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D E C I S I O N
of 21 September 2005

Case Number: T 0492/04 - 3.3.06

Application Number: 96928239.1

Publication Number: 0850291

IPC: C11D 1/835

Language of the proceedings: EN

Title of invention:
Stable Fabric Softener Compositions

Patentee:
Colgate-Palmolive Company

Opponent:
Henkel KGaA

Headword:
Stable softeners mixture/COLGATE

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step(yes): teaching contained in the patent in suit representing internal state of the art and having not been rendered available to the public prior to the priority date - convincing unexpected advantage"

Decisions cited:
T 0028/87, T 1135/97

Catchword:
-



Case Number: T 0492/04 - 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 21 September 2005

Appellant: Colgate-Palmolive Company
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Representative: H.A.M. Marsman
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Respondent: Henkel KGaA
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Representative: -

Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
3 February 2004 concerning maintenance of
European patent No. 0850291 in amended form.

Composition of the Board:

Chairman: P. Krasa
Members: L. Li Voti
A. Pignatelli

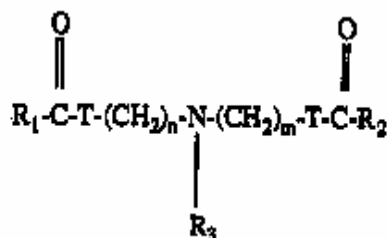
Summary of Facts and Submissions

I. The present appeal is from the decision of the Opposition Division concerning the maintenance in amended form of the European patent No. 0 850 291, relating to a stable fabric softening composition.

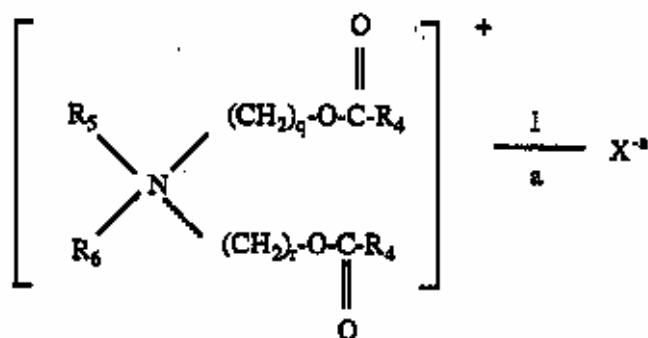
This patent was granted with a set of 26 claims, claim 1 of which reading as follows:

"1. A fabric softening composition in the form of an aqueous dispersion which is stable in the absence of oily perfume, comprising a mixture of:

(i) from 3 to 40% by weight of a fabric softener combination comprising a mixture of A and B, wherein (A) is an inorganic acid salt of a fabric softening compound of formula:



R₁ and R₂ represent C₁₂ to C₃₀ aliphatic hydrocarbon groups; R₃ represents (CH₂CH₂O)_pH, CH₃ or H; T represents O or NH; n = 1 to 5, m = 1 to 5, and p = 1 to 10; and (B) is biodegradable fatty ester quaternary ammonium compound of formula:



wherein each R_4 , independently, represent an aliphatic hydrocarbon group having from 8 to 22 carbon atoms, R_5 represents $(\text{CH}_2)_s\text{-R}_7$ (where R_7 represents an alkoxy carbonyl group containing from 8 to 22 carbon atoms, benzyl, phenyl, $(\text{C}_1\text{-C}_4)$ -alkyl substituted phenyl, OH or H); R_6 represents $(\text{CH}_2)_t\text{-R}_8$ (wherein R_8 represents benzyl, phenyl, $(\text{C}_1\text{-C}_4)$ alkyl substituted phenyl, OH or H); q , r , s and t , each independently represent a number of from 1 to 3; and x is an anion of valence a ; said mixture further characterized that at least 20% of the hydrocarbon substituent groups present in components A and B are unsaturated;;

(ii) a fatty ester of mono- or polyhydric alcohols having from 1 to 24 carbon atoms in the hydrocarbon chain and mono- or polycarboxylic acids having from 1 to 24 carbon atoms in the hydrocarbon chain, provided that the total number of carbon atoms in the ester is equal to or greater than 16 and that at least one of the hydrocarbon radicals in the ester has 12 or more carbon atoms, said fatty ester being present in the composition such that the weight ratio of component (i) to component (ii) is in the range of from 40:1 to 5:1; and

(iii) an aqueous carrier including an anti gelling amount of electrolyte."

Claims 2 to 21 related to particular embodiments of the composition of claim 1 and claims 22 to 25 to a method of imparting softness to fabrics by using such compositions.

