IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF NORTH CAROLINA

FUMA INTERNATIONAL LLC, an Ohio limited liability company, Plaintiffs, v. R.J. REYNOLDS VAPOR COMPANY, a North Carolina corporation, Defendant.	Civ. No. 1:19-cv-260 [Lead Case] Civ. No. 1:19-cv-660

PLAINTIFF FUMA INTERNATIONAL LLC'S OPENING CLAIM CONSTRUCTION BRIEF

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I. INTRODUCTION

While "solution holding medium" should be construed as proposed by Fuma, the remaining terms proposed for construction by RJR require no construction and should be accorded their ordinary meaning because they are easily understood. Among other flaws, RJR's proposed constructions improperly import limitations from some embodiments and exclude other embodiments of the patents despite the Federal Circuit's repeated admonitions against doing so. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (*en banc*).

II. LEVEL OF ORDINARY SKILL

Claims are construed from the perspective of one of ordinary skill in the art at the time of the invention. *Phillips*, 415 F.3d at 1313. The patents-in-suit claim a date of invention of July 28, 2009. One of ordinary skill would have a mechanical or electrical engineering degree, industrial design degree, or a similar technical degree, or equivalent work experience, and 5 to 10 years of experience in electromechanical devices.

III. DISCUSSION

A. Law

Claims are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art in view of the specification and prosecution history. *Id*. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979-80 (Fed. Cir. 1995) (*en banc*), *aff'd, Markman*, 517 U.S. 370 (1996). "Claim construction 'begins and ends in all cases with the actual words of the claim.'" *Becton Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010) (quoting *Renishaw PLC v.*

Marposs Societa' per Azioni, 158 F.3d 1243, 1248 (Fed. Cir. 1998)). Extrinsic evidence, including dictionaries and treatises, may be relied upon to determine a claim's meaning; however, extrinsic evidence is "less significant than the intrinsic record." *Phillips*, 415 F.3d at 1317 (citations omitted).

The Federal Circuit recognizes two exceptions to the rule of ordinary meaning: "1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term in the specification or during prosecution." *Unwired Planet, LLC v. Apple Inc.*, 829 F.3d 1353, 1358 (Fed. Cir. 2016) (citing *Thorner v. Sony Comput. Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012)). The Federal Circuit has "repeatedly held that it is 'not enough that the only embodiments, or all of the embodiments, contain a particular limitation' to limit claims beyond their plain meaning." *Id*. at 1359 (quoting *Thorner*, 669 F.3d at 1366; citing *GE Lighting Sols., LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014)). "When [a patent] claim addresses only some of the features disclosed in the specification, it is improper to limit the claim to other unclaimed features." *Ventana Med. Sys., Inc. v. Biogenex Labs*, Inc., 473 F.3d 1173, 1181 (Fed. Cir. 2006).

And "patentees [are] not required to include within each of their claims all of [the] advantages or features described as significant or important in the written description." *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1331 (Fed. Cir. 2004). "If everything in the specification were required to be read into the claims, or if structural claims were to be limited to devices operated precisely as a specification-described

embodiment is operated, there would be no need for claims." *SRI Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985).

B. As Conceded by RJR, Ordinary Meaning Should Presumptively Prevail.

There is a "heavy presumption" that claim terms carry ordinary and customary meaning. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002). Recognizing that RJR could not argue that this presumption was overcome for a majority of the claims RJR proposes for construction, RJR nonetheless asks the court to construe claims terms that RJR acknowledges have ordinary meaning. (*See* Dkt. 78, *passim* ("The ordinary meaning of this phase requires a construction to assist the jury, as follows …")). In fact, of the approximately 1482 words contained in the independent claims at issue, RJR proposed that approximately 506 words—or 34% of all the independent claims at issue—should be construed even where those terms have ordinary meaning. (Ex. A (showing independent claims with highlighted terms RJR has proposed for construction)).

However, claim construction is not a license to rewrite or paraphrase the claims for the jury.

> [Claim construction] **is not an obligatory exercise in redundancy**. Accordingly, district courts need not construe every limitation present in a patent's asserted claims. [C]ommonplace terms or terms that a juror can easily use [] in her infringement fact-finding without additional instructions from the court do not require construction, because they are neither unfamiliar to the jury, confusing to the jury, nor affected by the specification or prosecution history.

Ficep Corp. v. Voortman USA Corp., No. WDQ-13-0429, 2014 U.S. Dist. LEXIS 96803, at *5-7 (D. Md. July 15, 2014) (citations and quotations omitted, emphasis added) (citing, *inter alia*, *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997)).

Indeed, "[i]t is unnecessary to paraphrase the Patent's claims language where it can be understood through ordinary meaning." *Crystal Image Tech., Inc. v. Mitsubishi Elec. Corp.*, No. 08-cv-307, 2010 U.S. Dist. LEXIS 48158, at *24 (W.D. Pa. Apr. 9, 2010) (citing *Stanacard, LLC v. Rebtel Networks*, 680 F. Supp.2d 483, 493 (S.D.N.Y. 2010) (where claim term has ordinary meaning, proposed construction "paraphrasing" claim language "offers little to assist one of skill in the art in understanding the claim[]")). *See also Am. Patent Dev. Corp. v. Movielink, LLC*, 604 F. Supp. 2d 704, 716 (D. Del. 2009) (refusing to adopt a construction which was "merely a verbose paraphrasing of claim language that otherwise offers little to assist one of skill in the art in understanding the claims").

