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**Datasheet for the decision  
of 10 January 2008**

**Case Number:** T 0123/06 - 3.3.10

**Application Number:** 99950916.9

**Publication Number:** 1121159

**IPC:** A61L 9/012

**Language of the proceedings:** EN

**Title of invention:**  
Vapour dispensing device

**Patentee:**  
Reckitt Benckiser (UK) Limited

**Opponents:**  
Jeyes Group Limited  
The Procter & Gamble Company  
M.S. George Limited

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. 83

**Relevant legal provisions (EPC 1973):**  
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**Keyword:**  
"Sufficiency of disclosure (no): functional features - undue burden - research program"

**Decisions cited:**  
T 0409/91, T 0435/91

**Catchword:**  
-



Case Number: T 0123/06 - 3.3.10

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.10  
of 10 January 2008

**Appellant:**  
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**Respondent 1:**  
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(Opponent 4)  
(former intervener)

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**Decision under appeal:**

**Decision of the Opposition Division of the  
European Patent Office posted 6 December 2005  
revoking European patent No. 1121159 pursuant  
to Article 102(1) EPC 1973.**

**Composition of the Board:**

**Chairman:** R. Freimuth  
**Members:** P. Gryczka  
J.-P. Seitz

## Summary of Facts and Submissions

- I. The mention of the grant of European patent 1 121 159, in respect of European patent application No. 99950916.9, which is based on the International application PCT/GB99/03424, was published on 11 June 2003.
- II. Three notices of opposition and a notice of intervention according to Article 105 EPC were filed, in which revocation of the patent in its entirety was requested on the grounds of lack of novelty and inventive step and insufficiency of disclosure (Article 100(a) and (b) EPC).
- III. In a decision issued in writing on 6 December 2005, the Opposition Division revoked the European patent. The decision was based on a main request filed at the oral proceedings before the opposition division. Claim 1 of said request (present main request) read as follows:
- "1. A device (1) for the diffusion of an active volatile substance into ambient air or closed spaces comprising a solid casing or housing (4) and a solid carrier (3) containing said volatile substance wherein said solid carrier is arranged in at least one recess (2) formed in said casing or housing, the at least one recess having a depth and a width which are chosen in relation to the composition of the solid carrier containing the active substance so that the ratio of the evaporation surface of the solid carrier to the mass of the solid carrier disposed within the said recess is such that a substantially constant vapour release rate and total evaporation of said active

volatile substance during the active lifetime of the device is obtained, the at least one recess having a surface area of 10 to 50 cm<sup>2</sup> and the amount of solid carrier containing the volatile substance at the beginning of the lifetime of the device being from 3 to 30g."

The Opposition Division held that the claimed device was defined by two results to be achieved namely a constant vapour release rate and a total evaporation of the active volatile substance during the active lifetime of the device. The achievement of these results was influenced by a number of complex parameters so that the size, depth and width of the recess could no be determined simply by routine experiments. In addition, the patent specification did not contain any example showing that a constant and total vapour release could in fact be obtained, nor did it describe any procedure for determining the rate of release of the vapours and the total evaporation of the active substance. Therefore, the invention was not sufficiently disclosed and the skilled person was left with undue burden to carry it out. Thus, the requirements of Article 83 EPC were not met.

IV. The Proprietor of the patent in suit (Appellant) lodged an appeal against the above decision. With a letter dated 12 April 2006 he filed an amended set of claims as auxiliary request.

Claim 1 of said auxiliary request differs from claim 1 of the main request solely in that the active volatile substance is defined as "being a perfume".

- V. The Opponent 3 withdrew its opposition already in opposition proceedings and Opponent 4 (former intervener) withdrew its opposition during appeal proceedings.
- VI. The Appellant argued in writing that the skilled person knew that it was not imperative that the rate of release was exactly constant throughout the lifetime of the device and that standard tests could be used to determine whether the device fulfilled this objective. The same applied to the total evaporation of the active substance which could also be easily determined by one skilled in the art. The patent specification gave sufficient guidance in order to achieve these objectives since claim 1 itself defined the important parameters, namely the surface area of the recess, the mass of the carrier and the depth and width of the recess, which had to be determined in relation to the composition of the solid carrier containing the active substance in order to control the evaporation surface of the solid carrier. These parameters in addition with the control of the porosity of the housing and the quantity of active ingredient as taught by the patent specification enabled the skilled person to achieve the results set out in claim 1 using routine experimental procedures. Thus, the invention was sufficiently disclosed and the requirements of Article 83 EPC were fulfilled.
- VII. The Respondent 2 (Opponent 2) considered that the claimed device was defined by two results to be achieved, namely a constant rate of evaporation of the active substance and a total evaporation within the active lifetime of the device. However, the patent in

suit did not provide sufficient information as to the method of measurement of the rate of evaporation. The achievement of the two objectives required by claim 1 as well as the method for measuring the evaporation rate was influenced by a bundle of factors such as, *inter alia*, the temperature, the atmospheric pressure, the humidity, the size of the room, the air circulation, the quantity and nature of the active substance and the porosity of the carrier. The patent in suit did not provide sufficient information and guidance to determine the appropriate dimensions of the recess taking into account all these factors. Furthermore, no example showed that the results specified in claim 1 of the main and the auxiliary request could actually be achieved. For these reasons the invention was not disclosed in a sufficient manner as required by Article 83 EPC.

