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D E C I S I O N
of 20 July 2005

Case Number: T 0986/01 - 3.3.7

Application Number: 93916166.7

Publication Number: 0651632

IPC: A61K 7/06

Language of the proceedings: EN

Title of invention:
Hair cosmetic composition

Patentee:
Kao Corporation

Opponent:
(01) The Procter & Gamble Company
(02) Henkel Kommanditgesellschaft auf Aktien

Headword:
-

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step (yes) - problem and solution"
"Reliability of test report - improvement (yes)"

Decisions cited:
T 0219/83, T 0197/86

Catchword:
-



Case Number: T 0986/01 - 3.3.7

D E C I S I O N
of the Technical Board of Appeal 3.3.7
of 20 July 2005

Appellant: Henkel Kommanditgesellschaft auf Aktien
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Respondent: Kao Corporation
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
20 July 2001 concerning maintenance of European
patent No. 0651632 in amended form.

Composition of the Board:

Chairman: R. E. Teschemacher
Members: B. J. M. Struif
P. A. Gryczka

Summary of Facts and Submissions

I. The mention of the grant of European patent No. 0 651 632 with respect to European patent application No. 93 916 166.7 filed on 14 July 1993 was published on 15 October 1997. The granted patent was based on seven claims, claim 1 being the only independent claim and reading as follows.

"1. A hair cosmetic composition comprising the following components (a), (b) and (c):

- (a) at least one compound selected from fatty acids containing a linear or branched alkyl or alkenyl group having 12-40 carbon atoms, salts thereof and fatty acid esters composed of one of the fatty acids and a polyhydric alcohol;
- (b) at least one compound selected from benzyl alcohol, cinnamyl alcohol, phenethyl alcohol, p-anisyl alcohol, p-methylbenzyl alcohol, phenoxyethanol and 2-benzyloxyethanol; and
- (c) at least one cationic surfactant."

II. Two notices of opposition were filed against the granted patent, in which the revocation of the patent in its entirety was requested on the grounds of Article 100(a) EPC with respect to lack of novelty and lack of an inventive step. The opposition was supported *inter alia* by the following documents:

D1: EP-A-0 240 350

D2: US-A-5 120 531

D3: DE-A-4 009 617

III. In an interlocutory decision posted on 20 July 2001, the opposition division found that the patent as amended on the basis of a set of claims 1 to 7 submitted by letter dated 3 May 2000 as main request met the requirements of the EPC. Claim 1 as amended differed from claim 1 as granted as follows:

- at the beginning of paragraph (b) the feature "1 to 30 wt.% of" was added. Corresponding amendment was made to claims 2 and 5.

The opposition division held that:

- (a) The modified claims of the main request were in compliance with the requirements of Article 123(2) and (3) and Rule 57(a) EPC.
- (b) The claimed subject-matter was novel over the cited prior art D1, D2 and D3.
- (c) As regards inventive step, D1 and D3 were considered to represent the closest state of the art rather than D2 which did not exemplify compositions containing all components (a) to (c) as required by the patent in suit. Whilst in D1 a rigid polymer, in D2 a hair styling polymer and in D3 polyvinyl pyrrolidone and a water soluble peptide were essential for obtaining hair styling or conditioning properties, the presence of these components was only optional in the claimed composition. The beneficial effect of the amount of component (b) on the hair cosmetic composition could not be expected from the cited prior art. In the comparative experiments filed by the

proprietor, the compositions in accordance with the opposed patent differed from the compositions of D1 and D3 only by the amount of component (b). The properties of the treated hair were better when the claimed composition instead of the compositions of D1 and D3 was used. Thus, the claimed subject-matter involved an inventive step.

IV. On 4 September 2001, the opponent 02 (appellant) filed a notice of appeal against the above decision and paid the prescribed fee on the same day. The statement setting out the grounds of appeal was filed on 26 October 2001.

Opponent 01 did not file a separate appeal and is a party as of right.

