

In the Matter of

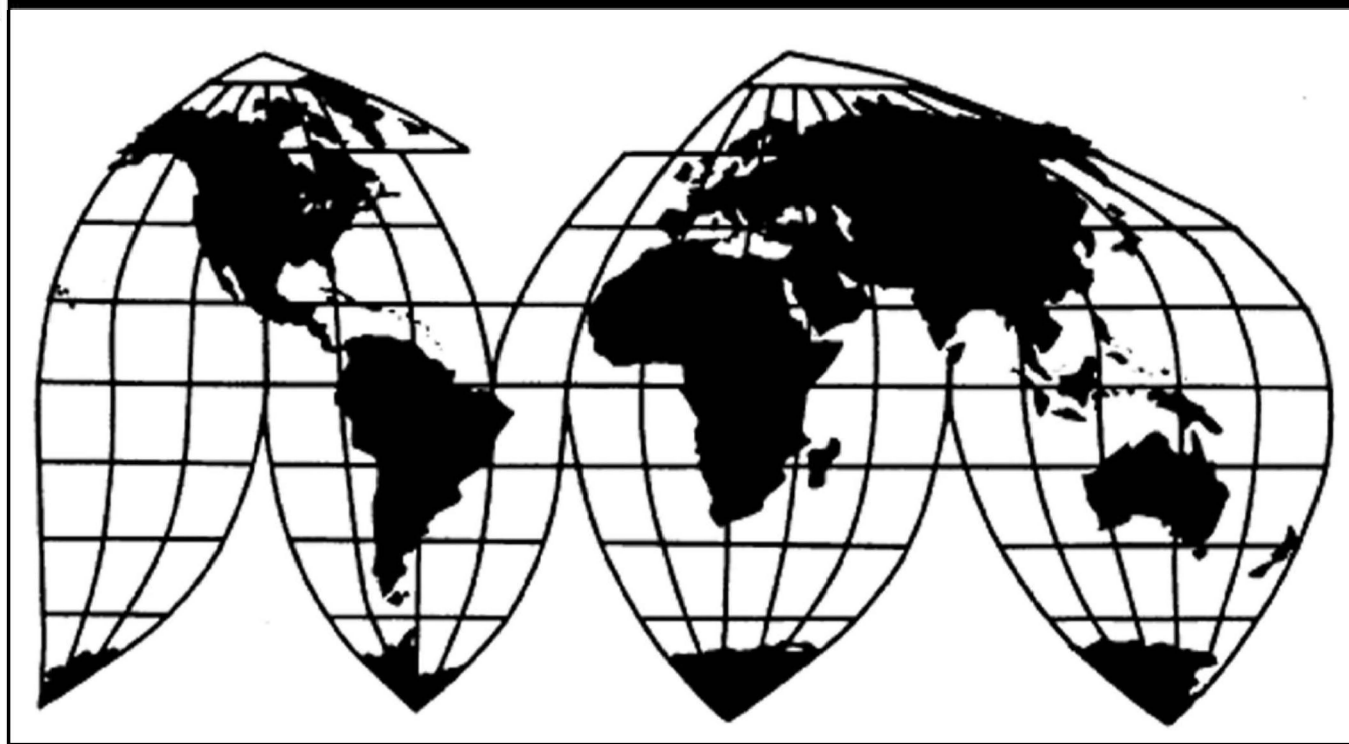
**CERTAIN ELECTRONIC NICOTINE
DELIVERY SYSTEMS AND COMPONENTS
THEREOF**

Investigation No. 337-TA-1139

Publication 5259

February 2022

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

COMMISSIONERS

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Washington, DC 20436

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Investigation No. 337-TA-1139



UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

**CERTAIN ELECTRONIC NICOTINE
DELIVERY SYSTEMS AND
COMPONENTS THEREOF**

Investigation No. 337-TA-1139

**ISSUANCE OF LIMITED EXCLUSION ORDER AND
CEASE AND DESIST ORDERS; TERMINATION OF THE INVESTIGATION**

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined to issue a limited exclusion order (“LEO”) and cease and desist orders (“CDOs”) directed to respondent Eonsmoke, LLC (“Eonsmoke”) and defaulted respondent XFire, Inc. (“XFire”) in the above-captioned investigation. The investigation is terminated in its entirety.

FOR FURTHER INFORMATION CONTACT: Cathy Chen, Office of the General Counsel, U.S. International Trade Commission, 500 E Street SW, Washington, D.C. 20436, telephone 202-205-2392. Copies of non-confidential documents filed in connection with this investigation may be viewed on the Commission’s electronic docket (EDIS) at <https://edis.usitc.gov>. For help accessing EDIS, please email EDIS3Help@usitc.gov. General information concerning the Commission may also be obtained by accessing its Internet server at <https://www.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission’s TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: On December 13, 2018, the Commission instituted this investigation under section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, based on a complaint filed on behalf of Juul Labs, Inc. (“JLI”) of San Francisco, California. 83 FR 64156 (Dec. 13, 2018). The complaint, as amended and supplemented, alleges violations of section 337 based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain electronic nicotine delivery systems and components thereof by reason of infringement of certain claims of U.S. Patent Nos.: 10,070,669 (“the ’669 patent”); 10,076,139 (“the ’139 patent”); 10,045,568 (“the ’568 patent”); 10,058,130 (“the ’130 patent”); and 10,104,915 (“the ’915 patent”) (collectively, “the Asserted Patents”). *Id.* The Commission’s notice of investigation named twenty-one respondents, including Eonsmoke of Clifton, New Jersey and XFire of Stafford, Texas. *Id.* at 64157. The Office of Unfair Import Investigations (“OUII”) is also a party to the investigation.

On February 25, 2019, the ALJ granted JLI's motion to amend the complaint and notice of investigation to change the name of respondent Bo Vaping of Garden City, New York to ECVD/MMS Wholesale LLC of Garden City, New York and the name of respondent MMS Distribution LLC of Rock Hill, New York to MMS/ECVD LLC of Garden City, New York. *See* Order No. 8 (Feb. 25, 2019), *not rev'd* by Comm'n Notice (Mar. 25, 2019).

On February 28, 2019, the ALJ granted a motion to amend the complaint and notice of investigation to change the name of respondent Limitless Mod Co. of Simi Valley, California to Limitless MOD, LLC of Simi Valley, California. *See* Order No. 10 (Feb. 28, 2019), *not rev'd* by Comm'n Notice (Mar. 27, 2019).

On May 21, 2019, the ALJ granted a motion to amend the complaint and notice of investigation to change the name of respondent Ziip Lab Co., Ltd. of Guangdong Province, China to SS Group Holdings of Guangdong Province, China. *See* Order No. 26 (May 21, 2019), *not rev'd* by Comm'n Notice (June 14, 2019).

Before the evidentiary hearing, JLI settled with the following eight respondents: J Well France S.A.S. of Paris, France; ECVD/MMS Wholesale LLC; MMS/ECVD LLC; The Electric Tobacconist, LLC of Boulder, Colorado; ALD Group Limited of Guangdong Province, China; Flair Vapor LLC of South Plainfield, New Jersey; Shenzhen Joecig Technology Co., Ltd. of Guangdong Province, China; and Myle Vape Inc. of Jamaica, New York. *See* Order No. 13 (Mar. 12, 2019), *not rev'd* by Comm'n Notice (Apr. 5, 2019); Order No. 16 (Mar. 21, 2019), *not rev'd* by Comm'n Notice (Apr. 4, 2019); Order No. 31 (July 30, 2019), *not rev'd* by Comm'n Notice (Aug. 23, 2019); Order No. 32 (July 30, 2019), *not rev'd* by Comm'n Notice (Aug. 23, 2019); Order No. 33 (July 30, 2019), *not rev'd* by Comm'n Notice (Aug. 23, 2019); Order No. 34 (July 30, 2019), *not rev'd* by Comm'n Notice (Aug. 23, 2019).

In addition, the investigation terminated as to the following six respondents based on a consent order stipulation and the issuance of a consent order: Vapor Hub International, Inc. of Simi Valley, California; Limitless MOD, LLC; Asher Dynamics, Inc. of Chino, California; Ply Rock of Chino, California; Infinite-N Technology Limited of Guangdong Province, China; and King Distribution LLC of Elmwood Park, New Jersey. *See* Order No. 9 (Feb. 27, 2019), *not rev'd* by Comm'n Notice (Mar. 27, 2019); Order No. 11 (Feb. 28, 2019), *not rev'd* by Comm'n Notice (Mar. 26, 2019); Order No. 18 (Mar. 28, 2019), *not rev'd* by Comm'n Notice (Apr. 11, 2019); Order No. 20 (Apr. 2, 2019), *not rev'd* by Comm'n Notice (Apr. 15, 2019).

On April 23, 2019, the ALJ found respondent XFire in default pursuant to Commission Rule 210.16(b), 19 CFR 210.16(b). *See* Order No. 22 (Apr. 23, 2019), *not rev'd* by Comm'n Notice (May 16, 2019). At the time XFire was found in default, it was accused of infringing claims 1, 2, 4, 5, 7, 8, 10, 12, 13, 16, 17, 20, and 21 of the '669 patent; claims 1, 2, 3, 4, 9, 10, 11, 13, 14, 19, 20, 21, 24, 28, and 29 of the '139 patent; and claims 1, 2, 3, 4, 6, 9, 11, 12, 18, 19, 20, 21, 22, 23, and 27 of the '915 patent (collectively, "the Asserted XFire Claims").

Also, prior to the evidentiary hearing, the ALJ granted JLI's motion for partial termination of the investigation with respect to allegations of infringement as to all asserted claims of the '139 patent and certain asserted claims of the other Asserted Patents. *See* Order

No. 36 (Aug. 8, 2019), *not rev'd* by Comm'n Notice (Sep. 5, 2019). As a result, the following claims remain at issue in the investigation: claims 1, 2, and 13 of the '669 patent; claims 12, 17, and 20 of the '568 patent; claims 1, 2, and 4 of the '130 patent; and claims 1, 6, and 21 of the '915 patent (collectively, "the Asserted Eonsmoke Claims").

JLI and the Commission were unable to serve respondent Keep Vapor Electronic Tech. Co., Ltd. of Shenzhen, China despite multiple attempts at service. The final ID states that JLI does not request any relief against this respondent. *See* ID at 2 n.1.

Only five respondents participated in the evidentiary hearing: SS Group Holdings; ZLab S.A. of Punta del Este – Maldonado, Uruguay; Shenzhen Yibo Technology Co. Ltd. Of Guangdong Province, China (collectively, "the Ziip Respondents"); Vapor 4 Life Holdings, Inc. of Northbrook, Illinois ("V4L"); and Eonsmoke.

On August 5, 2019, one day before the prehearing conference, the ALJ issued an ID (Order No. 35), granting JLI's motion for summary determination of importation, infringement, and domestic industry. The ALJ found that JLI was entitled to summary determination of importation with respect to the Ziip Respondents and their accused products; Eonsmoke and its accused products; and V4L and certain V4L accused products. *See* Order No. 35 at 4-11 (Aug. 5, 2019). Citing to a stipulation between JLI and the Ziip Respondents, the ALJ stated in his infringement analysis with respect to the Ziip Respondents' accused products that "the question of whether Ziip accused products contain or perform each limitation of asserted claims is moot." *Id.* at 11. The ALJ did not specifically state whether summary determination of infringement as to the Ziip Respondents was denied or granted nor the reasoning supporting grant or denial of the motion as to this issue. *Id.*

An evidentiary hearing was held from August 6-7, 2019.

On September 4, 2019 the Commission reviewed Order No. 35 in part. Specifically, the Commission reviewed the ALJ's analysis as to infringement and a statement regarding mootness on page 11 of the ID. The Commission remanded to the ALJ for clarification on this issue and as to whether the ID grants or denies summary determination that the Ziip Respondents infringe the Asserted Patents. *See* Comm'n Notice (Sep. 4, 2019).

In response to the Commission's September 4, 2019 Notice, the ALJ clarified that Order No. 35 denied summary determination of infringement as to the Ziip Respondents because that issue was moot in light of the stipulation between JLI and the Ziip Respondents. *See* Remand of Order No. 35 (Oct. 10, 2019).

On November 19, 2019, the ALJ granted motions to terminate the investigation as to the Ziip Respondents and V4L based on settlement agreements. *See* Order Nos. 38 and 39 (Nov. 19, 2019), *not rev'd* by Comm'n Notice (Dec. 16, 2019). Accordingly, only respondent Eonsmoke remains active in this investigation.

On December 12, 2019, the ALJ granted JLI's motion to strike portions of Eonsmoke's posthearing brief. *See* Order No. 40 (Dec. 12, 2019). Specifically, these portions relate to the issue of invalidity of asserted claim 4 of the '915 patent, which was not addressed by Respondents' expert or in their prehearing briefings. *Id.* at 3-5.

On December 13, 2019, the ALJ issued a combined final ID and recommended determination ("RD"), finding a violation of section 337 by respondent Eonsmoke. Specifically, the final ID finds, *inter alia*, that JLI satisfied the importation requirement as to Eonsmoke's accused products; that JLI has shown Eonsmoke's accused products infringe the Asserted Eonsmoke Claims; that JLI has satisfied the domestic industry requirement with respect to the '669, the '568, the '130, and the '915 patents; and that the Asserted Eonsmoke Claims have not been shown to be invalid. In addition, in the event the Commission finds a violation of section 337, the RD recommends that the Commission issue an LEO and CDOs directed at each of respondent Eonsmoke and defaulted respondent XFire, and impose a 100 percent bond during the period of Presidential review. No public interest submissions were filed in response to the Federal Register notice seeking such submissions, 85 FR 3720 (Jan. 22, 2020).

No petitions for review were filed, which means each party has abandoned all issues decided adversely to that party. *See* 19 CFR 210.43(b)(4).

On February 13, 2020, the Commission determined to *sua sponte* review the final ID in part. 85 FR 9803-06 (Feb. 20, 2020). Specifically, the Commission determined to review and, on review, declined to adopt the discussion of the validity of element [c] of claim 12 of the '669 patent on pages 50 and 55 of the final ID. The Commission also determined to review the discussion of Warranty and Customer Support and Regulatory Compliance on pages 265-266 of the final ID and the discussion of the quantitative significance of JLI's contract manufacturers' investments in the last paragraph on page 272 of the final ID. The Commission determined not to review the remainder of the final ID, including the other portions of the ID's domestic industry analysis, which were sufficient to support the final ID's finding that JLI has satisfied the domestic industry requirement under subparagraphs 337(a)(3)(A) and (B) with respect to the '669, the '568, the '130, and the '915 patents. Accordingly, the Commission's determination resulted in finding a violation of section 337 by reason of Eonsmoke's importation of electronic nicotine delivery systems and components thereof that infringe one or more of the Asserted Eonsmoke Claims. The Commission also determined that JLI is entitled to relief against defaulted respondent XFire pursuant to 19 U.S.C. 1337(g)(1). The parties were requested to file written submissions on remedy, the public interest, and bonding.

On February 27, 2020 JLI and OUII submitted their briefs on remedy, the public interest, and bonding. JLI and OUII further filed response briefs on March 5, 2020.

On review, the Commission has determined to affirm the discussion of Warranty and Customer Support and Regulatory Compliance as it concerns the economic prong of the domestic industry requirement on pages 265-66 of the final ID. The Commission has also determined to decline to adopt the discussion of the quantitative significance of JLI's contract manufacturers' investments as it concerns the economic prong of the domestic industry requirement in the last paragraph on page 272 of the final ID.

The Commission has further determined that the appropriate remedy in this investigation is: (1) an LEO directed to a) respondent Eonsmoke prohibiting the unlicensed importation of nicotine vaporizer devices and the associated pods sold for use with the devices, and components thereof that infringe one or more of the Asserted Eonsmoke Claims and b) respondent XFire prohibiting the unlicensed importation of nicotine vaporizer devices and the associated pods sold for use with the devices, and components thereof that infringe one or more of the Asserted XFire Claims; and (2) CDOs prohibiting respondents Eonsmoke and XFire from further importing, selling, and distributing infringing products in the United States. The Commission has also determined that the public interest factors enumerated in paragraphs 337(d)(1), (f)(1), and (g)(1) (19 U.S.C. 1337(d)(1), (f)(1), and (g)(1)), do not preclude issuance of these remedial orders. Finally, the Commission has determined that the bond during the period of Presidential review pursuant to 19 U.S.C. 1337(j) shall be in the amount of 100 percent of the entered value of the imported articles. The Commission's order was delivered to the President and to the United States Trade Representative on the day of its issuance. The investigation is hereby terminated.

While temporary remote operating procedures are in place in response to COVID-19, the Office of the Secretary is not able to serve parties that have not retained counsel or otherwise provided a point of contact for electronic service. Accordingly, pursuant to Commission Rules 201.16(a) and 210.7(a)(1) (19 CFR 201.16(a), 210.7(a)(1)), the Commission orders that the Complainant complete service for any party without a method of electronic service noted on the attached Certificate of Service and shall file proof of service on the Electronic Document Information System (EDIS).

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, and in Part 210 of the Commission's Rules of Practice and Procedure, 19 CFR Part 210.

By order of the Commission.

A handwritten signature in black ink, appearing to read 'Lisa R. Barton', with a stylized flourish at the end.

Lisa R. Barton
Secretary to the Commission

Issued: April 20, 2020

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served via EDIS upon the Commission Investigative Attorney, **Paul Gennari, Esq.**, and the following parties as indicated, on **April 20, 2020**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainants Juul Labs, Inc.:

Daniel E. Yonan, Esq.
STERNE, KESSLER, GOLDSTEIN & FOX, P.L.L.C.
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Washington, DC 20005
Email: dyonan@sternekessler.com

- ☐ Via Hand Delivery
- ☐ Via Express Delivery
- ☐ Via First Class Mail
- ☒ Other: Email Notification of Availability for Download

On Behalf of Respondents Eonsmoke, LLC:

Stephen M. Lobbin, Esq.
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7538 Draper Avenue
San Diego, California 92037
Email: sml@smlavvocati.com

- ☐ Via Hand Delivery
- ☐ Via Express Delivery
- ☐ Via First Class Mail
- ☒ Other: Email Notification of Availability for Download

Respondent:

XFire, Inc.
820 Summer Park Dr., Suite 700
Stafford, TX 77477

- ☐ Via Hand Delivery
- ☐ Via Express Delivery
- ☐ Via First Class Mail
- ☒ Other: Service to Be Completed by Complainants

**UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, DC**

In the Matter of

**CERTAIN ELECTRONIC NICOTINE
DELIVERY SYSTEMS AND
COMPONENTS THEREOF**

Investigation No. 337-TA-1139

LIMITED EXCLUSION ORDER

The Commission has determined that there is a violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), in the unlawful importation, sale for importation, or the sale within the United States after importation by Eonsmoke, LLC (“Eonsmoke”) and XFire, Inc. (“XFire”) (collectively, “Respondents”) of certain nicotine vaporizer devices and the associated pods sold for use with the devices, and components thereof that infringe one or more claims of U.S. Patent Nos. 10,070,669 (“the ’669 patent”); 10,045,568 (“the ’568 patent”); 10,058,130 (“the ’130 patent”); 10,104,915 (“the ’915 patent”); and 10,076,139 (“the ’139 patent”).

Having reviewed the record of this investigation, including the written submissions of the parties, the Commission has made its determination on the issues of remedy, the public interest, and bonding. The Commission has determined that the appropriate form of relief includes a limited exclusion order prohibiting the unlicensed entry of infringing nicotine vaporizer devices and the associated pods sold for use with the devices, and components thereof manufactured abroad by or on behalf of, or imported by or on behalf of, the Respondents or any of their affiliated companies, parents, subsidiaries, or other related business entities, or their successors or assigns.

The Commission has determined that the public interest factors enumerated in 19 U.S.C. §§ 1337(d)(1) and (g)(1) do not preclude issuance of the limited exclusion order, and that the bond during the period of Presidential review shall be in the amount of 100 percent of the entered value of the infringing articles.

Accordingly, the Commission hereby **ORDERS** that:

1. Nicotine vaporizer devices and the associated pods sold for use with the devices, and components thereof that infringe one or more of claims 1, 2, and 13 of the '669 patent; claims 12, 17 and 20 of the '568 patent; claims 1, 2 and 4 of the '130 patent; and claims 1, 6 and 21 of the '915 patent that are manufactured abroad by or on behalf of, or imported by or on behalf of, Eonsmoke or any of its affiliated companies, parents, subsidiaries, or other related business entities, or their successors or assigns, are excluded from entry for consumption into the United States, entry for consumption from a foreign trade zone, or withdrawal from a warehouse for consumption, for the remaining term of the patent, except under license of the patent owner or as provided by law.

2. Nicotine vaporizer devices and the associated pods sold for use with the devices, and components thereof that infringe one or more of infringing claims 1, 2, 4, 5, 7, 8, 10, 12, 13, 16, 17, 20, and 21 of the '669 patent; claims 1, 2, 3, 4, 9, 10, 11, 13, 14, 19, 20, 21, 24, 28, and 29 of the '139 patent; and claims 1, 2, 3, 4, 6, 9, 11, 12, 18, 19, 20, 21, 22, 23, and 27 of the '915 patent that are manufactured abroad by or on behalf of, or imported by or on behalf of, XFire or any of its affiliated companies, parents, subsidiaries, or other related business entities, or their successors or assigns, are excluded from entry for consumption into the United States, entry for consumption from a foreign trade zone, or withdrawal from a warehouse for consumption, for the remaining term of the patent, except under license of the patent owner or as provided by law.

3. Notwithstanding paragraphs 1 and 2 of this Order, the aforesaid nicotine vaporizer devices and the associated pods sold for use with the devices, and components thereof (“covered articles”) are entitled to entry into the United States for consumption, entry for consumption from a foreign-trade zone, or withdrawal from a warehouse for consumption under bond in the amount of one hundred (100) percent of the entered value of the products, pursuant to subsection (j) of Section 337 (19 U.S.C. § 1337(j)) and the Presidential Memorandum for the United States Trade Representative of July 21, 2005 (70 *Fed. Reg.* 43,251), from the day after this Order is received by the United States Trade Representative until such time as the United States Trade Representative notifies the Commission that this Order is approved, disapproved, or no action is taken but, in any event, not later than sixty (60) days after the date of receipt of this Order. All entries of covered articles made pursuant to this paragraph are to be reported to U.S. Customs and Border Protection (“CBP”), in advance of the date of the entry, pursuant to procedures CBP establishes.

4. At the discretion of CBP and pursuant to procedures that it establishes, persons seeking to import nicotine vaporizer devices and the associated pods sold for use with the devices, and components thereof that are potentially subject to this Order may be required to certify that they are familiar with the terms of this Order, that they have made appropriate inquiry, and thereupon state that, to the best of their knowledge and belief, the products being imported are not excluded from entry under paragraphs 1 and 2 of this Order. At its discretion, CBP may require persons who have provided the certification described in this paragraph to furnish such records or analyses as are necessary to substantiate the certification.

5. In accordance with 19 U.S.C. § 1337(l), the provisions of this Order shall not apply to covered articles imported by and for the use of the United States, or imported for, and to be used for, the United States with the authorization or consent of the Government.

6. The Commission may modify this Order in accordance with the procedures described in section 210.76 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.76).

7. The Secretary shall serve copies of this Order upon each party of record in this investigation that has retained counsel or otherwise provided a point of contact for electronic service and upon CBP. While temporary remote operating procedures are in place in response to COVID-19, the Office of the Secretary is not able to serve parties that have not retained counsel or otherwise provided a point of contact for electronic service. Accordingly, pursuant to Commission Rules 201.16(a) and 210.7(a)(1) (19 CFR 201.16(a), 210.7(a)(1)), the Commission orders that the Complainant complete service of this Order for any party without a method of electronic service noted on the attached Certificate of Service and shall file proof of service on the Electronic Document Information System (EDIS).

8. Notice of this Order shall be published in the *Federal Register*.

By order of the Commission.

A handwritten signature in black ink, appearing to read 'Lisa R. Barton'.

Lisa R. Barton
Secretary to the Commission

Issued: April 20, 2020

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ORDER** has been served via EDIS upon the Commission Investigative Attorney, **Paul Gennari, Esq.**, and the following parties as indicated, on **April 20, 2020**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainants Juul Labs, Inc.:

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- ☒ Other: Email Notification of Availability for Download

On Behalf of Respondents Eonsmoke, LLC:

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- ☒ Other: Email Notification of Availability for Download

Respondent:

XFire, Inc.
820 Summer Park Dr., Suite 700
Stafford, TX 77477

- ☐ Via Hand Delivery
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- ☒ Other: Service to Be Completed by Complainants

**UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, DC**

In the Matter of

**CERTAIN ELECTRONIC NICOTINE
DELIVERY SYSTEMS AND
COMPONENTS THEREOF**

Investigation No. 337-TA-1139

CEASE AND DESIST ORDER

IT IS HEREBY ORDERED THAT RESPONDENT XFire, Inc., 820 Summer Park Dr., Suite 700, Stafford, TX 77477 (“Respondent”), cease and desist from conducting any of the following activities in the United States: importing, selling, marketing, advertising, distributing, transferring (except for exportation), and soliciting United States agents or distributors for, or aiding and abetting other entities in the importation, sale for importation, sale after importation, transfer (except for exportation), or distribution of nicotine vaporizer devices and the associated pods sold for use with the devices, and components thereof that infringe one or more of claims 1, 2, 4, 5, 7, 8, 10, 12, 13, 16, 17, 20, and 21 of U.S. Patent No. 10,070,669 (“the ’669 patent”); claims 1, 2, 3, 4, 9, 10, 11, 13, 14, 19, 20, 21, 24, 28, and 29 of U.S. Patent No. 10,076,139 (“the ’139 patent”); and claims 1, 2, 3, 4, 6, 9, 11, 12, 18, 19, 20, 21, 22, 23, and 27 of U.S. Patent No. 10,104,915 (“the ’915 patent”) (collectively, “the Asserted Patents”) in violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337).

I. Definitions

As used in this order:

- (A) “Commission” shall mean the United States International Trade Commission.
- (B) “Complainant” shall mean Juul Labs, Inc., 560 20th Street, San Francisco, CA 94107.
- (C) “Respondent” shall mean XFire, Inc., 820 Summer Park Dr., Suite 700, Stafford, TX 77477.
- (D) “Person” shall mean an individual, or any non-governmental partnership, firm, association, corporation, or other legal or business entity other than Respondent or its majority-owned or controlled subsidiaries, successors, or assigns.
- (E) “United States” shall mean the fifty States, the District of Columbia, and Puerto Rico.
- (F) The terms “import” and “importation” refer to importation for entry for consumption under the Customs laws of the United States.
- (G) The term “covered products” shall mean nicotine vaporizer devices and the associated pods sold for use with the devices, and components thereof that infringe one or more of claims 1, 2, 4, 5, 7, 8, 10, 12, 13, 16, 17, 20, and 21 of the ’669 patent; claims 1, 2, 3, 4, 9, 10, 11, 13, 14, 19, 20, 21, 24, 28, and 29 of the ’139 patent; and claims 1, 2, 3, 4, 6, 9, 11, 12, 18, 19, 20, 21, 22, 23, and 27 of the ’915 patent. Covered products shall not include articles for which a provision of law or license avoids liability for infringement.

II. Applicability

The provisions of this Cease and Desist Order shall apply to Respondent and to any of its principals, stockholders, officers, directors, employees, agents, distributors, controlled (whether by stock ownership or otherwise) and majority-owned business entities, successors, and assigns, and to each of them, insofar as they are engaging in conduct prohibited by section III, *infra*, for, with, or otherwise on behalf of, Respondent.

III. Conduct Prohibited

The following conduct of Respondent in the United States is prohibited by this Order.

For the remaining term of the Asserted Patents, Respondent shall not:

- (A) import or sell for importation into the United States covered products;
- (B) market, distribute, sell, or otherwise transfer (except for exportation) imported covered products;
- (C) advertise imported covered products;
- (D) solicit U.S. agents or distributors for imported covered products; or
- (E) aid or abet other entities in the importation, sale for importation, sale after importation, transfer, or distribution of covered products.

IV. Conduct Permitted

Notwithstanding any other provision of this Order, specific conduct otherwise prohibited by the terms of this Order shall be permitted if:

- (A) in a written instrument, the owner of the Asserted Patents licenses or authorizes such specific conduct; or

- (B) such specific conduct is related to the importation or sale of covered products by or for the United States.

V. Reporting

For purposes of this requirement, the reporting periods shall commence on January 1 of each year and shall end on the subsequent December 31. The first report required under this section shall cover the period from the date of issuance of this order through December 31, 2020. This reporting requirement shall continue in force until such time as Respondent has truthfully reported, in two consecutive timely filed reports, that it has no inventory of covered products in the United States.

