

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

FUMA INTERNATIONAL LLC
an Ohio limited liability company

Plaintiff/Counterdefendant, v.

R.J. REYNOLDS VAPOR
COMPANY,
a North Carolina corporation,

Defendant/Counterplaintiff.

Civil Action No. 19-cv-260
[Lead Case]

Civil Action No. 19-cv-660

DEMAND FOR JURY TRIAL

**PLAINTIFF FUMA INTERNATIONAL LLC'S REPLY IN SUPPORT OF
ITS MOTION FOR SUMMARY JUDGMENT OF:**

- (I) INFRINGEMENT OF THE '881 PATENT BY DEFENDANT'S
VUSE SOLO AND VUSE CIRO PRODUCTS, AND**
- (II) INFRINGEMENT OF THE '604 PATENT BY DEFENDANT'S
VUSE CIRO PRODUCT**

Table of Contents

I.	Statement of Facts	1
A.	Fuma’s Motion Fairly Set Forth the Undisputed Facts	1
B.	The Parties Do Not Disagree on the Structure of the Accused Devices, the Parties Only Disagree as to Whether Those Structures Meet the Claims.....	2
II.	RJR’s Non-Infringement Arguments Should be Rejected.....	12
A.	The “electrically conductive portion” of the ’881 patent can have multiple features.....	12
B.	The “airflow passageway” of the Vuse Ciro “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.”	15
III.	Conclusion	19

I. Statement of Facts

A. Fuma's Motion Fairly Sets Forth the Undisputed Facts

RJR's argument that Fuma's motion lacks any "statement of facts, disputed or undisputed" is without merit. (Opp'n at 3). Fuma's motion focused the Court's attention on those elements of the claims that RJR argues are not met, and Fuma asserted as an undisputed fact that the remaining elements were met, with citation to its infringement contentions and expert report claim charts. (Mot. at 1-4). In its opposition, RJR does not dispute that the other elements of the asserted claims are met. RJR was required to propound all of its non-infringement arguments in its non-infringement contentions. *See* L.R. 103.3. Fuma's motion addressed all of RJR's non-infringement arguments for the products and patents covered by Fuma's motion, and RJR has raised no additional non-infringement arguments in its opposition. Fed. R. Civ. P. 56(e) ("If a party fails to properly ... address another party's assertion of fact as required by Rule 56(c), the court may: ... consider the fact undisputed for purposes of the motion"). In fact, RJR now concedes the additional fact that the solution holding medium need not extend the entire length of the cartridge, further narrowing the dispute between the parties. (Opp'n at n. 1).

This case involves physical devices, and the presence of claim elements can be readily gleaned from the labeled pictures of the accused devices in Fuma's final infringement contentions and in its expert reports as cited in its motion. (*See* Dkt.120-2, Ex. B; Dkt.120-3, Ex. C; Dkt.120-8, Ex. H; Dkt.120-9, Ex. I). The law does not require that Fuma narrate through each element of the asserted claims when those elements are

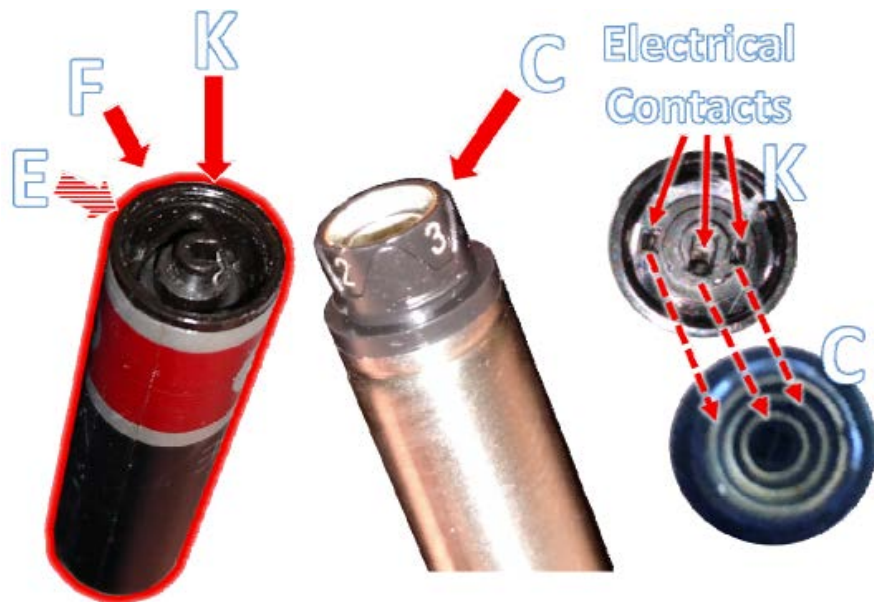
indisputably met. RJR merely seeks to obligate Fuma to expend its limited word count on secondary matters that RJR does not even dispute.

