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D E C I S I O N
of 11 July 2001

Case Number: T 0998/97 - 3.3.2

Application Number: 91200560.0

Publication Number: 0451889

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Language of the proceedings: EN

Title of invention:
Perfumed products

Patentee:
QUEST INTERNATIONAL B.V.

Opponent:
Henkel Kommanditgesellschaft auf Aktien

Headword:
Perfumed products/QUEST

Relevant legal provisions:
EPC Art. 83, 100(b)

Keyword:
"Patent revoked on ground of insufficiency; insufficiency alleged but not supported; Burden of proof; Determination of functionally defined ingredients of a composition of matter: no undue burden; alternatives to explicitly disclosed ingredients available on the basis of the disclosure in the specification"

Decisions cited:
T 0292/85, T 0182/89, T 0435/91

Catchword:

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Boards of Appeal

Chambres de recours

Case Number: T 0998/97 - 3.3.2

D E C I S I O N
of the Technical Board of Appeal 3.3.2
of 11 July 2001

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

Representative: -

Appellant: QUEST INTERNATIONAL B.V.
(Proprietor of the patent) Huizerstraatweg 28
NL-1411 GP Naarden (NL)

Representative: Matthews, Heather Clare
Keith W Nash & Co
Pearl Assurance House
90-92 Regent Street
Cambridge CB2 1DP (GB)

Decision under appeal: Interlocutory decision of the Opposition Division
of the European Patent Office posted 30 July 1997
concerning maintenance of European patent
No. 0 451 889 in amended form.

Composition of the Board:

Chairman: P. A. M. Lançon
Members: G. F. E. Rampold
S. C. Perryman

Summary of Facts and Submissions

- I. The appellant is proprietor of European patent No. 0 451 889 which was granted with 15 claims on the basis of European patent application No. 91 200 560.0; claim 1 as granted reads as follows:
- "Perfumed product comprising at least 25% of water and 0-60% of a surface active material characterized in that it contains less than 0.01% of conventional preservatives and 0.05% by weight or more of a preservative perfume which comprises conventional perfume ingredients **chosen only for their olfactory contribution** and wherein at least 30% by weight of the perfume consists **of at least two different perfume ingredients which need at least 3 inoculations to failure in the individual challenge test.**"
- II. The respondent originally filed notice of opposition requesting revocation in full of the European patent pursuant to Article 100(a) EPC on the ground of lack of inventive step and pursuant to Article 100(b) EPC on the ground of insufficiency of disclosure.
- III. During the proceedings before the opposition division, amended sets of claims were filed by the proprietor, by way of first and second auxiliary requests. In an interlocutory decision dated 30 July 1997, the opposition division refused both the proprietor's main request that the opposition be rejected and its first auxiliary request that the patent be maintained on the basis of the claims filed on 24 April 1997, but decided to maintain the patent as amended during the oral proceedings.

In its reasons for the decision the opposition division held that the main request and the first auxiliary request did not meet the requirements of Article 83 EPC, because the invention as claimed in both requests was not reproducible without undue burden. Since the main aim of the patent in suit was the antibacterial potential of the perfume ingredients, the skilled person would have to screen a very huge list of potential perfume ingredients in order to establish which ingredients were preservative in accordance with the particular challenge test and to arrive at the claimed product. He would have no other choice to establish the limits of the claimed invention than to test any compound of a perfume in order to know whether or not it passed the challenge test.

- IV. A notice of appeal was filed by the proprietor (appellant) against the decision of the opposition division. Both the appellant and the opponent (respondent) requested oral proceedings.

- V. In advance of the oral proceedings, scheduled to take place on 11 July 2001, both duly summoned parties informed the board that they would not attend the hearing.

- VI. The appellant's grounds and arguments in support of the appeal may be summarised as follows:

Article 100(b) EPC rather than Article 83 EPC which was cited in the impugned decision provided the correct legal basis in the EPC for the decision to refuse the main and the first auxiliary requests on the ground of insufficiency of disclosure.

