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Bezeichnung der Erfindung: Detergent-oil bath additives and process.

Title of invention:

Titre de l'invention :

Klassifikation / Classification / Classement : A61 K 7/50

ENTSCHEIDUNG / DECISION

vom / of / du 7 March 1989

Anmelder / Applicant / Demandeur :

Patentinhaber / Proprietor of the patent /
Titulaire du brevet : Ligner and Fischer GmbH

Einsprechender / Opponent / Opposant : OI Wella AG
OII Blendax GmbH

Stichwort / Headword / Référence : Bath additive/Ligner

EPÜ / EPC / CBE Article 56

Schlagwort / Keyword / Mot clé : "Inventive step (confirmed) - suitability of
'comparative tests'"

Leitsatz / Headnote / Sommaire

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Beschwerdekammern

Boards of Appeal

Chambres de recours

Case Number : T 38 /88 - 3.3.1



D E C I S I O N
of the Technical Board of Appeal 3.3.1
of 7 March 1989

Appellant : Ligner and Fischer GmbH
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Respondent : Wella AG Berliner Allee 65
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Respondent : Blendax GmbH
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Decision under appeal : Decision of Opposition Division of the European
Patent Office of 17 February 1987 posted on
19 November 1987 revoking European patent
No. 0 026 073 pursuant to Article 102(1) EPC.

Composition of the Board :

Chairman : K.J.A. Jahn
Members : R.W. Andrews
G.D. Paterson

Summary of Facts and Submissions

- I. The mention of the grant of the patent No. 0 026 073 in respect of European patent application No. 80 303 191.3, filed on 11 September 1980 and claiming priority of 22 September 1979 from a prior application filed in the United Kingdom, was announced on 1 June 1983 (cf. Bulletin 83/22) on the basis of nine claims for the Contracting States BE, CH, DE, FR, GB, IT, LI, NL and SE and nine claims for the Contracting State AT.
- II. Notices of oppositions were filed on 24 February 1984 and by a duly confirmed telex on 1 March 1984 in which the revocation of the patent on the grounds that its subject-matter lacked novelty and did not involve an inventive step. The oppositions were supported, inter alia, by the following documents:
- (3) DE-A-2 700 891 or its equivalent US-A-4 130 497 (11)
 - (7) Die Kosmetischen Präparate, G.A. Nowak, 2nd Edition, 1975, pages 278-279, and
 - (8) Firmenschrift, "Texapon WW99", D 1590-d-057220 (1972).
- III. By a decision delivered orally on 17 February 1987, with written reasons posted on 19 November 1987, the Opposition Division revoked the European patent. The Opposition Division concluded that although the claimed subject-matter was novel, it did not involve an inventive step in the light of the disclosure of documents (3) and (8). The Opposition Division considered that it was obvious to replace the expensive anhydrous alkyl or alkylaryl substituted ethoxylated oxacarboxylic acids or the sodium or amine salts thereof (component (ii)(b)) in the compositions disclosed in document (3) or (11) by the cheaper metal or ammonium ethoxylated C₈₋₁₈ fatty alcohol sulphates (component (i)(b)) in the presently claimed

compositions) in view of the teaching of document (8). In the Opposition Division's view the comparative tests disclosed in DE-A-2 943 202 (12), which corresponds, in part, to the disputed patent, could not be taken into account for the assessment of inventive step since the amount of oil used in these comparative compositions, although falling within the claimed range, was not the same as that used in Examples of document (3) or (11). However, even if these comparative tests were regarded as proving an improved effect with respect to the compositions of document (3) or (11), it would still have been obvious to replace the prior art detergent (ii)(b) by the present detergent (i)(b).

- IV. An appeal was lodged against the decision on 15 January 1988 together with the payment of the prescribed fee. A statement of grounds of appeal was filed on 23 March 1988.

In the statement and during the oral proceedings held on 7 March 1989 at which Respondent 01 was not present, the Appellant argued that the Opposition Division accepted that the problem of providing homogeneous oil-detergent bath additive compositions fulfilling the general requirements with respect to foaming and oil deposition on the body which are less expensive than the compositions disclosed in document (11) had been solved. Therefore, if the Appellant was able to demonstrate that the replacement of the component (ii)(b) of the compositions disclosed in document (11) by the present component (i)(b) was not obvious, this would be an indication of the presence of an inventive step. Alternatively, if the Appellant can demonstrate improved foaming and/or improved oil deposition compared with the closest prior art, this would also be an indication of the presence of an inventive step, since it has not been alleged that such improvement could have been foreseen. The Appellant submitted that the teaching of document (8) does not render it obvious to replace

component (ii)(b) of document (11) by the present component (i)(b), particularly since the surfactants which are comparable with this latter component are Texapon N40 and N70 which are not disclosed as being suitable for use in oil-containing compositions. In the Appellant's opinion the claimed compositions are not only superior insofar as they are less expensive than the prior art compositions but also superior to those compositions in view of the improvement in the amount of oil deposited on the skin.

