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**Datasheet for the decision
of 19 June 2020**

Case Number: T 2282/18 - 3.2.01

Application Number: 13717982.6

Publication Number: 2844094

IPC: A24D3/14, A24D3/18, A24B15/28,
A24D3/06, A24D3/04

Language of the proceedings: EN

Title of invention:
SMOKING ARTICLE MOUTHPIECE WITH COOLING AGENT INCLUSION
COMPLEX

Applicant:
Philip Morris Products S.A.

Headword:

Relevant legal provisions:
EPC Art. 52(1), 56

Keyword:
Inventive step - non-obvious solution

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 2282/18 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 19 June 2020

Appellant: Philip Morris Products S.A.
(Applicant) Quai Jeanrenaud 3
2000 Neuchâtel (CH)

Representative: Millburn, Julie Elizabeth
Reddie & Grose LLP
The White Chapel Building
10 Whitechapel High Street
London E1 8QS (GB)

Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 14 March 2018
refusing European patent application No.
13717982.6 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman G. Pricolo
Members: V. Vinci
S. Fernández de Córdoba

Summary of Facts and Submissions

I. The appeal was filed by the appellant (applicant) against the decision of the examining division to refuse the patent application in suit.

II. In the decision under appeal the examining division concluded that the subject-matter of the independent claims of both the main and auxiliary request on file did not involve an inventive step pursuant to Articles 52(1) and 56 EPC in view of the teaching of document

D1: US 5 752 529 A

or of document

D2: AU 718 673 B2

both taken alone or in combination with document

D4: WO9300018

Further, claim 1 of the main request was considered to lack clarity (Article 84 EPC). The auxiliary request solved this issue.

III. With the statement of the grounds of appeal the appellant requests that the contested decision be set aside and that an European patent be granted on the basis of the auxiliary request filed on 6th February 2018 underlying the contested decision (main request) or, as an auxiliary measure, according to one of the first or second auxiliary requests filed with the statement of the grounds of appeal. The appellant

further requests that oral proceedings be appointed should the main request not be allowed.

IV. Claim 1 of the main request reads as follows:

A smoking article (10) comprising:

a mouthpiece (14) having an outer surface, and a cooling agent inclusion complex (20) disposed on the outer surface, wherein the cooling agent inclusion complex (20) is a cyclodextrin cooling agent inclusion complex (20) comprising cyclodextrin and a non-volatile cooling agent, wherein the cooling agent has a vapour pressure of less than about 8.5 Pa at 25 degrees centigrade.

Claim 12 of the main request reads as follows:

Use of cyclodextrin cooling agent inclusion complex (20) comprising cyclodextrin and a cooling agent having a vapour pressure of less than about 8.5 Pa at 25 degrees centigrade in the manufacture of a mouthpiece (14) of a smoking article (10), wherein the cooling agent inclusion complex (20) is disposed on an outer surface of the mouthpiece.

Claim 13 of the main request reads as follows:

Method of providing a stable cooling sensation on the mouthpiece (14) of a smoking article (10), the method comprising applying a cyclodextrin cooling agent inclusion complex (20) on an outer surface of the mouthpiece (14), wherein the cooling agent inclusion complex (20) is a cyclodextrin cooling agent inclusion complex (20) comprising cyclodextrin and a non-volatile cooling agent having a vapour pressure of less than

about 8.5 Pa at 25 degrees centigrade.

Reasons for the Decision

1. The Board cannot follow the conclusion of the examining division that the subject-matter of independent claim 1 of the main request at stake does not involve an inventive step in view of documents D1 or D2, taken alone or in combination with document D4, for the following reasons:

1.1 There is general agreement on the fact that either D1 or D2 represents the closest prior art and that neither of these documents discloses the feature that:

"the cooling agent is a cyclodextrin cooling agent inclusion complex"

In fact, as correctly stated by the examining division, both D1 and D2 disclose, among many other possibilities, the use of cyclodextrin as a carrier for the cooling agent (see D1, column 3, line 63 until column 4, line 5 and D2, page 9, 1st paragraph). However, no inclusion complex, which is a particular molecular structure consisting in a host-compound accommodating a guest-compound, and in particular no cyclodextrin cooling agent inclusion complex, is disclosed in D1 or D2.

