

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NU MARK LLC,
Petitioner,

v.

FONTEM HOLDINGS 1 B.V.,
Patent Owner.

Case IPR2016-01307
Patent 8,375,957 B2

Before RAMA G. ELLURU, JO-ANNE M. KOKOSKI, and
KIMBERLY McGRAW, *Administrative Patent Judges*.

McGRAW, *Administrative Patent Judge*.

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

I. INTRODUCTION

Nu Mark LLC (“Petitioner”) filed a Petition (Paper 1 “Pet.”) requesting an *inter partes* review of claims 1, 3, 6–11, 14, 16–18, and 21–23 of U.S. Patent No. 8,375,957 B2 (Ex. 1001 “the ’957 patent”). See 35 U.S.C. § 311. Fontem Holdings 1 B.V. (“Patent Owner”) filed a Preliminary Response (Paper 9 “Prelim. Resp.”). We have jurisdiction under 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

For the reasons that follow, we do not institute an *inter partes* review of the challenged claims of the ’957 patent.

A. Related Proceedings

Petitioner identifies *Fontem Ventures BV v. Nu Mark LLC*, 2:16-cv-02291 (C.D. Cal.), in which Fontem asserted the ’957 patent and seven other patents (collectively, “the Asserted Patents”) against Petitioner, as a related matter. Pet. 3. Petitioner also identifies *Fontem Ventures BV v. Nu Mark LLC*, 2:16-cv-04537 (C.D. Cal.), in which Patent Owner asserted a number of patents “all of which are related to one or more of the Asserted Patents,” as a related matter. *Id.* Additionally, Petitioner identifies over thirty district court actions brought by Fontem or its predecessors-in-interest that involve the ’957 patent, the Asserted Patents, or other patents related to the Asserted Patents, as related matters. *Id.* at 3–7.

Petitioner also states it concurrently filed nine petitions for *inter partes* review of the Asserted Patents (*id.* at 8), and identifies an additional

thirteen *inter partes* review proceedings as related to the present petition (*id.* at 8–11), including two proceedings that involve the '957 patent (*id.* at 14–16) (citing IPR2015–00098¹ and IPR2015-01513²).

B. The '957 Patent

The '957 patent is directed to an electronic cigarette or cigar comprising, *inter alia*, a battery assembly and an atomizer assembly. Ex. 1001, Abstract; *see also* claims 1, 10, and 23 (independent claims). Figures 2A and 3 of the '957 patent are reproduced below:

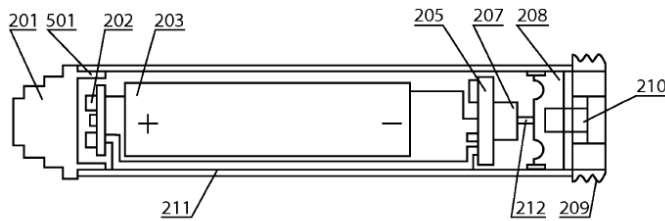


Figure 2A

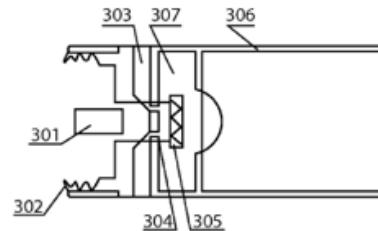


Figure 3

Figure 2A is a diagram of the battery assembly disclosed in the '957 patent, including external screwthread electrode 209. *Id.* at 2:27–28, 3:4–10.

Figure 3 is a diagram of an atomizer assembly disclosed in the '957 patent, including internal screwthread electrode 302. *Id.* at 2:31–32; 3:32–33.

Figure 5A, shown below, is a diagram of the internal structure of an assembled electronic cigarette described in the '957 patent. *Id.* at 2:35–36.

¹ The Board denied institution of *inter partes* review in IPR2015-00098. (*Logic Tech. Dev., LLC v. Fontem Holdings 1 B.V.*, Case IPR2015-00098, Paper 8 (PTAB May 11, 2015)).

² IPR2015-01513 was dismissed prior to a decision on institution following settlement by the parties. (*JT Int'l, S.A. v. Fontem Holdings 1 B.V.*, Case IPR2015-01513, Paper 14 (PTAB Dec. 14, 2015)).

