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Beschwerdekammern

Boards of Appeal

Chambres de recours

Case Number : T 226/85



D E C I S I O N
of the Technical Board of Appeal 3.3.2
of 17 March 1987

Appellant I:
(Opponent 02)

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Representative :

Appellant II:
(Opponent 01)

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Respondent :
(Proprietor of the patent)

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Representative :

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Decision under appeal :

Decision of Opposition Division of the
European Patent Office dated 12 June 1985,
posted on 26 July 1985, rejecting the
opposition filed against European patent
No. 9942 pursuant to Article 102(2) EPC.

Composition of the Board :

Chairman : P. Lançon
Member : G. Szabo
Member : R. Schulte

Summary of Facts and Submissions

- I. European patent No. 9942 was granted on 27 April 1983 with 8 claims in response to the European patent application No. 79 302 043.9 filed on 28 September 1979 claiming the priority of the earlier application of 2 October 1978, Claim 1 is worded as follows:

"A pourable scouring cleanser composition comprising an anionic surfactant, a water-soluble polar nonionic surfactant, an electrolyte, a chlorine-releasing bleaching agent and a suspended particulate abrasive characterised in that the polar nonionic surfactant comprises an amine oxide and the chlorine-releasing bleaching agent comprises sodium hypochlorite, the total surfactant concentration being from 0.1 to 0.5 moles/kg based on the total composition other than the abrasive, and the molar ratio anionic surfactant: amine oxide is from 60:40 to 20:80, the composition showing a loss of no more than half the initial available chlorine in a storage period of 30 hours at 50°C and being capable of suspending abrasive without allowing a layer of unsuspended material to settle for 1 month at 37°C."

- II. Two admissible notices of opposition were filed against the European patent requesting that it be revoked on the ground of non-patentability because of lack of inventive step. The first Appellant (second Opponent) also raised lack of novelty, and the second one (first Opponent) insufficiency, as further grounds. In the latter case comparative test results were submitted purporting to show that the claimed compositions neither possessed the advantage of stability, i.e. absence of sedimentation, nor

did they retain, as promised, half the chlorine after the specified storage. As to lack of novelty and obviousness GB-A-1 418 671(1) was raised as the most relevant state of the art.

III. The Opposition Division rejected the oppositions in a decision notified on 26 July 1985. The reason for the rejection was that the claimed compositions were novel in view of the fact that (1) had not disclosed the specific ratios or concentrations of the components of the claimed formulations. As to inventive step, the invention was directed to a problem which had not been previously recognised, i.e. the elimination of interaction between chlorine in the bleach and soap filaments at higher temperatures of storage. Since the cited document (1) led away from the invention, the solution requiring no soap filaments, was not obvious. Insufficiency was not recognisable either, since the methods given in the specification gave adequate guidance, and the skilled person would have had enough information to deduce what action should be taken in case of failure. Whilst impurities and minor components might make a critical difference to the properties of the compositions such problems could be resolved by some testing. In any case the tests did not strictly correspond to the examples (e.g. no perfume component was incorporated) and this might account for lack of success in reproducing the same results.

IV. The Appellants (former Opponents) filed appeals against the decision on 24 August and 30 September 1985, respectively, with the payment of the appropriate fee, and submitted Statements of Grounds within the prescribed time limits. The second Appellant also submitted new comparative test results and raised new objections on ground of lack of industrial applicability (Article 57 EPC). An oral hearing was held on 17 March 1987. Although

duly invited the first Appellant decided not to be represented at the hearing.

V. The Appellants submitted in the proceedings and at the oral hearing substantially the following arguments:

- (a) Whilst it was very doubtful that the elimination of the successful filament forming soap from the formulation could lead to a stable formulation, such step would only become non-obvious if the promised result was truly achieved and was reproducible.
- (b) The tests were repeated and care had been taken to chose only components (e.g. chlorstabil standard perfume) which complied with the general instructions of the specification concerning testing for suitability. This time the chlorine losses were within the prescribed limits but the substantial sedimentation at an elevated temperature (30°C) consistently demonstrated the instability of the formulation according to various examples of the patent.
- (c) Even if there were embodiments which would satisfy the functional criteria for the claimed subject-matter, the finding of the correct combination of conditions in each case would be an undue burden in view of extensive investigations. There was no common general knowledge or any other advice or theory available which could resolve the dilemma facing the skilled person trying to reproduce the subject-matter of the main claim in each instance.

