Unified Patent Court
Einheitliches Patentgericht
Juridiction unifiée du brevet

UPC Court of Appeal
UPC_CoA_71/2025

Decision

of the Court of Appeal of the Unified Patent Court
29 December 2025
regarding EP 3 456 214 (revocation)

HEADNOTES

- If an Application to amend the patent is lodged, the claimant shall lodge a Defence to the Application to amend the patent (R. 43.3 RoP). Where appropriate in view of the proposed amendments, the Defence to the Application to amend the patent may contain submissions in accordance with R. 44(d) to (h) RoP and alternative non-infringement submissions (R. 32.2 RoP).

- The Defence to the Application to amend the patent does not provide the claimant with an opportunity to introduce new grounds of invalidity in relation to the patent as granted, such as new prior art considered either novelty destroying or convincing starting points for the assessment of lack of inventive step, unless leave to amend the case is granted (R. 263 RoP). This means that a distinction must be made between the grounds, facts and evidence relied on in relation to the patent as granted and those relied on in relation to the proposed amendments.

- Under the front-loaded procedural system of the UPC, the parties are required to set out their full case as early as possible (RoP, preamble at 7). Nevertheless, specific new arguments may be admitted into the proceedings in consideration of specific circumstances of the case (CoA 21 November 2024, UPC_CoA_456/2024, OrthoApnea). The provisions must also be interpreted in the light of the principle of proportionality (RoP, preamble at 3). R. 44 RoP requires an “indication” of the facts relied on which contradicts an overly strict application.

- Furthermore, fairness (RoP, preamble at 5) in the application of the adversarial principle may require that the claimant in an action for revocation be allowed to introduce new facts and evidence in response to the Statement of defence. This may include evidence to prove a point already made by the claimant on the common general knowledge of the skilled person, or to rebut evidence brought forward by the defendant on this point.

KEYWORDS

Application to amend the patent (R. 43.3 RoP), new grounds of invalidity, new evidence, inventive step, common general knowledge

APPELLANT (AND DEFENDANT BEFORE THE COURT OF FIRST INSTANCE)

VMR Products LLC, San Francisco, USA
(hereinafter 'VMR Products')

represented by: European Patent Attorney Bernhard Thum, Thum & Partner, Munich, Germany, co-represented by attorney-at-law Dr. Tobias Wuttke, Bardehle Pagenberg, Munich, Germany, and other representatives from that firm

RESPONDENT (AND CLAIMANT BEFORE THE COURT OF FIRST INSTANCE)

NJOY Netherlands B.V., Amsterdam, The Netherlands
(hereinafter 'NJOY')

represented by: attorney-at-law Dr Henrik Holzapfel, McDermott Will & Emery, Düsseldorf, Germany

PATENT AT ISSUE

EP 3 456 214

PANEL AND DECIDING JUDGES

This decision has been adopted by Panel 2

Rian Kalden, presiding judge and legally qualified judge
Ingeborg Simonsson, legally qualified judge and judge-rapporteur
Patricia Rombach, legally qualified judge
Wiem Samoud, technically qualified judge
Andrea Scilletta, technically qualified judge

IMPUGNED DECISION OF THE COURT OF FIRST INSTANCE

Central Division Paris, 27 November 2024, revocation action, UPC_CFI_308/2023

LANGUAGE OF THE PROCEEDINGS

English

ORAL HEARING

3 November 2025

FACTS OF THE CASE

The parties

1. VMR Products is a manufacturer of e-vapor products. NJOY is a supplier of e-vapor products, competing with VMR Products.

The patent at issue

2. VMR Products is the proprietor of EP 3 456 214, "Vaporizer" (the patent at issue or the patent). The invention relates to the field of vaporizers, also referred to as electronic cigarettes. The patent application was filed on 14 March 2014 and claims a priority of two patent applications of 12 November 2013 (US201361903344 P) and 10 February 2014 (US 201461937851 P); the mention of the grant of the patent was published on 18 November 2020. It is validated and in force in the following UPC territories: Austria, Belgium, Finland, France, Germany, Italy and The Netherlands.

3. The patent's independent claim 1 reads:

A vaporizer comprising:

- a shell (106) having a battery segment (102) and a cartomizer receiving segment (104), the cartomizer receiving segment defining a chamber (108) having an insertion end distal from the battery segment and a base end proximate to the battery segment;
- a cartomizer (200) insertable into the chamber at the insertion end, the cartomizer including:

    - a cartomizer body (208) dimensioned to hold a vaporizable substance,
    - a heating element (214) provided within or proximate to the cartomizer body operable to heat the vaporizable substance,
    - cartomizer electrical contacts (218) provided on an exterior of the cartomizer,
    - cartomizer electrical circuitry operable to direct an electrical current between the cartomizer electrical contacts and the heating element, and
    - a mouthpiece (220) in fluid communication with the cartomizer body, the mouthpiece extending from the insertion end of the chamber when the cartomizer is inserted in the chamber,

    wherein the heating element is activated by the electrical current and is operable to heat the vaporizable substance to a vaporization temperature;

    - a battery (110) housed within the battery segment;
    - battery electrical contacts provided be-tween the base end of the chamber and the battery segment, the battery electrical contacts positioned to contact the cartomizer electrical contacts when the cartomizer is inserted in the chamber; and
    - battery electrical circuitry housed within the battery segment and operable to direct an electrical current between the battery, the battery electrical contacts, the cartomizer electrical contacts, and the heating element, when the cartomizer is inserted into the chamber,

    the shell including a window (130) provided at the cartomizer receiving segment (104) so that a portion of the chamber is visible from outside the shell.

4. Claims 2 to 14 are dependent claims (see further below).

The opposition procedure

5. The patent was opposed, and the Opposition Division of the European Patent Office confirmed the maintenance of the patent with amendments. As a result, the patent was republished on 22 November 2023 with the mention of the opposition decision.

The first instance procedure and the impugned decision

6. NJOY brought a revocation action against VMR Products before the Paris Central Division, alleging that the patent is invalid for lack of inventive step.

7. VMR Products defended the patent as granted and, in the alternative, applied to amend it.

8. The Central Division revoked the patent at issue in its entirety for lack of inventive step with regard to the territories of the Contracting Member States for which the patent had effect at the date of the filing of the revocation action. None of the auxiliary requests were granted. VMR Products was ordered to bear the costs of the proceedings.

9. VMR Products appealed.

INDICATION OF THE PARTIES' REQUESTS

10. VMR Products requests that
    i. the impugned decision be set aside;
    ii. the patent at issue be maintained:
        a. as granted;
        b. in the alternative based on one of the Auxiliary Requests I to X;
        c. further in the alternative in parts based on the independent validity of one or more of its dependent claims in combination with independent claim 1 as granted;
    iii. the English translation (MWE 11a) of Korean patent application KR 10 2012 007 4625 (Exhibit MWE 11; "Lee") provided by NJOY to the proceedings be rejected; and
    iv. NJOY bear the costs of the proceedings.

11. NJOY requests that the appeal be dismissed; that the impugned decision be confirmed and that VMR Products bear the costs of these appeal proceedings.

GROUNDS FOR THE DECISION

Procedural objections; the new translation of Lee

13. As regards the request not to admit the English translation (MWE 11a) of Lee, VMR Products submits that the translation of Lee para. [0005] provided by NJOY is incorrect and at best inaccurate. VMR Products requests that MWE 11a be rejected.

14. According to NJOY, VMR Product's objection against the translation of Lee is inadmissible because the objection was late filed, in the appeal instance, R. 222.2 RoP. Also, the objections are factually unfounded because there is no actual translation mistake. Furthermore, the objections are irrelevant.

15. The Court of Appeal notes that there was never a request made at first instance that the translation of Lee provided by NJOY be dismissed. VMR Products makes this request on appeal, after having seen how Lee was understood by the Central Division. In the first place, even if this late submission made by VMR Products would be accepted, it could not lead to inadmissibility of the NJOY's translation. If, hypothetically, the translation would be inaccurate, this should not lead to inadmissibility, but (if it was substantiated) to attributing a low or zero value as evidence to MWE 11a.

16. With the Statement of grounds of appeal VMR Products is in addition seeking to introduce new evidence on appeal, in the form of its own (new) translations of Lee (TP-12 and 13) and a machine translation.

17. These translations are late filed and shall be disregarded. Given the importance of Lee for the first instance proceedings, VMR Products should have checked the accuracy of the translation at an early stage and submitted new translations to the Central Division.

18. The dismissal does not lead to a different outcome as will be seen from the further grounds for this decision.

Admissibility of expert report and evidence

19. At first instance, in its Reply to the Statement of defence, NJOY relied on several new pieces of prior art, not only in relation to the application for amendments of the claims, but also in relation to claim 1 as granted. In a R. 105-order issued on 12 June 2024, the judge-rapporteur ordered that grounds of revocation not asserted in the Statement for revocation as well as facts and/or evidence that was submitted after the first writ and did not directly respond to arguments raised by the opposing party, should be excluded from consideration.

