

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

R.J. REYNOLDS VAPOR COMPANY
Petitioner,

v.

FONTEM HOLDINGS 1 B.V.,
Patent Owner.

Case IPR2016-01532
Patent 8,365,742 B2

Before BRIAN J. McNAMARA, JEREMY M. PLENZLER, and
JO-ANNE M. KOKOSKI, *Administrative Patent Judges*.

KOKOSKI, *Administrative Patent Judge*.

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

I. INTRODUCTION

R.J. Reynolds Vapor Company (“Petitioner”) filed a Petition (“Pet.”) to institute an *inter partes* review of claims 2 and 3 of U.S. Patent No. 8,365,742 B2 (“the ’742 patent,” Ex. 1001). Paper 1. Fontem Holdings 1 B.V. (“Patent Owner”) filed a Preliminary Response (“Prelim. Resp.”). Paper 7. We have jurisdiction under 35 U.S.C. § 314.

Upon consideration of the Petition and Preliminary Response, we determine that Petitioner has not established a reasonable likelihood of prevailing with respect to the unpatentability of claims 2 and 3 of the ’742 patent. Accordingly, we deny the Petition and do not institute an *inter partes* review.

A. *Related Proceedings*

The parties indicate that the ’742 patent is asserted in *Fontem Ventures B.V. v. R.J. Reynolds Vapor Company*, Case No. 2:16-cv-02286 (C.D. Cal. 2016).¹ Pet. 11; Paper 4, 2. The ’742 patent previously was the subject of IPR2015-00859 (institution denied on September 9, 2015) and IPR2015-01587 (terminated on December 14, 2015 at the joint request of the parties before an institution decision was entered) (Pet. 13; Paper 4, 7), and is the subject of IPR2016-01303, filed by Nu Mark LLC on June 28, 2016² (Paper 4, 7).

¹ Patent Owner indicates that this proceeding was subsequently transferred to the U.S. District Court for the Middle District of North Carolina, where it is pending under Civil Action No. 16-CV-1255. Paper 8, 1.

² This proceeding was terminated at the joint request of the parties before an institution decision was entered. *Nu Mark LLC v. Fontem Holdings 1 B.V.*, Case IPR2016-1303, slip op. at 2–3, 5 (PTAB Jan. 4, 2017) (Paper 12).

B. The '742 Patent

The '742 patent, titled “Electronic Cigarette,” is directed to an aerosol electronic cigarette having a battery assembly, an atomizer assembly, a cigarette bottle assembly, and a hollow, integrally-formed shell. Ex. 1001, Abstract. According to the '742 patent, prior art devices had various disadvantages, including low atomizing efficiency, being structurally complicated, and not providing ideal aerosol effects. *Id.* at 1:21–24.

Figure 1 of the '742 patent is reproduced below:

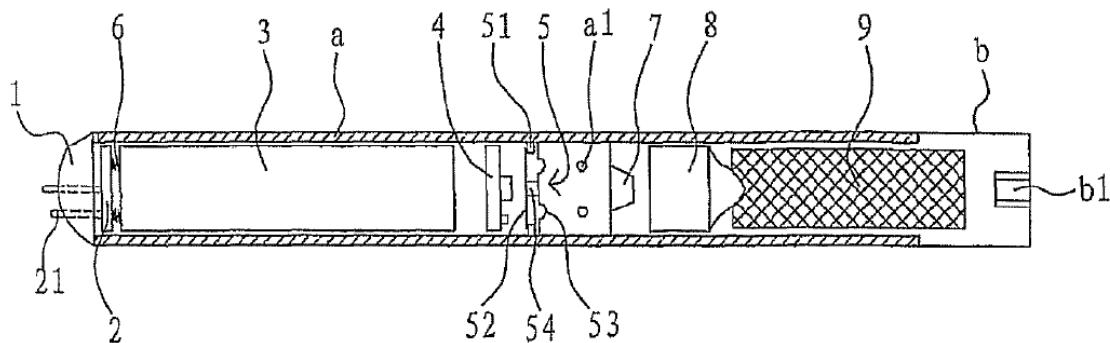


Figure 1

Figure 1 is a side section view of an electronic cigarette. *Id.* at 1:45. Hollow, integrally-formed shell (a) includes a battery assembly, atomizer assembly, and cigarette bottle assembly. *Id.* at 2:30–33. The battery assembly connects to the atomizer assembly in shell (a), and the detachable cigarette body assembly (which fits with the atomizer assembly) is located in one end of shell (a). *Id.* at 2:33–37. The battery assembly includes operating indicator 1, battery 3, electronic circuit board 4, and airflow sensor 5. *Id.* at 2:39–45. The atomizer assembly is atomizer 8, which includes a porous component and a heating rod. *Id.* at 3:6–8. The cigarette bottle

assembly includes hollow cigarette shell holder (b), and perforated component for liquid storage 9. *Id.* at 3:49–51.

Figures 5, 6, and 7 of the '742 patent are reproduced below:

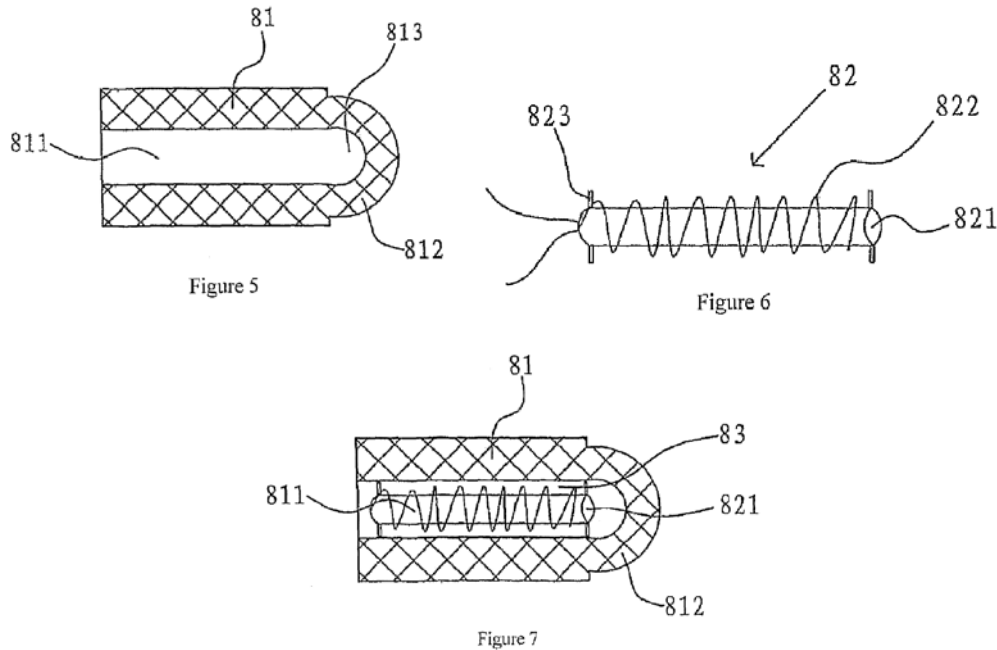


Figure 5 is a side-section view of the porous component of atomizer 8, Figure 6 is a diagram of the structure of a heating rod in atomizer 8, and Figure 7 is a side-section view of atomizer 8. *Id.* at 1:53–59. Atomizer 8 includes porous component 81 and heating rod 82. *Id.* at 3:6–8. Heating rod 82 includes heating wire 822 wound on the wall of cylinder 821. *Id.* at 3:28–30. Porous component 81 contains run-through atomizing chamber 811. *Id.* at 3:8–9. Heating rod 82 enters run-through atomizing chamber 811, and the space between heating rod 82 and the interior wall of run-through atomizing chamber 811 creates negative pressure cavity 83. *Id.* at 3:11–15. One end of porous component 81 fits with the cigarette bottle

assembly, with protuberance 812 at the other end connecting to atomizing chamber 811 with run-through hole 813. *Id.* at 3:16–19.

