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**Datasheet for the decision
of 18 March 2021**

Case Number: T 1807/19 - 3.2.01

Application Number: 08861079.5

Publication Number: 2229827

IPC: A24D1/02, A24D3/02, A24D3/16,
D21H27/00

Language of the proceedings: EN

Title of invention:
CIGARETTE FILTER, AND FILTER CIGARETTE

Patent Proprietor:
Japan Tobacco Inc.

Opponent:
Bungartz Christophersen Partnerschaft
mbB Patentanwälte

Headword:

Relevant legal provisions:
EPC Art. 100(b), 100(a), 123(1), 56, 84, 123(2)
RPBA 2020 Art. 13(2)

Keyword:

Grounds for opposition - insufficiency of disclosure (no) -
lack of inventive step (yes)

Main request' - Amendment after summons - taken into account
(no)

Auxiliary request I - Amendments convergent- taken into
account (yes)

Auxiliary request I - Clarity and added subject-matter
objections- Amendment after summons - taken into account (no)

Auxiliary request I - Inventive step objection - No amendment
to appellant's appeal case

Auxiliary request I - lack of inventive step (no)

Decisions cited:

T 0626/14, T 0464/05

Catchword:



Beschwerdekammern
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Case Number: T 1807/19 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 18 March 2021

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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted on 24 April 2019 rejecting the opposition filed against European patent No. 2229827 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	G. Pricolo
Members:	S. Mangin
	O. Loizou

Summary of Facts and Submissions

- I. The appeal was filed by the appellant (opponent) against the decision of the opposition division to reject the opposition filed against the patent in suit (hereinafter "the patent").
- II. The opposition division held that:
(1) the subject-matter of the claims as granted was novel and involved an inventive step in view of D1, D2, D14 and D15
and
(2) the patent disclosed the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.
- III. Oral proceedings were held before the Board on 18 March 2021.
- IV. The appellant (opponent) requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed (main request) or in the alternative that the patent be maintained in amended form on the basis of the main request' filed with letter dated 11 February 2021 or one of the auxiliary requests I to V filed with its reply, or the auxiliary request V' filed with the letter dated 11 February 2021, or the auxiliary request VI filed with the reply or the auxiliary request VI' also filed with letter dated 11 February 2021.

V. Claim 1 of the main request (with the feature numbering used in the appealed decision) reads as follows:

F1 A cigarette filter comprising:

F2 a filter plug comprising

F2.1 a cylindrical body of a filter plug wrapper which is cylindrically shaped and

F2.2 a filter material disposed in the cylindrical body,

characterized in that

F3 the filter plug wrapper is formed of a high-rigidity and high-permeability paper

F3.1 longitudinal rigidity of which is 30 or higher as measured in accordance with JIS P8143 and

F3.2 air permeability of which is 1000 CORESTA units or greater.

VI. Claim 1 of the main request' is based on claim 1 of the main request with the additional feature of granted claim 9: "wherein the filter material does not contain any hardness increasing agent"

VII. Claim 1 of auxiliary request I reads as follows:

A cigarette filter (210) comprising:

a plurality of filter plugs (220, 230) comprising a most upstream filter plug (230) and a most downstream filter plug (230), each comprising a cylindrical body (222, 232) of a filter plug wrapper (221, 231) which is cylindrically shaped, and a filter material (223, 233) disposed in the cylindrical body (222, 232), and a shaping paper (240) configured to wrap the circumference of the plurality of filter plugs (220, 230) and join the plurality of filter plugs (220, 230) to each other,

wherein the filter plug wrapper (221, 231) of at least one of the plurality of filter plugs (220, 230) is

formed of a high-rigidity and high-permeability paper, longitudinal rigidity of which is 30 or higher as measured in accordance with JIS P8143 and air permeability of which is 1000 CORESTA units or greater.

VIII. In the present decision, reference is made to the following documents:

D1: Catalogue "Porowrap® - Porous Plug Wrap Papers" published on February 1, 2002

D4: Product description from SWM PDM Industries dated 26 February 2016.