20. In the decision on the merits, the panel considered as admissible the declaration released by Mr. Mohammad Hajaligol (MWE 17) and the documents referred to in that statement (MWE 18 to MWE 40 and MWE 42, introduced by NJOY) – given that they contain arguments regarding the common general knowledge and the claim construction which are intended to contrast and react to the arguments raised by VMR Products in its defence to revocation and the evidence (Mr. Ramon Alarcon's opinion, TP-2) filed in support of these latter arguments. The admissibility of these documents also extended to arguments that, while not constituting a direct response to the VMR Product's arguments, are closely related to them.

21. It was added that those portions of NJOY's response that do not address the arguments in the reply – in particular, section B), C) and D) of the writ –, as well as Exhibit MWE 41 and 43 were disregarded.

22. It is the understanding of the Court of Appeal that NJOY's first instance submission of 15 April 2024 together with exhibits MWE 25a, MWE 26a, MWE 41-46 were not allowed by the Central Division. The parties were given the opportunity to comment on this at the oral hearing.

23. VMR Products has submitted that the Central Division applied the wrong legal standard for admittance of late-filed evidentiary documents. Since the parties are under the obligation to set out their full case as early as possible, it would have been correct to not admit any of the documents MWE 17 to MWE 40

and MWE 42 into the proceedings, as these could have been filed with the Statement for Revocation. The decision contradicts the previous announcement of the judge-rapporteur. It was to the disadvantage of VMR Products.

24. This argument is not accepted. The legal standard set out by the Central Division (paragraphs 16–29) is correct and there is no ground for criticising the application of this standard either.

25. If an Application to amend the patent is lodged, the claimant shall lodge a Defence to the Application to amend the patent (R. 43.3 RoP). Where appropriate in view of the proposed amendments, the Defence to the Application to amend the patent may contain submissions in accordance with R. 44(d) to (h) RoP and alternative non-infringement submissions (R. 32.2 RoP).

26. The Defence to the Application to amend the patent does not provide the claimant with an opportunity to introduce new grounds of invalidity in relation to the patent as granted, such as new prior art considered either novelty destroying or convincing starting points for the assessment of lack of inventive step, unless leave to amend the case is granted (R. 263 RoP). This means that a distinction must be made between the grounds, facts and evidence relied on in relation to the patent as granted and those relied on in relation to the proposed amendments.

27. Under the front-loaded procedural system of the UPC, the parties are required to set out their full case as early as possible (RoP, preamble at 7). Nevertheless, specific new arguments may be admitted into the proceedings in consideration of specific circumstances of the case (CoA 21 November 2024, UPC_CoA_456/2024, *OrthoApnea*). The provisions must also be interpreted in the light of the principle of proportionality (RoP, preamble at 3). R. 44 RoP requires an “indication” of the facts relied on which contradicts an overly strict application.

28. Furthermore, fairness (RoP, preamble at 5) in the application of the adversarial principle may require that the claimant in an action for revocation be allowed to introduce new facts and evidence in response to the Statement of defence. This may include evidence to prove a point already made by the claimant on the common general knowledge of the skilled person, or to rebut evidence brought forward by the defendant on this point.

The person skilled in the art

29. According to the findings of the Central Division, the person skilled in the art is a mechanical engineer with several years of experience in the technical field of vaporizers or is a team formed by a mechanical engineer and an electrical engineer.

30. The Court of Appeal will proceed from the same definition. Although the definition of the skilled person was contested at first instance (see paragraph 44 of the impugned decision), the parties have not raised any specific objections against the definition made by the Central Division. VMR Products has stated that all oral and written submissions made by it during first instance proceedings are maintained in full, and referred to its detailed arguments in those submissions. However, such a general reference to submissions made at first instance is only sufficient if and to the extent that the impugned decision does not address them (see order of 14 February 2025, UPC_CoA_382/2024, *Abbott vs Sibio et al*, para 17).

Claim 1 and the patent description – background to the invention and the object of the invention

31. It is set out in the Background section of the patent specification how electronic cigarettes have "recently" emerged as a new product for providing nicotine through a smokeless inhalation process. Typically, implementations consist of a power supply and an atomizing device. In reusable electronic cigarettes the two items are separated into a battery and a cartomizer, to allow the disposal and replacement of a nicotine containing fluid cartomizer while preserving the more costly battery and associated circuitry for additional use. In disposable electronic cigarettes, the two items are combined to integrate the functions into one unit that is discarded after either the battery energy or the nicotine containing liquid is exhausted (para. [0003]).

32. The electronic cigarette liquid used to vaporize ingredients such as nicotine is generally a solution of propylene glycol, vegetable glycerine, or polyethylene glycol 400, as well as their mixtures to which a flavour and/or nicotine has been added. The solution is often sold in a bottle (for refilling by the user) or in disposable cartridges or cartomizers. Many different flavours are incorporated into these liquids, including those that resemble the taste of regular tobacco, menthol, vanilla, coffee, cola and/or various fruits. Various nicotine concentrations are also available, and nicotine-free solutions are also common (para. [0004]).

33. The only reference to a particular piece of prior art in the description is to EP 2 399 636, in the Background section. Here, it is stated that EP 2 399 636 discloses a liquid storage portion comprising an electrical component for distinguishing the storage portion from other liquid storage portions, the liquid storage portion being configured for use in an aerosol generating system having means for determining an electrical characteristic of the electrical component and means for distinguishing the liquid storage portion from other liquid storage portions based on the determined electrical characteristic of the electrical component. The description does not mention whether and if so which disadvantages are associated with the embodiments protected by this patent and neither whether and if so which technical solution is provided by the patent at issue.

34. As noted by the Central Division, the patent specification does not explicitly state which problem is solved by the claimed solution. After the Background section, there is a brief summary of the invention describing two embodiments and their technical aspects, however, without indicating any technical effects achieved by any of the aspects described therein.

35. After a brief description of the figures follows a detailed description which is said to be exemplary in nature, where detailed technical aspects of different embodiments are described. The only statements made in the description that provide an indication of the technical effects achieved by the invention are found in para. [0023], lines 10-11: "According to the invention, one or more windows 130 are provided in outer shell 106 (see FIG. 1).", and lines 15-20: "According to the invention, window 130 is provided on or proximate to cartomizer receiving segment 104 and, more particularly, cartomizer chamber 108 so as to permit a user of electronic cigarette 10 to view the cartomizer 200 when it is inserted into cartomizer chamber 108", further clarifying what is already stated in para. [0013], lines 53-55: "The shell may include a window provided at the cartomizer receiving segment so that a portion of the chamber is visible from outside the shell".

36. Considering this, the skilled person will appreciate that the invention aims to provide a vaporizer that comprises a shell having a battery segment and a cartomizer receiving segment, with a window at the cartomizer receiving segment, so that a portion of the inserted cartomizer is visible from the outside.

Claim construction

37. VMR Products has raised certain criticisms against the reproduction of claim 1 by the Central Division, in para. 40 of the impugned decision. Although this objection is formally correct, the reproduction of claim 1 by the Central Division contains only editorial differences that do not alter the substantive meaning of claim 1; indeed, VMR Products has not explained how and why the Central Division's feature analysis would lead to a materially different technical interpretation or affect the assessment of inventive step. The division into claim features below is the one that parties have used in their pleadings. It is for reference only. It is reminded that claim features must always be interpreted in the light of the claim as a whole.

38. Broken down in features, claim 1 reads:

1.1	A vaporizer comprising:
1.2	- a shell (106) having a battery segment (102) and a cartomizer receiving segment (104),
1.2.1	the cartomizer receiving segment defining a chamber (108) having an insertion end distal from the battery segment and a base end proximate to the battery segment,
1.3	- a cartomizer (200) insertable into the chamber at the insertion end, the cartomizer including:
1.3.1	- a cartomizer body (208) dimensioned to hold a vaporizable substance,
1.3.2	- a heating element (214) provided within or proximate to the cartomizer body operable to heat the vaporizable substance,
1.3.3	- cartomizer electrical contacts (218) provided on an exterior of the cartomizer,
1.3.4	- cartomizer electrical circuitry operable to direct an electrical current between the cartomizer electrical contacts and the heating element, and
1.3.5	- a mouthpiece (220) in fluid communication with the cartomizer body,
1.3.6	the mouthpiece extending from the insertion end of the chamber when the cartomizer is inserted in the chamber,
1.4	wherein the heating element is activated by the electrical current and is operable to heat the vaporizable substance to a vaporization temperature;
1.5	- a battery (110) housed within the battery segment;
1.6	- battery electrical contacts provided between the base end of the chamber and the battery segment,
1.6.1	the battery electrical contacts positioned to contact the cartomizer electrical contacts when the cartomizer is inserted in the chamber, and
1.7	- battery electrical circuitry housed within the battery segment and operable to direct an electrical current between the battery, the battery electrical contacts, the cartomizer electrical contacts, and the heating element, when the cartomizer is inserted into the chamber,
1.8	the shell including a window (130) provided at the cartomizer receiving segment (104) so that a portion of the chamber is visible from outside the shell.

