

Case Number: T 0723/92 - 3.3.2

D E C I S I O N
of the Technical Board of Appeal 3.3.2
of 3 May 1995

Appellant: Henkel
(Opponent) Kommanditgesellschaft auf Aktien
TFP/Patentabteilung
D-40191 Düsseldorf (DE)

Representative: -

Respondent: Kao Corporation
(Proprietor of the patent)14-10, Nihonbashi Kayabacho 1-chome
Chuo-Ku
Tokyo 103 (JP)

Representative: Wächtershäuser, Günter, Prof. Dr.
Patentanwalt
Tal 29
D-80331 München (DE)

Decision under appeal: **Decision of the Opposition Division of the European Patent Office dated 9 June 1992 rejecting the opposition filed against European patent No. 0 117 469 pursuant to Article 102(2) EPC.**

Composition of the Board:

Chairman: P. A. M. Lançon
Members: I. A. Holliday
R. L. J. Schulte

Summary of Facts and Submissions

I. European patent No. 0 117 469 relating to hair cosmetics was granted on the basis of four claims contained in European patent application No. 84 101 398.0.

II. The Appellant filed an opposition against the granted patent citing the following documents:

- (1) Chemical Abstracts, **99**, (1983), 93514C, and
(1a) RO-A-75 299,
- (2) FR-A-1 402 017,
- (3) EP-A-0 053 466.

In the course of the opposition, the Respondent (Patentee) cited the following:

- (4) DE-A-2 940 220,
- (5) EP-A-0 052 441.

III. The Opposition Division considered the subject-matter claimed to be novel and inventive over the cited prior art and decided to maintain the patent in amended form.

Document (4) was held to be the closest prior art. The Opposition Division considered that the synergistic effect between the rosemary or birch extract and the silk or keratin decomposition product, which had been demonstrated in the patent in suit and comparative experiments filed during the opposition, could not have been predicted from the cited prior art. A similar conclusion would, in the Opposition Division's opinion, have been reached starting

from document (2) which the Appellant (Opponent) considered to be the closest prior art. Claim 1 on which the contested decision was based reads as follows:

"1. A hair cosmetic composition comprising
(A) an extract obtained by polar solvent extraction of birch or rosemary, and
(B) a polypeptide compound having a molecular weight of 350 to 30000 selected from decomposition products of silk, decomposition products of keratin and derivatives thereof, wherein the ingredient (A) is contained in an amount ranging from 0.001 to 2 weight-% and the ingredient (B) is in an amount ranging from 0.01 to 10 weight-%."

IV. The Appellant lodged an appeal against the decision of the Examining Division. Oral proceedings took place on 3 May 1995.

V. The arguments of the Appellant both in the written procedure and during the oral proceedings may be summarised as follows:

Firstly, the Appellant argued that the patent in suit lacked novelty over document (2). Referring to the table on page 2 of (2), it was argued that the plant extract "Extrapone spécial No. 5" which contained inter alia extracts of birch and rosemary anticipated the proportions of component (A) of the patent in suit. Furthermore, it was held that "Protéolysat de kératine" related to an enzymatic decomposition product having a molecular weight within the range specified for component (B).

In the Appellant's opinion, document (2) was the closest prior art. Even if the novelty of the claim were to be conceded, the Appellant argued that from its opening paragraphs, it was clear that (2) related to a shampoo/lotion which cleared the hair and removed fatty substances therefrom giving a brilliance after brushing out. The other effects claimed as advantages were known from the prior art. It was known from document (4) to use keratin hydrolysates for hair setting compositions giving the retentivity mentioned on page 2, lines 25 to 29 of the patent in suit. Document (3) referred to rosemary as a hair fibre strengthener and document (1) related to a composition including both hydrolysed keratin and birch extract as a hair regenerative lotion. The essence of the Appellant's argument was that the materials of the composition currently claimed were well-known in hair cosmetics at the priority and that no inventive step should be recognised for this combination.

The Appellant further argued that the Respondent's auxiliary request (see VI below), when considered in respect of a product claim, did not constitute a meaningful restriction.

