

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NJOY, LLC,
NJOY HOLDINGS, INC.,
Petitioners

v.

JUUL LABS, INC.,
Patent Owner

Case No. IPR2024-00223
U.S. Patent No. 10,709,173

PATENT OWNER'S PRELIMINARY RESPONSE

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PUBLIC VERSION**EXHIBIT LIST**

No.	Exhibit
2001	Declaration of John Collins, Ph.D.
2002	<i>Curriculum vitae</i> of John Collins, Ph.D.
2003	JUUL System FDA Premarket Tobacco Product Application, produced as JLI-NJOY-ITC1368-01159601
2004	Photo of JUUL System, produced as JLI-NJOY-ITC1368-01945391 ¹
2005	Photo of JUUL System, produced as JLI-NJOY-ITC1368-02013494
2006	Photo of JUUL System, produced as JLI-NJOY-ITC1368-02013502

¹ Several exhibits listed here were produced in the parallel ITC investigation, *In the Matter of: Certain Vaporizer Devices, Cartridges Used Therewith and Components Thereof*, ITC Investigation No. 337-TA-1368. Although those exhibits are labeled with the designation “Confidential Business Information Subject to Protective Order,” Patent Owner certifies that among these exhibits, with the exception of Exhibits 2003, 2025, 2026, and 2041 (which will be filed under seal), none of them contain Confidential Business Information. For the avoidance of doubt, Exhibit 2001, Dr. Collins’ declaration, describes and quotes the aforementioned confidential exhibits from the parallel litigation and therefore will also be filed under seal.

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2007	Photo of JUUL System, produced as JLI-NJOY-ITC1368-01945377
2008	Photo of JUUL System, produced as JLI-NJOY-ITC1368-01945372
2009	“American Cancer Society Position Statement on Electronic Cigarettes,” produced as JLI-NJOY-ITC1368-02013557
2010	World Health Organization, Tobacco Fact Sheet, retrieved from https://www.who.int/news-room/fact-sheets/detail/tobacco
2011	Gottlieb, “Healthy Innovation, Safer Families: FDA’s 2018 Strategic Policy Roadmap,” produced as JLI-NJOY-ITC1368-02013568
2012	Nitzkin, “The Case in Favor of E-Cigarettes for Tobacco Harm Reduction,” Int. J. Environ. Res. Public Health 2014, produced as JLI-NJOY-ITC1368-02013655
2013	Gottlieb & Zeller, “A Nicotine-Focused Framework for Public Health,” N Engl J Med 2017, produced as JLI-NJOY-ITC1368-02013549
2014	Hall & Doran, “How Much Can the USA Reduce Health Care Costs by Reducing Smoking?” PLoS Med 13 (May 10, 2016)
2015	Center for Disease Control and Prevention, Smoking & Tobacco Use: Costs and Expenditures, retrieved from https://www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/cost-and-expenditures.html
2016	Center for Disease Control and Prevention, Smoking Cessation: Fast Facts, retrieved from https://www.cdc.gov/tobacco/data_statistics/fact_sheets/cessation/smoking-cessation-fast-facts/index.html
2017	Chaiton et al., “Estimating the number of quit attempts it takes to quit smoking successfully in a longitudinal cohort of smokers,” BMJ Open 2016
2018	Lee & Kahende, “Factors Associated With Successful Smoking Cessation in the United States, 2000,” American Journal of Public Health, Vol. 97, No. 8 (Aug. 2007)
2019	Tolentino, “The Promise of Vaping and the Rise of JUUL,” The New Yorker, May 14, 2018, produced as JLI-NJOY-ITC1368-02013685

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2020	Cig20-schematic (Jan. 11, 2012), produced as JLI-NJOY-ITC1368-02013708
2021	Center for Disease Control and Prevention, Electronic Cigarettes, produced as JLI-NJOY-ITC1368-02013560
2022	Brose et al, “Is the use of electronic cigarettes while smoking associated with smoking cessation attempts, cessation and reduced cigarette consumption? A survey with a 1-year follow-up,” <i>Addiction</i> 110 (2015)
2023	U.S. Pat. Pub. No. 2009/0272379
2024	Corrected Post-Trial Proposed Findings of Fact and Conclusions of Law of Respondents Altria Group, Inc. and JUUL Labs, Inc., <i>In the Matter of Altria Group, Inc.</i> , before the FTC Office of Administrative Law Judges, Dkt. No. 9393
2025	Excerpts from Deposition Transcript of Adam Bowen, ITC No. 337-TA-1368 (Dec. 14, 2023)
2026	Excerpts from Deposition Transcript of James Monsees, ITC No. 337-TA-1368 (Jan. 18, 2024)
2027	Hines, “Vape King Juul Wants Everyone To Chill Out,” <i>Bloomberg Businessweek</i>
2028	Peebles, “Popular e-cigarette Juul’s sales have surged almost 800 percent over the past year,” <i>CNBC</i> (Jul. 2, 2018), produced as JLI-NJOY-ITC1368-02013602
2029	Zaleski, “E-Cigarette Maker Juul Labs Is Raising \$1.2 Billion,” produced as JLI-NJOY-ITC1368-02013564
2030	Chambers, “Imperial Takes on Juul as Big Tobacco Faces Upstart Rival,” <i>Bloomberg</i> (Jul. 4, 2018)
2031	Robinson, “How a startup behind the ‘iPhone of vaporizers’ reinvented the e-cigarette and generated \$224 million in sales in a year,” <i>Business Insider</i> (Nov. 21, 2017), produced as JLI-NJOY-ITC1368-02013607
2032	“Our Evening With blu: Takeaways from Imperial Brands’ E-Cig Event,” Wells Fargo Securities Equity Research (Mar. 28, 2018), produced as JLI-NJOY-ITC1368-02013571
2033	“Tobacco: Latest Consumer Anecdotes Still Consistent: iQOS and JUUL Stand Out,” <i>Piper Jaffray</i> (Feb. 14, 2018)

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2034	“Nielsen: Tobacco All Channel Data Thru 8/10 – Cig Vol Declines Hold Steady,” Wells Fargo Securities Equity Research (Aug. 20, 2019), produced as JLI-NJOY-ITC1368-02013619
2035	“Innovation Invigorates Inhalables,” Cowen and Company Equity Research (July 22, 2016), produced as JLI-NJOY-ITC1368-02013586
2036	“Big Tobacco Finds a Friend in the FDA, Today,” Cowen Equity Research (Sep. 12, 2018), produced as NJOYITC00148578
2037	“Three Key Take-aways From Our JUUL City Scanner Analysis,” Morgan Stanley (Sep. 10, 2018)
2038	“Is JUUL Hype Overblown?” Morgan Stanley (Jun. 26, 2018), produced as JLI-NJOY-ITC1368-01332225
2039	“Latest US Scanner Data Show Improving Trends for Cigarettes, JUUL,” Piper Jaffray (May 15, 2018)
2040	“PAX Finds Its Crown JUUL,” Cowen and Company (Sept. 22, 2016)
2041	Excerpts from Deposition Transcript of Vittal Kadapakkam, ITC No. 337-TA-1368 (Jan. 9, 2024)
2042	<i>In the Matter of Certain Electronic Nicotine Delivery Systems and Components Thereof</i> , Investigation No. 337-TA-1139, Final Initial Determination
2043	August 7, 2018 Letter to Dr. S. Gottlieb from American Academy of Pediatrics et al.
2044	“Top Juul-Compatible Pods on the Market,” Vaper City: Price Comparisons for Vapers (Oct. 2, 2018), produced as JLI-NJOY-ITC1368-02013546
2045	Intentionally Left Blank
2046	Intentionally Left Blank
2047	“Juul Compatible Pods,” Zalt, retrieved Nov. 6, 2018, produced as JLI-NJOY-ITC1368-02013548
2100	Proposed Stipulated Protective Order (redline)
2101	Proposed Stipulated Protective Order

PUBLIC VERSION**I. INTRODUCTION**

Patent Owner JUUL Labs, Inc. (“Patent Owner” or “JLI”) manufactures the highly-successful JUUL System, a cartridge-based, electronic cigarette system for delivering nicotine via vapor. U.S. Patent No. 10,709,173 (the “’173 patent”) covers several novel ideas developed by JLI and is coextensive with the JUUL System. Petitioners are competitors to JLI who have been accused of infringing the ’173 patent and now seek to invalidate it.

Introduced in 2015, the JUUL System had an immediate impact on the Electronic Nicotine Delivery Systems (“ENDS”) market. For many years, there had been a long-felt need for an alternative to conventional combustible cigarettes, given the known adverse health effects of smoking. While several companies had already introduced ENDS products by 2015, they took the approach of mimicking the shape, look, and feel of conventional cigarettes—yet this failed to attract much consumer interest.

JLI took a different approach. Its JUUL System abandoned traditional cigarette iconography altogether—instead, the JUUL System provided the user with a fundamentally different user experience. This included vapor

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production and nicotine delivery that satisfied smokers’ cravings and that were enabled through practice of the ’173 patent.

As a result of this approach, customers quickly flocked to the JUUL System. By 2018, JLI had reached over 70% market share in the ENDS market and nearly \$1 billion in annual revenue. The JUUL System also constituted over 90% of the growth in revenue within the entire market. Competitors, such as Petitioners’ parent company Altria Group, Inc. (who is a real party-in-interest), heaped extensive praise on JLI’s approach, describing it as “an innovative breakthrough” with a “simple, intuitive, easy-to-use product design.” The industry soon shifted from cigarette look-alikes to the pod-based design of the JUUL System, including Petitioners who released its first pod-based product, the NJOY Ace, in 2018.

In seeking to invalidate the independent claims of the ’173 patent, Petitioners rely on a single ground, which itself is based on a single-reference obviousness theory. Importantly, Petitioner argues that each and every limitation is *expressly* disclosed in a single prior art reference—the Verleur reference—with one exception, the “resistive heating element” limitation. Thus, while framed as an obviousness ground, Petitioner’s theory relies primarily on an express disclosure in the prior art. Yet Verleur does not

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disclose one of the key aspects of the '173 patent: an air inlet passage between the cartridge and the outer shell of the device. Rather than point to any disclosures in Verleur that anticipate the '173 patent's "air inlet passage," Petitioners makes three, hindsight-driven assumptions, with corresponding modifications to Verleur's figures based on nothing but supposition, about how air flows through the device in Verleur. The critical assumptions made by Petitioners are: (1) the presence of an air inlet where Verleur describes a window, (2) the presence of an airflow gap between Verleur's cartridge and outer shell, and (3) the presence of a central airflow hole at the bottom of Verleur's cartridge.

None of these assumptions are supported by any disclosure in Verleur or any evidence regarding a POSITA's understanding of Verleur—indeed, Verleur's teachings contradict Petitioners' assumptions in several ways. Yet each of these conclusory assumptions are required for Petitioners' argument. As detailed below, they are each incorrect, and the failure of even a single one of them is sufficient to warrant denial.

And the Petition fails for yet another reason—it has failed to consider the impact of any secondary considerations, including the well-known commercial success, industry praise, and copying of the JUUL System

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products, which are coextensive with the challenged claims. In view of these deficiencies, the Board should deny institution.

II. LEVEL OF ORDINARY SKILL IN THE ART

Petitioners propose that the level of a POSITA at the time of the '173 patent “would have at least a B.S. degree in Mechanical Engineering, Electrical Engineering, Industrial Design, Product Design, or similar field, with at least two years of industry experience in one of those fields, and such POSA would have been familiar with electrically powered vaporizing articles, their components, or the underlying technologies.” Pet. 5.

Patent Owner proposes that a POSITA at the time of the '173 patent would have had a B.S. in mechanical engineering, electrical engineering, or an equivalent degree, and either at least two years of experience designing electro-mechanical consumer products or an advanced degree in mechanical engineering, electrical engineering, or an equivalent field. Ex. 2001, ¶19.

Patent Owner’s arguments herein apply regardless of which definition of a POSITA is adopted. *Id.*, ¶¶20-21. Patent Owner’s expert, Dr. John Collins, was a POSITA at the time of the '173 patent under either definition. *Id.*, ¶22.

PUBLIC VERSION**III. CLAIM CONSTRUCTION**

In an *inter partes* review, claim terms receive their plain and ordinary meaning in light of the specification of the patent in which it appears, the same standard as used in district court. 37 C.F.R. § 42.100(b); *see Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005). Besides the term “mouthpiece,” Patent Owner contends that the terms of the ’173 Patent can be given their plain and ordinary meaning. Ex. 2001, ¶34.

Patent Owner notes that the meaning of the claim term “mouthpiece,” which appears in all Challenged Claims, is subject to a dispute in the co-pending ITC investigation. Patent Owner contends that it means “portion to be used by a mouth,” whereas Petitioners offer the construction “a separate component from the storage compartment to be used by a mouth,” arguing that the term should be limited to the preferred embodiments of the ’173 patent. Pet. 6. However, Patent Owner agrees with Petitioners that, at least in this preliminary stage, it is not necessary for the Board to resolve this construction. Ex. 2001, ¶¶35-36.

PUBLIC VERSION**IV. GROUND 1: PETITIONERS FAIL TO ESTABLISH THAT VERLEUR ALONE RENDERS OBVIOUS THE CHALLENGED CLAIMS**

The Petition’s only ground of challenge against the independent claims of the ’173 patent relies on Verleur alone “in view of the knowledge of a POSA.” Pet. 5. For the reasons below, Verleur does not disclose the claimed “air inlet passage” because Verleur does not disclose the three assumptions Petitioners make in arguing the presence of the claimed “air inlet passage”: (1) the presence of an air inlet where Verleur discloses a window, (2) the presence of an airflow gap between the cartridge and outer shell, and (3) the presence of a central hole at the bottom of the cartridge. Ex. 2001, ¶37.