39. The principles applicable to claim construction have been set out by this Court in its final order in UPC_CoA_335/2023 (*NanoString v 10x Genomics*). The patent claim is not only the starting point but the decisive basis for determining the protective scope of a European patent under Art. 69 EPC in conjunction with the Protocol on the Interpretation of Art. 69 EPC. The interpretation of a patent claim does not depend solely on the strict, literal meaning of the wording used. Rather the description and the drawings must always be used as explanatory aids for the interpretation of the patent claim and not only to resolve any ambiguities in the patent claim. The patent claim is to be interpreted from the point of view of a person skilled in the art. In applying these principles, the aim is to combine adequate protection for the patent proprietor with sufficient legal certainty for third parties.

Feature 1.3.3

40. Feature 1.3.3 reads "cartomizer electrical contacts (218) provided on an exterior of the cartomizer". The cartomizer electrical contacts are not defined in any specific way in the claim, nor in the description where the claim language is duplicated in paras. [0008] and [0013]. Neither is there any explanation of what is meant by "exterior".

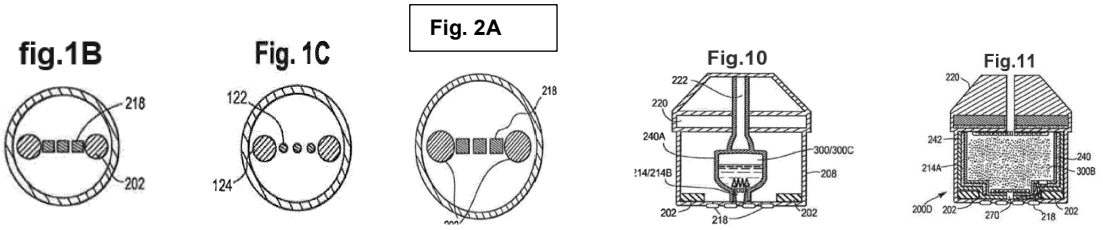
41. The Central Division considered that the requirement of feature (1.3.3) is a solution to enable the contact between the battery electrical contacts and the cartomizer electrical contacts when the cartomizer is inserted in the chamber. Therefore, considering that claim 1 does not disclose a specific design of the cartomizer electrical contacts or the battery electrical contacts, nor a particular arrangement on an exterior of the cartomizer with regard to feature 1.3.3, any design of cartomizer electrical contacts on an exterior of the cartomizer that – in dependence and conjunction with a particular design of the battery electrical contacts – may provide the contact specified in feature (1.6.1) falls under the design rule of feature (1.3.3).

42. The Court of Appeal concurs with this view.

43. In the summary of the invention, para. [0008], lines 34 –ff., reads "The vaporizer may further include a cartomizer insertable into the chamber at the insertion end [...], a heating element [...], cartomizer electrical contacts provided on the exterior of the cartomizer, cartomizer electrical circuitry operable to direct an electronic current between the cartomizer electrical contacts and the heating element [...]. A battery may be housed within the battery segment. The vaporizer may also include battery electrical contacts [...] positioned to contact the cartomizer electrical contacts when the cartomizer is inserted in the chamber. Additionally, the vaporizer may include battery electrical circuitry housed within the battery segment and operable to direct an electrical current between the battery, the battery electrical contacts, the cartomizer electrical contacts, the heating element, and the inserted cartomizer" (see also para. [0019], lines 32-40).

44. In the drawings, the cartomizer electrical contacts (218) are present in Figs. 1B and 2A, 10 and 11. Fig. 1B illustrates a lateral cross sectional view of the electronic cigarette of Fig. 1 illustrating the end of the inserted cartomizer, and Fig. 2A similar but in relation to Fig. 2. Fig. 10 illustrates a front cross sectional view of an embodiment of a cartomizer and Fig. 11 a front view of an embodiment of a cartomizer (see para. [0009]. When cartomizer 200 is not received in cartomizer chamber 108, a head portion of each pogo pin may extend into cartomizer chamber 108. When cartomizer 200 is received in cartomizer chamber 108, the pins 122 are contacted and at least partially compressed into battery portion 102.

Pins 122 may be contacted or pressed against electrical receivers provided on cartomizer 200 as described herein, thereby establishing an electrical connection between PCB 112 and cartomizer 200 (see para. [0019] lines 32-40). As can be seen from Fig. 1C, the similarly placed electrical contacts of the cartomizer chamber are aligned to those of the end of the inserted cartomizer in Fig. 1B.



45. The skilled person, presented with this information, would understand feature 1.3.3 in a functional way such that the cartomizer electrical contacts are positioned to make contact with the battery electrical contacts when the cartomizer is inserted in the chamber.

46. As for the requirement that the cartomizer electrical contacts are provided *on an exterior of the cartomizer*, the skilled person would take from this that the electrical contacts cannot be positioned inside the cartomizer. The skilled person would understand that the cartomizer electrical contacts must be accessible from outside the cartomizer in such a way that they can make contact with the battery electrical contacts, see para. [0008] lines 50-54: "The vaporizer may also include battery electrical contacts provided between the base end of the chamber and the battery segment, the battery electrical contacts positioned to contact the cartomizer electrical contacts when the cartomizer is inserted in the chamber".

Feature 1.6

47. Feature 1.6 reads "battery electrical contacts provided between the base end of the chamber and the battery segment,".

48. The skilled person's understanding of this feature has already been partly examined in relation to feature 1.3.3 and is further to be read in conjunction with feature 1.6.1 (below). It is a functional feature where the battery electrical contacts are provided between the base end of the chamber and the battery segment, where they can make contact with the cartomizer electrical contacts when the cartomizer is inserted in the chamber.

Feature 1.6.1

49. Feature 1.6.1 reads "the battery electrical contacts positioned to contact the cartomizer electrical contacts when the cartomizer is inserted in the chamber".

50. The interpretation of feature 1.6.1 corresponds to that of features 1.3.3 and 1.6 above.

Feature 1.8

51. Feature 1.8 reads "the shell including a window (130) provided at the cartomizer receiving segment (104) so that a portion of the chamber is visible from outside the shell". In the impugned decision it is

set out that feature 1.8 must be understood in the sense that it refers to a window of any shape and size, located anywhere on the cartomizer receiving segment, that in some way allows some portion of the chamber to be visible from outside the shell.

52. The Court of Appeal concurs with this interpretation of feature 1.8 and disagrees with VMR Product's assertion that the effects of the window include checking the electrical contacts.

53. VMR Products advances that the electrical contacts at the base end are sort of a black box for the user and if the user is unsure about the status of the electrical contacts and the correct insertion of the cartomizer, the window provides valuable feedback. Hence, there is also synergy between the chosen position of the contacts and the window in the shell.

54. This is not convincing. According to claim feature 1.8 the window is "so that a portion of the chamber is visible from outside the shell". The "chamber" must be understood from feature 1.2.1. as "the cartomizer receiving segment defining a chamber (108) having an insertion end distal from the battery segment and a base end proximate to the battery segment". This is also stated in para. [0011] of the specification. In para. [0023] lines 31-32 is stated "Chamber 108 is defined by outer shell 106 and electrical connector 120".

55. Against this backdrop, and when read together with feature 1.5 "a battery (110) housed within the battery segment", the question presents itself how it would be possible to see anything else than the chamber, or the cartomizer when inserted therein, through the window. This is especially so since the exact positions of the segments are not defined in a structurally precise way. The position of the window is "provided at the cartomizer-receiving segment 104" according to the claim. According to the invention, window 130 is provided on or proximate to cartomizer receiving segment 104 and, more particularly, cartomizer chamber 108 so as to permit a user of electronic cigarette 10 to view the cartomizer 200 when it is inserted into cartomizer chamber 108 (para. [0023] lines 16-20).

56. It should furthermore be observed that the cartomizer is inserted into the chamber at the insertion end of the chamber, this being distal from the battery segment, as opposed to the base end which is proximate to the battery segment, the mouthpiece extending from the insertion end, see features 1.2.1 and 1.3, as well as para. [0011] lines 54-58. This means that the cartomizer is inserted from the top of the device if Fig. 1 is taken as a reference point. According to the specification para. [0008] lines 50-54, the vaporizer may also include battery electrical contacts provided between the base end of the chamber and the battery segment, the battery electrical contacts positioned to contact the cartomizer electrical contacts when the cartomizer is inserted in the chamber. Once the cartomizer is inserted, the battery electrical contacts cannot be seen through the window.