1.2 The Board concurs with the appellant that as D1 and D2 do not disclose a cooling agent inclusion complex at all, a further feature of claim 1, namely that

"a cooling agent inclusion complex is disposed on the outer surface"

is not disclosed in D1 and D2 either.

1.3 In this respect, the Board notes that the examining division correctly pointed out that both D1 and D2 disclose the general teaching that the selected cooling agent, which according to only one among many others preferred embodiments may be incorporated in a cyclodextrin carrier, can be sprayed on the surface of the filter or directly injected into the filter (see D1, column 3, lines 18-26 or column 4, lines 16-26, or D2, page 9, 2nd paragraph from the bottom). This would result, at least in the first case, in disposing the cooling agent also on the surface of the mouthpiece of the smoking article. However, regardless of the argument of the appellant that spraying or injecting the cooling agent would result in the cooling agent being absorbed and dispersed in the whole filter material, rather than being provided and remaining on the outer surface thereof, a smoking article having a cyclodextrin cooling agent disposed on the outer surface of the mouthpiece, as required by claim 1, is not disclosed either in D1 nor in D2 simply because no inclusion complex of the kind specified in claim 1 is disclosed in these documents.

1.4 The examining division argues that the disclosure in D1 and D2 of the use of cyclodextrin as carrier for the cooling agent *"implicitly refers to the formation of a guest-host inclusion complex"*. In the examining division's opinion, this would obviously prompt the person skilled in the art to apply the well known cyclodextrin cooling agent inclusion complex to the smoking article of D1 or D2, in order to provide the required cooling sensation upon contact of the lips and the mouth of the user with the mouthpiece of a smoking

article.

1.5 The Board disagrees for the following reasons:

A cyclodextrin cooling agent inclusion complex is a particular embodiment of the more general concept of the cooling agent provided on a cyclodextrin carrier disclosed in D1 and D2. As correctly pointed out by the appellant, an inclusion complex is a particular host-guest molecular structure which presupposes a particular relationship between the dimension/shape of the "host molecule" (here the cyclodextrin) and the dimension/shape of the guest-molecule (here provided as a solution containing the cooling agent), this structure being obtainable only by a dedicated manufacturing process executed under specific process parameters. Taking this into account, the Board agrees with the appellant that simply mixing a cooling agent with cyclodextrin used as carrier, as could be considered to be suggested by D1 or D2, does not necessarily result in a inclusion complex.

1.6 The Board concurs with the examining division that the choice of a cyclodextrin cooling agent inclusion complex may be regarded as particular selection among others alternative options falling within the general teaching of D1 and D2 which already suggests to provide the cooling agent on a cyclodextrin carrier. However, the question at stake is whether this particular selection would be obvious in view of the technical problem to be solved, as concluded by the examining division, or not, as asserted by the appellant.

1.7 In this respect, the Board finds the reasoning of the appellant convincing:

In the Board's view, the appellant correctly formulates the objective technical problem underlying the contested patent application. This step is crucial for a correct application of the "*problem-solution approach*" which, according to well established Case Law of the Boards of Appeal, has to be used for assessing inventive step.

1.8 The underlying technical problem has to be seen in:

providing a cooling agent for a smoking article which is as stable as possible in order to prevent loss of efficacy during the shelf life of the smoking article and in a way that the cooling sensation can be directly and immediately appreciated by the user when the mouth and the lips contact the mouthpiece, i.e. even before the temperature of the mouthpiece rises.