Within thirty (30) days of the last day of the reporting period, Respondent shall report to the Commission: (a) the quantity in units and the value in dollars of covered products that it has (i) imported and/or (ii) sold in the United States after importation during the reporting period, and (b) the quantity in units and value in dollars of reported covered products that remain in inventory in the United States at the end of the reporting period.

When filing written submissions, Respondent must file the original document electronically on or before the deadlines stated above and submit eight (8) true paper copies to the Office of the Secretary by noon the next day pursuant to section 210.4(f) of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-1139") in a prominent place on the cover pages and/or the first page. (*See Handbook for Electronic Filing Procedures*, https://www.usitc.gov/documents/handbook_on_filing_procedures.pdf). Persons with questions regarding filing should contact the Secretary (202-205-2000). If Respondent desires to submit a document to the Commission in confidence, it must file the original and a public version of the

original with the Office of the Secretary and must serve a copy of the confidential version on Complainant's counsel.¹

Persons filing written submissions must file the original document electronically on or before the deadlines stated above. The Commission's paper filing requirements in 19 C.F.R. 210.4(f) are currently waived, pending resolution of the COVID-19 crisis. 85 Fed. Reg. 15798 (March 19, 2020).

Any failure to make the required report or the filing of any false or inaccurate report shall constitute a violation of this Order, and the submission of a false or inaccurate report may be referred to the U.S. Department of Justice as a possible criminal violation of 18 U.S.C. § 1001.

VI. Record-Keeping and Inspection

- (A) For the purpose of securing compliance with this Order, Respondent shall retain any and all records relating to the sale, marketing, or distribution in the United States of covered products, made and received in the usual and ordinary course of business, whether in detail or in summary form, for a period of three (3) years from the close of the fiscal year to which they pertain.
- (B) For the purposes of determining or securing compliance with this Order and for no other purpose, subject to any privilege recognized by the federal courts of the United States, and upon reasonable written notice by the Commission or its staff, duly authorized representatives of the

¹ Complainant must file a letter with the Secretary identifying the attorney to receive reports and bond information associated with this Order. The designated attorney must be on the protective order entered in the investigation.

Commission shall be permitted access and the right to inspect and copy, in Respondent's principal offices during office hours, and in the presence of counsel or other representatives if Respondent so chooses, all books, ledgers, accounts, correspondence, memoranda, and other records and documents, in detail and in summary form, that must be retained under subparagraph VI(A) of this Order.

VII.
Service of Cease and Desist Order

The Secretary shall serve copies of this Order upon each party of record in this investigation that has retained counsel or otherwise provided a point of contact for electronic service and upon CBP. While temporary remote operating procedures are in place in response to COVID-19, the Office of the Secretary is not able to serve parties that have not retained counsel or otherwise provided a point of contact for electronic service. Accordingly, pursuant to Commission Rules 201.16(a) and 210.7(a)(1) (19 CFR 201.16(a), 210.7(a)(1)), the Commission orders that the Complainant complete service of this Order for any party without a method of electronic service noted on the attached Certificate of Service and shall file proof of service on the Electronic Document Information System (EDIS).

Respondent is ordered and directed to:

- (A) Serve, within fifteen (15) days after the effective date of this Order, a copy of this Order upon each of its respective officers, directors, managing agents, agents, and employees who have any responsibility for the importation, marketing, distribution, or sale of imported covered products in the United States;
- (B) Serve, within fifteen (15) days after the succession of any persons

referred to in subparagraph VII(A) of this order, a copy of the Order upon each successor; and

- (C) Maintain such records as will show the name, title, and address of each person upon whom the Order has been served, as described in subparagraphs VII(A) and VII(B) of this order, together with the date on which service was made.

The obligations set forth in subparagraphs VII(B) and VII(C) shall remain in effect until the expiration of the Asserted Patents.

VIII. Confidentiality

Any request for confidential treatment of information obtained by the Commission pursuant to Section V or VI of this order should be made in accordance with section 201.6 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 201.6). For all reports for which confidential treatment is sought, Respondent must provide a public version of such report with confidential information redacted.

IX. Enforcement

Violation of this order may result in any of the actions specified in section 210.75 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.75), including an action for civil penalties under section 337(f) of the Tariff Act of 1930 (19 U.S.C. § 1337(f)), as well as any other action that the Commission deems appropriate. In determining whether Respondent is in violation of this order, the Commission may infer facts adverse to Respondent if it fails to provide adequate or timely information.

X. Modification

The Commission may amend this order on its own motion or in accordance with the procedure described in section 210.76 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.76).

XI. Bonding

The conduct prohibited by section III of this order may be continued during the sixty (60) day period in which this Order is under review by the United States Trade Representative, as delegated by the President (70 *Fed. Reg.* 43,251 (Jul. 21, 2005)), subject to Respondent's posting of a bond in the amount of one hundred (100) percent of the entered value of the covered products. This bond provision does not apply to conduct that is otherwise permitted by section IV of this Order. Covered products imported on or after the date of issuance of this Order are subject to the entry bond as set forth in the exclusion order issued by the Commission and are not subject to this bond provision.

The bond is to be posted in accordance with the procedures established by the Commission for the posting of bonds by complainants in connection with the issuance of temporary exclusion orders. (*See* 19 C.F.R. § 210.68.) The bond and any accompanying documentation are to be provided to and approved by the Commission prior to the commencement of conduct that is otherwise prohibited by section III of this Order. Upon the Secretary's acceptance of the bond, (a) the Secretary will serve an acceptance letter on all parties, and (b) Respondent must serve a copy of the bond and accompanying documentation on Complainant's counsel.²

² *See* note 1 above.

The bond is to be forfeited in the event that the United States Trade Representative approves this Order (or does not disapprove it within the review period), unless (i) the U.S. Court of Appeals for the Federal Circuit, in a final judgment, reverses any Commission final determination and order as to Respondent on appeal, or (ii) Respondent exports or destroys the products subject to this bond and provides certification to that effect that is satisfactory to the Commission.

The bond is to be released in the event the United States Trade Representative disapproves this Order and no subsequent order is issued by the Commission and approved (or not disapproved, or no action is taken) by the United States Trade Representative, upon service on Respondent of an order issued by the Commission based upon application therefore made by Respondent to the Commission.

By order of the Commission.

A handwritten signature in black ink, appearing to read "Lisa R. Barton", with a stylized flourish at the end.

Lisa R. Barton
Secretary to the Commission

Issued: April 20, 2020

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ORDER** has been served via EDIS upon the Commission Investigative Attorney, **Paul Gennari, Esq.**, and the following parties as indicated, on **April 20, 2020**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainants Juul Labs, Inc.:

Daniel E. Yonan, Esq.
STERNE, KESSLER, GOLDSTEIN & FOX, P.L.L.C.
1100 New York Avenue, N.W.
Washington, DC 20005
Email: dyonan@sternekessler.com

- ☐ Via Hand Delivery
- ☐ Via Express Delivery
- ☐ Via First Class Mail
- ☒ Other: Email Notification of Availability for Download

On Behalf of Respondents Eonsmoke, LLC:

Stephen M. Lobbin, Esq.
SML AVVOCATI P.C.
7538 Draper Avenue
San Diego, California 92037
Email: sml@smlavvocati.com

- ☐ Via Hand Delivery
- ☐ Via Express Delivery
- ☐ Via First Class Mail
- ☒ Other: Email Notification of Availability for Download

Respondent:

XFire, Inc.
820 Summer Park Dr., Suite 700
Stafford, TX 77477

- ☐ Via Hand Delivery
- ☐ Via Express Delivery
- ☐ Via First Class Mail
- ☒ Other: Service to Be Completed by Complainants

**UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, DC**

In the Matter of

**CERTAIN ELECTRONIC NICOTINE
DELIVERY SYSTEMS AND
COMPONENTS THEREOF**

Investigation No. 337-TA-1139

CEASE AND DESIST ORDER

IT IS HEREBY ORDERED THAT RESPONDENT Eonsmoke, LLC, 1500 Main Ave., 2nd Floor, Clifton, NJ 07011 (“Respondent”), cease and desist from conducting any of the following activities in the United States: importing, selling, marketing, advertising, distributing, transferring (except for exportation), and soliciting United States agents or distributors for, or aiding and abetting other entities in the importation, sale for importation, sale after importation, transfer (except for exportation), or distribution of nicotine vaporizer devices and the associated pods sold for use with the devices, and components thereof that infringe one or more of claims 1, 2, and 13 of U.S. Patent No. 10,070,669 (“the ’669 patent”); claims 12, 17 and 20 of U.S. Patent No. 10,045,568 (“the ’568 patent”); claims 1, 2 and 4 of U.S. Patent No. 10,058,130 (“the ’130 patent”); and claims 1, 6 and 21 of U.S. Patent No. 10,104,915 (“the ’915 patent”) (collectively, “the Asserted Patents”) in violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337).

I. Definitions

As used in this order:

- (A) “Commission” shall mean the United States International Trade Commission.
- (B) “Complainant” shall mean Juul Labs, Inc., 560 20th Street, San Francisco, CA 94107.
- (C) “Respondent” shall mean Eonsmoke, LLC, 1500 Main Ave., 2nd Floor, Clifton, NJ 07011.
- (D) “Person” shall mean an individual, or any non-governmental partnership, firm, association, corporation, or other legal or business entity other than Respondent or its majority-owned or controlled subsidiaries, successors, or assigns.
- (E) “United States” shall mean the fifty States, the District of Columbia, and Puerto Rico.
- (F) The terms “import” and “importation” refer to importation for entry for consumption under the Customs laws of the United States.
- (G) The term “covered products” shall mean nicotine vaporizer devices and the associated pods sold for use with the devices, and components thereof that infringe one or more of claims 1, 2, and 13 of the ’669 patent; claims 12, 17 and 20 of the ’568 patent; claims 1, 2 and 4 of the ’130 patent; and claims 1, 6 and 21 of the ’915 patent. Covered products shall not include articles for which a provision of law or license avoids liability for infringement.

II. Applicability

The provisions of this Cease and Desist Order shall apply to Respondent and to any of its principals, stockholders, officers, directors, employees, agents, distributors, controlled (whether by stock ownership or otherwise) and majority-owned business entities, successors, and assigns, and to each of them, insofar as they are engaging in conduct prohibited by section III, infra, for, with, or otherwise on behalf of, Respondent.

III. Conduct Prohibited

The following conduct of Respondent in the United States is prohibited by this Order.

For the remaining term of the Asserted Patents, Respondent shall not:

- (A) import or sell for importation into the United States covered products;
- (B) market, distribute, sell, or otherwise transfer (except for exportation) imported covered products;
- (C) advertise imported covered products;
- (D) solicit U.S. agents or distributors for imported covered products; or
- (E) aid or abet other entities in the importation, sale for importation, sale after importation, transfer, or distribution of covered products.

IV. Conduct Permitted

Notwithstanding any other provision of this Order, specific conduct otherwise prohibited by the terms of this Order shall be permitted if:

- (A) in a written instrument, the owner of the Asserted Patents licenses or authorizes such specific conduct; or

- (B) such specific conduct is related to the importation or sale of covered products by or for the United States.

V. Reporting

For purposes of this requirement, the reporting periods shall commence on January 1 of each year and shall end on the subsequent December 31. The first report required under this section shall cover the period from the date of issuance of this order through December 31, 2020. This reporting requirement shall continue in force until such time as Respondent has truthfully reported, in two consecutive timely filed reports, that it has no inventory of covered products in the United States.

Within thirty (30) days of the last day of the reporting period, Respondent shall report to the Commission: (a) the quantity in units and the value in dollars of covered products that it has (i) imported and/or (ii) sold in the United States after importation during the reporting period, and (b) the quantity in units and value in dollars of reported covered products that remain in inventory in the United States at the end of the reporting period.

When filing written submissions, Respondent must file the original document electronically on or before the deadlines stated above and submit eight (8) true paper copies to the Office of the Secretary by noon the next day pursuant to section 210.4(f) of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-1139") in a prominent place on the cover pages and/or the first page. (*See Handbook for Electronic Filing Procedures*, https://www.usitc.gov/documents/handbook_on_filing_procedures.pdf). Persons with questions regarding filing should contact the Secretary (202-205-2000). If Respondent desires to submit a document to the Commission in confidence, it must file the original and a public version of the

original with the Office of the Secretary and must serve a copy of the confidential version on Complainant's counsel.¹

Persons filing written submissions must file the original document electronically on or before the deadlines stated above. The Commission's paper filing requirements in 19 C.F.R. 210.4(f) are currently waived, pending resolution of the COVID-19 crisis. 85 Fed. Reg. 15798 (March 19, 2020).

Any failure to make the required report or the filing of any false or inaccurate report shall constitute a violation of this Order, and the submission of a false or inaccurate report may be referred to the U.S. Department of Justice as a possible criminal violation of 18 U.S.C. § 1001.

VI. Record-Keeping and Inspection

- (A) For the purpose of securing compliance with this Order, Respondent shall retain any and all records relating to the sale, marketing, or distribution in the United States of covered products, made and received in the usual and ordinary course of business, whether in detail or in summary form, for a period of three (3) years from the close of the fiscal year to which they pertain.
- (B) For the purposes of determining or securing compliance with this Order and for no other purpose, subject to any privilege recognized by the federal courts of the United States, and upon reasonable written notice by the Commission or its staff, duly authorized representatives of the

¹ Complainant must file a letter with the Secretary identifying the attorney to receive reports and bond information associated with this Order. The designated attorney must be on the protective order entered in the investigation.

Commission shall be permitted access and the right to inspect and copy, in Respondent's principal offices during office hours, and in the presence of counsel or other representatives if Respondent so chooses, all books, ledgers, accounts, correspondence, memoranda, and other records and documents, in detail and in summary form, that must be retained under subparagraph VI(A) of this Order.

**VII.
Service of Cease and Desist Order**

The Secretary shall serve copies of this Order upon each party of record in this investigation that has retained counsel or otherwise provided a point of contact for electronic service and upon CBP. While temporary remote operating procedures are in place in response to COVID-19, the Office of the Secretary is not able to serve parties that have not retained counsel or otherwise provided a point of contact for electronic service. Accordingly, pursuant to Commission Rules 201.16(a) and 210.7(a)(1) (19 CFR 201.16(a), 210.7(a)(1)), the Commission orders that the Complainant complete service of this Order for any party without a method of electronic service noted on the attached Certificate of Service and shall file proof of service on the Electronic Document Information System (EDIS).

Respondent is ordered and directed to:

- (A) Serve, within fifteen (15) days after the effective date of this Order, a copy of this Order upon each of its respective officers, directors, managing agents, agents, and employees who have any responsibility for the importation, marketing, distribution, or sale of imported covered products in the United States;
- (B) Serve, within fifteen (15) days after the succession of any persons

referred to in subparagraph VII(A) of this order, a copy of the Order upon each successor; and

- (C) Maintain such records as will show the name, title, and address of each person upon whom the Order has been served, as described in subparagraphs VII(A) and VII(B) of this order, together with the date on which service was made.

The obligations set forth in subparagraphs VII(B) and VII(C) shall remain in effect until the expiration of the Asserted Patents.

VIII. Confidentiality

Any request for confidential treatment of information obtained by the Commission pursuant to Section V or VI of this order should be made in accordance with section 201.6 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 201.6). For all reports for which confidential treatment is sought, Respondent must provide a public version of such report with confidential information redacted.

IX. Enforcement

Violation of this order may result in any of the actions specified in section 210.75 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.75), including an action for civil penalties under section 337(f) of the Tariff Act of 1930 (19 U.S.C. § 1337(f)), as well as any other action that the Commission deems appropriate. In determining whether Respondent is in violation of this order, the Commission may infer facts adverse to Respondent if it fails to provide adequate or timely information.

X. Modification

The Commission may amend this order on its own motion or in accordance with the procedure described in section 210.76 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.76).

XI. Bonding

The conduct prohibited by section III of this order may be continued during the sixty (60) day period in which this Order is under review by the United States Trade Representative, as delegated by the President (70 *Fed. Reg.* 43,251 (Jul. 21, 2005)), subject to Respondent's posting of a bond in the amount of one hundred (100) percent of the entered value of the covered products. This bond provision does not apply to conduct that is otherwise permitted by section IV of this Order. Covered products imported on or after the date of issuance of this Order are subject to the entry bond as set forth in the exclusion order issued by the Commission and are not subject to this bond provision.

The bond is to be posted in accordance with the procedures established by the Commission for the posting of bonds by complainants in connection with the issuance of temporary exclusion orders. (*See* 19 C.F.R. § 210.68.) The bond and any accompanying documentation are to be provided to and approved by the Commission prior to the commencement of conduct that is otherwise prohibited by section III of this Order. Upon the Secretary's acceptance of the bond, (a) the Secretary will serve an acceptance letter on all parties, and (b) Respondent must serve a copy of the bond and accompanying documentation on Complainant's counsel.²

² *See* note 1 above.

The bond is to be forfeited in the event that the United States Trade Representative approves this Order (or does not disapprove it within the review period), unless (i) the U.S. Court of Appeals for the Federal Circuit, in a final judgment, reverses any Commission final determination and order as to Respondent on appeal, or (ii) Respondent exports or destroys the products subject to this bond and provides certification to that effect that is satisfactory to the Commission.

The bond is to be released in the event the United States Trade Representative disapproves this Order and no subsequent order is issued by the Commission and approved (or not disapproved, or no action is taken) by the United States Trade Representative, upon service on Respondent of an order issued by the Commission based upon application therefore made by Respondent to the Commission.

By order of the Commission.

A handwritten signature in black ink, appearing to read "Lisa R. Barton", with a stylized flourish at the end.

Lisa R. Barton
Secretary to the Commission

Issued: April 20, 2020

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ORDER** has been served via EDIS upon the Commission Investigative Attorney, **Paul Gennari, Esq.**, and the following parties as indicated, on **April 20, 2020**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainants Juul Labs, Inc.:

Daniel E. Yonan, Esq.
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Washington, DC 20005
Email: dyonan@sternekessler.com

- ☐ Via Hand Delivery
- ☐ Via Express Delivery
- ☐ Via First Class Mail
- ☒ Other: Email Notification of Availability for Download

On Behalf of Respondents Eonsmoke, LLC:

Stephen M. Lobbin, Esq.
SML AVVOCATI P.C.
7538 Draper Avenue
San Diego, California 92037
Email: sml@smlavvocati.com

- ☐ Via Hand Delivery
- ☐ Via Express Delivery
- ☐ Via First Class Mail
- ☒ Other: Email Notification of Availability for Download

Respondent:

XFire, Inc.
820 Summer Park Dr., Suite 700
Stafford, TX 77477

- ☐ Via Hand Delivery
- ☐ Via Express Delivery
- ☐ Via First Class Mail
- ☒ Other: Service to Be Completed by Complainants

PUBLIC VERSION

**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.**

In the Matter of

**CERTAIN ELECTRONIC NICOTINE
DELIVERY SYSTEMS AND
COMPONENTS THEREOF**

Investigation No. 337-TA-1139

COMMISSION OPINION

The Commission has determined that there has been a violation of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, with respect to U.S. Patent Nos. 10,070,669 (“the ’669 patent”); 10,045,568 (“the ’568 patent”); 10,058,130 (“the ’130 patent”); and 10,104,915 (“the ’915 patent”) on review of the presiding administrative law judge’s (“ALJ”) final initial determination (“FID”). This opinion sets forth the Commission’s reasoning in support of that determination. In addition, the Commission adopts the findings in the FID that are not inconsistent with this opinion. The Commission has also determined that the appropriate form of relief is issuance of a limited exclusion order and cease and desist orders.

I. BACKGROUND

On December 13, 2018, the Commission instituted this investigation under section 337 based on a complaint filed on behalf of Juul Labs, Inc. (“JLI”) of San Francisco, California. 83 Fed. Reg. 64156-57 (Dec. 13, 2018). The complaint, as amended and supplemented, alleged violations of section 337 based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain electronic nicotine delivery systems (“ENDS”) and components thereof by reason of infringement of certain claims of the ’669 patent, the ’568 patent, the ’130 patent, the ’915 patent (collectively “the Asserted Patents”), and U.S. Patent No. 10,076,139 (“the ’139 patent”). *Id.* The Commission’s notice of

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investigation named twenty-one respondents, including Eonsmoke, LLC (“Eonsmoke”) of Clifton, New Jersey and XFire, Inc. (“XFire”) of Stafford, Texas. *Id.* at 64157. The Office of Unfair Import Investigations (“OUII”) was also a party to the investigation. *Id.*

JLI and the Commission were unable to serve respondent Keep Vapor Electronic Tech. Co., Ltd. of Shenzhen, China despite multiple attempts at service. The FID stated that JLI does not request any relief against this respondent. *See* FID at 2 n.1.

On February 25, 2019, the ALJ granted JLI’s motion to amend the complaint and notice of investigation to change the name of respondent Bo Vaping of Garden City, New York to ECVD/MMS Wholesale LLC of Garden City, New York and the name of respondent MMS Distribution LLC of Rock Hill, New York to MMS/ECVD LLC of Garden City, New York. *See* Order No. 8 (Feb. 25, 2019), *not rev’d* by Comm’n Notice (Mar. 25, 2019).

On February 28, 2019, the ALJ granted a motion to amend the complaint and notice of investigation to change the name of respondent Limitless Mod Co. of Simi Valley, California to Limitless MOD, LLC of Simi Valley, California. *See* Order No. 10 (Feb. 28, 2019), *not rev’d* by Comm’n Notice (Mar. 27, 2019).

On May 21, 2019, the ALJ granted a motion to amend the complaint and notice of investigation to change the name of respondent Ziip Lab Co., Ltd. of Guangdong Province, China to SS Group Holdings of Guangdong Province, China. *See* Order No. 26 (May 21, 2019), *not rev’d* by Comm’n Notice (June 14, 2019).

Before the evidentiary hearing, JLI settled with the following eight respondents: J Well France S.A.S. of Paris, France; ECVD/MMS Wholesale LLC; MMS/ECVD LLC; The Electric Tobacconist, LLC of Boulder, Colorado; ALD Group Limited of Guangdong Province, China; Flair Vapor LLC of South Plainfield, New Jersey; Shenzhen Joecig Technology Co., Ltd. of

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Guangdong Province, China; and Myle Vape Inc. of Jamaica, New York. *See* Order No. 13 (Mar. 12, 2019), *not rev'd* by Comm'n Notice (Apr. 5, 2019); Order No. 16 (Mar. 21, 2019), *not rev'd* by Comm'n Notice (Apr. 4, 2019); Order No. 31 (July 30, 2019), *not rev'd* by Comm'n Notice (Aug. 23, 2019); Order No. 32 (July 30, 2019), *not rev'd* by Comm'n Notice (Aug. 23, 2019); Order No. 33 (July 30, 2019), *not rev'd* by Comm'n Notice (Aug. 23, 2019); Order No. 34 (July 30, 2019), *not rev'd* by Comm'n Notice (Aug. 23, 2019).

In addition, the Commission terminated the investigation as to the following six respondents based on a consent order stipulation and the issuance of a consent order: Vapor Hub International, Inc. of Simi Valley, California; Limitless MOD, LLC; Asher Dynamics, Inc. of Chino, California; Ply Rock of Chino, California; Infinite-N Technology Limited of Guangdong Province, China; and King Distribution LLC of Elmwood Park, New Jersey. *See* Order No. 9 (Feb. 27, 2019), *not rev'd* by Comm'n Notice (Mar. 27, 2019); Order No. 11 (Feb. 28, 2019), *not rev'd* by Comm'n Notice (Mar. 26, 2019); Order No. 18 (Mar. 28, 2019), *not rev'd* by Comm'n Notice (Apr. 11, 2019); Order No. 20 (Apr. 2, 2019), *not rev'd* by Comm'n Notice (Apr. 15, 2019).

On April 23, 2019, the ALJ found respondent XFire in default pursuant to Commission Rule 210.16(b), 19 C.F.R. § 210.16(b). *See* Order No. 22 (Apr. 23, 2019), *not rev'd* by Comm'n Notice (May 16, 2019). At the time XFire was found in default, it was accused of infringing claims 1, 2, 4, 5, 7, 8, 10, 12, 13, 16, 17, 20, and 21 of the '669 patent; claims 1, 2, 3, 4, 9, 10, 11, 13, 14, 19, 20, 21, 24, 28, and 29 of the '139 patent; and claims 1, 2, 3, 4, 6, 9, 11, 12, 18, 19, 20, 21, 22, 23, and 27 of the '915 patent (collectively, "the Asserted XFire Claims").

Also, prior to the evidentiary hearing, the ALJ granted JLI's motion for partial termination of the investigation with respect to allegations of infringement as to all asserted

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claims of the '139 patent and certain asserted claims of the other Asserted Patents. *See* Order No. 36 (Aug. 8, 2019), *not rev'd* by Comm'n Notice (Sep. 5, 2019). As a result, only the following claims remain at issue in the investigation: claims 1, 2, and 13 of the '669 patent; claims 12, 17, and 20 of the '568 patent; claims 1, 2, and 4 of the '130 patent; and claims 1, 6, and 21 of the '915 patent.

Only five respondents participated in the evidentiary hearing: SS Group Holdings; ZLab S.A. of Punta del Este – Maldonado, Uruguay; Shenzhen Yibo Technology Co. Ltd. Of Guangdong Province, China (collectively, “the Ziip Respondents”); Vapor 4 Life Holdings, Inc. of Northbrook, Illinois (“V4L”); and Eonsmoke.

On August 5, 2019, one day before the prehearing conference, the ALJ issued an initial determination (“ID”) (Order No. 35), granting JLI’s motion for summary determination of importation, infringement, and domestic industry. The ALJ found that JLI was entitled to summary determination of importation with respect to the Ziip Respondents and their accused products; Eonsmoke and its accused products¹; and V4L and certain V4L accused products. *See* Order No. 35 at 4-11 (Aug. 5, 2019). Citing to a stipulation between JLI and the Ziip Respondents, the ALJ found regarding infringement that “the question of whether Ziip accused products contain or perform each limitation of asserted claims is moot.” *Id.* at 11. The ALJ did not specifically state whether summary determination of infringement as to the Ziip Respondents was denied or granted nor the reasoning supporting grant or denial of the motion as to this issue. *Id.*

An evidentiary hearing was held from August 6-7, 2019.

¹ Eonsmoke’s accused products include “the Eonsmoke device, the Eonsmoke v2.0 device, Eonsmoke (Eon) pod, and the 4X pod.” *See* FID at 9.

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On September 4, 2019 the Commission reviewed Order No. 35 in part. *See* Comm’n Notice (Sept. 4, 2019). Specifically, the Commission reviewed the ALJ’s analysis as to infringement and the statement regarding mootness on page 11 of the ID. *Id.* The Commission remanded to the ALJ for clarification on this issue and as to whether the ID grants or denies summary determination that the Ziip Respondents infringe the claims of the Asserted Patents. *Id.*

In response to the Commission’s September 4, 2019 Notice, the ALJ clarified that Order No. 35 denied summary determination of infringement as to the Ziip Respondents because that issue was moot in light of the stipulation between JLI and the Ziip Respondents. *See* Remand of Order No. 35 (Oct. 10, 2019).

On November 19, 2019, the ALJ granted motions to terminate the investigation as to the Ziip Respondents and V4L based on settlement agreements. *See* Order Nos. 38 and 39 (Nov. 19, 2019), *not rev’d* by Comm’n Notice (Dec. 16, 2019). Accordingly, only respondent Eonsmoke remained active in this investigation.

On December 12, 2019, the ALJ granted JLI’s motion to strike portions of Eonsmoke’s posthearing brief. *See* Order No. 40 (Dec. 12, 2019). Specifically, these portions relate to the issue of invalidity of asserted claim 4 of the ’915 patent, which was not addressed by Respondents’ expert or in their prehearing briefs. *Id.* at 3-5.

On December 13, 2019, the ALJ issued the FID finding a violation of section 337 by Eonsmoke with respect to claims 1, 2, and 13 of the ’669 patent; claims 12, 17, and 20 of the ’568 patent; claims 1, 2, and 4 of the ’130 patent; and claims 1, 6, and 21 of the ’915 patent

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(collectively, “the Asserted Eonsmoke Claims”).² No petitions for review were filed, which means each party abandoned all issues decided adversely to that party. *See* 19 C.F.R.

§ 210.43(b)(4). No public interest submissions were filed in response to the Federal Register notice seeking such submissions. *See* 85 Fed. Reg. 3720 (Jan. 22, 2020).

