

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NJOY, INC, CB DISTRIBUTORS, INC., DR DISTRIBUTORS, LLC,
FIN BRANDING GROUP, LLC,
ELECTRONIC CIGARETTES INTERNATIONAL GROUP, LTD. f/k/a
VICTORY ELECTRONIC CIGARETTES CORPORATION, and
LOGIC TECHNOLOGY DEVELOPMENT LLC,
Petitioner,

v.

FONTEM HOLDINGS 1 B.V.,
Patent Owner

Case IPR2015-01304
Patent 8,899,239 B2

Before JOSIAH C. COCKS, DONNA M. PRAISS, and JO-ANNE M. KOKOSKI,
Administrative Patent Judges.

COCKS, *Administrative Patent Judge.*

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

NJOY, Inc., CB Distributors, Inc., DR Distributors, LLC, FIN Branding Group, LLC, Electronic Cigarettes International Group, Ltd. f/k/a Victory Electronic Cigarettes Corporation, and Logic Technology Development LLC (collectively, “Petitioner”) filed a Petition (“Pet.”) to institute an *inter partes* review of claims 1–3, 5–15, 17, and 18 of U.S. Patent No. 8,899,239 B2 (“the ’239 patent,” Ex. 1001). Paper 1. Fontem Holdings 1 B.V. (“Patent Owner”) filed a Preliminary Response (“Prelim. Resp.”). Paper 6. We have jurisdiction under 35 U.S.C. § 314.

Upon consideration of the Petition, Preliminary Response, and the evidence of record, we determine that Petitioner has not established a reasonable likelihood of prevailing with respect to the unpatentability of claims 1–3, 5–15, 17, and 18 of the ’239 patent. Accordingly, we deny the Petition and do not institute an *inter partes* review.

A. Related Matters

Petitioner identifies multiple cases pending in the Central District of California that could be affected by this proceeding. Pet. 2–3. Petitioner also identifies ten related *inter partes* review proceedings. *Id.* at 3. Patent Owner additionally identifies four petitions for *inter partes* review “filed by JT International S.A. prior to Logic Technology Development LLC’s acquisition.” Paper 5, 1.

B. The ’239 Patent

The ’239 patent titled “Electronic Cigarette,” is directed to an electronic cigarette that includes a shell, a cell, a control circuit, a nicotine solution, and an electro-thermal vaporization nozzle installed at the air suction end of the shell.

Ex. 1001, Abs. According to the '239 patent, the control circuit provides starting current to an electric heater arranged within the electro-thermal vaporization nozzle, and the cell that provides the power to control circuit can be a disposable or rechargeable battery. *Id.* at 1:65–2:7. The high temperature in the electro-vaporization nozzle causes nicotine liquid to rapidly vaporize to form a puff of smoke. *Id.* at 2:2–5.

Figure 1 of the '239 patent is reproduced below:

