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Datasheet for the decision of 20 January 2023

Case Number: T 3296/19 - 3.3.09

06791577.7 Application Number:

Publication Number: 1917336

C11C3/10, A23D9/00 IPC:

Language of the proceedings: ΕN

Title of invention:

NON-HYDROGENATED HARDSTOCK FAT

Patent Proprietor:

Unilever N.V.

Unilever BCS Europe B.V.

Unilever BCS Limited

Opponent:

Vandemoortele Lipids NV

Headword:

Non-hydrogenated hardstock fat/UNILEVER

Relevant legal provisions:

EPC Art. 54(2), 56, 83, 123(2)

Keyword:

Main Request: Added Matter - (no); Sufficiency of Disclosure - (yes); Novelty - (yes); Inventive step - (yes)

Decisions cited:

Catchword:



Beschwerdekammern **Boards of Appeal** Chambres de recours

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Case Number: T 3296/19 - 3.3.09

DECISION of Technical Board of Appeal 3.3.09 of 20 January 2023

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Decision under appeal:

Interlocutory decision of the Opposition Division of the European Patent Office posted on 21 October 2019 concerning maintenance of the European Patent No. 1917336 in amended form.

Composition of the Board:

Chair A. Haderlein Members: A. Veronese

N. Obrovski

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Summary of Facts and Submissions

- I. Appeals were filed by the opponent and the patent proprietors against the decision of the opposition division finding that the European patent as amended according to the auxiliary request 3 filed on 25 October 2018 met the requirements of the EPC. As both parties are appellants, the board will continue to refer to them as patent proprietors and opponent.
- II. Claim 1 of the patent as granted read:
 - "1. A fat-continuous spread comprising a margarine fat, the margarine fat comprising:
 - (1) a liquid vegetable oil in an amount of 30 to 80 wt% and
 - (2) a hardstock fat in an amount of 20 to 70 wt%, the hardstock fat being an interesterified mixture of one or more fats, the hardstock fat having a solid fat content of 47 to 76 % at 10°C, 23 to 54% at 20C, 5 to 26 % at 30°C and less than 14 wt% at 35°C, wherein the hardstock fat is non hydrogenated and wherein in the hardstock fat the combined amount of saturated fatty acids having a length of C12 and C14 is 12 to 24 wt%, the combined amount of saturated fatty acids having a length of C16 and C18 is 28 to 50 wt%, the amount of saturated fatty acids with a length of C18 is 6 to 12 wt%, and the total amount of fully saturated fatty acids is less than 72 wt%".
- III. With its notice of opposition, the opponent had requested revocation of the patent in its entirety on the grounds under Article 100(a) (lack of novelty and lack of inventive step), 100(b) and 100(c) EPC.

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IV. The documents submitted during the opposition proceedings included:

D5: WO 03/096817 A1

D7: CA 1054848 A

D13: Bailey's Industrial Oil and Fat Products,
"Edible Oil and Fat Products, 5th Ed., 1996,
Vol.4, pp. 546-593

D15: Zhang Z. et al., Food Science and Technology, 2017, Vol.86, pp. 492-500

- V. In its decision, the opposition division found inter alia that the claims of the patent as granted (main request) did not contain added subject-matter, that the claimed invention was sufficiently disclosed, and furthermore, that the claimed subject-matter was novel over D7, but lacked an inventive step over D5, the closest prior art.
- VI. With its letter dated March 8, 2021 the opponent filed the following document:
 - D19: Bailey's Industrial Oil and Fat Products,

 "Edible Oil and Fat Products: Processing

 Technologies", 6th Ed., 2005, Vol.5, pp.511-519
- VII. The opponent's arguments of relevance to the present decision can be summarised as follows:
 - the application as filed did not disclose the combination of features characterising claim 1 as granted
 - the claimed invention was not sufficiently disclosed, because the application did not teach

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how to produce a low-fat, fat-continuous spread and how to carry out the interesterification reaction

- the claimed subject-matter was not novel over D7 and did not involve an inventive step over D5, the closest prior art, alone or in combination with D7
- VIII. The proprietors' arguments of relevance to the present decision can be summarised as follows:
 - the application as filed disclosed the combination of features characterising claim 1
 - the application provided the skilled person with sufficient information to prepare the claimed fatcontinuous spread
 - the claimed subject-matter was novel over D7 and involved an inventive step over D5, the closest prior art

The requests

- IX. The opponent requested that the decision under appeal be set aside and that the patent be revoked in its entirety.
- X. The patent proprietors requested that the decision under appeal be set aside and that the patent be maintained as granted or, alternatively, on the basis of one of auxiliary requests 1, 1a and 2 to 7, filed with the statement setting out the grounds of appeal.