On February 13, 2020, the Commission issued a notice determining to review *sua sponte* the FID in part and, on review, to adopt certain of the FID’s findings.³ 85 Fed. Reg. 9803-06 (Feb. 20, 2020). The notice also requested briefing on remedy, bonding, and the public interest. *Id.* First, the Commission determined to review and, on review, declined to adopt the discussion of the validity of element [c] of claim 12 of the ’669 patent on pages 50 and 55 of the FID. Second, with respect to the economic prong of the domestic industry requirement, the Commission determined to review the discussion of the quantitative significance of JLI’s contract manufacturers’ investments in the last paragraph on page 272 of the FID. Third, also with respect to economic prong of the domestic industry requirement, the Commission determined to review the discussion of Warranty and Customer Support and Regulatory Compliance on pages 265-66 of the FID. The Commission determined not to review the remainder of the FID, including the majority of the FID’s domestic industry analysis, which is sufficient to support the FID’s finding that JLI has satisfied the domestic industry requirement under subparagraphs 337(a)(3)(A) and (B) with respect to the ’669, ’568, ’130, and ’915

² Discussion of the Asserted Patents, the accused products, and the domestic industry products can be found in the FID at pages 9-13, 55-56, 117-18, 174, and 233.

³ With respect to issues under review, “the Commission may affirm, reverse, modify, set aside or remand for further proceedings, in whole or in part, the initial determination of the administrative law judge.” 19 C.F.R. § 210.45(c). The Commission also “may take no position on specific issues or portions of the initial determination,” and “may make any finding or conclusions that in its judgment are proper based on the record in the proceeding.” *Id.*

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patents. Accordingly, the Commission found a violation of section 337 by reason of respondent Eonsmoke's importation of certain electronic nicotine delivery systems and components thereof that infringe one or more of the Asserted Eonsmoke Claims. The Commission also found that complainant JLI is entitled to relief against defaulted respondent XFire pursuant to 19 U.S.C. § 1337(g)(1).

On January 27, 2020, JLI and OUII filed their respective initial submissions on remedy, bonding, and the public interest.⁴ On March 5, 2020, JLI and OUII filed their respective reply submissions.⁵ No other party filed a submission before the Commission.

II. DISCUSSION

A. The FID's Finding on the Quantitative Significance of JLI's Contract Manufacturers' Investments

As explained below, the Commission declines to adopt the discussion of the quantitative significance of JLI's contract manufacturers' investments in the last paragraph on page 272 of the FID. In particular, the FID finds that "JLI and its contractors' U.S. investments in the DI Products are significant from a quantitative perspective," in part because [REDACTED] percent of [REDACTED] [REDACTED] FID at 270-71, 272. However, the FID suggests that [REDACTED] also conducts activities in [REDACTED] relating to the JUUL system. For example, the FID explains that [REDACTED] conducts activity in

⁴ See Complainant's Statement on the Issues of Remedy, Public Interest, and Bonding, EDIS Doc ID 703618 (Feb. 27, 2020) ("CSub"); Brief of the Office of Unfair Import Investigations on Issues Under Review and on Remedy, the Public Interest, and Bonding, EDIS Doc ID 703614 (Feb. 27, 2020) ("IASub").

⁵ See Complainant's Reply to Brief of the Office of Unfair Import Investigations on Issues Under Review and on Remedy, the Public Interest, and Bonding, EDIS Doc ID 704165 (Mar. 5, 2020) ("CReply"); Reply of the Office of Unfair Import Investigations on Issues Under Review and on Remedy, the Public Interest, and Bonding, EDIS Doc ID 704164 (Mar. 5, 2020) ("IAReply").

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filling the pods with e-liquid in the United States. *See id.* at 261, 272. The FID also explains that the same contractor, [REDACTED], along with other contractors located in [REDACTED], assemble empty pods in [REDACTED]. *See id.* at 260. If [REDACTED] activities relating to the JUUL system are indeed conducted in both [REDACTED] and the U.S., then not all of [REDACTED] facilities and employees can support a finding of quantitative significance.

The Commission finds that the remainder of the FID’s domestic industry analysis is sufficient to support the FID’s finding that JLI has satisfied the domestic industry requirement under subparagraphs 337(a)(3)(A) and (B) with respect to the ’669, the ’568, the ’130, and the ’915 patents. Accordingly, the Commission affirms the FID’s finding that JLI has satisfied the economic prong of the domestic industry requirement with respect to the Asserted Patents but declines to adopt the last paragraph on page 272 of the FID.

B. The FID’s Discussion of JLI’s Warranty and Customer Support and Regulatory Compliance Activities

The Commission also determined to review the discussion of JLI’s Warranty and Customer Support and Regulatory Compliance activities on pages 265-66 of the FID. Specifically, JLI engages in “a variety of customer support and warranty activities related to the JUUL system in the United States” including [REDACTED] [REDACTED]. *Id.* at 265. JLI’s domestic activities also include investments in complying with the U.S. Food and Drug Administration regulations relating to ENDS products. *See id.* at 265-66. In particular, “JLI’s clinical research and medical affairs departments plan, execute, and analyze the results of [REDACTED] [REDACTED] studies designed to support JLI’s compliance and youth prevention efforts” in the United States. CX-0017C at Q85 (citing CX-0014C at Q43); *see id.* at 259, 265-66.

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On review, the Commission has determined to affirm the FID’s discussion of JLI’s warranty and customer support and regulatory compliance activities on pages 265-66 of the FID. The Commission in the past has recognized similar types of investments in the United States relating to the domestic industry product. *See, e.g., Certain Marine Sonar Imaging Devices, Including Downscan and Sidescan Devices, Products Containing the Same, and Components Thereof*, Inv. No. 337-TA-921, Comm’n Op. at 53-54 (Dec. 1, 2015) (recognizing investments in the form of technical customer support, warranty and repair work); *Certain Strontium-Rubidium Radioisotope Infusion Systems, and Components Thereof Including Generators*, Inv. No. 337-TA-1110, Comm’n Op. at 40, 42 (Dec. 11, 2019) (recognizing investments in FDA regulatory approval activities relating to the domestic industry product).⁶

III. REMEDY, BONDING, AND THE PUBLIC INTEREST

The RD recommends that, in the event the Commission determines that a violation of section 337 has occurred, the Commission should issue a limited exclusion order (“LEO”) and cease and desist orders (“CDO”) directed to each of respondents Eonsmoke and XFire and set the amount of bond to be posted during the period of Presidential review at 100 percent of the entered value of the infringing products. *See* FID at 273-79. The RD finds that the record in

⁶ Commissioner Kearns observes that FDA regulatory compliance is required for a nicotine delivery system from any source. The same can be said with regard to warranty and customer support activities, which a supplier of a consumer product of any origin can be expected to carry out. To the extent that certain activities needed to market a product in the United States as a practical matter can only be performed in the United States, these activities may not on their own distinguish a complainant’s activities from those of an importer. He finds it unclear from evidence submitted whether (or which of) JLI’s activities in the areas of FDA regulatory compliance and warranty and customer support are of a nature that can only be conducted in the United States. *See, e.g., CX-0014C (Danaher), CX-0017C (Mulhern)*. However, he need not resolve that issue as he finds the other evidence on record cited by the ALJ to be sufficient to demonstrate that JLI satisfied the domestic industry requirement of section 337(a)(3)(A) and (B).

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this investigation contains no evidence that a remedial order would adversely affect the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, or United States consumers. *See id.* at 280-81.

A. Remedy

The Commission has “broad discretion in selecting the form, scope, and extent of the remedy.” *Viscofan, S.A. v. U.S. Int’l Trade Comm’n*, 787 F.2d 544, 548 (Fed. Cir. 1986).

1. Limited Exclusion Order

Section 337(d)(1) provides that “[i]f the Commission determines, as a result of an investigation under this section, that there is a violation of this section, it shall direct that the articles concerned, imported by any person violating the provision of this section, be excluded from entry into the United States, unless, after considering the [public interest], it finds that such articles should not be excluded from entry.” 19 U.S.C. § 1337(d)(1). Section 337(g)(1) provides that, when a complaint seeks an LEO against a party that has been found in default, the Commission “shall, upon request, issue an exclusion from entry . . . limited to that person unless” consideration of the public interest factors dictates that “such exclusion . . . should not issue.” 19 U.S.C. § 1337(g)(1).

JLI and OUII agree that the Commission should issue an LEO directed at Eonsmoke and XFire. While JLI and OUII agree on the scope of the LEO directed at Eonsmoke, they proposed different scopes with respect to the LEO directed at XFire. *Compare* IASub Ex. B at 1 *with* CSub Ex. A at 2. In particular, JLI submitted a proposed LEO that covered the same claims with respect to both respondents while OUII submitted a proposed LEO covering different sets

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of claims for each of the respondents.⁷ *Id.* OUII proposed that the scope of the LEO for XFire correspond to the claims asserted against XFire in the complaint. IAREply at 2-3; Amended Complaint, ¶ 190. In its reply, JLI approves the use of OUII’s proposed LEOs. CReply at 1.

Based on the evidence in the record, the Commission determines that the appropriate remedy in this investigation is an LEO directed to each of respondents Eonsmoke and XFire. *See* FID at 273. There is no dispute that the LEO directed to Eonsmoke should prohibit the unlicensed entry of “nicotine vaporizer devices and the associated pods sold for use with the devices, and components thereof,” 83 Fed. Reg. 64157, that infringe one or more of the Asserted Eonsmoke Claims (*i.e.*, claims 1, 2, and 13 of the ’669 patent; claims 12, 17, and 20 of the ’568 patent; claims 1, 2, and 4 of the ’130 patent; and claims 1, 6, and 21 of the ’915 patent).

JLI is also entitled to relief against defaulted respondent XFire pursuant to 19 U.S.C. § 1337(g)(1). As noted above, JLI’s reply approves the use of OUII’s proposed LEO. The Commission finds that the LEO directed to XFire should be limited to the claims asserted in the complaint as proposed by OUII and as later agreed to by JLI. Accordingly, the LEO directed to XFire should prohibit the unlicensed entry of “nicotine vaporizer devices and the associated pods sold for use with the devices, and components thereof” that infringe one or more of the Asserted XFire Claims (*i.e.*, claims 1, 2, 4, 5, 7, 8, 10, 12, 13, 16, 17, 20, and 21 of the ’669 patent; claims 1, 2, 3, 4, 9, 10, 11, 13, 14, 19, 20, 21, 24, 28, and 29 of the ’139 patent; and claims 1, 2, 3, 4, 6, 9, 11, 12, 18, 19, 20, 21, 22, 23, and 27 of the ’915 patent).⁸

⁷ OUII’s proposed LEO directed to XFire covered the Asserted XFire Claims whereas JLI’s proposed LEO directed to XFire covered the Asserted Eonsmoke Claims.

⁸ We remind the complainant that parties are to state their positions on remedy in their initial submissions pursuant to the Commission’s Federal Register notice requesting briefing on remedy. 85 Fed. Reg. at 9806. Here, complainant switched its position between its initial

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2. Cease and Desist Orders

Section 337(f)(1) provides that in addition to, or in lieu of, the issuance of an exclusion order, the Commission may issue a CDO as a remedy for violation of section 337. *See* 19 U.S.C. § 1337(f)(1). CDOs are generally issued when, with respect to the imported infringing products, respondents maintain commercially significant inventories in the United States or have significant domestic operations that could undercut the remedy provided by an exclusion order. *See, e.g., Certain Table Saws Incorporating Active Injury Mitigation Technology & Components Thereof* (“*Table Saws*”), Inv. No. 337-TA-965, Comm’n Op. at 4-6 (Feb. 1, 2017); *Certain Protective Cases & Components Thereof*, Inv. No. 337-TA-780, USITC Pub. No. 4405, Comm’n Op. at 28 (Nov. 19, 2012) (citing *Certain Laser Bar Code Scanners & Scan Engines, Components Thereof & Prods. Containing Same*, Inv. No. 337-TA-551, Comm’n Op. at 22 (June 24, 2007)). Complainants bear the burden on this issue. “A complainant seeking a cease and desist order must demonstrate, based on the record, that this remedy is necessary to address the violation found in the investigation so as to not undercut the relief provided by the exclusion order.” *Table Saws*, Comm’n Op. at 5 (citing *Certain Integrated Repeaters, Switches, Transceivers, & Prods. Containing Same*, Inv. No. 337-TA-435, USITC Pub. No. 3547 (Oct. 2002), Comm’n Op. at 27 (Aug. 16, 2002); *see also* H.R. REP. No. 100-40, at 160 (1987)).

Section 337(g)(1) provides that the Commission “shall, upon request, issue . . . a cease and desist order . . . limited to that person unless” consideration of the public interest factors dictates that “such . . . an order should not issue.” 19 U.S.C. § 1337(g)(1). In the case of named

submission and its reply submission as to the patent claims for which it sought a remedy against XFire. Given the circumstances here where XFire was found in default, we find it appropriate to issue the LEO and CDO as described herein.

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respondents in the United States who have been found in default or who have not participated in the investigation, the Commission has inferred commercially significant domestic inventories or significant domestic operations with respect to the infringing articles. *See, e.g., Certain Earpiece Devices and Components Thereof*, Inv. No. 337-TA-1121, Comm’n Op. at 41-42 (Nov. 8, 2019); *Certain Hand Dryers and Housing for Hand Dryers*, Inv. No. 337-TA-1015, Comm’n Op. at 24 (Oct. 30, 2017); *Certain Mobile Device Holders and Components Thereof*, Inv. No. 337-TA-1028, Comm’n Op. at 27 (Mar. 22, 2018); *Certain Agricultural Tractors, Lawn Tractors, Riding Lawnmowers, and Components Thereof*, Inv. No. 337-TA-486, Comm’n Op. at 18 (Aug. 19, 2003); *Certain Rare-Earth Magnets and Magnetic Materials and Articles Containing Same*, Inv. No. 337-TA-413, USITC Pub. No. 3307, Comm’n Op. at 17-18 (May 2000).

JLI and OUII agree that both Eonsmoke and XFire should be subject to CDOs. However, OUII asserts that, as with JLI’s proposed LEO, JLI’s proposed CDOs for both respondents do not correctly reflect the claims that were asserted against XFire at the time it defaulted in this investigation, and improperly subjects XFire to claims in the ‘568 patent, which was never asserted against XFire. IAREply at 3.

There is no dispute that Eonsmoke’s inventory of the accused products is commercially significant. FID at 274 (citing CX-0017C at Q313). Specifically, the record evidence shows that “Eonsmoke’s inventory of pods on March 8, 2019 was valued at between \$2 million and \$5 million, which equates to approximately 133,422 to 333,556 packs of pods at retail prices.” *Id.* at 274-75 (citing CX-0756C; CX-0757C; CX-0851). Therefore, the record evidence supports issuing a CDO prohibiting Eonsmoke from further importing, selling, and distributing products

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in the United States that infringe one or more of the Asserted Eonsmoke Claims.⁹ See 19 U.S.C. § 1337(f)(1).

As noted above, XFire has been found by the Commission to be in default and, thus, the prerequisites of section 337(g)(1) are satisfied with respect to XFire. As the RD points out, JLI's amended complaint alleges that XFire imported infringing devices and pods and that it "maintain[s] a commercially-significant inventory of the XFire devices and pods in the United States." FID at 275 (citing Amended Complaint ¶¶ 147-49, 162, 192). Therefore, pursuant to section 337(g)(1), the Commission has presumed the facts alleged in the complaint to be true and has determined to issue a CDO directed to XFire, as JLI requests, provided the public interest will not be adversely affected by the issuance of the order.¹⁰ See 19 U.S.C.

⁹ When the presence of infringing domestic inventory or domestic operations is asserted as the basis for a CDO under section 337(f)(1), Commissioner Schmidtlein does not adopt the view that the inventory or domestic operations needs to be "commercially significant" in order to issue the CDO. See, e.g., *Certain Magnetic Tape Cartridges and Components Thereof*, Inv. No. 337-TA-1058, Comm'n Op. at 65, n.24 (Mar. 25, 2019); *Table Saws*, Comm'n Op. at 6-7, n.2. In Commissioner Schmidtlein's view, the presence of some infringing domestic inventory or domestic operations, regardless of its commercial significance, provides a basis to issue a CDO under section 337(f)(1). *Id.* Accordingly, Commissioner Schmidtlein supports issuance of the CDO against Eonsmoke under section 337(f)(1) due to the presence of some infringing domestic inventory, regardless of the commercial significance.

¹⁰ Commissioner Schmidtlein supports issuance of the CDO against XFire, the respondent in default, for the reasons provided in her separate views in *Certain Electric Skin Care Devices, Brushes and Chargers Therefore, and Kits Containing the Same*. See Inv. No. 337-TA-959, Comm'n Op., Separate Views of Chairman Schmidtlein (Feb. 13, 2017) (public version). Specifically, because remedial relief as to XFire is governed by section 337(g)(1), she finds that the mandatory "shall, upon request, issue" language in section 337(g)(1) requires the Commission to issue the requested CDO against XFire. See *id.* at 2-5; see also *Certain Industrial Automation Systems and Components Thereof Including Control Systems, Controllers, Visualization Hardware, Motion and Motor Control Systems, Networking Equipment, Safety Devices, and Power Supplies*, Inv. No. 337-TA-1074, Comm'n Op., Dissenting Views of Commissioner Schmidtlein (April 23, 2019) (public version).

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§ 1337(g)(1). The CDO prohibits XFire from further importing, selling, and distributing products in the United States that infringe one or more of the Asserted XFire Claims.

The Commission declines to include JLI's two edits to OUII's proposed CDOs because the edits are generally not found in CDOs and JLI has made no showing that these provisions are necessary. First, JLI's edit proposes that provisions of the CDOs apply to respondents' "contractors" and "joint ventures." CReply, Ex. 1. JLI's remedy brief, however, provides no evidence or argument that these entities should be included among the entities that are bound by the terms of the CDOs. Commission CDOs typically include language providing that the provisions of the CDO shall apply to the respondent and to any of its principals, stockholders, officers, directors, employees, agents, distributors, controlled (whether by stock ownership or otherwise) and majority-owned business entities, successors, and assigns, and to each of them, insofar as they are engaging in prohibited conduct for, with, or otherwise on behalf of, respondent. In short, JLI has provided no justification for why this standard language is insufficient in scope to address the violations in this investigation. Moreover, JLI's amended complaint makes no allegations with respect to any contractors or joint ventures in connection with these respondents. In fact, the only discussion of contractors in the amended complaint is with respect to JLI's domestic industry activities.

Second, JLI proposes to include the model names of the respondents' accused products in the definition of "covered products" although its proposal does not limit the covered products to only the accused products. CReply, Ex. 1. Commission orders generally do not name specific infringing products because such information can be easily found in the record. Such is the case here. *See, e.g.*, Amended Complaint, ¶¶ 113 (Eonsmoke accused products), 115 (XFire accused products); FID at 9, 35. JLI has provided no justification for deviating from the

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Commission’s long-standing practice of declining to name specific models in its exclusion orders. *Cf. Certain Ground Fault Circuit Interrupters and Products Containing Same*, Inv. No. 337-TA-615, Comm’n Op. at 27 (rejecting respondents’ request to limit exclusion orders to specific model numbers in order to prevent circumvention).

B. Public Interest

Section 337 requires the Commission, upon finding a violation of section 337, to issue an LEO “unless, after considering the effect of such exclusion upon the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers, it finds that such articles should not be excluded from entry.” 19 U.S.C. § 1337(d)(1). Similarly, the Commission must consider these public interest factors before issuing a CDO. 19 U.S.C. § 1337(f)(1). The same holds for remedial orders issued pursuant to section 337(g)(1). 19 U.S.C. § 1337(g)(1).

Under appropriate facts and circumstances, the Commission may determine that no remedy should issue because of the adverse impacts on the public interest. *See, e.g., Certain Fluidized Supporting Apparatus & Components Thereof*, Inv. Nos. 337-TA-182/188, USITC Pub. 1667, Comm’n Op. at 1-2, 23-25 (Oct. 1984) (finding that the public interest warranted denying complainant’s requested relief). Moreover, when the circumstances of a particular investigation require, the Commission has tailored its relief in light of the statutory public interest factors. For example, the Commission has allowed continued importation for ongoing medical research, exempted service parts, grandfathered certain infringing products, and delayed the imposition of remedies to allow affected third-party consumers to transition to non-infringing products. *E.g., Certain Microfluidic Devices*, Inv. No. 337-TA-1068 Comm’n Op. at 1, 22-48, 53-54 (analyzing the public interest, discussing applicable precedent, and ultimately issuing a tailored LEO and a tailored CDO); *Certain Road Milling Machines & Components*

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Thereof, Inv. No. 337-TA-1067, Comm’n Op. at 32-33 (July 18, 2019) (exempting service parts); *Certain Baseband Processor Chips & Chipsets, Transmitter, & Receiver (Radio) Chips, Power Control Chips, & Prods. Containing Same, Including Cellular Tel. Handsets*, 337-TA-543, USITC Pub. No. 4258, Comm’n Op. at 150-51 (Oct. 2011) (grandfathering certain products); *Certain Personal Data & Mobile Comm’n Devices & Related Software*, 337-TA-710, USITC Pub. No. 4331, Comm’n Op., at 72-73, 80-81 (June 2012) (delaying imposition of remedy).

The statute requires the Commission to consider and make findings on the public interest in every case in which a violation is found regardless of the quality or quantity of public interest information supplied by the parties. 19 U.S.C. §§ 1337(d)(l), (f)(l), (g)(1). Thus, the Commission publishes a notice inviting the parties as well as interested members of the public and interested government agencies to gather and present evidence on the public interest at multiple junctures in the proceeding. *See* 19 C.F.R. § 210.50(a)(4).

The ALJ finds that the record in this investigation contains no evidence that a remedial order would adversely affect the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, or United States consumers. *See* FID at 280-81. No respondent briefed the statutory public interest factors before the ALJ, although the issue of public interest was delegated to the ALJ in the notice of investigation. *Id.* at 280. In addition, no third party responded to the Commission’s Notice requesting submissions from the public with respect to the public interest. *See* 85 *Fed. Reg.* 3720 (Jan. 22, 2020).

JLI and OUII agree that there are no public health, safety or welfare concerns implicated by the LEO and CDOs. FID at 280-81. According to OUII, “there is no evidence that

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Respondents' accused products have any unique public health benefits" and "there is no evidence that any remedial orders issued in this investigation would adversely affect the public health and welfare." IASub at 14. JLI and OUII also agree that JLI has adequate capacity to meet any increase in demand if the accused products are excluded. *Id.*; CSub at 10. In addition, JLI asserts that the remedial orders will positively impact consumers because JLI's products "are made with the highest quality materials and are subject to stringent quality-control measures to ensure a reliable and consistent user experience" and the orders "will benefit adult consumers . . . by removing from the market products that are made with unknown materials in unknown locations by unknown methods." CSub at 11.

The record in this investigation contains no evidence that issuance of an LEO or CDO would adversely affect the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, or United States consumers. *See* 19 U.S.C. §§ 1337(d)(1), (f)(1), (g)(1). In addition, JLI has a domestic industry and it can readily replace the products at issue with their own product. Accordingly, based on the record of this investigation, the Commission determines that the public interest does not preclude the issuance of remedial orders.

C. Bonding

If the Commission enters an exclusion order or a cease and desist order, a respondent may continue to import and sell its products during the 60-day period of Presidential review under a bond in an amount determined by the Commission to be "sufficient to protect the complainant from any injury." 19 U.S.C. § 1337(j)(3); *see also* 19 C.F.R. § 210.50(a)(3). When reliable price information is available in the record, the Commission has often set the bond in an amount that would eliminate the price differential between the domestic product and the imported, infringing product. *See Certain Microsphere Adhesives, Processes for Making*

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Same, & Prods. Containing Same, Including Self-stick Repositionable Notes, Inv. No. 337-TA-366, USITC Pub. No. 2949, Comm’n Op. at 24 (Jan. 16, 1996). The Commission also has used a reasonable royalty rate to set the bond amount where a reasonable royalty rate could be ascertained from the evidence in the record. *See, e.g., Certain Audio Digital-to-Analog Converters & Prods. Containing Same*, Inv. No. 337-TA-499, Comm’n Op. at 25 (Mar. 3, 2005). Where the record establishes that the calculation of a price differential is impractical or there is insufficient evidence in the record to determine a reasonable royalty, the Commission has imposed a 100 percent bond. *See, e.g., Certain Liquid Crystal Display Modules, Prods. Containing Same, & Methods Using the Same*, Inv. No. 337-TA-634, Comm’n Op. at 6-7 (Nov. 24, 2009). The complainant, however, bears the burden of establishing the need for a bond. *Certain Rubber Antidegradants, Components Thereof & Prods. Containing Same*, Inv. No. 337-TA-533, USITC Pub. No. 3975, Comm’n Op. at 40 (July 21, 2006).

JLI seeks imposition of a bond in the amount of 100 percent of entered value during the period of Presidential review “due to the complexities and wide range of [price] differentials” for the accused products. CSub at 4-8. The RD agrees and, in particular, finds that the evidence shows: (i) there is direct competition between participating respondents’ accused products and JLI’s JUUL system, which will result in continuing injury to JLI in the form of displaced sales; (ii) participating respondents have directly targeted JLI and the JUUL system with their marketing; (iii) publicly available pricing data even on the same respondents’ websites is, at times, inconsistent; (iv) participating respondents consistently provide discounts or coupons for their products beyond the publicly available price; and (v) JLI’s domestic industry products and accused products are sold in a variety of configurations, making direct pricing comparisons difficult. *See* FID at 276-279; IASub at 16-17.

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The Commission adopts the RD's findings and has determined to set the bond in the amount of 100 percent of the entered value of the infringing products during the period of Presidential review. As the RD finds, the record shows the complexities and wide range of price differentials between Eonsmoke's accused products and JLI's JUUL system, which supports a bond of 100 percent. *See* FID at 276-279; CSub at 4-7 (citing CX-0017C at QQ316-25, 328, 334-46). Eonsmoke does not challenge the RD's recommendation and did not provide briefing on the appropriate bond. With regard to XFire, it was found in default in this investigation and provided no discovery relating to pricing or royalty information. The Commission generally sets the bond at 100 percent for defaulting respondents. *See Certain Neodymium-Iron-Boron Magnets, Magnet Alloys, & Prods. Containing Same*, Inv. No. 337-TA-372, Comm'n Op. at 15 (May 1996).

IV. CONCLUSION

For the foregoing reasons, the Commission affirms the discussion of Warranty and Customer Support and Regulatory Compliance on pages 265-66 of the FID and declines to adopt the discussion of the quantitative significance of JLI's contract manufacturers' investments in the last paragraph on page 272 of the FID. The Commission determines that the appropriate form of relief is an LEO and CDOs directed to Eonsmoke and XFire. The Commission finds that the public interest does not preclude issuance of these orders. The Commission sets the bond during the period of Presidential review in the amount of 100 percent of the entered value of the infringing products.

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By order of the Commission.

A handwritten signature in black ink, appearing to read "LRB", is centered within a light gray rectangular box.

Lisa R. Barton
Secretary to the Commission

Issued: May 5, 2020

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **Opinion, Commission** has been served via EDIS upon the Commission Investigative Attorney, **Paul Gennari, Esq.**, and the following parties as indicated, on **May 05, 2020**.



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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

**CERTAIN ELECTRONIC NICOTINE
DELIVERY SYSTEMS AND
COMPONENTS THEREOF**

Investigation No. 337-TA-1139

**NOTICE OF A COMMISSION DETERMINATION TO REVIEW THE
FINAL INITIAL DETERMINATION IN PART AND TO AFFIRM THE
FINDING OF A VIOLATION OF SECTION 337;
SCHEDULE FOR FILING WRITTEN SUBMISSIONS ON
REMEDY, THE PUBLIC INTEREST AND BONDING;
EXTENSION OF THE TARGET DATE**

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined to review the presiding administrative law judge's ("ALJ") final initial determination ("ID") in part. On review, the Commission affirms the ID's finding of a violation of section 337 in the above-captioned investigation. The Commission requests written submissions from the parties, interested government agencies, and interested persons on the issues of remedy, the public interest, and bonding concerning respondent Eonsmoke, LLC ("Eonsmoke") and defaulting respondent XFire, Inc. ("XFire"). The Commission has also determined to extend the target date for completion of the above-captioned investigation to Monday, April 20, 2020.