The individual components of the claimed perfumed product, including all the technical features by which both the ingredients of the "preservative perfume" were defined, were clearly disclosed. The opponent itself admitted in the opposition statement that the individual challenge test was workable. There had also been no suggestion during the opposition proceedings that any information which was necessary for performance of the invention was missing from the description. This being the case, the appellant concluded that the disclosure of the patent in suit was both clear and complete and, consequently, met all the criteria of Article 100(b) EPC.

Article 100(b) EPC did not contain any reference whatsoever to the burden which might be put upon a skilled person wishing to repeat the invention. Apart from the fact that this criterion was accordingly inappropriate for judging the allowability of the patent in suit, the opposition division had omitted or misrepresented important facts in assessing the burden which was imposed on a skilled person in the present case. The opposition division asserted in the impugned decision that, because the main aim of the contested invention was the antibacterial potential of perfume ingredients, the skilled person had to examine more than about 4000 potential ingredients. This assertion conflicted with the essential selection criterion of claim 1, that the perfume ingredients were only chosen for their olfactory contribution. In view of this feature a skilled person would not search for compounds additional to a list of known perfume ingredients.

The opposition division based its arguments on an assumption that the skilled person who wished to carry

out the invention started with the intention of determining each and every way of carrying out the invention and concluded that this entailed an undue burden. Although the skilled person was only ever interested in a limited number of ways of carrying out the invention, the specification provided nevertheless clear and complete instructions to enable a skilled person to carry out the invention in respect of the whole subject-matter claimed without undue burden.

It was well-established that the scope of a European patent was not restricted to the specific embodiments disclosed therein and a patentee was entitled to protect an invention which represented a reasonable generalisation of specific disclosures. The scope of the invention as claimed in the patent in suit represented an acceptable generalisation.

VII. In its reply to the appeal statement the respondent essentially referred to its submissions during the proceedings before the opposition division. In the respondent's opinion, the disclosure was insufficient to enable the skilled person to find further effective ingredients with a reasonable expectation of success outside the area of the explicitly disclosed perfume ingredients in the patent in suit.

Although the respondent did not dispute that the challenge test was workable, it submitted nevertheless that this test was insufficient and not practicable to enable the skilled person to achieve the desired result within the whole ambit of claim 1 without undue burden.

Since an effectively unlimited number of compounds was covered by the functional definition in claim 1, the

person skilled in the art was compelled to apply inventive ingenuity, or at least to perform an extensive research programme in order to find suitable variants of "preservative perfumes" and, in particular, "suitable variants of antimicrobially effective perfume ingredients" within the whole ambit of claim 1, but outside the area of the specific examples in the patent in suit. This should be seen as an unacceptable burden in accordance with the principles set out in decision T 435/91 (OJ EPO 1955, 188). Moreover, the description did not provide the skilled reader with any assistance or guidance indicating in which direction to go if initial investigations and test runs had failed.

VIII. The appellant had requested in writing that the decision under appeal be set aside and that the patent be maintained as granted.

The respondent had requested in writing that the appeal be dismissed.

Reasons for the Decision

1. The appeal is admissible.
2. The first question to be decided in this appeal is whether or not the opposition division was correct in finding that the ground for opposition under Article 100(b) EPC prejudices the maintenance of the patent as granted. An attack on the ground of insufficiency of disclosure 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 a 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. In the absence of evidence to the contrary, it is sufficient if the disclosure suggests plausibly this is possible.

The disclosure in the patent specification

3. Claim 1 relates to a *composition of matter*, more specifically a **"perfumed product"**, comprising the following components: at least 25% of water; 0-60% of a surface active material; less than 0.01% of conventional preservatives; and

0.05% by weight or more of a **"preservative perfume"** defined only in functional terms; the defining *functional features* of the "preservative perfume" require

(i) that it comprise "conventional perfume ingredients *chosen only for their olfactory contribution*"; and

(ii) that at least 30% by weight of its total weight consist of at least two different perfume ingredients [*chosen for their olfactory contribution*] which need at least 3 inoculations to failure in the individual challenge test" (hereinafter referred to as **"antimicrobially effective perfume ingredients"**).