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Reasons for the Decision

Main request

- 1. Amendments
- 1.1 Claim 1 as granted defines a fat-continuous spread comprising a margarine fat, which on its own comprises a liquid vegetable oil and a hardstock fat having a specific composition.
- 1.2 The opponent did not dispute that the application as filed disclosed the individual features of claim 1 as granted. However, it submitted that the application did not disclose the combination of the following features:
 - a hardstock fat composition having the <u>Saturated</u>
 Fatty Acid (SFA) profile defined in claim 1
 - the requirement that the hardstock fat comprise an interesterified mixture of fats
 - the requirement that the spread containing the hardstock be fat-continuous
- 1.3 Claims 14 and 15 as originally filed disclose a spread comprising a margarine fat, which on its own comprises the hardstock fat defined in any of preceding claims 1 to 7 as filed and a liquid vegetable oil. The amounts of these ingredients and the SFA profile of the hardstock fat defined in claims 1, 2, 14 and 15 as filed correspond to those of claim 1 as granted.
- 1.4 Claims 1, 2, 14 and 15 as filed do not state that the hardstock fat is an interesterified mixture of one or

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more fats. However, as decided by the opposition division, the basis for this feature can be found in the passage on page 2, lines 27 and 28 of the application as filed, which explicitly refers to said interesterified mixture. There are no reasons to diverge from this finding. Indeed, this passage, included in the first paragraph of the section "Detailed description", provides general teaching which can be combined with the definition of the hardstock given in claim 1 and 2 as filed, without creating originally undisclosed subject-matter.

- The opponent argued that adding this feature amounted to a "selection" between interesterified and non-interesterified mixtures, and that this selection contributed to the creation of new, originally undisclosed subject-matter. This argument is not convincing. While claim 1 as filed may generically encompass interesterified and non-interesterified mixtures, the application as filed does not disclose both of these types of mixtures. No "selection" from a list of a certain length defining alternative embodiments is to be made: as mentioned above, page 2, lines 27 and 28 directly and unambiguously discloses only an interesterified mixture.
- 1.6 Claims 1, 2, 14 and 15 as filed do not require the spread to be "fat-continuous" either. However, fat-continuous and water-continuous spreads are disclosed on page 2, line 31 and page 9, lines 15 to 21 as filed. Since both these types of spreads are directly and unambiguously disclosed in the application, and the choice of fat-continuous spreads is not one among many, the limitation to a fat-continuous spread does not create originally undisclosed subject-matter.

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- 1.7 For these reasons, claim 1 as granted does not contain added subject-matter (Articles 100(c) and 123(2) EPC).
- 2. Sufficiency of disclosure
- 2.1 The opponent considered that the invention defined in claim 1 was not sufficiently disclosed because the patent did not teach how to:
 - produce a fat-continuous spread, in particular if the spread contained a low amount of fat
 - carry out the interesterification reaction so as to obtain a hardstock having the claimed solid fat content (SFC)
- 2.2 The opponent noted that claim 1 did not specify the amount of margarine fat contained in the claimed spread and furthermore, that the claimed spread could contain very low amounts of fats and other ingredients. D13 (and its later edition, D19) taught that spreads containing low amounts of fats were difficult to produce and were unstable. The patent did not teach how to prepare those spreads and did not describe any working example either. Therefore, the skilled person would not have been able to carry out the invention.
- 2.3 The board does not agree with these conclusions. It is true that the examples in the patent describe only hardstock fat compositions, and that no fat-continuous spread comprising an oil and those hardstock fat compositions is disclosed. However, D13, a textbook representing common general knowledge, shows that fat-continuous spreads, including spreads comprising a low fat content, were well known in the art at the time of filing of the patent application. D13 acknowledges that

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the manufacture of low-fat, fat-continuous spreads can be difficult. Nevertheless, it also shows that these difficulties had already been addressed and could be overcome, for example, by including emulsifiers and thickeners. The opponent argued that D13 did not mention any specific example of these agents. However, D13 represents common general knowledge and provides numerous references to previous publications focusing on these issues. This means that at the relevant date the skilled person would have been able to select ingredients and methods for obtaining fat-continuous spreads. Furthermore, the opponent has not provided any evidence or argument that the skilled person would not have been capable of preparing a fat-continuous spread using the specific hardstock fat composition specified in the claims.

