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**Datasheet for the decision
of 19 March 2013**

Case Number: T 0533/11 - 3.3.07

Application Number: 05755558.3

Publication Number: 1771152

IPC: A61K 8/73, A61K 8/86,
A61Q 5/02, A61Q 5/12

Language of the proceedings: EN

Title of invention:
Hair care compositions

Patent Proprietors:
Unilever PLC
Unilever N.V.

Opponent:
Beiersdorf AG

Headword:
-

Relevant legal provisions:
EPC Art. 100(a)
RPBA Art. 13

Keyword:
"Late submitted material - admitted (yes)"
"Inventive step (no)"

Decisions cited:
-

Catchword:
-



Case Number: T 0533/11 - 3.3.07

D E C I S I O N
of the Technical Board of Appeal 3.3.07
of 19 March 2013

Appellants:
(Patent Proprietors)

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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted 30 December 2010 revoking European patent No. 1771152 pursuant to Article 101(3) (b) EPC.**

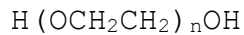
Composition of the Board:

Chairman: J. Riolo
Members: D. Semino
D. T. Keeling

Summary of Facts and Submissions

I. The appeal of the patent proprietors (appellants) lies against the decision of the opposition division announced at the oral proceedings on 30 November 2010 to revoke European Patent 1 771 152. The granted patent comprised 10 claims, claim 1 reading as follows:

"1. A hair care composition comprising a water-soluble, nonionic polymer of ethylene oxide and a water-soluble, nonionic cellulose ether, characterised in that the polymer of ethylene oxide is a linear homopolymer of ethylene oxide characterised by the general formula:



in which n has an average value of from 45,000 to 185,000 and in that the nonionic cellulose ether is selected from methyl cellulose, hydroxypropyl methylcellulose and mixtures thereof."

II. A notice of opposition was filed against the granted patent requesting revocation of the patent in its entirety on the grounds of lack of novelty and lack of inventive step, in accordance with Article 100(a) EPC.

III. The decision was based on the patent as granted as main request and on an auxiliary request filed with letter of 23 November 2010. In the decision the following documents were cited *inter alia*:

D1: EP-B-0 473 349

D3: A. L. L. Hunting, Encyclopedia of Shampoo Ingredients, Micelle Press, 1983, page 175

- D4: J. R. Conklin, Methocel® Cellulose Ethers and their Applications in Personal Care Products, Dow Chemical Co., December 1989
- D5: Hair and Hair Care, edited by D. H. Johnson, Marcel Dekker, 1997, page 57
- D6: Methocel Cellulose Ethers, Technical Handbook, Dow, September 2002

IV. As far as relevant to the present decision, the decision under appeal can be summarised as follows:

- (a) The composition according to granted claim 1 differed from the compositions in the examples of D1 in the type of nonionic cellulose, which was hydroxyethyl cellulose in D1. The results of a single example in the patent in suit (example 1), which demonstrated a technical effect for a specific hydroxypropyl methylcellulose, could not be extrapolated to other hydroxypropyl methylcelluloses and to methyl celluloses as encompassed by granted claim 1. The objective technical problem was therefore the provision of alternative hair care compositions. The solution defined in granted claim 1, namely to use as nonionic cellulose methyl cellulose, hydroxypropyl methylcellulose or mixtures thereof was an obvious alternative to the use of hydroxyethyl cellulose in view of any of documents D3, D4, D5 or D6.
- (b) The auxiliary request was not admitted into the proceedings as it was late filed, no explanation was given for the late filing and it was not clearly argued why the request satisfied the requirements of the EPC.

- V. The appellants lodged an appeal against that decision. With the statement setting out the grounds of appeal they submitted a set of claims as auxiliary request. Claim 1 of the auxiliary request corresponded to claim 1 as granted with the specification that the nonionic cellulose ether "is hydroxypropyl methylcellulose" (i.e. the other two options, namely methyl cellulose or mixtures of the two celluloses, were deleted).
- VI. In the reply to the statement setting out the grounds of appeal the respondent (opponent) maintained the objection of lack of inventive step.
- VII. In a communication dated 15 December 2013 in preparation of oral proceedings the Board addressed the issue of inventive step by summarising *inter alia* the different opinions of the parties as far as the formulation of the problem was concerned and pointing out the need to analyse the evidence on file in order to evaluate whether the problem posed in the patent had been solved over the closest prior art. In that context the Board expressed doubts that the examples available on file, namely the ones in the patent in suit, made a comparison with compositions according to D1 possible, as they were not representative of the compositions disclosed therein.
- VIII. With letter of 18 January 2013 the respondent filed further comparative tests (D10) to show that the presence of an effect over compositions containing hydroxyethyl cellulose could not be acknowledged.

