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Datasheet for the decision of 26 November 2019

Case Number: T 1723/17 - 3.3.10

Application Number: 10766370.0

Publication Number: 2480259

IPC: A61L9/12, A61L9/03

Language of the proceedings: EN

Title of invention:
METHODS OF EMITTING A VOLATILE MATERIAL FROM A DIFFUSER

Patent Proprietor:
S.C. Johnson & Son, Inc.

Opponent:
The Procter & Gamble Company

Headword:

Relevant legal provisions:
EPC Art. 123(2), 56
RPBA Art. 13(1)

Keyword:
Late-filed request - admitted (yes)
Amendments - allowable (yes)
Inventive step - (yes)

Decisions cited:

Catchword:

Europäisches Patentamt
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Office européen des brevets

Beschwerdekammern

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Case Number: T 1723/17 - 3.3.10

D E C I S I O N
of Technical Board of Appeal 3.3.10
of 26 November 2019

Appellant: (Opponent)	The Procter & Gamble Company One Procter & Gamble Plaza Cincinnatti, Ohio 45202 (US)
Representative:	Jump, Timothy John Simon Venner Shipley LLP 200 Aldersgate London EC1A 4HD (GB)
Respondent: (Patent Proprietor)	S.C. Johnson & Son, Inc. 1525 Howe Street Racine, WI 53403 (US)
Representative:	Madgwick, Paul Roland Ruschke Madgwick Seide & Kollegen Postfach 86 06 29 81633 München (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 18 April 2017 concerning maintenance of the European Patent No. 2480259 in amended form.**

Composition of the Board:

Chairman	M. Kollmannsberger
Members:	R. Pérez Carlón
	W. Van der Eijk

Summary of Facts and Submissions

I. The appellant (opponent) lodged an appeal against the decision of the opposition division on the maintenance of European patent No. 2 480 259 in the form of the second auxiliary request then pending.

II. Notice of opposition had been filed on the grounds of added subject-matter (Article 100(c) EPC), insufficiency of disclosure (Article 100(b) EPC) and lack of novelty and inventive step (Article 100(a) EPC).

III. The documents filed during the proceedings include the following:

D1 US 5,297,998
D3 JP 5-173648, translated into English as D3a
D9 First Declaration of William Mahoney from 11 November 2016
D10 Microsoft Excel Help, "RAND", Professional Edition 2003
D11 Scaling random numbers in Fortran, http://infohost.nmt.edu/tcc/help/lang/fortran/scaling.html, last updated 1995

IV. The opposition division concluded that the second auxiliary request pending before it was admissible. Its subject-matter found a basis in paragraphs [0045] to [0048] and Figure 7 of the application as originally filed.

The claimed method was novel over those disclosed in D3. If D3 was considered the closest prior art, the problem underlying the claimed invention was that of providing less predictable emission times. The

solution, which was characterised by using random periods calculated in the manner required by claim 1, was not obvious. If D1 was considered the closest prior art, the problem underlying the claimed invention was to provide an alternative random computation of time periods. The claimed solution, characterised by obtaining said random time periods by adding the product of a random number and an incremental period to a base period, was not obvious having regard to the prior art. The claimed method was thus inventive.

V. Claim 1 of the main request in these appeal proceedings, filed at the oral proceedings before the board of appeal on 26 November 2019, reads as follows:

"A method of emitting two or more volatile materials from a diffuser (13, 130, 250) the method comprising the steps of:

initializing a random number generator;

emitting a first volatile material (35a, 135a, 262a) using a first diffusion element (38a, 138a, 266a) for a first randomly determined period of time; and

emitting a second volatile material (35b, 135b, 262b) using a second diffusion element (38b, 138b, 266b) for a second randomly determined period of time;

wherein:

the first randomly determined period of time is equal to a base time period plus a first incremental period, wherein the first incremental time period is determined by:

a) operating the random number generator to generate a first random number; and

b) multiplying the first random number by a time factor to produce the first incremental time period; and

the second randomly determined period of time is equal to the base time period plus a second incremental time period, wherein the second incremental time period is determined by:

a) operating the random number generator again to generate a second random number; and

b) multiplying the second number by the time factor to product the second incremental time period."

VI. The arguments of the appellant relevant to the present decision were as follows:

The main request was filed extremely late and should not be admitted into the proceedings.

The method of claim 1 of the main request did not find a basis in the application as originally filed. Claim 1 did not include all of the features disclosed in paragraphs [0045] to [0048] and Figure 7. Specifically, claim 1 did not require a timer, a block that establishes a current emission time period, the sequence of operations as in Figure 7, that the diffuser be turned off by unplugging and that only two volatile materials were emitted.