The Court should reject RJR's assertion that "the ordinary meaning … requires a construction to assist the jury" because RJR merely invites the Court to paraphrase and rewrite claims in the hopes that, after rewritten, RJR will no longer infringe.

C. Disputed Claim Terms

Proposed constructions and the claims in which the disputed terms appear are in the Joint Claim Construction and Prehearing Statement. (Dkt. 81).

1. "solution holding medium"

Term	Fuma	RJR
"solution holding medium" ('604 Claim 1; '881 Claims 1, 16)	A location in the interior of the housing where solution is stored, including but not limited to at least one of an absorbent material, a chamber, a reservoir, a capsule, or any combination thereof.	A container or other mechanism for holding solution in the cartridge

Fuma's construction is drawn directly from the specification. ('604, 4:4-8 ("A liquid, gelatin, frozen or solid solution (solution) 128 also resides **in the interior of the housing** 120, wherein the solution can be suspended in an **absorbent material, capsule, or reservoir**, wherein such devices **may** act as the holding medium for the solution 128.") (emphasis added); '604, 5:48-51 ("Additionally, as described above, the solution 128 may be placed in an **absorbent material**, such as cotton, wool, polyester, a batting material, or some other suitable absorbent material.") (emphasis added)).

To illustrate the meaning of "solution holding medium" for the jury, Fuma's proposed construction incorporates examples of what a "solution holding medium" could include. These examples come directly from the '604 Patent's Claim 2, which depends on Claim 1. ('604 Claim 2 ("The apparatus according to claim 1, wherein the solution holding medium includes at least one of **an absorbent material, a chamber, a reservoir, a capsule, or any combination thereof.**") (emphasis added)). Likewise, certain of the examples appear in dependent claims of the '881 patent when "solution holding medium" is further limited ('881 Claim 5 ("The cartridge of claim 1, wherein the

solution holding medium includes at least one of an **absorbent material** and a **reservoir**.") (emphasis added); '881 Claim 24 ("The cartridge of claim 16, wherein the solution holding medium includes at least one of an **absorbent material** and a **reservoir**.") (emphasis added)). Use of the examples presented in '604 dependent Claim 2 for illustrative purposes is appropriate because "solution holding medium appears" in independent claims, and "[a]n independent claim impliedly embraces more subject matter than its narrower dependent claim." *Alcon Research, LTD. v. Apotex Inc.*, 687 F.3d 1362, 1363 (Fed. Cir. 2012). Furthermore, the term "solution holding medium" has the same meaning whether appearing in the '604 or '881 patent. *In re Rambus Inc.*, 694 F.3d 42, 48 (Fed. Cir. 2012) (citing *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1334 (Fed. Cir. 2003)) ("[U]nless otherwise compelled … the same claim term in the same patent or related patents carries the same construed meaning.").

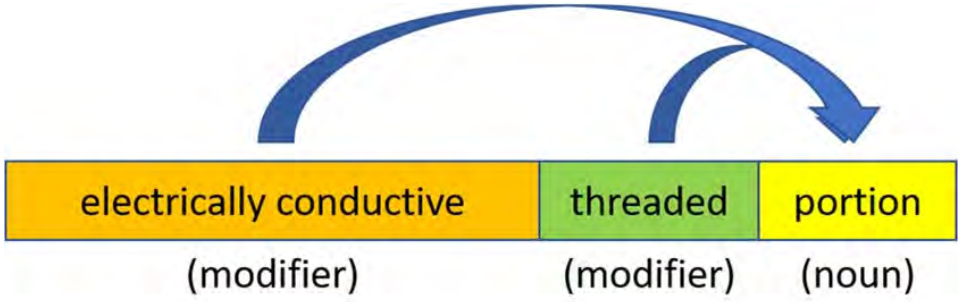
RJR's construction ignores examples of a solution holding medium presented in the specification and dependent claims, and instead attempts to paraphrase "solution holding medium" by using the term "container"—a term that does not appear anywhere in the specification or claims of the '604 or '881 patents. Because RJR's proposed construction strays from the words of the claims and specification, it would only serve to confuse the jury and should be rejected.

2. "electrically conductive threaded portion" ('604 Patent)

Terms	Fuma	RJR
the power source includes an electrically conductive threaded portion	Ordinary meaning.	The ordinary meaning of this phase requires a construction to assist the jury, as follows: The power source and the cartridge

the housing includes an electrically conductive threaded portion that is adapted to mechanically and electrically couple to the electrically conductive threaded portion of the power source ('604 Claim 1)		housing include electrically conductive threads that fasten the power source to the cartridge and through which electrical current flows
the housing includes an electrically conductive threaded portion that is configured to mechanically and electrically couple to a further electrically conductive threaded portion in operative connection with a power source ('604 Claim 12)	Ordinary meaning.	The ordinary meaning of this phase requires a construction to assist the jury, as follows: The cartridge housing includes electrically conductive threads that fasten the cartridge to electrically conductive threads of the power source and through which electrical current flows

Fuma's position is that the above terms have plain meaning that is readily understood, and RJR agrees that these claim terms have their ordinary meaning. Central to these claim terms is the phrase "electrically conductive threaded portion," which is readily understandable. Because "electrically conductive" and "threaded" are both modifiers of the noun "portion," the '604 claims at issue simply require a "portion" of the first end of the housing that has threads and the "portion" is also electrically conductive.