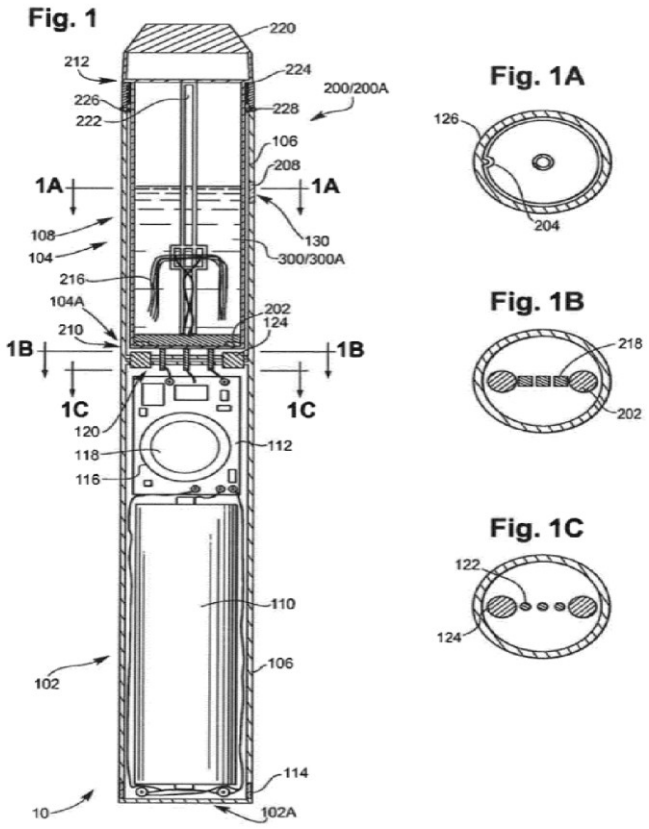
57. This is not contradicted by the specification in para. [0023] lines 10-14 which reads "According to the invention, one or more windows 130 are provided in outer shell 106 (see FIG. 1). Windows 130 may be made of a translucent material, such as glass or substantially clear plastic, in order to view *internal components or battery portion 100*" (emphasis added).

58. This passage may at first glance seem to suggest that the battery or (as stated by VMR Products) internal components including electrical contacts and/or (referring to Fig. 1, the top end of) the battery

segment, may be visible through the window. However, the battery portion, while not defined in the claim, must be understood as comprising the battery housing segment, the cartomizer receiving segment *and* the shell; in effect the full device except the cartomizer.

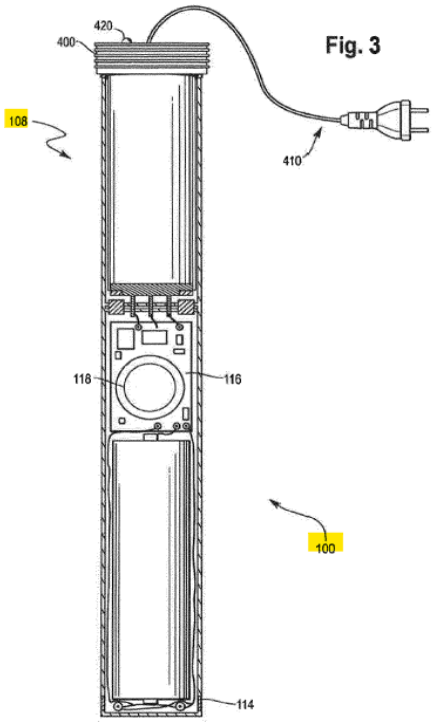
59. This understanding, fully in line with how VMR Products wants to read "battery portion", finds explicit support in para. [0016] of the specification: "Electronic cigarette 10 may include a battery portion connectable with a vaporization unit or cartomizer 200 for holding a vaporizable substance 300. The battery portion may include a battery housing segment 102 provided proximate to the first end 102A of the battery portion, and a second cartomizer receiving segment 104 provided proximate a second end 104A of the battery portion. The battery portion may include an outer shell 106 for covering or protecting one or more of the components of battery portion 100 as may be internally provided as described herein."

60. Nothing else follows from the drawings. Fig. 1 does not contain any reference to the battery portion 100, and neither does Fig. 2, but the specification at para. [0009] lines 7-12 is informative: "FIG. 1 illustrates a front view of an embodiment of an electronic cigarette of the disclosure comprising a first embodiment of a battery portion with an embodiment of a cartomizer for use with a vaporizable liquid inserted into a cartomizer chamber of the first embodiment battery portion, the outer shell of the first embodiment battery portion shown transparently so as to illustrate the inner components of the electronic cigarette."



61. Fig. 3 includes a reference to the battery portion 100 (highlighted by the Court for reference), illustrating that it is the full device except the cartomizer chamber (in the claim language: the

cartomizer receiving segment defining a chamber (108) see also the specification at para. [0009] lines 45-56):



62. Similar references are made in Figs. 4-5.

63. It has not been explained how, in accordance with the claim, the window would allow a view of the battery electrical contacts or the battery. Insofar as paragraph 23 mentions that according to the invention, one or more windows 130 may be made of a translucent material (...) in order to view internal components of battery portion 100", this is neither specifically related to the battery electrical contacts nor reflected in the patent claim.

64. The specification supports that the purpose of the window is to permit the user to view the cartomizer when it is in the chamber. Reference is made here to para. [0023] lines 18-20: “According to the invention, window 130 is provided on or proximate to cartomizer receiving segment 104 and, more particularly, cartomizer chamber 108 so as to permit a user of electronic cigarette 10 to view the cartomizer 200 when it is inserted into cartomizer chamber 108”, and also to Figs. 1, 4 and 5.

65. According to feature 1.3.5, the mouthpiece is in fluid communication with the cartomizer body, the mouthpiece extending from the insertion end of the chamber when the cartomizer is inserted in the chamber. As noted by the Central Division, the claim language does not disclose how the mouthpiece is technically realised and does not require the mouthpiece to be detachable from the cartomizer body. While the claim does not specify whether the mouthpiece is mounted on the cartomizer or on top of the battery portion, the description and drawings strongly support that it is on the cartomizer (see especially Figs. 2, 4 and 5 and by contrast, Fig. 3). In some embodiments the mouthpiece can be

detachable so as to permit access to container 240, provided within the cartomizer body, para. [0026] lines 33-34, para. [0028] lines 44-47. The chamber can be more easily inspected from above when the cartomizer is removed from the battery portion and the window only fulfils a function in the assembled state. In the assembled state there is no need for a window to check the electrical contacts, as it is not possible to see them. The skilled person thus does not understand the window is provided to make the battery electrical contacts visible, as argued by VMR Products.

66. VMR Products has argued that the window enables the user to observe the presence of a cartomizer inside the chamber, which allows to see *what type of cartomizer* is inserted without disassembly. According to VMR Products a certain colour of the cartomizer may indicate for example flavour, and this is supported to some extent by the description which states that "a colored ring or logo 228 may be provided about a portion of cartomizer body 208 in order to identify the type or cartomizer being used", para. [0025], lines 27-29. However, this does not detract from the interpretation that feature 1.8 refers to a window of any shape and size, located anywhere on the cartomizer receiving segment, that in some way allows some portion of the chamber to be visible from outside the shell.

Inventive step, principles

67. The approach taken by the Unified Patent Court when establishing inventive step is as follows (see decision of 25 November 2025, UPC_CoA_528/2024 and UPC_CoA_529/2024, *Amgen vs Sanofi and Regeneron*, see also *Meril vs Edwards* issued on the same day).

68. It first has to be established what the object of the invention is, i.e. the objective problem. This must be assessed from the perspective of the skilled person (m/f – hereinafter referred to as 'it'), with its common general knowledge, as at the application or priority date (also referred to as the relevant date) of the patent. This must be done by establishing what the invention adds to the state of the art, not by looking at the individual features of the claim, but by comparing the claim as a whole in context of the description and the drawings, thus also considering the inventive concept underlying the invention (the technical teaching), which must be based on the technical effect(s) that the skilled person on the basis of the patent understands is (are) achieved with the claimed invention.

69. In order to avoid hindsight, the objective problem should not contain pointers to the claimed solution.

70. The claimed solution is obvious when at the relevant date the skilled person, starting from a realistic starting point in the state of the art in the relevant field of technology, wishing to solve the objective problem, would (and not only: could) have arrived at the claimed solution.

71. The relevant field of technology is the field relevant to the objective problem to be solved as well as any field in which the same or similar problem arises and of which the person skilled in the art of the specific field must be expected to be aware.

72. A starting point is realistic if the teaching thereof would have been of interest to a skilled person who, at the relevant date, wishes to solve the objective problem. This may for instance be the case if the relevant piece of prior art already discloses several features similar to those relevant to the invention as claimed and/or addresses the same or a similar underlying problem as that of the claimed invention.

There can be more than one realistic starting point and the claimed invention must be inventive starting from each of them.

74. The skilled person has no inventive skills and no imagination and requires a pointer or motivation that, starting from a realistic starting point, directs it to implement a next step in the direction of the claimed invention. As a general rule, a claimed solution must be considered not inventive / obvious when the skilled person would take the next step prompted by the pointer or as a matter of routine, and arrive at the claimed invention.

The objective problem

75. The Central Division found that ”the underlying problem of the invention is to be seen to develop a vaporizer that has a shell having a battery segment and a cartomizer receiving segment with the cartomizer receiving segment defining a chamber having an insertion end distal from the battery segment and a base end proximate to the battery segment and a cartomizer insertable into the chamber at the insertion end, in such a manner that it allows a portion of a cartomizer receiving chamber of the shell to be visible from the outside.”

76. According to VMR Products, the problem formulated by the Central Division includes a pointer to the solution and is therefore inadmissible. The object of the invention is to provide a vaporizer, which has a reliable, easy and secure connection between the cartomizer and the battery segment and facilitates checking the status of the inserted cartomizer and the battery electrical contacts.

77. Here, VMR Products argues for a synergistic effect between the chosen position of the electrical contacts and the window in the shell, see paragraph 53 above.

78. Based on this argument, VMR Products suggests that the objective problem should be formulated as follows: “*providing a vaporizer that facilitates checking the status of the inserted cartomizer and the battery electrical contacts*”.