B. The Parties Do Not Disagree on the Structure of the Accused Devices, the Parties Only Disagree as to Whether Those Structures Meet the Claims.

1. Vuse Solo

The parties have no disagreement about the physical structure of the Vuse Solo device. RJR does not dispute that the Vuse Solo cartridge electrically and mechanically couples to the Vuse Solo power unit. Therefore, there must be some portion of the respective Solo cartridge and power unit that electrically and mechanically couples because the ends of the cartridge and power unit plug into one another to operate.

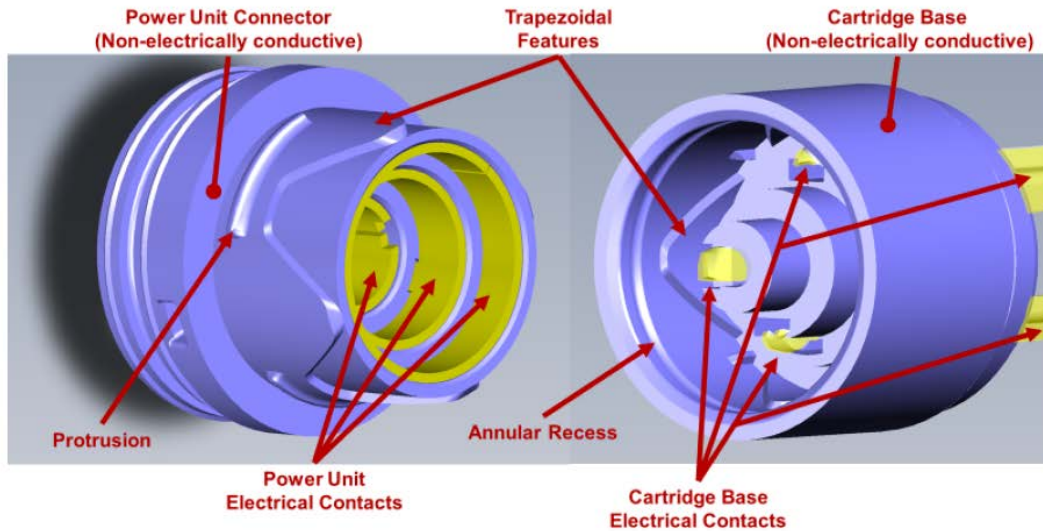
Fuma identifies the respective “portions” of the cartridge and power source in its motion—as it has in its infringement contentions, expert reports, and **even its complaint**—as the end of the Vuse Solo cartridge (element C below) and the end of the Vuse Solo power unit (element K below):



(Mot. at 11; Dkt.120-2, Ex. B at 7; Dkt.120-03, Ex. C at 7; Dkt.120-5, Ex. E at 26; Dkt.120-6, Ex. F at 25. *See also* 19-cv-660 Dkt.001, '881 Complaint at ¶¶ 136, 141, 147, 152, 159, 161-162, 174, 183 (elements C and K)). RJR cannot legitimately argue for the first time that “Fuma [] does not identify or explain the purported ‘portion’ that achieves the mechanical and electrical coupling.” (Opp’n at 9). In addition to the above, Fuma’s expert also included pictures and schematic drawings of the “electrically conductive portions” of the battery power source (left) and cartridge housing (right):



(120-05, Ex. E at 6, 28 (left); *Id.* at 29 (right); *Id.* at 30 (showing them electrically and mechanically coupled together); 120-06, Ex. F at 32 (same)). These same portions of the battery and cartridge housing are electrically conductive because they contain electrical contacts, and these same portions also mechanically couple together due to mating physical structures. RJR likewise identified these same two portions as the structures at issue in its opposition brief:

