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**Datasheet for the decision
of 20 January 2022**

Case Number: T 2017/18 - 3.2.01

Application Number: 12812186.0

Publication Number: 2787846

IPC: A24F47/00, A61M15/06

Language of the proceedings: EN

Title of invention:

AN AEROSOL GENERATING DEVICE HAVING AN INTERNAL HEATER

Patent Proprietor:

Philip Morris Products S.A.

Opponent:

JT International S.A.

Headword:

Relevant legal provisions:

EPC Art. 84, 54

RPBA 2020 Art. 13(2)

Keyword:

Claims - clarity - main request (yes)

Novelty - main request (yes)

Amendment after summons - exceptional circumstances (no) -
taken into account (no) - cogent reasons (no)

Decisions cited:

Catchword:



Beschwerdekammern

Boards of Appeal

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Case Number: T 2017/18 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 20 January 2022

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
23 May 2018 concerning maintenance of the
European Patent No. 2787846 in amended form.**

Composition of the Board:

Chairman G. Pricolo
Members: J. J. de Acha González
A. Jimenez

Summary of Facts and Submissions

- I. The appeal of the patent proprietor lies against the interlocutory decision of the Opposition Division maintaining the European patent 2787846 in amended form according to the auxiliary request 4 filed during the oral proceedings before it.

- II. In its decision the Opposition Division considered among others that independent claims 1 and 7 of the auxiliary request 3 were clear (Article 84 EPC) but that their subject-matter lacked novelty in view of CA 2 884 987 A1 (D5) and CN 101 843 368 A (D7, D7b being its English translation).

- III. Oral proceedings before the Board were held on 20 January 2022 by videoconference.

- IV. The appellant (patent proprietor) requested that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of the main request, or alternatively, to maintain the patent in amended form on the basis of one of auxiliary requests 1-6, all filed with the statement of grounds of appeal.

The respondent (opponent) requested that the appeal be dismissed or, in case novelty of the claimed subject-matter is acknowledged, that the case be remitted to the opposition division to decide on inventive step.

V. Claim 1 of the main request reads as follows (feature numbering used by the appellant):

- F1 "An aerosol generating device comprising:
- F2 a storage portion (101) for storing an aerosol-forming substrate, the storage portion having
 - F2.1 an outer housing and
 - F2.3 an internal passageway (103),
 - F2.4 the storage portion forming a reservoir for the aerosol-forming substrate between the outer housing and the internal passageway;
- F3 a vaporizer (105, 105') for heating the aerosol-forming substrate to form an aerosol,
 - F3.1 the vaporizer at least partially inside the internal passageway in the storage portion; and
- F4 a porous interface (107) at least partially lining the internal passageway for conveying the aerosol-forming substrate from the storage portion towards the vaporizer,
- F5 wherein the aerosol generating device is electrically operated and
 - F5.1 the vaporizer (105, 105') of the aerosol generating device comprises an electric heater for heating the aerosol-forming substrate, wherein the electric heater comprises:
 - F5.2 a first electrical connection portion (301, 401);
 - F5.3 a second electrical connection portion (305, 405);
 - and
 - F5.4 a heating filament (309, 413) between the first and second electrical connection portions,
 - F6 wherein the cylindrical shape of the first (301, 401) and second (305, 405) electrical connection portions and the heating filament (309, 413) define a cylindrical bore, and wherein an air flow route is defined through the cylindrical bore."

Claim 7 reads as follows:

"A cartridge comprising:

a storage portion (101) for storing an aerosol-forming substrate, the storage portion having an outer housing and an internal passageway (103), the storage portion forming a reservoir for the aerosol-forming substrate between the outer housing and the internal passageway;

a vaporizer (105, 105') for heating the aerosol-forming substrate to form an aerosol, the vaporizer at least partially inside the internal passageway in the storage portion; and

a porous interface (107) at least partially lining the internal passageway for conveying the aerosol-forming substrate from the storage portion towards the vaporizer,

wherein the vaporizer (105, 105') comprises an electric heater for heating the aerosol-forming substrate, wherein the electric heater comprises:

a first electrical connection portion (301, 401);

a second electrical connection portion (305, 405);

and

a heating filament (309, 413) between the first and second electrical connection portions,

wherein the cylindrical shape of the first (301, 401) and second (305, 405) electrical connection portions and the heating filament (309, 413) define a cylindrical bore, and wherein an air flow route is defined through the cylindrical bore."