C. Challenged Claims

Petitioner challenges claims 2 and 3 of the '742 patent, which are reproduced below.

2. An electronic cigarette, comprising:

a battery assembly and an atomizer assembly within a housing with the battery assembly electrically connected to the atomizer assembly;

a liquid storage component in the housing;

with the housing having one or more through-air-inlets;

the atomizer assembly including a porous component supported by a frame having a run-through hole;

a heating wire wound on a part of the porous component in the path of air flowing through the run-through hole; and

the porous component substantially surrounded by the liquid storage component.

3. An electronic cigarette, comprising:

a battery assembly and an atomizer assembly within a housing with the battery assembly electrically connected to the atomizer assembly;

with the housing having one or more through-air-inlets and an outlet;

the atomizer assembly includes a frame having a run through hole, and a porous component between the frame and the outlet;

a heating wire wound on a part of the porous component which is substantially aligned with the run-through hole; and

with the porous component in contact with a liquid supply in the housing.

D. The Asserted Ground of Unpatentability

Petitioner challenges the patentability of claims 2 and 3 of the '742 patent under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Application Publication No. 2009/0095311 A1, published on April 16, 2009 (“the '311 Publication,” Ex. 1002).

II. ANALYSIS

A. Claim Interpretation

We interpret claims of an unexpired patent using the “broadest reasonable construction in light of the specification of the patent in which [the claims] appear[.]” 37 C.F.R. § 42.100(b); *see Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016). The Board, however, may not “construe claims during IPR so broadly that its constructions are *unreasonable* under general claim construction principles. . . . ‘[T]he protocol of giving claims their broadest reasonable interpretation . . . does not include giving claims a legally incorrect interpretation.’” *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015) (citation omitted). “Rather, ‘claims should always be read in light of the specification and teachings in the underlying patent’” and “[e]ven under the broadest reasonable interpretation, the Board’s construction ‘cannot be divorced from the specification and the record evidence.’” *Id.* (citations omitted). Only those terms in controversy need to be construed, and only to the extent necessary to resolve the controversy. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

Petitioner proposes constructions for the terms “frame,” “porous component,” “a battery assembly and an atomizer assembly within a

housing,” and “the porous component substantially surrounded by the liquid storage component.” Pet. 19–21. Patent Owner states that it disagrees with Petitioner’s proposed constructions of the terms “frame,” “porous component,” and “the porous component substantially surrounded by the liquid storage component,” but “does not address those terms here” because “[t]he meanings of those terms are not relevant to the resolution of the Petition.” Prelim. Resp. 7–8. Patent Owner proposes a construction for the term “housing.” *Id.* at 8–12. For purposes of this Decision, based on the record before us, we determine that it is necessary to address the interpretation of the claim term “housing” as set forth in claims 2 and 3.

“housing”

Petitioner notes that, in a “prior wave of litigations,” “[t]he district court ruled that ‘housing’ ‘need not be construed, other than to specify that it need not be a ‘one-piece shell.’” Pet. 19–20 (quoting Ex. 1014, 8–10). Petitioner proposes that we construe “housing” as not being limited to a one-piece shell, consistent with the district court’s ruling. *Id.* at 20. Patent Owner agrees that “the term ‘housing’ should not be limited to a one-piece housing,” and asserts that “housing” “needs no construction,” or, alternatively, it “be construed to have its plain meaning, namely, ‘a casing.’” Prelim. Resp. 9.

We agree with the parties that “housing” is not limited to a one-piece shell. The Specification states that “[t]he battery assembly connects with the atomizer assembly and both are located in a housing,” with a bottle assembly “located in one end of the housing” that “fits with the atomizer assembly.” Ex. 1001, 1:30–33. The Specification describes, with reference to Figures 1–10,

an aerosol electronic cigarette [that] includes a battery assembly, an atomizer assembly and cigarette bottle assembly, and also includes a shell or housing (a), which is hollow and integrally formed. The battery assembly connects with the atomizer assembly and both are located in the shell. The cigarette bottle assembly is located in one end of the shell, which is detachable. The cigarette bottle assembly fits with the atomizer assembly.