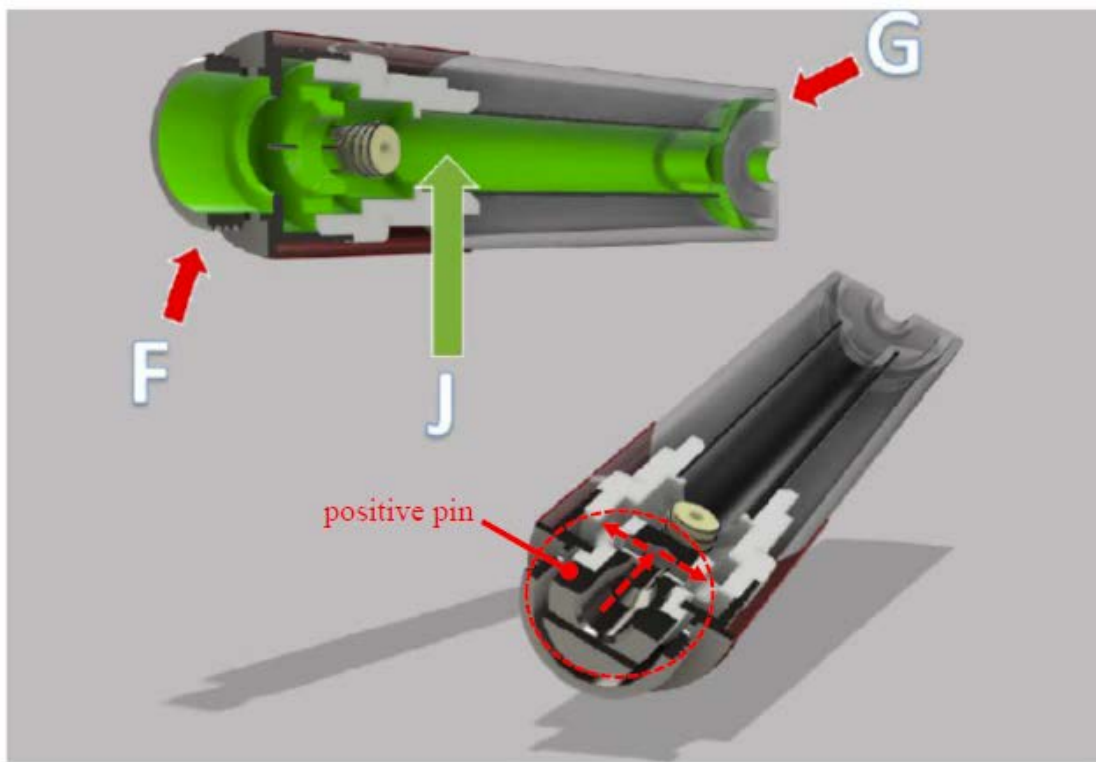


(Opp’n at 27).

The end portions of the cartridge and power unit indisputably mechanically and electrically couple together, yet RJR simply disagrees that the ends of the cartridge and power source shown above are “portions” of the respective cartridge and power source. RJR argues that the portions shown above have separate and distinct features that mechanically and electrically couple. (Opp’n at 16). Fuma agrees that the accused electrically conductive portions have multiple features involved in the mechanical and electrical coupling, but this does not avoid a finding of infringement because a “portion” of the cartridge housing/power source as required by the claims is merely an area of the cartridge housing and/or power source where mechanical and electrical coupling takes place.

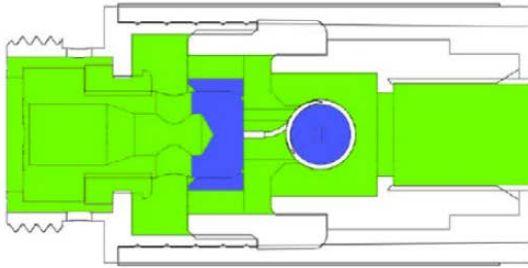
2. Vuse Ciro

The parties have no disagreement about the physical structure of the Vuse Solo device. RJR characterizes a figure in Fuma's motion as misleading, which is not the case. The parties have a disagreement about where the airflow passageway is in the Vuse Ciro device. Fuma's view is that there is a "positive pin" that is placed in the airflow passageway of the Vuse Ciro device, and Fuma therefore provided a side-by-side image showing the positive pin removed to illustrate (in green) where Fuma contends the airflow passageway resides, while also showing the "positive pin" inserted:

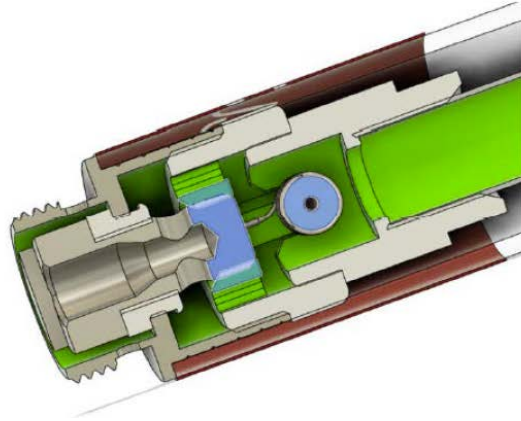


(Opp'n at 18 (citing Dkt.120 at 15)). Fuma also included several other figures depicting the positive pin in place, all of which show that the airflow passageway extends in a straight path from one end of the cartridge to the other:

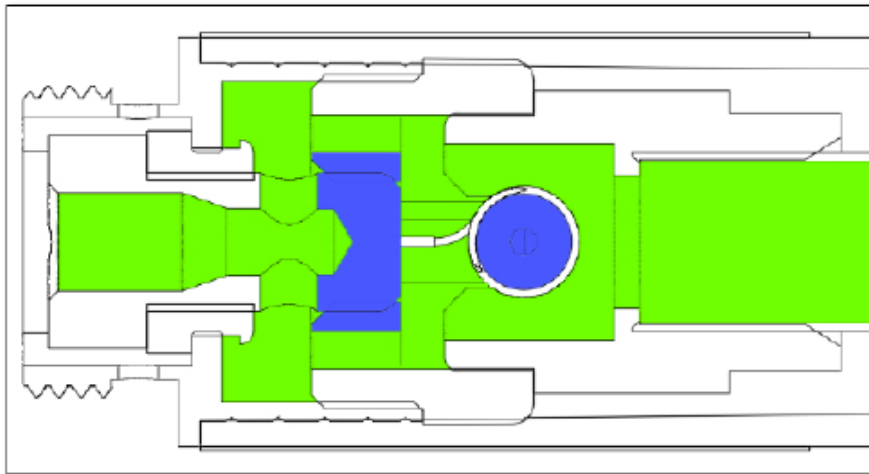
Vuse Ciro 2D View



Vuse Ciro 3D View



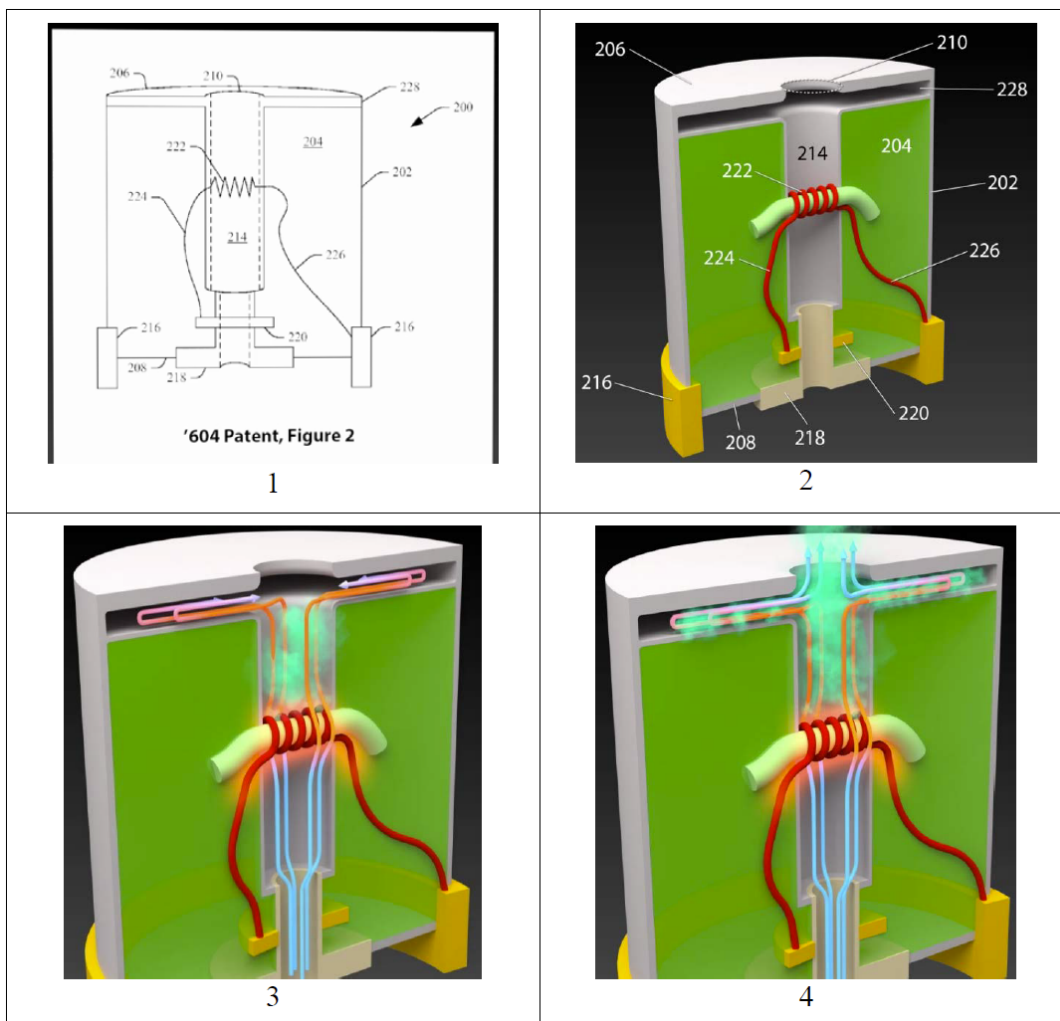
(Mot. at 19 (showing Fuma's view that the positive pin resides in the airflow passageway)). In contrast to Fuma's view, RJR contends that the airflow passageway travels *through* the positive pin (Opp'n at 19-21), as illustrated in Fuma's motion:



(Mot. at 20 (showing RJR's view that the passageway runs through the positive pin, with the first aperture in the middle of the positive pin))).

Whether the airflow passageway contains the positive pin (Fuma's view) or whether the airflow passageway goes through the positive pin (RJR's view) is of no moment because both result in an airflow passageway that extends in a straight path through the center of the cartridge. This is because the claimed airflow passageway can include obstructions, such as those shown in blue above.