II. In its notice of opposition the Opponent, referring *inter alia* to document

(7): EP-A-0634475,

sought revocation of the patent on the grounds of Article 100(a), because of lack of novelty and inventive step of the claimed subject-matter.

During the opposition proceedings the Patent Proprietor filed as auxiliary request a set of 24 claims, claim 1 of which differed from that according to the main request only insofar as it specified that the claimed compositions were free of added perfume.

III. In its decision the Opposition Division found *inter alia* that

- the subject-matter of the claims as granted was novel over the cited prior art;

- document (7) disclosed stable aqueous fabric softening compositions comprising a mixture of the softening agents A and B of the patent in suit, an electrolyte and added perfume;

- as specified in the patent in suit, it was already known that added perfume conferred chemical and

physical stability over extended periods of time and under a wide range of temperatures to such compositions;

- the technical problem underlying the claimed invention amounted thus only to the provision of an alternative softening composition having similar stability;

- it was obvious for the skilled person to modify the compositions known from document (7) by adding other known components already used in softening compositions of the same type, e.g. known fatty esters of mono- or polyhydric alcohols, at the weight ratio required by the patent in suit;

- the subject-matter of the claims according to the main request lacked thus an inventive step;

- since it had been convincingly shown that the fatty esters of mono- or polyhydric alcohols were able to confer unexpectedly to such softening compositions not comprising added perfume a low viscosity stable over extended periods of time under a wide range of temperatures, the subject-matter of the claims according to the auxiliary request, relating to compositions not comprising added perfume, involved an inventive step.

IV. An appeal was filed against this decision by the Patent Proprietor (Appellant).

The Respondent (Opponent) did not respond in writing to the statement of the grounds of appeal.

Oral proceedings were held before the Board on
21 September 2005.

V. The Appellant submitted in writing and orally that

- the addition of fatty esters of mono- or polyhydric alcohols to aqueous dispersions of the softeners (A) and (B) and electrolyte brought about an unexpected stabilisation of the compositions also in the absence of added perfume, which advantage persisted in the presence of perfume;

- the teaching in the patent in suit that added oily perfume might provide sufficient stabilisation to such aqueous dispersions of the softeners (A) and (B) and electrolyte was an Appellant's discovery and represented an internal state of the art which had not been rendered available to the public before the priority date of the patent in suit;

- the examples of the patent in suit showed clearly the advantage of the claimed compositions over those according to the prior art, e.g. over the composition identified as Control A, which was similar to the compositions not comprising added perfume known from document (7);

- therefore, the subject-matter of claim 1 as granted involved an inventive step.

VI. The Respondent submitted orally that

- the compositions of document (7) could also comprise added perfume;

- it was already known in the prior art, as indicated in the patent in suit, that added perfume conferred stability to such compositions;
 - the technical problem underlying the claimed invention amounted just to the provision of alternative stable compositions;
 - it was obvious for the skilled person to modify the compositions known from document (7) by adding further components known to be suitable for the same type of softening compositions, e.g. fatty esters of mono- or polyhydric alcohols;
 - the examples in the patent in suit showed that no difference in stability existed between compositions comprising added perfume and no fatty esters of mono- or polyhydric alcohols and similar compositions comprising both these components; therefore, the addition of such fatty esters did not provide any unexpected technical advantage;
 - the claimed subject-matter thus lacked an inventive step.
- VII. The Appellant requests that the decision under appeal be set aside and that the patent be maintained as granted.

The Respondent requests that the appeal be dismissed.

Reasons for the Decision

1. *Novelty*

The Board is satisfied that the claimed subject-matter is novel over the cited prior art as found in the decision under appeal (point 2 of the reasons for the decision). No further details are thus necessary.

2. *Inventive step*

- 2.1 The patent in suit and, in particular, the subject-matter of claim 1, relates to a fabric softening composition in the form of an aqueous dispersion which is stable in the absence of oily perfume, comprises a mixture of a specific amido or ester amino compound (A) and of an esterquat (B) and an electrolyte salt as a gelation preventer to provide enhanced viscosity reduction (page 2, line 41 to page 3, lines 21 and 43 to 44).

As explained in the patent in suit, such compositions contain usually small amounts of perfume in order to improve their consumer appeal, but it is desirable to formulate the compositions without or only with a minor amount of perfumes in order to prepare large master batches, portions of which can be combined with different types of perfumes in order to satisfy a greater number of consumers (page 3, lines 26 to 37).

However, such unperfumed compositions were found not to possess a stable viscosity upon ageing (page 3, lines 38 to 42).