VI. In the written procedure and at the oral proceedings, the Respondent argued essentially as follows:

The Appellant denied that document (2) destroyed the novelty of the subject-matter currently claimed. The plant extract featuring in the table on page 2 of (2) was derived from a mixture of plants of which birch and rosemary constituted only two of the seven varieties listed. It was

thus impossible to assess whether the percentage of either of them fell within the claimed range for component (A). The Respondent also held that the term "protéolysat" was not restricted to an enzymatic decomposition product and filed the relevant page of "Römps Chemielexikon" to back this argument. There was thus no evidence that the "protéolysat" had a molecular weight within the range prescribed for component (B) of Claim 1.

In respect of inventive step, although admitting that a hair lotion which is the type of composition claimed in document (2) would fall within the general term "hair cosmetic composition" claimed in the patent in suit, the Respondent denied that (2) was an appropriate starting point. Document (2) relates to a lotion or cream which is useful for cleaning the hair whilst avoiding conventional washing and rinsing. The Respondent considered document (4) which related to hair setting compositions based on keratin hydrolysates to be the closest prior art. The Board's attention was directed to comparative experiments filed in November 1989 and March 1991; the synergistic effects demonstrated therein must be indicative of an inventive step.

During the oral proceedings, the Respondent filed an auxiliary request in which Claim 1 was identical to the claim appearing in III above, except that the words "whereby component A improves the feeling to the touch of the hair" were added at the end of the claim.

VII. The Appellant requested that the decision under appeal be set aside and that the patent be revoked.

The Respondent requested that the appeal be dismissed (main request) or alternatively that the patent be maintained on the basis of the auxiliary request filed in the oral proceedings.

Reasons for the Decision

1. The appeal is admissible.

2. *Novelty*
 - 2.1 The hair cosmetic composition of the table on page 2 of document (2) contains in an aqueous/alcoholic vehicle a composition comprising 10 parts by weight per 1000 total of a plant extract which is stated to be derived from birch, coltsfoot, horsetail, flowers of clover, yarrow, rosemary and speedwell. In the discussion at the oral proceedings, it was agreed between the parties that such extracts normally contain 3 to 5% by weight of solids. Thus the actual amount of solids in the total composition would be somewhere in the range of 0.03 to 0.05% by weight. Having regard to the mixture of seven components on which the extract was based, it cannot be established with any degree of certainty (or even probability) that either birch or rosemary might have been present within the range prescribed for component (A) of Claim 1.
 - 2.1.1 The said table refers merely to a proteolysate of keratin. Having regard to the definition presented by the Respondent at the oral proceedings, the Board is satisfied that such a product would have been derived by hydrolysis of a keratin

which hydrolysis may have been enzymatic but not necessarily so. Such a hydrolysate may well have had a molecular weight below the minimum value of 350 prescribed for component (B) of Claim 1. In other words, the molecular weight of the proteolysate cannot be established.

2.1.2 In the circumstances, the Respondent must be given the benefit of the doubt and the novelty of Claim 1 of the main request over (2) acknowledged.

2.2 None of the other documents cited during the opposition and examination disclose a composition as defined by the said Claim 1.

3. *Problem and solution*

3.1 As suggested by the Appellant, the Board regards document (2) as the closest prior art. It relates to a hair cosmetic composition which contains both a keratin hydrolysate and a specific plant extract which as already noted has a similarity to the extracts specified in Claim 1 of the patent in suit. As outlined above, the composition of (2) is a lotion or cream for application to the hair which has a cleansing effect; although the cream specified in the table on page 2 contains well over 50% by weight of water, its cleansing effect does not depend on conventional lathering, washing and rinsing. Other effects already known and expected from shampoos and referred to in (2) relate to the prevention of hair loss, feeding the hair and to its brilliance.

3.2 Starting from (2), the problem to be solved can be seen as developing new hair cosmetics which give good retentivity and good feeling to the touch together with ease in combing and the prevention of hair fly (cf. patent in suit, page 2, lines 25 to 29 and page 10, lines 15 to 25).

3.3 The problem is solved by the composition of Claim 1 which comprises birch or rosemary extract and a hydrolysate of keratin or silk in specified proportions. Having regard to the examples which appear in the patent in suit and comparative experiments filed in the course of the opposition procedure, the Board is satisfied that the problem has indeed been solved.