A. Verleur does not render obvious “an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle” that “is configured to deliver the air to the heater chamber”

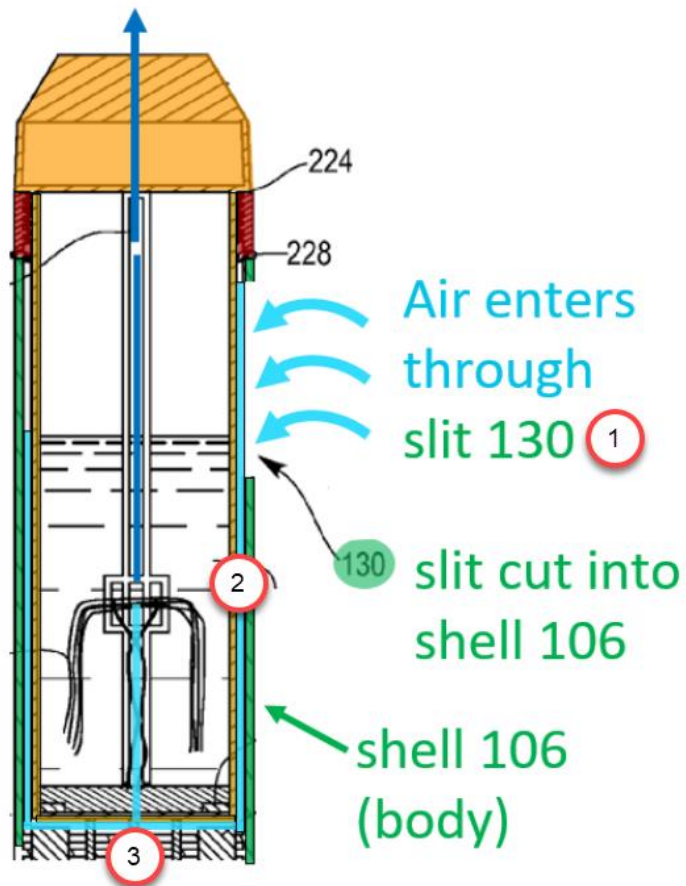
The claims all require several key limitations that the Petition fails to establish. Specifically, independent claims 1 and 20 require an air inlet passage that (1) includes airflow between the exterior surface of the cartridge and the interior surface of the receptacle, and (2) delivers air to the heater chamber or heating element. Importantly, the Petition asserts no obviousness theories for these limitations, arguing exclusively that these limitations are

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expressly disclosed in the prior art. Thus, the Petition is confined to the four corners of the prior art—but the prior art very plainly fails to disclose these limitations. Ex. 2001, ¶38.

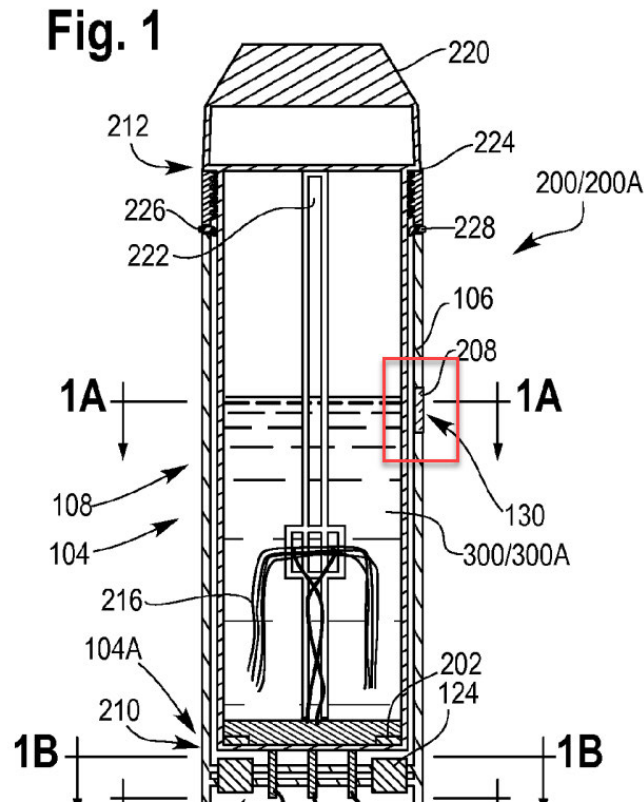
Indeed, Petitioner is forced to make several incorrect assumptions in mapping the claims to Verleur. Ex. 2001, ¶39. The failure of any one of these assumptions would warrant denial, but here, each of these assumptions are incorrect. *Id.*, ¶40 These assumptions are best discussed in the context of Petitioners' highly modified and annotated Figure 1, reproduced below and further modified herein to label each assumption by a red-circled number. Ex. 2001, ¶41.

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First, Petitioners assume that “air enters at window 130” which they label an “inlet passage.” Pet. 33. But this is Petitioner’s annotation, and the specification *nowhere* states that window 130 allows air to enter—this is pure fabrication on Petitioner’s part. Ex. 2001, ¶42. Figure 1, of course, shows no such opening where window 130 is located.

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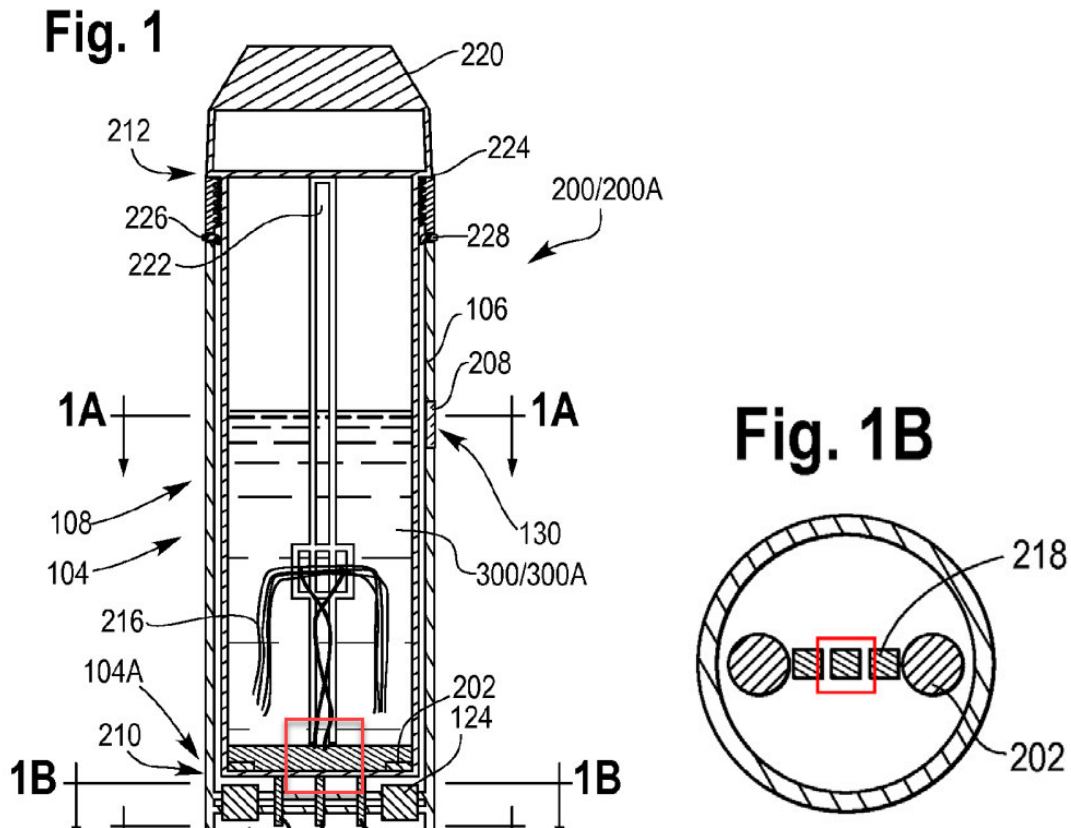


Second, Petitioners assume the existence of a gap between the shell 106 and the removable cartomizer. Ex. 2001, ¶43. While Figure 1 depicts a gap, Verleur does not describe the presence or purpose of such a gap other than to allow the cartridge to be insertable into the chamber of the shell. *Id.* Petitioners misleadingly widen the depicted gap in their modified Figure 1. *Id.*

Third, Petitioners assume (and modify the figure to show) the presence of a hole in the center of the bottom of the removable cartomizer to allow for airflow to travel into the cartomizer. Ex. 2001, ¶44. Not only is no such hole

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depicted or described (see Figure 1 below, annotated to show the lack of a hole), but there can be no hole in that location—Verleur teaches an electrical contact in the center of the bottom of the cartomizer, not a hole. *Id.*



Each of the above assumptions is necessary for Petitioners' theory that Verleur discloses "an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle" that "is configured to deliver the air to the heater chamber." If a single assumption is wrong, then there is simply no airflow from the surface

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of the cartridge through the air inlet passage to the heater chamber, as required by the claims. Ex. 2001, ¶40.

Patent Owner addresses these assumptions in turn. Ex. 2001, ¶45.

1. Verleur does not disclose that “window 130” is an air inlet

Petitioner assumes that “window 130” is an air inlet. Pet. 30. Petitioners’ interpretation of Verleur is not found anywhere in Verleur nor is it consistent with the understanding of a POSITA. Ex. 2001, ¶46. Indeed, Verleur knew how to expressly disclose an air inlet—one is described in the embodiment of Figure 2 that Petitioners explicitly do not rely on, and is placed in a completely different position that would not read on the claim limitations. *Id.*

Verleur makes clear that the purpose of “window 130” is “to view internal components of battery portion 100,” such as “to permit a user ... to view the cartomizer 200 when it is inserted into cartomizer chamber 108.” Ex. 1005, ¶37. In other words, the purpose of “window 130” is to, for example, allow a user to easily see how much fluid remains in the removable cartomizer. Ex. 2001, ¶42.

Verleur states that window 130 may be covered by glass or plastic, or that it can be a “slit cut into shell 106.” Ex. 1005, ¶37. However, regardless

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of its form, window 130 is, as its name makes clear, a *window*. Verleur never states that window 130 is an inlet that allows air to enter the electronic cigarette. There is no disclosure in Verleur that window 130 is appropriately-sized for airflow in fluid connection with the mouthpiece where a user inhales, nor would a POSITA expect it to be. Ex. 2001, ¶48. It is important to note that Verleur does not require air flow through the cartomizer² in this Figure 1 embodiment—in such a case, it would be considered a “fuming” type device. Such devices heat the liquid in an enclosed space and the liquid that is vaporized substantially expands in volume and exits through the inhalation tube where it can be inhaled. Ex. 2001, ¶49. Consistent with the device described in Verleur, a fuming type device can have buttons on the exterior of the shell for users to press/actuate to cause the current to flow to the heater rather than using a pressure sensor to automatically detect a puff/draw. Ex. 1005, ¶27. Fuming devices do not require the user to suck air through the cartomizer, and instead, the vapor is inhaled directly with the potential for

² As discussed herein, air flowing “through the cartomizer” refers to air flowing from an inlet to a separate outlet. Ex. 2001, ¶49.

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ambient air that never passes through the cartomizer to be mixed with the vapor during inhalation. Ex. 2001, ¶49.

Even if air flows through the cartomizer, a POSITA at the time of the invention of the '173 Patent would understand that the airflow in an e-cigarette is the result of considerable engineering. Ex. 2001, ¶50. The size, shape, and location of air inlets and air passages affects draw resistance, which impacts, among other things, vapor production, the size of the visible vapor cloud, and nicotine delivery to a user. *Id.* These are details that must be carefully balanced so that the use of the vaporizer simulates the experience of using a cigarette. *Id.* And importantly, Petitioners do ***not*** argue an obviousness theory for this limitation. They argue that an “air inlet” is expressly disclosed, and as such are tied to the four corners of the disclosure. *Microsoft Corp. v. Biscotti, Inc.*, 878 F.3d 1052, 1068 (Fed. Cir. 2017). And a ***window*** is not an ***inlet***.

Indeed, the Petition fails to address any of the significant distinctions between a “window” and an “inlet.” The inventors of the '173 Patent and the JUUL Device it claims recognized that draw resistance, and the airflow that contributes to it, must be tightly controlled. *See, e.g.*, Ex. 2003, 26 [REDACTED]

[REDACTED]

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██████████ Others working in the e-cigarette space at the time of the '173 Patent's invention similarly recognized that many factors contribute to the user experience, including the design of the aerosol formation chamber. *See* Ex. 2023 ("Thorens '379"), ¶50; Ex. 2001, ¶51.

But Petitioners do not take these factors into consideration when arbitrarily designating window 130 as an air inlet. Ex. 2001, ¶52.

A POSITA would not expect, therefore, that air enters through window 130. To the contrary, to the extent the device allows air to enter, a POSITA would understand that air must enter the device elsewhere. Ex. 2001, ¶53. The size of window 130 proposed by Petitioners is proportionally very large relative to the rest of the shell. If the window were the air passage, a POSITA would understand that the resulting draw resistance would be nothing like a traditional cigarette, and as a result the Verleur device would not be usable for its intended purpose as an electronic substitute for a traditional cigarette. *Id.*; Ex. 1005, ¶3. Moreover, too large of an air inlet (as window 130 would be)

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would jeopardize the ability of the Verleur device to detect negative pressure during a draw, impacting its ability to properly function. Ex. 2001, ¶53.

Verleur does state that “[i]nhalation tube 222 may also be in fluid communication with one or more *holes or ducts provided, for instance, in sides of outer shell 106* in order to permit air flow through cartomizer body 208.” Ex. 1005, ¶39. However, Verleur does not assign an element number to such holes or ducts, does not equate such holes or ducts with window 130, and *does not describe or depict where they are*. Figure 1 does not depict any such hole or duct on the outer shell—and window 130 is depicted as a solid piece, not a hole or duct. Thus, it is clear these holes or ducts are a different element from window 130 and it is improper for Petitioners to equate the two. Ex. 2001, ¶54. And, again, Petitioners’ ground rests on an argument that this inlet is *expressly* disclosed—Petitioners have not argued that such an inlet would have been obvious, and thus there is no evidence in the record as to where or how such holes or ducts would be placed.