V. Respondent OI (Wella AG) based his request for the dismissal of the appeal on the arguments put forward during the opposition proceedings, the reasons in the decision under appeal and the reply of the Respondent OII (Blendax GmbH) to the statement of grounds of appeal.

VI. Respondent OII argued that it forms part of the normal duties of the skilled person in the cosmetic industry to find cheaper replacements for expensive raw materials. Thus, with respect to the compositions disclosed in document (11), the skilled person was in a "one-way street" situation insofar as the only possibility for reducing the cost of these prior art compositions was to replace the expensive component (ii)(b) by a cheaper detergent. It is proposed to replace this component by a class of detergents which are extensively used in shampoos and bath additives and are known to possess good foaming properties. Moreover, the combined teaching of documents (7) and (8) clearly demonstrates that the proposed solution to the problem of providing a cheaper bath additive with good foaming properties and containing a high amount of oil was obvious.

Furthermore, this Respondent considered that the comparative test reported in document (12) were defective insofar as: (a) the method used to determine the amount of oil deposited on the skin was not a generally recognised

method; (b) the number of tests and a statistical analysis of the results were not reported; and (c) the comparative tests were not fair since the exact compositions disclosed in the Examples of document (11) were not used.

In connection with the disclosure in document (11) of the use of paraffin oil in the compositions disclosed therein, the Appellant acknowledged that this oil would not fall within the ambit of vegetable oils since it is generally considered to be a mineral oil.

VII. The Appellant requested that the decision under appeal be set aside and a patent maintained with the text as filed on 2 March 1989. The only independent claim for the Contracting States BE, CH, DE, FR, GB, IT, LI, NL and SE in accordance with the above-mentioned text reads as follows:

"A homogeneous oil-detergent bath additive composition characterised in that it comprises:

- (i) 20 to 70% by weight of the composition of a detergent mixture consisting of:
 - (a) 10 to 90% by weight of the mixture of at least one amine C₈₋₁₈ fatty alcohol sulphate optionally ethoxylated in the C₈₋₁₈ fatty alcohol sulphate anion, and
 - (b) 90 to 10% by weight of the mixture of a metal ethoxylated C₈₋₁₈ fatty alcohol sulphate or ammonium ethoxylated C₈₋₁₈ fatty alcohol sulphate;
- (ii) 20 to 60% by weight of the composition of a cosmetically acceptable oil selected from vegetable oils and synthetic liquid C₈₋₁₂ fatty acid triglycerides, and
- (iii) from 0 to 15% by weight water."

The only independent claim for the Contracting State AT relates to a process producing the above-defined homogeneous oil-detergent bath additive.

Both Respondents requested that the appeal be dismissed.

VIII. At the conclusion of the oral proceedings, it was announced that the Board had decided to maintain the patent with the text as filed on 2 March 1989.

Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC and is, therefore, admissible.
2. There are no formal objections under Article 123 EPC to Claims 1 to 8 for the above-mentioned group of Contracting States or Claims 1 to 8 for the Contracting State AT since they are adequately supported by the original disclosure and do not extend the protection conferred. Claim 1 of both sets of claims finds support in the original corresponding main claims in combination with page 2, lines 1 and 2 and page 4, lines 10 to 12 and 22 to 28 of the published patent application (cf. also page 2, line 19 and page 3, lines 1 to 2 and 8 to 11 of the printed patent specification). Claims 2 to 8 of both sets of claims correspond to the respective Claims 2 to 7 and 9 of the originally filed and granted sets of claims apart from those amendments necessary to render them consistent with their corresponding main claims.
3. The patent in suit relates to homogeneous oil-detergent bath additive compositions and a process for their preparation. Such compositions are known from document (11). This document, which represent the closest prior art,

discloses a single phase oil-detergent composition comprising

- (i) from 15 to 50% by weight of a cosmetically acceptable oil; such as, for example, a C₈₋₁₂ triglyceride;
- (ii) from 40 to 75% by weight of an anionic detergent mixture comprising
 - (a) an anhydrous amine salt of an optionally ethoxylated C₈₋₁₈ fatty alcohol sulphate; and
 - (b) an anhydrous alkyl or alkylaryl substituted ethoxylated oxacarboxylic acid or a sodium or an amine salt thereof having the formula:
$$R-(O\ CH_2CH_2)_n - O-CH_2COOX$$
wherein R is C₈₋₁₈ alkyl or C₆₋₁₂ alkylphenyl; n has an average value of from 1 to 15; and X is hydrogen, sodium or an amine residue; and
- (iii) from 0 to 5% water (cf. Claims 1 and 2).