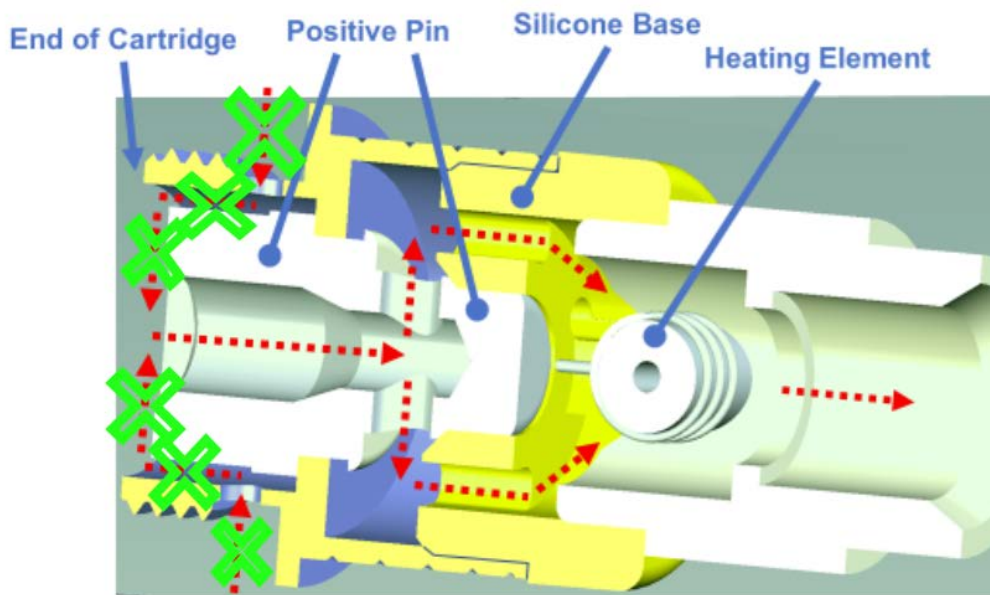
RJR's opposition, while containing illustrations of where air flows through the device, **contains no identification of where RJR contends the airflow passageway exists**. If RJR had done so, the resulting figure would look like the previous illustration. (Mot. at 20; Opp'n at 40 ("Reynolds and its technical expert accurately identify and describe the structures [of the airflow passageway] – namely the **internal walls** of the positive pin and passageways formed within the silicone base.") (emphasis added)). Focusing on air flow paths can be misleading because, as shown by the preferred embodiment of the patented invention, air can flow on transverse sides of obstructions such as heating elements (222)—or make turns into gaps (228)—while the device still has a straight airflow passageway:



(Dkt.130 at 23; Dkt.130-5, Ex. P (illustrating '604 Fig. 2)).

RJR stretches its reliance on the path of air through the Cirro even further by relying on the direction of air flow **before air even enters the airflow passageway**.

RJR's opposition includes the below figure, identifying air paths that are additional unrecited features not included in the claims:

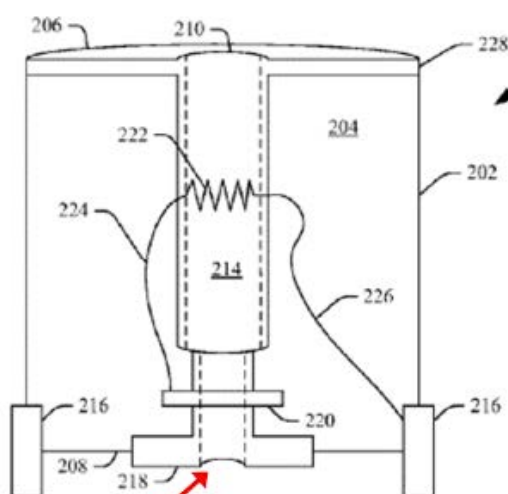


(Opp’n at 20 (annotations added to remove air flow outside cartridge and before reaching first aperture)). As Fuma’s expert explains regarding this image:

The claims define a housing that comprises “an interior” (’604 Claims 1, 12; ’881 Claims 1, 8) yet [RJR’s expert’s] annotated “openings on the side of the cartridge housing” do not form the end (or “opening”) of the airflow passageway and therefore do not transmit air to the interior of the housing—nor have I identified them as such. The “openings on the side of the cartridge housing” are merely extraneous features of the Vuse Ciro that are not relevant to the claims.... **[T]he flow of air before reaching the accused first aperture is extraneous to the asserted claims. To the extent [RJR’s expert] attempts to point to a different first aperture that I have pointed to by arguing that the air “converges and enter[s] a slot on the positive pin,” that does not change my infringement opinion.**