The technical problem underlying the claimed invention is therefore defined in the patent in suit as the provision of aqueous dispersions of softening compositions comprising a mixture of softeners of formulae A and B and electrolyte which are able to maintain viscosity stability upon ageing also in the absence of added oily perfumes (page 3, lines 43 to 44).

- 2.2 Document (7) relates to the provision of low viscosity, stable, flowable aqueous dispersions of fabric softeners (see page 7, lines 48 to 50) and describes softening compositions comprising a mixture of softeners (A) and (B) and electrolyte (see claim 1).

The Board thus takes this document as the most suitable starting point for the evaluation of inventive step of the claimed subject-matter. All parties agreed with this finding.

Moreover, since perfume is not an essential component of the subject-matter of the disputed claim 1, the Board finds that the most reasonable starting point for the evaluation of inventive step is one of the known compositions of document (7) without added perfume, e.g. one of the compositions of table 1 differing from the claimed subject-matter only insofar as they do not contain a fatty ester of mono- or polyhydric alcohols (see claim 1 and compositions of table 1) and not a composition comprising added perfume as found by the first instance and argued by the Respondent.

- 2.3 The patent in suit, discussing the known softening compositions of document (7), corresponding to the U.S.

Patent No. 5,501,806, cited on page 3, line 23, reads as follows:

"Attempts to prepare emulsion master batches containing amido or ester amine/esterquat softening agents as described above without added perfumes have demonstrated that the perfume is necessary in order to obtain emulsions having a stable viscosity. The perfume has been found to serve a physical/chemical role in the achievement of emulsions which maintain viscosity and which do not separate after periods of storage, since perfume-free emulsions of the type described herein are not viscosity stable after periods of ageing." (see page 3, lines 38 to 42).

The Respondent as well as the first instance considered this teaching contained in the description of the patent in suit as belonging to the prior art.

However, the Board notes that there is no suggestion in the patent in suit that the above teaching was part of the common general knowledge of the skilled person at the priority date of the patent in suit and that no evidence was provided by the Respondent that this teaching belonged to the prior art or that the prior art already taught to solve the viscosity stability problem of such compositions by adding an oily perfume.

In fact, the teaching of document (7) was that viscosity stability upon ageing could be achieved by adding specific rheology modifiers such as polymers or citric acid (page 14, line 51 to page 15, line 3), perfume having been cited in this document only as an additional component for improving the consumer's

appeal but not for increasing the stability of the compositions.

Furthermore, the tests contained in document (7) relating to compositions comprising perfume (table 3, compositions 14 to 16), indicate only their initial viscosity and their viscosity after 24 hours at low temperature and thus do not show whether perfume would have an influence on the viscosity stability upon ageing under a wide range of temperatures.

Therefore, in the Board's judgement, the above wording of the patent in suit can only imply that the given information did not belong to the common general knowledge of the skilled person at the priority date of the patent in suit but, as confirmed by the Appellant during oral proceedings, was an Appellant's discovery achieved upon investigation of the known products of document (7) and represented an internal state of the art which had not been rendered available to the public before the priority date of the patent in suit (see also T 28/87, point 5.4 of the reasons for the decision and T 1135/97, point 8.3 of the reasons for the decision).

The technical problem underlying the claimed invention, seen in the light of the teaching of document (7), does not consist thus in the Board's view in the provision of alternative softening composition containing perfume and having similar stability but in the provision of an additive different from the rheology modifiers suggested in document (7) and capable of conferring low viscosity to such compositions not comprising added perfume and of stabilizing their viscosity upon ageing under a wide range of temperatures.

2.4 The unperfumed compositions known from document (7) show a not very stable viscosity upon ageing (see table 2 and control A in table 1 of the patent in suit) whilst the claimed unperfumed compositions of the patent in suit have a low viscosity which is very stable upon ageing (see e.g. examples 1 and 2 in tables 1 and 2).

The Board finds thus credible that the claimed composition solved the above mentioned technical problem as found by the first instance in respect to the then pending auxiliary request (see point 5 of the reasons for the appealed decision).

2.5 Since document (7) suggested the use of polymers or citric acid for improving the viscosity stability upon ageing under a wide range of temperatures of compositions comprising a mixture of softeners (A) and (B) and electrolyte (page 14, line 51 to page 15, line 3) and the remaining prior art did not suggest that fatty ester of mono- or polyhydric acid could be useful for this purpose, the Board finds that the skilled person would not have had any incentive in trying to add such components to the softening compositions of document (7) for solving the technical problem underlying the claimed invention.

2.6 The Board concludes thus that the subject-matter of the claims as granted involves an inventive step and thus the appeal succeeds.

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 Chairman:

G. Rauh

P. Krasa