3.1 The description includes the following worked examples:

- 3 examples of the "**perfumed product**" according to claim 1 (see Examples 6 to 8);

- 5 examples of a "**preservative perfume**" in accordance with the claimed invention (see claims 1 and 9), indicating the proportion, nature and function (either antimicrobially effective or not) of each single ingredient of such "preservative perfume" (see Examples 1 to 5); and a list of
 - 15 "**antimicrobially effective perfume ingredients**" which needed at least 3 inoculations to failure in the individual challenge test (see page 6, lines 5-21).

Furthermore, the specification discloses on page 4, lines 32 to 38 two groups of compounds which are said to be particularly effective antimicrobial perfume ingredients. These groups are identified by their general formulae.

3.2 Since the reproducibility of the examples is beyond doubt, it is clear that the patent in suit discloses explicitly not only one, but several different ways enabling the skilled person to carry out the invention. A substantial number of claimed "perfumed products" can accordingly be formed by preparing "preservative perfumes" using the ingredients listed in the specification. Alternatively, a skilled person needs to apply successively the selection criteria (i) and (ii) according to claim 1 (see point 3 above) to find additional suitable ingredients for the "preservative perfume".

It is the sufficiency of disclosure of the criteria for selecting the "preservative perfume" within the whole ambit of claim 1 which has been disputed under Article 100(b) or Article 83 EPC.

The selection criteria

4. ad(i):

The notional skilled person is considered in the present case to be a perfume formulator familiar with selecting perfume ingredients for their olfactory contribution. A person with these knowledge and skills, faced with the task of devising a perfume having a desired specific aroma or odour, would be able to select, without the exercise of any inventive activity or scientific research, from the group of all possible conventional perfume ingredients available in the state of art for this purpose a more or less large sub-group of suitable ingredients capable of imparting the particular olfactory contribution to the desired specific aroma of the "preservative perfume". Since it was not contested that the skilled person would have no difficulty in choosing a perfume with the desired aroma on the basis of the disclosure in the patent in suit, there is no need to expand on this matter.

4.1 ad (ii):

The respondent itself admitted in the opposition statement (see point 3) that, by following the disclosure in the patent in suit (see especially the paragraph bridging pages 5 and 6), the individual challenge test is workable. There is also no dispute that those skilled in the art can readily establish

whether or not a potential perfume ingredient selected according to criterion (i) passes the challenge test and would therefore be acceptable as an "antimicrobially effective perfume ingredient" in accordance with the challenge test. The skilled person is thus given precise and complete instructions in the patent in suit as to how he can test the group of all possible perfume ingredients, which have been selected for their olfactory contribution, also for their performance in the challenge test and, accordingly, determine by **routine testing** suitable variants of "antimicrobially effective perfume ingredients" encompassed by the functional definition in claim 1. It is then only a trivial matter of calculation to formulate a "preservative perfume" containing at least 30% by weight of at least two "antimicrobially effective perfume ingredients".

- 4.2 In view of the foregoing observations and in the absence of any evidence to the contrary, it cannot in the board's judgment be assumed that the skilled person would have difficulty in identifying any number of other suitable "preservative perfumes" using the test criteria given in the specification and the suggestions therein as to their likely chemical formulae. That finding alternatives to the specifically mentioned "preservative perfumes" will require some additional work cannot be considered to impose an undue burden. The facts are quite different from those in case T 435/91 (*loc. cit.*, see for more details point 7 below).

The objections in the impugned decision

5. Whilst the opposition division does not appear to

dispute, in principle, in the impugned decision the feasibility of the selection criteria (i) and (ii) as such for choosing suitable "preservative perfumes" outside the area of the specific examples mentioned in point 2.2 above, it took the view that the requirements of Article 83 EPC are not met, since the invention according to claim 1 as granted "is not reproducible without undue burden". This view is based on the principal arguments that, in order to form the claimed product, a skilled person would have to screen a very huge list of ingredients [more than the suggested 4000 potential perfume ingredients, which are regularly used in perfumery for perfuming purposes] to determine which ingredients fulfill the requirements of the challenge test" and that the person skilled in the art "would have to test any compound of a perfume in order to know whether or not it is a perfume compound and whether or not it meets the requirement of the challenge test" in order to find out the limits of the claimed invention (see Reasons for the decision, point 2).