- 2.4 Finally, the opponent has not contested that, as held by the opposition division, interesterification reactions were well known in the art at the relevant date. It has also not provided evidence that by carrying out an interesterification reaction using a mixture as defined in the patent, e.g. in paragraph [0031], the skilled person would not have been able to obtain a hardstock fat as defined in claim 1.
- 2.5 For these reasons it is concluded that the claimed invention is sufficiently disclosed (Articles 100(b) and 83 EPC).
- 3. Novelty
- According to the opponent, the subject-matter of claim 1 lacked novelty over D7. To formulate its attack, the opponent drew attention, in a first step, to the method for preparing a fat blend obtained

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starting from the generic definition given in claim 1 of D7. Selecting specific amounts of ingredients from among those generically mentioned in said claim 1, the opponent defined a randomised fat blend comprising:

- 50% wt% palm stearine
- 35% wt% coconut oil
- 15 wt% shea olein
- 3.2 The opponent submitted that this specific blend fell under the definition of claim 2 as granted and therefore, necessarily, under the definition of claim 1 as granted. The opponent then argued, by inference, that this blend had of necessity the Solid Fat Content (SFC) and the Saturated Fatty Acid profile (SFA) of claim 1.
- 3.3 The board does not agree with the opponent's conclusions.
- 3.4 Multiple selections have to be made to arrive at the aforementioned specific fat blend, in particular:
 - the highest amount of palm oil given in claim 1 of D7, namely 50 wt% has to be selected, with the further assumption that this palm oil is stearine, which corresponds to an embodiment disclosed in claim 3
 - the maximum amount of lauric acid given in claim 1, namely 35 wt% has to be selected, with the further assumption that this is coconut oil, which corresponds to an embodiment disclosed in claim 10
 - a remaining amount of 15 wt% of non-lauric softening agent is to be selected, this being

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assumed to be shea olein, according to an embodiment of claim 5

- furthermore, the requirement is to be imposed that the spread be fat-continuous
- 3.5 Since multiple selections have to be made from the teaching of D7 to define the fat blend defined herein in point 2.1, this fat blend is not directly and unambiguously disclosed in this document. It is also noted that the opponent's argument relies on the definition of a hypothetical composition considered to fall within the scope of claim 1 or 2 as granted. Since this composition is hypothetical, it cannot qualify as state of the art and be cited against the claimed subject-matter.
- 3.6 Furthermore, as noted by the proprietors, the opponent disregarded the fact that the composition of claim 2 as granted must also be characterised by the features of claim 1 as granted. Since some ingredients characterising claim 2 are generically defined, e.g. the "vegetable oil", the compositions defined in claim 2 are not necessarily characterised by the SFC and the SFA specified in claim 1.
- 3.7 In Annex 2, the opponent has provided some calculations, based on D15, to show that the fat blend defined in point 2.1 comprises the required ingredients. However, this argument fails, for the simple reason that that fat blend is hypothetical and not directly and unambiguously disclosed in D7.
- 3.8 For these reasons it is concluded that D7 does not anticipate the claimed subject-matter.

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- 4. Inventive step
- 4.1 The claimed invention relates to a fat-continuous spread comprising a margarine fat comprising a liquid vegetable oil and a hardstock fat prepared from an interesterified mixture of fats. As mentioned in the patent, the invention aims at preparing a product avoiding certain food processing steps, such as hydrogenation, and using inexpensive materials, see paragraphs [0005], [0009] and [0018].

The closest prior art

- The opposition division held that D5 is the closest prior art and the parties did not contest this. D5 relates, like the opposed patent, to the preparation of a W/O, i.e. fat-continuous, spread comprising a vegetable oil and a structuring fat, namely a hardstock obtained by transesterification of a mixture of fats. D5 teaches that the product can be obtained without the need for hydrogenation, see claims 1, 13 and 15 and page 6, lines 11 to 13.
- 4.3 In its statement of grounds of appeal the opponent argued that D7 could also be a suitable starting point for assessing inventive step. However, the opponent did not provide any reason why D7 would be more suitable as the closest prior art than D5. Thus, it is concluded that there are no reasons for deviating from the opposition division's finding that D5 is the closest prior art.