V. By letter of 11 March 2002, the proprietor (respondent) submitted a set of claims as an auxiliary request and the following prior art documents:

D4: D. H. Johnson: "Hair and Hair Care", Marcel Dekker Inc., New York, 1997, pages 42, 43, 96 to 99

D5: K. Schrader: "Grundlagen und Rezepturen der Kosmetika", 2nd edition, Hüthig Buchverlag, Heidelberg, 1989, pages 959 to 961 and 966, 967

VI. By letter dated 25 April 2005 in reply to a communication of the board, the appellant referred to the following documents:

D6: DE-A-3 836 907

D7: EP-A-0 529 598

- VII. Oral proceedings were held on 20 July 2005 in the absence of opponent 01 who had informed the board by letter dated 23 February 2005 that he would not be attending oral proceedings (Rule 71(2) EPC).
- VIII. During the oral proceedings the respondent submitted an amended set of claims 1 to 7 (main request) and an amended page 2 of the patent specification. Claim 1 as amended differed from claim 1 as granted as follows:
- at the beginning of paragraph (b) the feature "1 to 30 wt.%, based on the whole composition, of" was added.
- IX. The appellant argued in substance as follows:
- (a) No formal objections were raised with respect to the amendments. D7, a state of the art document under Article 54(3) EPC, was no longer relied upon.
 - (b) The opposition division had acknowledged an inventive step despite the fact that there was an overlap between the claimed subject-matter and compositions of D1 or D3 and although the claims did not exclude the presence of the specific polymers of D1 and D3. D3, a document relating to the same technical field as the patent in suit, concerned a hair regenerating composition which provided hair with elasticity and strength and reduced the damage by hair split. D3 was considered as the closest state of the art. Claim 1 differed from the exemplified compositions of D3 only in that the amount of phenoxy ethanol was 1% by weight instead of 0.5% by weight. In the

compositions of D3 phenoxy ethanol was used as a preservative. Preservatives could also be used according to D1 in hair conditioning compositions in an amount of 0.01 to 10% by weight. It was thus obvious to increase the amount of the preservative in the compositions of D3 so as to arrive at the claimed subject-matter. Furthermore, hair conditioning compositions of D2 contained a non-aqueous solvent and a conditioning component consisting of a lipid, which was preferably a fatty acid ester and a cationic surfactant. The non-aqueous solvent was preferably benzyl alcohol, which was used in an amount of 0.2 to 20% by weight. Since in D2 benzyl alcohol could also be used as preservative, it was obvious to modify the teaching of D3 in the direction of the claimed subject-matter.

- (c) The comparative examples submitted by the respondent were not suitable to demonstrate an improved effect linked to the claimed composition. The results of the first test report filed on 26 February 1999 and of the second test report filed on 3 May 2000, were different, although the same compositions were tested. Furthermore, according to the patent in suit identical compositions such as comparative examples 7 and 12 as well as examples 11 and 18 exhibited different results. Thus, the results of the tests were rather subjective and could not provide the basis for a scientific experimental proof of superior properties. Furthermore, the test report of 3 May 2000 was based on five test persons and the results were evaluated by only one hair dresser.

According to D5 as high a number of test persons as possible should be used. According to D6, the half-head test was evaluated by a group of experts. Consequently, the conditions of the tests did not meet the normal standards as required by documents D4 to D6. Thus, it had not been demonstrated that the small increase in the amount of phenoxy ethanol provided a surprising effect over the compositions of D3. Hence, the problem solved by the invention of the patent in suit was only to provide an alternative composition to that of D3. Even if a technical effect over D3 had been shown for one specific composition, this was not sufficient to support an inventive step within the whole breadth of the claims.

- (d) If example 5 of D1 was considered as the closest state of the art, the problem solved by the patent in suit was to provide a composition which prevented damage to the hair, imparted resilience to the hair while exhibiting excellent hair-conditioning properties. However, a prevention of damage to the hair had not been shown. Thus, the claimed subject-matter was also obvious, when considering the teaching of document D2 and D3 in combination with D1.
- (e) Consequently, the claimed subject-matter lacked an inventive step.