FOR FURTHER INFORMATION CONTACT: Cathy Chen, Office of the General Counsel, U.S. International Trade Commission, 500 E Street SW, Washington, D.C. 20436, telephone 202-205-2392. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, SW, Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server at <https://www.usitc.gov>. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <https://edis.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: On December 13, 2018, the Commission instituted this investigation under section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, based on a complaint filed on behalf of Juul Labs, Inc. ("JLI") of San Francisco, California. 83

FR 64156 (Dec. 13, 2018). The complaint, as amended and supplemented, alleges violations of section 337 based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain electronic nicotine delivery systems and components thereof by reason of infringement of certain claims of U.S. Patent Nos.: 10,070,669 (“the ’669 patent”); 10,076,139 (“the ’139 patent”); 10,045,568 (“the ’568 patent”); 10,058,130 (“the ’130 patent”); and 10,104,915 (“the ’915 patent”) (collectively, “the Asserted Patents”). *Id.* The Commission’s notice of investigation named twenty-one respondents, including Eonsmoke of Clifton, New Jersey and XFire of Stafford, Texas. *Id.* at 64157. The Office of Unfair Import Investigations (“OUII”) is also a party to the investigation.

On February 25, 2019, the ALJ granted JLI’s motion to amend the complaint and notice of investigation to change the name of respondent Bo Vaping of Garden City, New York to ECVD/MMS Wholesale LLC of Garden City, New York and the name of respondent MMS Distribution LLC of Rock Hill, New York to MMS/ECVD LLC of Garden City, New York. *See* Order No. 8 (Feb. 25, 2019), *not rev’d* by Comm’n Notice (Mar. 25, 2019).

On February 28, 2019, the ALJ granted a motion to amend the complaint and notice of investigation to change the name of respondent Limitless Mod Co. of Simi Valley, California to Limitless MOD, LLC of Simi Valley, California. *See* Order No. 10 (Feb. 28, 2019), *not rev’d* by Comm’n Notice (Mar. 27, 2019).

Before the evidentiary hearing, JLI settled with the following eight respondents: J Well France S.A.S. of Paris, France; ECVD/MMS Wholesale LLC; MMS/ECVD LLC; The Electric Tobacconist, LLC of Boulder, Colorado; ALD Group Limited of Guangdong Province, China; Flair Vapor LLC of South Plainfield, New Jersey; Shenzhen Joecig Techonology Co., Ltd. of Guangdong Province, China; and Myle Vape Inc. of Jamaica, New York. *See* Order No. 31 (July 30, 2019), *not rev’d* by Comm’n Notice (Aug. 23, 2019); Order No. 16 (Mar. 21, 2019), *not rev’d* by Comm’n Notice (Apr. 4, 2019); Order No. 33 (July 30, 2019), *not rev’d* by Comm’n Notice (Aug. 23, 2019); Order No. 13 (Mar. 12, 2019), *not rev’d* by Comm’n Notice (Apr. 5, 2019); Order No. 34 (July 30, 2019), *not rev’d* by Comm’n Notice (Aug. 23, 2019); Order No. 32 (July 30, 2019), *not rev’d* by Comm’n Notice (Aug. 23, 2019).

In addition, the investigation terminated as to the following six respondents based on a consent order stipulation and the issuance of a consent order: Vapor Hub International, Inc. of Simi Valley, California; Limitless MOD, LLC; Asher Dynamics, Inc. of Chino, California; Ply Rock of Chino, California; Infinite-N Technology Limited of Guangdong Province, China; and King Distribution LLC of Elmwood Park, New Jersey. *See* Order No. 9 (Feb. 27, 2019), *not rev’d* by Comm’n Notice (Mar. 27, 2019); Order No. 11 (Feb. 28, 2019), *not rev’d* by Comm’n Notice (Mar. 26, 2019); Order No. 18 (Mar. 28, 2019), *not rev’d* by Comm’n Notice (Apr. 11, 2019); Order No. 20 (Apr. 2, 2019), *not rev’d* by Comm’n Notice (Apr. 15, 2019).

On April 23, 2019, the ALJ found respondent XFire in default pursuant to Commission Rule 210.16(b), 19 CFR 210.16(b). *See* Order No. 22 (Apr. 23, 2019), *not rev’d* by Comm’n Notice (May 16, 2019).

Also, prior to the evidentiary hearing, the ALJ granted JLI's motion for partial termination of the investigation with respect to allegations of infringement as to all asserted claims of the '139 patent and certain asserted claims of the other asserted patents. *See* Order No. 36 (Aug. 8, 2019), *not rev'd* by Comm'n Notice (Sep. 5, 2019). As a result, the following claims remain at issue in the investigation: claims 1, 2, and 13 of the '669 patent; claims 12, 17, and 20 of the '568 patent; claims 1, 2, and 4 of the '130 patent; and claims 1, 6, and 21 of the '915 patent (collectively, "the Asserted Claims").

JLI and the Commission were unable to serve respondent Keep Vapor Electronic Tech. Co., Ltd. of Shenzhen, China despite multiple attempts at service. The final ID states that JLI does not request any relief against this respondent. *See* ID at 2 n.1.

On May 21, 2019, the ALJ granted a motion to amend the complaint and notice of investigation to change the name of respondent Ziip Lab Co., Ltd. of Guangdong Province, China to SS Group Holdings of Guangdong Province, China. *See* Order No. 26 (May 21, 2019), *not rev'd* by Comm'n Notice (June 14, 2019).

Only five respondents participated in the evidentiary hearing: SS Group Holdings; ZLab S.A. of Punta del Este – Maldonado, Uruguay; Shenzhen Yibo Technology Co. Ltd. Of Guangdong Province, China (collectively, "the Ziip Respondents"); Vapor 4 Life Holdings, Inc. of Northbrook, Illinois ("V4L"); and Eonsmoke.

On August 5, 2019, one day before the prehearing conference, the ALJ issued an ID (Order No. 35), granting JLI's motion for summary determination of importation, infringement, and domestic industry. The ALJ found that JLI was entitled to summary determination of importation with respect to the Ziip Respondents and their accused products; Eonsmoke and its accused products; and V4L and certain V4L accused products. *See* Order No. 35 at 4-11 (Aug. 5, 2019). Citing to a stipulation between JLI and the Ziip Respondents, the ALJ stated in his infringement analysis with respect to the Ziip Respondents' accused products that "the question of whether Ziip accused products contain or perform each limitation of asserted claims is moot." *Id.* at 11. The ALJ did not specifically state whether summary determination of infringement as to the Ziip Respondents was denied or granted nor the reasoning supporting grant or denial of the motion as to this issue. *Id.*

An evidentiary hearing was held from August 6-7, 2019.

On September 4, 2019 the Commission reviewed Order No. 35 in part. Specifically, the Commission reviewed the ALJ's analysis as to infringement and a statement regarding mootness on page 11 of the ID. The Commission remanded to the ALJ for clarification on this issue and as to whether the ID grants or denies summary determination that the Ziip Respondents infringe the Asserted Patents. *See* Comm'n Notice (Sep. 4, 2019).

In response to the Commission's September 4, 2019 Notice, the ALJ clarified that Order No. 35 denied summary determination of infringement as to the Ziip Respondents because that issue was moot in light of the stipulation between JLI and the Ziip Respondents. *See* Remand of Order No. 35 (Oct. 10, 2019).

On November 19, 2019, the ALJ granted motions to terminate the investigation as to the Ziip Respondents and V4L based on settlement agreements. *See* Order Nos. 38 and 39 (Nov. 19, 2019), *not rev'd* by Comm'n Notice (Dec. 16, 2019). Accordingly, only respondent Eonsmoke remains active in this investigation.

On December 12, 2019, the ALJ granted JLI's motion to strike portions of the Ziip Respondents' and Eonsmoke's posthearing briefs. *See* Order No. 40 (Dec. 12, 2019). Specifically, these portions relate to the issue of invalidity of asserted claim 4 of the '915 patent, which was not addressed by Respondents' expert or in their prehearing briefings. *Id.* at 3-5.

On December 13, 2019, the ALJ issued a combined final ID and recommended determination ("RD"), finding a violation of section 337 by respondent Eonsmoke. Specifically, the final ID finds, *inter alia*, that JLI satisfied the importation requirement as to Eonsmoke's accused products; that JLI has shown Eonsmoke's accused products infringe the Asserted Claims; that JLI has satisfied the domestic industry requirement with respect to the Asserted Patents; and that the Asserted Claims have not been shown to be invalid. In addition, in the event the Commission finds a violation of section 337, the RD recommends that the Commission issue a limited exclusion order ("LEO") and cease and desist orders ("CDO") directed at Eonsmoke and defaulting respondent XFire, and impose a 100 percent bond during the period of Presidential review.

No petitions for review were filed, which means each party has abandoned all issues decided adversely to that party. *See* 19 CFR 210.43(b)(4).

Having reviewed the record of this investigation, including the final ID, the Commission has determined to *sua sponte* review the final ID in part. 19 CFR 210.44. Specifically, the Commission has determined to review and, on review, decline to adopt the discussion of the validity of element [c] of claim 12 of the '669 patent on pages 50 and 55 of the final ID. The Commission has also determined to review the discussion of Warranty and Customer Support and Regulatory Compliance on pages 265-266 of the final ID and the discussion of the quantitative significance of JLI's contract manufacturers' investments in the last paragraph on page 272 of the final ID. The Commission has determined not to review the remainder of the final ID, including the other portions of the ID's domestic industry analysis, which are sufficient to support the ID's finding that JLI has satisfied the domestic industry requirement under subparagraphs 337(a)(3)(A) and (B) with respect to the Asserted Patents. Accordingly, the Commission finds a violation of section 337 by reason of Eonsmoke's importation of electronic nicotine delivery systems and components thereof that infringe one or more of claims 1, 2, and 13 of the '669 patent; claims 12, 17, and 20 of the '568 patent; claims 1, 2, and 4 of the '130 patent; and claims 1, 6, and 21 of the '915 patent. The Commission also finds that JLI is entitled to relief against defaulting respondent XFire pursuant to 19 U.S.C. 1337(g)(1).

The Commission has determined to extend the target date for completion of the investigation to Monday, April 20, 2020.

In connection with the final disposition of this investigation, the statute authorizes issuance of (1) an order that could result in the exclusion of the subject articles from entry into the United States, and/or (2) cease and desist order(s) that could result in the respondent(s) being required to cease and desist from engaging in unfair acts in the importation and sale of such articles. Accordingly, the Commission is interested in receiving written submissions that address the form of remedy, if any, that should be ordered. If a party seeks exclusion of an article from entry into the United States for purposes other than entry for consumption, the party should so indicate and provide information establishing that activities involving other types of entry either are adversely affecting it or likely to do so. For background, see *Certain Devices for Connecting Computers via Telephone Lines*, Inv. No. 337-TA-360, USITC Pub. No. 2843, Comm'n Op. at 7-10 (Dec. 1994). In addition, if a party seeks issuance of any cease and desist orders, the written submissions should address that request in the context of recent Commission opinions, including those in *Certain Arrowheads with Deploying Blades and Components Thereof and Packaging Therefor*, Inv. No. 337-TA-977, Comm'n Op. (Apr. 28, 2017) and *Certain Electric Skin Care Devices, Brushes and Chargers Therefor, and Kits Containing the Same*, Inv. No. 337-TA-959, Comm'n Op. (Feb. 13, 2017). Specifically, if Complainant seeks a cease and desist order against a respondent, the written submissions should respond to the following requests:

1. Please identify with citations to the record any information regarding commercially significant inventory in the United States as to each respondent against whom a cease and desist order is sought. If Complainant also relies on other significant domestic operations that could undercut the remedy provided by an exclusion order, please identify with citations to the record such information as to each respondent against whom a cease and desist order is sought.
2. In relation to the infringing products, please identify any information in the record, including allegations in the pleadings, that addresses the existence of any domestic inventory, any domestic operations, or any sales-related activity directed at the United States for each respondent against whom a cease and desist order is sought.
3. Please discuss any other basis upon which the Commission could enter a cease and desist order.

The statute requires the Commission to consider the effects of any remedy upon the public interest. The public interest factors the Commission will consider include the effect that an exclusion order would have on (1) the public health and welfare, (2) competitive conditions in the U.S. economy, (3) U.S. production of articles that are like or directly competitive with those that are subject to investigation, and (4) U.S. consumers. The Commission is therefore interested in receiving written submissions that address the aforementioned public interest factors in the context of this investigation.

If the Commission orders some form of remedy, the U.S. Trade Representative, as delegated by the President, has 60 days to approve, disapprove, or take no action on the Commission's determination. See Presidential Memorandum of July 21, 2005, 70 FR 43251 (July 26, 2005). During this period, the subject articles would be entitled to enter the United

States under bond, in an amount determined by the Commission and prescribed by the Secretary of the Treasury. The Commission is therefore interested in receiving submissions concerning the amount of the bond that should be imposed if a remedy is ordered.

WRITTEN SUBMISSIONS: Parties to the investigation, interested government agencies, and any other interested parties are encouraged to file written submissions on the issues of remedy, the public interest, and bonding. Such initial submissions should include views on the recommended determination by the ALJ on remedy and bonding.

Complainant and the Commission Investigative Attorney are also requested to identify the form of remedy sought and to submit proposed remedial orders for the Commission's consideration in their initial written submissions. Complainant is further requested to state the dates that the Asserted Patents expire, the HTSUS numbers under which the accused products are imported, and to supply the identification information for all known importers of the products at issue in this investigation. The written submissions and proposed remedial orders must be filed no later than close of business on **February 27, 2020**. Reply submissions must be filed no later than the close of business on **March 5, 2020**. No further submissions on these issues will be permitted unless otherwise ordered by the Commission.

Persons filing written submissions must file the original document electronically on or before the deadlines stated above and submit 8 true paper copies to the Office of the Secretary by noon the next day pursuant to Commission Rule 210.4(f), 19 C.F.R. 210.4(f). Submissions should refer to the investigation number (Inv. No. 337-TA-1139) in a prominent place on the cover page and/or the first page. (*See Handbook for Electronic Filing Procedures, https://www.usitc.gov/documents/handbook_on_filing_procedures.pdf*). Persons with questions regarding filing should contact the Secretary, (202) 205-2000.

Any person desiring to submit a document to the Commission in confidence must request confidential treatment. All such requests should be directed to the Secretary to the Commission and must include a full statement of the reasons why the Commission should grant such treatment. See 19 CFR 201.6. Documents for which confidential treatment by the Commission is properly sought will be treated accordingly. A redacted non-confidential version of the document must also be filed simultaneously with any confidential filing. All information, including confidential business information and documents for which confidential treatment is properly sought, submitted to the Commission for purposes of this investigation may be disclosed to and used: (i) by the Commission, its employees and Offices, and contract personnel (a) for developing or maintaining the records of this or a related proceeding, or (b) in internal investigations, audits, reviews, and evaluations relating to the programs, personnel, and operations of the Commission including under 5 U.S.C. Appendix 3; or (ii) by U.S. government employees and contract personnel, solely for cybersecurity purposes. All contract personnel will sign appropriate nondisclosure agreements. All nonconfidential written submissions will be available for public inspection at the Office of the Secretary and on EDIS.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, and in Part 210 of the Commission's Rules of Practice and Procedure, 19 CFR Part 210.

By order of the Commission.

A handwritten signature in black ink, appearing to read 'LRB', is positioned above the printed name of the signatory.

Lisa R. Barton
Secretary to the Commission

Issued: February 13, 2020

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, **Paul Gennari, Esq.**, and the following parties as indicated, on **February 13, 2020**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainants Juul Labs, Inc.:

Daniel E. Yonan, Esq.
STERNE, KESSLER, GOLDSTEIN & FOX, P.L.L.C.
1100 New York Avenue, N.W.
Washington, DC 20005

- ☐ Via Hand Delivery
☐ Via Express Delivery
☒ Via First Class Mail
☐ Other: _____

On Behalf of Respondents Eonsmoke, LLC,

Stephen M. Lobbin, Esq.
SML AVVOCATI P.C.
7538 Draper Avenue
San Diego, California 92037

- ☐ Via Hand Delivery
☐ Via Express Delivery
☒ Via First Class Mail
☐ Other: _____

Respondents:

Keep Vapor Electronic Tech. Co., Ltd.
Block D, XinLong Techno Park
ShaJing Town, Bao An District
Shenzhen, China

- ☐ Via Hand Delivery
☐ Via Express Delivery
☒ Via First Class Mail
☐ Other: _____

PUBLIC VERSION

**UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C**

In the Matter of

**CERTAIN ELECTRONIC NICOTINE
DELIVERY SYSTEMS AND
COMPONENTS THEREOF**

Inv. No. 337-TA-1139

FINAL INITIAL DETERMINATION

Administrative Law Judge David P. Shaw

Pursuant to the notice of investigation, 83 Fed. Reg. 64156 (Dec. 13, 2018), this is the Initial Determination in *Certain Electronic Nicotine Delivery Systems and Components Thereof*, United States International Trade Commission Investigation No. 337-TA-1139.

It is held that a violation of section 337 (19 U.S.C. § 1337) has occurred with respect to U.S. Patent No. 10,070,669; U.S. Patent No. 10,045,568; U.S. Patent No. 10,058,130; and U.S. Patent No. 10,104,915.

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The following abbreviations may be used in this Initial Determination:

ALJ	-	Administrative Law Judge
CDX	-	Complainant's Demonstrative Exhibit
CPX	-	Complainant's Physical Exhibit
CX	-	Complainant's Exhibit
Dep.	-	Deposition
EDIS	-	Electronic Document Imaging System
JPX	-	Joint Physical Exhibit
JX	-	Joint Exhibit
P.H.	-	Prehearing
RDX	-	Respondents' Demonstrative Exhibit
RPX	-	Respondents' Physical Exhibit
RWS	-	Rebuttal Witness Statement
RX	-	Respondents' Exhibit
Tr.	-	Transcript
WS	-	Witness Statement

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I. Background

A. Institution of the Investigation; Procedural History

By publication of a notice in the *Federal Register* on December 13, 2018, pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended, the Commission instituted this investigation to determine:

[W]hether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain products identified in paragraph (2) by reason of infringement of one or more of claims 1, 2, 4, 5, 7, 3, 10, 12, 13, 16, 17, 20, and 21 of the '669 patent [U.S. Patent No. 10,070,669]; claims 1-4, 9-11, 13, 14, 19-21, 24, 28, and 29 of the '139 patent [U.S. Patent No. 10,076,139]; claims 1-3, 5-9, 12, and 17-20 of the '568 patent [U.S. Patent No. 10,045,568]; claims 1, 2, 4-6, 8-10, 16, 19, 21, and 27 of the '130 patent [U.S. Patent No. 10,058,130]; and claims 1-4, 6, 9, 11, 12, 18-23, and 27 of the '915 patent [U.S. Patent No. 10,104,915]; and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

83 Fed. Reg. 64156 (Dec. 13, 2018).

Pursuant to section 210.10(b)(1) of the Commission's Rules of Practice and Procedure, 19 C.F.R. 210.10(b)(1):

[T]he plain language description of the accused products or category of accused products, which defines the scope of the investigation, is "nicotine vaporizer devices and the associated pods sold for use with the devices, and components thereof[.]"

Id.

The complainant is Juul Labs, Inc. of San Francisco, California. The named respondents were:

1. J Well France S.A.S. of Paris, France

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2. Bo Vaping, of Garden City, New York
3. MMS Distribution LLC of Rock Hill, New York
4. The Electric Tobacconist, LLC of Boulder, Colorado
5. Vapor 4 Life Holdings, Inc. (“V4L”) of Northbrook, Illinois
6. Eonsmoke, LLC of Clifton, New Jersey
7. ZLab S.A. of Maldonado, Uruguay
8. Ziip Lab Co., Limited of Guangdong Province, China
9. Shenzhen Yibo Technology Co., Ltd. of Guangdong Province, China
10. XFire, Inc. of Stafford, Texas
11. ALD Group Limited of Guangdong Province, China
12. Flair Vapor LLC of South Plainfield, New Jersey
13. Shenzhen Joecig Technology Co., Ltd. of Guangdong Province, China
14. Myle Vape Inc. of Jamaica, New York
15. Vapor Hub International, Inc. of Simi Valley, California
16. Limitless Mod Co. of Simi Valley, California
17. Asher Dynamics, Inc. of Chino, California
18. Ply Rock of Chino, California
19. Infinite-N Technology Limited of Guangdong Province, China
20. King Distribution LLC of Elmwood Park, New Jersey
21. Keep Vapor Electronic Tech. Co., Ltd.¹ of Shenzhen, China

The Office of Unfair Import Investigations (“OUII” or “Staff”) is a party to this investigation. *Id.*

The target date for completion of this investigation was initially set at fifteen months, *i.e.*, March 13, 2020. *See* Order No. 3 (Jan. 30, 2019). Accordingly, the original due date for the final initial determination on violation was November 13, 2019.

¹ JLI states, “Despite multiple attempts at service, both the Commission and JLI were unable to serve Respondent Keep Vapor, who has not entered an appearance or participated in this Investigation.” Compl. Br. at 5. JLI does not request any relief against Keep Vapor.

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On March 25, 2019, the Commission determined not to review an initial determination granting complainant's motion to amend the complaint and notice of investigation. *See* Order No. 8 (Feb. 25, 2019), *aff'd*, Commission Decision Not to Review an Initial Determination Granting Complainant's Motion to Amend the Complaint and Notice of Investigation. On March 26, 2019, the Commission determined not to review an initial determination granting a joint motion for partial termination of the investigation as to certain respondents based on consent order stipulations and proposed consent orders. *See* Order No. 11 (Feb. 28, 2019), *aff'd*, Commission Decision Not to Review an Initial Determination Granting a Joint Motion for Partial Termination of the Investigation As to Certain Respondents Based on Consent Order Stipulations and Proposed Consent Orders.

On March 27, 2019, the Commission determined not to review an initial determination granting-in-part a joint motion to amend the complaint and notice of investigation. *See* Order No. 10 (Feb. 28, 2019), *aff'd*, Commission Decision Not to Review an Initial Determination Granting-in-Part a Joint Motion to Amend the Complaint and Notice of Investigation. On March 27, 2019, the Commission determined not to review an initial determination granting a motion for partial termination of the investigation as to respondent Vapor Hub International Inc. based on a consent order stipulation and a proposed consent order. *See* Order No. 9 (Feb. 27, 2019), *aff'd*, Commission Decision Not to Review an Initial Determination Granting a Joint Motion for Partial Termination of the Investigation As to One Respondent Based on a Consent Order Stipulation and a Proposed Consent Order.

On April 4, 2019, the Commission determined not to review an initial

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determination granting a joint motion for partial termination of the investigation as to respondent The Electric Tobacconist, LLC based on settlement. *See* Order No. 16 (Mar. 21, 2019), *aff'd*, Commission Decision Not to Review an Initial Determination Granting a Joint Motion for Partial Termination of the Investigation As to a Respondent Based on Settlement. On April 5, 2019, the Commission determined not to review an initial determination granting an amended joint motion for partial termination of the investigation as to respondent Flair Vapor, LLC based on settlement. *See* Order No. 13 (Mar. 12, 2019), *aff'd*, Commission Decision Not to Review an Initial Determination Granting an Amended Joint Motion for Partial Termination of the Investigation As to a Respondent Based on Settlement.

On April 11, 2019, the Commission determined not to review an initial determination granting an unopposed motion for partial termination of the investigation as to respondent Infinite-N Technology Limited based on a consent order stipulation and a proposed consent order. *See* Order No. 18 (Mar. 28, 2019), *aff'd*, Commission Decision Not to Review an Initial Determination Granting an Unopposed Motion for Partial Termination of the Investigation As to a Respondent Based on a Consent Order Stipulation and a Proposed Consent Order. On April 15, 2019, the Commission determined not to review an initial determination granting a joint motion for partial termination of the investigation as to respondent King Distribution LLC based on a consent order. *See* Order No. 20 (Apr. 2, 2019), *aff'd*, Commission Decision Not to Review an Initial Determination Granting a Joint Motion for Partial Termination of the Investigation As to a Respondent Based on a Consent Order.

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On May 16, 2019, the Commission determined not to review an initial determination finding respondent XFire, Inc. in default. *See* Order No. 22 (Apr. 23, 2019), *aff'd*, Commission Decision Not to Review an Initial Determination Finding Respondent Xfire, Inc. in Default.

On June 14, 2019, the Commission determined not to review an initial determination granting a joint, unopposed motion to amend the amended complaint and notice of investigation to correct a corporate entity name. *See* Order No. 26 (May 21, 2019), *aff'd*, Commission Decision Not to Review an Initial Determination Granting a Joint, Unopposed Motion to Amend the Amended Complaint and Notice of Investigation.

On June 24, 2019, the private parties filed a technology stipulation. *See* EDIS Doc. ID No. 679303.

On August 23, 2019, the Commission determined not to review an initial determinations granting joint motions for partial termination of the investigation as to certain respondents² based on settlement agreements. *See* Order Nos. 31, 32, 33, and 34 (July 30, 2019), *aff'd*, Commission Determination Not to Review Initial Determinations Granting Joint Motions for Partial Termination of the Investigation As to Certain Respondents Based on Settlement Agreements. As a result of this notice, only five respondents (Vapor 4 Life Holdings, Inc.; ZLab S.A.; SS Group Holdings; Shenzhen Yibo Technology Co., Ltd.; and Eonsmoke, LLC) remained active in this investigation.

On September 4, 2019, the Commission determined to review in part an initial determination granting in part complainant's motion for summary determination of

² J Well France S.A.S.; MMS/ECVD LLC; ECVD/MMS Wholesale LLC; Myle Vape, Inc.; ALD Group Limited; and Shenzhen Joecig Technology Co., Ltd.

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importation, infringement, and domestic industry. *See* Order No. 35 (Aug. 5, 2019), *aff'd in part*, Commission Determination to Review in Part an Initial Determination Granting in Part Complainant's Motion for Summary Determination of Importation, Infringement, and Domestic Industry. The Commission Notice stated, "The Commission has determined to remand to the ALJ for clarification regarding the analysis of infringement and the statement regarding mootness." Commission Notice at 1.³

On September 5, 2019, the Commission determined not to review an initial determination partially terminating the investigation based on the withdrawal of certain patent claims. *See* Order No. 36 (Aug. 8, 2019), *aff'd*, Commission Decision Not to Review an Initial Determination Partially Terminating the Investigation Based on the Withdrawal of Certain Patent Claims. The following asserted patents and claims were terminated:

- U.S. Patent No. 10,070,669: claims 4, 5, 7, 8, 10, 12, 16, 17, 20 and 21;
- U.S. Patent No. 10,045,568: claims 1-3, 5-9, 18 and 19;
- U.S. Patent No. 10,058,130: claims 5, 6, 8-10, 16, 19, 21 and 27;
- U.S. Patent No. 10,104,915: claims: 2-4, 9, 11, 12, 18-20, 22, 23 and 27; and
- U.S. Patent No. 10,076,139: all asserted claims.

Accordingly, the following claims remain at issue in this investigation:

- U.S. Patent No. 10,070,669: claims 1, 2 and 13;
- U.S. Patent No. 10,045,568: claims 12, 17 and 20;
- U.S. Patent No. 10,058,130: claims 1, 2 and 4; and
- U.S. Patent No. 10,104,915: claims 1, 6 and 21.

³ On October 10, 2019, in response to the notice and concurrently issued Commission order, the administrative law judge issued a "Remand of Order No. 35 (ID) Clarification and Statement." *See* EDIS Doc. ID No. 690976.

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A prehearing conference was held on August 6, 2019, with the evidentiary hearing in this investigation commencing immediately thereafter. Complainant Juul, five remaining respondents Vapor 4 Life Holdings, Inc.; ZLab S.A.; SS Group Holdings; Shenzhen Yibo Technology Co., Ltd.; and Eonsmoke, LLC, and the Staff participated in the hearing. The hearing concluded on August 7, 2019. *See* Order No. 6 (Feb. 21, 2019); P.H. Tr. 1-70; Tr. 1-619. The parties were requested to file post-hearing briefs not to exceed 220 pages in length, and to file reply briefs not to exceed 80 pages in length. P.H. Tr. 10-11.

On August 23, 2019, the parties filed a joint outline of the issues to be decided in the Final Initial Determination. *See* Parties' Joint Outline of the Issues to Be Decided ("Joint Outline") (EDIS Doc. ID No. 686159). On September 3, 2019, the parties filed a joint outline of the reply briefs. *See* Parties' Joint Outline of Reply Briefs ("Joint Reply Outline") (EDIS Doc. ID No. 687043).

On October 17, 2019, the administrative law judge held a telephone conference with the parties concerning anticipated settlements with respect to respondents Vapor 4 Life Holdings, Inc.; ZLab S.A.; SS Group Holdings; and Shenzhen Yibo Technology Co., Ltd. The undersigned also received letters about changes concerning which respondents may or may not settle with the complainant. Under these circumstances, on November 8, 2019, the administrative law judge filed an order extending the target date by one month. *See* Order No. 37. Accordingly, the initial determination on alleged violation of section 337 will be due on December 13, 2019, and the target date for completion of this investigation will be April 13, 2020, which is 16 months after institution of the investigation.