- 5.1 Although the Convention does not specify, at least not explicitly, this requirement, it is established case law of the boards of appeal that the disclosure should enable the skilled person to carry out the invention without "undue burden" or "undue difficulty" (see "Case Law of the Boards of Appeal of the EPO, 3rd ed. 1998, II. A. 4.). There cannot, of course, be a clear-cut answer to the question of how much detailed information and how many instructions are required in a patent specification to allow the invention to be reproduced without "undue burden", since this question can only be decided on the basis of the facts of each individual case.

5.2 The board considers that the appropriate yardstick for judging whether or not the burden is acceptable in the present case cannot, in contrast to what the opposition division appears to suggest in the impugned decision (see point 5 above), realistically be the theoretical number of test runs required to detect or to test each and every conceivable variant of a potentially "antimicrobially effective perfume ingredient" encompassed by the functional definition in claim 1 (ie the indefinite and abstract host of possible alternatives in claim 1, see point 7 below), but rather the number required to find, on the basis of the disclosure in the specification, enough suitable alternatives to the 15 explicitly disclosed variants in the patent in suit (see decision T 292/85, OJ EPO 1989, 275, especially Reasons, point 3.1.5). There was no evidence provided that the disclosure is insufficient in this respect.

The burden of proof

6. The burden of proof lies with the respondent (opponent) to show that there is insufficiency under Article 83 EPC (see decision T 182/89, OJ EPO 1991, 391). The board finds that this burden of proof has not been discharged.

6.1 There was no evidence provided by the respondent to suggest that a skilled reader of the patent would be unable to carry out the claimed invention in any embodiment. Merely to allege in the opposition statement (see page 3) that "a nearly unlimited number of compounds" has to be tested to find antimicrobially effective perfume ingredients and that, in carrying out the challenge test according to the patent in suit,

"failures" (detection of ineffective ingredients) are the rule and "successes" (detection of effective ingredients) the exception, does not, in the absence of any evidence in support of these allegations, discharge the burden of proof.

6.2 Moreover, the respondent (opponent) is incorrect in arguing, in the opposition statement, that the disclosure in the patent specification failed to provide a skilled person with assistance and guidance in choosing on the basis of the selection criteria perfume ingredients which may be suitable because of their preservative activity. On the contrary, the specification contains information on two groups of compounds, which are particularly effective in antimicrobial activity, and provides the person skilled in the art with the teaching that particularly effective ingredients can be found among compounds according to the formulae presented on page 4, lines 35-58. This teaching is experimentally confirmed by the fact that each of the 15 "antimicrobially effective perfume ingredients" specifically mentioned in the list on page 6, lines 5 to 21, of the specification has a chemically rather simple structure described by these two formulae.

6.3 Consequently, based on the commonly known principle of the structural dependence of the properties of chemical substances i.e. on the fact that similar properties would normally be expected in view of the structural similarity of two substances, the skilled person would, in the board's judgment, preferably start from the list of the effective ingredients in the specification and in the first place investigate similar compounds, which are covered by the above formulae and contain only

minor structural modifications, for example, analogues or homologues, for their performance in the challenge test. Thus, in the absence of any evidence to the contrary, the board has no reason to conclude that the disclosure in the specification does not lead the person skilled in the art in a direction in which the chance of finding a sufficient number of other "antimicrobially effective perfume ingredients" is reasonably high.

6.4 Consequently, neither the opposition division, in the impugned decision, nor the respondent, in the opposition statement, provided a reasoned argument or convincing evidence in support of the assumption that the person skilled in the art had to test a very huge number in the range of more than 4000 ingredients in order to form the claimed product and to complete the list of suitable "antimicrobially effective perfume ingredients" disclosed in the patent specification.