X. The arguments of the respondent can be summarized as follows:

- (a) D3 concerned a composition for repairing damaged hair to provide elasticity and breaking resistance, whilst the contested patent aimed at compositions for preventing damage to hair. The essential components of the compositions of D3 were polyvinyl pyrrolidone together with an oligo- or polypeptide. Exemplified composition 4 of D3 contained components (a), (b) and (c) in accordance with the patent in suit, however, component (b) in an amount of only 0.5% by weight. The increase in the amount of component (b) from 0.5 to 1.0% by weight led to an unexpected improvement in terms of resilience, softness, oily feel and moistured feel as demonstrated by the test report of 3 May 2000. These test results were consistent with those submitted on 26 February 1999. Hence, the problem solved by the claimed invention was to provide a composition having improved hair conditioning properties.
- (b) The comparative experiments of 3 May 2000 were performed on the basis of a so-called half-head test, which was an accepted test method as acknowledged by D4 and D5. This method allowed an experienced hairdresser to determine the slightest changes of the hair and reduced the subject-to-subject variability. As regards the number of test persons, no standard rule existed and there was no hint in the literature that more than five test persons and more than one trained hairdresser were necessary. Although D6 mentioned a group of hair

dressers for the evaluation of the tests, that was not obligatory according to D4 and D5. In addition, the appellant had not provided any comparative experiment on its own, proving that the test results were not valid.

- (c) Although the compositions in comparative examples 7 and 12 as well as in examples 11 and 18 of the patent in suit were identical, the inconsistencies in the results could not be elucidated on the basis of the documents on file. A possible explanation could be an error when drafting the tables of the application as filed and of the priority documents and that in fact these compositions were in reality different.

- (d) Example 5 of D1 disclosed a composition comprising a cationic surfactant, a fatty acid ester and a non-specified preservative in an amount of 0.03%. Also the other examples of D1 included only a small amount of a preservative. Since the compositions of D1 included as optional components several other preservatives, and since benzyl alcohol was only one possible preservative among others, a selection with respect to that specific compound and its amount had to be made in order to arrive at the claimed compositions. In addition, the conditioning effect mentioned in D1 only related to combability and did not concern resilience, moisture feel and smoothness, for which the claimed composition provided an improvement as demonstrated by the comparative tests. Since there was no hint in D1 that preservatives had any beneficial effect on hair

conditioning, there was no incentive to increase the amount of benzyl alcohol in D3 in order to solve the problem underlying the patent in suit.

- (e) D2 related to a hair treatment composition comprising a styling polymer and a solvent. A lipid and a cationic surfactant were mentioned as conditioner. D2 aimed at providing a soft hair feel, an antistatic effect and ease of combing. In particular, D2 did not address the specific conditioning effects achieved by the patent in suit. According to the examples of D2, only combinations of components a) plus b) and a) plus c) as claimed were disclosed. In the compositions of D2, benzyl alcohol was a solvent and had thus a function different from that of the patent in suit. As shown in the patent in suit, the claimed combinations of components (a), (b) and (c) led to a non-sticky or non-oily feel and prevented damage of hair and kept waves or curls of the hair beautiful.
- (f) Therefore, the claimed subject-matter did involve an inventive step.

XI. The appellant requested that the decision under appeal be set aside and that the European patent be revoked.

XII. The respondent requested that the appeal be dismissed and that the patent be maintained on the basis of the main request as submitted during the oral proceedings, or, alternatively on the basis of the auxiliary request submitted by letter of 11 March 2002, with the amendments to the description as follows: page 2 as

submitted at the oral proceedings and page 3 underlying the decision under appeal.

Reasons for the Decision

1. The appeal is admissible.

Amendments

2. The amendments to claim 1 are based on original page 6, lines 10 to 13 and restrict the scope of protection. They were not objected to by the appellant and the board sees no reason to take a different view. Hence, the amendments meet the requirements of Article 123 paragraphs (2) and (3) EPC.

Closest prior art document

3. The patent in suit concerns a hair cosmetic composition. Such compositions are known from the prior art, in particular D1 and D3, which the parties and the opposition division regarded as the closest prior art documents. Both parties in the oral proceedings started from D3 as the closest state of the art. The board sees no reason to take a different starting point as becomes apparent from the following.