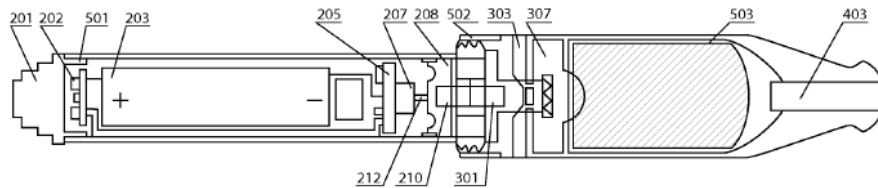


Figure 5A

Figure 5A of the '957 patent is a diagram of an assembled electronic cigarette of the '957 patent that includes the battery assembly of Figure 2A and the atomizer assembly of Figure 3. *Id.* at 3:57–61. The '957 patent states external screwthread electrode 209, located on the battery assembly housing, mates with internal screwthread electrode 302, located on the atomizer assembly housing. *Id.* at 2:63–3:1. The internal and external screwthread electrodes each have a hole drilled in its center. *Id.* at 3:27–29, 3:42–44.

C. Claims

Petitioner challenges claims 1, 3, 6–11, 14, 16–18, and 21–23. Of the challenged claims, claims 1, 10, and 23 are independent. Pet. 1. Claim 1, reproduced below, is illustrative of the subject matter at issue in this proceeding:

1. An electronic cigarette or cigar comprising:
 - a battery assembly comprising a battery assembly housing having a first end and a second end, with a battery, a microcontroller unit (MCU) and a sensor electrically connected to a circuit board within the battery assembly housing;
 - a primary screwthread electrode located on the first end of the battery assembly housing and having a hole through its center;
- an atomizer assembly comprising:
 - an atomizer assembly housing having a first end and a second end;

an atomizer, and a solution storage area in the atomizer assembly housing;

a secondary screwthread electrode located on the second end of the atomizer assembly housing and having a hole through its center, the battery assembly and the atomizer assembly connected through the primary and secondary screwthread electrodes; and

with the atomizer including a heater coil wound around a porous component.

D. Prior Art Relied Upon

Petitioner applies the following prior art references in the grounds of unpatentability asserted in the Petition:

U.S. Patent No. 2,057,353 (Ex. 1005, “Whittemore”)

U.S. Patent No. 4,947,874 (Ex. 1006, “Brooks”)

U.S. Patent No. 5,177,424 (Ex. 1024, “Connors”)

E. Asserted Grounds of Unpatentability

Petitioner argues that the challenged claims are unpatentable based upon the following grounds:

References	Basis	Challenged Claim(s)
Brooks and Whittemore	§ 103	1, 3, 6–11, 14, 16–18, 22, and 23
Brooks, Whittemore, and Connors	§ 103	21

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs.*,

LLC v. Lee, 136 S. Ct. 2131, 2136 (2016). Claim terms are generally given their ordinary and customary meaning, as 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). For purposes of this Decision, only the term “screwthread electrode” requires construction and only to the extent necessary to resolve the present dispute. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

Screwthread electrode

The parties provide slightly different constructions of “screwthread electrode.” Based on their ordinary and customary meanings, Petitioner contends that the term “screwthread” means a “helical ridge formed on a cylindrical core” and the term “electrode” means an “electrical conductor through which an electric current enters or leaves a medium.” Pet. 21. Thus, according to Petitioner, a “screwthread electrode” should be construed as a “helical fastener or connector that includes an electrical conductor for passing electric current.” *Id.*

Patent Owner responds that Petitioner’s construction is unreasonably broad because it merely requires the “screwthread electrode” to “include” an electrical conductor, rather than requiring that the screwthread electrode itself be formed from a conductor. Prelim. Resp. 8. Patent Owner asserts that “screwthread electrode” should be construed as “a projecting helical rib of a screw formed from a conductor for passing electricity that mates with a corresponding groove between projecting helical ribs of a screw formed from a conductor for passing electricity.” Prelim. Resp. 7.

We agree with Patent Owner that the screwthread itself must conduct, or pass, electricity. Prelim. Resp. 8. The broadest reasonable interpretation does not mean the broadest possible interpretation. *See Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015) (stating that although claim terms must be given their broadest reasonable interpretation, the interpretation must still be reasonable). To the extent Petitioner is arguing that the term “screwthread electrode” does not require the screwthread to conduct electricity, such a construction is unreasonable. The claims do not recite a screwthread and a separate electrode; rather the term “screwthread” modifies “electrode.” If, as Petitioner urges, a “screwthread electrode” does not require the screwthread to act as an electrode, the term “screwthread” modifying “electrode” would be superfluous. *See Merck & Co., Inc. v. Teva Pharmaceuticals USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) (rejecting a proposed claim construction that would render claim terms superfluous).

Moreover, the specification discloses that a “screwthread electrode” functions as an electrode. For example, the specification states screwthread electrode 601 that matches external thread electrode 209 on the battery assembly may be used as the charging interface. Ex. 1001, 4:45–61, *see also* Fig. 6.