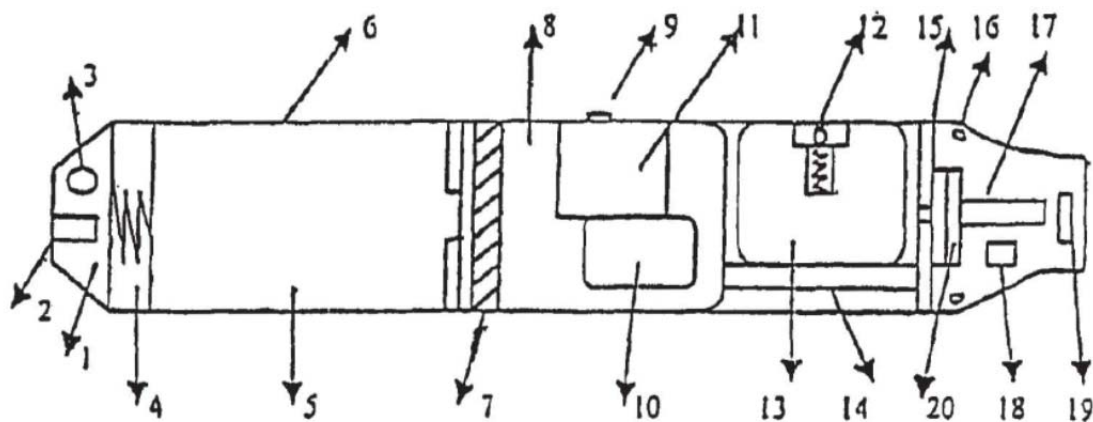


Figure 1 is a structural diagram of an electronic cigarette according to the invention of the '239 patent. *Id.* at 2:15–16. Resistance sensor 19 activates control circuit board 8 when a smoker puts the cigarette holder in his/her mouth, causing circuit board 8 to output two driving voltages, one to supply power to the electric heating element of electro-thermal vaporization nozzle 17, and the other to activate micro pump 11. *Id.* at 3:50–55. Nicotine solution is then pumped to electro-thermal vaporization nozzle 17 by nicotine storage container 13, vaporized into high temperature vapor on the heating element of electro-thermal vaporization nozzle 17, and ejected from the opening end. *Id.* at 3:55–60. In the air, the ejected vapor is expanded and condensed into micro aerosol droplets. *Id.* at 3:60–61.

The electronic cigarette also includes a “one-way valve for liquid injection 12” that is “sealed by a ball or cone member under the pressure of a spring,” and an airflow sensor 18 that “can be comprised of an array of integrated thermal sensitive resistors in the shape of film.” *Id.* at 2:46–49. The ’239 patent explains the following:

The airflow sensor 18 is sensitive to the diluted air which enters through air inlet 16 when a “suction” action take[s] place[.]. The sensed signals are transmitted to the control circuit, and the control circuit then stop[s] to supply power to the micro pump and the electric heater after a certain time delay.

Id. at 4:4–9.

Furthermore, the electronic cigarette is configured such that:

A red LED 3 blinks for each smoking action, and a sawtooth wave signal that lasts for 1.2 seconds is given by the control circuit for blinking signals, which provides a gradual change of luminance to imitate the ignition and combustion process of a conventional cigarette.

Id. at 4:23–27.

C. Illustrative Claims

Claims 1, 13, and 17 are independent, and are reproduced below:

1. An electronic cigarette, comprising:
a housing;
a control circuit electrically connected to an airflow sensor in the housing;
a light source at a first end of the housing, with the light source electrically connected to the control circuit, and with the light source configured to provide a gradual change in luminance via control by the control circuit, when the airflow sensor senses airflow, to simulate a conventional cigarette.
13. An electronic cigarette, comprising:
a housing;

a control circuit electrically connected to a battery, an airflow sensor, an atomizer and an LED, with the LED at a first end of the housing, configured such that the luminance of the LED changes based on an output of the airflow sensor; and
a liquid storage container adjacent to the atomizer.

17. A method of using an electronic cigarette, comprising:
sensing airflow in a housing of the electronic cigarette via a sensor;
providing a sensed airflow signal from the sensor to an electronic controller in the housing;
operating the electronic controller to gradually change a luminance of an LED at a first end of the housing to simulate a conventional burning cigarette top; and
vaporizing a liquid via an atomizer in the housing.

Ex. 1001, 6:38–47; 7:12–19; 8:10–17.

D. The Prior Art

Petitioner relies on the following prior art references:

Reference	Description	Date	Exhibit No.
Hongbin	CN 1233436A	Nov. 3, 1999	1003 ¹
Mielordt	US 5,819,756	Oct. 13, 1998	1004
Cox	US 6,234,167 B1	May 22, 2001	1005
Susa	EP 0 845 220 A1	Dec. 24, 1997	1006
Voges	US 6,196,218 B1	Mar. 6, 2001	1007

¹ Exhibit 1003 includes both CN 1233436A, which is written in Chinese, and an English translation of that document. Pursuant to 37 C.F.R. § 42.6(a)(3), combined documents are not permitted. All evidence must be filed separately in the form of an exhibit and labelled properly. For purposes of this Decision, however, we will not require refiling of the English translation of CN1233436A as a separate exhibit.