3.1 A disadvantage of this prior art composition was considered to lie in the use of a detergent blend containing the component (ii)(b) which is a special and expensive detergent. A further disadvantage of these prior art compositions was seen in the fact that, although they yielded a satisfactory amount of foam, the amount of oil deposited on the skin was considered to be too low. Since prices fluctuate, particularly in the cosmetic industry, and, therefore, do not allow an objective assessment of inventive step, the technical problem underlying the patent in suit in the light of this closest prior art may be seen in providing homogeneous oil-detergent bath additives with improved oil deposition without any deterioration in their foaming properties.

According to the patent in suit the above-defined technical problem is essentially solved by the composition defined in

the claim recited in paragraph VII above. A comparison of the present compositions with those disclosed in document (11) reveals that component (ii)(b) of the known compositions has been replaced by a metal or ammonium ethoxylated C8-18 fatty alcohol sulphate and that the cosmetically acceptable oil has been selected from vegetable oil and synthetic liquid C8-18 fatty acid triglycerides. Further the present composition may optionally contain more water than the prior art ones.

- 3.2 In view of the results in the Table bridging columns 5 and 6 and 7 and 8 of document (12) the Board is satisfied that the technical problem as defined above has been plausibly solved. These results, which arise from a fair comparison with the closest prior art, demonstrate that the present compositions deposit about double the amount of oil onto the skin as compositions falling within the terms of Claim 1 of document (11) while yielding about the same amount of foam.
- 3.3 The results of these comparative tests have been criticised insofar as the test used to determine the amount of oil deposited on the skin was not considered to be an internationally recognised test. In this respect the Opposition Division referred to a decision of the Board T 57/84 (cf. OJ EPO, 1987, 53) in which further comparative tests were carried out using internationally recognised testing methods (cf. point IV). These tests, for which standard methods were available, were carried out to establish the upper and lower toxic limits of two specified fungicides under certain conditions. However, this decision is not to be construed as requiring that comparative tests submitted as evidence must be carried out using only internationally recognised test methods since such methods do not always exist. In the present case the test procedure adopted by the Appellant cannot be said to have been arbitrary chosen by him since a very similar procedure was

used for the same purpose in document (11) (cf. Experiment 1), DE-B-1 948 800 (document (1); cf. Column 2, lines 1 to 44) and reported in the literature (cf. Journal of Investigative Dermatology, Volume 37, pages 69 to 72, 1961 and Archives of Dermatology, Volume 87, pages 369 to 371, 1963; filed by the Appellant on 2 March 1989). In the Board's judgement this method is satisfactory for quantifying oil deposition from a bath onto the skin.

Further criticisms levelled against the comparative tests were the lack of statistical analysis of the results and no indication of the number of tests carried out with each composition. With respect to the latter criticism the Board accepts that, since the results of Examples 1 and 2 in document (12) are identical with the results of Examples 1 and 2 of the disputed patent the results relating to the quantity of oil deposited onto the skin reported in the Table bridging Columns 5 and 6 of document (12) represents the mean of twenty measurements, i.e. two per person. In view of the great difference in the amounts of oil deposited by the compositions in accordance with the disputed patent and those deposited by the prior art compositions a statistical analysis is rendered redundant. The only results subjected to statistical analysis of variance in document (11) were those obtained in Experiment 2 in which the skin benefit obtained using two different foam bath compositions were compared on the basis of subjective assessment by a panel of trained assessors.

A final criticism of the comparative tests was that the amount of oil present in the Comparative Examples of document (12) was not identical with that present in the Examples of document (11). Nevertheless, the Board is satisfied that these tests provide a fair comparison since the amount of oil in all the composition was the same (30% by weight) and corresponded to the mid-point of the most preferred prior art range of 25 to 35% by weight disclosed

in document (11) (cf. Column 2, line 1). Furthermore, the weight ratio of sulphated alcohol to the substituted carboxylic acid in the detergent blend were maintained at the value exemplified in document (11).

Therefore in the Board's judgement the comparative tests disclosed in document (12) may be used as evidence in the assessment of inventive step since they represent a fair comparison with the closest prior art. As mentioned above these results demonstrate to the Board's satisfaction that the technical problem underlying the disputed patent of providing oil-detergent bath additives with improved oil deposition onto the skin compared with those disclosed in document (11) has been solved. Furthermore, the results also show that the foaming properties of the presently claimed compositions are at least as good as those of the prior art compositions.