Since Figure 1 does not depict holes or ducts nor depict how such holes or ducts would be in fluid communication with inhalation tube 222, to the extent they exist, the placement of such elements is not limited to the placement of other elements in Figure 1. Ex. 2001, ¶55. Where they would

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be present on the shell would need to be in accordance with a POSITA's understanding of Verleur—and not simply placed arbitrarily “anywhere along the length of the outer shell” as Petitioners propose. Pet. 35. Petitioners do not provide any explanation or evidence for why a POSITA would understand the holes to be in any particular place. It is clear Petitioners' arbitrary placement of the hole is merely driven by hindsight to meet the claims rather than an analysis of what a POSITA would consider to be efficacious or desirable. Ex. 2001, ¶55.

Indeed, if there is airflow through the cartomizer, the exact placement of the air inlets is both key to the proper functioning of a vaporizer device like the one disclosed in Verleur and is key to whether Verleur reads on the claims. Ex. 2001, ¶56. As discussed above, the size, shape, and location of the air inlet dictates the airflow within the device, which is key to proper operation of an e-cigarette device like the one taught in Verleur. Moreover, the precise placement of the holes or ducts (which is not disclosed in the embodiment of Verleur that Petitioners rely on), dictates whether the claim limitation is met. For example, if the holes or ducts are (arbitrarily) placed on the shell below the cartridge in the receptacle and if one (arbitrarily) assumes air enters the cartomizer through its bottom, then there is no “air inlet passage having a first

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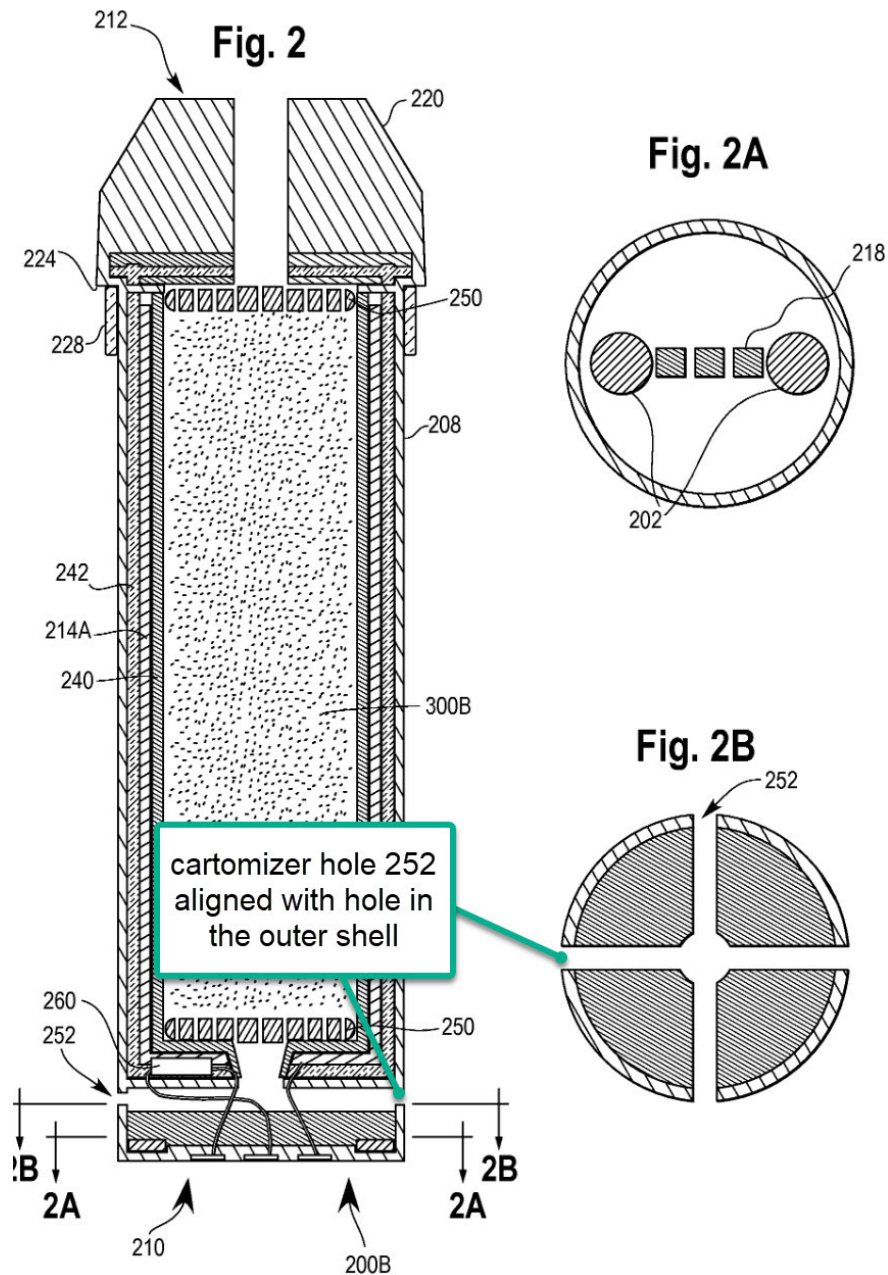
side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle.” Ex. 2001, ¶56. Thus, Petitioners’ argument that placing the hole “anywhere along the length of the outer shell” would necessarily result in air “travel[ing] down a gap (channel) formed by the exterior surface of [the cartomizer] and the interior surface of outer shell 106” is completely baseless and simply wrong. Pet. 35.

But while Verleur does not disclose the air path in connection with Figure 1, it *does* in connection with another embodiment, not relied on in the Petition. Pet. 26-27 (“Petitioners rely on the first embodiment, which is depicted at, *e.g.*, Fig. 1, and *not the second embodiment*, which is depicted at, *e.g.*, Fig. 2.”). Figure 2 is a solid matter embodiment that does not use a liquid. However, like the Figure 1 embodiment, the solid matter embodiment still utilizes a removable cartomizer. Ex. 1005, ¶11 (“FIG. 2 illustrates ... a cartomizer ... that may be inserted into the cartomizer chamber of the battery portion of FIG. 1.”); Ex. 2001, ¶57.

In the context of the Figure 2 embodiment, Verleur depicts “one or more holes 252 in the cartomizer body 208,” which Verleur calls an “air hole structure,” at the bottom region of the cartomizer. Ex. 1005, ¶¶43, 13. A cross-section of the cartomizer is shown in Figure 2B and depicts the holes

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forming a + shape, with four holes on the outside of the cartomizer body. Ex. 2001, ¶58.



Notably, Verleur explains that these cartomizer holes 252 “may be capable of *alignment with one or more holes on the outer shell 106* ... so

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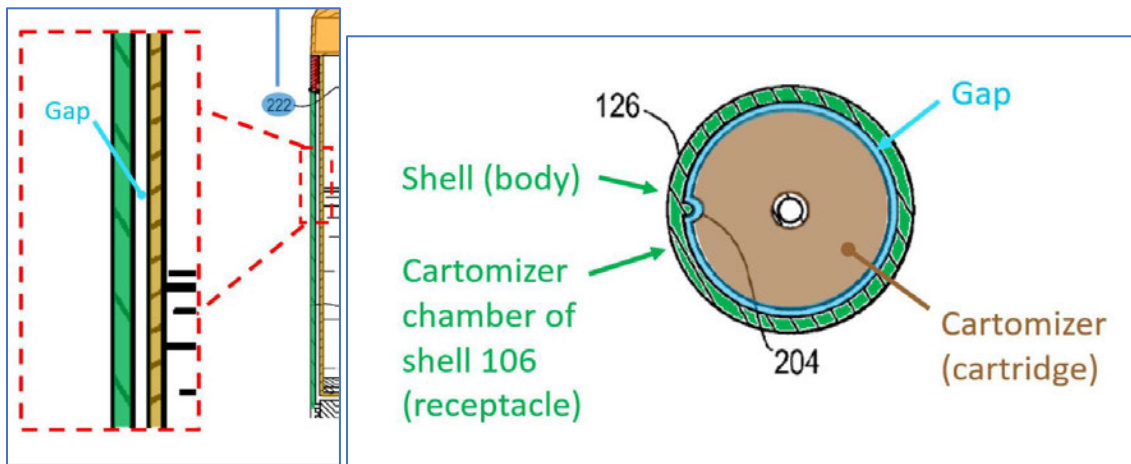
that air from the environment may pass through holes 252 and into container 240.” Ex. 1005, ¶43. Given this disclosure in Verleur of where the holes or ducts are located, a POSITA would not understand Verleur’s window 130 or any other arbitrary position to be the “hole” in the Figure 1 embodiment. Ex. 2001, ¶59. To the contrary, a POSITA would understand that to the extent Figure 1 has a hole on the outer shell for airflow, the holes would be preferably aligned with an “air hole structure” similar to that depicted in Figures 2 and 2B, instead of the arrangement assumed by Petitioners. Ex. 1005, ¶13; Ex. 2001, ¶59.

2. Verleur does not disclose an air inlet passage between the cartomizer and the outer shell

Petitioners’ second assumption is that Verleur expressly discloses a gap between outer shell 106 and the cartomizer that allows for airflow, which it must in order to meet the “air inlet passage” limitation. However, Verleur does not describe that any such gap exists. Ex. 2001, ¶60. To the extent a gap exists, a POSITA would understand that its purpose is to provide clearance to allow the insertion of the cartomizer into the shell’s chamber, not to allow airflow. *Id.*

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Petitioners instead rely on the depiction of what they allege to be a gap in Figures 1 and 1A. Pet. 28-29.³ Petitioners’ annotated versions of Figures 1 and 1A are provided below. Ex. 2001, ¶61.



As an initial matter, it is well-settled that a patent’s figures generally are not intended to convey specific dimensions or scale. *Hockerson-*

³ Petitioners argue that since Figure 2 “does not depict gap, but instead provides access to external air through holes 202,” this must mean Figure 1’s gap is for airflow. Pet. 36. However, no such gap is depicted because Figure 2 only depicts the cartomizer, and not how it fits when inserted into the battery portion. Ex. 1005, ¶11 (“FIG. 2 illustrates ... a cartomizer in accordance with the disclosure that [it] may be inserted into the cartomizer chamber of the battery portion of FIG. 1.”); Ex. 2001, ¶62.

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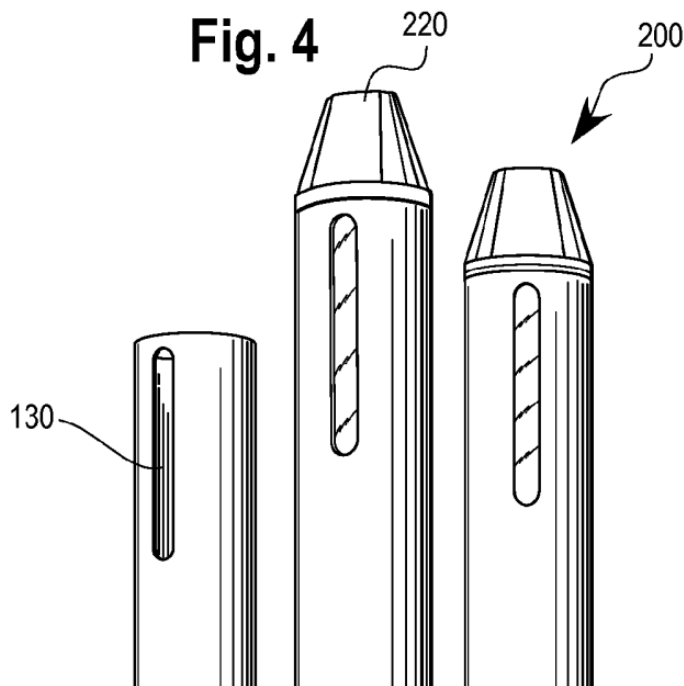
Halberstadt, Inc. v. Avia Group Int'l, 222 F.3d 951, 956 (Fed. Cir. 2000) (“[P]atent drawings do not define the precise proportions of the elements and ***may not be relied on to show particular sizes*** if the specification is completely silent on the issue.”).⁴ Nevertheless, in the face of a specification that is completely silent on both the existence and the function of the alleged gap, Petitioners still argue that the figures of Verleur disclose a gap that is used for airflow. Nowhere does Verleur label the alleged “gap” or describe it as a gap, let alone a gap through which air flows. Verleur cannot anticipate the airflow path limitation when Petitioners’ interpretation of Verleur is contrary to a POSITA’s understanding. Ex. 2001, ¶63.

A POSITA would not understand that the depicted gap is for airflow because Verleur does not provide ***any*** disclosure about the presence, size, or purpose of the depicted gap. Ex. 2001, ¶64. Notably, Petitioners do not argue that it would be obvious that this gap is an airflow passage. Nor do Petitioners provide any evidence that a POSITA would understand that the purpose of this gap is to allow airflow. By contrast, Patent Owner provides the testimony of Dr. Collins, who explains that a POSITA would instead understand that the gap is merely to depict that the cartomizer is physically separate from the

⁴ Indeed, Figure 1A does not depict the inside wall of the cartomizer.

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cartomizer chamber 108, and that the former is insertable into the latter—without such a depicted gap, it would be difficult to tell from the figures that those components are physically separate. Ex. 2001, ¶64. Indeed, this is further supported by Figures 4-7, which depict the cartridge and the inner shell as being flush with one another. *Id.* The presence of an actual gap is not required or disclosed. Instead, if air enters at all, it does so through holes or ducts which are not shown.



Moreover, as discussed above, if airflow through the cartomizer occurs, the amount of airflow through the device must be tightly controlled to allow for a specific amount of draw resistance that allows a satisfactory user

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experience. *See, e.g.*, Ex. 2003, 26; Ex. 2001, ¶65. Petitioners provide no evidence and point to no disclosures in Verleur that a POSITA would consider the alleged gap in Verleur to meet such customer requirements. Ex. 2001, ¶65.