D14: KR 20060031173 A published on April 12, 2006

D14EN: English translation (machine translation) of D14

D15: US 5,107,866

D17: Fax sheet of 30 January 1995 "PPW Extra Stiff"

Reasons for the Decision

1. Main request

1.1 Sufficiency of disclosure - Article 100(b) EPC

The ground for opposition under Article 100(b) EPC does not prejudice the maintenance of the patent as granted.

1.2 The Appellant is of the opinion that claim 1 does not specify whether the rigidity is to be measured in the machine direction (MD) or in the cross direction (CD) of the paper. Very different results are obtained along the MD and the CD of the paper such that the invention according to claim 1 is insufficiently disclosed. The appellant refers to D4, D17 and the table submitted on page 7 with the notice of opposition, disclosing papers having different stiffness / rigidity in the MD and CD to exemplify its statement.

Furthermore, the appellant contests that the term "longitudinal" refers to the longitudinal axis of the cigarette filter. In the appellant's opinion, in view of the wording of claim 1 and of the patent specification the term "longitudinal" refers to the paper.

Finally, the appellant refers to decision T 626/14 and explains that the issue concerning the parameter "longitudinal rigidity" amounts to a problem of insufficiency of disclosure and not of clarity.

- 1.3 While the Board agrees that the term "longitudinal" cannot be associated to the longitudinal axis of the filter plug in view of the wording of claim 1 and of the patent specification (see table 1), the fact that claim 1 does not specify whether the measurement of the longitudinal rigidity is made in the machine direction or in the cross direction of the paper does not render the invention insufficiently disclosed.

As claim 1 does not define the direction of the paper in which the longitudinal rigidity should be measured, a paper having a longitudinal rigidity of 30 or higher in any one of the two directions, machine or cross, falls under the scope of claim 1.

Decision T 626/14 concerns the thickness measurement of an absorbent body and refers to T 464/05 concerning the mass vapor transmission rate (MVTR) measurement of a side panel. In both cases no standard test methods were used to measure the parameters and test methods for measuring the parameters in a reliable and consistent manner were not detailed in the patent, which led to an

undue burden for the skilled person trying to reproduce the invention.

In the present case the longitudinal rigidity is measured according to JIS P8143, a standardised method for measuring the stiffness of paper by self-weight bending. The fact that claim 1 does not specify whether the longitudinal rigidity is measured along the machine or along the cross direction does not amount to an undue burden for the skilled person trying to reproduce the invention. The skilled person knows that the longitudinal rigidity is usually higher in the machine direction than in the cross direction. It is thus sufficient for the skilled person to measure the longitudinal rigidity of the paper in the longitudinal direction to see whether the value is of 30 or higher to ensure that the feature in question of claim 1 is fulfilled.

1.4 Inventive step - Articles 100(a) and 56 EPC

The subject-matter of claim 1 does not involve an inventive step in view of D1 and in view of D14.

1.4.1 The subject-matter of claim 1 undisputedly differs from D1 and D14 in that the longitudinal rigidity of the filter plug wrapper is 30 or higher as measured in accordance with JIS P8143 (feature F3.1 of claim 1). In D1 and D14 there is no disclosure of measurements of the longitudinal rigidity of the papers.

The filter plug wrappers of D1 and D14 are described as stiff. On page 24 of D1, the product description qualifies the grade as "PPW 115 STIFF" and D14 deals with the same problem as the patent in suit, namely to provide a cigarette filter that imparts a proper

hardness without plasticizer (D14EN, abstract and page 2 lines 44-46).