Either of documents D1 and D3 could be considered the closest prior art, as both related to the problem of preventing habituation to volatile materials. Regardless of which of them was closest, the problem underlying the claimed invention was that of providing an alternative method. The claimed solution, which was characterised by using a random number obtained in a defined manner, was obvious having regard to D10 or D11. The claimed method was thus not inventive.

VII. The arguments of the respondent (patent proprietor) relevant to the present decision were as follows:

The main request was a reaction to objections raised for the first time by the board in its communication and should thus be admitted into the proceedings.

The claimed method found a basis in the fourth mode of operation disclosed in paragraphs [0045] to [0048] and Figure 7 of the application as originally filed. This fourth mode could be applied to any of the first to third embodiments of the application. The features mentioned by the appellant were either implicitly required by the claimed method, redundant to features already in the claim, or not essential.

Even if the problem underlying the claimed invention were to be seen as that of providing an alternative to the methods of D1 or of D3, the claimed solution was inventive. It was characterised by an emission time obtained as a base time period plus a random number multiplied by a time factor. Documents D10 and D11 disclosed how to obtain random numbers, but did not disclose time intervals as those required by claim 1.

VIII. The final requests of the parties were as follows:

- The appellant requested that the decision under appeal be set aside and that the European patent No. 2 480 259 be revoked.

- The respondent requested that the decision under appeal be set aside and the patent be maintained on the basis of its main request, filed at the oral proceedings before the board on 26 November 2019, or one of auxiliary requests 1 to 4, all auxiliary

requests filed with letter of 1 April 2019.

IX. At the end of the oral proceedings, the decision was announced.

Reasons for the Decision

1. The appeal is admissible.

Main request

2. Admittance

2.1 The respondent's main request was filed at the oral proceedings before the board of appeal and its admissibility is thus subject to the criteria set by Article 13 RPBA.

2.2 The appellant acknowledged at the oral proceedings that it was prepared to deal with the subject-matter of the main request. Article 13(3) RPBA does thus not apply.

2.3 Claim 1 of the main request merely differs from claim 1 of the request found allowable by the opposition division in that "comprised of ... and..." is replaced by "is equal to... plus..." and in that the wording "multiplying the random number" on its second appearance is replaced by "multiplying the second random number". Some dependent claims have also been cancelled.

The changes are simple, do not raise any further issues and were a second attempt to react to an objection of clarity put forward by the board in its communication in preparation for oral proceedings. Said second attempt did overcome the deficiencies of the first.

Under these circumstances, the board decided to admit the respondent's main request into the proceedings.

3. Amendments

3.1 Claim 1 finds a basis in paragraphs [0045] to [0048] and Figure 7 of the application as originally filed.

3.2 The appellant argued that these passages could only provide a basis for the embodiment requiring the first and second volatile materials to be emitted sequentially.

The fourth embodiment of the application as originally filed requires a random number generator, [0045] to [0047]. This mode of operation can be applied [0046] to any of the first, second or third embodiments disclosed in [0043]. The first embodiment requires an alternating sequence. The second includes a pause between emissions. The third, an overlap of volatile material emissions. No other possibility is apparent. This argument is thus not convincing.

3.3 The appellant further argued that claim 1 did not require features which were essential for the embodiment of the passages mentioned in 3.1. These features were the timer, the block that establishes a current emission time period and the sequence of operations, including a feedback loop. It argued that the fourth mode of operation could not work without them.

However, the feature "for a [...] period of time" of claim 1 inherently requires a timer. It is thus a feature of the claim, contrary to the appellant's

argument.

The current emission time period needs to be calculated in the manner defined in the claim. The block that establishes the current emission time does not add anything to the claimed subject-matter over and above what claim 1 already requires.

Lastly, the sequence put forward in Figure 7 of the application as originally filed is not essential for carrying out the embodiment defined in paragraphs [0045] to [0048]. Some parts of the sequence are set by the features of claim 1, for example that the random number is generated before establishing the current emission time period. A feedback loop is also inherent to the embodiment of emitting more than one volatile material, as required by claim 1.

These arguments of the appellant are thus not convincing.

3.4 The appellant further argued that claim 1 did not require the process to be brought to a hold by unplugging, which was disclosed on paragraph [0056] in connection with the features of claim 1.

A diffuser suitable for the claimed method inevitably requires energy. Adding that the device can be turned off - and on - does not add any technical information to claim 1.

3.5 Lastly, the appellant argued that the embodiment disclosed in the passages mentioned in 3.1 above only provided a basis for the emission of two volatile materials.