Accordingly, based on the present record, we construe “screwthread electrode” according to the ordinary and customary meaning of the individual claim terms, i.e., as a screwthread (e.g., a helical ridge formed on a cylindrical core) that acts an electrode (i.e., an electrical conductor that passes electricity).

*B. Asserted Obviousness of Claims 1, 3, 6–11, 14, 16–18, 22, and 23
over Brooks and Whittemore*

Petitioner contends claims 1, 3, 6–11, 14, 16–18, 22, and 23 would have been obvious under 35 U.S.C. § 103 over the combination of Brooks and Whittemore. Pet. 13, 30–81. Petitioner provides explanations as to how Brooks and Whittemore allegedly teach the limitations of the challenged claims and relies on the Declaration of John Collins, Ph.D. (Ex. 1003) in support of its contentions. *Id.*

1. Overview of Brooks

Brooks, titled “Smoking Articles Utilizing Electrical Energy,” discloses a device having two basic parts: a reusable controller and a disposable cartridge or “cigarette.” *See, e.g.*, Ex. 1006, 7:15–16.

Figure 2 of Brooks illustrates an embodiment of the invention and is reproduced below:

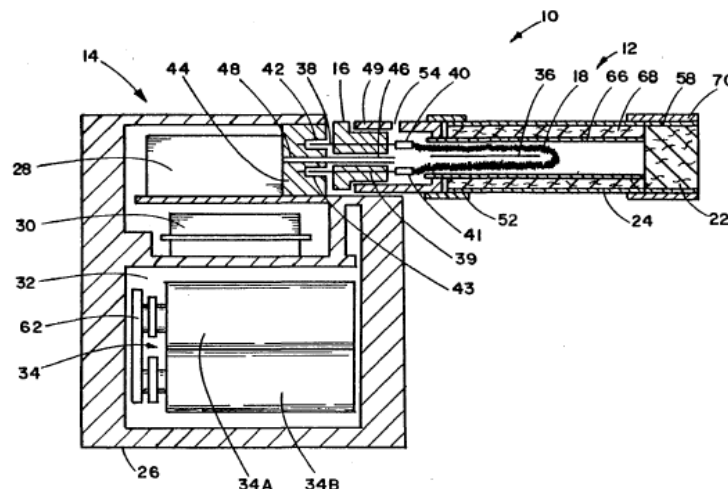


Figure 2 is a sectional view of an embodiment of the smoking device described in Brooks having reusable controller 14 and disposable cigarette 12. Ex. 1006, 6:62–63, 7:15–16. To connect disposable cigarette 12 to reusable controller 14, the user inserts plug 16 of cigarette 12 into receptacle

44 of controller 14. *See, e.g., id.* at 8:33–38, 10:34–35. Both plug 16 and receptacle 44 are made from electrically insulative, i.e., nonconductive, materials. *See, e.g., id.* at 8:31–33, 9:41–43. Plug 16 includes two electrical connector pins or prongs 38, 39 and receptacle 44 has two electrical terminals 42, 43. *See, e.g., id.* at 8:33–38, 9:41–43. Brooks explains that an electrical connection is made by engaging electrical connector pins 38, 39 with electric terminals 42, 43. *See, e.g., id.* at 8:36–38, 9:41–43, 10:34–45.

Receptacle 44 also includes tube 48, which is inserted into passageway 46 of plug 16 to be in airflow communication with the internal region of the cigarette. *Id.* at 9:43–46. Brooks explains that electrical connector pins 38, 39 and passageway 46 are offset with respect to the longitudinal axis of plug 16. *Id.* at 8:40–42, Fig. 1A.

Figure 1A of Brooks is reproduced below.

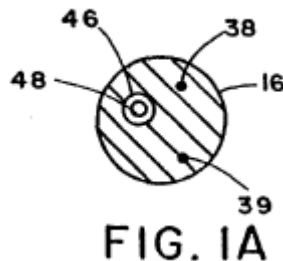


Figure 1A illustrates a sectional view of the disclosed smoking device that depicts plug 16, tube 48, passageway 46, and electrical connectors pins 38, 39.