79. NJOY takes the view that even accepting the technical problem suggested by VMR Products, the window provides nothing more than looking inside the chamber.

80. Vaporizers were known in the art, and the patent specification does not explain disadvantages pertaining to vaporizers in the prior art, advantages with the invention, or even how the invention distinguishes itself from prior art. Only the statements made in paras. [0013] and [0023] support a technical effect, being the effect of making a portion of the inserted cartomizer visible from the outside, by providing a vaporizer with a window at the cartomizer receiving segment.

81. As said, the Court of Appeal cannot find anything in the patent specification to support the view that the skilled person would consider a functional interaction or combined effect as suggested by VMR Products. This is not the understanding of the skilled person, who understands each feature to serve its own purpose; the electrical contacts to ensure the power supply to the heating element and the window to provide visibility of a portion of the cartomizer when inserted.

82. The objective technical problem therefore cannot include 'facilitating to check the status of the battery electrical contacts' as suggested by VMR Products, but is limited to "providing a vaporizer that facilitates checking the status of the inserted cartomizer".

Claim 1 as granted; inventive step assessment

Procedural background and submissions on appeal

83. In relation to claim 1, NJOY relies on prior art:
    - U.S. Patent Application Publication No. 2010/0242974 A1 ("Pan"), published on 30 September 2010, combined with Korean Patent Application Publication No. 2012-0074625 A ("Lee"), published on 6 July 2012 and common general knowledge.
    - U.S. Patent Application Publication No. 2005/0268911 A1 ("Cross"), published on 8 December 2005, combined with Lee and common general knowledge.

84. The Central Division found that prior art Pan relates to an electronic cigarette and discloses a vaporizer with all features of the claimed invention with the exception of feature 1.8 as it does not describe a shell including a window provided at the cartomizer receiving segment so that a portion of the chamber is visible from outside the shell. The skilled person, starting from Pan, would have found the claimed invention on the basis of his/her common general knowledge and skills. In addition, with Pan as a starting point and guided by Lee as an illustration of the common general knowledge, the skilled person would have arrived at the invention.

85. VMR Products has submitted on appeal (in summary and insofar as relevant) that:
- In addition to the lack of feature 1.8, Pan does not provide direct and unambiguous disclosure for the features 1.3.3, 1.6 and 1.6.1.
- The assessment of the common general knowledge in the impugned decision is wrong.
- Starting from Pan, granted claim 1 involves an inventive step, contrary to the conclusion of the Central Division even when assuming that feature 1.8 is the only distinguishing feature.

86. NJOY has submitted that the impugned decision is well-reasoned and correct in substance and outcome, adding that the criticisms are unconvincing. In particular, the impugned decision correctly relied on the statement in and by Lee as indication of common general knowledge that existed before the patent in dispute.

Inventive step; Pan and common general knowledge

87. The invention in Pan relates to an electronic cigarette. It comprises a tubular electronic inhaler and a tubular electronic atomizer, wherein the electronic inhaler includes an electric power source that provides an electronic current to the electronic atomizer. Pan belongs to the same field of technology and discloses several features similar to those relevant to the invention as claimed. Pan would have been of interest to a skilled person who wished to solve the problem of providing a vaporizer that facilitates checking the status of the inserted cartomizer. Pan is thus a realistic starting point for an inventive step analysis, and VMR Products has rightly not questioned this on appeal. Pan is not a cited reference in the patent specification and was not brought before the EPO Opposition Division.

88. The contested features are 1.3.3, 1.6 and 1.6.1.

89. In relation to feature 1.3.3; “cartomizer electrical contacts (218) provided on an exterior of the cartomizer”, it is set out in Pan para. [0029] how “FIG. 3 is a section view of another integrated electronic atomizer with the second electric connector 21 being of a DC plug-socket type. The electronic atomizer includes an atomizer tube 263 and, inside the atomizer tube 263, a second electric connector comprised of a DC plug 21 located on a plug seat 71….”. Where Pan uses the term “atomizer”, this corresponds to “cartomizer” in the patent at issue.

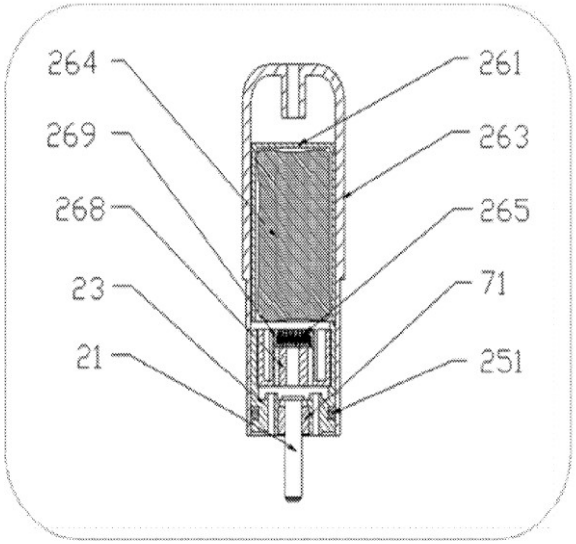


Figure 3

90. On the basis of its common general knowledge, the skilled person understands from Pan that the second electric connector discloses one component, namely a DC plug, of an electrical connection structure having two components, namely the DC plug and a corresponding DC socket, wherein the DC plug is removably insertable into the DC socket. The DC socket is shown in Fig. 5 and disclosed in para [0034] of Pan. The DC plug has an outer barrel and an inner sleeve, one arranged concentrically within the other. The DC socket comprises a central fixed pin and an outer cylindrical contact.

91. As a result, the protruding part in Figure 3 of Pan, electric connector 21 being of a DC plug-socket type, corresponds to cartomizer electrical contacts (plural) in the patent at issue, with a positive and a negative contact.

92. While the Central Division found support in Fig. 11 of the patent at issue for the view that protruding electrical contacts were considered to be on an exterior of the cartomizer, the interpretation of feature 1.3.3 made by the Central Division and the Court of Appeal alike would not require this. As explained, on a correct claim construction, the cartomizer electrical contacts must only be accessible from outside the cartomizer in such a way that they can make electrical contact with the battery electrical contacts.

93. Pan thus discloses feature 1.3.3.

94. As regards feature 1.6, “battery electrical contacts provided between the base end of the chamber and the battery segment,” Pan discloses a first electric connector 17 of a DC plug-socket type located on the DC socket-seat 28, para. [0033]. The first electric connector 17 with the socket seat 28 is completely

embedded in the inhaler tube 10, which can be connected to the second electric connector of the electric atomizer to form an electronic cigarette, para. [0034]. In the embodiment illustrated by Fig. 7, the electronic inhaler and the integrated electronic atomizer are fit together through their connectors of the same type to form the electronic cigarette. The connection is done through the first electric connector socket 28 of the electronic inhaler and the second electric connector plug 21 of the integrated electronic atomizer. The connection achieves the electric combination of the inhaler tube and the atomizer tube. (Para. [0037]).

95. The first electric connector 17 and the socket seat 28 are visible in Figures 5 and 7 of Pan:

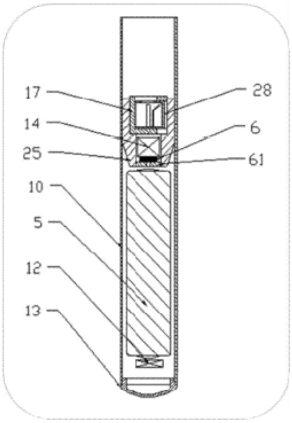


Figure 5

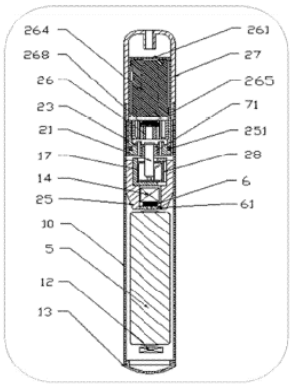


Figure 7

96. On the plurality of electrical contacts, the same reasoning as for feature 1.3.3 applies. Furthermore, and as already explained, the inhaler tube 10 of Pan has a part in which the electric power source 5 is arranged (corresponding to the battery segment in the patent at issue) and an open-end chamber, into which the integrated electronic atomizer is partially inserted (corresponding to the chamber in the patent at issue). The first electric connector 17 of a DC plug-socket type located on the DC socket-seat 28 of Pan (corresponding to the battery electrical contacts in the patent at issue) is provided between the base end of the chamber and the electric power source 5 of Pan.

97. The conclusion is that Pan discloses feature 1.6.

98. As regards feature 1.6.1, the first electric connector in Pan (corresponding to the battery electrical contacts in the patent at issue) is positioned to contact the second electric connector (corresponding to the cartomizer electrical contacts in the patent at issue) when the atomizer (corresponding to the cartomizer in the patent at issue) is connected (corresponding to inserted in the chamber in the patent at issue).

99. Thus, Pan also discloses feature 1.6.1.

100. It is common ground that Pan does not disclose feature 1.8 “the shell including a window (130) provided at the cartomizer receiving segment (104) so that a portion of the chamber is visible from outside the shell”.