However, [0046] relates to the emission of materials, in the plural. Figure 7 includes a step of determining which diffusion element should be activated next in the sequence (310), which would have been redundant if only two materials were emitted. For these reasons, the embodiment disclosed in the passages mentioned in 3.1 is not limited to the emission of only two volatile materials.

4. Inventive step

D1 as closest prior art

4.1 Document D1 discloses a method for supplying a fragrance or deodorant involving random numbers (column 3, line 60). As the claimed invention, D1 seeks to avoid the habituation of the user.

One of the embodiments of D1 involves the intermittent emission of various materials (Figure 1, 11A to 11C) according to random numbers from the producing circuit 15 (column 3, lines 35-41). Different patterns of supplying time and non-emitting time are set for that purpose. The random number allows the selection of the next pattern to be used (column 3, lines 54-63).

4.2 Problem underlying the claimed invention

It was not disputed that the problem underlying the claimed invention was to provide an alternative method for avoiding habituation to volatile materials such as fragrances.

4.3 Solution

The claimed solution is the method of claim 1 in which

the emission time of at least two volatile materials is obtained using random numbers, characterised in that said emission time is equal to a base time plus a random number multiplied by a time factor.

It was not disputed that the claimed method solved the problem as formulated above.

4.4 It thus remains to be decided whether the proposed solution to the objective problem defined above would have been obvious for the skilled person in view of the prior art.

The appellant relied in this respect on documents D10 and D11, supported by declaration D9. D9 discloses that the methods for generating random numbers in D10 and D11 were standard in the art, which was not questioned by the respondent.

D10 is a help page of Microsoft Excel explaining the use of the function RAND(). It discloses that [RAND()*(b-a)+a] generates a random, real number between a and b. D11 discloses an equivalent way of producing pseudorandom numbers in Fortran.

However, documents D10 and D11 merely disclose how to obtain random numbers, i.e. numbers such as N1 as defined in claim 1. Even if D10 and D11 were combined with D1, the result would be a process for emitting volatile substances using [RAND()*(b-a)+a] for choosing which of the predefined patterns of [emission time + interval without emission] is used, which is not an embodiment of the method of claim 1.

Thus the prior art does not hint at the claimed solution.

Document D3 as closest prior art

4.5 Document D3 is not published in an official language of the EPO. In the following, reference is made to its English translation D3a.

Document D3 relates to the problem of preventing habituation to an aroma [0009] and discloses using random generating means to select the type of fragrance, intensity, timing in which the fragrance is supplied or the amount of fragrance supplied [0010]. Paragraph [0044] discloses in the context of Example 1 that "the time for which the lid is opened is also random". It does not provide any further information on how to put that embodiment into practice.

D3 discloses using a decoder with n bits that generates 2^n results. 2^n needs to be much larger than the number of output lines (i.e. of fragrances), which is 8 in the embodiment disclosed. Only 8 of the 2^n results cause the opening of one of the lids of the chambers containing the volatile materials. Most of the results of the decoder result in no chamber being open.

D3 thus discloses a method which implies a random sequence of aromas, separated by periods of time of different length in which no chamber is open. There is a possibility that a chamber would be open for two consecutive periods, but this is very low.

4.6 Problem underlying the claimed invention

The appellant argued that the problem underlying the claimed invention was merely that of providing an alternative method for avoiding habituation to volatile

materials such as fragrances.

Since the board came to the conclusion on this basis that the claimed subject-matter is inventive (see 4.9), it is not necessary to elaborate further on whether a more ambitious problem has also been solved, as proposed by the respondent.

4.7 Solution

The claimed solution is the method of claim 1, characterised in that the emission time is equal to a base time plus a random number multiplied by a time factor.

It was not disputed that the claimed method solved the problem of providing an alternative.

4.8 It thus remains to be decided whether the proposed solution to the objective problem defined above would have been obvious for the skilled person in view of the prior art.

As in the previous case, the appellant relied in this respect on documents D10 and D11.

However, even if D10 and D11 were combined with D3, the result would be a process for emitting volatile substances using [RAND()*(b-a)+a] for choosing whether and which of the perfume-containing chambers would be opened next, which is not an embodiment of claim 1. The skilled person would thus not have arrived at the claimed subject-matter even by combining D10 or D11 with D3.

4.9 Thus, the claimed method is inventive within the meaning of Article 56 EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the opposition division with the order to maintain European patent No. 2 480 259 as follows:

Claims: claims 1-8 of the main request filed during oral proceedings before the board
Description: pages 2 and 3 as filed during oral proceedings before the opposition division
pages 4-7 of the patent specification
Drawings: sheets 1/5-5/5 of the patent specification.

The Registrar: The Chairman:

C. Rodríguez Rodríguez M. Kollmannsberger

Decision electronically authenticated