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On October 23, 2019, the parties filed a joint outline of the issues to be decided in the Final Initial Determination as to respondent Eonsmoke. *See* Joint Outline of Issues to Be Decided As to Eonsmoke Only (“Joint Outline - Eonsmoke”) (EDIS Doc. ID No. 692144). On October 23, 2019, the parties filed a joint outline of the reply briefs. *See* Parties’ Joint Outline of Reply Briefs As to Respondent Eonsmoke Only (“Joint Reply Outline - Eonsmoke”) (EDIS Doc. ID No. 692141). In its initial posthearing brief, Eonsmoke briefed only the level of ordinary skill in the art and validity issues (but not including secondary considerations). *See* Joint Outline - Eonsmoke; Ground Rule 11; P.H. Tr. 11 (“The main briefs are to cover all issues.”).

Three months after the evidentiary hearing, complainant and respondents Vapor 4 Life Holdings, Inc.; ZLab S.A.; SS Group Holdings; and Shenzhen Yibo Technology Co., Ltd. filed joint motions to terminate the investigation based on settlement agreements. On November 19, 2019, the administrative law judge issued an initial determination granting an amended joint motion to terminate the investigation as to respondent Vapor 4 Life Holdings, Inc. based on a settlement agreement. *See* Order No. 38. On November 19, 2019, the administrative law judge issued an initial determination granting a joint motion to terminate the investigation as to respondents ZLab S.A.; SS Group Holdings; and Shenzhen Yibo Technology Co., Ltd. based on a settlement agreement. *See* Order No. 39. As a result, only respondent Eonsmoke, LLC (“Eonsmoke”) remains in this investigation.

B. The Parties

The complainant is Juul Labs, Inc. (“JLI”) of San Francisco, California. JLI is a privately-held corporation organized and existing under the laws of the State of

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Delaware. *See* Compl. Br. at 6; Complaint, ¶ 19. JLI was founded in 2007 under the name Ploom, Inc (“Ploom”). Ploom changed its name to Pax Labs, Inc. (“Pax”) in 2015. *See id.* On June 30, 2018, the Pax division developing electronic nicotine delivery system (“ENDS”) products was renamed to Juul Labs, Inc., and its other divisions were spun off but reacquired the corporate name Pax Labs, Inc. *See id.*; Technology Stipulation at 1. Before the reorganization, Pax developed the product that is now known as the JUUL system—the domestic industry product in this investigation. *See* Compl. Br. at 7. Pax and JUUL Labs, Inc. became separate companies in 2017. *See id.*

As noted above, there were initially 21 named respondents in this investigation. *See* 83 Fed. Reg. 64156 (Dec. 13, 2018). The investigation was terminated with respect to 20 respondents. Only respondent Eonsmoke remains in this investigation.

Eonsmoke is based in Clifton, New Jersey, and is an importer, distributor, and seller of ENDS devices and pods, including the Eonsmoke devices and pods manufactured by Ziip Lab Co., Limited (“Ziip”). The accused products for Eonsmoke include the Eonsmoke device, the Eonsmoke v2.0 device, Eonsmoke (Eon) pod, and the 4X pod.

The Office of Unfair Import Investigations also remains a party to this investigation.

C. The Accused Products

The accused products with respect to Eonsmoke include the Eonsmoke device, the Eonsmoke v2.0 device, Eonsmoke (Eon) pod, and the 4X pod (individually and collectively, “Eonsmoke accused products”). *See* Compl. Br. at 10 (citing CX-0958C (Eonsmoke Invoices 13); CX-0858 (Eonsmoke’s Supp. Responses to JLI’s RFAs)).

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D. Asserted Patents and Technological Background

United States Patent No. 10,070,669 (“the ‘669 patent”), entitled “Cartridge for use with a vaporizer device,” issued on September 11, 2018. JX-0003 (‘669 Patent). The ‘669 patent issued from Application No. 15/820,370, filed on November 21, 2017. *Id.* The ‘669 patent application is a continuation of, and claims priority to, Application No. 15/257,748 filed on September 6, 2016. The ‘669 patent relates to “apparatuses, including systems and devices, for vaporizing material to form an inhalable aerosol. Specifically, these apparatuses may include vaporizers, cartridge for use with a vaporizer device, and vaporizers with cartridges.” JX-0003, 2:31-36. The ‘669 patent has a total of 21 claims.

United States Patent No. 10,045,568 (“the ‘568 patent”), entitled “Vaporization device systems and methods,” issued on August 14, 2018. JX-0001 (‘568 Patent). The ‘568 patent issued from Application No. 15/832,749, filed on December 5, 2017. *Id.* The ‘568 patent application is a continuation of, and claims priority to, Application No. 15/379,898, filed on December 15, 2016, which is a continuation-in-part of other patent applications. The ‘568 patent relates to “apparatuses, including systems and devices, for vaporizing material to form an inhalable aerosol. Specifically, these apparatuses may include vaporizers.” JX-0001, 1:64-67. The ‘568 patent has a total of 20 claims.

United States Patent No. 10,058,130 (“the ‘130 patent”), entitled “Cartridge for use with a vaporizer device,” issued on August 28, 2018. JX-0002 (‘130 Patent). The ‘130 patent issued from Application No. 15/813,089, filed on November 14, 2017. *Id.* The ‘130 patent application is a continuation of, and claims priority to, Application No. 15/257,748 filed on September 6, 2016, which is a continuation-in-part of other patent

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applications. The ‘130 patent relates to “apparatuses, including systems and devices, for vaporizing material to form an inhalable aerosol. Specifically, these apparatuses may include vaporizers, cartridge for use with a vaporizer device, and vaporizers with cartridges.” JX-0002, 2:32-36. The ‘130 patent has a total of 27 claims.

United States Patent No. 10,104,915 (“the ‘915 patent”), entitled “Securely attaching cartridges for vaporizer devices,” issued on October 23, 2018. JX-0004 (‘915 Patent). The ‘915 patent issued from Application No. 15/815,666, filed on November 16, 2017. *Id.* The ‘915 patent application is a continuation of, and claims priority to, Application No. 15/430,357, filed on February 10, 2017, which is a continuation-in-part of other patent applications. The ‘915 patent also claims priority to Provisional Application No. 62/294,281, filed on February 11, 2016. The ‘915 patent relates to “apparatuses, including systems and devices, for vaporizing material to form an inhalable aerosol. Specifically, these apparatuses may include vaporizers.” JX-0004, 2:64-67. The ‘915 patent has a total of 32 claims.

According to JLI, ENDS products based on liquid nicotine solutions (also called e-liquid), vaporize a liquid solution containing nicotine and permit the user to inhale that solution as an aerosol. E-liquid based ENDS are also sometimes called e-cigarettes. *See* CX-0016C (Alarcon WS) Q/A 31. An e-liquid based ENDS product typically includes a storage compartment that holds the liquid nicotine solution, a heating element that vaporizes the liquid to generate an aerosol, and a battery and circuitry to power and operate the heating element. *See id.*; CX-0015C (Collins WS) Q/A 38. The user can inhale an aerosolized nicotine solution generated by the heating element. *See* CX-0016C (Alarcon WS) Q/A 32.

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JLI's JUUL system is an ENDS product that includes a device and a cartridge. *See* CX-0016C (Alarcon WS) at Q/A 33. The device is sometimes called a vaporizer, battery, or, generally, a device. The device contains a battery and circuitry. *See id.* The cartridge is sometimes called a pod. The cartridge of the accused products and JLI's JUUL system is now called a cartomizer, meaning the atomizer, which is responsible for generating the aerosol, is built into the cartridge. *See id.*

The JUUL device is configured to be used with a JUULpod. *See* CX-0016C (Alarcon WS) at Q/A 35. Likewise, a JUULpod is configured to be used with a JUUL device. To use the cartridge-based ENDS system of the JUUL system, a user first inserts a cartridge into the receptacle of a compatible device. *See* CX-0016C (Alarcon WS) Q/A 36. When inserted, the cartridge's electrical contacts will engage the device's electrical contacts, completing an electrical circuit between the heating element and the battery. *See id.* Once the product is activated by the user, either with a button or by inhaling on the mouthpiece, the device sends electrical power through the electrical contacts to the heating element. *See id.* The heating element generates heat that causes the liquid to vaporize. The vapor immediately disperses in air, forming an aerosol. Airflow carries the generated aerosol from the heating element to the user's mouth. *See id.* The mouthpiece encloses and conceals a portion of a storage compartment. *See* CX-0015C (Collins WS) Q/A 39.

When a user inhales through the mouthpiece, electrical power is provided by the battery to a resistive heating element through the flat, folded over contact tabs. *See* CX-0015C (Collins WS) Q/A 40. The resistive heating element converts the electrical power to heat, which in turn heats the vaporizable liquid within the adjacent wick, generating

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aerosol. As liquid is vaporized by the resistive heating element, more liquid is drawn towards the heater by capillary action within the wick, allowing the generation of more aerosol. *See id.*

II. Jurisdiction and Importation

On August 5, 2019, the administrative law judge issued an initial determination granting complainant's motion for summary determination with respect to importation. *See* Order No. 35 (Aug. 5, 2019) at 4-5, *aff'd in part*, Commission Determination to Review in Part an Initial Determination Granting in Part Complainant's Motion for Summary Determination of Importation, Infringement, and Domestic Industry (Sept. 4, 2019) (Commission determining not to review importation). Thus, the Commission has *in rem* jurisdiction over the accused products. *See e.g., Sealed Air Corp. v. United States Int'l Trade Comm'n*, 645 F.2d 976, 985-86 (C.C.P.A. 1981).

As indicated in the Commission's notice of investigation, discussed above, this investigation involves the importation of products alleged to infringe United States patents in a manner that violates section 337 of the Tariff Act, as amended. No party has contested the Commission's jurisdiction over the subject matter of this investigation. It is found that the Commission has subject matter jurisdiction over this investigation.

No party has contested the Commission's personal jurisdiction over it. In particular, Eonsmoke has been given notice of this investigation at least through service of the complaint and notice of investigation, and has participated in this investigation on the merits. It is therefore found that the Commission has personal jurisdiction over all parties.

III. General Principles of Applicable Law

A. Claim Construction

Claim construction begins with the plain language of the claim.⁴ Claims should be given their ordinary and customary meaning as understood by a person of ordinary skill in the art, viewing the claim terms in the context of the entire patent.⁵ *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006).

In some instances, claim terms do not have particular meaning in a field of art, and claim construction involves little more than the application of the widely accepted meaning of commonly understood words. *Phillips*, 415 F.3d at 1314. “In such circumstances, general purpose dictionaries may be helpful.” *Id.*

In many cases, claim terms have a specialized meaning, and it is necessary to determine what a person of skill in the art would have understood the disputed claim language to mean. “Because the meaning of a claim term as understood by persons of skill in the art is often not immediately apparent, and because patentees frequently use terms idiosyncratically, the court looks to ‘those sources available to the public that show

⁴ Only those claim terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *Vanderlande Indus. Nederland BV v. Int’l Trade Comm.*, 366 F.3d 1311, 1323 (Fed. Cir. 2004); *Vivid Tech., Inc. v. American Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

⁵ Factors that may be considered when determining the level of ordinary skill in the art include: “(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field.” *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696 (Fed. Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984).

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what a person of skill in the art would have understood disputed claim language to mean.” *Phillips*, 415 F.3d at 1314 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)). The public sources identified in *Phillips* include “the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Id.* (quoting *Innova*, 381 F.3d at 1116).

In cases in which the meaning of a claim term is uncertain, the specification usually is the best guide to the meaning of the term. *Phillips*, 415 F.3d at 1315. As a general rule, the particular examples or embodiments discussed in the specification are not to be read into the claims as limitations. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (*en banc*), *aff’d*, 517 U.S. 370 (1996). The specification is, however, always highly relevant to the claim construction analysis, and is usually dispositive. *Phillips*, 415 F.3d at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). Moreover, “[t]he 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.

Claims are not necessarily, and are not usually, limited in scope to the preferred embodiment. *RF Delaware, Inc. v. Pacific Keystone Techs., Inc.*, 326 F.3d 1255, 1263 (Fed. Cir. 2003); *Decisioning.com, Inc. v. Federated Dep’t Stores, Inc.*, 527 F.3d 1300, 1314 (Fed. Cir. 2008) (“[The] description of a preferred embodiment, in the absence of a clear intention to limit claim scope, is an insufficient basis on which to narrow the claims.”). Nevertheless, claim constructions that exclude the preferred embodiment are

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“rarely, if ever, correct and require highly persuasive evidentiary support.” *Vitronics*, 90 F.3d at 1583. Such a conclusion can be mandated in rare instances by clear intrinsic evidence, such as unambiguous claim language or a clear disclaimer by the patentees during patent prosecution. *Elektta Instrument S.A. v. O.U.R. Sci. Int’l, Inc.*, 214 F.3d 1302, 1308 (Fed. Cir. 2000); *Rheox, Inc. v. Entact, Inc.*, 276 F.3d 1319 (Fed. Cir. 2002).

If the intrinsic evidence does not establish the meaning of a claim, then extrinsic evidence may be considered. Extrinsic evidence consists of all evidence external to the patent and the prosecution history, and includes inventor testimony, expert testimony, and learned treatises. *Phillips*, 415 F.3d at 1317. Inventor testimony can be useful to shed light on the relevant art. In evaluating expert testimony, a court should discount any expert testimony that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent. *Id.* at 1318. Extrinsic evidence may be considered if a court deems it helpful in determining the true meaning of language used in the patent claims. *Id.*

B. Infringement

Under 35 U.S.C. §271(a), direct infringement consists of making, using, offering to sell, or selling a patented invention without consent of the patent owner. The complainant in a section 337 investigation bears the burden of proving infringement of the asserted patent claims by a “preponderance of the evidence.” *Certain Flooring Products*, Inv. No. 337-TA-443, Comm’n Notice of Final Determination of No Violation of Section 337, 2002 WL 448690, at *59, (Mar. 22, 2002); *Enercon GmbH v. Int’l Trade Comm’n*, 151 F.3d 1376 (Fed. Cir. 1998).

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Literal infringement of a claim occurs when every limitation recited in the claim appears in the accused device, *i.e.*, when the properly construed claim reads on the accused device exactly.⁶ *Amhil Enters., Ltd. v. Wawa, Inc.*, 81 F.3d 1554, 1562 (Fed. Cir. 1996); *Southwall Tech. v. Cardinal IG Co.*, 54 F.3d 1570, 1575 (Fed Cir. 1995).

If the accused product does not literally infringe the patent claim, infringement might be found under the doctrine of equivalents. “Under this doctrine, a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is ‘equivalence’ between the elements of the accused product or process and the claimed elements of the patented invention.” *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 21 (1997) (citing *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 609 (1950)). “The determination of equivalence should be applied as an objective inquiry on an element-by-element basis.”⁷ *Id.* at 40.

“An element in the accused product is equivalent to a claim limitation if the differences between the two are insubstantial. The analysis focuses on whether the element in the accused device ‘performs substantially the same function in substantially the same way to obtain the same result’ as the claim limitation.” *AquaTex Indus. v.*

⁶ Each patent claim element or limitation is considered material and essential. *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991). If an accused device lacks a limitation of an independent claim, the device cannot infringe a dependent claim. See *Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1552 n.9 (Fed. Cir. 1989).

⁷ “Infringement, whether literal or under the doctrine of equivalents, is a question of fact.” *Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1130 (Fed. Cir. 2011).

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Techniche Solutions, 419 F.3d 1374, 1382 (Fed. Cir. 2005) (quoting *Graver Tank*, 339 U.S. at 608); accord *Absolute Software*, 659 F.3d at 1139-40.⁸

Prosecution history estoppel can prevent a patentee from relying on the doctrine of equivalents when the patentee relinquished subject matter during the prosecution of the patent, either by amendment or argument. *AquaTex*, 419 F.3d at 1382. In particular, “[t]he doctrine of prosecution history estoppel limits the doctrine of equivalents when an applicant makes a narrowing amendment for purposes of patentability, or clearly and unmistakably surrenders subject matter by arguments made to an examiner.” *Id.* (quoting *Salazar v. Procter & Gamble Co.*, 414 F.3d 1342, 1344 (Fed. Cir. 2005)).

Section 271(b) of the Patent Act governs induced infringement, “Whoever actively induces infringement of a patent shall be liable as an infringer.” 35 U.S.C. § 271(b). In contrast to direct infringement, liability for inducing infringement attaches only if the defendant knew of the patent and that “the induced acts constitute patent infringement.” See *Commil USA, LLC v. Cisco Sys., Inc.*, 135 S.Ct. 1920, 1926 (2015) (“*Commil USA*”).

Section 271(c) of the Patent Act deals with contributory infringement:

“Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in

⁸ “The known interchangeability of substitutes for an element of a patent is one of the express objective factors noted by *Graver Tank* as bearing upon whether the accused device is substantially the same as the patented invention. Independent experimentation by the alleged infringer would not always reflect upon the objective question whether a person skilled in the art would have known of the interchangeability between two elements, but in many cases it would likely be probative of such knowledge.” *Warner-Jenkinson*, 520 U.S. at 36.

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an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.”

35 U.S.C. § 271(c). Like induced infringement, contributory infringement requires knowledge of the patent in suit and knowledge of patent infringement. *Commil USA*, 135 S.Ct. at 1926.

Section 271(c) “covers both contributory infringement of system claims and method claims.”⁹ *Arris Group v. British Telecomm. PLC*, 639 F.3d 1368, 1376 (Fed. Cir. 2011) (footnotes omitted). To hold a component supplier liable for contributory infringement, a patent holder must show, *inter alia*, that (a) the supplier’s product was used to commit acts of direct infringement; (b) the product’s use constituted a material part of the invention; (c) the supplier knew its product was especially made or especially adapted for use in an infringement” of the patent; and (d) the product is not a staple article or commodity of commerce suitable for substantial noninfringing use. *Id.*

C. Validity

One cannot be held liable for practicing an invalid patent claim. *See Commil USA*, 135 S.Ct. at 1929; *Pandrol USA, LP v. AirBoss Railway Prods., Inc.*, 320 F.3d 1354, 1365 (Fed. Cir. 2003). Nevertheless, each claim of a patent is presumed to be valid, even if it depends from a claim found to be invalid. 35 U.S.C. § 282; *DMI Inc. v. Deere & Co.*, 802 F.2d 421 (Fed. Cir. 1986).

⁹ “Claims which recite a ‘system,’ ‘apparatus,’ ‘combination,’ or the like are all analytically similar in the sense that their claim limitations include elements rather than method steps. All such claims can be contributorily infringed by a component supplier.” *Arris*, 639 F.3d at 1376 n.8.

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A respondent that has raised patent invalidity as an affirmative defense must overcome the presumption by “clear and convincing” evidence of invalidity. *Checkpoint Systems, Inc. v. United States Int’l Trade Comm’n*, 54 F.3d 756, 761 (Fed. Cir. 1995).

1. Anticipation

Anticipation under 35 U.S.C. § 102 is a question of fact. *z4 Techs., Inc. v. Microsoft Corp.*, 507 F.3d 1340, 1347 (Fed. Cir. 2007). Section 102 provides that, depending on the circumstances, a claimed invention may be anticipated by variety of prior art, including publications, earlier-sold products, and patents. *See* 35 U.S.C. § 102 (e.g., section 102(b) provides that one is not entitled to a patent if the claimed invention “was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States”).

The general law of anticipation may be summarized, as follows:

A reference is anticipatory under § 102(b) when it satisfies particular requirements. First, the reference must disclose each and every element of the claimed invention, whether it does so explicitly or inherently. *Eli Lilly & Co. v. Zenith Goldline Pharms., Inc.*, 471 F.3d 1369, 1375 (Fed.Cir.2006). While those elements must be “arranged or combined in the same way as in the claim,” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1370 (Fed.Cir.2008), the reference need not satisfy an *ipsisimilis verbis* test, *In re Bond*, 910 F.2d 831, 832-33 (Fed.Cir.1990). Second, the reference must “enable one of ordinary skill in the art to make the invention without undue experimentation.” *Impax Labs., Inc. v. Aventis Pharms. Inc.*, 545 F.3d 1312, 1314 (Fed.Cir.2008); *see In re LeGrice*, 49 C.C.P.A. 1124, 301 F.2d 929, 940-44 (1962). As long as the reference discloses all of the claim limitations and enables the “subject matter that falls within the scope of the claims at issue,” the reference anticipates -- no “actual creation or reduction to practice” is required. *Schering Corp. v. Geneva Pharms., Inc.*, 339 F.3d 1373, 1380-81 (Fed.Cir.2003); *see In re Donohue*, 766 F.2d 531, 533 (Fed.Cir.1985). This is so despite the

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fact that the description provided in the anticipating reference might not otherwise entitle its author to a patent. *See Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1562 (Fed.Cir.1991) (discussing the “distinction between a written description adequate to support a claim under § 112 and a written description sufficient to anticipate its subject matter under § 102(b)”).

In re Gleave, 560 F.3d 1331, 1334 (Fed. Cir. 2009).

2. Obviousness

Under section 103 of the Patent Act, a patent claim is invalid “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.”¹⁰ 35 U.S.C. § 103. While the ultimate determination of whether an invention would have been obvious is a legal conclusion, it is based on “underlying factual inquiries including: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness.” *Eli Lilly and Co. v. Teva Pharmaceuticals USA, Inc.*, 619 F.3d 1329 (Fed. Cir. 2010).

The objective evidence, also known as “secondary considerations,” includes commercial success, long felt need, and failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 13-17 (1966); *Dystar Textilfarben GmbH v. C.H. Patrick Co.*, 464 F.3d 1356, 1361 (Fed. Cir. 2006). “[E]vidence arising out of the so-called ‘secondary considerations’ must always when present be considered en route to a determination of

¹⁰ The standard for determining whether a patent or publication is prior art under section 103 is the same as under 35 U.S.C. § 102, which is a legal question. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568 (Fed. Cir. 1987).

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obviousness.” *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983). Secondary considerations, such as commercial success, will not always dislodge a determination of obviousness based on analysis of the prior art. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 426 (2007) (commercial success did not alter conclusion of obviousness).

“One of the ways in which a patent’s subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent’s claims.” *KSR*, 550 U.S. at 419-20. “[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *Id.*

Specific teachings, suggestions, or motivations to combine prior art may provide helpful insights into the state of the art at the time of the alleged invention. *Id.* at 420. Nevertheless, “an obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents. The diversity of inventive pursuits and of modern technology counsels against limiting the analysis in this way.” *Id.* “Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *Id.* A “person of ordinary skill is also a person of ordinary creativity.” *Id.* at 421.

Nevertheless, “the burden falls on the patent challenger to show by clear and convincing evidence that a person of ordinary skill in the art would have had reason to attempt to make the composition or device, or carry out the claimed process, and would

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have had a reasonable expectation of success in doing so.” *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1360 (Fed. Cir. 2007); *see KSR*, 550 U.S. at 416 (a combination of elements must do more than yield a predictable result; combining elements that work together in an unexpected and fruitful manner would not have been obvious).¹¹

D. Domestic Industry

A violation of section 337(a)(1)(B), (C), (D), or (E) can be found “only if an industry in the United States, with respect to the articles protected by the patent, copyright, trademark, mask work, or design concerned, exists or is in the process of being established.” 19 U.S.C. § 1337(a)(2). Section 337(a) further provides:

(3) For purposes of paragraph (2), an industry in the United States shall be considered to exist if there is in the United States, with respect to the articles protected by the patent, copyright, trademark, mask work, or design concerned—

(A) significant investment in plant and equipment;

(B) significant employment of labor or capital; or

(C) substantial investment in its exploitation, including engineering, research and development, or licensing.

19 U.S.C. § 1337(a)(3).

These statutory requirements consist of an economic prong (which requires certain activities)¹² and a technical prong (which requires that these activities relate to the

¹¹ Further, “when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious.” *KSR*, 550 U.S. at 416 (citing *United States v. Adams*, 383 U.S. 39, 52 (1966)).

¹² The Commission practice is usually to assess the facts relating to the economic prong at the time that the complaint was filed. *See Certain Coaxial Cable Connectors and Components Thereof and Products Containing Same*, Inv. No. 337-TA-560, Comm’n Op.

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intellectual property being protected). *Certain Stringed Musical Instruments and Components Thereof*, Inv. No. 337-TA-586, Comm’n Op. at 13 (May 16, 2008) (“*Stringed Musical Instruments*”). The burden is on the complainant to show by a preponderance of the evidence that the domestic industry requirement is satisfied. *Certain Multimedia Display and Navigation Devices and Systems, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-694, Comm’n Op. at 5 (July 22, 2011) (“*Navigation Devices*”).

With respect to the economic prong, and whether or not section 337(a)(3)(A) or (B) is satisfied, the Commission has held that “whether a complainant has established that its investment and/or employment activities are significant with respect to the articles protected by the intellectual property right concerned is not evaluated according to any rigid mathematical formula.” *Certain Printing and Imaging Devices and Components Thereof*, Inv. No. 337-TA-690, Comm’n Op. at 27 (Feb. 17, 2011) (“*Printing and Imaging Devices*”) (citing *Certain Male Prophylactic Devices*, Inv. No. 337 TA-546, Comm’n Op. at 39 (Aug. 1, 2007)). Rather, the Commission examines “the facts in each investigation, the article of commerce, and the realities of the marketplace.” *Id.* “The determination takes into account the nature of the investment and/or employment

at 39 n.17 (Apr. 14, 2010) (“We note that only activities that occurred before the filing of a complaint with the Commission are relevant to whether a domestic industry exists or is in the process of being established under sections 337(a)(2)-(3).”) (citing *Bally/Midway Mfg. Co. v. U.S. Int’l Trade Comm’n*, 714 F.2d 1117, 1121 (Fed. Cir. 1983)). In some cases, however, the Commission will consider later developments in the alleged industry, such as “when a significant and unusual development occurred after the complaint has been filed.” See *Certain Video Game Systems and Controllers*, Inv. No. 337-TA-743, Comm’n Op., at 5-6 (Jan. 20, 2012) (“[I]n appropriate situations based on the specific facts and circumstances of an investigation, the Commission may consider activities and investments beyond the filing of the complaint.”).

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activities, ‘the industry in question, and the complainant’s relative size.’” *Id.* (citing *Stringed Musical Instruments* at 26).

The Commission has rejected a finding of quantitative significance based solely on the absolute value of the domestic industry investments devoid of any context. A contextual analysis is required. The analysis may include a discussion of the value of domestic investments in the context of the relevant marketplace, such as by comparing a complainant’s domestic expenditures to its foreign expenditures or considering the value added to the product from a complainant’s activities in the United States. *See Certain Carburetors and Products Containing Such Carburetors*, Inv. No. 337-TA-1123, Comm’n Op. at 18 (Oct. 28, 2019).

With respect to section 337(a)(3)(C), whether an investment in domestic industry is “substantial” is a fact-dependent inquiry for which the complainant bears the burden of proof. *Stringed Musical Instruments* at 14. There is no minimum monetary expenditure that a complainant must demonstrate to qualify as a domestic industry under the “substantial investment” requirement of this section. *Id.* at 25. There is no need to define or quantify an industry in absolute mathematical terms. *Id.* at 26. Rather, “the requirement for showing the existence of a domestic industry will depend on the industry in question, and the complainant’s relative size.” *Id.* at 25-26.

IV. U.S. Patent No. 10,070,669

United States Patent No. 10,070,669 (“the ‘669 patent”), entitled “Cartridge for use with a vaporizer device,” issued on September 11, 2018. JX-0003 (‘669 Patent). The ‘669 patent issued from Application No. 15/820,370, filed on November 21, 2017. *Id.*

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The '669 patent application is a continuation of, and claims priority to, Application No. 15/257,748 filed on September 6, 2016. The '669 patent relates to "apparatuses, including systems and devices, for vaporizing material to form an inhalable aerosol. Specifically, these apparatuses may include vaporizers, cartridge for use with a vaporizer device, and vaporizers with cartridges." JX-0003, 2:31-36. The '669 patent has a total of 21 claims.

Complainant asserts claims 1, 2 and 13 of the '669 patent. *See* Compl. Br. at 14. As discussed below, the evidence shows that (1) the asserted claims are infringed by the accused products; (2) complainant has satisfied the technical prong of the domestic industry requirement; and (3) the asserted claims are not invalid.