- 1.4.2 During oral proceedings the respondent submitted that the objective technical problem as formulated initially based on paragraph [0012] of the patent: *"to provide a cigarette filter that can achieve satisfactory hardness and ventilation ratio even when the filter plug wrapper and shaping paper are not furnished with any ventilation hole and even when any hardness increasing agent is not used therein"*, was no longer correct as it pointed to the solution. The respondent redefined the objective technical problem such as to provide a filter which leads to an increased user benefit in terms of how the cigarette feels in particular for the lips, the fingers and the taste.
- 1.4.3 The Board considers that none of these two definitions of the problem to be solved is correct. The objective technical problem should be formulated on the basis of the technical difference(s) identified over the closest prior art and should be derivable from the disclosure of the patent. In view of the difference (the longitudinal rigidity of the paper of 30 or higher) and paragraph [0012] of the patent, the Board concurs with the objective technical problem formulated by the appellant, that is to provide a cigarette filter having a suitable stiffness for the consumer.
- 1.4.4 It is known to the skilled person that the longitudinal rigidity of the filter plug wrapper will increase as the thickness and/or the basis weight of the filter plug wrapper increase and that the air permeability of the filter plug wrapper will decrease as its thickness and/or basis weight increase. There is no synergetic effect between the longitudinal rigidity and the air

permeability of the paper. There is only a compromise to be set between the air permeability and the longitudinal rigidity of the filter plug wrapper.

The filter plug wrapper "PPW 115 STIFF" on page 24 of D1 has the following properties:

- a basis weight of 44 g/m²
- a thickness of 137 micrometers
- an air permeability of 11500 CORESTA unit
- a longitudinal rigidity according to JIS P8143 which is unknown.

The filter plug wrapper S4 according to the invention in table 1 of the patent has the following properties:

- a basis weight of 48 g/m²
- a thickness of 113 micrometers
- an air permeability of 12670 CORESTA unit
- a longitudinal rigidity according to JIS P8143 of 60.

Comparing the two above papers, they have similar basis weight and thickness resulting in a similar air permeability. One would expect the longitudinal rigidity to be similar as well.

If nevertheless the resulting longitudinal rigidity of the "PPW 115 STIFF" wrapper is lower than 30, then it would be obvious for the skilled person to increase the basis weight and/or the thickness of the wrapper to increase the longitudinal rigidity to a value above 30. It would inevitably decrease the air permeability but as the air permeability of the filter plug wrapper "PPW 115 STIFF" is well above the lower limit defined in claim 1, it would be a straightforward measure for the skilled person to adjust the basis weight and the thickness in in such a way as to arrive at a filter plug wrapper for which both parameters defined in claim 1 are met.

- 1.4.5 The above reasoning applies to the filter plug wrapper of D14, which has the following properties:
- a permeability of 3000-33000 cu (CORESTA unit)
 - a basis weight of 50-250 g/m²
 - a thickness : 70-300 micrometers
 - a longitudinal rigidity according to JIS P8143 which is unknown.

It is part of the normal activities of a skilled person to optimise the characteristics of a product, and in the present case to optimise the basis weight of the filter plug wrapper in such a way as to reach an acceptable compromise between the air permeability and the longitudinal rigidity, which are contingent in opposing ways on the basis weight, in order to solve the above defined objective technical problem (see case law of the Boards of Appeal I.D.9.16, 9th Edition, July 2019).

Moreover, in the present case, no unknown surprising effect can be recognised but only predictable ones. Therefore the selection of the air permeability above 1000 CORESTA unit and the longitudinal rigidity above 30 can only be regarded as an arbitrary selection within a normal optimisation process and as such it does not involve an inventive step.

- 1.4.6 The respondent argues that there is an indefinite number of combinations of parameters that influence the stiffness of the paper such that it amounts to an undue burden for the skilled person to adjust these parameters to arrive at a longitudinal rigidity of 30 or higher. The respondent also explains that there is no correlation between the basis weight and the longitudinal rigidity of the paper and refers to the

paper PPW 115 STIFF on page 24 of D1 and paper S4 in table 1 of the patent.

- 1.5 The Board however agrees with the appellant: while many parameters have an influence on the longitudinal rigidity, the basis weight of the paper is an obvious parameter to adjust while keeping the composition of the paper unchanged.