- 3.1 D3 describes hair care compositions for damaged hair containing cationic surfactants, which include a combination of 0.1 to 4.0% by weight of polyvinyl pyrrolidone and 0.1 to 5.0% by weight of a water soluble oligo- or polypeptide (claim 1). The composition may contain further components including preservatives (page 3, lines 47 to 63). In table II,

five compositions (comparative examples V3, V4 and examples 2 to 4) are described, which include 0.54% by weight of glycerol-monostearate and palmitate (component (a)), 0.2% by weight of distearyldimethylammonium chloride (component (c)), 3.0% by weight of cetyltrimethylammonium chloride (25% in water) (component (c)), 0.5% by weight of phenoxyethanol (component (b)) and further additional components. Both parties agreed that phenoxy ethanol in these compositions had the function of a preservative which rendered the composition for example more stable against fungi and bacteria. Compositions 2 to 4 include furthermore 2.0% by weight of polyvinyl pyrrolidone and 5.63 to 10% by weight of a water soluble oligo- or polypeptide (keratin hydrolysate, collagen hydrolysate and elastin hydrolysate), which are not present in combination in comparative compositions V3 and V4. Examples 2 to 4 show an improvement in terms of reduction of splitting hair compared to comparative examples V3 and V4.

3.2 The patent in suit aims at hair cosmetic compositions which are excellent in hair-conditioning effects, and also can impart resilience to the hair and are superb in effects of preventing damage to the hair and of keeping the waves or curls of the hair beautiful (page 2, lines 5 to 7).

3.3 Since D3 is directed to hair care compositions which aim at enhancing the tear strength and flexibility of damaged hair structure (page 3, line 65 and 66) and since D3 discloses in combination all components (a) to (c) as claimed, except for the claimed amount of component (b), D3 corresponds to a purpose or technical

effect similar to that of the invention underlying the patent in suit and requires a minimum of structural and functional modifications (Case Law of the Boards of Appeal of the European Patent Office, 4th Edition 2001, I.D.3.1). Thus, D3 is considered to be an appropriate starting point for the assessment of inventive step.

Problem and solution

4. According to example 1 of the patent in suit, hair care compositions are disclosed which include the essential components (a), (b) and (c) as well as a non-obligatory component (d) (lower alcohol or lower polyol; claim 4 as granted) in a variety of different components and combinations. The so-called "inventive compositions" 1 to 25 include all components (a), (b) and (c), whilst in "comparative compositions" 1 to 13 one of these components is missing (tables 1 to 7). The hair cosmetic compositions are tested on 20 g (about 15-20 cm long) of the hair of Japanese women, which have been subjected to hairdressing treatment such as cold permanent waving or bleaching. Thereafter, 2 g of each of the hair cosmetic compositions is applied evenly to the hair thus shampooed and then rinsed out for 30 seconds with running water. The thus-treated hair is then towelled and dried further by a hair drier to evaluate the properties of the hair cosmetic composition in respect of resilience, softness, oily feel, moistured feel and smoothness of the hair, the degree of occurrence of split hairs, the effect of keeping the waves beautiful and the remaining rate of lipids in accordance with specified standards (page 7, lines 25 to 30). The results are evaluated in four different degrees A to D, in which A represents a very

good result, whilst an evaluation of D is a bad result. The "inventive compositions" always show a better performance with respect to the tested properties than the comparative compositions (tables 1 to 7). However, the examples of the patent in suit do not include any comparison with the closest state of the art, D3.

- 4.1 The respondent's additional tests of 3 May 2000 include a comparative test based on example 4 of D3. Comparative composition 2 is identical with that disclosed in example 4 of D3 (see point 3.1 above) which shows the best result in D3. Inventive composition 1 differs from composition 2 only in that instead of 0.5% by weight of phenoxyethanol 1% by weight thereof is used. Thus, the test conditions have been chosen to demonstrate an improved effect to have its origin only in the distinguishing feature of the claimed invention (compare T 0197/86, OJ 1989, 371, Reasons, point 6.1.3).

Also these compositions are evaluated in the half-head test, in which the hair of each of five Japanese women was divided into 2 equal parts after washing and drying with a towel to humidity. Afterwards, 2g of the composition in accordance with the patent in suit (composition 1) was applied to one half of the hair, 2g of the comparison product (composition 2) to the other half of the hair, kept there for 5 minutes, then rinsed out and dried. Afterwards, the property of the one half was compared to the other half by a hair dresser in a blind test. The following hair conditioning properties are tested: resilience (elasticity), softness, oily feel, moistured feel and smoothness. The hair dresser evaluates the hair in three categories: either

composition 1 or composition 2 is better or both compositions have the same property.