- IX. Oral proceedings were held on 19 March 2013 in the announced absence of the appellants.
- X. The arguments of the appellants can be summarised as follows:

Inventive step

- (a) The opposition division decided that the presence of an effect could not be acknowledged over the whole scope of granted claim 1, because only one material had been tested within the nonionic cellulose ethers falling under the definition of the claim. As it was common practice for patent applicants to provide a single example supporting a broader claim, in the absence of experimental data proving that there were materials within the scope of the claim which did not work, the benefit of doubt had instead to be accorded to the proprietors.
- (b) Accordingly, starting from D1 as the closest prior art, whose compositions differed from the claimed ones in that they contained hydroxyethyl cellulose instead of hydroxypropyl methylcellulose or methyl cellulose, the problem had to be formulated as in the patent in suit and the presence of an inventive step had to be acknowledged.
- (c) Those arguments were equally valid for claim 1 according to the auxiliary request.

The appellants did not contest the admission of document D10 into the proceedings.

XI. The arguments of the respondent can be summarised as follows:

Admissibility of D10

(a) The comparative tests in D10 were very relevant to show the lack of inventive step. They were filed late, as it was clear only after the communication of the Board that it could be disputed that the choice of the cellulose ether did not make any difference. In view of this and of the fact that there was sufficient time for the appellants to take position on the tests, D10 should be admitted into the proceedings.

Inventive step

(b) The opposition division was correct in deciding that a single example could not support the presence of an effect over the whole ambit of the claim, in view of the fact that an immense number of methyl celluloses or hydroxypropyl methylcelluloses could be commercially obtained. The reasoning of the opposition division therefore fully applied both to claim 1 as granted and to claim 1 according to the auxiliary request.

(c) In addition D10 showed that it did not make any difference whether a hair care composition contained hydroxypropyl methylcellulose as according to claim 1 or hydroxyethyl cellulose as according to the examples of D1. Therefore an inventive effect related to a wet slippery feel or

a creamy lather could not be acknowledged. Starting from D1, the problem was that of providing an alternative hair care composition. D3 and D5 showed that the different hydroxyalkyl celluloses were equally suitable and could be replaced with another one. The replacement of hydroxyethyl cellulose with hydroxypropyl methylcellulose was therefore obvious.

- (d) On that basis the composition of claim 1 as granted and according to the auxiliary request was not inventive.

XII. The appellants requested in writing that the decision under appeal be set aside and the patent be maintained as granted or on the basis of the auxiliary request filed with the statement of grounds of appeal.

XIII. The respondent requested that the appeal be dismissed.

Reasons for the Decision

Admissibility of D10

1. Document D10 containing some comparative tests was filed by the respondent two months before the scheduled oral proceedings and well after these oral proceedings had been arranged. On that basis its submission is a late filed amendment of the respondent's case, whose admission into the proceedings is subject to a discretionary decision of the Board (Article 13 of the Rules of Procedure of the Boards of Appeal).

- 1.1 While the crucial point for formulating the problem solved with respect to the closest prior art D1 both in the appealed decision and in the arguments of the parties in the statement of grounds and in the reply thereto was whether the single example in the patent in suit was sufficient to prove an effect over the whole scope of granted claim 1, the Board underlined in the communication sent in preparation of the oral proceedings the relevance of a comparison between compositions according to the patent and according to document D1, which was not available on file.
- 1.2 The respondent submitted D10 one month after the communication of the Board and two months before the scheduled oral proceedings in order to make available the missing comparison. The appellants did not contest the admissibility of D10 and did not request a longer period of time to analyse the tests or to provide counter-tests.
- 1.3 On that basis D10 can be seen as a legitimate and not contested reaction of the respondent to a point raised for the first time in the communication of the Board. The document is according to the Board straightforward and helpful in providing a clear answer to the crucial issue in the analysis of inventive step. Moreover, its admission does not raise any issue which could require an adjournment of the oral proceedings.
- 1.4 For these reasons the Board considers it appropriate to exercise its discretion according to Article 13 of the Rules of Procedure of the Boards of Appeal by admitting document D10 into the proceedings.