101. The Court of Appeal considers that the skilled person who is searching to solve the problem of providing a vaporizer that facilitates checking the status of the inserted cartomizer would arrive at the claimed invention based on Pan and common general knowledge.

102. Bearing the interpretation of feature 1.8 in mind – it refers to a window of any shape and size, located anywhere on the cartomizer receiving segment, that in some way allows some portion of the chamber to be visible from outside the shell – there is no synergy between the chosen position of the contacts and the window in the shell.

103. A claimed solution must be considered obvious when the skilled person would take the next step prompted by the pointer or as a matter of routine, and arrive at the claimed invention. In an effort to provide a vaporizer that facilitates checking the status of the inserted cartomizer, the skilled person considers general means known to him on the basis of his common general knowledge, which are known for a variety of applications and belong to the standard repertoire of the skilled person.

104. On the common general knowledge, NJOY is not only relying on Lee. NJOY alleged in the Statement for revocation that the use of glass or plastic translucent material in spectacles, picture frames, windows and so on is part of the common general knowledge. According to NJOY the skilled person would naturally derive the use of glass or plastic because these materials are commonly used in many fields of technology and in everyday items where light transmission is required and therefore, the use of glass or plastic as a translucent material would be obvious to the skilled person. Further allegations about everyday items were made as well. Also, in Mr Hajaligol's statement it is said that translucent and transparent cartridges were known in the art. Mr Hajaligol suggests that by the time of the invention disclosed in Cross and Lee, similar windows were incorporated in electronic vaporizers to indicate the amount of remaining vaporizable fluid in such vaporizers. He also makes the example of the window concept in traditional fountain pens.

105. The skilled person wishing to provide a vaporizer that facilitates checking the status of the inserted cartomizer, would have considered as a routine adaption the inclusion of a window, a well-known general means for everyday appliances and devices, provided at the obvious place: the cartomizer receiving segment. The result of such a step was readily predictable.

106. The use of this means in the specific technical context is objectively appropriate and there are no circumstances that would make its application appear impossible, problematic or impracticable. This is shown by Lee which provides an electronic cigarette provided with a cartridge level check window (para. [10]) serving the technical purpose of making the inside of a device visible from the outside (para. [0031]).

107. To conclude, claim 1 of the patent at issue lacks inventive step in relation to Pan combined with common general knowledge.

Auxiliary requests I-X

108. For the reasons set out below, auxiliary requests I-X are unsuccessful.

Auxiliary request I

109. Auxiliary request I amends claim 1 by adding to feature 1.3.1 as follows:

"a cartomizer body (208) dimensioned to hold a fluid vaporizable substance"

110. The Central Division found that the integrated electronic atomizer of 'Pan' has a liquid container 261 (see Fig. 3 and para. [0029]) and a liquid-storing media 264 that is filled with liquids to be inserted inside the liquid container 26. Therefore, 'Pan' discloses the additional feature included in Auxiliary Request I, as the term "fluid" encompasses also liquids.

111. The Court of Appeal concurs with this view.

Auxiliary request II

112. Auxiliary request II incorporates auxiliary request I and further adds at the end of feature 1.7 as follows:

, "and - a wicking element (216) provided within the cartomizer body,"

113. The Central Division found that Pan describes a wicking element placed within the cartomizer body by way of the heat equalizer 269 provided within the cartomizer body.

114. The Court of Appeal takes the same position, considering that the heating wire of the heat equalizer 269 in Pan is a wicking element, as demonstrated by the passages in para [12] "This electric current preferably flows through the electric heat wire inside the atomizer tube, which then heats up the heat equalizer with absorbed liquid from the liquid-container" and in para [28] "preferably made of a special fibre which can withstand temperature as high as 2000 degrees centrigrade". Reference is also made to para [11] and claim 9 of Pan.

Auxiliary request III

115. Auxiliary request III incorporates auxiliary requests I and II, adding further to feature 1.7 as follows:

"- an inhalation tube (222) in fluid connection with the heating element and the wicking element, wherein the heating element operable to heat the vaporizable substance to the vaporizing temperature is configured to create a vaporized fluid,
and
wherein the inhalation tube is configured to let the vaporized fluid travel there through to the mouthpiece for inhalation by a user,"

116. The Central Division found that para. [0012] of Pan discloses a heat equalizer that converts the liquid into a form of a vapor mist, which is finally drawn into the mouth of the user, and a tube that extends inwards from the mouthpiece and that is in fluid connection with the heating element and the wicking element. Therefore, all the added features mentioned in Auxiliary request III are disclosed in Pan.

117. The Court of Appeal shares this view, adding that further support for this reading of Pan can be found in para. [0027] where a side-space for airflow between the liquid container and the liquid media is mentioned.

Auxiliary request IV

118. Auxiliary request IV incorporates auxiliary request I and adds the feature:

"wherein at least a portion of the cartomizer body is composed of a translucent material."

119. Similar to the Central Division, the Court of Appeal considers that the choice of translucent material is arbitrary when seen in relation to Pan, which discloses two possible solutions for the equivalent to a cartomizer, namely a metal or plastic tube (see para. [0010]). At the filing date, it was well known to a person skilled in the art that plastic can be translucent. Against Pan, composing the cartomizer body of a translucent material is obvious.

Auxiliary request V

120. Auxiliary request V incorporates auxiliary requests I and VI, adding the feature:

"- a wicking element (216) provided within the cartomizer body,"

121. This amendment fails for the same reason as did auxiliary requests II and IV.

Auxiliary request VI

122. Auxiliary request VI incorporates auxiliary request III (and thereby I and II), and IV. This request fails for the reasons set out above.

Auxiliary request VII

123. Auxiliary request VII incorporates auxiliary request VI and specifies that the heating element is a "single" heating element.

124. Like the Central Division, the Court of Appeal finds that the heat wire disclosed in Pan is a single heating element as well.

Auxiliary request VIII

125. Auxiliary request VIII incorporates auxiliary request VI and adds to feature 1.2 as follows:

"wherein the shell (106) is an outer shell, and wherein the battery segment (102) and the cartomizer receiving segment (104) commonly share the shell (106),"

126. The Court of Appeal concurs with the view of the Central Division, that these features are present in Pan which discloses that the inhaler tube 10 is an outer shell and that the battery segment and the cartomizer receiving segment commonly share the shell (see Fig. 5).

Auxiliary request IX

127. Auxiliary request IX incorporates auxiliary request VIII, adding to feature 1.3.1 as follows:

"- a cartomizer body (208) dimensioned to hold a free-standing fluid vaporizable substance"

128. With this auxiliary request, VMR Products seeks to exclude embodiments in which the liquid or vaporizable substance is held within, or absorbed by, a porous or fibrous media and to define instead a vaporizable fluid existing freely within the chamber. VMR Products argues that the person skilled in the art has no difficulties in understanding from Fig. 1 that reference is made in this feature to a cartomizer body which holds a vaporizable substance in a free-standing form, i.e., as in a liquid column in an empty space of the cartomizer body. An empty space is different, for instance, from a soaked sponge or a material which is coated on a surface, which would not be construed as free-standing fluid. The exact type of vaporizable substance is not relevant for this feature according to VMR Products, but it does not include gas.

129. NJOY argues that neither claim 1 nor the amendment specify any limitations for the fluid vaporizable substance. They encompass vaporizers holding other forms of fluid vaporizable substance, such as a gas and it is not at all clear how such other forms of material might be "free-standing" or provide a meaning of the term in such a context and hence there is nothing in the patent that would explain to the skilled person what 'free standing fluid' as opposed to just 'fluid' means. NJOY also refers to the declaration of Mr. Hajaligol according to which a skilled person would appreciate that the term "fluid" encompasses gasses, liquids, and any semi-solid mixtures.

130. The Central Division found that the request contravenes Article 84 EPC, according to which the claims must be clear.

131. The Court of Appeal shares this view. Pursuant to R. 50.2 RoP, any Application to amend the patent shall contain an explanation as to why the amendments satisfy the requirements of Articles 84 and 123(2), (3) EPC and why the proposed amended claims are valid. The term "free-standing" does not appear in the description whether in relation to a liquid or any other fluid mentioned in the patent specification such as wax, oil or gel (para. [0034]) and there is nothing in the patent specification that would explain what a free-standing fluid is. It would therefore only be clear if it was established that it was understood, as VMR Products contends, by the skilled person based on its common general knowledge as a liquid column as opposed to a soaked sponge or similar. VMR Products relies on the opinion of Dr. Collins in this respect. However, the Court of Appeal makes the observation that the opinion of Dr. Collins, in this part, is a blank statement (with reference to a drawing in the specification of another patent in the same family) that the person skilled in the art would understand the term "free-standing fluid" to mean static fluid that is only subject to hydrostatic forces caused by gravity. Leaving aside whether this would indeed be the skilled person's understanding, a drawing in a single patent specification cannot be considered to represent common general knowledge of the skilled person. VMR Products has thus not provided sufficient substantiation that and why the skilled person would understand the term 'free-standing fluid' in the way it asserts.

132. Auxiliary request IX cannot be allowed for lack of clarity and lack of support in the description.

Auxiliary request X

133. Auxiliary request X incorporates auxiliary request IX and adds that the heating element is a "single" heating element.