4.2 In all tested properties composition 1 according to the patent in suit provides better results than comparative composition 2 according to D3. In four of five properties (resilience, oily feel, moisturized feel and smoothness) composition 1 is better than composition 2 whilst composition 2 is never evaluated better than composition 1. Thus, this test report shows improved hair conditioning effects over the products of D3.

4.3 The appellant contested that the tests were suitable to demonstrate any improved effect, since the comparison tests did not meet the normal standard requirements for such a half-head test. He submitted that the indicated results were not reliable.

4.3.1 According to document D5, which belongs to the standard literature in the hair cosmetic field, the half-head test is a well established method to evaluate hair properties (D5, pages 959 and 960, point 2.1.1). This method is also mentioned in D4, another general document in this field (page 43, point 2). Since the two sides of the head are compared at the same time, subject-to-subject variability is reduced (D4, page 98). That is confirmed by D5, according to which the half-head test has the specific advantage that two products can be directly compared. This reduces the number of test persons and increases the accuracy of the result. The half-head test is evaluated by an experienced hair dresser, who is able to determine in most cases the slightest differences (D5, page 960).

4.3.2 It can however not be derived from D4 and D5 that there are generally accepted strict rules for performing such half-head tests. In particular, there is no indication in the standard literature that more than five test persons are necessary or that more than one experienced hair dresser is required to get reliable results. In D5, it is recommended to test the properties on at least 100 panelists, before a product is put on the market (page 960, lines 12 and 13). However, the requirements in terms of testing are apparently more severe for putting a product on the market than for the purpose of demonstrating an improved effect of the claimed subject-matter vis-à-vis the state of the art. Although in D6 the evaluation of the half-hair test is made by a group of hair dressers, this does not mean that the test results, which are evaluated by only one experienced hair dresser, are not reliable. On the other hand, the appellant has not provided any comparative experiments, which could cast doubts on the validity of the respondent's results. The onus of proof in this respect lies, however, with the opponent (appellant) (T 0219/83, OJ EPO 1986, 211).

4.3.3 In addition, the respondent's half-head test is conducted as blind test so that the hair dresser has no advance information in respect of the tested compositions applied which reduces the subjectivity of the tests. Furthermore, the respondent had already filed other comparative experiments on 26 February 1999, in which a composition in accordance with comparative example V3 of D3 and an identical composition, except for the amount of phenoxyethanol (1.0% by weight instead of 0.5% by weight) were evaluated. The same conditioning properties are tested as in the

comparative test of 3 May 2000 (compare point 4.1 above), however, the properties are tested as described in the patent in suit (compare point 4 above). These former test results show that the claimed composition are improved in all tested properties (resilience, softness, oily feel moistured feel and smoothness), which is in line with the test results in the later filed half-head test. This consistency in the test results obtained by different test methods confirms the reliability of the tests carried out by the respondent.

- 4.3.4 The appellant questioned the reliability of the respondent's test method pointing to the fact that identical compositions exemplified in the patent in suit show different test results. The respondent was not in a position to clarify the reason for these inconsistencies present in the application as filed, supposing that compositions had been mixed up when presenting the results.
- 4.3.5 In the description the test results are presented in the form of a table with 5, 7 and 9 columns indicating the composition, and 10 or 11 different components. A different choice of components (a) (4), (b) (2), (c) (2) and (d) (2) is possible, as either indicated by a number (component is present in the indicated percentage), or indicated by a "-" (component is not present). In such a situation it cannot be excluded that an error has occurred when drafting the tables. However, such an isolated error does not make meaningless the rest of the numerous data indicated in the seven tables. In any case, inconsistencies in the test results of the patent in suit cannot discredit the test report of 3 May 2000, because the later report is

based on separate independent experimental evidence using a different evaluation method (half-head test).