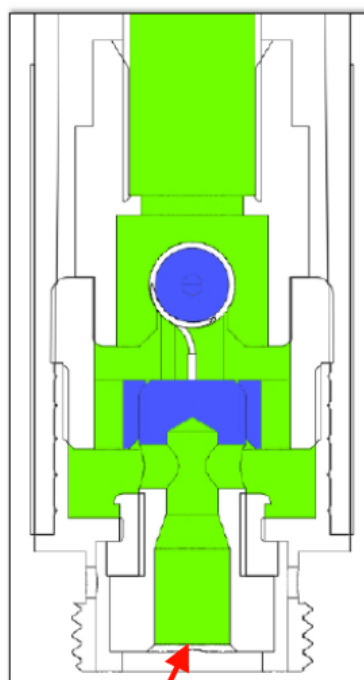
(Dkt.120-7, Ex. G, Vallee Reply at ¶¶ 63-64. See also *Id.* at ¶¶ 61 (“The claims do not restrict how air reaches the first aperture or what happens to the air after it leaves the

second aperture, but [RJR's expert] has included in his analysis the flow of air and 'air inlets' that are before the air reaches the accused first aperture. These additional aspects add additional elements that do not (and cannot as a matter of law, according to my understanding) avoid a finding of infringement.")). See *CIAS, Inc. v. Alliance Gaming Corp.*, 504 F.3d 1356, 1360 (Fed. Cir. 2007) (infringing device may include additional elements not recited in the claims). Thus, even if the airflow passageway extends through and around the positive pin, the air still enters the cartridge through a single opening on the end:



Single opening
on end

(Opp'n at 35)



Single opening
on end

(Mot. at 20 (annotation added)).

Properly allowing for an airflow passageway that can contain obstructions as depicted and described in the preferred embodiment of the patent, the airflow passageway of the Vuse Ciro is straight whether the passageway extends through and around the positive pin (RJR's view) or whether the positive pin is merely situated in the airflow passageway (Fuma's view).

II. RJR's Non-Infringement Arguments Should be Rejected

A. The “electrically conductive portion” of the '881 patent can have multiple features.

RJR attempts a second try at claim construction by arguing that “the ‘electrically conductive portion’ (i.e. the portion that is electrically conductive) must provide both the electrical and mechanical coupling” (Opp'n at 26). During claim construction the parties had a similar dispute regarding “electrically conductive threaded portion.” As the Court noted:

The dispute between the parties is over whether the phrase “electrically conductive threaded portion” means: 1) the threads are electrically conductive, or 2) the portion is electrically conductive and has threads.... In other words, do the words “electrically conductive” modify the word “threaded” or the word “portion”? ... The Court adopts Fuma's construction: it gives meaning to every word.... Nothing in the claim language, specification, or prosecution history supports RJR's contention that the threads must be electrically conductive.

(Dkt.95, Claim Construction Order at 7-8 (citations omitted)). RJR's newly-phrased argument about why the Solo does not infringe is simply a rewording and re-positioning of the same argument it pressed during claim construction and that the Court rejected.

Under RJR’s newly phrased position, if the function of mechanically coupling the battery to the cartridge uses a thread—as recited in the claims of the ’604 patent—then necessarily the thread must also electrically couple the battery to the cartridge, i.e. there must be an electrically conductive thread. But that is not what the claim says, and the Court rejected this exact position when RJR urged it previously. (*Id.*). The term “electrically conductive portion” in the ’881 patent is broader than the ’604 and deletes the ’604 patent’s requirement that the “portion” have threads. The broader term “electrically conductive portion” of the ’881 patent still permits, but does not require, the presence of non-metallic threads on the accused “portion” of the cartridge housing or power source.

Importantly, the Court already rejected RJR’s attempt to rephrase the term “electrically conductive portion.” During claim construction, RJR argued that its proposed construction “requires that the ‘electrically conductive portion’ (the structure through which current flows) both fastens (i.e., mechanically couples) and electrically couples the power source to the cartridge housing.” (Dkt.82, RJR’s Opening Claim Construction Br. at 14). Fuma responded, arguing that “[n]othing in the claims requires that the electrical coupling and mechanical coupling be accomplished using the same features, only that those features be included on the ‘first end of the housing.’” (Dkt.90, Fuma’s Responsive Claim Construction Br. at 8-9). The Court ultimately rejected RJR’s construction, noting that “RJR’s construction is overly complicated and unnecessary.” (Dkt.95 at 10).

While RJR’s proposed view of the claims has already been rejected by the Court, it is also clear from the patent specifications and the claim language that the term “portion” does not refer to a particular feature of the connection mechanism as RJR would have this Court hold. Instead, the patent specification defines and uses the term “portion” to refer generally to the ends of the cartridge housing. “The cartridge **104** also comprises a first end **122** and a second end **124**, which may be considered as **a portion of the housing 120** or apart from the housing **120**.” (’604 patent, Col.3:44-45) (emphasis added). Consistent with that use of the term, the asserted claims of ’881 patent-in-suit recite that “**the first end of the [cartridge] housing includes an electrically conductive portion that is adapted** to mechanically and electrically couple” (’881 Claim 1 (emphasis added); *See also* ’881 Claim 8 (similar)). Nowhere in the patent specifications or the asserted claims is the term “portion” used to refer to some part of the connection mechanism. It is used to refer to an end of the cartridge housing, which “end” portion must be “adapted” to mechanically and electrically couple to the battery. This use of the term “portion” is fully consistent with its ordinary meaning. *See* Dictionary.com, “portion” (“noun 1. a part of any whole, either separated from or integrated with it”) (available at <https://www.dictionary.com/browse/portion>).