E. The Alleged Grounds of Unpatentability

Petitioner contends that claims 1–3, 5–15, 17, and 18 of the ’239 patent are unpatentable under 35 U.S.C. § 103(a) on the following grounds:

References	Claims Challenged
Hongbin and Mielordt	1, 2, 10, 17, and 18
Hongbin, Mielordt, and Cox	3, 5, 7, 8, 13, and 14
Hongbin, Mielordt, Cox, and Susa	6, 9, 11, and 15
Hongbin, Mielordt, and Voges	12

II. ANALYSIS

A. Claim Construction

The Board construes claims in an unexpired patent by applying the broadest reasonable interpretation in light of the specification. 37 C.F.R. § 42.100(b); *see also In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1277 (Fed. Cir. 2015) (“It can therefore be inferred that Congress impliedly approved the existing rule of adopting the broadest reasonable construction.”) Claim terms also are given their ordinary and customary meaning as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Nevertheless, a “claim term will not receive its ordinary meaning if the patentee acted as his own lexicographer and clearly set forth a definition of the disputed claim term in either the specification or prosecution history.” *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002).

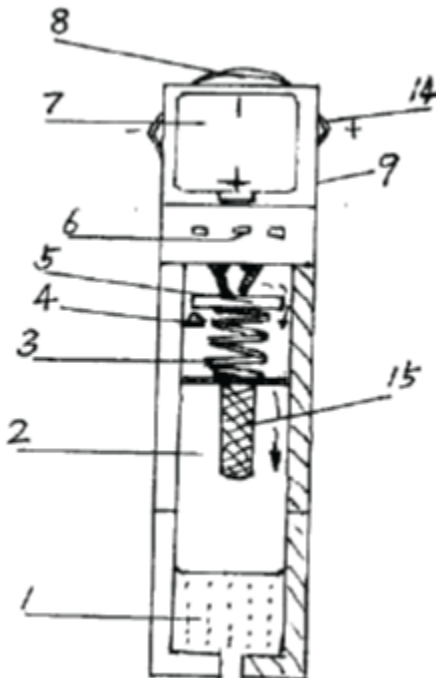
Here, neither party contends that the record conveys a particular lexicographic definition for any claim term. In that respect, for purposes of this Decision, we have given all terms their ordinary and customary meaning, and determine that none of the claim terms requires an explicit construction.

B. Obviousness over Hongbin and Mielordt

Petitioner contends that claims 1, 2, 10, 17, and 18 are unpatentable over the combination of Hongbin and Mielordt.

1. Overview of Hongbin

Hongbin is titled “Liquid Odorous Cigarette.” Ex. 1003, 6.² Hongbin explains that “the present invention is to design a type of liquid odorous cigarette which has no toxicity or harm and does not pollute the environment.” *Id.* at 8. Hongbin’s Figure 1 is reproduced below:

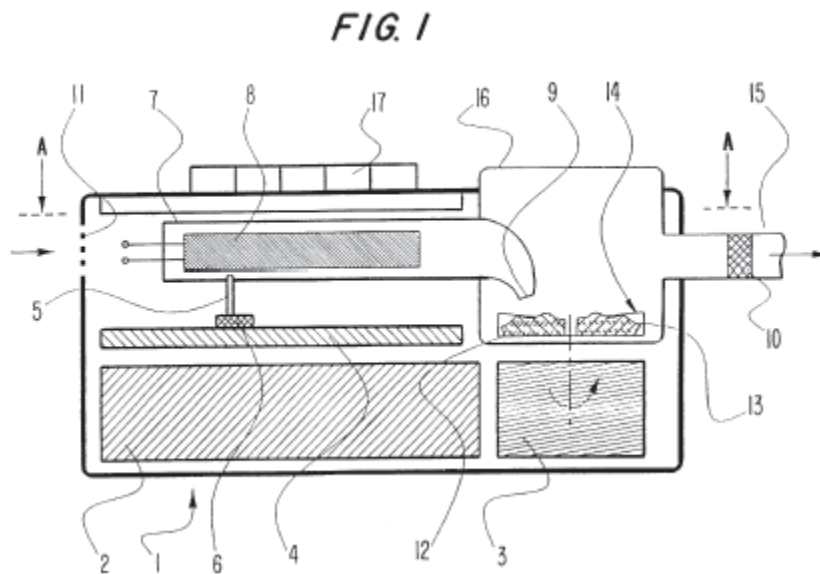


² We refer to the page numbering of Hongbin appearing in the lower right hand corner of the document.