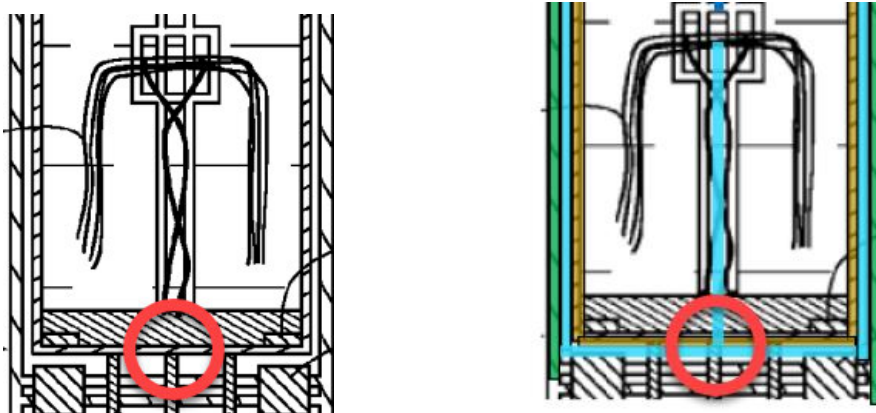
Instead, as discussed above, Verleur already discloses an effective means for allowing airflow into the cartomizer: the use of an “air hole structure” such as that depicted in Figure 2 and holes on the outer shell aligned with such a structure. Ex. 1005, ¶¶13, 43. Thus, air would flow directly into the cartomizer through aligned holes. Ex. 2001, ¶66. Such an air hole structure would not disclose “an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by the internal surface of the receptacle” as claimed.

3. Verleur does not disclose a central airflow hole at the bottom of the cartomizer

Petitioners’ third assumption is that the bottom of the cartomizer has a center hole to allow airflow into the cartomizer. However, if air enters the cartomizer, it cannot be through what Petitioners depict to be a center hole via their annotated drawings, because Verleur expressly discloses the presence of a solid electrical contact in this location instead. Ex. 2001, ¶67.

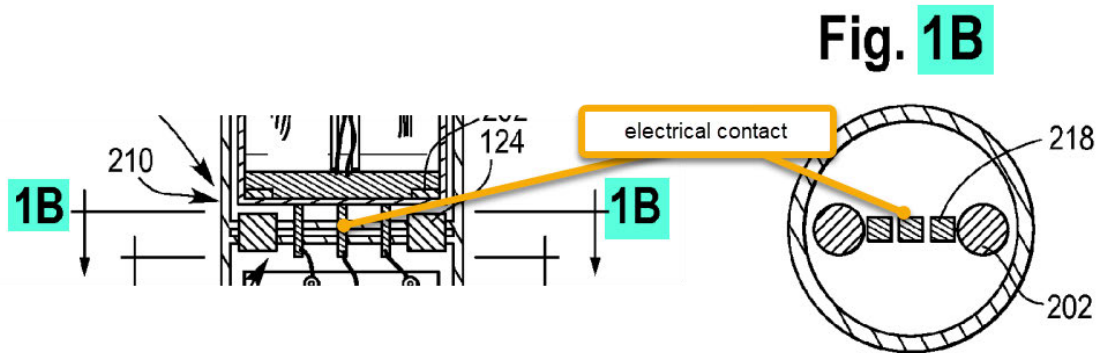
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Below is a comparison of Verleur's Figure 1 (which does not depict a hole) with Petitioners' annotated Figure 1 (which has been modified to require the presence of a hole)—the red circles indicate this difference. Ex. 2001, ¶68.



Instead of a hole, Verleur discloses that there is an electrical contact. Ex. 2001, ¶69. Specifically, Figure 1B shows that at the center of the cartomizer, where Dr. Singhose opines the hole is placed, there is a solid “electrical contact 218” or “electrical receiver[] ... thereby establishing an electrical connection between PCB 112 and cartomizer 200.” Ex. 1006, ¶¶33, 57; Figs. 1, 1B.

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These electrical contacts provide current from the PCB to power the heating element in the cartomizer. *Id.*, ¶39 (“An electrical current may be transmitted to heating element 214 through circuitry in electrical communication with electrical contacts, which contact pins 122 ... when cartomizer 200A is inserted into chamber 108.”). If the electrical contact is in the center of the cartomizer, an air inlet cannot be disposed in the same location, nor would it be obvious to modify Verleur to place an air inlet in this location. Ex. 2001, ¶70

* * *

In sum, in arguing that Verleur “discloses” an “air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle” that “is configured to deliver the air to the heater chamber” as required by limitations [1.H] and [1.I], Petitioners assume (1) that what Verleur describes as a window is really an air

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inlet, (2) that a gap exists and is of a particular size that allows a specific user-satisfying amount of airflow between the cartomizer and outer shell, and (3) that a center hole exists on the bottom of the cartomizer. Verleur discloses none of these things and instead provides disclosures that are plainly inconsistent with Petitioners’ assumptions. Ex. 2001, ¶71. Nor do Petitioners provide any evidence that a POSITA would find such things readily apparent or obvious—by contrast, Petitioners provide testimony from Dr. Collins that a POSITA would not find any of these assumptions to be apparent or obvious. *Id.*, ¶72.

Thus, Petitioners’ Ground 1 fails on the merits.

V. GROUND 2 FAILS ON THE MERITS

As discussed above, Petitioners have failed to establish that Verleur in view of the knowledge of a POSITA renders obvious the independent claims of the ’173 Patent. Because Ground 2 challenges dependent claims 2, 4, 21, and 23, Ground 2 also fails for the same reasons discussed above in Ground 1. Ex. 2001, ¶73.

VI. OBJECTIVE EVIDENCE FURTHER DEMONSTRATES THAT THE ’173 PATENT WAS NOT OBVIOUS

Objective indicia of non-obviousness “may often be the most probative and cogent evidence in the record.” *Medtronic, Inc. v. Teleflex Innovations*

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Sarl, 70 F.4th 1331, 1342 (Fed. Cir. 2023). In considering such evidence, the Board should conduct a “a reasoned, collective weighing of its evidence of secondary considerations,” and not rely on “overly vague and ambiguous” “assignments of weight to different considerations.” *Volvo Penta of the Americas v. Brunswick Corp.*, 81 F.4th 1202, 1213-16 (Fed. Cir. 2023). Objective evidence includes “(1) commercial success, (2) copying, (3) industry praise, (4) skepticism, (5) long-felt but unsolved need, and (6) failure of others.” *Id.*, 81 F.4th at 1212.

As shown below, there is strong and indisputable objective evidence of non-obviousness. Ex. 2001, ¶¶74-75. For nearly a decade, Patent Owner JLI has marketed and sold electronic cigarette devices under the JUUL brand. These products comprised a JUUL Device and various JUULpod (a removable cartridge) products (the “JUUL System”).

After its introduction in 2015, the JUUL System met the long-felt need for a nicotine alternative to conventional combustion cigarettes. The JUUL System unexpectedly met this need by declining to use cigarette iconography and instead focusing on modularity and a system that would provide the best user experience. As a result, the JUUL System received significant industry praise and commercial success, raising its market share to over 70% within a

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few years. The success of the JUUL System also led to copying by competitors, including by Petitioners and Petitioners' parent company and real party-in-interest, Altria Group, Inc ("Altria") (f/k/a Philip Morris).

A. JLI's products are coextensive with the claimed invention and thus a strong nexus exists between the invention and the objective evidence

In evaluating the nexus requirement for secondary considerations, there is a "presum[ption] that such a nexus applies for objective indicia when the patentee shows that the asserted objective evidence is tied to a specific product and that product embodies the claimed features, and is coextensive with them." *Polaris Industries, Inc. v. Arctic Cat, Inc.*, 882 F.3d 1066, 1072 (Fed. Cir. 2018). The nexus analysis looks at the claims as a whole and "proof of nexus is not limited to only when objective evidence is tied to the supposedly new features." *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1331 (Fed. Cir. 2016).

There is a strong nexus here because the JUUL System is coextensive with the claims of the '173 patent. Ex. 2001, ¶¶76-77. The claimed invention is not merely a subcomponent of the products sold, but includes a removable cartridge and a body that receives the cartridge.

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As shown below, the JUUL System practices every limitation of at least claim 1 of the '173 patent.

1. 1[pre]: An apparatus comprising:

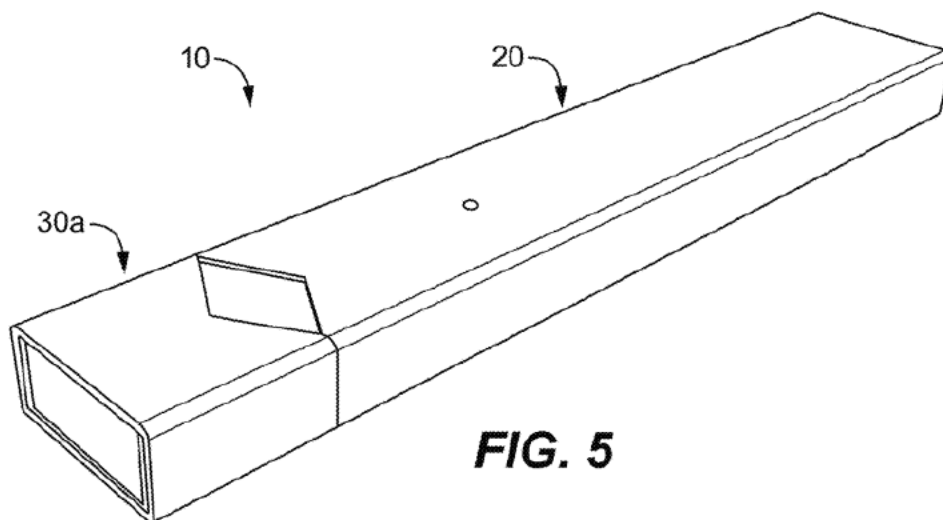
The JUUL System is an apparatus that [REDACTED]

[REDACTED]

[REDACTED] Ex. 2003, 9, 11; Ex. 2001, ¶78.

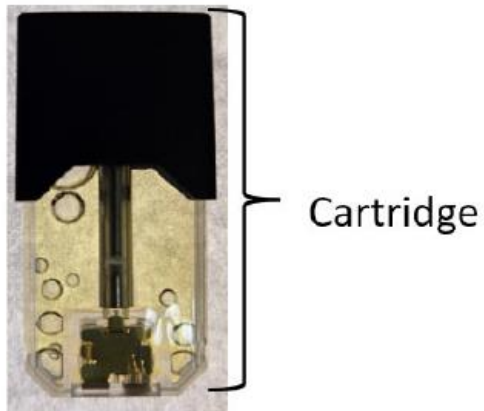
[REDACTED]

This apparatus is consistent with the apparatuses described in the '173 patent and depicted in its figures. *See, e.g.*, Fig. 5; Ex. 2001, ¶79.

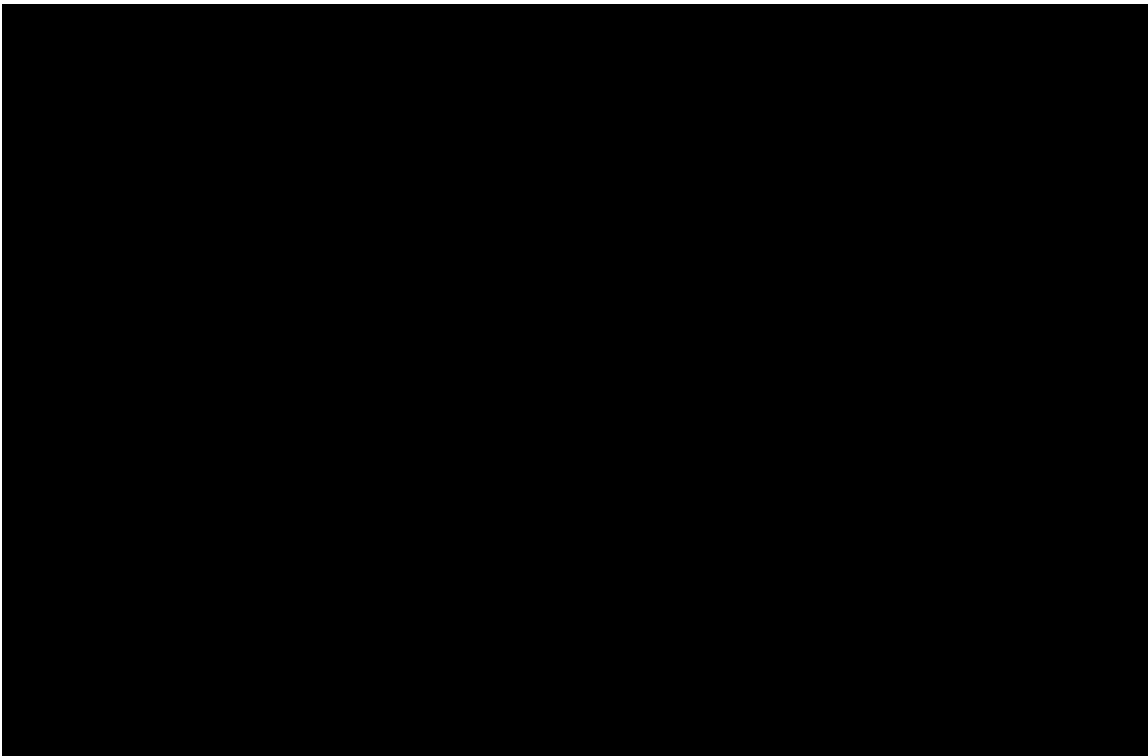


PUBLIC VERSION**2. 1[a]: a cartridge comprising,**

The JUUL System comprises a cartridge (specifically a JUULpod) that is insertable into the JUUL Device. Ex. 2004; Ex. 2001, ¶80.