- (d) As regards the specified absence of undue chlorine loss within 30 hours at 50°C, this was itself irrelevant for practice which required sufficient stability for a longer time at a lower temperature. The alleged correlation between the stated accelerated test and the real requirement was not confirmed by the experiments since the chlorine loss became unacceptably high at a temperature slightly above room temperature. There was no reproducible teaching as to the solution of the problem and therefore no justification for patentability.
- (e) If an essential feature for success was missing from the claim, this should itself amount to insufficient disclosure. In addition, the claim itself was not limited to the case where filaments had been excluded from the composition, although this was alleged to be an essential characteristic of the solution of the problem. The functional limitations of the claim were rather characteristics of the technical problem than features of the solution to achieve the desired result. The problem itself, to have storage stability at higher temperatures, was only applicable in some southern areas of the Member States of the Convention and was therefore irrelevant for the rest. In addition, all features of the claimed subject-matter were disclosed in the cited art (1). Without a distinctive effect no invention could be recognised.

VI. The Respondent (Patentee) argued substantially as follows:

- (a) As to the alleged irreproducibility of results, it was unknown why precipitations occurred with the cleanser compositions prepared by the Appellant. Structured liquids were, of course, extremely sensitive and suffered from "physical instability". Nevertheless, the

disclosure was extremely detailed with respect of the preparations of the compositions and it was apparent that the Appellant had failed to repeat the Example exactly. It was possible that at least some of the preliminary tests for suitability of components might not have been carried out.

- (b) As regards the more relevant long-term chlorine stability at room temperature, it was well known that a bleach loss after 30 hours at 50°C was roughly equivalent to loss after one month at room temperature. Industry often relied on accelerated tests which were indicative of long-term characteristics.
- (c) Although all features of the invention could be found in the disclosures of (1), the state of the art achieved success with a three-dimensional network of entangled filaments, whilst the invention did not use such system and avoided its disadvantages.
- (d) There was no doubt that the skilled practitioners of the Appellant had tried to repeat the invention in their new tests with the materials available to them, but the appropriate adjustment of conditions was necessary in view of the delicacy of the composition. In such circumstances it was not possible to pin-point where the Appellant had gone wrong and what could have been done to rectify the position. Although it was possible that the earlier tests were unsuccessful because perfume was not incorporated, this should not mean that perfume was an essential feature of the invention in other circumstances.

VII. The Appellants request that the decision under appeal be set aside and the patent be revoked. The Respondent requests that the appeal be dismissed and that the patent be maintained.

Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC and is, therefore, admissible.
2. An attack on the ground of insufficiency under Article 100(b) EPC is, of course, based on Article 83 EPC which requires that the disclosure of the invention must be "sufficiently clear and complete for it to be carried out by the person skilled in the art". It is understood that this means that substantially any embodiment of the invention, as defined in the broadest claim, must be capable of being realised on the basis of the disclosure.
3. The tests originally submitted by one of the Appellants might have failed to provide a successful composition since they did not strictly correspond to the Examples. It is, however, important to note that for sufficiency not only the exemplified specific embodiments must be reproducible but any embodiment which falls within the ambit of the claim. Whilst it is true in the present case that unsuccessful variants are automatically excluded by the two functional requirements incorporated in the claim, this cannot lead to a situation where the skilled person is in great difficulties to find proper embodiments by following the instructions of the specification.
4. Normally the realisation of the essential and tangible technical features of the claims should ensure success provided the skilled person faithfully follows the instructions of the specification and uses his knowledge

properly to achieve what is required. In cases where there are genuine difficulties to define the invention by its components alone, it has been possible to "round up" the definition at its problematic edges by functional limitations. The Board supports the Guidelines for Examination in the EPO, C.III -4.7, in this respect. The results referred to must be easy to ascertain directly by test. Such safeguards must not, however, replace the incorporation of all essential features in the definition, the necessary and sufficient criteria for the invention. Whilst this is basically a matter for the clarity of claims under Article 84 EPC which is itself not available as a ground for opposition under Article 100 EPC, it can have consequences for the question of the reproducibility of the invention since the exact scope of the claim necessarily governs that aspect as well.