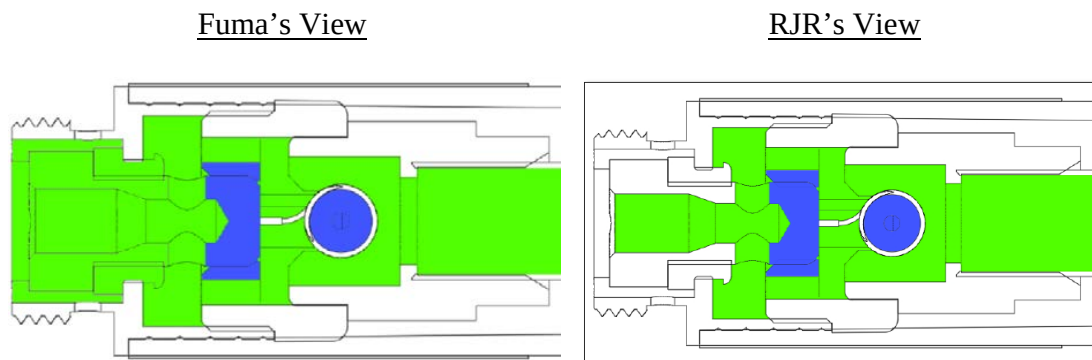
This use of the term “portion” to refer generally to one end of the cartridge housing is also consistent with the overall tenor and focus of the patented invention as described in the patent specification. “Claims must always be read in light of the specification.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (*en*

banc). “Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* “The construction that stays true to the claim language **and most naturally aligns with the patent’s description of the invention** will be, in the end, the correct construction.” *Id.* at 1316 (emphasis added) (quotations omitted). The present invention is not a novel connection mechanism, and Fuma never argued during prosecution in the Patent Office that some single feature, or structure, of the connection mechanism must do both the mechanical and electrical coupling of the e-cigarette cartridge to the battery. The patents describe a multitude of different types of connection mechanisms that are interchangeable so long as they are “adapted” to mechanically and electrically couple the cartridge to the battery. (’604, Col.3:1-8). Rather, the invention defined by the asserted claims comprises a unique and non-obvious design of the internal structure of the e-cigarette cartridge wherein the central airflow passageway is surrounded by the e-liquid solution holding medium and where a heating coil and wick is positioned transversely across the airflow passageway. That novel design is found nowhere in the prior art, which is why RJR has only asserted obviousness, rather than anticipatory, invalidity challenges.

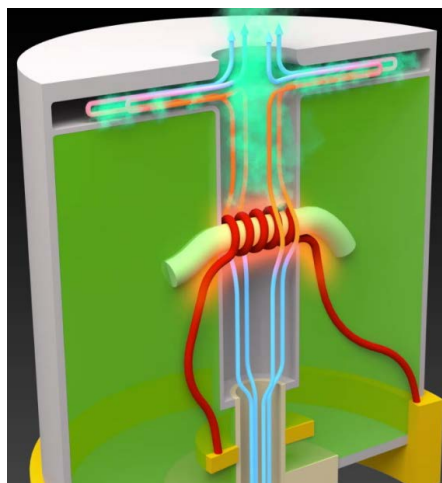
B. The “airflow passageway” of the Vuse Ciro “extends in a straight path through the center of the cartridge from a first opening on the first end to a second opening on the opposite end of the cartridge.”

Whether the Court adopts Fuma’s view or RJR’s view of the location of the airflow passageway (green), both extend straight through the center of the cartridge from

a first opening to a second opening, with the understanding that the airflow passageway contains obstacles as in the preferred embodiment of the '881 patent (blue):