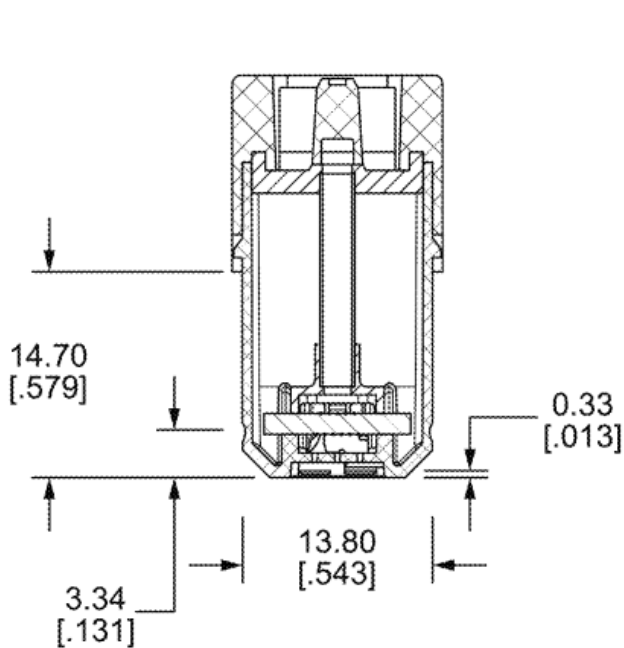
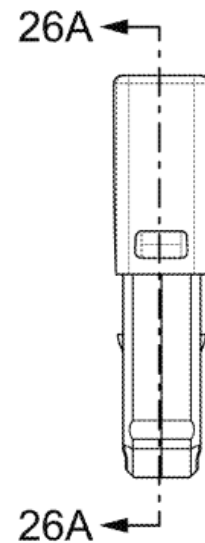


Below is a schematic of the JUULpod cartridge. Ex. 2003, 26; Ex. 2001, ¶81.



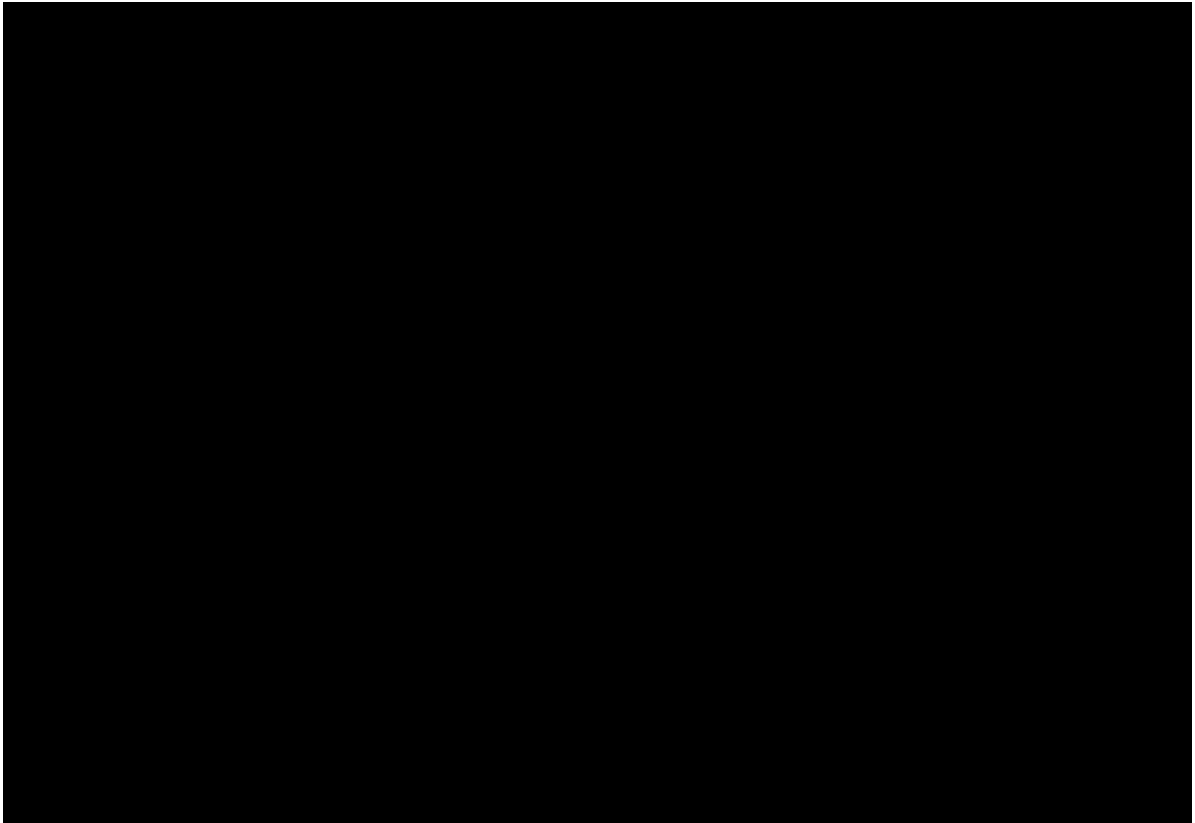
PUBLIC VERSION

The JUULpod cartridge is consistent with the cartridges described in the '173 patent and depicted in its figures. *See, e.g.*, Figs. 26A and 26B; Ex. 2001, ¶82.

**FIG. 26A****FIG. 26B**

3. 1[b]: a mouthpiece,

Under either parties' proposed construction of "mouthpiece," the JUUL System's JUULpod has a mouthpiece. Ex. 2001, ¶83. For example, as shown below, there are multiple components of the JUULpod, including a separate mouthpiece component. Ex. 2003, 24.

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The components of the JUULpod cartridge, including its mouthpiece, are consistent with the cartridge components described in the '173 patent and depicted in its figures. *See, e.g.*, Fig. 30; Ex. 2001, ¶84.

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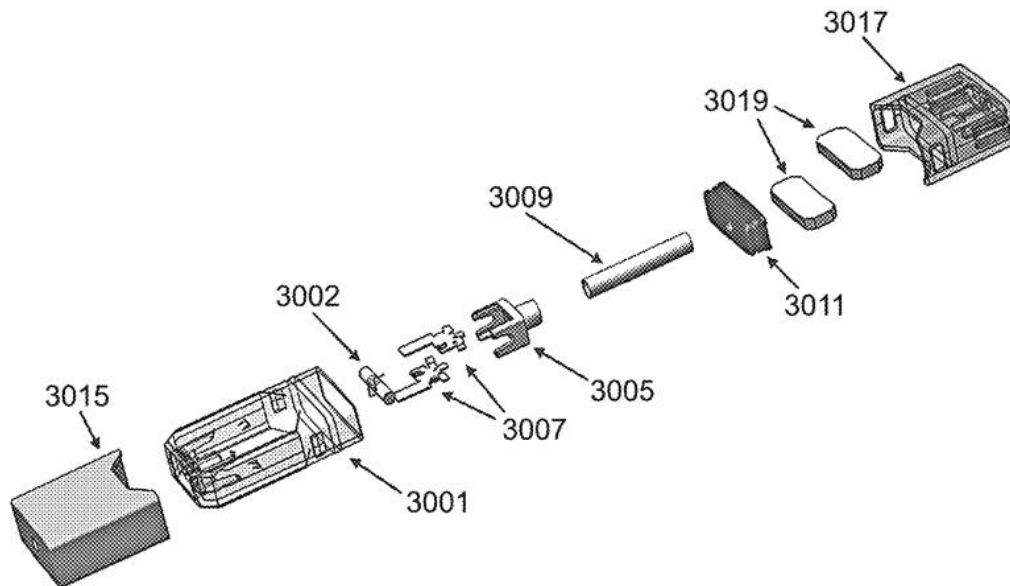
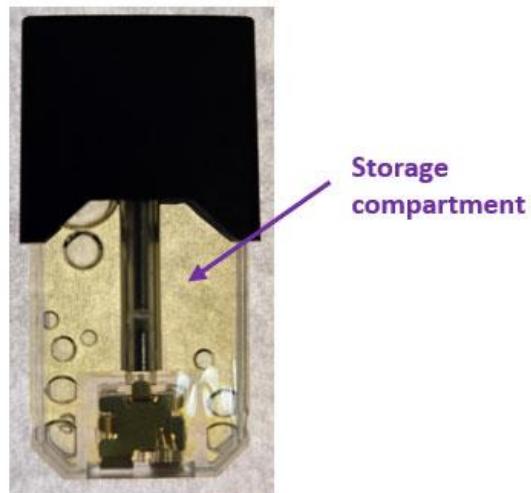


FIG. 30

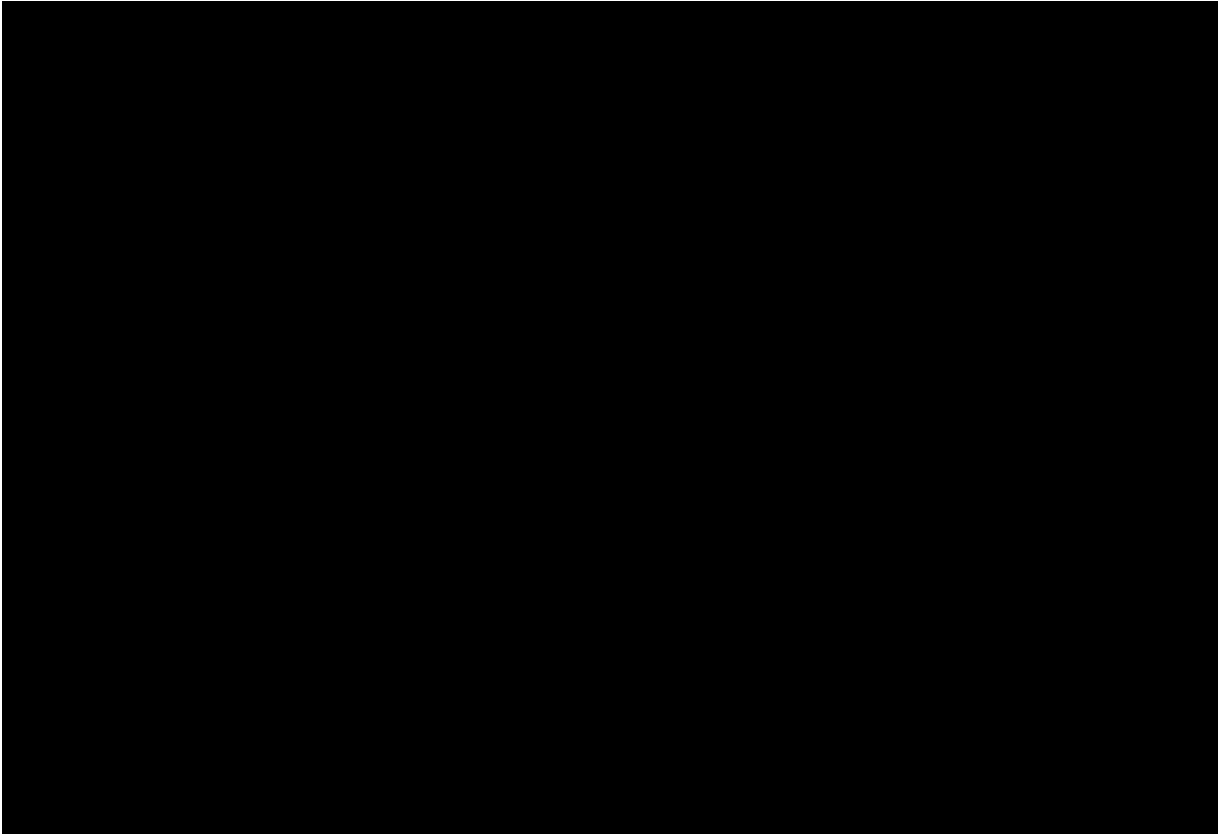
4. 1[c]: a storage compartment configured to hold a vaporizable material, and

The JUULpod cartridge contains a storage compartment for storing the vaporizable liquid, as shown in the below photo. Ex. 2004; Ex. 2001, ¶85.



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According to Patent Owner's technical documents, a JUULpod [REDACTED] as shown in the below figure. Ex. 2003, 23-24; Ex. 2001, ¶86.



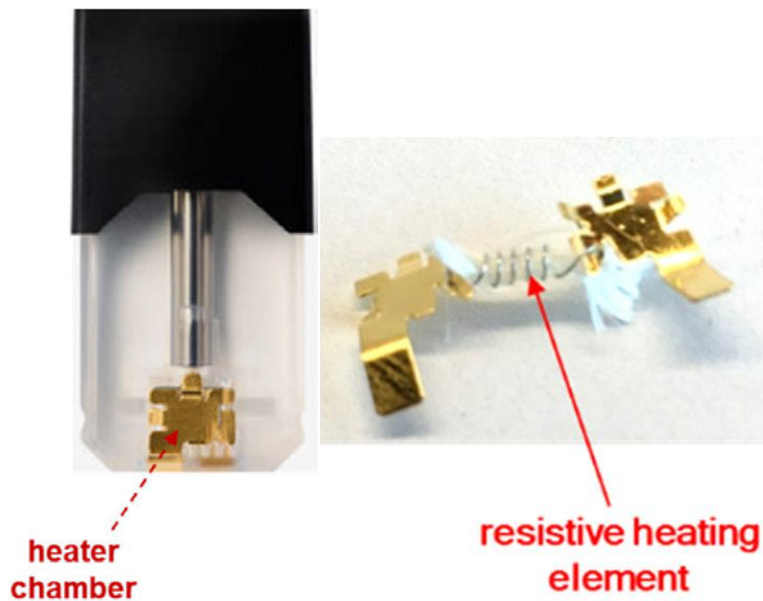
The components of the JUULpod cartridge, including its storage compartment, are consistent with the cartridge components described in the '173 patent and depicted in its figures. *See, e.g.*, Fig. 30; Ex. 2001, ¶87.

5. **1[d]: a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material**

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generates an aerosol comprising the vaporizable material and air passing along an airflow path;

The JUULpod cartridge of the JUUL System contains a heater chamber comprising a resistive heating element, as shown in the below photos. Ex. 2005, Ex. 2006; Ex. 2001, ¶88.



The heating element is *resistive* because it [REDACTED]
 [REDACTED] Ex. 2003, 23;
 Ex. 2001, ¶89. The heating element *heats the vaporizable material* to
generate an aerosol that is the combination of the vaporizable material and
 air. Ex. 2003, 23 [REDACTED]
 [REDACTED]; *id.*, 26-27 [REDACTED]

PUBLIC VERSION

The JUUL System's heating element is consistent with the resistive heating elements described and depicted in the '173 patent. *See, e.g.*, Fig. 30 Ex. 2001, ¶90.