5. If the presence of perfume is, as suggested, not an essential feature of the invention but only a circumstance which may influence the effect of the essential features and thereby their proper adjustment, the skilled person must be in the position to readjust the composition in case he wishes to exclude the perfume from the same. In view of the fact that he could rely on his common general knowledge even to rectify errors or fill gaps in the instructions (cf. T 171/84, "Redox Catalyst" OJ 4/1986, 95), his knowledge in this respect is also assumed to be applicable when he tries to repeat specific examples or to prepare other embodiments falling within the scope of the claim. It appears that there is no advice available from the such sources, or from the instructions of the patent to enable the skilled person to steer the formulation towards success in such situations. For instance, no trend is recognisable for other components when examples with or without the perfume component are compared.

6. The same considerations apply to the newly submitted tests filed only with the Statement of Grounds by the Appellants. Nevertheless, the tests are admissible since they were presented to some extent in response to criticisms about the earlier set of results expressed in the decision of the Opposition Division. This time, perfume was also incorporated which possessed "chlorine stability", i.e. it did not interact with the bleach at 50°C after 30 hours. Nevertheless, results at lower temperatures for a longer storage time showed undesirable losses of activity suggesting that the correlation between accelerated and long-term testings was not as reliable as submitted by the Respondents.

The allegation by the Respondent that the Appellant failed again to repeat the Examples exactly, was neither supported with specific explanations as what must have gone wrong nor was it sustained at the oral hearing. The assumption that the Appellants must have also carried out the preliminary tests for suitability was confirmed, and yet the results showed that the most important aim of the invention, the absence of sedimentation, could not be achieved at least in a statistically acceptable frequency.

7. There has been no guidance even at this late stage of appeal proceedings as to how the skilled person could have acted in the special circumstances of the examples to obtain satisfactory results. Nor are there instructions in the specification or available from common general knowledge as to how to rectify the results by sensibly adjusting the conditions within the available ranges. It was known that certain conditions, like the density and surface characteristics of the abrasive, and the homogeneity of the anionic surfactant might influence stability but no clear

principles were available for control. In such circumstances, the skilled person was in no position to carry out the invention without an undue burden of experimentation and search for the right conditions.

The repeated results showing instability according to the Appellant's evidence also supported the impression of a very high failure rate with the claimed formulation, which was not refuted by any evidence from the Respondent showing the incidental character of the Appellant's case or at least an acceptable rate of success with a random approach.

8. Even though a reasonable amount of trial and error is permissible when it comes to the sufficiency of disclosure in an unexplored field or, - as it is in this case -, where there are many technical difficulties, there must then be available adequate instructions in the specification or on the basis of common general knowledge which would lead the skilled person necessarily and directly towards success through the evaluation of initial failures or through an acceptable statistical expectation rate in case of random experiments.

In the present appeal the sensitivity or inherent instability of the composition, or other unexplained circumstances are such that the skilled person can only reproduce the invention in a number of instances with some luck, if at all, in view of the unknown character of reasons which cause failure. For this reason, the patent is invalid in its entirety for not complying with the requirements of Article 83 EPC.

9. The Board has the impression, as it was also tentatively admitted by one of the Appellants at the oral hearing that if the filament-free composition had been reproducibly successful, it would have been indeed a very impressive invention. The question of inventive step, or the originally

also mentioned novelty problem, in respect of any successful versions of the claimed subject-matter, has become irrelevant in view of the above findings and the Board need not deal with it. For the same reason it was not necessary to consider the scope of the main claim or the question raised in respect of Article 57 EPC.

Order

For these reasons it is decided that:

1. The decision of the Opposition Division is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:

F. Klein

P. Lançon