Comparing the paper PPW 115 STIFF on page 24 of D1 with paper S4 in table 1 of the patent to conclude that there is no correlation between the thickness and the basis weight of the paper with the stiffness is not correct. The respondent does not take into consideration the fact that the composition and the fiber size of the paper PPW 115 STIFF and the sample S4 may be different. Starting from the paper PPW 115 STIFF and increasing the thickness and/or the basis weight of the paper, without changing the composition of the paper will lead to an increased longitudinal rigidity of the paper.

2. Admissibility of the main request' filed with letter of 11 February 2021 - Article 13(2) RPBA 2020

- 2.1 Under 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.

The main request' has been amended such that claim 1 is a combination of granted claims 1 and 9, defining the absence of a hardness increasing agent in the filter material.

2.2 The respondent is of the opinion that claim 1 of the main request has always been understood as comprising the features of claim 9, and the issue that these features were not part of claim 1 was raised for the first time in the second paragraph of section 4.2 in the Board's notification of 9 November 2020. According to the respondent, the main request' thus merely serves to clarify the subject-matter of claim 1 and should under these circumstances be admitted into the proceedings.

2.3 While the Board noted in its notification that claim 1 neither defined the absence of ventilation holes nor the absence of hardness increasing agent, this statement could not come as a surprise to the respondent. It was merely a finding based on the reading of claim 1 of the main request. Dependent claim 9 as granted defines the absence of any hardness increasing agent in the filter material such that the wording of granted claim 1 encompasses without any ambiguity both a cigarette filter with and a cigarette filter without a hardness increasing agent. The restriction of claim 1 to a cigarette filter not containing any hardness increasing agent is thus an amendment consisting in limiting the subject-matter of granted claim 1 and not just a clarification in respect of a feature which was anyway implicitly present in granted claim 1 as alleged by the respondent.

Therefore, in the present case, the Board considers that there are no exceptional circumstances justified by cogent reasons provided by the respondent that would justify taking into account the main request' submitted after notification of the summons to oral proceedings dated 3 September 2020.

3. Admissibility of auxiliary request I

Auxiliary request I submitted with the reply to the statement of grounds of appeal was already filed with letter of 16 October 2018 as auxiliary request I in opposition proceedings. This request was not considered by the opposition division as it maintained the patent as granted (rejected the opposition).

3.1 The appellant is of the opinion that auxiliary request I should not be admitted into the appeal proceedings. The appellant argues that the main request' submitted by the respondent with letter of 11 February 2021 changes the focus of the claimed invention and that consequently auxiliary request I is not convergent with the main request and main request' and should therefore not be admitted in the proceedings.

3.2 While the Board notes that the admissibility of amendments may depend, among other things, on whether the amended claims converge with or diverge from the subject-matter previously claimed, the Board does not recognise a problem of convergence in the case at hand.

In the present case convergency of auxiliary request I has to be assessed with respect to the main request since the later filed main request' is not taken into account as explained above. Claim 1 of auxiliary request I is a combination of granted claims 1 and 3, limiting the scope of granted claim 1. Accordingly auxiliary request I converges with the main request.

4. Admissibility of the objections made by the appellant concerning auxiliary request I - Article 13(2) RPBA 2020.

The appellant submitted with their letter of 18 February 2021 an objection of lack of inventive step in view of D14 against the subject-matter of claim 1 of auxiliary request I and submitted during oral proceedings objections under Articles 84 and 123(2) EPC against dependent claim 2.

- 4.1 The respondent is of the opinion that all these objections should not be taken into account as they represent an amendment to the appellant's case made after notification of a summons to oral proceedings without there being any exceptional circumstances justified with cogent reasons.

- 4.2 The Board considers that the objection of lack of inventive step in view of D14 does not constitute an amendment to the appellant's case as this objection remains within the framework of its case put forward in appeal. This objection regarding inventive step is essentially the same as the inventive step objection raised against claim 1 of the main request which is discussed above, as the appellant considers that there is still only one and the same distinguishing feature over D14 (see point 5.2 herein below). Consequently Article 13(2) RPBA 2020 does not apply.