4. *Inventive step*

4.1 The compositions of the patent in suit and those of (2) differ in two respects. Firstly, extracts of rosemary or birch are used in the patent in suit instead of a plant extract derived from a mixture of various species. As is apparent from Claim 1, the extract is employed in an amount of 0.001 to 2% by weight. Secondly, the keratin hydrolysate is limited to a specified molecular weight range and to a proportion of 0.01 to 10% by weight of the composition.

4.1.1 It is not clear why the plant extract is used in the preferred composition of (2). Its purpose may well be to suppress the malodour of the keratin hydrolysate as argued by the Appellant. In any event even in consideration of the known properties generally expected from shampoos there is no indication in (2) of the effects obtained in accordance

with the patent in suit especially those relating to retentivity and a good feel to the touch.

4.1.2 The comparative tests of the patent in suit were criticised during the opposition procedure insofar as the amounts employed in tests involving a single component, i.e. plant extract alone or keratin hydrolysate alone, did not correspond to the total amounts when both components were employed. This point was met by the comparative experiments received in the EPO on 2 November 1989.

4.1.3 On the one hand, since synergy has been convincingly shown by the Respondent in relation to the use of single components, no further comparison with particular mixed compositions comprised in the disclosure of (2) could have been demanded as such were not clearly individualised in this document. On the other hand the Appellant did not produce any evidence to the contrary. Accordingly, the compositions according to the patent in suit could be regarded as a selection from the subject-matter of (2) which is in no way suggested from the document taken alone.

4.2 Document (1), as is clear from the English translation supplied by the Appellant, also relates to a hair cosmetic composition comprising: (A) birch extract and (B) a keratin hydrolysate. Although the amount of (B) falls within the range prescribed by the patent in suit, the extract (A) is employed in considerably larger amounts. The composition is stated to restore hair damaged by dyeing and perming. Again it is not clear what purpose is served by the birch extract which is employed at 10 to 20% of the composition. In any event, there is no indication in (1) of any effect which

might have been obtained by reducing the amount of birch extract employed to the range employed in the patent in suit.

4.3 The preferred compositions of document (3) contain a protein (especially beef bone marrow) and rosemary. It is not entirely clear from the language of (3): "wherein the keratin fibre strengthener comprises rosemary" whether, as argued by the Appellant at oral proceedings, the rosemary in fact acts as a strengthener. The alternative interpretation, argued by the Respondent, was that the strengthener merely included rosemary. It could well be that the rosemary is added merely to mask the odour of the beef bone marrow. In any event, there is nothing in (3) which might suggest that the combination of protein and rosemary could lead to the effects demonstrated in the patent in suit.

4.4 Document (4) relates to hair cosmetic compositions containing protein hydrolysate having a molecular weight in the range 2000 to 20000, i.e. within the range prescribed by Claim 1 of the patent in suit. The said compositions are useful in setting hair. In other words, the first effect demonstrated in the patent in suit, i.e. imparting retentivity to hair is already known from (4), in the absence of a birch or rosemary extract. There is, however, no hint from any of the other prior art documents that by adding such a birch or rosemary extract to the composition of (4) that it would be possible to obtain the other effects demonstrated by the patent in suit.

- 4.5 Document (5) concerns a hair rinse composition containing inter alia keratin hydrolysates having a molecular weight range overlapping that prescribed by the patent in suit (see page 9, lines 17 to 19). The composition is stated to impart softness and smoothness to the hair and to aid combing (page 4, lines 1 to 3). There is, however, no hint that the addition of rosemary or birch extract to the composition known from (5) would yield any improvement.
- 4.6 From the foregoing, it is apparent that the combination of effects obtained when applying the compositions of the patent in suit to the hair were not foreshadowed by the prior art. An inventive step can accordingly be acknowledged.
- 4.7 It may be added that the Board would have reached an analogous conclusion if it had chosen to regard document (4) as closest prior art. In this case, the problem to be solved would have been to develop a hair cosmetic composition not only displaying retentivity but also the other effects outlined in point 3.2 above. There is nothing to be derived from the documents (1) to (3) which would have led the skilled person to add a birch or rosemary extract to the compositions known from (1) in the expectation of obtaining the desired effects (cf. T 2/83, OJ EPO 1984, 265).
5. Since the Board are in position to allow the Appellant's main request and to dismiss the appeal, it is not necessary to consider the auxiliary request.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

P. Martorana

P. A. M. Lançon