See, e.g., Kruse Tech. P'ship v. Volkswagen AG, 544 F. App'x 943, 949 (Fed. Cir. 2013) (noting that "[a] claim must be read in accordance with the precepts of English grammar.").

This plain reading of the claim term is consistent with the description in the specification, where threads are a feature of a "fastener" or "receiver." ('604, Col.2:62-3:1 ("For example, the cartridge 104 may comprise an electrically conductive threaded fastener, and the power source 102 may comprise an electrically conductive threaded receiver. The threaded fastener and the threaded receiver can be coupled to one another, thereby mechanically and electrically coupling the power source 102 with the cartridge 104.")).

The specification further confirms that the "portion" is not a thread or other type of connector in and of itself but instead an area of the housing where such features are located. In other words, a "portion" of a housing can have threads in the presence of other separate features necessary for coupling, such as a non-threaded center post:

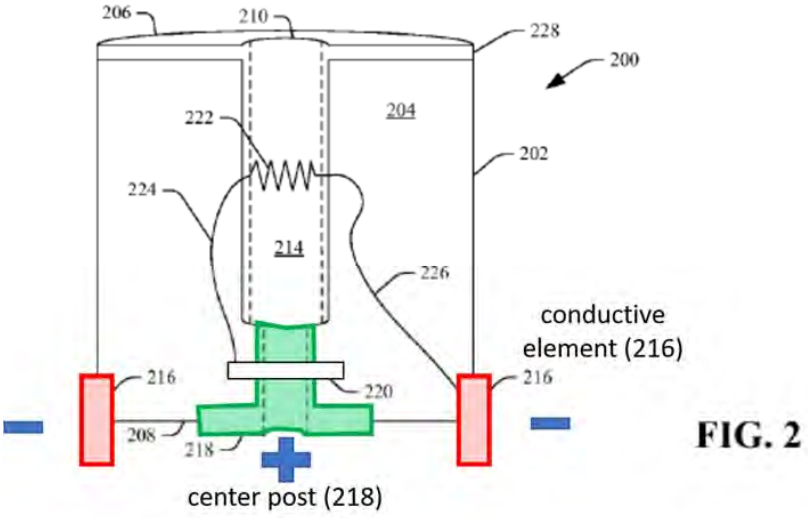


FIG. 2

(annotations added)

In reference to the above figure, the '604 patent specification explains:

> [T]he conductive element [216] **may be metallic threads** that facilitate mechanically and electrically coupling the cartridge 200 with a power source (battery). … In an example, the center post 218 can be formed of a conductive material, and may be constructed as being a portion of an end cap.
>
> …
>
> When the cartridge 200 is coupled to a power source, the **conductive element 216 is electrically coupled to a negative terminal** of the power source and the **center post 218** (and thus the electrical isolator 220) **is electrically coupled to a positive terminal of the power source**.

('604, Col.6:24-50 (emphasis added)). Thus, consistent with its use in the specification, a "portion" of a housing is not a "thread" in itself, but instead a portion of the end of the housing that may have threads or other features.

RJR's construction is an attempt to rewrite the language of the claim such that the "threads" must mechanically and electrically couple rather than the "portion." The claim does not say "an electrically conductive thread," the claim requires "an electrically conductive threaded **portion**." ('604, Claims 1 and 12 (emphasis added)). RJR's construction converts the modifier "threaded" to a noun "thread" in order to improperly remove the term "portion" from the claim altogether. *See Merck & Co. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) ("A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so."); *Power Mosfet Techs., L.L.C. v. Siemens AG*, 378 F.3d 1396, 1410 (Fed. Cir. 2004) ("[I]nterpretations that render some portion of the claim language superfluous are disfavored.").

RJR's proposed construction also runs afoul of the plain reading of the claim term requiring that the "portion" be "adapted to … electrically couple." ('604, Claims 1 and

12). "[E]lectrically conductive threads," as RJR proposes, are insufficient by themselves to electrically couple because another feature is needed in order to have both negative and positive terminals – *e.g.* in the preferred embodiment electricity will not flow through threads without a "center post" providing a positive terminal. ('604, Col.6:24-50; Fig. 2 illustration, *supra*). Because "electrically conductive threads" by themselves are insufficient to electrically couple, RJR's proposed construction renders the invention inoperable. *See AIA Eng'g Ltd. v. Magotteaux Int'l S/A*, 657 F.3d 1264, 1267 (Fed. Cir. 2011) ("A construction of a patent claim that renders the claimed invention inoperable should be viewed with extreme skepticism.").