1.9 In support of the negative assessment of inventive step provided in the contested decision, the examining division refers to document D4 which indeed discloses the use of a cyclodextrin cooling agent inclusion complex as cooling agent. The fact that such an inclusion complex is well known in the relevant technical field of the cooling agents is not contested.

1.10 However, this document is directed to the specific problem of enhancing the cooling sensation of chewing gums which is perceived upon chewing the gum, and this without affecting the gum texture. This problem is solved according to document D4 by dispersing a cyclodextrin cooling agent inclusion complex within the whole gums. Moreover, as correctly observed by the appellant, although document D4 mentions indeed that it is generally known to use cooling agents in a large variety of products, among others in tabac products

(see D4, page 3, lines 11-15), the use of the cyclodextrin cooling agent inclusion complex at stake is disclosed through the whole document only in its application to chewing gums in order to solve the problem relating to the cooling sensation described above (see D4, for example page 1, lines 11 to 25).

1.11 Therefore, it is at least questionable whether the person skilled in the art, starting from D1 or D2 and looking for a cooling agent for a smoking article suitable for solving the technical problem stated under point 1.8 above, would consider at all a document relating to chewing gums and, even in this case, whether he/she would be encouraged to apply the cyclodextrin cooling agent inclusion complex disclosed therein only in combination with chewing gums, to the mouthpiece of a smoking article. Moreover, the Board concurs with the argument of the appellant that, even if the skilled person would consider to transfer the teaching of D4 to the smoking article disclosed in D1 or D2, he/she would be inclined to disperse the cyclodextrin cooling agent inclusion complex within the filter material of the mouthpiece, in conformity with the teaching of D4 to disperse the cooling agent within the whole chewing gums. Therefore, the Board concludes that disposing the cyclodextrin cooling agent inclusion complex on the outer surface of the mouthpiece of a smoking article as required by claim 1 would represent an additional and not obvious step required to arrive to the subject-matter of claim 1.

1.12 In conclusion, in the Board's view, the examining division failed to convincingly prove that the person skilled in the art, starting from D1 or D2 and aiming to solve the technical problem underlying the contested patent application, would arrive to the solution

defined in claim 1 by carrying out a serie of obvious steps. The reasoning of the examining division, and in particular the assertion that the teaching of D4 would obviously prompt the person skilled in the art to the solution according to claim 1, suffers from a hindsight approach in the knowledge of the invention which is however not suitable for correctly assessing inventive step.

2. The Examining Division has not raised objections on patentability based on the other documents cited in the search report and the Board does not see the relevance of these documents to the issue of inventive step. Therefore, the subject-matter of claim 1 does involve an inventive step over the prior art in the meaning of Articles 52(1) and 56 EPC.
- 2.1 The same arguments and conclusions apply "*mutatis mutandis*" to the subject-matter of the independent claims 12 and 13 which require the same new and inventive technical features of claim 1.
3. The main request at stake thus meets all the requirements of the EPC.
4. From the above it follows that an European patent can be granted on the basis of claims 1 to 13 of the auxiliary request underlying the decision under appeal as filed on 6th February 2018 which corresponds to the main request filed in the appeal procedure. Accordingly, since the appellant's main request (see point III above) can be granted, the Board can issue a decision favourable to the appellant without any further procedural steps (such as summoning to oral proceedings requested as an auxiliary measure if the

main request cannot be granted).

- 4.1 However, the Board notes that the description is not adapted to the invention as defined in the independent claims because it contains statements in which features now included in the independent claims are still presented as being optional. This inconsistency leads to doubts concerning the scope of the protection afforded by the claims. The Board considers it appropriate that these minor amendments be carried out in the written procedure before the examining division.

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 with the order to grant an European patent on the basis of claims 1 to 13 according to the auxiliary request underlying the appealed decision as filed on 06th February 2018, and a description to be adapted.

The Registrar:

The Chairman:



A. Vottner

G. Pricolo

Decision electronically authenticated