134. The Central Division found that, for the reasons illustrated with regard to Auxiliary requests VII and IX the added feature is not sufficient to exclude the invalidity of the patent. The Court of Appeal concurs with this view.

Claims 2-14

VMR Products' requests that claims 2-14, each in combination with claim 1, be upheld are unsuccessful as well.

Claim 2

135. As regards claim 2, the Court of Appeal shares the view of the Central Division that it lacks inventive step in relation to Pan for the reasons indicated with regard to Auxiliary request IV (arbitrary design choice, obviousness).

Claim 3

136. Claim 3 reads: "The vaporizer of claim 1, wherein the window (13) is a slit cut into the shell (106)."

137. The Court of Appeal finds that for the skilled person starting from Pan, making the window a slit cut into the shell is an arbitrary design choice that would have been obvious (see also reasoning in relation to claim 1 as granted).

Claim 4

138. Claim 4 reads: "The vaporizer of any of the previous claims, wherein the window (130) is provided on or proximate to the cartomizer receiving segment (104)."

139. The only difference in relation to claim 1 as granted is that the window is provided "*on or proximate to* the cartomizer receiving segment" rather than "*at* the cartomizer receiving segment". The description indicates the purpose of the positioning "on or proximate" is "so as to permit a user of electronic cigarette 10 to view the cartomizer 200 when it is inserted into cartomizer chamber 108" (para. [0023] lines 15-20). This demonstrates that claim 4 does not add anything in terms of functionality, as well as structural arrangement, in relation to granted claim 1, which the Court of Appeal has found to be invalid in relation to Pan and common general knowledge. Claim 4 lacks inventive step in relation to Pan and common general knowledge for the same reasons as stated for claim 1.

Claim 5

140. Claim 5 reads: "The vaporizer of any of the previous claims, wherein the window (130) is configured to permit viewing of the cartomizer (200) when the cartomizer is inserted into the cartomizer chamber (108)."

141. Claim 5 lacks inventive step for the same reasons as stated for claim 1 and 4.

Claim 6

142. Claim 6 reads: "The vaporizer of any of the previous claims, wherein at least a portion of the cartomizer body is composed of a translucent material."

143. Claim 6 lacks inventive step in relation to Pan for the same reasons as stated for auxiliary request IV (arbitrary design choice, obviousness).

Claim 7

144. Claim 7 reads: "The vaporizer of claim 6, wherein the translucent material of the cartomizer body comprises glass or plastic."

145. The Central Division stated that making at least a portion of the cartomizer body to be composed of a translucent material is a simple choice of suitable material for a cartomizer body. The skilled person would naturally derive the use of glass or plastic because these materials are commonly used in many fields of technology and in everyday items where light transmission is required. It follows that granted claim 7 does not involve an inventive step.

146. The Court of Appeal concurs with this view (see also auxiliary request IV).

Claim 8

147. Claim 8 reads: "The vaporizer of any of the previous claims, wherein the cartomizer further includes a container (240) provided within the cartomizer body and dimensioned to hold the vaporizable substance, wherein the heating element (214) is provided exterior to at least a portion of the container and is operable to heat the container thereby heating the vaporizable substance to the vaporization temperature."

148. According to the Central Division, in Pan the liquid-storing media 264 – apart from those part that connect to the wick-type heat equalizer – is arranged in a liquid container 261 which is located above the heating wire 265 and the heat equalizer 269 (see Fig. 3). Hence, Pan discloses the additional features of claim 8. Indeed, to the skilled person's understanding, given the proximity of the heating wire 265 to the liquid-storing media 264 and given the typical temperatures that the heating wire will be heated up to, heat radiating from the heating wire will – albeit to a small extent – reach the liquid-storing media and consequently heats the vaporizable substance to the vaporization temperature. It is noted that claim 8 does not indicate the heating mechanism prescribed therein to be the only mechanism for generating vape. Therefore, even if in Pan the predominant amount of vape is generated in the wick-type heat exchanger and only a minimal amount of vape is generated by heat radiation from the heating wire 265 to the liquid-storing media 264, the teaching of claim 8 is fulfilled.

149. VMR Products has only referred to its arguments at first instance here, but as already explained, this is only sufficient on appeal if and to the extent that the impugned decision does not address them (*Abbott vs Sibio et al*, para 17).

Claim 9

150. Claim 9 reads: "The vaporizer of any of the previous claims, wherein the heating element (214) includes conductive material intertwined with non-conductive material, and the conductive material is in electrical communication with the cartomizer electronic circuitry."

151. The Central Division found that claim 9 lacks inventive step over Pan, where in paras. [0027] and [0029] it is indicated that the heat equalizer 269 is made of fibers, which the skilled person understands to be of non-conductive material as this is typically used for wick-type elements, and is twined with electric heat wire 265, which is a conductive material (see also Fig. 1).

152. VMR Products has argued that Pan teaches away from the heat equalizer 269 being made of non-conductive material, since claim 9 of Pan states that the heat equalizer ensures that the heat generated by the electric wire is uniform.

153. This argument is not accepted. Only the fiber in Pan (which is part of the heat equalizer 269) is made of non-conductive material since it ensures a wicking function (absorption of the liquid).

Claim 10

154. Claim 10 reads: "The vaporizer of any of the previous claims, further comprising a printed circuit board (112) housed in the battery segment and in electrical communication with the battery electrical circuitry, and the cartomizer further includes a sensor (260) in electrical communication with the cartomizer electrical circuitry, wherein the printed circuit board is operable to process environment information received from the sensor when the cartomizer is inserted into the chamber."

155. NJOY attacks claim 10 on several grounds, including a combination of Pan and Kofford (U.S. Patent Application Publication No. 2011/0308521 A1, published on 22 December 2011). Here, NJOY argues that Pan discloses that the CPU processor 14, which corresponds to the claimed battery electronic circuitry, "controls the temperature and heat generated through the electric heating wire and heat equalizer" (Pan para. [0026]). A skilled person would appreciate that the CPU processor 14 of Pan would be able to better control the temperature of the heater if temperature information were provided to the CPU processor 14. Thus, Pan provides motivation for the use of a temperature sensor. A skilled person seeking to improve the efficacy of the Pan device would modify it to have a cartomizer that includes a sensor for providing environmental information to battery electric circuitry when the cartomizer is installed without inventive effort based on Kofford.

156. The Central Division found that the skilled person, starting from Pan and guided by Kofford, would provide the integrated electronic atomizer with a temperature sensor in electrical communication with the cartomizer electrical circuitry, such that the CPU processor 14 of Pan could process temperature information (environment information) received from the temperature sensor when the cartomizer is inserted into the chamber.

157. VMR Products argues that the Central Division did not address that it already combined prior art documents Pan and Lee in order to arrive at the subject-matter of granted claim 1. Therefore,

combining with a further prior art document leads to at least three prior art documents to be combined, an indicator for the presence of an inventive step. Furthermore, Kofford discloses a vaporizer device 10 having a completely different structure compared to the electronic cigarette of Pan. An unbiased person skilled in the art would never consider a combination of Pan and Kofford, and would particularly not extract any feature of Kofford relating to a sensor, without any incentive to do so. Kofford does not teach a cartomizer that includes a sensor in electrical communication with the cartomizer electrical circuitry.

158. The Court of Appeal rejects VMR Product's arguments.

159. According to the description of the patent at issue, the printed circuit board PCB 112 may be provided for controlling one or more functions of electronic cigarette 10 (para. [0016] lines 36-38). It may operate to control the vaporization temperature within 10 degrees Celsius or even within 1 degree Celsius as inputted by the user (para. [0029] lines 20-26). PCB 112 "may also includ[e] safety protocols for automatic shutoff in the event that sensor 260 records a temperature above a preset vaporization temperature range, which may indicate material 300 (including, for example, 300A, 300B, 300C) is actively burning or about to burn" (para. [0029] lines 4-8).

160. A sensor 260 may be included in some embodiments of cartomizer 200. Sensor 260 may operate to sense vaporizing temperature, and may be electronically communicative with PCB 112 so as to provide sensory information to PCB 112 (para. [0029] lines 50-54). The temperature sensor 260 may operate as a thermistor (para. [0029] lines 8-9).

161. Communication between sensor 260 and printed circuit board 112 may be bidirectional so that sensor 260 may operate to control at least portions of to transmit information to PCB 112 and additionally receive information from PCB 112, which operates to control electronic cigarette 10 (para. [0029] lines 26-31).

162. Bearing this information from the description in mind, the Court of Appeal considers that the object of the claimed invention of claim 10 is not only to provide a vaporizer that facilitates checking the status of the inserted cartomizer but that also allows to control the vaporization temperature. Being functionally independent of one another, these problems should be assessed separately for inventive step. The first partial problem has already been assessed in relation to claim 1 as granted and held to lack inventive step in relation to Pan and common general knowledge. The second partial problem is solved when Pan is combined with Kofford.