Reasons for the Decision

Main request

1. It is undisputed that the appellant's main request corresponds essentially to the modified auxiliary request 1A filed during opposition proceedings and renamed as auxiliary request 3 in the decision under appeal (see point 4.3.3 of the minutes of the oral proceedings before the Opposition Division).
In fact, independent claim 1 of the main request is identical to claim 1 of the auxiliary request 3 underlying the decision under appeal and independent claim 7 only differs from claim 7 of the auxiliary request 3 underlying the decision under appeal by the omission of the reference to the aerosol generating device. In fact, the admissibility of the main request was never contested.

2. *Clarity - Article 84 EPC*
 - 2.1 Claims 1 and 7 are clear. In particular, the wording of the feature F6, that these claims have in common, is clear, namely:

"the cylindrical shape of the first and second electrical connection portion and the heating filament define a cylindrical bore and wherein an air flow route is defined through the cylindrical bore."

 - 2.2 The respondent admitted that the claims are to be construed by a mind willing to understand but contested that this meant that broad terms should be interpreted more narrowly. The same applied for ambiguous formulations that encompassed a variety of embodiments.

In this regard, the feature F6 included two clarity issues. Firstly, out of the feature's wording it was not clear whether the cylindrical shape referred to the first and second connections portions only or also to the heating element. Secondly, it was not possible to ascertain the limit of the contribution of each of the three elements to the commonly defined cylindrical bore, such that a straight connection wire, for instance, would also contribute to the definition of the bore. Such boundaries were not defined in the independent claims and consequently an unclarity was present.

- 2.3 The Board shares the view of the appellant that feature F6 is clear to the skilled person with a mind willing to understand and not desirous of misunderstanding. The wording of the feature can only be reasonably read as defining the cylindrical bore as being formed by the cylindrical shape of the first and second electrical connection portions and by the cylindrical shape of the heating filament. These elements (the first and second electrical portions as well as the heating element), exhibiting each a cylindrical shape, define thus together a hollow cylinder delimiting the cylindrical bore through which air can flow. It follows that the cylindrical shape of each of these elements represent portions of said hollow cylinder. However, said portions need not be each in the form of a complete cylinder but must define the shape of a cylinder (such as e.g. a cylinder with an opening along its axis, which has a cylindrical shape but does not form a whole cylinder). This was also the view of the Opposition Division in its decision (see point 14.2 of the contested decision).
- Further, all three portions contribute to the definition of the bore and not a subset of them.

Regarding, the issue of the undefined boundaries, the Board considers that the skilled person can recognise when any of the first and second connection portions and the heating element exhibit each a cylindrical shape defining the cylindrical bore. Such shapes should be a portion of the hollow cylinder defining the cylindrical bore that provide alone sufficiently information to define by way of extension the hollow cylinder and consequently the bore (such as in the above example of a cylinder with an opening along its axis). Accordingly, a straight wire does not fall under a cylindrical shape since it cannot alone and by way of extension define a hollow cylinder, i.e. a cylindrical bore.

3. *Novelty - Article 54 EPC*

3.1 The subject-matter of independent claims 1 and 7 is new over the disclosure of D5 and D7 (D7b).

3.2 Under dispute is whether D5 and D7 disclose feature F6 present in both claims 1 and 7.

3.3 The respondent alleged that the spiral heaters of D5 (heater 5) and D7 (heater 6) alone fell under feature F6. The first and last winding of these spiral heaters (coils) could be seen as the first and second electrical connection portions respectively, since the wording of the independent claims did not exclude the connection portions from heating up and being formed as a wire. The heating filament was then considered to be the turns of the spiral heating filament between the first and last winding.

Further, according to another line of argument based on a much broader interpretation of feature F6 and in line with the view of the Opposition Division (see point

14.4.3 of the impugned decision), the respondent argued that the terminal parts of the coil (5 in D5 and 6 in D7), which connected the coil electrically to the power source, could be regarded as the first and second electrical connection portions. These terminal parts together with the coil contributed to form the cylindrical bore through which an air flow route was created.