RJR paraphrases and rewrites the claim terms in an attempt to avoid infringement. RJR's assertion that their construction "assists the jury" in understanding the ordinary meaning is belied by the fact that they reuse, nearly wholesale, readily understood terms from the claims at issue, including "power source," "housing," "thread[ed]," "electrically conductive." RJR does not assist the jury by jettisoning "portion," converting "threaded" to "threads," substituting "fasten" for "mechanically couple," and substituting "through which electrical current flows" for "electrically couple." RJR's changes would confuse the jury and stray from the plain meaning of the claim term, as set forth above. *See, e.g. Am. Patent Dev. Corp. v. Movielink, LLC*, 604 F. Supp. 2d 704, 716 (D. Del. 2009) (refusing to adopt a construction which was "merely a verbose paraphrasing of claim language that otherwise offers little to assist one of skill in the art in understanding the claims").

3. "electrically conductive portion" ('881 Patent)

Terms	Fuma	RJR
the power source includes an electrically conductive portion / the housing includes an electrically conductive portion that is adapted to mechanically and electrically couple to the electrically conductive portion of the power source ('881 Claim 1)	Ordinary meaning.	The ordinary meaning of this phase requires a construction to assist the jury, as follows: The power source and cartridge housing include electrically conductive portions that fasten the power source to the cartridge and through which electrical current flows
the housing having an electrically conductive portion adapted to mechanically and electrically couple to the electrically conductive portion of the power source ('881 Claim 8)	Ordinary meaning.	The ordinary meaning of this phase requires a construction to assist the jury, as follows: The cartridge housing includes an electrically conductive portion that fastens the cartridge to an electrically conductive portion of the power source and through which electrical current flows
the housing having an electrically conductive portion adapted to mechanically and electrically couple to an electrically conductive portion of the power source ('881 Claim 16)	Ordinary meaning.	The ordinary meaning of this phase requires a construction to assist the jury, as follows: The cartridge housing includes an electrically conductive portion that fastens the cartridge to an electrically conductive portion of the power source and through which electrical current flows

Fuma's position adopts plain meaning because the terms are readily understood, and RJR agrees that these claim terms have their ordinary meaning. The plain meaning of the claim and the description in the specification supports the ordinary meaning of these words for the same reasons set forth in the above section regarding "electrically conductive threaded portion" in the '604 patent. The only difference as to the '881 claims at issue from those of the '604 patent is that the '881 claims are broader and no

longer require that the "portion" also be "threaded"—only that the portion must be "electrically conductive."

RJR's construction is less clear than the claims themselves and appears to be an attempt by RJR, as they did with "electrically conductive threaded portion," to rearrange the claim to argue that the feature that mechanically couples must also electrically couple. As described above, in the preferred embodiment a center post is used as a part of the "portion" as a positive electrical terminal simply to make electrical contact with the power source and not mechanically couple. Requiring that the feature of the "portion" that electrically couples also mechanically couple would therefore exclude an embodiment from the claims. *See, e.g., Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1333 (Fed. Cir. 2013) ("[A]n interpretation which excludes a disclosed embodiment from the scope of the claim is rarely, if ever, correct.") (citations and quotations omitted). Therefore, while a "portion" of the housing (or power source) must be adapted to mechanically and electrically couple, there is nothing in the plain meaning of the claims that precludes the portion from having separate features to accomplish mechanical and electrical coupling.

As with "electrically conductive threaded portion" terms appearing in the '604 patent, RJR paraphrases and rewrites the "electrically conductive portion" terms at issue in the '881 patent in an attempt to avoid infringement. RJR's assertion that their construction "assists the jury" in understanding the ordinary meaning is again belied by the fact that they reuse, nearly wholesale, readily understood terms from the claims at issue, including "power source," "housing," and the entire clause "electrically conductive

portion." By substituting "fasten" for "mechanically couple," and substituting "through which electrical current flows" for "electrically couple," RJR does nothing to assist the jury in understanding the claims, but rather attempts to manufacture a non-infringement argument where none exists according to the ordinary meaning of the claim terms.

4. "the heating element comprises a wicking material"

Term	Fuma	RJR
the heating element comprises a wicking material ('604 Claims 6, 14)	Ordinary meaning	The component generating heat is constructed from a wicking material

Fuma's position is that the above terms have plain meaning that is readily understood. The specification demonstrates that there was no special meaning applied to the term "wick" or "heating element." ('604, Col.5:48-52 ("Additionally, as described above, the solution 128 may be placed in an absorbent material, such as cotton, wool, polyester, a batting material, or some other suitable absorbent material. A wicking material may be used in order to channel the liquid or gel to the heating element."); '604, Col.6:43-46 ("The heating element 222 can comprise wicking material that draws the liquid solution from the absorbent material 204 towards the heating element 222.")).

RJR's construction is contrary to the ordinary meaning of "wick"—as shown by the specification cited above—and also rewrites the claim contrary to the meaning of "comprises" and improperly reads out an embodiment from what was claimed.