Inventive step

2. There was agreement between the parties on the choice of document D1 as the closest prior art and on the analysis of that document, namely on the facts that it discloses hair care compositions (see the examples of D1) comprising linear homopolymers of ethylene oxide with chemical formula $H(OCH_2CH_2)_nOH$ in which n has an average value of from 45,000 to 185,000 (see the high-molecular weight polyethylene glycols in the examples) and a water-soluble, nonionic cellulose ether (hydroxyethyl cellulose contained in all examples of D1) and that the composition of granted claim 1 differs from the compositions of D1 in that as nonionic cellulose ether methyl cellulose, hydroxypropyl methylcellulose or mixtures thereof are used in place of hydroxyethyl cellulose. The Board agrees with this analysis.
- 2.1 The disputed issue was instead the formulation of the solved problem, which according to the appellants is the one indicated in the patent in suit, namely providing compositions which show an improvement in wet sensory benefits and in ease of rinsing (paragraph [0004] of the patent), and in the view of the respondent is the provision of an alternative hair care composition.
- 2.2 Given that alleged advantages to which the proprietors merely refer without offering sufficient evidence, supported by any comparison with the closest prior art, cannot be taken into consideration in determining the problem effectively solved by the underlying invention (Case Law of the Boards of Appeal of the EPO,

6th edition 2010, I.D.4.2), the examples and comparative examples available on file must be taken into account to evaluate whether the problem posed in the patent has indeed been solved, all the more because D1 aims at providing properties which are similar to the desired ones in the patent in suit (compositions providing "good texture of the wet hair", see page 2, line 29, and "good rinsing capabilities", see page 2, lines 54 and 55).

2.3 The tests in the patent in suit (paragraphs [0011] to [0013]) concern a composition falling under granted claim 1 (example 1, containing as polymer of ethylene oxide 0.1 weight % polyethylene oxide with an average molecular weight of 8 million daltons and as nonionic cellulose ether 0.2 weight % hydroxypropyl methylcellulose) and three comparative compositions which differ from that one in the absence of the polyethylene oxide (example B), of the hydroxypropyl methylcellulose (example C) or of both ingredients (example A). None of the comparative compositions can be considered as representative of the disclosure of D1, whose examples contain both a polyethylene oxide with the desired chain length and a nonionic cellulose ether (hydroxyethyl cellulose, see point 2, above).

2.4 The tests in D10 compare a composition falling under granted claim 1 ("Rezeptur 1" in the table in section 1 of D10, containing as polymer of ethylene oxide 0.05 weight % polyethylene oxide with the desired chain length and as nonionic cellulose ether 0.2 weight % hydroxypropyl methylcellulose) with a composition in which the hydroxypropyl methylcellulose is replaced by hydroxyethyl cellulose in the same amount ("Rezeptur 2"

in the table in section 1 of D10). The evaluation of wet sensory benefits (creamy leather and wet slippery feel) and of ease of rinsing shows that a large majority of the users was not able to detect any difference in the properties when employing the two compositions tested (table in section 2.1 of D10). While the tests in D10 did not reproduce the examples of D1, they evaluated the effect of the replacement of hydroxyethyl cellulose with hydroxypropyl methylcellulose, which is the only difference between the compositions of D1 and the claimed one (see point 2, above).

2.5 While the tests in the patent in suit do not make a comparison with the compositions according to D1 possible and do not permit therefore the acknowledgement of the claimed improvements, the tests in D10 confirm that no improvement in the claimed properties (wet sensory properties and ease of rinsing) can be attributed to the replacement of hydroxyethyl cellulose with hydroxypropyl methylcellulose. Nothing can be said for the replacement of hydroxyethyl cellulose with methyl cellulose, as no tests are available on file relating to a composition comprising methyl cellulose.

2.6 On that basis and in the absence of any acknowledged improvement, the problem solved by the hair care composition of claim 1 with respect to the compositions of document D1 as the closest prior art is the provision of further hair care compositions.

2.7 It is well-known in the field of hair care compositions that cellulose ethers are commonly used thickeners and

that hydroxyethyl cellulose, hydroxypropyl methylcellulose and methyl cellulose are equally valid alternatives belonging to that class (see e.g. D3, an extract from an encyclopaedia on shampoo ingredients, page 175, section on "Cellulose ether thickeners" and D5, an extract from a book on hair and hair care, see page 57, section D.2 on "Cellulose and other polymers" as thickening agents). The skilled person, starting from the compositions of the examples of D1 and looking for further hair care compositions, would therefore replace the hydroxyethyl cellulose used therein with a hydroxypropyl methylcellulose or methyl cellulose without exercising any inventive activity.

- 2.8 For these reasons, the hair care composition of granted claim 1 does not involve an inventive step.

Auxiliary request - inventive step

3. The reasoning leading to lack of inventive step for the composition of granted claim 1 and valid both for the embodiment comprising hydroxypropyl methylcellulose and for the one including methyl cellulose is equally applicable to the composition of claim 1 according to the auxiliary request, which is limited to the former embodiment. This composition is thus not inventive for the same reasons as detailed for granted claim 1 (see points 2 to 2.8, above).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar

The Chairman

S. Fabiani

J. Riolo