4. After examination of the cited documents the Board has reached the conclusion that the subject-matter of the disputed patent is novel. Since novelty is no longer in dispute it is not necessary to consider this matter in detail.
5. It still remains to be examined whether the requirement of inventive step is met by the claimed subject-matter.
 - 5.1 Document (8) relates to the detergent Texapon WW99. According to this leaflet Texapon WW99 is a combination of an alkyl ether sulphate on the basis of selected coconut oil alcohol fractions with non-ionic emulsifiers. In document (7) it is stated that Texapon WW99 is an isopropanolamine ether sulphate. In the light of the disclosure in these two documents the Board is satisfied that Texapon WW99 is a detergent of the class defined under (i) (a) of the disputed patent and (ii) (a) of document (11).

Document (8) also discloses that Texapon WW99 gives clear mixtures with oils, such as, for example, vegetable oils, and in view of this property is suitable for the preparation of oil foam baths with good regreasing and clear over-greased shower products. Although such products may contain up to 70% of oil, in order to develop an adequate amount of foam they should preferably contain 35 to 45% of oil. There then follows seven suggested oil foam bath compositions comprising Texapon WW99, as the sole detergent, in amounts ranging from 30 to 75%, and different oils in various amounts. From this reading of the document up to this point the skilled person would conclude that Texapon WW99 is, by itself, a suitable surfactant for the production of oil foam bath compositions.

- 5.2 This conclusion is supported by the disclosure of document (7) which describes on page 279 two additional oil foam bath compositions containing Texapon WW99 as the sole surfactant.
- 5.3 Document (8) further discloses that Texapon WW99 can be used in combination with other surfactants, such as, for example Texapon N40 or N70 for the preparation of aqueous surfactant compositions. Texapon N40 and N70 are solid and liquid forms respectively of sodium laurylethersulphate (cf. Tensid Taschenbuch, 2nd. Edition, H. Stache, page 922). However, the leaflet warns that such composition should not contain more than 15% of Texapon WW99 and that the presence of perfume oil, usually present in small amounts of, for example, 2% can cause compatibility problems in compositions containing Texapon WW99 and Texapon N40 or N70. Three examples of compositions containing mixtures of Texapon WW99 and Texapon N40 or N70 are provided. These compositions contain from 55 to 68% of water and 2% of a water-soluble perfume.

Therefore, the skilled person would find no incentive in the teaching of document (8) to combine Texapon WW99 with other surfactants for the preparation of bath additive compositions containing substantial amounts of oils. In fact, in view of the warning in the this document about compatibility problems occurring with small amounts of perfume oils, the skilled person would be actively discouraged from considering using detergent blends containing Texapon WW99 for oil-detergent bath additives. Thus, document (8) alone or combined with document (7) would not even suggest to the skilled person the present component (i)(b) as an alternative to component (ii)(b) of the compositions known from document (11), let alone that this replacement would solve the technical problem of improving the performance of these prior art compositions with respect to the amount of oil deposited onto the skin.

5.4 The Board cannot accept the allegation that the skilled person was in a "one-way street" situation in the present case since solutions to the objectively assessed technical problem as defined above might have resided not only in finding a suitable replacement for component (ii)(b) of the known compositions but also in varying the other components of these compositions. However, in the Board's judgement even the replacement of component (ii)(b) cannot be regarded as representing a "one-way street" situation in view of the vast number of detergents known in the art which are available as possible alternatives to the above-mentioned component (ii)(b). Moreover, for the reasons given above the teaching of document (8) would clearly direct the skilled person's attention away from the present metal or ammonium ethoxylated C₈₋₁₈ fatty alcohol sulphates as possible candidates for blending with component (ii)(a) of the prior art compositions.

5.5 Therefore, the subject-matter of Claim 1 of both sets of claims involves an invention step. Dependent Claims 2 to 8

of both sets of claims, which relate to preferred embodiments of their respective main claims, derive their patentability from these claims.

6. With respect to the Appellant's earlier written request for reimbursement of the appeal fee (cf. page 22 of the statement setting out the grounds of appeal) which was not maintained at the oral proceedings the Board considers that, although errors of fact and of judgement were made by the Opposition Division in the decision under appeal, such errors are not procedural in nature and therefore do not constitute a substantial procedural violation justifying the refund of the appeal fee under Rule 67 EPC.

Order

For these reasons, it is decided that:

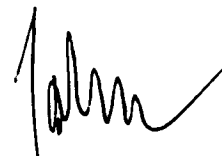
1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to maintain the patent with the text as filed on 2 March 1989.

The Registrar:



S. Fabiani

The Chairman:



K. Jahn

R.W.A.