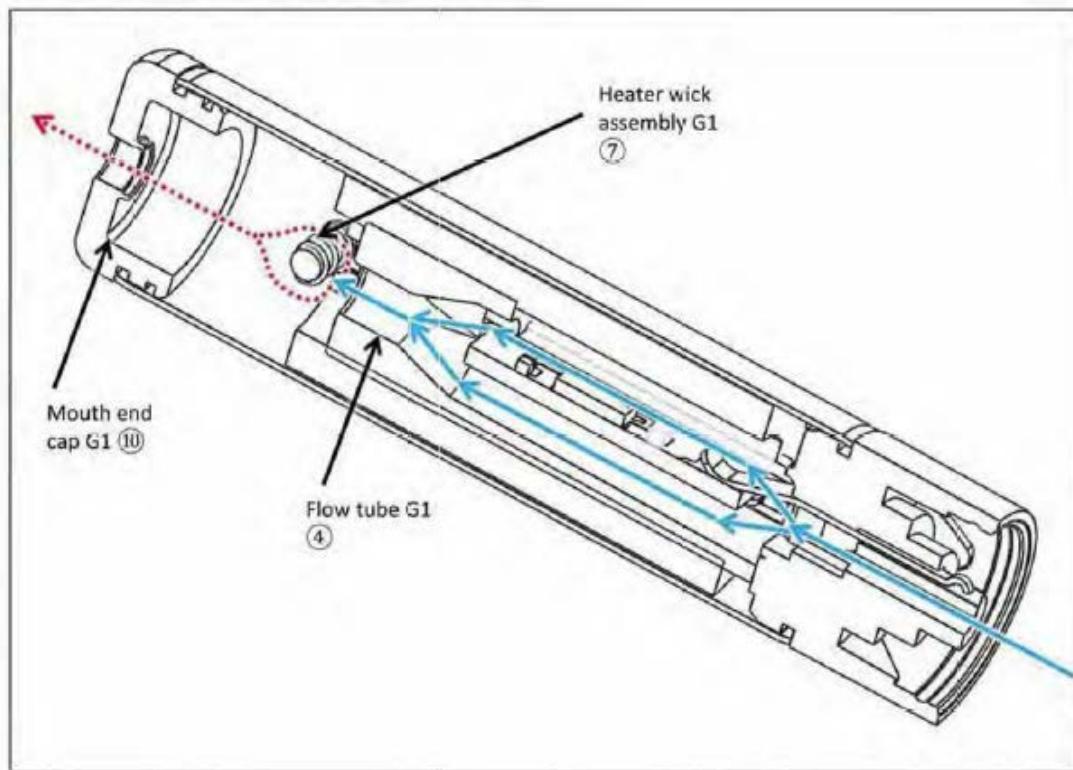
As illustrated in Fuma's opposition brief to RJR's motion for summary judgment, the preferred embodiment has a straight path with obstacles and involves air flow that diverts around a heating element and takes 90° turns into a gap.



(Dkt.130 at 23; Dkt.130-5, Ex. P). RJR likens the “straight airflow path” to a “straw for pulling liquid through a cylindrical tube.” (Opp’n at 41). Tellingly, RJR notes that “[t]he interior of the tube does not define the liquid passageway—the straw does.” (Opp’n at

41). Fuma agrees, but putting an obstruction—like a positive pin—in the interior of the straw around which liquid can flow does not change the fact that the straw defines a straight passageway. Even if the passageway extends through and around the positive pin as RJR argues, the obstruction at the end of the positive pin still resides on the interior of the larger airflow passageway “tube” with air flowing around the end of the positive pin. Both the heating element (blue circle) and the end of the positive pin (blue rectangle) are mere obstructions in an airflow passageway (green) that is straight.

RJR’s only argument that the positive pin is more than an obstacle is that it is “unlike the heating element **around which** air flows” (Opp’n at 41 (emphasis in original)). However, Fuma’s argument is that only the **end** of the positive pin forms an obstacle for air to travel around (as illustrated in blue above), and RJR’s own figures show that **air flows around the end of the positive pin** just like the heating element of the patent’s preferred embodiment. (See figures, Opp’n at 19, 20, 37, 39, 42, 45). RJR itself has recognized that structures around which air flows cannot be anything more than obstacles in a larger airflow passageway. RJR originally contended that its Vuse Solo G1 cartridge did not infringe because air deflected around a printed circuit board, or “PCB,” in the airflow passageway:



(Dkt.122-01, Ex. 1 at 32). Fuma’s expert argued that the PCB was merely an “obstacle in the airflow passageway” around which air flowed (Dkt.120-5, Ex. E at 21-22), and RJR acceded to that point in its rebuttal expert report and no longer contends that the above cartridge lacks a straight airflow passageway. (See generally Dkt.120-1, Ex. A (lacking any non-infringement arguments based on the presence of a PCB in the airflow passageway)).

In sum, even while RJR argues that the airflow passageway must consist of “internal walls” (Opp’n at 40) of a passage and understands that the passage may contain obstacles, RJR never illustrates the internal walls forming the passageway and instead depicts only air flow paths maneuvering around the obstacles contained in the Ciro’s

straight airflow passageway.¹ However, the asserted claims do not recite or define an “airflow path”—only an “airflow passageway.”

III. Conclusion

For the aforementioned reasons, Fuma’s motion for summary judgment should be granted.

Dated: November 25, 2020

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**Special Appearance Under Local Rule 831(d)*

¹ If the *Cirio* does not literally infringe the airflow passageway requirement, RJR’s motion for summary judgment should not be granted because Fuma can still prove infringement under the Doctrine of Equivalents—a heavily fact dependent inquiry. (See Dkt.130 at 27-29).

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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/ William K. Davis
William K. Davis

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