Hongbin's Figure 1 above shows "a cross-sectional schematic diagram of the first design scheme of a cigarette holder." *Id.* at 9. Figure 1 depicts filter tip 1, smoking material evaporation chamber 2, spring 3, power contactor 4, valve plate 5, gas inlet 6, power cell 7, indicator lamp 8, outer case 9, inner case 10, interlayer 11, button 12, trigger piece 13, external power source 14, and electronic heater 15. *Id.*

2. Overview of Mielordt

Mielordt is titled "Smoking or Inhalation Device," and is directed to "[a] device for smoking tobacco or another smoking product or for inhaling aerosols released by corresponding substances when they are heated." Ex. 1004, Title; Abs. Mielordt's Figure 1 is reproduced below:



Mielordt's Figure 1 "is a schematic representation of a longitudinal cross-section through a preferred embodiment of the invention." *Id.* at 5:7–9. In connection with the "appliance 1" shown in Figure 1, Mielordt conveys the following:

Heated air leaving the hot air generator 7 is used to convection heat the smoking product 13. The smoker inhales from a standpipe 15 the required quantity of air through an inlet 11 provided in the wall of the housing. In this flow path, the hot air generator 7 is integrated in such a way that ambient air sucked through the inlet 11 will reach the hot air generator 7 directly, to then flow along a heating appliance 8. This results in heating of the smoking product in areas near the surface.

The air outlet nozzle 9 of the hot air generator 7 is directed into the smoking chamber 16 of the smoking device 1, the outlet being positioned closely to the smoking product 13 in the reservoir 12. At this point, the heated air reaches a temperature at which the smoking product 13 becomes pyrolytically converted to release aerosols.

Id. at 5:29–43.

Mielordt also conveys in a variation of its device, “the psychological impression of conventional smoking” may be effected through “appropriate use of a light-emitting diode (LED), most suitably red or orange, which would be activated with the heating appliance.” *Id.* at 7:27–32.

3. Discussion

As noted above, claim 1 is directed to an electronic cigarette that includes a housing, a control circuit electrically connected to an airflow sensor, and

a light source at a first end of the housing, with the light source electrically connected to the control circuit, and with the light source configured to provide a gradual change in luminance via control by the control circuit, when the airflow sensor senses airflow, to simulate a conventional cigarette.

Ex. 1001, 6:42–47.

Claim 17 is drawn to a corresponding method of using an electronic cigarette that includes steps of sensing airflow in a housing via a sensor, providing a sensed airflow signal from the sensor to an electronic controller, and “operating the electronic controller to gradually change a luminance of an LED at a first end

of the housing to simulate a conventional burning cigarette tip.” *Id.* at 8:14–16: Lastly, claim 17 recites a step of vaporizing a liquid via an atomizer in the housing.

Petitioner contends that Hongbin discloses all the features of claims 1 and 17 with the exception of those features directed to the gradual change of luminance of a light source by an electronic controller or circuit. Pet. 15. To remedy that deficiency, Petitioner relies on Mielordt. According to Petitioner, Mielordt “suggests” the feature in question to a person of ordinary skill in the art. *Id.* In justifying that position, Petitioner relies on Mielordt’s disclosure of creating a “psychological impression of conventional smoking” by illuminating an LED. *Id.* at 18. Pointing to the Declaration testimony of its expert, Dr. Samir Nayfeh, Petitioner contends that, in light of Mielordt’s teachings, a person of ordinary skill in the art “would have been motivated to implement Mielordt in a way that imitated the gradual change in luminance during a puff known to be exhibited by real cigarettes.” *Id.* (citing Ex. 1002 ¶ 61). Petitioner also offers the following arguments:

A POSA [person of ordinary skill in the art] would have known that such control of an LED was possible using components readily available in 2003. Mielordt, for example, describes a controller that controls power to a heater in response to rate of air flow so as to maintain a constant temperature at the heater. Ex. 1004 at 3:36-46; 6:1-8. This control function is similar to (and at least as complicated as) controlling the luminance of an LED as in claim 1. Nayfeh Decl. at ¶ 62. Moreover, the controller of Mielordt is described as a software controller, indicating that other control programs could be loaded to configure the controller for control functions such as control of luminance. Ex. 1004 at 6:11-13. A POSA could have readily implemented an electronic controller, as described in Mielordt, programmed to provide a desired gradual change in luminance when the airflow sensor senses inhalation. Nayfeh Decl. at ¶ 62. Such a task would have been even easier in March of 2003 than in 1994,

when Mielordt was filed, as a result of advances in electronics.
Nayfeh Decl. at ¶ 62.

Pet. 18–19.

Thus, Petitioner is of the view that Mielordt’s disclosure of controlling a heater to maintain a constant temperature conveys to a skilled artisan that the luminance of an LED may also be controlled, and that such control extends to “a desired gradual change in luminance when the airflow sensor senses inhalation.” According to Petitioner, the support for its position in that regard flows from paragraph 62 of Dr. Nayfeh’s Declaration.

Patent Owner does not agree with Petitioner. To that end, Patent Owner notes that neither Hongbin nor Mielordt describes the gradual change in luminance of a light source, and discounts, as insufficient, Petitioner’s contention that a skilled artisan “could have” programmed a controller to effect that gradual luminance change. PO Resp. 21–22.

As recognized by Patent Owner, we discern that neither Hongbin nor Mielordt describes operation of an electronic component so as to effect a gradual change in luminance of a light source. It also is not apparent to us that either reference discloses that the output of an airflow sensor, via an electric signal to an electronic component or circuit, proceeds to control the luminance of a light source. We are cognizant that Petitioner directs our attention to Hongbin’s “gas suction control valve plate 5” and “spring 3” as constituting an airflow sensor whose movement triggers power source contactor 4 to cause indicator lamp 8 to glow. Pet. 20–21. Petitioner, however, does not provide sufficient elucidation as to why valve plate 5 and spring 3 reasonably are regarded as an airflow sensor. Indeed, those components are more readily likened to the one-way valve 12 and spring arrangement in the ’239 patent, which is distinguished from airflow sensor 18. *See* Ex. 1001, 2:46–49.

In any event, even assuming that the reference conveys an airflow sensor and triggering of a light source such as an LED, the parties' dispute, at its heart, centers on whether a skilled artisan would have known to "program" a controller to effect gradual change in luminance of an electronic cigarette. *See* Pet. 18–19; PO Resp. 21–22. Petitioner relies heavily on Dr. Nayfeh's testimony at paragraph 62 of his Declaration in proposing that a person of ordinary skill would have had such knowledge. Upon review, however, we observe that the paragraph spanning pages 18 and 19 of the Petition (reproduced above) is taken verbatim from Dr. Nayfeh's Declaration. The only proffered support for the premise that a skilled artisan would have known that "control programs could be loaded to configure the controller for control functions such as control of luminance," is the disclosure in Mielordt that a controller is configured to control a heater, and the general statement in Mielordt that "software" can be used to adjust air temperature or a dire unit's speed for a "particular smoking profile." *See* Ex. 1004, 6:8–13.

Petitioner does not explain adequately its leap in logic in advocating that a skilled artisan somehow also would have known from Mielordt's teachings that a light source may be controlled as to present a gradual change in luminance. Petitioner's reliance on Dr. Nayfeh's testimony is unavailing in meeting its burden to cause the institution of trial based on Hongbin and Mielordt. Indeed, Dr. Nayfeh's testimony is conclusory, and lacks little if any explanation for the positions to which he attests. Nothing requires a fact finder to credit unexplained testimony of an expert. *See Rohm and Haas Co. v. Brotech Corp.*, 127 F.3d 1089, 1092 (Fed. Cir. 1997).