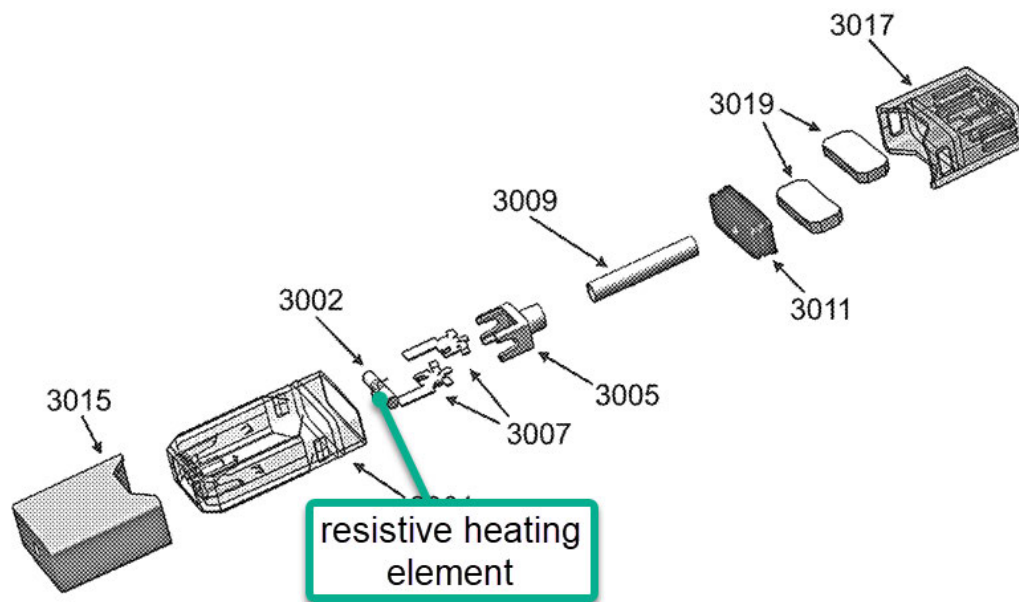
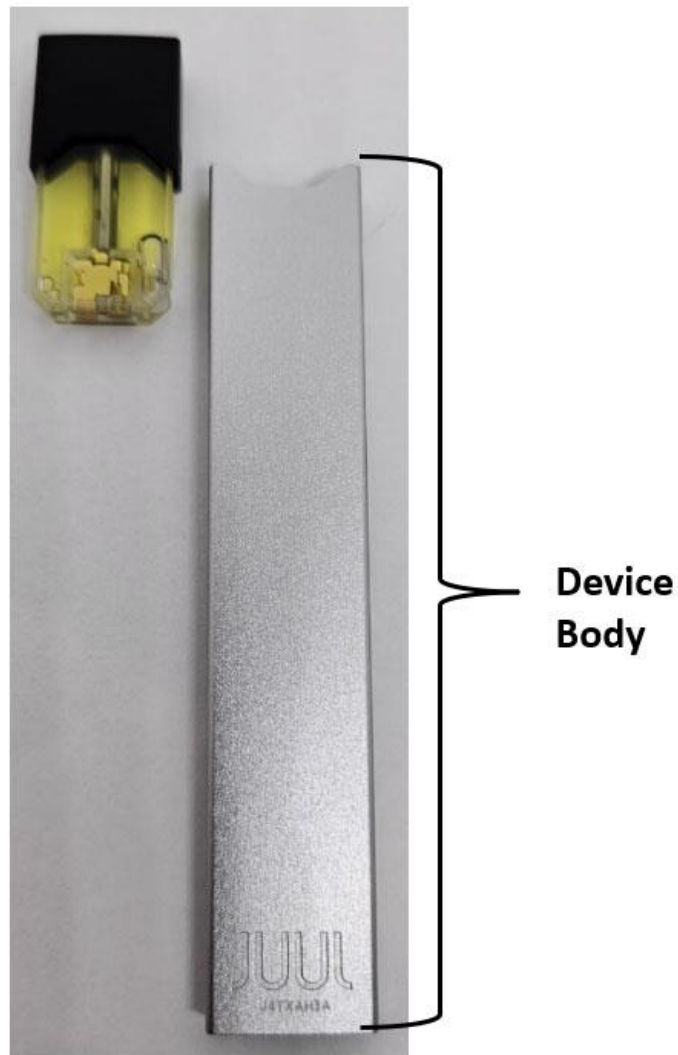


FIG. 30

6. 1[e]: a body comprising

The JUUL System comprises a JUUL Device body into which the JUULpod cartridge is inserted. Ex. 2007; Ex. 2001, ¶91.

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The JUUL Device has a device body consistent with the device bodies described in the '173 patent and depicted in its figures. *See, e.g.*, Figs. 27A and 27B; Ex. 2001, ¶92.

PUBLIC VERSION

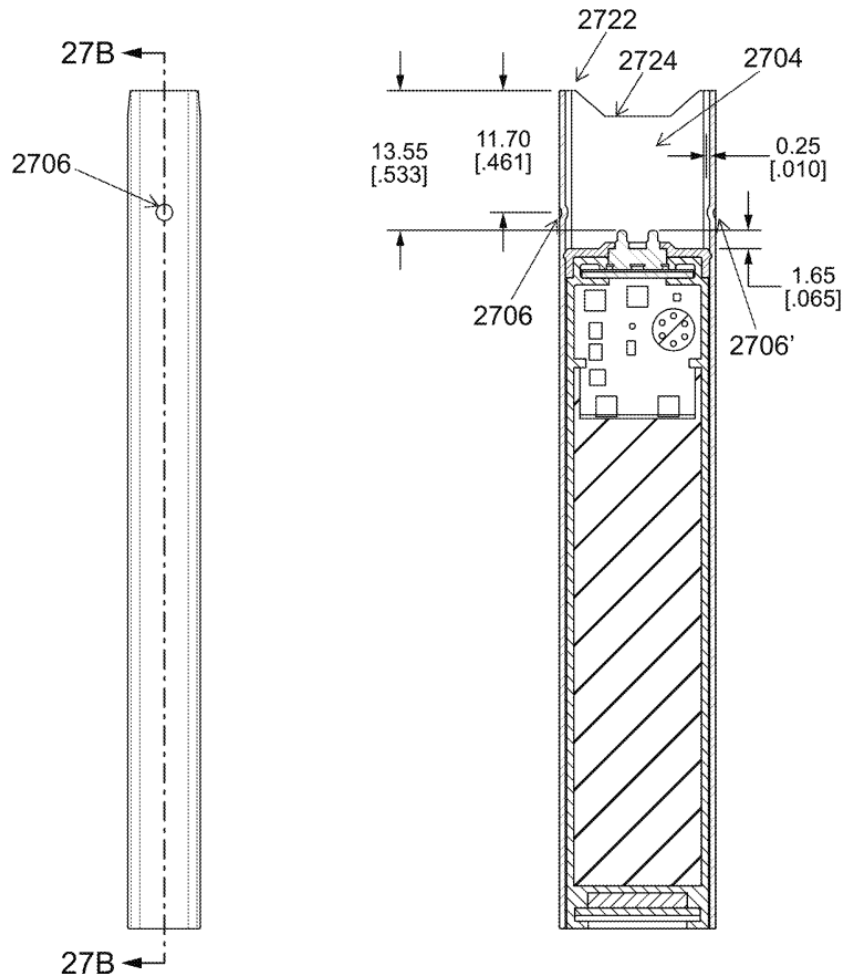
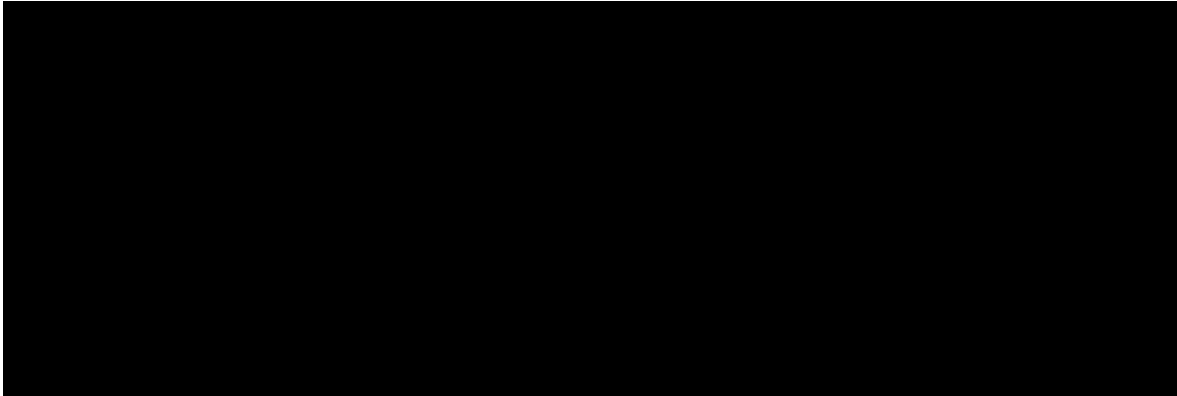


FIG. 27A

FIG. 27B

7. 1[f]: a receptacle configured to insertably receive and couple to the cartridge,

In the JUUL System, the JUULpod is inserted into and coupled to the JUUL Device's receptacle, as shown below. Ex. 2003, 9; Ex. 2001, ¶93.

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The JUUL System's method of cartridge insertion is consistent with the insertion methods described and depicted in the '173 patent. *See, e.g.*, Figs. 28B and 28C; Ex. 2001, ¶94.

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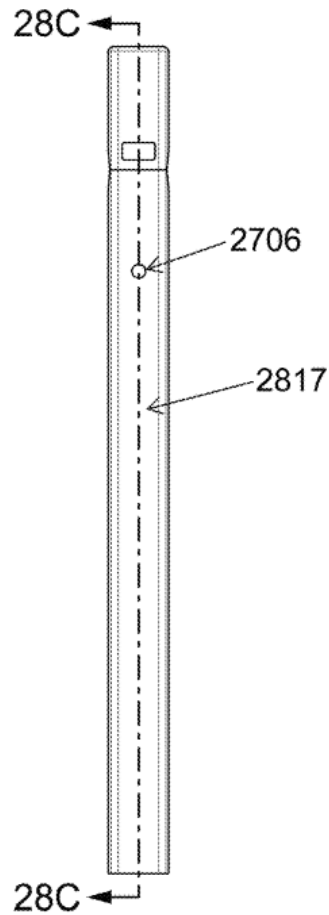


FIG. 28B

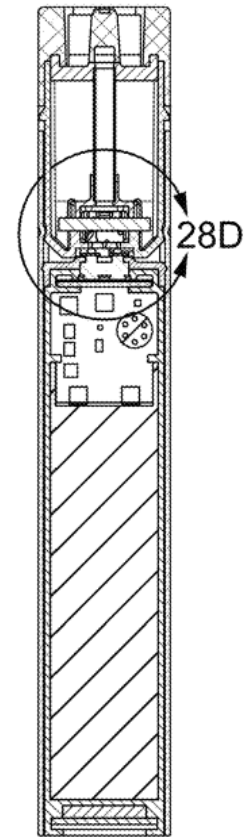


FIG. 28C

8. 1[g]: wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,

As depicted below, the JUULpod cartridge's heater chamber is at the bottom of the cartridge and therefore is disposed within the JUUL Device's receptacle when the cartridge is inserted. Ex. 2007; Ex. 2001, ¶95.

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The placement of the heater chamber within the receptacle in the JUUL System is consistent with those described and depicted in the '173 patent. *See, e.g.,* Figs. 28B and 28C; Ex. 2001, ¶96.

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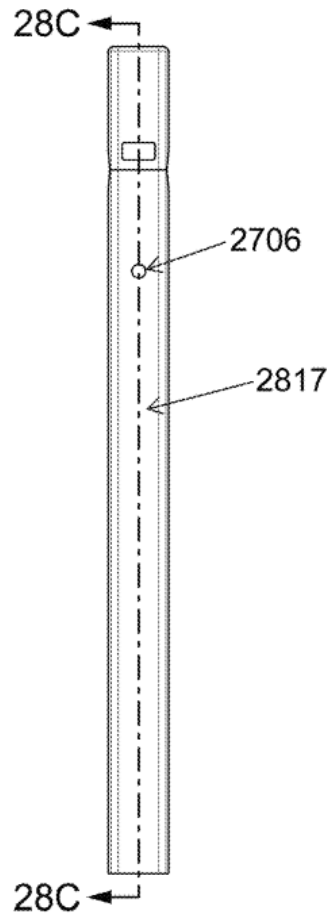