Asserted claims 1, 2 and 13 are recited below:

1. A cartridge for generating an aerosol, the cartridge comprising:
 - [a] a body including a storage compartment configured to hold a vaporizable material, the body having a first end and a second end opposite the first end, the body comprising a surface between the first end and the second end;
 - [b] a heating element configured to generate the aerosol, the generating of the aerosol comprising heating the vaporizable material; and
 - [c] a mouthpiece secured over the first end, the mouthpiece having a notch extending away from the second end towards the first end, the mouthpiece covering a first portion of the surface,
 - [d] the mouthpiece not covering a second portion of the surface, the second portion of the surface configured for insertion into a cartridge receptacle of a vaporizer device,
 - [e] the mouthpiece not covering a third portion of the surface, the third portion of the surface comprising an area between the notch and the second end, the third portion of the surface being visible when the second portion of the surface is inserted into the cartridge receptacle.

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2. The cartridge of claim 1, wherein the mouthpiece is opaque, wherein the surface is transparent, and wherein the vaporizable material is visible through the surface.

12. An apparatus for generating an aerosol, the apparatus comprising:

[a] a vaporizer device comprising a cartridge receptacle; and

[b] a cartridge comprising:

a body including a storage compartment configured to hold a vaporizable material, the body having a first end and a second end opposite the first end, the body comprising a surface between the first end and the second end;

[c] a heating element configured to generate the aerosol, the generating of the aerosol comprising heating the vaporizable material; and

[d] a mouthpiece secured over the first end, the mouthpiece covering a first portion of the surface,

[e] the mouthpiece not covering a second portion of the surface, the second portion of the surface configured for insertion into the cartridge receptacle,

[f] the mouthpiece not covering a third portion of the surface, the third portion of the surface being visible when the second portion of the surface is inserted into the cartridge receptacle.

13. The apparatus of claim 12, wherein the mouthpiece is opaque, wherein the surface is transparent, and wherein the vaporizable material is visible through the surface.

JX-0003 ('669 Patent), claims 1, 2, 12, and 13.

A. Claim Construction¹³

¹³ Respondent Eonsmoke did not discuss any of the disputed claim terms on the merits in its posthearing briefs. *See* Joint Outline - Eonsmoke; and Joint Reply Outline - Eonsmoke. Indeed, Eonsmoke's only statement concerning claim construction is the following:

Ziip applies the agreed upon constructions for any terms that had agreed upon constructions, as set forth in the Joint Claim Construction Chart. Otherwise, Ziip applies the plain and ordinary meaning of the term.

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1. A Person of Ordinary Skill in the Art

Complainant argues:

A person of ordinary skill in the art (“POSA”) is one who is presumed to be aware of all pertinent art, thinks along conventional wisdom in the art, and is a person of ordinary creativity. A POSA in the context of the asserted patents would have had (1) a B.S. in mechanical engineering, electrical engineering, or an equivalent degree and (2) at least one year of experience designing consumer products. CX-0015C (Collins WS) Q/A 33; CX-0016C (Alarcon WS) Q/A 22.

Ziip’s expert, Mr. Flolid has proposed that a POSA would have at least a bachelor’s degree in mechanical engineering, electrical engineering, or an equivalent degree. RX-0113 (Flolid WS) Q/A 19. Alternatively, Mr. Flolid opined that a POSA could also have had at least two years’ experience designing, developing, or testing electronic cigarettes or related electromechanical devices, such as electromechanical devices configured to heat liquid and generate an aerosol. *Id.* at Q/A 20. Mr. Flolid further opines that his definition is only “approximate” and that a skilled artisan could have a higher level of education to make up for less experience or a higher level of training or skill to make up for less education. *Id.* at Q/A 19. Mr. Flolid’s definition of a POSA is vague and incorrect. CX-1353C (Alarcon Rebuttal WS) Q/A 41-42; CX-0015C (Collins WS) Q/A 34. Regardless, the differences between JLI’s proposed qualifications for a POSA and those proposed by Respondents would not change JLI’s infringement or validity analysis. CX-0015C (Collins WS) Q/A 35; CX-1353C (Alarcon Rebuttal WS) Q/A 42.

Compl. Br. at 18-19 (citations omitted).

Respondent argues:

The key decision is the definition of a POSA. Both parties agree that a POSA would have at least a degree in mechanical or electrical engineering or a similar degree. And both agree that this POSA would have some design experience with products. Ziip proposes that this experience would be at least two years with electronic cigarettes or related electromechanical devices because this is the subject matter of the patents at issue.

Ziip’s definition is a better one:

Resp. Br. at 3-4.

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A person of ordinary skill in this art would have (1) at least a B.S. in mechanical engineering, electrical engineering, or an equivalent degree and/or (2) at least two years' experience designing, developing, or testing electronic cigarettes or related electromechanical devices, such as electromechanical devices configured to heat liquid and generate an aerosol. This description is approximate, and a higher level of training or skill might make up for less education, and vice-versa.

(RX-0113.0005-6, Q/A 18-20).

Juul has proposed a far broader definition – one year designing consumer products – because Juul wants its POSA to be as ignorant as possible so as not to see the connections that Ziip claims are obvious. But Juul's definition is deficient, as its expert, Mr. Ramon Alarcon, essentially admitted when he noted that not every consumer product would be relevant. (Hearing Tr., at 422:15-423:16).

Ziip's definition of a POSA as having at least two years' of experience with devices like an electronic cigarette makes more sense as this is the type of person would look to the prior art to find solutions to the known problems. And, as the United States Supreme Court has held, it is the solving of known problems that is a key determinant of obviousness.

Resp. Br. at 2-3.

The Staff argues:

JLI contends that for all asserted patents, a person of ordinary skill in the art would have had (1) a B.S. in mechanical engineering, electrical engineering, or an equivalent degree and (2) at least one year of experience designing consumer products." CPreHBr. at 15. Ziip, Eonsmoke and V4L did not present a contention in their respective pre-hearing briefs regarding the level of ordinary skill in the art for any of the asserted patents. Therefore, they waived any such contentions. *See* Ground Rule 7.c. Nonetheless, Ziip and Eonsmoke's expert, Mr. Flolid, testified that he agreed with Ziip's apparent contention "that a person of ordinary skill in the art would have at least (1) a B.S. degree in mechanical engineering, electrical engineering, or an equivalent degree and/or (2) at least two years of experience designing, developing, or testing electronic cigarettes or related electromechanical devices, such as electromechanical devices configured to heat liquid and generate an aerosol. This description is approximate, and a higher level of training or skill might make up for less education, and vice-versa." RX-0113 at Q19.

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To the extent the ALJ does not agree that Respondents waived their contentions as to one of ordinary skill in the art, the Staff agrees with JLI's contention, favoring the lesser experience requirement. The Staff, however, is of the view that the difference between the private parties' proposals with respect to the level of ordinary skill does not affect the infringement or invalidity issues in this Investigation.

Staff Br. at 19-20 (citations omitted).

As an initial matter, Eonsmoke did not discuss the level of ordinary skill in the art for any of the asserted patents in its pre-hearing brief. Therefore, it waived any such contention. *See* Ground Rule 7.c.

In any event, JLI's proposed level of ordinary skill is more persuasive in the context of the '669 patent. JLI's proposed level requires (1) a B.S. in mechanical engineering, electrical engineering, or an equivalent degree, and (2) at least one year of experience designing consumer products. Thus, the administrative law judge finds that a person of ordinary skill in the art with respect to the '669 patent is a person who has a B.S. in mechanical engineering, electrical engineering, or an equivalent degree, and at least one to two years of experience designing consumer products.

2. Claim Construction

Below is a chart showing the parties' proposed claim constructions.

Claim Term	Claim(s)	JLI's Construction	Eonsmoke's Construction	Staff's Construction
"notch"	1, 14	"a cut-out region from an edge"	abandoned	Same as JLI
"portion of the surface"	1, 12	Plain meaning, which is: "part of the surface"	abandoned	Same as JLI
"visible"	1, 12, 13	Plain meaning,	abandoned	Same as JLI

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Claim Term	Claim(s)	JLI's Construction	Eonsmoke's Construction	Staff's Construction
		which is: "can be seen"		
"heating element configured to generate the aerosol"	1, 12	"heating element": "a component that transforms electrical energy to heat" " <i>heating element configured to generate the aerosol</i> ": "a component that transforms electrical energy to heat for generating the aerosol"	abandoned	Plain meaning, which is: "a component that transforms energy to heat for generating the aerosol" ¹⁴

Compl. Br. at 19-22; Resps. Br. at 3-4; Staff Br. at 20-26.

Eonsmoke did not present any claim construction analyses in its pre-hearing brief, and thus waived any such contentions. *See* Ground Rule 7.c.

a. "notch"

The specification uses the term notch consistently to refer to "a cut-out region from an edge." JX-0003 ('669 Patent), 2:51-53, 3:8-15 ("a cut-out region on the distal edge ... the cut-out region may be any appropriate shape (e.g., square, rectangular, oval, semi-circular, or combinations thereof), and may match with another cut-out region on the upper edge"), *id.* at 5:27-32 ("The window (e.g., notch) ... may be a rectangular,

¹⁴ The Staff originally proposed the same meaning as that proposed by JLI. *See* Joint Claim Construction Chart. However, the Staff proposed a slight modification to its proposed construction presented in the Joint Claim Construction Chart, shown in the above chart.

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triangular, semi-circular, or oval cutout region”), *id.* at 3:34-38, 4:61-65, 10:19-23, 48:26-36, 50:46-55, 52:7-24, 52:36-65, 53:1-5, FIGS. 7A-B, 11-13, 24A-B, 27B, 28A, 30, 31A-L, 34A-L. The Staff agrees with JLI. *See* Staff Br. at 23.

The administrative law judge has determined that the claim term “notch” should be construed to mean “a cut-out region from an edge.”

b. “portion of the surface”

JLI argues and the Staff concurs that the term “portion of the surface” has a plain and ordinary meaning, which is, “part of the surface.” The specification uses the term “portion” to refer generally to a part. JX-0003 (‘669 Patent), claim 1, FIGS. 5, 6A-B, 7A-B, 8B, 9A-9L, 11-13, 14, 15, 16B-C, 24A-B, 25A, 27B, 28A, 29F, 29G, 30, 31A-L, 32, 33C, 33E, 34A-L. A person of ordinary skill in the art would understand that the claim language describes a mouthpiece that covers part, but not necessarily all, of the recited surface. The Staff agrees with JLI. *See* Staff Br. at 24.

The administrative law judge has determined that the claim term “portion of the surface” should be given its plain and ordinary meaning, *i.e.*, “part of the surface.”

c. “visible”

JLI argues and the Staff concurs that the plain and ordinary meaning of “visible” is “can be seen.” The specification uses this term consistently with its plain meaning. *See* JX-0003 (‘669 Patent), 2:51-52, 2:62-63, 4:37-42, 5:4-5, 5:29-32 (“the fluid ... may be visible; for example, the elongate fluid storage compartment may be transparent or translucent”), *id.* at 6:61-62, 8:19-23 (the “opaque body so that a portion of the storage compartment and the cannula are visible through the notch”), 9:25-26, 9:35-39 (a

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“window through a side of the cartridge receptacle so that at least a portion of the ... compartment is visible through the window”), *id.* at 9:59-63, 10:7-10, 19:13-16, FIGS. 7A, 7B, 9A-9L, 1115, 30, 31A-L, 33C, 34A-L. A person of ordinary skill in the art would understand that “visible” refers the ability to see something, and would know various ways to make something visible. The Staff agrees with JLI. *See* Staff Br. at 24-25.

The administrative law judge has determined that the claim term “visible” should be given its plain and ordinary meaning, *i.e.*, “can be seen.”

d. “heating element configured to generate the aerosol”

JLI argues that the this term has a plain and ordinary meaning, which is “a component that transforms electrical energy to heat for generating the aerosol.” A heating element, generally, is a component that transforms electrical energy to heat. This is consistent with the way that the specification describes the heating element in the claimed device. JX-0003 (‘669 Patent), 1:60-61, 19:49-56 (“[E]nergy may be derived from a battery in electrical communication with the heating element.”), *id.* at 21:4-13 (“[t]he heating element in thermal communication with the oven may heat a vaporizable material mass in order to create a gas phase vapor ... through conductive, convective, and/or radiative heat transfer.”), *id.* at FIGS. 7B, 7C, 8B, 9A-9L, 10A-10C, 17A, 17B, 26A, 28C, 28D.

However, as argued by the Staff, the specification also discloses that instead of electrical energy, the heating element may “alternatively [use] a chemical reaction (e.g., combustion or other exothermic reaction) [to] provide energy to the heating element.”

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JX-0003 ('669 Patent), 19:54-56. Thus, the specification teaches that energy need not be limited to electrical energy.

The administrative law judge has determined that the claim term “heating element configured to generate the aerosol” should be given its plain and ordinary meaning, *i.e.*, “a component that transforms energy to heat for generating the aerosol.”

B. Infringement Analysis of the '669 Patent

JLI asserts claims 1, 2, and 13 of the '669 patent. JLI demonstrated by a preponderance of the evidence that Eonsmoke's accused products infringe the asserted claims of the '669 patent. *See* Compl. Br. at 21-30; CX-0016C (Alarcon WS) Q/A 39-261. Indeed, Eonsmoke did not contest infringement and did not present any non-infringement arguments in its post-hearing briefs. *See* Joint Outline – Eonsmoke; Joint Reply Outline – Eonsmoke.

Nonetheless, the administrative law judge adopts JLI's infringement analysis with respect to Eonsmoke and provides the following infringement analysis of the '669 patent.

1. Importation and Accused Products

On August 5, 2019, the administrative law judge issued an initial determination granting complainant's motion for summary determination with respect to importation. *See* Order No. 35 (Aug. 5, 2019) at 4-5, *aff'd in part*, Commission Determination to Review in Part an Initial Determination Granting in Part Complainant's Motion for Summary Determination of Importation, Infringement, and Domestic Industry (Sept. 4, 2019) (Commission determining not to review importation). Thus, the Commission has *in rem* jurisdiction over the accused products. *See e.g., Sealed Air Corp. v. United States*

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Int'l Trade Comm'n, 645 F.2d 976, 985-86 (C.C.P.A. 1981).

Eonsmoke is based in Clifton, New Jersey, and is an importer, distributor, and seller of ENDS devices and pods, including the Eonsmoke devices and pods manufactured by Ziip. The accused products with respect to Eonsmoke include the Eonsmoke device, the Eonsmoke v2.0 device, Eonsmoke (Eon) pod, and the 4X pod (individually and collectively, “Eonsmoke accused products”). *See* Compl. Br. at 10 (citing CX-0958C (Eonsmoke Invoices 13); CX-0858 (Eonsmoke’s Supp. Responses to JLI’s RFAs)).

JLI provided the following table showing the Eonsmoke accused products that are alleged to infringe the asserted patent claims:

Accused Product	‘669	‘915	‘568	‘130
<u>Eonsmoke Respondent</u>	1, 2, 13	1, 6, 21	12, 17, 20	1, 2, 4
Eonsmoke device				
Eonsmoke v2 device (stipulated representative)				
Eonsmoke pods (stipulated representative)				
4X pods				

Compl. Br. at 220.

Eonsmoke stipulated that the 4X pods are represented by the Eonsmoke pods, which are manufactured by Ziip. *See* CX-0016C (Alarcon WS) Q/A 57-60; CX-1236C (Representative Accused Products Stipulation). The Eonsmoke v2.0 device is representative of the Eonsmoke device (Ziip-manufactured). *See* CX-0018C (Tolmach Dep. Designations (Apr. 4, 2019)) 86:5-86:12; CX-1236C (Representative Accused Products Stipulation). The Eonsmoke v2.0 device is compatible with the same pods as

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the Eonsmoke device. *See* CX-0016C (Alarcon WS) Q/A 63.

JLI's expert, Mr. Alarcon, reviewed various technical documents and product samples regarding the Eonsmoke accused products, and concluded that they infringe and are representative as stipulated. *See* CX-0016C (Alarcon WS) Q/A 84, 86-88 (detailing evidence reviewed).

2. Infringement of Asserted Claims

a. Independent Claim 1

Each element of claim 1, including the preamble, is given a letter designation and discussed individually below. *See* CX-0016C (Alarcon WS) Q/A 174-175.

Asserted claim 1 is recited below:

1. A cartridge for generating an aerosol, the cartridge comprising:
 - [a] a body including a storage compartment configured to hold a vaporizable material, the body having a first end and a second end opposite the first end, the body comprising a surface between the first end and the second end;
 - [b] a heating element configured to generate the aerosol, the generating of the aerosol comprising heating the vaporizable material; and
 - [c] a mouthpiece secured over the first end, the mouthpiece having a notch extending away from the second end towards the first end, the mouthpiece covering a first portion of the surface,
 - [d] the mouthpiece not covering a second portion of the surface, the second portion of the surface configured for insertion into a cartridge receptacle of a vaporizer device,
 - [e] the mouthpiece not covering a third portion of the surface, the third portion of the surface comprising an area between the notch and the second end, the third portion of the surface being visible when the second portion of the surface is inserted into the cartridge receptacle.

JX-0003 ('669 Patent), claim 1.

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The accused Eonsmoke pods practice claim element 1[p] because each pod is a cartridge and it may be used in a compatible device to generate aerosol. *See id. at Q/A 176-178, 182* (listing underlying evidence).

Claim 1[a]

The accused Eonsmoke pods practice claim element 1[a] because each pod has a body that includes a storage compartment holding a vaporizable material. *See CX-0016C (Alarcon WS) Q/A 184-185, 189* (listing underlying evidence). The body has a first and second end that is opposite to the first end, and a surface between the first and second ends. *See CX-0016C (Alarcon WS) Q/A 184-185.*

Claim 1[b]

The accused Eonsmoke pods practice claim element 1[b] because each pod includes a heating element in the form of a coil of wire. *See CX-0016C (Alarcon WS) Q/A 191-192, 196* (listing underlying evidence). *See id. Q/A 198.* The heating element of each accused product includes at least a resistive coil, a pair of plates and contact tabs. *See id.* The contact tabs are integrally formed with the respective plate and constitute “contact tips.” The resistive coil transforms electrical energy into heat. *See id.* Therefore, the heating elements of the accused products include a heating element that generates an aerosol as a result of heating the vaporizable material, which satisfies element 1[b].

Claim 1[c]

The accused Eonsmoke pods practice claim element 1[c] because each pod has a dark-colored mouthpiece that is secured over the first end and includes a notch. *See id. at Q/A 203-204, 209.* The notch extends away from the second end toward the first end.

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The mouthpiece covers a first portion of the surface. Each accused pod contains the claimed notch. *See id.* at Q/A 203-204, 209.

Claim 1[d]

Each of the accused Eonsmoke pods practice claim element 1[d] because the mouthpiece of each pod does not cover a second portion. This second portion is configured so that it may be inserted into the cartridge receptacle of a compatible vaporizer device. *See* CX-0016C (Alarcon WS) Q/A 211-212, 216.

Claim 1[e]

Each accused pod practices claim element 1[e] because the mouthpiece of the pod does not cover a third portion. *See* CX-0016C (Alarcon WS) Q/A 218-219, 223 (listing underlying evidence). Further, this third portion is between the notch and the second end and more than a *de minimis* portion of the third portion is also visible when the second portion is inserted into a suitable cartridge receptacle. *See* CX-0016C (Alarcon WS) Q/A 218-223.

Claim 2

All of the accused Eonsmoke pods practice claim 2. *See* CX-0016C (Alarcon WS) Q/A 226-227, 231. The mouthpiece of the pod is a dark opaque material, and the surface of the body is transparent and the vaporizable material within is readily visible through the surface. *See* CX-0016C (Alarcon WS) Q/A 226-231.

b. Dependent Claim 13

Asserted claim 13 is recited below:

12. An apparatus for generating an aerosol, the apparatus comprising:

[a] a vaporizer device comprising a cartridge receptacle; and

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[b] a cartridge comprising:

a body including a storage compartment configured to hold a vaporizable material, the body having a first end and a second end opposite the first end, the body comprising a surface between the first end and the second end;

[c] a heating element configured to generate the aerosol, the generating of the aerosol comprising heating the vaporizable material; and

[d] a mouthpiece secured over the first end, the mouthpiece covering a first portion of the surface,

[e] the mouthpiece not covering a second portion of the surface, the second portion of the surface configured for insertion into the cartridge receptacle,

[f] the mouthpiece not covering a third portion of the surface, the third portion of the surface being visible when the second portion of the surface is inserted into the cartridge receptacle.

13. The apparatus of claim 12, wherein the mouthpiece is opaque, wherein the surface is transparent, and wherein the vaporizable material is visible through the surface.

JX-0003 ('669 Patent), claims 12, 13.

Claim 13 depends from claim 12 and recites a claimed vaporizer device and a claimed cartridge. Thus, the combination of a vaporizer device and a cartridge directly infringes claim 12 or 13. The manufacture, import, or sale of either the claimed cartridge or the claimed device alone indirectly infringes claim 12 or 13. The accused pods are specifically constructed to be combined with an infringing device. *See* CX-0016C (Alarcon WS) Q/A 233.

Claim 12[p]

The combination of any of the accused Eonsmoke devices with any compatible pod practices claim element 12[p] because each combination, is an apparatus for generating an aerosol. *See* CX-0016C (Alarcon WS) Q/A 234-235, 240.

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Claim 12[a]

All of the accused devices practice claim element 12[a]. The device is a vaporizer device and includes a receptacle for a cartridge. *See* CX-0016C (Alarcon WS) Q/A 241-242, 245. Separately sold pod products are not themselves vaporizing devices, but are specifically constructed to be used with devices that practice the patent like a JUUL device. When compatible pods are used with an infringing device as intended, these products infringe claim 12. The accused pod products will infringe claim 12 when combined with any infringing device, not just their corresponding branded device. *See* CX-0016C (Alarcon WS) Q/A 246.

Claims 12[b]-[f]

Each of claim elements 12[b] through 12[f] is substantially similar to claim elements 1[a] through 1[e], respectively. *See id.* at Q/A 248, 250, 252, 254, 256. The accused products therefore practice claim 12 for the reasons above. Claim 13 is substantially similar to claim 2. The only relevant difference is that claim 13 requires an apparatus rather than only a cartridge. *See* CX-0016C (Alarcon WS) Q/A 259. Where the cartridge at issue is combined with an infringing device to satisfy the non-cartridge elements of claim 12, the analysis for claim 2, discussed above, applies equally to 13. *See id.* Each of the accused pods therefore practices claim 13.

Inducement and Contributory Infringement

Eonsmoke makes, imports, and sells the accused devices and pods both separately and packaged together as a kit. Under an indirect infringement analysis, end users are the direct infringers. Eonsmoke offers its products for sale to the public on its website and has admitted (CX-0018C (Tolmach Dep. Designations (Apr. 4, 2019)) 128, 130, 1340;

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CX-0026C (Grishayev Dep. Designations (Apr. 17, 2019)) 210) to selling the Eonsmoke accused products to end users.

The only purpose of the accused cartridges and devices is to be combined into an ENDS that meets every element of claim 13. *See* CX-0016C (Alarcon WS) Q/A 68, 89, 161. An act of direct infringement occurs when a user combines a cartridge with a device, as intended by Eonsmoke.

Eonsmoke had the requisite knowledge and intent for indirect infringement at least since district court suits alleging infringement of the '669 patent were filed in 2018. *See* CX-1304C (4X Pods Blue Blackberry Packaging); CX-1302C (Eonsmoke Pods Ad); CX-0407 (Eonsmoke v2.0 Juul Compatible); CX-1111 (Eonsmoke Instructions Screenshot); CX-1112 (Eonsmoke Packaging Photo); CX-0170 (Eonsmoke Product & Packaging Images 3); CX-0026C (Grishayev Dep. Designations (Apr. 17, 2019)) 55-57; CX-0018C (Tolmach Dep. Designations (Apr. 4, 2019)) 58-60, 81-83, 184-186. Additionally, JLI virtually marks each of its products with a website that contains a list of issued patents covering the JUUL system. *See* CX-0016C (Alarcon WS) Q/A 77, 97, 169. This website was updated to include the '669 patent by October 3, 2018. *See id.*

Each of the accused products is a material part of an apparatus that infringes claim 13. The accused Eonsmoke pods practice the majority of the elements of claim 13 and the apparatus would be inoperative without the pod. *See id.* at Q/A 78-79, 98-99, 170-171. The accused pods and devices have no substantial noninfringing use. These products are either cartridges specifically configured for use with infringing vaporizer devices, or vice versa. *See id.* at Q/A 80-81, 100-101, 172-173. Eonsmoke has not identified any noninfringing pods or devices for which the accused pods or devices are

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compatible. These cartridges and devices have no use outside their use with a device as an infringing ENDS. *See id.* at Q/A 80-81, 100-101, 172-173.

C. Validity of the '669 Patent

Respondent Eonsmoke argues that (1) Tucker (RX-0109) alone renders obvious claims 1, 2 and 13 of the '669 patent; and (2) Tucker (RX-0109) in combination with Pentafragas (RX-0106) renders obvious claims 1, 2 and 13 of the '669 patent. *See Resp. Br.* at 4-14. Eonsmoke argues and JLI and the Staff do not dispute that prior art alleged by Eonsmoke are prior to the priority date of the '568 patent. *See id.* at 4.

1. Tucker (RX-0109) Alone

Respondent Eonsmoke argues that (1) Tucker (RX-0109) alone renders obvious claims 1, 2 and 13 of the '669 patent. *See Resp. Br.* at 4-12.

Eonsmoke argues, *inter alia*:

It is undisputed that Tucker (RX-0109) discloses the following features of claim 1:

- A cartridge for generating an aerosol, the cartridge comprising
- a body including a storage compartment configured to hold a vaporizable material, the body having a first end and a second end opposite the first end, the body comprising a surface between the first end and the second end;
- a heating element configured to generate the aerosol, the generating of the aerosol comprising heating the vaporizable material.

(CX-1353C.0037). The dispute for the invalidity of claim 1 is whether it would have been obvious to modify Tucker's mouthpiece to be secured over the first end and include a notch. Expert witness Greg Flolid testified that this modification would have been obvious to try from a finite number of identified, predictable mouthpiece solutions, with a reasonable expectation of success.

Resp. Br. at 4.

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For the reasons set forth below, Eonsmoke has not shown by clear and convincing evidence that the asserted claims of the '669 patent are invalid.

Independent Claim 1

Asserted claim 1 is recited below:

1. A cartridge for generating an aerosol, the cartridge comprising:
 - [a] a body including a storage compartment configured to hold a vaporizable material, the body having a first end and a second end opposite the first end, the body comprising a surface between the first end and the second end;
 - [b] a heating element configured to generate the aerosol, the generating of the aerosol comprising heating the vaporizable material; and
 - [c] a mouthpiece secured over the first end, the mouthpiece having a notch extending away from the second end towards the first end, the mouthpiece covering a first portion of the surface,
 - [d] the mouthpiece not covering a second portion of the surface, the second portion of the surface configured for insertion into a cartridge receptacle of a vaporizer device,
 - [e] the mouthpiece not covering a third portion of the surface, the third portion of the surface comprising an area between the notch and the second end, the third portion of the surface being visible when the second portion of the surface is inserted into the cartridge receptacle.

JX-0003 ('669 Patent), claim 1.

Claim 1[c]

Eonsmoke argues, *inter alia*:

Tucker discloses a mouthpiece (8), but the mouthpiece is not secured over the first end; nor does the mouthpiece have a notch extending away from the second end towards the first end with the mouthpiece covering a first portion of the surface. However, as Mr. Flolid has testified, this would have been an obvious modification to Tucker's mouthpiece. (RX-0113.0008-9, Q/A 29-32; Hearing Tr. 249:16-250:7; 298:2-300:4).

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Tucker discloses a mouthpiece which is fitted within the body of the cartridge (as shown in Fig 1), as opposed to over the end of the cartridge. In designing the mouthpiece, as Mr. Flolid has testified, there would have been limited and predictable approaches to interfacing the mouthpiece with the cartridge body. The mouthpiece fit to the cartridge body must be either (1) inside, such as disclosed in the examples in Tucker, (2) over the cartridge body, (3) attached to face, such as with glue or screws or rivets, or (4) with combinations thereof. Each alternative would have had a reasonable expectation of success and predictable results.

Resp. Br. at 6.