Id. at 2:30–37. The Specification further describes that “the battery assembly and atomizer assembly are mutually connected and then installed inside the integrally formed shell (a) to form a one-piece part,” and one end of cigarette holder shell (b) “plugs into the shell (a).” *Id.* at 3:42–44, 49–52, 57–58. Moreover, the embodiments described in the Specification include at least two pieces—shell (a), containing a battery assembly and atomizer assembly, and shell (b), containing a cigarette bottle assembly. *See id.* at 2:30–38, 3:42–62, 5:9–18. These disclosures indicate that at least shell (a) and shell (b) together form a “housing” as set forth in claims 2 and 3.

That a “housing” is not limited to a one-piece shell is further confirmed by the language of the claims. Claim 2 recites “a battery assembly and an atomizer assembly within a housing” as well as “a liquid storage component in the housing,” and claim 3 similarly recites “a battery assembly and an atomizer assembly within a housing” and “the porous component in contact with a liquid supply in the housing.” *Id.* at 6:28–31, 40–42, 51–52. The Specification describes that the cigarette bottle assembly “includes a hollow cigarette holder shell (b), and perforated component for liquid storage (9) inside the shell (b).” *Id.* at 3:49–51. Because the cigarette bottle assembly includes the liquid storage in shell (b), and the claims require that the liquid storage component or porous component is also in the

housing, the housing must include both shell (a) and shell (b), and the term “housing” cannot be limited to a one-piece shell.

Upon review of the Specification, we do not find an explicit or special definition for the claim term “housing.” Therefore, for purposes of this Decision, we determine that “housing” does not require an explicit construction.

C. Anticipation by the '311 Publication

Petitioner contends that the subject matter of claims 2 and 3 is unpatentable under 35 U.S.C. § 102(b) as anticipated by the '311 Publication, which published on April 16, 2009. Pet. 21–33. The '311 Publication is the publication of U.S. Patent Application Serial No. 12/226,818 (“the '818 Application,” Ex. 1009), filed as PCT/CN2007/001575 on May 15, 2007, to which the '742 patent claims priority as a divisional filing (U.S. Patent Application Serial No. 13/079,937 (“the '937 Application,” Ex. 1010), filed on April 5, 2011). *Id.* at 1, 5, 8. Accordingly, Petitioner’s challenge is based on the '742 patent not being entitled to priority to the '818 Application. *Id.* at 1–10, 33–54.

Petitioner’s contentions are based solely on the “a battery assembly and an atomizer assembly within a housing” limitation of claims 2 and 3. Petitioner argues that “claims 2 and 3 are not entitled to a filing date any earlier than” the April 5, 2011 filing date of the '937 Application because the '818 Application “narrowly describes the ‘invention’ as an electronic cigarette where the battery assembly and the atomizer assembly are located together in the same one-piece shell,” and, thus, does not provide written description support for claims 2 and 3, “which encompass an electronic cigarette with the battery assembly and atomizer assembly located in either

the same or separate shells.” Pet. 10. In other words, Petitioner argues that the ’818 Application does not provide support for an electronic cigarette “having the battery assembly and the atomizer assembly located in separate shells.” *Id.* at 2. Petitioner also asserts that “[t]here is no inconsistency with the parent ’818 application (which was published as the ’311 publication) anticipating, but not providing written description support, for claims 2 and 3 of the ’742 patent.” *Id.* at 10, n. 3.