First, RJR's construction essentially rewrites the terms "the heating element comprises a wicking material" to mean that "the heating element **is** a wicking material."

RJR's rewrite of the claim term is contrary to the well-understood meaning of "comprising," which denotes that the heating element includes but is not limited to the "wick." *CIAS, Inc. v. Alliance Gaming Corp.*, 504 F.3d 1356, 1360 (Fed. Cir. 2007) ("In the patent claim context the term 'comprising' is well understood to mean 'including but not limited to.'"). Thus, because the heating element "comprises" a wick, the claims are intended to cover, for example, heating elements with an electrified coil wrapped around a wick.

Second, RJR's requirement that the "wick" heat the solution is unsound, reading out the preferred embodiment. The specification makes clear—and in a manner consistent with the ordinary meaning of a "wick"—that the wick's purpose is not to heat but to "to channel the liquid or gel to the heating element" or "draw[] the liquid solution … towards the heating element …." ('604, Col.5:48-52; '604, Col.6:43-46). It is of no moment that Clams 6 and 14 claim the "wick" as part of the overall "heating element" structure because the term "comprises" permits the heating element to have other structures, such as an electrified coil, that supply heat. RJR's interpretation reads out the preferred embodiment, which depicts the heating element as an electrified resistive coil, describing further that a wick (not depicted in the patent figures) does not heat but instead "draws the liquid solution from the absorbent material 204 towards the heating element 222." ('604, Col.6:43-46)

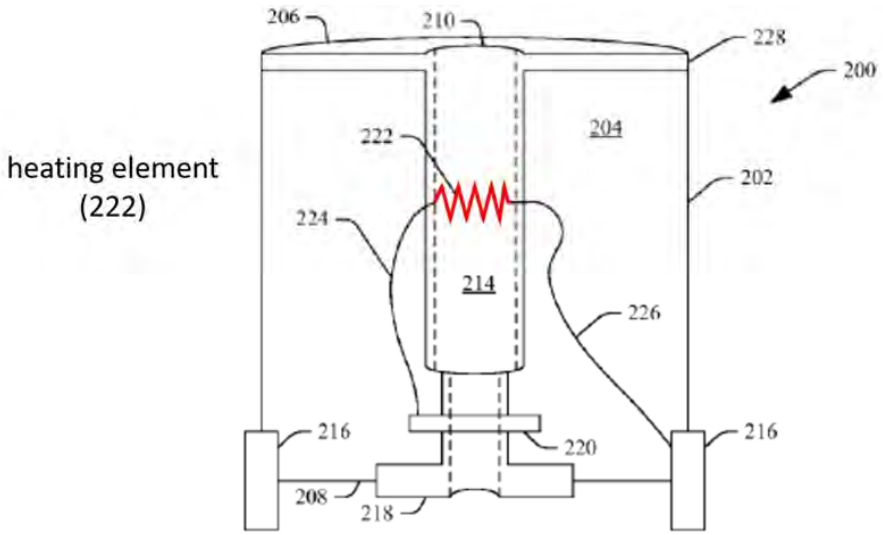


FIG. 2

(annotation added)

See, e.g., Broadcom Corp. v. Emulex Corp., 732 F.3d 1325, 1333 (Fed. Cir. 2013) ("[A]n interpretation which excludes a disclosed embodiment from the scope of the claim is rarely, if ever, correct.").

As such, this claim term should be afforded its ordinary meaning and RJR's proposed construction should be rejected.

5. "electrically configured to vaporize at least a portion of the solution"

Terms	Fuma	RJR
wherein the heating element is electrically configured to vaporize at least a portion of the solution to be contained in the solution holding medium the heating element being electrically configured to vaporize at least a portion of the solution to be contained in the solution holding medium reservoir	Ordinary meaning	The ordinary meaning of this phase requires a construction to assist the jury, as follows: The heating element vaporizes the solution while the solution is in the solution holding medium

the heating element being electrically configured to vaporize at least a portion of the solution to be contained in the solution holding medium ('881 Claims 1, 8, 16)		

Fuma's position is that the above terms have plain meaning that is readily understood, and RJR agrees that these claim terms have their ordinary meaning. As discussed in the previous section, the specification describes embodiments where solution is vaporized by being drawn out of the solution holding medium and channeled to the heating element. ('604, Col.5:48-52 ("Additionally, as described above, the solution 128 may be placed in an absorbent material, such as cotton, wool, polyester, a batting material, or some other suitable absorbent material. A wicking material may be used in order to channel the liquid or gel to the heating element."); '604, Col.6:43-46 ("The heating element 222 can comprise wicking material that draws the liquid solution from the absorbent material 204 towards the heating element 222.")). The plain meaning of these claim terms in the '881 patent merely recognizes that the solution to be contained in the solution holding medium will be vaporized by the heating element—which includes configurations where the solution is transported from the solution holding medium to the heating element by a wick.

RJR's construction is not supported by the plain reading of the claim, which does not require that the solution be vaporized "while the solution is in the solution holding

medium." Such a limitation is inserted by RJR without support even while RJR claims that the terms should have their ordinary meaning.