Eonsmoke's expert Mr. Flolid identifies liquid supply reservoir 22 as the storage compartment and cartridge 70 as the cartridge recited in element 1[c]. Although he does not explicitly identify the "body" that these elements relate to, it appears he considers the body to be the outer tube 6. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 89-90. Mr. Flolid identifies mouth end insert 8 in Figure 1 as the mouthpiece but admits that mouth end insert 8 is not secured over the first end, does not cover a first portion of the surface, and does not have a notch extending away from the second end towards the first end as claimed. *See id.* at Q/A 91; Flolid Tr. 246, 296-297. Mr. Flolid instead argues that a person of ordinary skill in the art would have modified the mouth end insert 8 in two ways. First, he modifies Tucker's mouth end insert 8 to be a mouthpiece secured over the first end instead of inside it. Second, he modifies Tucker's mouth end insert 8 to have a notch extending away from the second end towards the first end. A person of ordinary skill in the art would not have been motivated to make either modification. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 91.

There would have been no reason to modify Tucker's mouth end insert 8 to be secured over outer tube 6 as Mr. Flolid proposes. As an initial matter, modifying

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Tucker's mouth end insert 8 would have destroyed its principle of operation. Tucker's invention is described as having two key features: a mouth end insert and air flow diverter. *See* RX-0109 (Tucker), ¶ [0030]. The mouth end insert 8 has off-axis diverging outlets to provide an "improved aerosol output and/or better mouthfeel." *See id.* Mr. Flolid's proposed modifications to the Tucker mouth end insert 8 do not address how the mouth end insert 8 would still achieve Tucker's goals if modified to be a mouthpiece covering part of the cartridge rather than an insert within the cartridge. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 94.

Tucker never suggests how to redesign the mouthpiece to be placed outside of the casing. *See* Flolid Tr. 247. Mr. Flolid opines that it would have been obvious to try this option as it was allegedly only one of a finite number of possibilities for attaching a mouthpiece to the cartridge. Yet, he identifies no market pressure or design need that would have led a person of ordinary skill in the art to turn the mouth end insert 8 into a mouthpiece attached to the outside of the cartridge. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 95. In fact, there are numerous reasons why a person of ordinary skill would not have made this modification. Modifying the mouth end insert 8 as Mr. Flolid suggests to fit over the end of the cartridge instead would compromise the flush design of Tucker, creating a discontinuity between the outer tube 6 and mouth end insert 8. This discontinuity would make the modified mouthpiece prone to being dislodged or ripped off from the cartridge. *See id.* The proposed modification would also increase the size of Tucker's mouth end insert 8, thereby requiring more materials and taking up more space. Requiring more material makes the device more costly to manufacture, and taking up more space makes the device less convenient to use. In addition, the overall structure of

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Tucker's mouth end insert would need to be redesigned if its functionality were to be retained. *See id.*

Even assuming that a person of ordinary skill would have modified Tucker's mouth end insert 8 to be secured over the end of outer tube 6, there would have been no reason to further modify Tucker's mouth end insert 8 to have the recited notch. Mr. Flolid admits Tucker does not disclose a notch extending away from the second end towards the first end. *See* RX-0113 (Flolid WS) Q/A 29. Mr. Flolid opines that it would have been obvious to include a notch, so as not to block Tucker's window. Mr. Flolid admits that simply modifying Tucker's mouth end insert 8 to extend over the casing would not necessarily obstruct Tucker's window. *See* Flolid Tr. 254.

The only way a modified mouth end insert 8 would obstruct Tucker's window is if the mouth end insert 8 were modified to extend further down. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 98. Mr. Flolid does not explain why a person of ordinary skill in the art would have adopted the new design he suggests, when that modification would require further modification to avoid compromising Tucker's window. *See id.* Mr. Flolid suggests that one could spontaneously redesign the mouthpiece to fit it over the casing, and then extend the shoulder further down the casing until it obstructed the window. He would therefore first create the problem of the window being obstructed—a problem that does not need to be created and does not otherwise exist in Tucker. He would then solve that problem by forming a notch in the mouthpiece shoulder. *See* Flolid Tr. 254. Like extending the mouth end insert 8 over the casing, extending mouth end insert 8 downward to cover the window would also increase the size of Tucker's components, thereby requiring more materials and taking up more space—both of which are

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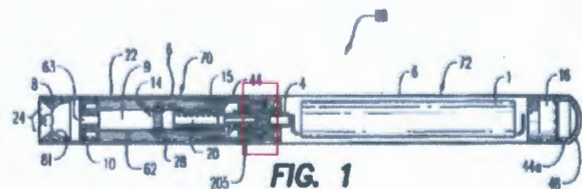
undesirable results. *See* CX-1353C (Alarcon Rebuttal WS) at Q/A 98. Indeed, even if Tucker's mouth end insert 8 extended over a portion of the window, Mr. Flolid admits that Tucker's window would remain functional. Flolid Tr. 301.

Mr. Flolid's analysis is an example of using the claims as a blueprint to reverse engineer the prior art to arrive at the claimed features, and should therefore be rejected. *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1327 (Fed. Cir. 2012); *Yamanouchi Pharm. Co. v. Danbury Pharmacal, Inc.*, 231 F.3d 1339, 1343 (Fed. Cir. 2000) (cautioning against using the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention); *In re Cyclobenzaprine Hydrochloride*, 676 F.3d 1063, 1079 (Fed. Cir. 2012). A person of ordinary skill in the art would not have further modified Tucker's mouth end insert 8 to obstruct the window and, thus, there is no motivation to add a notch. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 99.

Claim 1[d]

For element 1[d], Eonsmoke argues:

Tucker as modified would have a mouthpiece not covering a second portion of the surface, the second portion of the surface configured for insertion into a cartridge receptacle of a vaporizer device. Tucker includes a portion of its cartridge that would not have been covered by the modified mouthpiece and would have been configured for insertion into a cartridge receptacle of a vaporizer device (72). (RX-0113.0010, Q/A 33).



Resp. Br. at 7.

For element 1[d], Mr. Flolid opines that Tucker "as modified, alone or in view of

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Pentafragas,” would disclose this element. *See* RX-0113 (Flolid WS) Q/A 33. It is unclear what he means by “as modified,” or what elements of Tucker correspond to the first and second portions of the surface. Mr. Flolid appears to identify the threaded connection as the claimed second portion of the surface of the body. *See id.* at Q/A 100. Tucker’s threaded connection mechanism is a separate and distinct structure from outer tube 6, which Mr. Flolid asserts includes the claimed first portion of the surface of the body. Inasmuch as the threaded connection is separate from the outer tube 6, it cannot include a second portion of the surface, which according to Mr. Flolid is defined in part by outer tube 6. *See id.* Mr. Flolid provides no suggestion or motivation to modify any component of Tucker besides the mouth end insert. He has not shown that Tucker renders obvious the recited first and second portions of the surface. *See id.*

Claim 1[e]

Mr. Flolid’s analysis of element 1[e], presents similar issues as element 1[d]. He does not identify what component of Tucker he relies on to teach the third portion. It appears that window 71 is the third portion, but Tucker does not teach a notch and therefore cannot teach a “third portion of the surface comprising an area *between the notch* and the second end.” *See id.* at Q/A 101. Claim 1 is therefore not obvious.

Dependent Claim 2

Asserted claim 2 is recited below:

2. The cartridge of claim 1, wherein the mouthpiece is opaque, wherein the surface is transparent, and wherein the vaporizable material is visible through the surface.

JX-0003 (‘669 Patent), claim 2.

Eonsmoke has not shown that Tucker renders claim 2 obvious. First, claim 2 is

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not obvious for at least the reasons discussed for claim 1 from which it depends. Mr. Flolid states that Tucker discloses the mouth end insert (8) and that it is opaque, but he does not cite evidentiary support. Tucker is silent about the opaqueness of mouth end insert 2. Additionally, the transparent surface recited in claim 2 is the same surface recited in claim 1 that includes a “second portion” configured for insertion into a cartridge receptacle of a vaporizer device. Inasmuch as he has not explicitly identified what he considers as the body, Mr. Flolid has not identified what surface must be transparent. If Tucker were modified as Mr. Flolid suggests for claim 1, and the second portion were inserted into the receptacle, then it would require the vaporizable material to be seen through the threaded coupling of Tucker’s cartridge. Mr. Flolid does not explain how this is possible in a practical or manufacturing sense. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 102.

Dependent Claim 13

Asserted claim 13 is recited below:

12. [p] An apparatus for generating an aerosol, the apparatus comprising:

[a] a vaporizer device comprising a cartridge receptacle; and

[b] a cartridge comprising:

[c] a body including a storage compartment configured to hold a vaporizable material, the body having a first end and a second end opposite the first end, the body comprising a surface between the first end and the second end;

[d] a heating element configured to generate the aerosol, the generating of the aerosol comprising heating the vaporizable material; and

[e] a mouthpiece secured over the first end, the mouthpiece covering a first portion of the surface, the mouthpiece not covering a second portion of the surface, the second portion of the surface configured for insertion into the cartridge

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receptacle, the mouthpiece not covering a third portion of the surface, the third portion of the surface being visible when the second portion of the surface is inserted into the cartridge receptacle.

13. The apparatus of claim 12, wherein the mouthpiece is opaque, wherein the surface is transparent, and wherein the vaporizable material is visible through the surface.

JX-0003 ('669 Patent), claims 12,¹⁵ and 13.

Claim 13, which depends from claim 12, is not rendered obvious by Tucker. CX-1353C (Alarcon Rebuttal WS) Q/A 103-104. At least elements 12[c], and 12[e] are not taught by Tucker. Element 12[c] corresponds to element 1[a], and element 12[e] corresponds to elements 1[c], 1[d], and 1[e]. Thus, Tucker does not render elements 12[c] and 12[e] obvious for at least the same reasons discussed above for elements 1[a], 1[c], 1[d], and 1[e]. *Id.* at Q/A 105. Claim 13 adds a limitation similar to claim 2. Claim 13 is therefore not rendered obvious for the same reasons discussed above for claim 2. *Id.* at Q/A 106.

2. Tucker (RX-0109) and Pentafragas (RX-0106)

Eonsmoke argues that Tucker (RX-0109) in combination with Pentafragas (RX-0106) renders obvious claims 1, 2 and 13 of the '669 patent. *See* Resp. Br. at 12-14.

Eonsmoke argues:

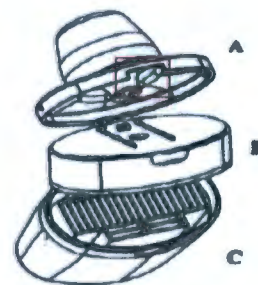
Tucker discloses the limitations of claims 1, 2, and 13 set forth above. Regarding the limitation **“a mouthpiece secured over the first end, the mouthpiece having a notch extending away from the second end towards the first end, the mouthpiece covering a first portion of the surface”** in claim 1, as one alternative to being obvious over *Tucker*

¹⁵ JLI has given a letter designation for each element of the asserted independent claims. The letter designations used for the elements of this claim is different for infringement and validity analysis. The administrative law judge is adopting the different letter designations as appropriate.

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alone, this would have been an obvious modification to *Tucker* in view of US2005/0252511A1 to *Pentafragas*. (RX-0113.0008-9, Q/A 31-32).

Pentafragas discloses an inhalation device having a mouthpiece (A) secured over the first end, the mouthpiece having a notch extending away from the second end towards the first end, the mouthpiece covering a first portion of the surface. (RX-0106.0002, Figure 1).



It would have been obvious to a sophisticated observer like the POSA at issue here to modify *Tucker* to include a similar mouthpiece to that of *Pentafragas* having a notch to accommodate functionality of the rest of the device, as taught by *Pentafragas* regarding the cover sheet 20. (RX-0113.0008-9, Q/A 31-32). In *Tucker*'s case, the functionality of the rest of the device accommodated by the notch would have been the liquid viewing window 71. A POSA would have been motivated to make this modification to *Tucker*'s mouthpiece to preserve *Tucker*'s window benefit. (RX-0113.0008-9, Q/A 31-32). *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 405, 127 S. Ct. 1727, 1734 (2007).

Additionally, it would have been obvious to modify *Tucker* to include a similar mouthpiece to that of mouthpiece of *Pentafragas* as a simple substitution of one known type of mouthpiece for another. *KSR*, 550 U.S. at 416 ("when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.").

Resp. Br. at 12-13 (emphasis in original).

Independent Claim 1

Asserted claim 1 is recited below:

1. A cartridge for generating an aerosol, the cartridge comprising:
 - [a] a body including a storage compartment configured to hold a vaporizable material, the body having a first end and a second end opposite the first end, the body comprising a surface between the first end and the second end;
 - [b] a heating element configured to generate the aerosol, the generating of the aerosol comprising heating the vaporizable material; and
 - [c] a mouthpiece secured over the first end, the mouthpiece having a notch extending away from the second end towards

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the first end, the mouthpiece covering a first portion of the surface,

[d] the mouthpiece not covering a second portion of the surface, the second portion of the surface configured for insertion into a cartridge receptacle of a vaporizer device,

[e] the mouthpiece not covering a third portion of the surface, the third portion of the surface comprising an area between the notch and the second end, the third portion of the surface being visible when the second portion of the surface is inserted into the cartridge receptacle.

JX-0003 ('669 Patent), claim 1.

Claim 1[c]

Tucker in view of Pentafragas does not disclose elements 1[c], 1[d], and 1[e]. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 88. Mr. Flolid suggests that a person of ordinary skill in the art would have substituted the mouth end insert of Tucker with the mouthpiece of Pentafragas, which allegedly fits over another component. He does not explain why a person of ordinary skill would have been motivated to do such a substitution, or what functionality a person of ordinary skill would seek to import from Pentafragas. Indeed, the Pentafragas reference is directed towards a dry powder inhaler, not an ENDS device like Tucker's. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 96. There is no explanation by Mr. Flolid why a person of ordinary skill in the art would have looked to a dry powder inhaler to modify an ENDS device or have an expectation of success in doing so.

The function of Pentafragas's alleged notch and Tucker's window are substantially different. Pentafragas's alleged notch is to provide a user physical access to the end of a blister strip. Tucker's window is to provide a viewing window for the contained liquid. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 96. Tucker's mouth end

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insert 8 and Pentafragas's mouthpiece A are structurally different. *See* RX-0106 (Pentafragas), ¶ [0007]; CX-1353C (Alarcon Rebuttal WS) Q/A 96; Flolid Tr. 278-279. As such, the modification proposed by Mr. Flolid is far from a simple substitution of elements. Combining the references would require a substantial redesign of either system. Tucker in view of Pentafragas thus does not render obvious claim element 1[c]. *See id.* at Q/A 97.

Claim 1[d]

For element 1[d], Mr. Flolid opines that Tucker "as modified, alone or in view of Pentafragas," would disclose this element. *See* RX-0113 (Flolid WS) Q/A 33. It is unclear what he means by "as modified," or what elements of Pentafragas may be relevant to this limitation. *See id.* at Q/A 100. Mr. Flolid provides no suggestion or motivation to modify any component of Tucker besides the mouth end insert. Eonsmoke has not shown that Tucker, alone or in combination with Pentafragas, renders obvious the recited first and second portions of the surface. *See id.*

Claim 1[e]

Mr. Flolid's analysis of element 1[e], presents similar issues as element 1[d]. He does not identify what component of Tucker or Pentafragas he relies on to allegedly teach the third portion. It appears that window 71 is the third portion, but Tucker does not teach a notch and therefore cannot teach a "third portion of the surface comprising an area *between the notch* and the second end." *See id.* at Q/A 101. Claim 1 is therefore not obvious.

Eonsmoke has not shown that Tucker in combination with Pentafragas renders claim 2 obvious. Mr. Flolid's opinion for claim 2 is conclusory and does not appear to

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rely on Pentafragas. In particular, claim 2, which depends from claim 1, is not rendered obvious for at least the reasons discussed previously for claim 1. Additionally, for claim 2, he merely states that Tucker discloses the mouthpiece (8) and that it is opaque. However, he does not cite evidentiary support. Inasmuch as he has not explicitly identified what he considers the body to be, he has not identified what surface he considers to be transparent. He references the window 71, but the window 71 is not the claimed third portion of the body, so he has not shown that the surface is transparent. Additionally, if Tucker were modified as Mr. Flolid suggests for claim 1, and the second portion were somehow inserted into the receptacle, it would require the vaporizable material to be seen through the threaded coupling. Mr. Flolid does not explain how this is possible in a practical or manufacturing sense. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 102.

Dependent Claim 13

Asserted claim 13 is recited below:

12. [p] An apparatus for generating an aerosol, the apparatus comprising:

[a] a vaporizer device comprising a cartridge receptacle; and

[b] a cartridge comprising:

[c] a body including a storage compartment configured to hold a vaporizable material, the body having a first end and a second end opposite the first end, the body comprising a surface between the first end and the second end;

[d] a heating element configured to generate the aerosol, the generating of the aerosol comprising heating the vaporizable material; and

[e] a mouthpiece secured over the first end, the mouthpiece covering a first portion of the surface, the mouthpiece not covering a second portion of the surface, the second portion of the surface configured for insertion into the cartridge

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receptacle, the mouthpiece not covering a third portion of the surface, the third portion of the surface being visible when the second portion of the surface is inserted into the cartridge receptacle.

13. The apparatus of claim 12, wherein the mouthpiece is opaque, wherein the surface is transparent, and wherein the vaporizable material is visible through the surface.

JX-0003 ('669 Patent), claims 12, and 13.

Claim 13, which depends from claim 12, is not rendered obvious by Tucker in combination with Pentafragas. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 103-104. At least elements 12[c], and 12[e] are not taught by Tucker in view of Pentafragas. Element 12[c] corresponds to element 1[a], and element 12[e] corresponds to elements 1[c], 1[d], and 1[e]. Thus, Tucker in view of Pentafragas does not render elements 12[c] and 12[e] obvious for at least the same reasons discussed above for elements 1[a], 1[c], 1[d], and 1[e]. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 105. Claim 13 adds a limitation similar to claim 2 ("wherein the mouthpiece is opaque, wherein the surface is transparent, and wherein the vaporizable material is visible through the surface"). Claim 13 is therefore not rendered obvious for the same reasons discussed above for claim 2. *See id.* at Q/A 106.

D. Domestic Industry (Technical Prong)

Complainant asserts claims 1, 2, 13, 14, and 20 of the '669 patent for domestic industry. *See* Compl. Br. at 30 (citing CX-0016C (Alarcon WS) Q/A 264). The JUUL system includes the JUUL device and JUULpod. CX-0016C (Alarcon WS) Q/A 262. The JUUL device is a reusable component that includes a battery and electronic circuitry for powering the heater in the JUULpod. The JUULpod is a cartridge that is prefilled

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with a nicotine-containing liquid. The JUULpod is inserted into the JUUL device and includes a mouthpiece through which the user inhales an aerosol that contains droplets of the liquid. *Id.* at Q/A 263.

Mr. Alarcon physically inspected the JUUL system, including the JUUL device and JUULpod. *See* CX-0016C (Alarcon WS) Q/A 266. He also reviewed numerous documents and materials including photographs of physical samples of the JUUL system, marketing materials including advertisements, product packaging, user manuals, information available on public webpages and the like, and technical documents such as engineering drawings and presentations describing the structure and assembly of the JUUL system. *See* CPX-0067C (JLI Animation) depicts the JUUL system. Mr. Alarcon also reviewed numerous documents describing various aspects of the JUUL system. *See* CX-0016C (Alarcon WS) Q/A 267 (listing documents reviewed).

1. Independent Claim 1

Asserted claim 1 is recited below:

1. A cartridge for generating an aerosol, the cartridge comprising:

[a] a body including a storage compartment configured to hold a vaporizable material, the body having a first end and a second end opposite the first end, the body comprising a surface between the first end and the second end;

[b] a heating element configured to generate the aerosol, the generating of the aerosol comprising heating the vaporizable material; and

[c] a mouthpiece secured over the first end, the mouthpiece having a notch extending away from the second end towards the first end, the mouthpiece covering a first portion of the surface,

[d] the mouthpiece not covering a second portion of the surface, the second portion of the surface configured for insertion into a cartridge receptacle of a vaporizer device,

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[e] the mouthpiece not covering a third portion of the surface, the third portion of the surface comprising an area between the notch and the second end, the third portion of the surface being visible when the second portion of the surface is inserted into the cartridge receptacle.

JX-0003 ('669 Patent), claim 1.

Claim 1[p]

The JUUL system, particularly, the JUULpod, includes each and every element of claim 1 of the '669 patent. *See* CX-0016C (Alarcon WS) Q/A 269. The JUULpod practices element 1[p]. As shown in CX-1202 (JUUL Photo Set 3), the JUULpod is a cartridge, which is used with the JUUL device to generate an aerosol. As such, the JUULpod practices the preamble. *See* CX-0016C (Alarcon WS) Q/A 270.

Claim 1[a]

The JUULpod practices element 1[a] as shown in CX-1202 (JUUL Photo Set 3), CX-0369C (JLI Step 1), and CX-0388C (JLI Image). For example, as shown in CX-1202 (JUUL Photo Set 3), the JUULpod has a body that includes a storage compartment holding a vaporizable material. The JUULpod's body has a first end and a second end that is opposite to the first end, and there is a surface between the first end and the second end. *See* CX-0016C (Alarcon WS) Q/A 271.

Claim 1[b]

The JUULpod satisfies element 1[b]. *See* CX-1202 (JUUL Photo Set 3); CX-0369C (JLI Step 1); CX-0379C (JLI Step 13); CX-0380C (JLI Step 14); CX-0381C (JLI Step 15); CX-0382C (JLI Step 19); CX-0383C (JLI Step 21), CX-1202 (JUUL Photo Set 3), CX-0384C (JLI Step 25), CX-0385C (JLI Step 26), CX-0386C (JLI Step 27), CX-0387C (JLI Step 28). As shown in CX-1202 (JUUL Photo Set 3), CX-0384C (JLI Step

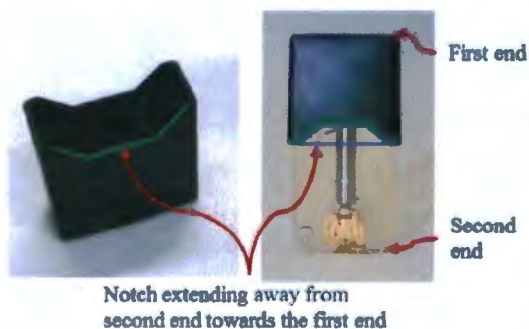
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25), CX-0385C (JLI Step 26), CX-0386C (JLI Step 27), CX-0387C (JLI Step 28), for example, the JUULpod includes a heating element in the form of a coil of wire. The heating element includes at least a resistive coil, a pair of plates and contact tabs. The contact tabs are integrally formed with the respective plate. *See* CX-0016C (Alarcon WS) Q/A 272.

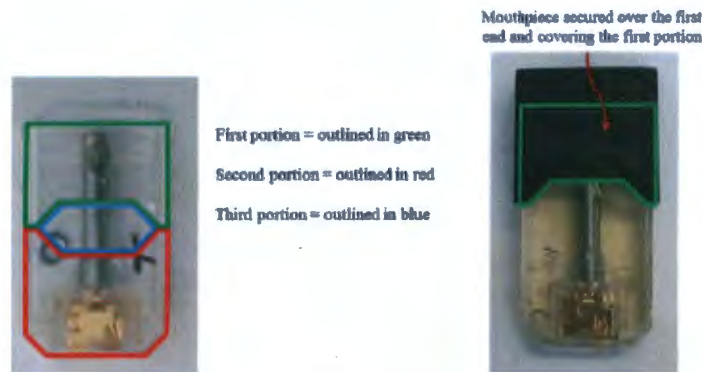
The heating element of the JUULpod is configured to generate an aerosol. Electrical energy passes from the JUUL device battery through the electrical contacts to the heating element, which converts the electrical energy to heat. The heating element is wrapped around a wick. The heat from the heating element raises the temperature of the wick and the vaporizable material within the wick to generate a vapor. The vapor immediately disperses with air at the heating element and an aerosol is immediately formed. *Id.* at Q/A 273.

Claim 1[c]

The JUULpod satisfies element 1[c]. *See* CX-1202 (JUUL Photo Set 3); CX-0369C (JLI Step 1); CX-0388C (JLI Image). The JUULpod includes a mouthpiece that is secured over the first end of the body of the cartridge.



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CX-1202.0001-.0002, .0016-.0017, (JUUL Photo Set 3) (annotated).

The upper left images of CX-1202 (JUUL Photo Set 3) show the notch of the mouthpiece, highlighted in green. The lower images of CX-1202 (JUUL Photo Set 3) show the first portion of the surface, also outlined in green, that is covered by the mouthpiece when the mouthpiece is secured over the first end. The mouthpiece's notch extends away from the second end towards the first end. As shown in CX-1202 (JUUL Photo Set 3); CX-0369C (JLI Step 1); CX-0388C (JLI Image), the notch is a cut-out region from an edge of the mouthpiece. *See* CX-0016C (Alarcon WS) Q/A 276.

Claim 1[d]

The JUULpod satisfies element 1[d]. *See* CX-1202 (Juul Photo Set 3); CX-0369C (JLI Step 1); CX-0388C (JLI Image); CX-0389C (JLI Step 5).

The mouthpiece, discussed above for element 1[c], does not cover a second portion of the surface, which is outlined in red. The second portion of the surface is configured for insertion into a cartridge receptacle of a vaporizer device, such as the JUUL device, as shown in CX-1202 (JUUL Photo Set 3). Thus, the JUULpod's mouthpiece does not cover a second portion of the surface that is configured for insertion into a cartridge receptacle of a vaporizer device as recited in element 1[d]. CX-0016C

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(Alarcon WS) Q/A 277.

Claim 1[e]

The JUULpod satisfies element 1[e]. *See* CX-1202 (JUUL Photo Set 3). The mouthpiece, as discussed for element 1[c], does not cover a third portion of the surface, which is outlined in blue in CX-1202 (JUUL Photo Set 3). This third surface portion includes an area between the notch and the second end and is visible when the second portion of the surface of the JUULpod is inserted into the JUUL device as shown in CX-1202 (JUUL Photo Set 3). *See* CX-0016C (Alarcon WS) Q/A 278.

2. Dependent Claim 2

Asserted claim 2 is recited below:

2. The cartridge of claim 1, wherein the mouthpiece is opaque, wherein the surface is transparent, and wherein the vaporizable material is visible through the surface.

JX-0003 ('669 Patent), claim 2.

Claim 2 depends from claim 1, and requires that “the mouthpiece is opaque,” “the surface is transparent,” and “the vaporizable material is visible through the surface.” The JUULpod includes every element of claim 1 as explained above. *See* CX-0016C (Alarcon WS) Q/A 280. The JUULpod practices every element of claim 2. *See* CX-1202 (JUUL Photo Set 3). The mouthpiece is opaque, and the surface of the body is transparent such that the vaporizable material is visible through the surface. *See* CX-0016C (Alarcon WS) Q/A 282; CX-1202 (JUUL Photo Set 3).

3. Dependent Claim 20

Asserted claim 20 is recited below:

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20. The cartridge of claim 1, further comprising the vaporizable material within the storage compartment, wherein the vaporizable material comprises a nicotine formulation.

JX-0003 ('669 Patent), claim 20.

Claim 20 depends from claim 1, and requires that the cartridge “further compris[es] the vaporizable material within the storage compartment, wherein the vaporizable material comprises a nicotine formulation.” The JUULpod includes every element of claim 1 as explained above. *See* CX-0016C (Alarcon WS) Q/A 283-284. The JUULpod practices claim 20 because the storage compartment of the JUULpod contains a nicotine-containing liquid. *See* CX-0016C (Alarcon WS) Q/A 285; CX-1202 (JUUL Photo Set 3).

4. Dependent Claim 13

Asserted claim 13 is recited below:

12. An apparatus for generating an aerosol, the apparatus comprising:

[a] a vaporizer device comprising a cartridge receptacle; and

[b] a cartridge comprising:

a body including a storage compartment configured to hold a vaporizable material, the body having a first end and a second end opposite the first end, the body comprising a surface between the first end and the second end;

[c] a heating element configured to generate the aerosol, the generating of the aerosol comprising heating the vaporizable material; and

[d] a mouthpiece secured over the first end, the mouthpiece covering a first portion of the surface,

[e] the mouthpiece not covering a second portion of the surface, the second portion of the surface configured for insertion into the cartridge receptacle,

[f] the mouthpiece not covering a third portion of the surface, the third portion of the surface being visible when

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the second portion of the surface is inserted into the cartridge receptacle.

13. The apparatus of claim 12, wherein the mouthpiece is opaque, wherein the surface is transparent, and wherein the vaporizable material is visible through the surface.

JX-0003 ('669 Patent), claims 12,¹⁶ 13.