“It is elementary patent law that a patent application is entitled to the benefit of the filing date of an earlier filed application only if the disclosure of the earlier application provides support for the claims of the later application, as required by 35 U.S.C. § 112.” *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1306 (Fed. Cir. 2008) (citations omitted); *see also Research Corp. Techs. v. Microsoft Corp.*, 627 F.3d 859, 871–72 (Fed. Cir. 2010) (holding the later-filed application, with claims that were not limited to a “blue noise mask,” was not entitled to the priority filing date of the parent application, which was “limited to a blue noise mask”); *ICU Med., Inc. v. Alaris Med. Sys.*, 558 F.3d 1368, 1377–78 (Fed. Cir. 2009) (holding that “spikeless” claims “added years later during prosecution” were not supported by the specification which “describe[d] only medical valves with spikes”); *Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1158-60 (Fed. Cir. 1998) (holding the generic shaped cup claims of the later-filed child application were not entitled to the filing date of the parent application that “disclosed only a trapezoidal cup and nothing more”). “To satisfy the written description requirement the disclosure of the prior application must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, [the inventor] was in possession of the invention.” *PowerOasis*,

522 F.3d at 1306 (citations omitted). The sufficiency of written description support is based on “an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art.” *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc).

Petitioner has the burden to persuade us that the '311 Publication is invalidating prior art. We make our decisions on institution based on whether the information presented in the petition and the patent owner's preliminary response “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.” 35 U.S.C. § 314(a). “In an *inter partes* review, the burden of persuasion is on the petitioner to prove ‘unpatentability by a preponderance of the evidence,’ . . . and that burden never shifts to the patentee.” *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (quoting 35 U.S.C. § 316(e)). The burden of production can shift to the patent owner, however. *See id.* at 1379. This shift happens where it is “warranted because the patentee affirmatively seeks to establish a proposition not relied on by the patent challenger and not a necessary predicate for the unpatentability claim asserted—effectively an affirmative defense.” *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1376 (Fed. Cir. 2016). Here, Petitioner has asserted that the '311 Publication discloses each limitation of the challenged claims, and the '818 Application does not provide written description support for those same claims, as evidenced by the disclosure of the '311 Publication. Thus, Petitioner has the burden of persuasion, based on all of the evidence, on both of these assertions. *See Dynamic Drinkware*, 800 F.3d at 1378.

Petitioner contends that the '818 Application describes and claims an electronic cigarette that is limited to having the battery assembly and the atomizer assembly in the same shell for several reasons. Pet. 1–10, 37–54. These reasons include that: (1) the “Abstract” describes the invention as including both the battery assembly and the atomizer assembly in one end of a hollow, integrally formed shell (a); (2) the “Contents of the Invention” section “repeatedly describes the ‘invention’ as one in which the battery assembly and the atomizer assembly are located together in the same, one-piece shell;” (3) the '818 Application “also touts that a benefit of ‘this invention’ is an electronic cigarette with a ‘very simple structure’ that has ‘just one connection between two parts,’ namely, between the shell (a) and the cigarette holder shell (b);” and (4) all the embodiments described in the “Specific Mode for Carrying Out the Invention” section “contemplate[] a shell (a) in which both the battery assembly and the atomizer assembly reside.” *Id.* at 38–41.

Patent Owner argues that “[t]he text of the '818 application contemplates embodiments of a battery assembly and atomizer assembly within the casing of the electronic cigarette” by “expressly describ[ing] the electronic cigarette as having more than one shell (*i.e.*, shell (a) and shell (b)), which forms the housing that encases the internal components of the electronic cigarette, including the battery assembly and the atomizer assembly.” Prelim. Resp. 16. Patent Owner also argues that the figures in the '818 Application “also depict the claimed ‘a battery assembly and an atomizer assembly within a housing,’” noting that Figure 1 “shows the internal components of the electronic cigarette, including the battery assembly and atomizer assembly, located with the housing, which is

composed of shell (a) and shell (b).” *Id.* at 16–17. Therefore, according to Patent Owner, “the ’818 application describes and illustrates the battery assembly and atomizer assembly located within a housing, which is formed from shell (a) and (b),” (*id.* at 18), and “[e]xactly what is claimed is disclosed in the text and figures of the ’818 application” (*id.* at 15).