Accordingly, we have considered the record before us, including the Petition, the testimony of Dr. Nayfeh, and Patent Owner's Preliminary Response, and conclude that Petitioner has not established a reasonable likelihood of success

in showing that claims 1 and 17 are unpatentable over the combination of Hongbin and Mielordt. We also reach that conclusion with respect to claims 2, 10, and 18, which depend from either claim 1 or claim 17.

C. Obviousness over Hongbin, Mielordt, and Cox

Petitioner contends that claims 3, 5, 7, 8, 13, and 14 are unpatentable over the combination of Hongbin, Mielordt, and Cox.

1. Claims 3, 5, 7, and 8

Each of claims 3, 5, 7, and 8 ultimately depends from claim 1. Petitioner does not rely on Cox to make up for the deficiencies with respect to claim 1 noted above with respect to the combination of Hongbin and Mielordt. Accordingly, we also are not persuaded that Petitioner has shown a reasonable likelihood of success in showing that claims 3, 5, 7, and 8 are unpatentable over Hongbin, Mielordt, and Cox.

2. Claims 13 and 14

Claim 13 is independent, and claim 14 depends from claim 13. Like claim 1, claim 13 is drawn to an electronic cigarette with a housing, and includes the following recitation:

a control circuit electrically connected to a battery, an airflow sensor, an atomizer and an LED, with the LED at a first end of the housing, configured such that the luminance of the LED changes based on an output of the airflow sensor[.]

Ex. 1001, 7:14–19.

Claim 13 thus requires a configuration in which the luminance of an LED changes based on an output of an airflow sensor. Petitioner generally relies on the same arguments that it advanced for claim 1 in proposing that claim 13 is unpatentable over the combination of Hongbin, Mielordt, and Cox. See Pet. 34–

35. As discussed above, those arguments are premised on the contention that one of ordinary skill in the art would have derived from Hongbin and Mielordt's teachings that an electronic cigarette would include a light source electrically connected to a control circuit, and an airflow sensor whose output operates to change the luminance of the light source. We did not find the arguments persuasive in connection with claim 1. With respect to claim 13, we also do not conclude that the Petition before us provides a suitable evidentiary basis for concluding that claim 13 would have been obvious over the combination of Hongbin, Mielordt, and Cox.

Accordingly, we are not persuaded that Petitioner has established a reasonable likelihood of success in showing that claims 13 and 14 would have been obvious over the combination of Hongbin, Mielordt, and Cox.

D. Remaining Grounds of Unpatentability

Petitioner also proposes that: (1) claims 6, 9, 11, and 15 would have been obvious over the combination of Hongbin, Mielordt, Cox, and Susa; and (2) claim 12 would have been obvious over the combination of Hongbin, Mielordt, and Voges. Each of claims 6, 9, 11, and 12, ultimately depends from claim 1, and claim 15 ultimately depends from claim 13. Petitioner relies on Susa and Voges to account for features added by claims 6, 9, 11, 12, and 15, and not to make up for the deficiencies that were noted concerning claims 1 and 13.

Accordingly, on this record, we conclude that Petitioner has not shown a reasonable likelihood of success in showing that: (1) claims 6, 9, 11, and 15 would have been obvious over the combination of Hongbin, Mielordt, Cox, and Susa; or that (2) claim 12 would have been obvious over the combination of Hongbin, Mielordt, and Voges.

III. CONCLUSION

For the foregoing reasons, we conclude that, on the present record, Petitioner has not established a reasonable likelihood that it would prevail on its challenge that claims 1–3, 5–15, 17, and 18 of the '239 patent are unpatentable.

IV. ORDER

After due consideration of the record before us, it is ORDERED that the Petition is *denied*.

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Patent 8,899,239 B2

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