation of a measure known to be common in the art (here: addition of protein to NDC compositions) can only be considered to involve an inventive effort if it leads to an unexpected technical effect (here: not shown) and/or if, given the special circumstances of the case, the existence of a prejudice against the realisation is established. However, there is neither any objective evidence that omission of the addition of protein according to D2 was a deliberate decision of its inventors and a necessary consequence of the chosen emulsifier system, nor is there any information in D2 or in any of the further citations which could justify the assumption that the addition of protein would necessarily lead to a change of the components of D2's emulsifier system which goes beyond the emulsifier definition of present Claim 1.

The fact that D12 advises not to use emulsifiers based on unsaturated fatty acids cannot help the Respondent either, if only because the subject-matter of the patent does not require the compulsory use of such emulsifiers (see all working examples).

- 4.5 For these reasons the Board finds that the subject-matter of Claim 1 of the main request is not based on an inventive step and does not comply with the requirements of Articles 52(1) and 56 EPC.

Auxiliary requests 1, 2 and 4

5. Claim 2 of auxiliary request 1 and Claim 1 of auxiliary request 4 differ from Claim 1 of the main request only by the fact that the "15 - 25 wt% fat" range has been amended to read "15 - 20 wt% fat". In Claim 1 of auxiliary request 2 the stabilising and destabilising emulsifiers have been specified.

As stated above (see 4.2.1.), example 1 of D2 discloses an emulsion with a fat content of 20 wt% and the emulsifiers used therein (glyceryl monostearate and lecithin) fall within the specified emulsifiers according to auxiliary request 2.

Consequently the reasoning in relation to the main request applies *mutatis mutandis* to the subject-matter of auxiliary requests 1, 2 and 4, which therefore does not involve an inventive step (Article 56 EPC).

Auxiliary request 3

6. Claim 1 of auxiliary request 3 includes as a further ingredient a "butter milk component". The Respondent pointed out that the presence of butter milk component adds flavour and emulsifying properties which provides a short whipping time.

It is however noted that there is no experimental evidence showing any effect due to the presence of butter milk component. This component appears only to be the source of the milk protein used. In any case the use of a butter milk component is well known, as already acknowledged on page 2, lines 49 - 50 of the

present patent, and its presence cannot contribute an inventive step. The additional presence of a butter milk component thus does not alter the conclusions made for Claim 1 of the main request as set out under point 4 above.

The subject-matter of Claim 1 of auxiliary request 3 does not therefore involve an inventive step as required by Article 56 EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:

G. Röhn

P. Kitzmantel