Moreover, RJR's construction impermissibly reads out the aforementioned embodiment where the wick draws solution to the heating element. *See, e.g., Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1333 (Fed. Cir. 2013). RJR's construction runs afoul of the principle that "[a]n independent claim impliedly embraces more subject matter than its narrower dependent claim." *Alcon Research, LTD. v. Apotex Inc.*, 687 F.3d 1362, 1363 (Fed. Cir. 2012). Claim 26 of the '881 patent, which depends from independent Claim 16, the subject of RJR's proposed construction, requires that "the heating element is in operative connection with a wicking material, and the wicking material is operative to attract a portion of the solution from the solution holding medium …." Thus, RJR's construction of the independent claim 16 is impermissibly narrower than the dependent Claim 26.

As such, these claim terms should be afforded their ordinary meaning and RJR's proposed constructions should be rejected.

6. <u>"an airflow passageway …"</u>

Terms	Fuma	RJR
an airflow passageway that extends centrally and axially with respect to the housing intermediate of the first aperture on the first end of the housing and the second aperture on the second end of the housing; wherein the airflow passageway is configured to allow art airflow through the cartridge from the first aperture to the second aperture of the housing an airflow passageway that extends intermediate of the first end and the second end axially through the interior of	Ordinary meaning	The ordinary meaning of this phase requires a construction to assist the jury, as follows: The airflow passageway

the housing along a central longitudinal axis of the housing, wherein the airflow passageway enables airflow from the first end to the second end an airflow passageway in the interior of the housing extending centrally and axially with respect to the housing intermediate of the first aperture on the first end of the housing and the second aperture on the second end of the housing, the airflow passageway being configured to allow an airflow through the cartridge from the first aperture to the second aperture of the housing an airflow passageway in the interior of the housing, the airflow passageway having a length extending centrally and axially with respect to the housing intermediate of the first aperture on the first end of the housing and the second aperture on the second end of the housing, the airflow passageway being configured to allow an airflow through the cartridge from the first aperture to the second aperture of the housing ('604 Claims 1, 12; '881 Claims 1, 8, 16).		extends in a straight path through the center of the cartridge from a first opening on the first end to a second opening on the opposite end of the cartridge

As in initial matter, while RJR has proposed vast amounts of claim language for construction, RJR is essentially trying to rewrite and paraphrase two clauses. First, RJR attempts to construe and impermissibly narrow the meanings of "centrally and axially" / "axially … along a central longitudinal axis" to require that the airflow passageway extends "in a straight path through the center." Second, RJR attempts to construe the term "intermediate" to improperly require that the airflow passageway span the entire length from the first aperture to the second aperture.

a) "centrally and axially" / "axially … along a center axis"

Fuma's position is that the above terms have plain meaning that is readily understood, and RJR agrees that these claim terms have their ordinary meaning. By their

plain meaning, the terms "centrally and axially" / "axially … along a central longitudinal axis" are terms of approximation, which is confirmed by the specification. ('604, Col. 4:32-34 ("An airflow passageway 134 extends between the first aperture 130 and the second aperture 132 **axially proximate** to the center of the housing 120.") (emphasis added); '604, Col. 6:18-21 ("An air passageway 214 begins at the first aperture 210 and extends to the second aperture 212 **approximately** along the central axis of the cartridge 200.") (emphasis added)).

RJR's construction attempts to ignore the approximate nature of the terms "centrally and axially" and "axially … along a center axis" by instead requiring that the airflow passageway "extends in a straight path through the center of the cartridge." Such a rewrite is neither consistent with the ordinary meaning of "centrally" or "axially" nor helpful to the jury. The term "straight" does not appear in claims or specifications of the '604 or '881 patents whatsoever and excludes embodiments from the claims where the airflow passageway extends approximately along the center axis and not in an exact straight path down the center. ('604, Col. 4:32-34; '604, Col. 6:18-21). *See, e.g., Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1333 (Fed. Cir. 2013) ("[A]n interpretation which excludes a disclosed embodiment from the scope of the claim is rarely, if ever, correct.") (citations and quotations omitted).

To the extent RJR's relies on an airflow passageway depicted in a patent figure to support its proposed construction, RJR's construction impermissibly imports limitations into the claims based on the examples in the specification figures. *See Jang v. Bos. Sci. Corp.*, 493 F. App'x 70, 76-77 (Fed. Cir. 2012) ("According to Jang, the district court

improperly imported the 'unattached' limitation from the patent figures … Jang is correct … [W]e have repeatedly held that the fact that the specification describes only a single embodiment, standing alone, is insufficient to limit otherwise broad claim language.") (citations and quotations omitted).

b) "intermediate"

Fuma's position is that the above terms have plain meaning that is readily understood, and RJR agrees that these claim terms have their ordinary meaning. The ordinary meaning of the term "intermediate" is sufficient to express that the airflow passageway must exist somewhere within the confines of the first and second ends of the cartridge housing. This plain meaning of "intermediate" is confirmed by a review of the claims and specification. For example, the first independent claims of the '604 and '881 patents require a "solution holding medium" that surrounds the airflow passageway "**intermediate** of the first end and the second end." ('604 Claim 1 ("the solution holding medium surrounds the airflow passageway in the interior of the housing and intermediate of the first end and the second end"); '881 Claim 1 ("the solution holding medium surrounds the airflow passageway and the heating element in the interior of the housing and intermediate of the first end and the second end")). The patent specification shows that the claimed "solution holding medium," while "intermediate," does **not** span the entire length from the first end to the second end due to the presence of a gap:

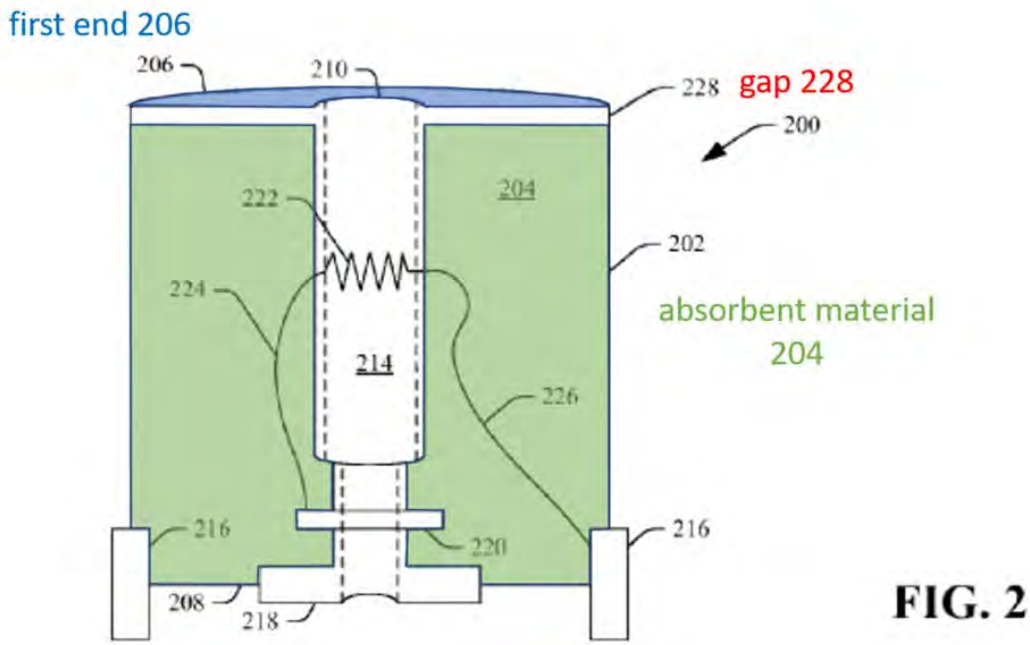


FIG. 2

('604, 6:55-57 ("Additionally, as shown, a gap 228 may exist between the first end 206[1] of the cartridge 200 and the absorbent material 204. This gap 228 can be utilized to mix air and the vaporized liquid solution to provide the user with an appropriate amount of vaporized solution.") (describing Figure 2)). Construing "intermediate" contrary to its plain meaning would exclude a disclosed embodiment from the claimed "solution holding medium." *See Fin Control Sys. Pty v. Oam*, 265 F.3d 1311, 1318 (Fed. Cir. 2001) ("[T]he same terms appearing in different portions of the claims should be given

[1] Figure 2 identifies element 206 as a "first end" while element 206 corresponds to a "second end" in the'604 and '881 patent claims. *See Free MotionFitness, Inc. v. Cybex Int'l*, 423 F.3d 1343, 1348 (Fed. Cir. 2005) ("[T]he use of the terms 'first' and 'second' is a common patent-law convention to distinguish between repeated instances of an element or limitation." … "'First' does not denote spatial location ….") (citations and quotations omitted).

the same meaning unless it is clear from the specification and prosecution history that the terms have different meanings at different portions of the claims.”).

RJR’s construction is contrary to the ordinary meaning of “intermediate” described above when it requires that the airflow passageway extend “from a first opening on the first end to a second opening on the opposite end”—improperly requiring that the airflow passageway span the entire length between the first end an second end.

RJR’s rewrite of the claims is also an attempt to roll back claim amendments made by the applicant during prosecution. In its amendment prior to allowance of the ’604 patent, the applicant removed limitations from Claim 1 requiring that the airflow passageway extends “between the first aperture on the first end of the housing and the second aperture on the second end of the housing” in favor of the term “intermediate”:

> wherein the housing includes an airflow passageway that extends centrally and axially with respect to the housing ~~between~~ intermediate of the first aperture on the first end of the housing and the second aperture on the second end of the housing,

(Dkt. 57-1, July 11, 2016, Response to Office Action, at FUMA00000152). The applicant also specifically removed language from the ’604 patent’s issued Claim 12[2] that required that the airflow passageway extend “from” a first end “to” a second end—

[2] Amended Claim 13 (Dkt. 57-1, FUMA00000155-157) issued as Claim 12 of the ’604 patent.

language RJR now seeks to read back into '604 Claim 12 and insert into **all** asserted claims:

> an airflow passageway that extends ~~from~~ intermediate of the first end ~~to~~ and the second end axially through the interior of the housing along a central longitudinal axis of the housing, wherein the airflow passageway enables airflow from the first end to the second end;

(Dkt. 57-1, July 11, 2016, Response to Office Action, at FUMA00000156). RJR's importation of limitations into the claims that were removed by amendment is improper. *See 3M Innovative Props. Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1372-73 (Fed. Cir. 2003) (refusing to read limitations into the claims that were removed by broadening amendment); *Smith v. Snow*, 294 U.S. 1, 16 (1935) ("It is of no moment that in the course of the proceedings in the Patent Office the rejection of narrow claims was followed by the allowance of the broader claim 1."); *United States v. Telectronics, Inc.*, 857 F.2d 778, 782-83 (Fed. Cir. 1988) (concluding that adding a limitation to a claim during prosecution and then removing it when the limitation failed to result in allowance of the claim over the prior art does not permit reading of limitation into claim when the claim issued without it); *Kistler Instrumente Ag v. United States*, 224 Ct. Cl. 370, 380, 628 F.2d 1303, 1308 (1980) (noting that courts are not permitted to read "back into the claims limitations which were originally there and were removed during prosecution of the application through the Patent Office.").

RJR's construction that the airflow passageway must both "extend[] in a straight path through the center" and span the entire length of the cartridge "from a first opening on the first end to a second opening on the opposite end of the cartridge" renders the claimed invention inoperable because the "first aperture" and "second aperture" do not have to be centrally located. For example, while Claim 1 of the '604 patent recites the presence of a "a first aperture on the first end and a second aperture on the second end," those apertures are not centrally located by the independent claim. It is not until dependent Claim 3 of the '604 patent that the apertures must be centrally located. ('604, Claim 3 ("the housing has a cylindrically shaped outer wall including a central longitudinal axis that extends between the first and second apertures")). Likewise, Claim 12 of the '604 patent does not require centrally-located apertures—only dependent Claim 16 does. ('604, Claim 16 ("The apparatus according to claim 12, wherein the first end comprises a centrally located first aperture and the second end comprises a centrally located second aperture …")). The same is true of the '881 patent's Claims 1, 8, and 16. (*See* '881, Dependent Claims 3, 11, and 22 ("… the first aperture on the first end is located centrally and axially with respect to the housing …"). When the first and second apertures are not centrally located, an airflow passageway "extending in a straight path through the center" would be unable to extend "from a first opening on the first end to a second opening on the opposite end of the cartridge," and no air would flow through the device. *See AIA Eng'g Ltd. v. Magotteaux Int'l S/A*, 657 F.3d 1264, 1267 (Fed. Cir. 2011) ("A construction of a patent claim that renders the claimed invention inoperable should be viewed with extreme skepticism."). RJR's proposal thus would improperly

narrow the broader independent claims of the ’604 and ’881 patents to require what the dependent claims require. *Alcon Research, LTD. v. Apotex Inc.*, 687 F.3d 1362, 1363 (Fed. Cir. 2012) (“An independent claim impliedly embraces more subject matter than its narrower dependent claim.”).

Accordingly, the Court should adopt the ordinary meaning of the terms and reject RJR’s proposed construction.

IV. CONCLUSION

For all these reasons, the Court should adopt Fuma’s construction of “solution holding medium” and otherwise afford the claim terms their ordinary meaning.

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/s/ Brandon M. Jordan

Brandon M. Jordan
THE LAW FIRM OF BRANDON M. JORDAN PLLC
2800 Eisenhower Ave., Suite 220
Alexandria, VA 22314
Telephone: (703) 493-0231
Facsimile: (703) 832-4806
brandon@brandonjordan.net

Christopher P. Sullivan
ROBINS KAPLAN LLP
800 Boylston Street
Suite 2500
Boston, MA 02199
Telephone: (617) 267-2300
Facsimile: (617) 267-8288
csullivan@robinskaplan.com

Dirk D. Thomas
DIRK D. THOMAS PLLC
1775 Eye Street NW, Suite 1150
Washington, DC 20006
Telephone: (202) 587-5690

Facsimile: (202) 587-5610
dirk.thomas@dthomasllc.com

William K. Davis
N.C. Bar No. 1117
Kevin G. Williams
N.C. Bar No. 25760
BELL, DAVIS & PITT, P.A.
100 North Cherry St., Suite 600
Winston-Salem, NC 27120-1029
Telephone: (336) 722-3700
Facsimile: (336) 722-8153
wdavis@belldavispitt.com
kwilliams@belldavispitt.com

Counsel for *FUMA INTERNATIONAL, LLC*

CERTIFICATE OF WORD COUNT

Pursuant to L.R. 7.3(d)(1), the undersigned certifies that this Brief complies with the word limit contained in L.R. 7.3(d)(1), using the word count feature of the word processing software in making this certification.

/s/ Brandon M. Jordan
Brandon M. Jordan

CERTIFICATE OF SERVICE

I hereby certify that, on Monday, January 13, 2020, I electronically filed the foregoing with the Clerk of Court using the CM/ECF system.

/s/ Brandon M. Jordan
Brandon M. Jordan