“[A] specification’s focus on one particular embodiment or purpose cannot limit the described invention where that specification expressly contemplates other embodiments or purposes.” *ScriptPro LLC v. Innovation Associates, Inc.*, 833 F.3d 1336, 1341 (Fed. Cir. 2016). Here, the disclosure of the ’818 Application is similar to the disclosure of the ’742 patent. Just like the ’742 patent specification, the ’818 Application contemplated embodiments of an electronic cigarette in which the battery assembly and the atomizer assembly are in a housing that is completed when multiple shells are connected. In particular, the ’818 Application discloses that the electronic cigarette includes a battery assembly connected to an atomizer assembly within shell (a), and a cigarette bottle assembly that fits with the atomizer assembly located in a detachable end of the shell. Ex. 1009, 18–19. The ’818 Application describes an embodiment where “the battery assembly and atomizer assembly are mutually connected and then installed inside the integrally formed shell (a) to form a one piece part,” which is plugged into the cigarette bottle assembly contained within shell (b). *Id.* at 20.

In accordance with claims 2 and 3 of the ’742 patent, the ’818 Application discloses that “the battery assembly and the atomizer assembly are within a housing.” In describing the cigarette bottle assembly as including “a perforated component for liquid storage (9) inside the shell (b),” and “[o]ne end of cigarette holder shell (b) plugs into the shell (a),” the

'818 Application also discloses “a liquid storage component in the housing” and “a porous component in contact with a liquid supply in the housing” as claims 2 and 3, respectively, also require. Moreover, as Patent Owner notes, “there is no additional disclosure in the '742 patent that is not in the '818 application, which is necessary to provide written description support for the claim limitation, ‘a battery assembly and an atomizer assembly within a housing.’” Prelim. Resp. 15–16. Thus, we agree with Patent Owner that “the '818 application reasonably conveys to a person of ordinary skill in the art that the inventor was in possession of the claimed ‘a battery assembly and an atomizer assembly within a housing’” and that “what is claimed is disclosed in the text and figures of the '818 application.” *Id.* at 15 (citing Ex. 2001 ¶¶ 32–36). Claims 2 and 3 only require that the battery assembly and the atomizer assembly are within a housing, and, as set forth above, “housing” is not limited to a one-piece shell. Upon review of the '818 Application’s disclosure, we are not persuaded that the “a battery assembly and an atomizer assembly within a housing” limitation recited in the challenged claims lacks written description support in the '818 Application.

Petitioner also contends that the patentee broadened the disclosure, because the '937 Application was filed with a substitute specification that removed limiting language from the '818 Application. Pet. 44–46. According to Petitioner, “the Applicant submitted a substitute specification with substantial revisions, including numerous deletions that were aimed at broadening the disclosure to encompass an electronic cigarette in which the battery assembly and the atomizer assembly are located in separate shells.” *Id.* at 44 (citing Ex. 1011, 7–37). We agree with Patent Owner that “the relevant inquiry is whether the '818 application provides written description

for the claim limitation ‘a battery assembly and an atomizer assembly within a housing.’ That analysis requires a comparison of the ’742 patent claims to the ’818 application’s disclosure, not a comparison of the specifications.” Prelim. Resp. 32–33. As discussed above, Petitioner has not sufficiently persuaded us that the ’818 Application does not convey with reasonable clarity to those skilled in the art that applicant was in possession of the invention as of the filing date of the ’818 Application, specifically, that applicant was not in possession of the claimed “a battery assembly and an atomizer assembly within a housing.” Therefore, on the record before us, we determine that Petitioner fails to establish that the priority date of claims 2 and 3 of the ’742 patent is no earlier than April 5, 2011.

III. CONCLUSION

Based on the arguments in the Petition and Preliminary Response, and the evidence of record, we are not persuaded that the ’311 Publication is prior art to the ’742 patent. Therefore, we determine that Petitioner has not demonstrated a reasonable likelihood that at least one of the challenged claims of the ’742 patent is unpatentable based on the asserted ground.

IV. ORDER

In consideration of the foregoing, it is hereby
ORDERED that the Petition is denied.

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