- 4.4 According to the appellant's further objection, a technical effect over D3, if any, had been shown only by one example, which was not sufficient to support an inventive step over the whole breadth of the claims.
- 4.4.1 The respondent has shown an improved effect over the closest composition according to D3. Furthermore, an excellent conditioning effect has been evidenced in the patent in suit by 26 different compositions compared to 13 comparative compositions which are composed of two different types of surfactants, two aromatic alcohols, two fatty acids and two fatty acid esters.
- 4.4.2 On the other hand, the appellant has not provided any evidence that an improved effect is not obtained within the whole scope of the claimed subject-matter. The onus of proof in this respect lies, however, with the opponent (appellant) which he has not discharged (T 0219/83, *supra*).
- 4.5 From the above it follows that the half-head test is described in the standard literature as a suitable method which can be expected to provide accurate results. Furthermore, the appellant has not shown that the respondent's half-head test of 3 May 2000 is unreliable. Although the test report is based only on a small number of test persons, it has its own probative value, from which the conclusion can be drawn that an improvement over the closest state is achieved.
- 4.6 Therefore, the problem solved by the invention underlying the patent in suit is to provide a hair care

composition which in view of D3 has improved hair conditioning properties, in particular in terms of resilience, moisture feel, oily feel and smoothness, in line with the patent in suit (page 2, lines 38 to 41 and tables 1 to 7, tested properties).

Obviousness

5. It remains to be decided whether the claimed subject-matter is obvious having regard to the documents on file.

5.1 D3 aims at hair compositions for the regeneration of damaged hair which comprise polyvinyl pyrrolidone, a cationic surfactant and an oligo- and polypeptide as essential components (compare point 3.1 above). In table II of D3, phenoxyethanol has been used as preservative and the description does not provide any incentive to increase the amount of the preservative to at least 1% by weight in order to achieve an improved conditioning effect. Hence, the claimed subject-matter is not made obvious by D3 alone.

5.2 D1 describes a hair care composition comprising:

(a) from about 0.01% to about 10% of a rigid silicone polymer having a complex viscosity of at least 2×10^5 poise; and

(b) a volatile carrier

wherein if water is the sole carrier a surfactant is also present (claim 1).

5.2.1 The hair conditioner according to example 5 comprises *inter alia* 0.85 weight % Quaternium-18 (component c)), 0.25 weight % glycerol monostearate (component (a)) and 0.03 weight % of a preservative, which is not further specified. The preservatives are optional components suitable for rendering the compositions more acceptable. Suitable preservatives are benzyl alcohol, methyl paraben, propyl paraben and imidazolidinyl urea (page 8, lines 27 to 30). Further optional components include pearlescent aids, thickeners, viscosity modifiers, pH adjusting agents, coloring agents, perfumes, sequestering agents and polymer plasticizing agents. Such optional components may be included in an amount of 0.01 to 10% by weight of the composition (page 8, lines 27 and 39).

5.2.2 The highest amount of a preservative used in the examples of D1 is 0.37% by weight (examples 2 to 4), which is still lower than that used in D3. Furthermore, there is no teaching in D1 that benzyl alcohol which is only described as preservative may have any conditioning effect. The broad disclosure of nine optional components and the generally indicated amount in D1 does not provide any hint to select specifically benzyl alcohol from the list of preservatives and use it in an amount higher than exemplified, in order to enhance the conditioning effect. The appellant's submission that the range indicated for optional components discloses preservatives in these amounts has no basis in the document. Hence, D1 does not provide any incentive to modify the teaching of D3 in the direction of the claimed subject-matter.

D2 discloses a rinse-off hair conditioner composition comprising: a. from about 0.05% to about 25% of a hair conditioning agent; b. from about 0.2% to about 20% of a hair styling polymer; c. from about 0.2% to about 20% of a non-aqueous solvent which will solubilize said polymer; and d. the balance, an aqueous carrier; wherein the polymer and solvent are present in the hair conditioner composition as a dispersed fluid phase; and wherein the ratio of polymer to solvent is from about 10:90 to about 80:20 (compare claim 1).