2. Overview of Whittemore

Whittemore, titled “Vaporizing Unit for Therapeutic Apparatus,” describes a battery-powered device for vaporizing medications. *See, e.g.,* Ex. 1005, 1:5–10. Figure 2 of Whittemore is reproduced below:

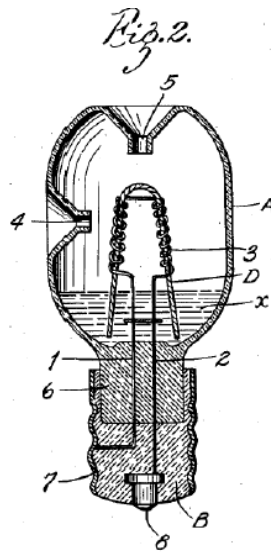


Figure 2 shows a vaporizing unit described in Whittemore having vessel A, for carrying medicament x, connected to terminal plug B. Ex. 1005, 1:38–41. Terminal plug B is “adapted to be [placed] in a terminal socket forming part of an electrical circuit, [such as] an ordinary flashlight.” *Id.* at 1:40–45. Coil 3 is attached to electrical conductors 1 and 2. *Id.* at 2:26–30. Conductor 1 is soldered to the inner surface of metal shell 7 of plug B and conductor 2 is soldered to the inner surface of center conducting button 8 of plug B. *Id.* at 1:45–49.

3. Discussion

a. Claims 1, 10, and 23

Independent claims 1 and 10 of the '957 patent require the electronic cigarette or cigar to have “a primary screwthread electrode located on the first end of the battery assembly” and “a secondary screwthread electrode located on the second end of the atomizer assembly housing.” Both claims further require “the battery assembly and the atomizer assembly connected through the primary and secondary screwthread electrodes.” Independent

claim 23 recites similar limitations.³ Claim 1 further requires each of the screwthread electrodes to have “a hole through its center.”

Petitioner relies on the combination of Brooks and Whittemore for teaching the “screwthread electrode” limitations. Petitioner admits that Brooks “does not disclose a screwthread connection,” but rather discloses “a two-piece device in which the components are joined using a connector that provides a mechanical linkage and electrical conductivity.” Pet. 25–26, 50.

To remedy the deficiency in Brooks, Petitioner relies on Whittemore, stating “Whittemore discloses a threaded connection.” *Id.* at 30–31. Petitioner contends that it would have been obvious to combine Brooks and Whittemore to provide an electronic cigarette with two parts that are electrically and mechanically coupled using a screwthread electrode rather than a plug electrode. *Id.* at 30–37. Petitioner further contends that it would have been obvious to adapt Brooks to include the threaded electrode as taught by Whittemore, while maintaining the hole through the center of the electrode that Brooks already discloses. *Id.* at 53, 60–61.

Even if we accept that an ordinary artisan would have made the proposed combination, Petitioner has not shown sufficiently that the proposed combination would have resulted in the claimed “screwthread electrode,” as opposed to merely a screwthread. Petitioner contends that the proposed Brooks-Whittemore combination would have replaced Brooks’ plug 16 and receptacle 44 with Whittemore’s screwthread electrodes, yet

³ Claim 23 requires the first screwthread electrode be “on the back end” of the battery assembly and the second screwthread electrode be on “the front end” of the atomizer assembly.

would have “retain[ed] Brooks’ electrical and airflow connections between its two components.” Pet. 35. Petitioner further contends that “electricity would flow from controller 14 to cigarette 12 as in the unmodified [Brooks] device, and tube 48 would likewise be retained in order to facilitate airflow to current actuation mechanism 28.” *Id.* at 35–36.

However, plug 16 and receptacle 44 of Brooks, which Petitioner contends would have been replaced by Whittemore’s screwthread electrode, are made of non-conductive materials and do not conduct electricity. In Brooks, the electrical connection is achieved through electrical connector pins 38, 39, which engage with the electrical terminals located in receptacle 44. Ex. 1006, 8:33–38, 9:41–43, 10:34–38. Given that Petitioner expressly states adapting Brooks to include the threaded connection of Whittemore “would retain all [of] the features of Brooks except that the mating of the two detachable components would be achieved with threaded pieces” (Pet. 35), and that electricity “would flow from the controller 14 to cigarette 12 as in the unmodified [Brooks] device” (*id.*), it follows that the electrical connector pins and electrical terminals, not the screwthread, provide the electrical connection between the two components of the device.

Therefore, under Petitioner’s own description of the proposed modified device, the non-conductive plug and receptacle of Brooks would have changed to a screwthread but the electrical connections, i.e., the electrical connector pins and the electrical terminals, of Brooks would have been retained. As a result, the electrical connections between the two devices would have been achieved by the electrical connector pins and the electrical terminals found in the Brooks device, and not by the screwthread of the Whittemore device.