In contrast, the Board considers that the objections under Articles 84 and 123(2) EPC raised for the first time during oral proceedings constitute an amendment to the appellant's case. Furthermore, the appellant did not justify why these objections were only filed at that stage of the proceedings, in particular having

regard to the fact that auxiliary request I had been filed already during opposition proceedings and was resubmitted in appeal with the reply to the statement of grounds of appeal. There are thus no exceptional circumstances justified with cogent reasons. Therefore the Board does not take into account the objections under Articles 84 and 123(2) EPC against dependent claim 2.

5. Inventive step of auxiliary request I - Article 56 EPC

The subject-matter of claim 1 of auxiliary request I involves an inventive step in view of D14.

- 5.1 The subject-matter of claim 1 differs from D14 in that:
- (a) - each filter plug comprises a cylindrical body of a filter plug wrapper,
 - (b) - wherein the filter plug wrapper of at least one of the plurality of filter plugs is formed of a high-rigidity and high-permeability paper, longitudinal rigidity of which is 30 or higher measured in accordance with JIS P8143.

The fact that each filter plug comprises a cylindrical body of a filter plug wrapper enables to adjust the properties in particular the rigidity of the filter plug along its longitudinal axis.

The objective technical problem to be solved by means of feature (a) can thus be regarded as to provide a filter with variable rigidity along the longitudinal axis of the filter plug (see e.g. paragraph [0037] of the patent in suit).

The filter in D14 comprises a single filter plug wrapper 14 wrapping the filter plugs as depicted on

figures 1-3. D14 neither discloses nor suggests the use of several filter plug wrappers to adjust the longitudinal rigidity over the length of the filter plug. The skilled person has thus no incentive to modify the filter plug of D14.

5.2 The appellant is of the opinion that the wording of claim 1 does not exclude that a single filter plug wrapper is provided for all filter plugs. The term "each" in claim 1 merely means that each filter plug is surrounded by a wrapper and not that separate wrappers have to be provided for each filter plug. D14 discloses a filter plug wrapper 14 wrapping each filter plug. The appellant thus identifies only one distinguishing feature between the subject-matter of claim 1 and D14, namely the longitudinal rigidity of the wrapper and concludes that the inventive step reasoning for the subject-matter of claim 1 of the main request applies to the auxiliary request 1.

5.3 The Board disagrees with the interpretation of claim 1 made by the appellant. In claim 1, "a plurality of filter plugs (...) each comprising a cylindrical body of a filter plug wrapper (...)" means that a distinct filter plug wrapper is associated to each filter plug. Since several filter plugs are defined in claim 1, several filter plug wrappers are provided. Also, the above wording concerning the filter plug wrapper is to be read in the whole context of the claim which also refers to the shaping paper being *"configured to wrap the circumference of the plurality of filter plugs and join the plurality of filter plugs to each other"*. Should the filter plug wrapper be made of a single wrapper wrapping the filter plugs, then it would be the filter plug wrapper which would have the

function to join the filter plugs and not the shaping paper.

Furthermore claim 1 defines that *"the filter plug wrapper of at least one of the plurality of filter plugs is formed of a high-rigidity and high-permeability paper"* emphasising the plurality of filter plug wrappers.

6. It follows from the above that the claims according to auxiliary request I form a suitable basis for the maintenance of the patent in amended form.

The description of the patent as granted however requires amendment to bring it into conformity with the limitations introduced in claim 1. The Board decided to make use of its discretion to remit the case to the opposition division for the description to be adapted (Article 111(1) EPC). None of the parties objected to such remittal.

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 maintain the patent in amended form on the basis of the claims of auxiliary request I as filed with the reply and a description to be adapted thereto.

The Registrar:

The Chairman:



D. Magliano

G. Pricolo

Decision electronically authenticated