6.5 The impugned decision contains also no plausible explanation why the opposition division considers that successive application of the selection criteria (i) and (ii) on the basis of the guidance and assistance in the specification mentioned in points 6.2 and 6.3 above would not enable the skilled person to find suitable variants on the basis of a reasonable number of test runs, in particular since in the present case criterion (i) considerably reduces the number of candidates to be tested for their performance in the individual challenge test. Thus, there appears to be no question of the person skilled in the art having to test "a nearly unlimited number of compounds", since already from a pure perfumery point of view only a limited number of perfume ingredients will be considered by the

perfume formulator to be suitable for a specific perfume or odour, and thus only a limited number need to be tested.

- 6.6 Finally, the appellant's argument was not contested that the challenge test is of such simple nature as to enable a reasonably well equipped microbiology laboratory to run tests of as many as hundreds different ingredients simultaneously.
7. The respondent referred in the opposition statement (see page 7) to decision T 435/91 (*loc. cit.*) which, in its opinion, related to a comparable case and supported its allegation that the disclosure was insufficient. However, this decision does not, contrary to the respondent's assertions, support the allegation of insufficiency of disclosure in the present case.

According to the statement in point 2.2.1 of the Reasons for the decision in case T 435/91 , "the peculiarity of **the functional definition of a component of a composition of matter** resides in the fact that this component is not characterised in structural terms, but by means of its effect. Thus this mode of definition does not relate to a tangible component or group of components, but comprises an **indefinite and abstract host of possible alternatives**, which may have quite different chemical compositions, as long as they achieve the desired result." This is the case here. However, the mere fact that some of the components of the claimed perfume product are broadly defined in functional terms is not in itself a ground for considering the patent in the granted version as not complying with the requirement for sufficient disclosure under Article 83 EPC. Only if there were

serious doubts as to sufficiency of disclosure, substantiated and supported by verifiable facts, would revocation of the patent as granted on the ground of insufficiency of disclosure be justified.

In particular, in the case of decision T 435/91 the patent proprietor (respondent) itself admitted that, on the basis of the information contained in the patent specification and taking into account the common general knowledge, it was not possible to identify other variants of a functionally defined component (additives) than the two alternatives specifically mentioned in the examples, which could have reasonably been expected to bring about the desired effect. In sharp contrast to the situation in the cited decision, the selection criteria (i) and (ii) and the disclosure mentioned in points 6.2 and 6.3 above provide the skilled reader with sufficiently precise instructions as to how he can find with a reasonable expectation of success suitable alternatives to the "preservative perfume" and to the 15 "antimicrobially effective perfume ingredients" listed in the specification, without the exercise of any inventive activity or scientific research.

8. On the basis of the above observations, the board concludes that, in the absence of any evidence to the contrary, the disclosure in the patent specification and the relevant common knowledge provide sufficient and appropriate guidance as to how to obtain with a reasonable expectation of success suitable variants of "preservative perfumes and "antimicrobially effective perfume ingredients". The allegation that this would require an undue burden of experimentation has not been substantiated by any verifiable facts.

9. In view of the foregoing, the board considers that the alleged lack of sufficiency of disclosure (Articles 100(b) and 83 EPC), cited by the respondent as a ground for opposition, does not prejudice the maintenance of the contested patent as granted and the decision must be set aside. Since the patent as granted was also opposed under Article 100(a) EPC on the ground of lack of inventive step and the opposition division did not decide on this issue, the case must be remitted to the department of first instance under Article 111 EPC for further prosecution. In the present case, the board considers it necessary to emphasise that the claimed products in the patent in suit are essentially defined by the method of selecting the essential perfume ingredients without any indication as to the properties of the products themselves. When assessing inventive step for such products, it has to be examined, as in the examination of products defined in terms of their preparation ("product-by-process" claims), whether the products themselves fulfil the requirement for inventive step in the light of the cited state of the art, independently of the particular method of selecting their essential ingredients.

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 for further prosecution.

The Registrar:

The Chairman

A. Townend

P. A. M. Lançon