It is Petitioner's burden to explain how the combined teachings of Brooks and Whittemore disclose primary and secondary screwthread electrodes as required by the claims. Petitioner has not shown sufficiently how Whittemore's screwthread would have functioned as an electrode, and, therefore has not carried its burden. Accordingly, the record before us does not establish a reasonable likelihood that Petitioner would prevail in establishing that independent claims 1, 10, and 23 would have been obvious over the combined teachings of Brooks and Whittemore.

b. Claims 1 and 22

Independent claim 1 of the '957 patent recites a primary screwthread electrode and a secondary screwthread electrode, each "having a hole through its center." Claim 22, which depends from independent claim 10, requires "at least one of the primary and secondary screwthread electrodes having a hole through its center."

Petitioner relies upon Whittemore as disclosing the claimed "screwthread electrodes" and Brooks as disclosing a hole through the center of an electrode. However, Petitioner does not identify a persuasive reason why a person of ordinary skill in the art would have been prompted to combine the references to arrive at a *screwthread electrode having a hole through its center*. See, e.g., Pet. 30–37, 48–53. Petitioner states one skilled in the art would have been motivated to adapt Brooks to include a screwthread electrode as taught by Whittemore, while maintaining the hole through the center of the electrode that Brooks already discloses, "for the reasons discussed in Section 9.1." *Id.* at 53. However, Section 9.1 of the Petition does not address the limitation regarding *a hole through the center of a screwthread electrode*. A showing of obviousness must be supported

by an articulated reasoning with rational underpinning to support a motivation to combine the prior art teachings. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 417 (2007). A conclusory statement unsupported by a reasoned explanation does not articulate a sufficient motivation to combine. Thus, Petitioner has not established a reasonable likelihood that it would prevail on the ground that claims 1 or 22 of the '957 patent would have been obvious over the combination of Brooks and Whittemore.

c. Claims 3, 6–9, 11, 14, 16–18, and 22

Petitioner contends that dependent claims 3 and 6–9 (which depend directly from independent claim 1) and claims 11, 14, 16–18, and 22 (which depend directly or indirectly from claim 10) are unpatentable under 35 U.S.C. § 103 over Brooks and Whittemore. Pet. 64–81. As discussed above, Petitioner has not sufficiently shown that Brooks or Whittemore, either alone or in combination, teaches the primary or secondary “screwthread electrodes,” as required by independent claims 1 and 10. Nor has Petitioner sufficiently shown that Brooks or Whittemore, either alone or in combination, teaches a primary or secondary screwthread electrode “having a hole through its center” as required by independent claim 1. Therefore, on this record, the information presented does not show a reasonable likelihood that Petitioner would prevail in establishing that claims 3, 6–9, 11, 14, 16–18, and 22 are unpatentable for obviousness over the combinations of Brooks and Whittemore. *See Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 520 F.3d 1358, 1365 (Fed. Cir. 2008) (“[D]ependent claims are nonobvious if the independent claims from which they depend are nonobvious.”).

*C. Asserted Obviousness of Claim 21 over
Brooks, Whittemore, and Connor*

Petitioner contends that claim 21, which directly depends from claim 10, is unpatentable under 35 U.S.C. § 103 over Brooks, Whittemore, and Connor. Pet. 81–87. As discussed above, Petitioner has not sufficiently shown that Brooks or Whittemore, either alone or in combination, teaches the primary or secondary “screwthread electrodes,” as required by independent claim 10. Petitioner does not argue that Connor teaches the primary or secondary screwthread electrode limitations of independent claim 10. *See id.* Therefore, on this record, the information presented does not show a reasonable likelihood that Petitioner would prevail in establishing that claim 21 is unpatentable over the combined teachings of Brooks, Whittemore, and Connor.

III. CONCLUSION

For the foregoing reasons, we determine that the information presented in the Petition does not show that there is a reasonable likelihood that Petitioner would prevail at trial with respect to at least one of the challenged claims of the ’957 patent based on any grounds presented in the Petition. On this record, we deny the Petition for *inter partes* review of claims 1, 3, 6–11, 14, 16–18, and 21–23 of the ’957 patent.

ORDER

Accordingly, it is

ORDERED that the petition for *inter partes* review of U.S. Patent No. 8,375,957 B2 is *denied* as to all challenged claims, and no trial is instituted.

PETITIONER:

Elizabeth Stotland Weiswasser
Adrian C. Percer
Jeremy Jason Lang
Anish R. Desai
WEIL, GOTSHAL & MANGES LLP
elizabeth.weiswasser@weil.com
adrian.percer@weil.com
jason.lang@weil.com
anish.desai@weil.com

PATENT OWNER:

Michael J. Wise
Joseph P. Hamilton
PERKINS COIE LLP
Mwise@PerkinsCoie.com
JHamilton@perkinscoie.com

cdc