163. Once again, Pan is a realistic starting point for an inventive step analysis. According to the abstract of Pan, which is not contradicted by the description, the electronic cigarette of Pan includes an electronic airflow sensor to detect air movement generated by the user's inhaling or puffing act and a Single Chip Micyoco which controls the atomization process. According to the description (para. [0012]), when the user puffs on the electronic cigarette through the air-puffing hole on the first end of the atomizer, the electronic sensor detects an airflow and converts it to a signal, which then wakes up the single chip Micyoco to record the signal. The single chip Micyoco guided by its embedded software instructions may turn on the electric power source to supply an electricity current with a predefined

time length. This electric current preferably flows through the electric heat wire inside the atomizer tube, which then heats up the heat equalizer with absorbed liquid from the liquid-container.

164. In Pan, the magnitude of the electric current supplied from the electric power source 5 depends on the magnitude of signal detected from the airflow proportional to the strength of user's puffing action. This, in turn, controls the temperature and heat generated through the electric heating wire and heat equalizer (para. [0026]). The heat equalizer 269 is preferably made of a special fiber which can withstand temperature as high as 2000 degrees centigrade. The electric heating wire 265 twined on the heat equalizer 269 can be made from tungsten or another electric heating material, which produces heat when the electric current flows therethrough (para. [0028]).

165. While Pan includes indirect technical means to control the temperature in the atomizer, it provides the skilled person with motivation to look for improved control of the vaporization temperature. With this object in mind, the skilled person, starting from Pan would find and consult Kofford, and would arrive at the claimed invention according to claim 10.

166. Kofford discloses a vaporizing device and describes how “A temperature indicator may be in operative communication with the temperature regulator and configured to emit a temperature signal when the temperature of the receptacle is in the vaporizing temperature range” (para. [0013]). The vaporizing device of Kofford may include a temperature control unit in electrical communication with the power supply and the heating rod. A temperature sensor may be in electrical communication with the temperature control unit for measuring the temperature of the herbal receptacle, the heating conduit, or the heating rod to determine whether the temperature of the herbal receptacle is within the desired vaporization range (para. [0032]). When the device is powered up, the heating rod receives power from the power supply until the temperature sensor indicates that the temperature of the herbal receptacle is beyond the upper limit of the allowable temperature range, at which time power is restricted to the heating rod (para. [0033]).

167. Faced with this information, the skilled person would include a sensor in electrical communication with the CPU processor of Pan, and make the CPU processor operable to process environment information received from the sensor when the atomizer is inserted into the chamber.

Claim 11

168. Claim 11 reads: “The vaporizer of any of the previous claims, wherein the mouthpiece (220) is detachably connected to the cartomizer body.”

169. The Central Division found that Lee discloses the mouthpiece to be detachably connected to the cartomizer body (paras. [0020] and [0024]). Therefore, the vaporizer of granted claim 11 does not involve an inventive step as it is obvious to the person skilled in the art.

170. According to VMR Products, the Central Division overlooked that the person skilled in the art would not isolate particular teachings of Lee, such as the detachability of the mouthpiece. It must be taken into account that Lee is used by the Central Division for inventive step in the context of granted claim 1, in particular feature 1.8 relating to the window. In case the person skilled in the art would implement the cartridge level check window 160 of Lee, it must be considered that the window 160 of Lee is

provided in the detachable mouthpiece 150. Therefore, in case the window 160 of Lee is implemented in the Pan device, as well as the detachable mouthpiece 150, the person skilled in the art would at most directly follow the embodiment of Lee and try to implement the detachable mouthpiece 150 of Lee with the window 160. However, by doing so, the person skilled in the art would at least not arrive at feature 1.8, requiring the shell to include a window provided at a cartomizer receiving segment.

171. This argument fails because the skilled person would already arrive at claim 1 based on Pan and common general knowledge.

172. According to the description of the patent at issue, mouthpiece 220 may be removable or detachable, for instance through a screw thread, so as to permit access to container 240 (para. [0028] lines 44-47). Container 240 is provided within the cartomizer body (para. [0026] lines 33-34). So that a user may refill fluid 300A held in body 208, mouthpiece 220 may be removable from body 208 (para. [0025] lines 18-19). Various ways to make mouthpiece 220 removable are described (para. [0025] lines 20-23, para. [0034] lines 20-26).

173. Bearing this information from the description in mind, the Court of Appeal considers that the object of the claimed invention of claim 11 is to provide a vaporizer that facilitates checking the status of the inserted cartomizer and also to allow refilling of the cartomizer. Being functionally independent of one another, these problems should be assessed separately for inventive step. The first partial problem has already been assessed in relation to claim 1 as granted and held to lack inventive step in relation to Pan and common general knowledge.

174. Starting from Pan, the skilled person who wished to further improve the vaporizer to allow refilling of the cartomizer, would have consulted Lee. Lee discloses “a liquid refillable solution…. ..cartridge”, “the refillable solution to be filled in the cartridge 132” (para. [33], see also paras. [13-14], [17-19], [23], [25], [28-29]). It also discloses that the use of a separable mouthpiece ensures that the components “can be easily assembled with one another”(para. [12]).

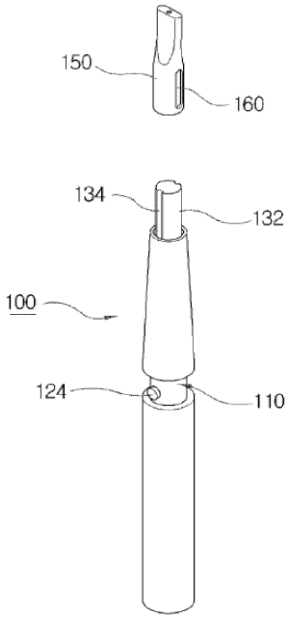


Fig.3

175. The person skilled in the art understands that detaching the mouthpiece permits disassembly of the mouthpiece from the body of the vaporizer, allowing refilling of the cartomizer. The detachable mouthpiece of Lee thus provides a solution to the second partial technical problem defined above. The skilled person would not have any technical difficulty implementing such a detachable mouthpiece on the vaporizer of Pan. As explained, this is independent of improving a vaporizer with regard to inspection of the content of the chamber, and the skilled person would arrive at the claimed invention, using its common general knowledge to design an appropriate position of the window.

Claim 12

176. Claim 12 reads: "The vaporizer of any of the previous claims, wherein the cartomizer further includes a basin (214B) for holding the vaporizable substance, and wherein the heating element is provided proximate to the basin in order to heat the basin."

177. The Central Division found that claim 12 does not involve an inventive step over Pan. In Pan the liquid-storing media 264 is – apart from those parts that connect to the wick-type heat equalizer – arranged in a liquid container 261, which can be considered as a basin for holding the vaporizable substance. The heating wire 265 and the heat equalizer 269 are arranged below this liquid container 261 in the viewing direction of Fig. 3. Pan, hence, discloses the cartomizer (the integrated electronic atomizer) to further includes a basin (the liquid container 261) for holding the vaporizable substance, and wherein the heating element (heating wire 265) is provided proximate to the basin (the liquid container 261) in order to heat the basin.

178. VMR Products is criticizing the Central Division for relying only on Pan. The Court of Appeal notes that NJOY attacked claim 12 based on several combinations including Pan and takes the view that the Central Division cannot be blamed for relying on Pan alone.

179. Apart from that, VMR Products refers to its arguments provided in the first instance showing that claim 12 involves an inventive step, but as explained this is insufficient.

Claim 13

180. Claim 13 reads: "The vaporizer of any of the previous claims, further comprising:

- a wicking element (216) provided within the cartomizer body; and
- an inhalation tube (222) in fluid connection with the heating element and the wicking element, wherein the heating element operable to heat the vaporizable substance to the vaporizing temperature is configured to create a vaporized fluid, and

wherein the inhalation tube is configured to let the vaporized fluid travel there through to the mouthpiece for inhalation by a user."

181. This claim lacks an inventive step for the reasons set out in relation to auxiliary request III.

Claim 14

182. Claim 14 reads: "The vaporizer of any of the previous claims, wherein the vaporizable substance is a fluid.

183. The Central Division found that the vaporizable substance in Pan is a liquid, which is a fluid. Hence, the added feature described in claim 14 is already anticipated by Pan.

184. The Court of Appeal concurs with this view.

Other requests

185. The Central Division dismissed further requests (paragraphs 151-154) and this has not been challenged on appeal.

DECISION

I. The appeal is rejected.

II. All other requests are rejected.

III. VMR Products shall bear the reasonable and proportionate legal costs and other expenses incurred by NJOY, up to the applicable ceiling.

Issued on 29 December 2025

Rian Kalden Date: 2025.12.29 13:11:37 +01'00'

Rian Kalden, presiding judge and legally qualified judge

Rian Kalden Date: 2025.12.29 13:12:10 +01'00'

Ingeborg Simonsson, legally qualified judge and judge-rapporteur

for technical reasons signed by presiding judge

Patricia Ursula Rombach Digitally signed by Patricia Ursula Rombach Date: 2025.12.29 11:26:24 +01'00'

Patricia Rombach, legally qualified judge

Wiem SAMOUD Signature numérique de Wiem SAMOUD Date : 2025.12.29 11:47:56 +01'00'

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Andrea Scilletta Firmato digitalmente da Andrea Scilletta Data: 2025.12.29 11:33:17 +01'00'

Andrea Scilletta, technically qualified judge