FIG. 28B

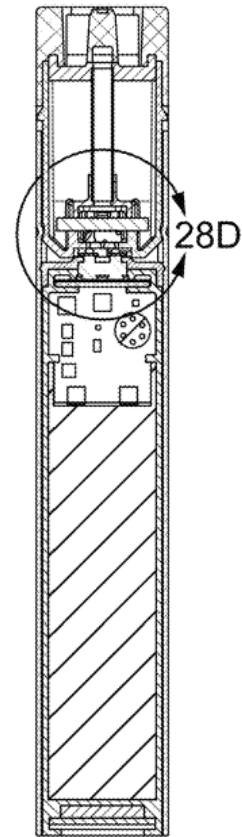


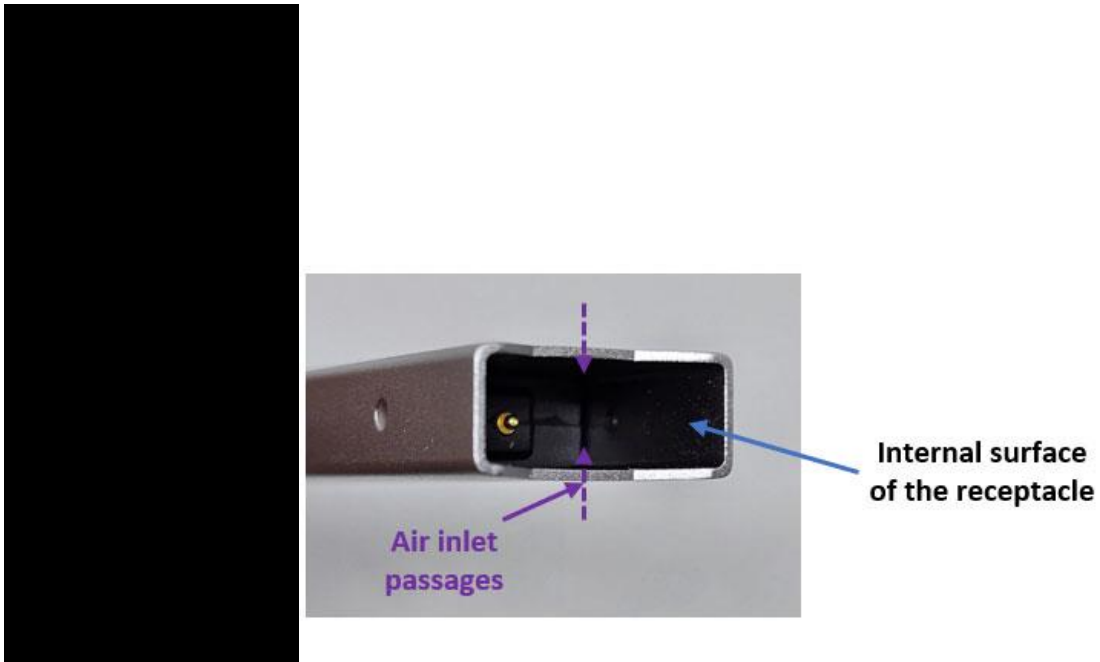
FIG. 28C

9. 1[h]: wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,

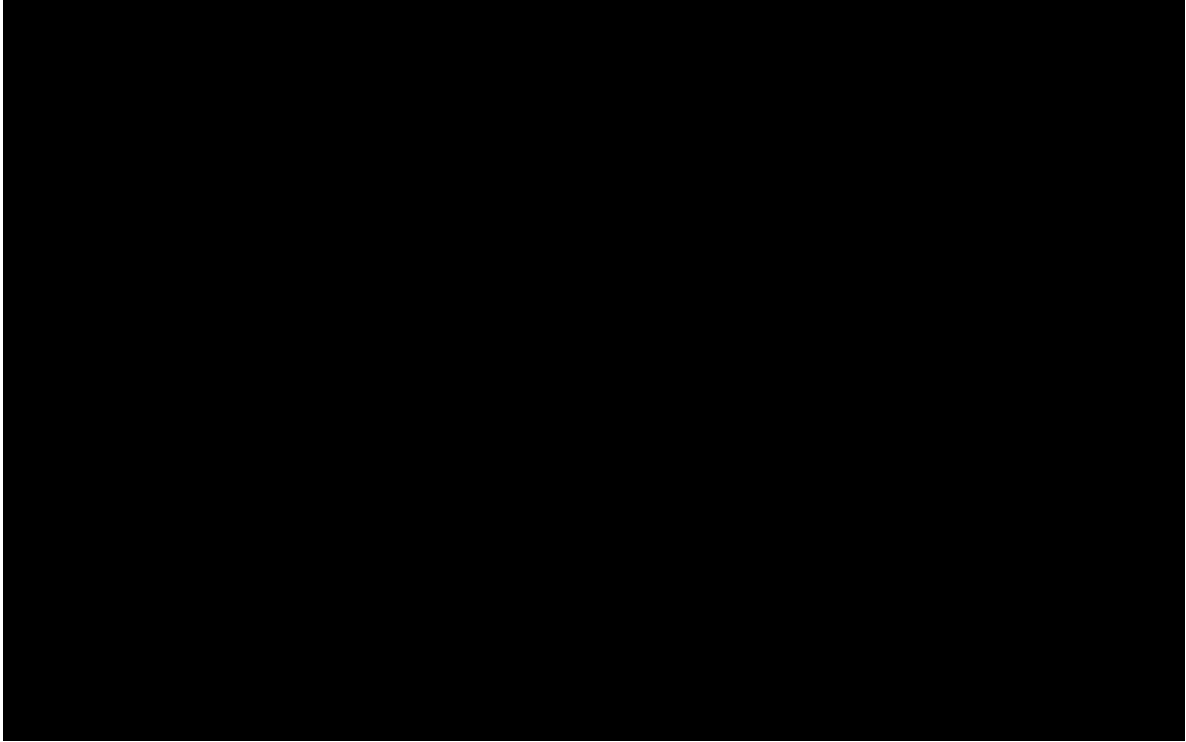
As shown in the below annotated photos, the JUUL System has an opening which allows air to enter the device where it flows through a passage

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between the cartridge and the internal surface of the receptacle. Ex. 2003, 9;
Ex. 2008; Ex. 2001, ¶97.



As explained in JLI's technical documentation, [REDACTED]
[REDACTED] Ex. 2003,
23, 26; Ex. 2001, ¶98.

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The JUUL System has a [REDACTED]
[REDACTED] which allows air to
flow into the JUULpod from the bottom inlet holes. Ex. 2003, 26-27. This
gap allows for a draw resistance that [REDACTED]

[REDACTED]

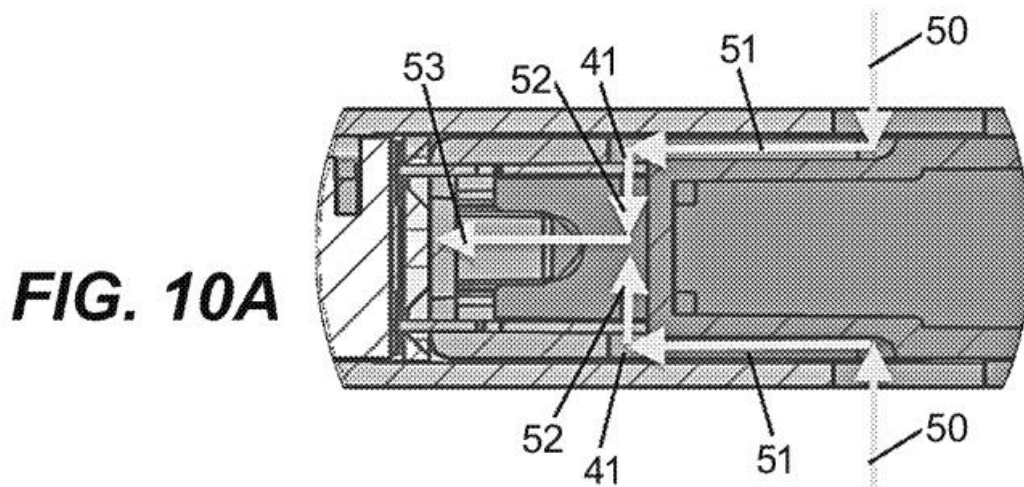
[REDACTED]

[REDACTED]

[REDACTED] Ex. 2001, ¶99.

PUBLIC VERSION

The JUUL System's airflow passage is consistent with the airflow passages described and depicted in the '173 patent. *See, e.g.*, Fig. 10A; Ex. 2001, ¶100.



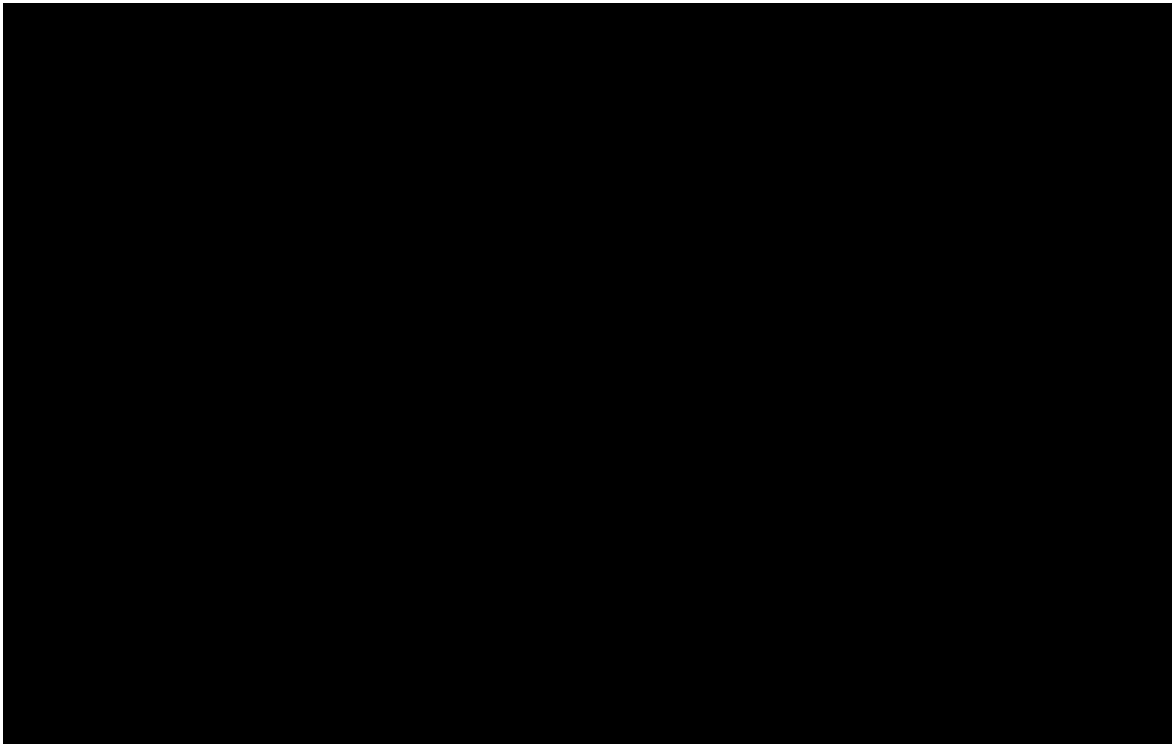
10. 1[i]: wherein the air inlet passage is configured to deliver the air to the heater chamber; and

In the JUUL System, the JUULpod's airflow passage delivers air to the heater chamber. Ex. 2003, 23 [REDACTED]

[REDACTED]

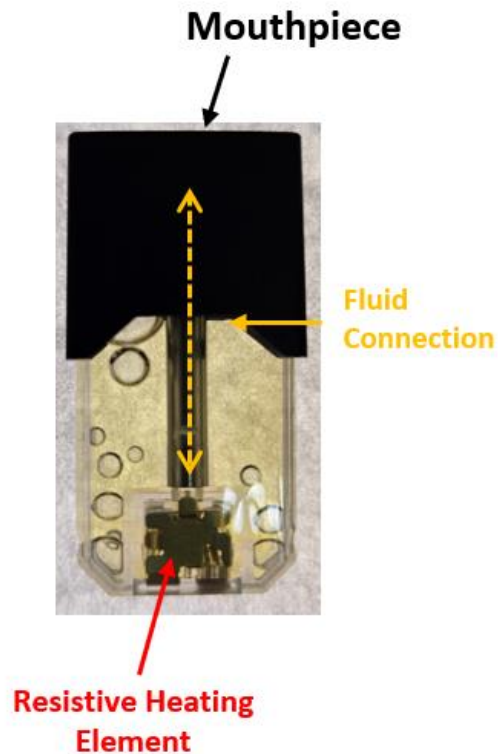
[REDACTED]

[REDACTED] Ex. 2001, ¶101. This is also depicted in the below diagram (annotations are in the original). Ex. 2003, 26.

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11. 1[j]: a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece.

As shown below, in the JUULpod cartridge, there is *a fluid connection connecting the heater chamber and the mouthpiece*. Ex. 2004; Ex. 2001, ¶102.

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As described in JLI's technical documentation, [REDACTED]

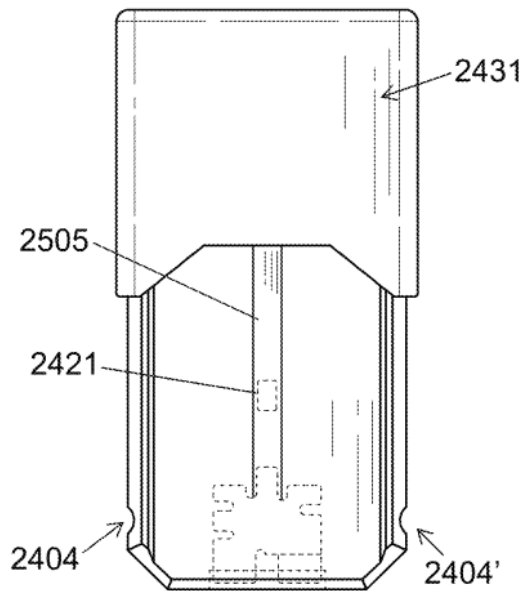
[REDACTED]

[REDACTED]

[REDACTED] Ex. 2003, 26-27; Ex. 2001, ¶103.

The JUUL System's fluid connection between heating element and mouthpiece is consistent with those described and depicted in the '173 patent.

See, e.g., Fig. 25A; Ex. 2001, ¶104.

PUBLIC VERSION**FIG. 25A****B. Long-felt Need**

The JUUL System met the long-felt need for a satisfying nicotine delivery product that did not have the unhealthy adverse health effects of smoking combustible cigarettes. Ex. 2001, ¶105.

Before the JUUL System was first introduced in 2015, smoking tobacco cigarettes had long been known to have significant health risks. Ex. 2001, ¶106. Both federal and state governments had for decades made it a priority to decrease smoking through regulations, taxes, and informational campaigns about the dangers of smoking. *Id.*

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Thus, before 2015, it was known that tobacco smoke kills half of its users, and more than eight million people die from smoke-related diseases worldwide each year. Ex. 2009; Ex. 2010; Ex. 2001, ¶107. It was also known that smoke from burning tobacco contains toxic chemical compounds that are directly and primarily responsible for the illness and death caused by cigarettes. Ex. 2011, 3; Ex. 2012, 3. Although nicotine is addictive, an FDA commissioner has recognized that nicotine itself does not directly cause the disease associated with smoking cigarettes. Ex. 2013, 2. Smoking has also caused a significant increase in national healthcare costs. Ex. 2014; Ex. 2015 (CDC estimate of \$240 billion increase in health care costs from smoking).