VIII. The Respondent 1 (Opponent 1) did not make any submissions or file any request in the present appeal proceedings.

IX. The Appellant requested in writing that the decision under appeal be set aside and that the case be remitted to the first instance for further prosecution on the basis of the main request filed at the oral proceedings in front of the opposition division, or alternatively on the basis of the auxiliary request filed with the letter dated 12 April 2006.

The Respondent 2 requested that the appeal be dismissed.

X. At the end of the oral proceedings which took place on 10 January 2008 in the absence of the duly summoned

Appellant and Respondent 1, the decision of the Board was announced.

## **Reasons for the Decision**

1. The appeal is admissible.

### *Main and auxiliary requests*

2. *Insufficiency of disclosure of the invention*  
(Article 100 (b) EPC)

The main issue to be decided in this appeal is whether or not the decision under appeal was right to find that the patent in suit did not disclose the claimed invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. The Appellant objected to the finding of the Opposition Division that the subject-matter of claim 1 could not be carried out by a person skilled in the art in particular because the claimed device was defined by means of inadequate functional features expressing the results to be achieved by the invention.

- 2.1 It is the established jurisprudence of the Boards of Appeal that the requirements of sufficiency of disclosure are only met if the invention as defined in the claims can be performed by a person skilled in the art in the whole area claimed without undue burden, using common general knowledge and having regard to further information given in the patent in suit (see decisions T 409/91, OJ 1994, 653, point 3.5 of the reasons; T 435/91, OJ EPO 1995, 188, point 2.2.1 of the



reasons). That principle applies to any invention irrespective of the way in which it is defined, be it by way of the result to be achieved or not. The peculiarity of the functional definition of a technical feature resides in the fact that it is defined by means of the result to be achieved. That mode of definition comprises an indefinite and abstract host of possible alternatives, which is acceptable as long as the skilled person can determine without undue burden the technical characteristics of the alternatives which achieve the desired result. Therefore, it has to be established whether or not the patent in suit discloses sufficient information to enable the person skilled to determine which are the claimed alternatives achieving the results defined in the claim.

2.2 According to claim 1 of the main request and the auxiliary request the at least one recess has a depth and a width which are chosen in relation to the composition of the solid carrier containing the active substance so that the ratio of the evaporation surface of the solid carrier to the mass of the solid carrier disposed within the said recess is such that a substantially constant vapour release rate and total evaporation of said active volatile substance during the active lifetime of the device is obtained. The claimed device is thereby defined by the results to be achieved and the indication that in order to achieve these results structural characteristics of the recess have to be chosen, i.e. its depth and width. It has thus to be established whether or not the patent in suit gives the skilled person using common general knowledge sufficient information to carry out the invention, i.e. sufficient information to determine the

depth and the width of the recess in relation to the composition of the solid carrier containing the active substance so that the ratio of the evaporation surface of the solid carrier to the mass of the solid carrier disposed within the said recess is such that a substantially constant vapour release rate and total evaporation of said active volatile substance during the active lifetime of the device is obtained.

To carry out the invention the skilled person will have to determine the depth and the width of the recess so as to obtain a substantially constant vapour release rate and total evaporation of the active volatile substance during the active lifetime of the device. As a matter of fact, the evaporation of an active substance depends, however, on several variable parameters such as temperature, atmospheric pressure, humidity, shape of the recess, number of recesses, quantity and nature of the active substance, and quantity, nature and porosity of the carrier. According to the patent in suit the appropriate size for the recess has to be selected as a function of, for example, the nature of the material of the solid carrier and its porosity which may vary for a given material according to the mode of preparation, the amount of active ingredient and its volatility, or the interaction between the solid carrier material and the active substance. All of these variable parameters can have an impact on the efficiency of diffusion of the volatile substance and the appropriate size of the recesses can thus be readily determined on a case by case basis (page 4, lines 15 to 20). It is thus acknowledged in the patent in suit itself that no general rules can be applied for the determination of the depth and width of

the recess. Consequently, to carry out the claimed invention the skilled person, in each single case, is faced with the problem of determining the suitable dimensions of the recess depending on a host of variable parameters. However, neither the common general knowledge nor the patent in suit provides him with any information guiding him in performing successfully this task. Thus, the skilled person does not have at his disposal any guidance leading necessarily and directly towards success through the evaluation of initial failures so that the skilled person can only establish by trial and error in each single case whether or not a particular choice of possible alternatives within the host of variable parameters will provide the result to be achieved by the claimed device, which amounts to an undue burden. The functional definition of the device is no more than an invitation to perform a research program in order to find suitable dimensions (T 435/91, *loc. cit.*).

For these reasons, the Board cannot follow the Appellant's submission that the patent in suit provided sufficient guidance to find devices having suitable dimensions by simple routine experiments. The Board, hence, comes to the conclusion that the patent in suit does not disclose the claimed invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (Article 100(b) EPC).

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar

The Chairman

P. Cremona

R. Freimuth