The Board does not agree and shares the view of the appellant. According to the claims there are at least three components building up the electric heater: the first and second electrical connection portions and the heating filament. These are formed by three separate elements which are electrically connected and fulfill different functions, namely supplying electrical power and heating. Accordingly, from a technical point of view the heating element does not include the first and second electrical connection portions as defined in feature F6. It is clear to the skilled person that in D5 and D7 the heating filament corresponds to the whole heating coils 5 and 6 respectively and not to a portion of them. Anything between the coils and the electrical power source could be seen as the electrical connection portions, which are intended to provide the electrical power needed for heating coils with negligible consumption, i.e. without heating up, but not as parts of the spirally formed heating filament.

The Board shares the view of the appellant that the respondent was trying to misconstrue the wording of the claims in order to be able to read it in the devices disclosed in D5 and D7 by artificially splitting-up the coils into different parts with different technical functions.

As regards the argument of considering the punctual terminal parts of the coils to be the first and second

electrical connection portions, such connection points do not have a cylindrical shape as explained above under point 1.3.

- 3.4 In yet another line of argument over D7, the Opposition Division in its decision and the respondent in the reply also considered the electrodes 32 and 31 (see figure 2) to be the first and second electrical connection portions and the heater the coil 6.

This line, however, fails since the outer electrode 32, which is concentric with the inner electrode 31, does not contribute to defining the cylindrical bore as required by feature F6 (see above under point 1.3). The cylindrical bore is only defined by the electrode 31 and the heating coil 6.

- 3.5 It follows that the subject-matter of claims 1 and 7 differs from the disclosures of D5 and D7 at least on account of feature F6. The subject-matter of claims 1 and 7 of the main request is consequently new.

4. *Inventive step - admissibility*

- 4.1 The inventive step objections of the respondent are not taken into account under Article 13(2) RPBA 2020 (Rules of Procedure of the Boards of Appeal OJ EPO 2019, A63).

- 4.2 With letter of 20 December 2021, posterior to the notification of the summons to oral proceedings before the Board, the respondent submitted for the first time in the appeal proceedings inventive step objections for the subject-matter of claim 1 starting from D5 and D7 as the closest state of the art.

- 4.3 According to Article 13(2) RPBA 2020 any amendment to a party's appeal case made after notification of a summons to oral proceedings shall, in principle, not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.
- 4.4 The respondent argued that these inventive step attacks should be admitted because they were based on the same facts and evidence as for novelty, and because it would be self-contradicting to submit, with the reply to the statement of grounds of appeal, arguments on inventive step which were based on the same documents used for novelty. Further, the admissibility was justified in view of the surprising interpretation of feature F6 which was never addressed before.
- 4.5 The Board disagrees and follows the view of the appellant. Firstly, the Board cannot see why the respondent could not have formulated these inventive step attacks at the latest with the reply to the statement of grounds of appeal of the appellant. The interpretation of feature F6 above corresponds to that of the appellant submitted in the statement of grounds of appeal and therefore could not be surprising for the respondent. Moreover, the appellant argued in the statement of grounds of appeal that the subject-matter of claim 1 involved an inventive step starting from D5 or D7 as the closest prior art considering the difference to be only feature F6. Accordingly, the respondent could have submitted arguments on inventive step already with the reply to the statement of grounds of appeal, for the eventuality that the Board were to follow the appellant's view on the interpretation of feature F6 and on inventive step.

Consequently, the reasons for admitting the late filed inventive step objections do not qualify as cogent reasons that justify the presence of exceptional circumstances as required under Article 13(2) RPBA 2020.

5. Accordingly, independent claims 1 and 7 together with dependent claims 2 to 6 and 8 to 12 and claim 13, which includes all the features of claim 1 or claim 7, the description as amended at the oral proceedings before the Board, for which no objections were raised by the respondent, and the figures of the patent as granted, form a suitable basis for the maintenance of the patent in amended form.

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 the patent in amended form in the following version:
 - Claims 1-13 of the main request filed with the statement of grounds of appeal,
 - Description pages 2-10 as filed during the oral proceedings before the Board with amended paragraphs 5, 7, 11, 23 and 24 as filed during the oral proceedings before the Board,
 - Figures 1-4 of the patent specification.

The Registrar:

The Chairman:



A. Voyé

G. Pricolo

Decision electronically authenticated