Despite these known adverse health effects, many smokers have struggled to quit smoking because of the addictive nature of nicotine. Ex. 2001, ¶108. About 70% of adult smokers report that they desire to give up smoking. Ex. 2016. Yet the average smoker attempts to quit at least 30 times before successfully foregoing smoking for at least a year. Ex. 2017. Moreover, a 2007 study concluded that, at the time, smoking cessation failed over 90% of the time without some form of support. Ex. 2018.

In light of the above, companies have long tried to design alternative mechanisms for delivering nicotine to help users quit combustible cigarettes.

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Ex. 2001, ¶109. For example, in the 1980s, Philip Morris and R.J. Reynolds invested billions in developing “heat-not-burn” cigarettes that deliver nicotine from tobacco without burning it. Ex. 2019, 3-4.

Some companies developed early electronic nicotine vaporizer products that resembled combustible cigarettes, often referred to as “cig-a-likes.” Ex. 2001, ¶110. These early Electronic Nicotine Delivery Systems (“ENDS”) products were often white and cylindrical and approximately the same size as a cigarette in order to mimic the shape, look, and feel of a cigarette. Ex. 2020. However, despite the long-time availability of these early ENDS products before 2015, widespread consumer adoption did not occur before the JUUL System. Ex. 2021, 1; Ex. 2022.

For example, in 2013, Altria (formerly Philip Morris and currently Petitioners’ parent company and RPI to this proceeding) sold through its subsidiary NuMark a cig-a-like product called MarkTen—but Altria did not consider the product to be a success because it “could [not] provide the satisfaction necessary to convert smokers.” Ex. 2024, ¶613; Ex. 2001, ¶111.

On the other hand, JLI took a different approach with its JUUL System, abandoning traditional cigarette iconography altogether, in particular the cylindrical shape, outward-facing, flame-simulating LED, and a screw-in

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cartridge. Ex. 2001, ¶112. The JUUL System’s inventive design provided the user with a fundamentally different user experience, including with respect to vapor production and nicotine delivery that satisfied smokers’ cravings and that were enabled through practice of the ’173 patent. Ex. 2025, 39:8-41:5

([REDACTED]

[REDACTED]); Ex. 2026, 25:6-30:8 ([REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]); *id.*, 137:23-143:4 ([REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]); *id.*, 33:24-35:6 ([REDACTED]

[REDACTED]

[REDACTED]); *id.*, 116:15-117:14. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Ex. 2025,

39:8-41:5, 65:9-66:19, 81:22-82:18, 84:8-85:4, 87:21-88:2.

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The industry recognized that the JUUL System products were unique and abandoned the industry norms of emulating the iconography of traditional cigarettes. Ex. 2019, 3; Ex. 2027. This approach was regarded as technological, elegant, and sophisticated, while also providing satisfactory vapor production and nicotine delivery in a small form factor—all of which were enabled through practice of the '173 patent. Ex. 2001, ¶113. Within a few years of the JUUL System launch, JLI became recognized as a leader in the ENDS device market. Ex. 2028, 1, 4; Ex. 2029; Ex. 2030.

Thus, the JUUL System met the long-felt need for nicotine delivery systems alternatives to combustible cigarettes. Ex. 2001, ¶114.

C. Unexpected Results

The JUUL System achieved the unexpected result of a reliable, user-satisfying ENDS system, while departing from industry design norms, providing sufficient vapor production and nicotine delivery, and using a relatively small form factor. Ex. 2001, ¶115. For example, providing users with a reliable device that also allowed users to view the current liquid level while the pod was inserted in the vaporizer was unexpected in view of the concern about light degradation of the liquid nicotine formulation. *Id.* Providing adequate airflow for satisfying vapor production and accurate

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pressure sensing to avoid accidental triggering of the device were also unexpected, as was providing a pod-based device with a liquid tank as opposed to prior devices that stored liquid in the wick or other sponge-like absorbent material. *Id.*

And for example, designing a reliable, user-satisfying ENDS system that could be manufactured in a cost-efficient manner was also unexpected.

See Ex. 2025, 39:8-41:5 ([REDACTED]); Ex. 2026, 25:6-30:8 ([REDACTED]);
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]; *see also id.*, 137:23-143 ([REDACTED]);
[REDACTED]
[REDACTED]
[REDACTED]; *id.*, 33:24-35:6 ([REDACTED]);
[REDACTED]
[REDACTED]; *id.*, 116:15-117:14; Ex. 2001, ¶116.

PUBLIC VERSION

RPI Altria also made considerable investments in the e-cigarette space before it invested in JUUL. Ex. 2001, ¶117. As Altria itself acknowledged, it “really didn’t have success with [its] internally developed products,” despite all the effort “put ... into engineering reduced-risk products.” Ex. 2024, ¶¶144-45. Altria’s failed products included the De-Nic, Accord, SCOR, Marlboro Snus, Marlboro Moist Smokeless Tobacco, MarkTen King Size and MarkTen XL. *Id.*, ¶¶146-202.

D. Industry Praise

The JUUL System received widespread recognition from its customers and others in the industry. Ex. 2001, ¶118. In the years following its release, the JUUL System became the leading alternative for adult smokers, which analysts called a “runaway success.” *See* Ex. 2029; Ex. 2031; Ex. 2032.

RPI Altria has also praised the JUUL System as revolutionary and fueled by a strong innovation pipeline. Ex. 2001, ¶119. Altria has described the JUUL System as “an innovative breakthrough.” Ex. 2024, ¶¶213-214. It has acknowledged that while “most of the major players in the e-vapor industry acquired their products, [JUUL] ‘is one of the few companies that is responsible for the design and manufacturing of its own products.’” *Id.*, ¶214. Altria acknowledges that JUUL was “really the first pod product in the

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marketplace.” *Id.* It has said that “within the context of the context of the classic three-part structure, JUUL offered a number of signature features that resonated with adult consumers, including ‘the unique form-factor body, the liquid-level viewing window, the reversible pod with locking gaps, the fresh air flow design, and the simple user operation.’” *Id.*, ¶219. Altria has acknowledged that “[p]rior to the emergence of Juul, most e-cigarettes were cigalikes” whereas JUUL had a “‘simple, intuitive, [and] easy-to-use’ product design” which “contributed to JUUL’s success.” *Id.*, ¶¶ 220-22; *see also*, Ex. 2026, 25:6-30:8, 35:7-35:24, 63:3-12, 68:23-69:10, 121:18-122:17.

E. Commercial Success

The JUUL System has enjoyed significant commercial success since its release in 2015. Ex. 2001, ¶120. For example, a Wells Fargo analysis of Nielsen data reported that JLI’s effective annual dollar sales increased 783% in the 52-week period ending June 16, 2018, reaching \$942.6 million. Ex. 2028, 1. This came from an 882% increase in unit sales over the same period. *Id.* Other analysis made similar findings. *See* Ex. 2032; Ex. 2033, 3 (“JUUL’s 4-week sales growth grew over 800% in 2017, with under \$5M in sales during the 4 weeks ending mid-February 2017 and over \$46M in the 4 weeks ended mid-January 2018.”).

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As a result of this huge increase in revenue and unit sales, the JUUL System held dominant market share. Ex. 2001, ¶121. For example, by August 2018, one analyst estimated JUUL to have approximately 70% of market share. Ex. 2034, 8; Ex. 2035, 3; Ex. 2032, 4. Another report similarly estimated 72% market share for JUUL by September 2018. Ex. 2036, 2. A report from 2018 also showed that JUUL's competitors saw decreasing market share shortly after the 2015 JUUL System launch. Ex. 2037, 3.

The success of JUUL System also contributed to growth in the ENDS market as a whole, which had experienced relatively flat sales before the JUUL System. *See* Ex. 2035, 3, 5; Ex. 2036, 3; Ex. 2038, 4; Ex. 2039, 2; Ex. 2040, 3. The JUUL System accounted for a significant portion of the surveyed weekly volume sales of the ENDS pod retail market in the years following the release of the JUUL System: 43.1% of March 2017 annual growth, 90.7% of March 2018 annual growth, and over 95% of growth from April to September 2018. Ex. 2001, ¶122.

RPI Altria also recognized the commercial success of the JUUL System in its offers to potentially license JLI's intellectual property. Ex. 2001, ¶123.

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[REDACTED]

[REDACTED]

[REDACTED] Ex.

2041, 106:5-107:7.

F. Copying

There are several sources that have acknowledged that others began copying the JUUL System shortly after its release. Ex. 2001, ¶124.

In prior investigations before the International Trade Commission involving the JUUL System, the Commission itself has observed copying of the JUUL System. Ex. 2001, ¶125. For example, the Commission has observed that “[a] number of competitors, including some respondents, have admitted to using the JUUL system as a reference when manufacturing their own ENDS products.” *See* Ex. 2042, 250-51.

Industry commentators have also noted copying of the JUUL System. Ex. 2001, ¶126. For example, in a letter to the U.S. Food and Drug Administration, industry commentators noted how “[m]any of the newly introduced e-cigarette products appear to be attempting to capitalize on the recent marketing success of Juul” and “new products appear to mimic the sleek design of Juul.” Ex. 2043. Copying is further evidenced by competitor

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marketing material that touts the fact that their products are compatible with the JUUL Device. *See, e.g.*, Ex. 2044 (stating that “[e]ver since the Juul device burst onto the vape market, companies have been churning out ... Juul-compatible pods to keep up with the trend.”); Ex. 2047 (advertising JUUL-compatible pods).

RPI Altria has also represented that it began “working on an internal pod-based product concept designed to appeal to cigarette smokers” in June 2017, two years after JUUL was launched. Ex. 2024, ¶190. This effort was called “Project Panama” and was “in the works for less than a year before it was paused to free up resources to fix the many problems plaguing Altria’s on-market products.” *Id.* Altria has said that “[a]ll told, although Nu Mark ultimately pursued at least a half dozen internal device projects, many of which were the subject of ‘years’ of effort, none ever ‘yielded fruit.’” *Id.* ¶191; Ex. 2001, ¶127.

As Altria has admitted, since it was “[u]nable to develop an e-vapor product internally, Altria did what it always did when its innovation efforts failed: It turned to acquiring existing products.” Ex. 2024, ¶192. Altria began “searching in the spring of 2017 for opportunities to branch out from MarkTen cig-a-like and to participate in the pod market.” *Id.*, ¶301. This was because

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“after August 8, 2016 (the predicate date under the Deeming Rule), Altria ‘didn’t have the ability . . . to develop anything internally to compete without waiting multiple years to compete, and . . . thought it was important to go scan the environment to see if there were any pod products that were available.’”

Id. ¶302. Internally, Altria referred to this project as “Project Mule.” *Id.*, ¶303; Ex. 2001, ¶128.

In late-May 2017, Altria’s Strategy & Business Development group “surveyed the market” and based on “conversations with a number of different companies” recommended that Altria pursue an acquisition of JLI. Ex. 2024, ¶305. Altria considered JUUL to be the “[t]op performer among adult smokers and vapers” and acknowledged that “‘Juul offers key benefits of a hybrid-evapor system,’ providing cig-a-like users ‘better performance without sacrificing convenience’ and open-system users ‘convenience in a non cigarette form.’” *Id.*, ¶307; Ex. 2001, ¶129.

Altria approached JLI to begin discussing a potential acquisition of, or investment in, JLI in May 2017. Ex. 2024, ¶¶306, 308. By this point, Altria had admitted that it “found itself with ‘virtually nothing in [Nu Mark’s] pipeline, in-house pipeline, for [it] to sell. Cigalike was declining very quickly. The pod business was growing exponentially, driven by JUUL. And

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... [Altria was] getting [its] butt[] kicked week in and week out.”” *Id.*, ¶324. Starting in 2018 Altria shifted some of its focus to an internally-developed pod-based product, the MarkTen Elite, but ultimately did not see a viable path forward for that product given the lack of demand, product defects including excessive leaking, and constraints imposed by the existing regulatory regime. *See id.*, ¶¶570-573, 653-54; Ex. 2001, ¶130.

Like its parent company Altria, Petitioners’ products prior to the release of the JUUL System were cig-a-like products. Ex. 2001, ¶131. After the JUUL System was released and Petitioners observed the success of the JUUL System, Petitioners copied the design and features of the JUUL System in releasing its first pod-based product, the NJOY Ace.

VII. CONCLUSION

For the foregoing reasons the Board should deny institution of this petition.

Date: February 29, 2024

By: /s/ James Glass

James M. Glass (Reg. No. 46,729)
QUINN EMANUEL URQUHART &
SULLIVAN LLP
51 Madison Avenue, 22nd Floor
New York, NY 10010
Email: jimglass@quinnemanuel.com
Phone: 212-849-7142
Fax: 212-849-7100

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Counsel for Patent Owner
JUUL Labs, Inc.

PUBLIC VERSION**CERTIFICATE OF LENGTH (37 C.F.R. §§ 42.24)**

The undersigned hereby certifies that, according to the word-processing system used to prepare the foregoing document, this document has 8,694 words and thus complies with the applicable word limit.

Date: February 29, 2024

By: /s/ James Glass

James M. Glass (Reg. No. 46,729)
QUINN EMANUEL URQUHART &
SULLIVAN LLP

51 Madison Avenue, 22nd Floor
New York, NY 10010

Email: jimglass@quinnemanuel.com

Phone: 212-849-7142

Fax: 212-849-7100

Counsel for Patent Owner
JUUL Labs, Inc.

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CERTIFICATE OF SERVICE (37 C.F.R. §§ 42.6(E), 42.105(A))

The undersigned hereby certifies that the foregoing document was served in its entirety on February 29, 2024 upon the following parties via Electronic Mail:

elizabeth.weiswasser@weil.com
anish.desai@weil.com
adrian.percer@weil.com
anne.cappella@weil.com
sutton.ansley@weil.com
christopher.pepe@weil.com
matthew.sieger@weil.com
taylor.lawrence@weil.com

Date: February 29, 2024

By: /s/ James Glass
James M. Glass (Reg. No. 46,729)
QUINN EMANUEL URQUHART &
SULLIVAN LLP
51 Madison Avenue, 22nd Floor
New York, NY 10010
Email: jimglass@quinnemanuel.com
Phone: 212-849-7142
Fax: 212-849-7100

Counsel for Patent Owner
JUUL Labs, Inc.