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Distinguishing features

4.4 The claimed spread differs from that disclosed in D5 in the claimed fatty acid profile and in the Solid Fat Content (SFC).

Technical effect

4.5 The opposition division considered that these distinguishing technical features are not associated with a technical effect. This appears also to be the position of both parties.

Underlying technical problem

- 4.6 The underlying problem is the provision of an alternative fat-continuous spread comprising a liquid vegetable oil and a hardstock fat prepared from an interesterified mixture of fats.
- 4.7 Referring in particular to D13, the opponent submitted that, since the compositions claimed are not suitable for yielding (stable) fat-continuous spreads over the whole scope claimed, the problem to be solved should be "a further non-hydrogenated fat composition".
- This argument is not persuasive. Claim 1 defines a "fat-continuous spread" comprising a specific composition. As stated when discussing sufficiency of disclosure (point 1.11), there is no evidence that this fat-continuous spread could not have been prepared by the skilled person. The aforementioned argument that the composition of claim 1 is not suitable for preparing the claimed spread is in any case related more to the alleged lack of sufficiency of disclosure than to an alleged lack of inventive step. Furthermore,

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claim 1 does not specify any particular degree of stability when defining the claimed spread.

Obviousness / Non-obviousness of the claimed solution

- 4.9 The opponent noted that according to page 3 of D5 the properties of the interesterified triglyceride mixture can be manipulated through a proper choice of the three fats used for the preparation of the mixture. In its opinion, this passage provides the skilled person with the incentive to manipulate the amounts of the components which are specifically disclosed in D5 and in this way arrive at the claimed composition.
- 4.10 The board does not agree. The teaching of D5 is very broad as far as the composition of the spread is concerned, see in particular claim 1. This claim 1 does not, like claim 1 as granted, define the complete fatty acid profile of the fat composition. The solid acid content of the claimed spread is not mentioned either. Thus, to find guidance concerning these features, the skilled person would refer to the specific spreads disclosed in the examples of D5.
- 4.11 Example 1 of D5 discloses an interesterified mixture comprising an amount of saturated C₁₈ fatty acids which is far higher than that of claim 1 as granted, namely 33.4% vs 6 wt% to 12 wt% in claim 1. Example 2 discloses a blend comprising the interesterified fat and a vegetable oil, which still comprises a higher amount of saturated C₁₈ fatty acid, namely 17%. Furthermore, as noted by the proprietors, example 2, which compares a composition according to the invention and a reference one, shows that the purpose of D5 is to obtain a composition in which the amount of saturated C₁₈ fatty acid is increased. Therefore, insofar as D5

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teaches manipulation of the fat blends, there is a deliberate intention to increase the amount of saturated C_{18} fatty acid making up the hardstock. This means that D5 does not give the skilled person any incentive to provide a hardstock fat having a content of saturated C_{18} fatty acid in the amount specified in claim 1.

- 4.12 It also appears that, starting from D5, D7 would not have given the skilled person any incentive to use a composition having the fatty acid profile of claim 1 to prepare a fat-continuous spread.
- 4.13 Although D7 contains few passing references to a food spread - see page 4, line 14 and claim 15 - the focus is on ice creams, which are oil in water rather than water in oil emulsions. The exemplified compositions are in fact ice creams in the form of water emulsions, see the description of D7 starting from page 7, line 7, and see in particular page 7, lines 16 to 24 and the example. The fatty acid profile in table 2 also relates to ice creams. The opponent referred to the hypothetical composition mentioned above in point 2.1 when discussing novelty over D5, arguing that the skilled person would have considered the fatty acid profile of this composition when searching for an alternative composition to that described in D5. This argument is not persuasive either. D7 neither discloses nor contains any pointer to this fatty acid profile. Thus, the opponent's reasoning is tainted by hindsight.
- 4.14 For these reasons, the subject-matter of claim 1 as granted and of the subsequent claims, which are more limited in scope, involves an inventive step.

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Order

For these reasons it is decided that:

- 1. The decision under appeal is set aside.
- 2. The patent is maintained as granted.

The Registrar:

The Chair:



M. Schalow A. Haderlein

Decision electronically authenticated