Specific polymer solvent materials useful in D2 include isopropanol, butyl alcohol, amyl alcohol, phenyl ethanol, benzyl alcohol, ethyl butyrate, isopropyl butyrate, phenyl ethyl dimethyl carbinol, and mixtures thereof. Preferred solvents for use herein are benzyl alcohol, ethyl butyrate, phenyl ethanol, phenyl ethyl dimethyl carbinol, and mixtures thereof (column 5, lines 55 to 62). Amongst these solvents benzyl alcohol corresponds to component (b) of claim 1 of the patent in suit.

The solvent is used in the conditioner compositions of D2 in an amount sufficient to solubilize the polymer and disperse it as a separate fluid phase in the conditioner composition. Generally, from about 0.2% to about 20%, preferably from about 2% to about 6%, polymer solvent is used. At levels below about 0.2% solvent, the polymer cannot be sufficiently diluted; at levels above about 20% solvent, conditioner benefits may be negatively affected (column 5, lines 63 to column 6, line 3).

The conditioner compositions may comprise conditioning agents typically used in hair conditioner compositions. Such agents generally comprise a lipid material and a cationic surfactant. These agents together provide not only hair conditioning benefits, such as anti-static, soft hair feel, and ease of combing, but also provide a gel-network thickened vehicle for the styling polymer and solvent of the present compositions (column 6, lines 25 to 33).

Preferred lipid materials include cetyl palmitate and glycerylmonostearate (page 7, lines 3 and 4), corresponding to feature (a) of the claimed subject-matter.

Benzyl alcohol corresponding to component (b) as claimed is only used in example 1 of D2 in an amount of 3% by weight but without component (a) as claimed. The compositions of the other examples do not contain component (b) as claimed. Although benzyl alcohol may also be used as preservative (column 20, lines 10 and 11), the function of benzyl alcohol as solvent for the styling polymer and as preservative provides no link that benzyl alcohol may have any improved conditioning effect when used in combination with components (a) and (c) as claimed. Thus, there is no incentive in D2 to modify the teaching of D3 in the direction of the claimed subject-matter in order to provide an enhanced conditioning effect.

5.3 Therefore, starting from D3 as the closest prior art document, the claimed subject-matter is not rendered obvious.

6. When starting from D1 as the closest prior art document no other conclusion would be reached. The composition having the most features in common with the claimed subject-matter is described in example 5 of D1 (point 5.2 above). In that example the nature of the preservative is however not specified.
- 6.1 In the comparative test of 3 May 2000, comparative composition 4 is identical with that disclosed in example 5 of D1 and includes as preservative 0.03% by weight of benzyl alcohol. Inventive composition 3 in accordance with the patent in suit differs from composition 4 only in that 1% by weight instead of 0.03% by weight of benzyl alcohol is used. The compositions are evaluated in a half-head test as described in point 4.1 above. According to the test results, all tested hair conditioning properties of inventive composition 3 are better than those for composition 4 in accordance with D1. In particular, the claimed composition achieves the highest possible evaluation for resilience, moistured feel and smoothness. As regards the reliability of that test the same considerations as indicated under point 4.3 above apply *mutatis mutandis*.
- 6.2 Consequently, when starting from D1, the problem solved by the claimed subject-matter may be seen in providing a hair care composition which has improved hair conditioning properties, in particular in terms of resilience, moistured feel and smoothness, in line with the patent in suit (page 2, lines 38 to 41 and tables 1 to 7, tested properties). This problem is consequently the same as the problem defined when starting from D3 as the closest state of the art (point 4.6 above).

6.3 As regards obviousness with respect to D1, D2 and D3, the same considerations as indicated under points 5.1 5.2 and 5.3 above apply *mutatis mutandis*. Consequently, there is no incentive in D1 itself or in D2 or D3 to modify the teaching of D1 in the direction of the claimed subject-matter to solve the problem posed. Therefore, also when starting from D1 the claimed subject-matter is not rendered obvious by the prior art cited by the appellant.

7. From the above it follows that the claimed subject-matter involves an inventive step.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to maintain the patent with the following documents:
 - claims 1 to 7 as submitted during the oral proceedings (main request)
 - description: pages 4 to 19 of the patent as granted; page 2 as submitted at the oral proceedings; page 3 as underlying the decision under appeal.

The Registrar:

The Chairman:

U. Bultmann

R. Teschemacher