Claim 13 depends from independent claim 12. Claim 12 is substantially similar to claim 1, except that claim 12 is an apparatus claim that requires both a vaporizer device and a cartridge. *See* CX-0016C (Alarcon WS) Q/A 286-290; CX-1202 (JUUL Photo Set 3); CX-0369C (JLI Step 1); CX-0388C (JLI Image); CX-0379C (JLI Step 13); CX-0380C (JLI Step 14); CX-0381C (JLI Step 15); CX-0382C (JLI Step 19); CX-0383C (JLI Step 21). Element 12[b] corresponds to the preamble of claim 1 and element 1[a]. Elements 12[c] through 12 [f] are materially identical to elements 1[b] through 1[e], respectively. Accordingly, the JUUL system includes each of elements 12[b], [c], [d], [e] and [f] for the same reasons explained above regarding the preamble and elements 1[a], [b], [c], [d], and [e] of claim 1. *See* CX-0016C (Alarcon WS) Q/A 292; CX-1202 (JUUL Photo Set 3); CX-0369C (JLI Step 1); CX-0388C (JLI Image); CX-0379C (JLI Step 13); CX-0380C (JLI Step 14); CX-0381C (JLI Step 15); CX-0382C (JLI Step 19); CX-0383C (JLI Step 21). The JUUL system thus includes every element of claim 12 of the '669 patent. CX-0016C (Alarcon WS) Q/A 288.

The combination of the JUUL device and the JUULpod is an apparatus for

¹⁶ JLI has given a letter designation for each element of the asserted independent claims. The letter designations used for the elements of this claim is different for technical prong and validity analysis. The administrative law judge is adopting the different letter designations as appropriate.

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generating an aerosol as recited in claim 12. *See* CX-0016C (Alarcon WS) Q/A 289-291; CX-1202 (JUUL Photo Set 3). Element 12[a] recites “a vaporizer device comprising a cartridge receptacle.” *See* CX-1202 (JUUL Photo Set 3). The JUUL device is an ENDS device, which is a type of vaporizer device. The JUUL device includes a receptacle for receiving a cartridge. *See* CX-0016C (Alarcon WS) Q/A 294-295; CX-1202 (JUUL Photo Set 3); CX-0369C (JLI Step 1); CX-0388C (JLI Image); CX-0379C (JLI Step 13); CX-0380C (JLI Step 14); CX-0381C (JLI Step 15); CX-0382C (JLI Step 19); CX-0383C (JLI Step 21). Claim 13 is similar to claim 2 and thus reads on the JUUL system for the same reasons. *See* CX-0016C (Alarcon WS) Q/A 297; CX-1202 (JUUL Photo Set 3).

5. Dependent Claim 14

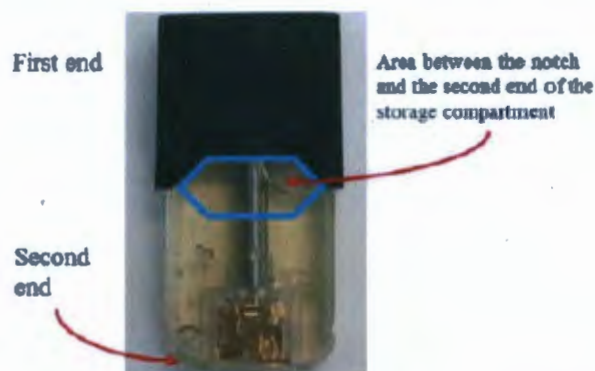
Asserted claim 14 is recited below:

14. The apparatus of claim 12, wherein the mouthpiece comprises a notch extending away from the second end of the body towards the first end of the body, and wherein the third portion of the surface comprises an area between the notch and the second end of the storage compartment.

JX-0003 (‘669 Patent), claim 14.

Claim 14 depends from claim 12 and requires that “the mouthpiece comprises a notch extending away from the second end of the body towards the first end of the body, and wherein the third portion of the surface comprises an area between the notch and the second end of the storage compartment.” The JUUL system practices claim 14. *See* CX-1202 (JUUL Photo Set 3); CX-0369C (JLI Step 1); CX-0388C (JLI Image).

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CX-1202.0017 (JUUL Photo Set 3) (annotated).

Particularly, the annotated images of CX-1202 (JUUL Photo Set 3) shown above show that the mouthpiece of the JUULpod includes a notch (which is highlighted in green) that extends away from the second end of the body towards the first end of the body.

Annotated image CX-1202 (JUUL Photo Set 3) shows that the third portion of the surface includes an area between the notch and the second end of the storage compartment. *See* CX-0016C (Alarcon WS) Q/A 300.

V. U.S. Patent No. 10,045,568

United States Patent No. 10,045,568 ("the '568 patent"), entitled "Vaporization device systems and methods," issued on August 14, 2018. JX-0001 ('568 Patent). The '568 patent issued from Application No. 15/832,749, filed on December 5, 2017. *Id.* The '568 patent application is a continuation of, and claims priority to, Application No. 15/379,898, filed on December 15, 2016, which is a continuation-in-part of other patent applications. The '568 patent relates to "apparatuses, including systems and devices, for vaporizing material to form an inhalable aerosol. Specifically, these apparatuses may include vaporizers." JX-0001, 1:64-67. The '568 patent has a total of 20 claims.

Complainant asserts claims 12, 17 and 20 of the '568 patent. *See* Compl. Br. at

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14. As discussed below, the evidence shows that (1) the asserted claims are infringed by the accused products; (2) complainant has satisfied the technical prong of the domestic industry requirement; and (3) the asserted claims are not invalid.

Asserted claims 12, 17 and 20 are recited below:

12. A cartridge for use with a vaporization device, the cartridge comprising:

[a] a flattened body having a proximal end, a distal end opposite the proximal end, a longitudinal axis between the proximal end and the distal end, and a transverse axis that is perpendicular to and shorter than the longitudinal axis;

[b] a reservoir within the flattened body and holding a vaporizable material;

[c] a mouthpiece proximate to the proximal end of the flattened body;

[d] a heater comprising:

a pair of plates extending in a direction of the longitudinal axis,

[e] a wick extending along at least the transverse axis, at least a first portion of the wick disposed between the pair of plates, and at least a second portion of the wick disposed within the reservoir and in contact with the vaporizable material, and

[f] a resistive heating element directly in contact with each plate of the pair of plates and in thermal contact with the wick; and

[g] a pair of flat contact tabs integrally formed from the pair of plates and folded over an outer surface of the flattened body proximate to the distal end of the flattened body, the pair of flat contact tabs extending from the heater and configured to complete a circuit with the vaporization device when the distal end is inserted into the vaporization device.

17. The cartridge of claim 12, wherein the mouthpiece is coupled to the flattened body with a snap-fit coupling.

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20. An apparatus comprising:

a vaporizer body comprising:

a power source;

a cartridge receptacle; and

a pair of contacts within the cartridge receptacle; and

[a] a cartridge comprising:

a flattened body having a proximal end, a distal end opposite the proximal end, a longitudinal axis between the proximal end and the distal end, and a transverse axis that is perpendicular to and shorter than the longitudinal axis;

[b] a mouthpiece proximate to the proximal end of the flattened body;

[c] a reservoir within the flattened body, the reservoir configured to hold a vaporizable material;

[d] a pair of plates extending in a direction of the longitudinal axis;

[e] a wick extending along at least the transverse axis, at least a first portion of the wick disposed between the pair of plates;

[f] a resistive heating element in contact with the pair of plates and the wick, wherein at least a second portion of the wick is configured to contact the vaporizable material when the vaporizable material is present; and

[g] a pair of flat contact tabs integrally formed from the pair of plates and folded over an outer surface of the flattened body proximate to the distal end of the flattened body, the pair of flat contact tabs configured to complete a circuit with the pair of contacts and the power source when the distal end is inserted into the cartridge receptacle.

JX-0001 ('568 Patent), claims 12, 17, 20.

A. Claim Construction¹⁷

¹⁷ Respondent Eonsmoke did not discuss any of the disputed claim terms on the merits in its posthearing briefs. *See* Joint Outline - Eonsmoke; and Joint Reply Outline - Eonsmoke. Indeed, Eonsmoke's only statement concerning claim construction is the following:

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1. A Person of Ordinary Skill in the Art

Complainant argues:

A person of ordinary skill in the art (“POSA”) is one who is presumed to be aware of all pertinent art, thinks along conventional wisdom in the art, and is a person of ordinary creativity. A POSA in the context of the asserted patents would have had (1) a B.S. in mechanical engineering, electrical engineering, or an equivalent degree and (2) at least one year of experience designing consumer products. CX-0015C (Collins WS) Q/A 33; CX-0016C (Alarcon WS) Q/A 22.

Ziip’s expert, Mr. Flolid has proposed that a POSA would have at least a bachelor’s degree in mechanical engineering, electrical engineering, or an equivalent degree. RX-0113 (Flolid WS) Q/A 19. Alternatively, Mr. Flolid opined that a POSA could also have had at least two years’ experience designing, developing, or testing electronic cigarettes or related electromechanical devices, such as electromechanical devices configured to heat liquid and generate an aerosol. *Id.* at Q/A 20. Mr. Flolid further opines that his definition is only “approximate” and that a skilled artisan could have a higher level of education to make up for less experience or a higher level of training or skill to make up for less education. *Id.* at Q/A 19. Mr. Flolid’s definition of a POSA is vague and incorrect. CX-1353C (Alarcon Rebuttal WS) Q/A 41-42; CX-0015C (Collins WS) Q/A 34. Regardless, the differences between JLI’s proposed qualifications for a POSA and those proposed by Respondents would not change JLI’s infringement or validity analysis. CX-0015C (Collins WS) Q/A 35; CX-1353C (Alarcon Rebuttal WS) Q/A 42.

Compl. Br. at 18-19 (citations omitted).

Respondent argues:

The key decision is the definition of a POSA. Both parties agree that a POSA would have at least a degree in mechanical or electrical engineering or a similar degree. And both agree that this POSA would have some design experience with products. Ziip proposes that this experience would be at least two years with electronic cigarettes or related

Ziip applies the agreed upon constructions for any terms that had agreed upon constructions, as set forth in the Joint Claim Construction Chart. Otherwise, Ziip applies the plain and ordinary meaning of the term.

Resp. Br. at 3-4.

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electromechanical devices because this is the subject matter of the patents at issue.

Ziip's definition is a better one:

A person of ordinary skill in this art would have (1) at least a B.S. in mechanical engineering, electrical engineering, or an equivalent degree and/or (2) at least two years' experience designing, developing, or testing electronic cigarettes or related electromechanical devices, such as electromechanical devices configured to heat liquid and generate an aerosol. This description is approximate, and a higher level of training or skill might make up for less education, and vice-versa.

(RX-0113.0005-6, Q/A 18-20).

Juul has proposed a far broader definition – one year designing consumer products – because Juul wants its POSA to be as ignorant as possible so as not to see the connections that Ziip claims are obvious. But Juul's definition is deficient, as its expert, Mr. Ramon Alarcon, essentially admitted when he noted that not every consumer product would be relevant. (Hearing Tr., at 422:15-423:16).

Ziip's definition of a POSA as having at least two years' of experience with devices like an electronic cigarette makes more sense as this is the type of person would look to the prior art to find solutions to the known problems. And, as the United States Supreme Court has held, it is the solving of known problems that is a key determinant of obviousness.

Resp. Br. at 2-3.

The Staff argues:

JLI contends that for all asserted patents, a person of ordinary skill in the art would have had (1) a B.S. in mechanical engineering, electrical engineering, or an equivalent degree and (2) at least one year of experience designing consumer products." CPreHBr. at 15. Ziip, Eonsmoke and V4L did not present a contention in their respective pre-hearing briefs regarding the level of ordinary skill in the art for any of the asserted patents. Therefore, they waived any such contentions. *See* Ground Rule 7.c. Nonetheless, Ziip and Eonsmoke's expert, Mr. Flolid, testified that he agreed with Ziip's apparent contention "that a person of ordinary skill in the art would have at least (1) a B.S. degree in mechanical engineering, electrical engineering, or an equivalent degree and/or (2) at least two years of experience designing, developing, or testing electronic cigarettes or related electromechanical devices, such as electromechanical

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devices configured to heat liquid and generate an aerosol. This description is approximate, and a higher level of training or skill might make up for less education, and vice-versa.” RX-0113 at Q19.

To the extent the ALJ does not agree that Respondents waived their contentions as to one of ordinary skill in the art, the Staff agrees with JLI’s contention, favoring the lesser experience requirement. The Staff, however, is of the view that the difference between the private parties’ proposals with respect to the level of ordinary skill does not affect the infringement or invalidity issues in this Investigation.

Staff Br. at 19-20 (citations omitted).

As an initial matter, Eonsmoke did not discuss the level of ordinary skill in the art for any of the asserted patents in its pre-hearing brief. Therefore, it waived any such contention. *See* Ground Rule 7.c.

In any event, JLI’s proposed level of ordinary skill is more persuasive in the context of the the ‘568 patent. JLI’s proposed level requires (1) a B.S. in mechanical engineering, electrical engineering, or an equivalent degree, and (2) at least one year of experience designing consumer products. Thus, the administrative law judge finds that a person of ordinary skill in the art with respect to the ‘568 patent is a person who has a B.S. in mechanical engineering, electrical engineering, or an equivalent degree, and at least one to two years of experience designing consumer products.

2. Claim Construction

Below is a chart showing the parties’ proposed claim constructions.

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Claim Term	Claim(s)	JLI's Construction	Eonsmoke's Construction	Staff's Construction
"a flattened body"	1, 12, 20	"a body having a first dimension between opposing first and second sides that is smaller than a second dimension between opposing third and fourth sides between the first and second sides"	abandoned	Same as JLI
"proximate to"	1, 12, 20	Plain meaning, which is: "close or near"	abandoned	Same as JLI
"pair of plates"	1, 12, 20	"two corresponding, relatively thin pieces of material used together"	abandoned	Same as JLI
"flat contact tabs"	1, 12, 20	"flat electrically conductive projections"	abandoned	"smooth or even electrically conductive projections"
"integrally formed"	1, 12, 20	"made as a unitary structure"	abandoned	Same as JLI

Compl. Br. at 48-51; Resp. Br. at 3-4; Staff Br. at 37-42.

Eonsmoke did not present any claim construction analyses in its pre-hearing brief, and thus waived any such contentions. *See* Ground Rule 7.c.

a. "a flattened body"

JLI argues and the Staff concurs that the claim term "a flattened body" should be construed as "a body having a first dimension between opposing first and second sides that is smaller than a second dimension between opposing third and fourth sides between the first and second sides." The specification supports this construction. *See* JX-0001

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(‘568 Patent), claim 1, 54:40-44 (“a flattened body having a proximal body, a distal end opposite the proximal end, a longitudinal axis between the proximal end and the distal end, and a transverse axis that is perpendicular to and shorter than the longitudinal axis”), *id.* at 55:27-28, 56:24-25, FIGS. 5, 7A, 14, 26A, 26B, 29A-29D. The Staff agrees with JLI. *See* Staff Br. at 40.

The administrative law judge has determined that the claim term “a flattened body” should be construed to mean “a body having a first dimension between opposing first and second sides that is smaller than a second dimension between opposing third and fourth sides between the first and second sides.”

b. “proximate to”

JLI argues in its brief that the claim term “proximate to” has a plain meaning, which is “at or near” but JLI’s chart shows the plain meaning JLI proposes is “close or near.” *See* Compl. Br. at 47-48. The Staff concurs that the claim term “proximate to” has a plain meaning, which is “close or near.” *See* Staff Br. at 41. The Staff believes “at or near” was a typographical error. *See* Staff Br. at 41 n.10.

The specification uses this term consistently with this proposed plain meaning. JX-0001 (‘568 Patent), 15:20-21, 17:33-34, 36:48-49, 46:25-28, FIGS. 5, 7A-C, 8B, 9A-9L, 10A, 11-15, 16B-C, 24A-B, 25A-B, 26A-B, 28A, 28C, 28D, 30, 31A-31L. This term also appears in the ‘130 patent, is used consistently in that context, and should be construed consistently. The Staff agrees with JLI. *See* Staff Br. at 41.

The administrative law judge has determined that the claim term “proximate to” should be given its plain and ordinary meaning, *i.e.*, “close or near.”

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c. “pair of plates”

JLI argues and the Staff concurs that the claim term “a pair of plates” in the context of the ‘568 patent means “two corresponding, relatively thin pieces of material used together.” A plate, generally, is a relatively thin piece of material. The term “pair” generally refers to two of something that are related (here “corresponding”) in some way (here “used together”). This construction is consistent with how the specification uses this term, describing two corresponding plates that are used together to define a space. *See* JX-0001 (‘568 Patent), 14:64-15:3 (“thin plates affixed about the sides”), 16:64-65, 35:31-34, 54:50-51, 55:38-39, 56:34-35, 56:44-46, FIGS. 7B, 8B, 24A-B, 25A-B, 26A, 28C-D. The related term “plate” appears in the ‘130 patent and should be construed consistently with the construction of the word “plate” as it appears in the term “pair of plates,” recited in the ‘568 patent. The Staff agrees with JLI. *See* Staff Br. at 41.

The administrative law judge has determined that the claim term “pair of plates” should be construed to mean “two corresponding, relatively thin pieces of material used together.”

d. “flat contact tabs”

JLI argues that the term “flat contact tabs” means “flat electrically conductive projections.” Contact tabs are electrically conductive projections that are placed on a component so as to contact electrical conduits on another component, to complete a circuit. Flat tabs look like projecting strips of metal or other conductive material. This construction is consistent with the specification and the way a person of ordinary skill in the art would understand the term. JX-0001 (‘568 Patent), 48:6-9, 54:60-62 (“folded over

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an outer surface”), 54:63-65 (“the pair of flat contact tabs configured to complete a circuit”), 55:48-51, 55:51-56:3, 56:44-46, 56:46-50, FIGS. 24B, 26A, 28D.

The Staff argues that the “flat” portion of the term means “smooth or even,” which is consistent with the specification. *See* Staff Br. at 42 (citing JX-1, Figures 7B, 7C, 8B, and 9 and the specific disclosures in the specification associated with each Figure; 48:4-9). Thus, the Staff agrees with the construction that contact tabs are electrically conductive projections, but proposes that “flat” be construed as smooth or even. JLI suggests that “flat” needs no construction, and Staff’s construction does not conform to the plain meaning of that word. A structure that is not flat could nonetheless be smooth or even, like a ball bearing. Likewise, something flat, like a sheet of sandpaper, may not be smooth or even.

The administrative law judge has determined that the claim term “flat contact tabs” should be construed to mean “flat electrically conductive projections.”

e. “integrally formed”

JLI argues and the Staff concurs that the claim term “integrally formed” means “made as a unitary structure.” This proposed meaning is consistent with the way the specification uses this term. JX-0001 (‘568 Patent), 48:6-9, 54:60-62, 54:63-65, 55:48-51, 55:51-56:3, 56:44-46, 56:46-50, FIGS. 25A-B, 28C-D. The Staff agrees with JLI. *See* Staff Br. at 42.

The administrative law judge has determined that the claim term “integrally formed” should be construed to mean “made as a unitary structure.”

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B. Infringement Analysis of the '568 Patent

JLI asserts claims 12, 17 and 20 of the '568 patent. JLI demonstrated by a preponderance of the evidence that Eonsmoke's accused products infringe the asserted claims of the '669 patent. *See* Compl. Br. at 51-65; CX-0015C (Collins WS) at Q/A 47-278. Indeed, Eonsmoke did not contest infringement and did not present any non-infringement arguments in its post-hearing briefs. *See* Joint Outline – Eonsmoke; Joint Reply Outline – Eonsmoke.

Nonetheless, the administrative law judge adopts JLI's infringement analysis with respect to Eonsmoke and provides the following infringement analysis of the '568 patent.

1. Importation and Accused Products

On August 5, 2019, the administrative law judge issued an initial determination granting complainant's motion for summary determination with respect to importation. *See* Order No. 35 (Aug. 5, 2019) at 4-5, *aff'd in part*, Commission Determination to Review in Part an Initial Determination Granting in Part Complainant's Motion for Summary Determination of Importation, Infringement, and Domestic Industry (Sept. 4, 2019) (Commission determining not to review importation).

Eonsmoke is based in Clifton, New Jersey, and is an importer, distributor, and seller of ENDS devices and pods, including the Eonsmoke devices and pods manufactured by Ziip. The accused products with respect to Eonsmoke include the Eonsmoke device, the Eonsmoke v2.0 device, Eonsmoke (Eon) pod, and the 4X pod (individually and collectively, "Eonsmoke accused products"). *See* Compl. Br. at 10 (citing CX-0958C (Eonsmoke Invoices 13); CX-0858 (Eonsmoke's Supp. Responses to JLI's RFAs)).

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JLI provided the following table showing the Eonsmoke accused products that are alleged to infringe the asserted patent claims:

Accused Product	'669	'915	'568	'130
<u>Eonsmoke Respondent</u>	1, 2, 13	1, 6, 21	12, 17, 20	1, 2, 4
Eonsmoke device				
Eonsmoke v2 device (stipulated representative)				
Eonsmoke pods (stipulated representative)				
4X pods				

Compl. Br. at 220.

Eonsmoke's stipulations concerning representativeness discussed above for the '669 patent apply equally to the '568 patent. *See* CX-0015C (Collins WS) Q/A 69-71.

a. Independent Claim 12

Asserted claim 12 is recited below:

12. A cartridge for use with a vaporization device, the cartridge comprising:

[a] a flattened body having a proximal end, a distal end opposite the proximal end, a longitudinal axis between the proximal end and the distal end, and a transverse axis that is perpendicular to and shorter than the longitudinal axis;

[b] a reservoir within the flattened body and holding a vaporizable material;

[c] a mouthpiece proximate to the proximal end of the flattened body;

[d] a heater comprising:

a pair of plates extending in a direction of the longitudinal axis,

[e] a wick extending along at least the transverse axis, at least a first portion of the wick disposed between the pair of plates, and at least a second portion of the wick disposed

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within the reservoir and in contact with the vaporizable material, and

[f] a resistive heating element directly in contact with each plate of the pair of plates and in thermal contact with the wick; and

[g] a pair of flat contact tabs integrally formed from the pair of plates and folded over an outer surface of the flattened body proximate to the distal end of the flattened body, the pair of flat contact tabs extending from the heater and configured to complete a circuit with the vaporization device when the distal end is inserted into the vaporization device.

JX-0001 ('568 Patent), claim 12.

Claim 12[p]

Eonsmoke pods practice claim element 12[p] because the pod is a “cartridge for use with a vaporization device.” *See* CX-0015C (Collins WS) Q/A 113 (Eonsmoke).

Claim 12[a]

Eonsmoke pods practice claim element 12[a] because the pods include a “flattened body having a proximal end, a distal end opposite the proximal end, a longitudinal axis between the proximal end and the distal end, and a transverse axis that is perpendicular to and shorter than the longitudinal axis.” *See* CX-0015C (Collins WS) Q/A 119 (Eonsmoke). Eonsmoke pods have a flattened body. The cartridge’s flattened body is rectangular and has a first dimension between opposing first and second sides that is smaller than a second dimension between opposing third and fourth sides. Accordingly, Eonsmoke pods meet this limitation. *See* CX-0015C (Collins WS) Q/A 120 (Eonsmoke).

Claim 12[b]

Eonsmoke pods practice claim element 12[b] because the pods include “a reservoir within the flattened body, the reservoir configured to hold a vaporizable

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material.” *See* CX-0015C (Collins WS) Q/A 129 (Eonsmoke); CX-1183 (Eonsmokev2 Photo Set 6); CX-1275C (Eonsmokev2 Photo Set 5); CX-1192 (Eonsmokev2 Photo Set 2). Photos of each of these pod’s packaging identifies nicotine as an ingredient, and language copied from Eonsmoke’s website describes the pods as containing liquid materials for vaping including nicotine. *See* CX-0015C (Collins WS) Q/A 130 (Eonsmoke). Based on the information provided on the cartridges’ respective packaging and websites selling the cartridges, the liquid in the Eonsmoke pods is a vaporizable material. *See id.* at Q/A 131 (Eonsmoke).

Claim 12[c]

Eonsmoke pods practice claim element 12[c] because the pods include “a mouthpiece proximate to the proximal end of the flattened body.” *See* CX-0015C (Collins WS) Q/A 140 (Eonsmoke). A first plate is positioned proximate to (i.e., close or near) a first side of the storage compartment, the first plate coupled to the heating element and attached proximate to the first end. A second plate is positioned proximate to (i.e., close or near) a second side of the storage compartment, the second plate coupled to the heating element and attached proximate to the first end. *See* CX-0015C (Collins WS) Q/A 141 (Eonsmoke).

Claim 12[d]

Eonsmoke pods practice claim element 12[d] because the pods include “a heater comprising: a pair of plates extending in a direction of the longitudinal axis.” *See* CX-0015C (Collins WS) Q/A 150 (Eonsmoke). Eonsmoke pods have a pair of plates. The cartridge’s plates are two corresponding relatively thin pieces of material that are used together to provide power to the coil. These two plates are also smooth, generally flat,

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thin pieces of metal that are parallel and face each other. *See* CX-0015C (Collins WS) Q/A 151 (Eonsmoke).

Claim 12[e]

Eonsmoke pods practice claim element 12[e] because the pods include “a wick extending along at least the transverse axis, at least a first portion of the wick disposed between the pair of plates, and at least a second portion of the wick disposed within the reservoir and in contact with the vaporizable material,” when the vaporizable material is present. *See* CX-0015C (Collins WS) Q/A 159 (Eonsmoke).

Claim 12[f]

Eonsmoke pods practice claim element 12[f] because the pods include “a resistive heating element directly in contact with each plate of the pair of plates and in thermal contact with the wick.” *See* CX-0015C (Collins WS) Q/A 164 (Eonsmoke). Each pod has a resistive heating element in contact with the pair of plates, and in thermal contact with the wick. *See* CX-0015C (Collins WS) Q/A 164 (Eonsmoke). The wick is positioned at least partially in an area occupied by the vaporizable material when the vaporizable material is present. Thus, at least a portion of the wick will contact the vaporizable material at that time. *See* CX-0015C (Collins WS) Q/A 164 (Eonsmoke).

Claim 12[g]

Eonsmoke pods practice claim element 12[g] because each pod includes “a pair of flat contact tabs integrally formed from the pair of plates and folded over an outer surface of the flattened body proximate to the distal end of the flattened body, the pair of flat contact tabs extending from the heater and configured to complete a circuit with the vaporization device when the distal end is inserted into the vaporization device.” *See*

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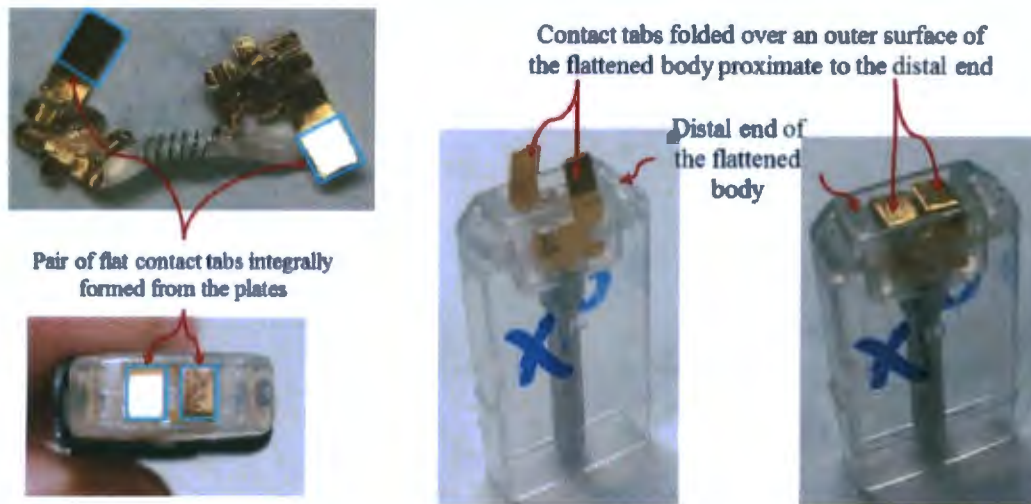
CX-0015C (Collins WS) Q/A 173 (Eonsmoke). The tabs and the plate form a unitary structure. The contact tabs are made of metal and, thus, electrically conductive. The contact tabs project from the pair of the plates and extend outside the body, and are folded over an outer surface of the flattened body proximate to the distal end. *See id.* at Q/A 174 (Eonsmoke). When folded, the contact tabs are level, and are configured to complete a circuit with the vaporization device when the distal end is inserted into the vaporization device. *See id.*

Eonsmoke pods include “flat contact tabs.” The contact tabs are made of metal and, thus, electrically conductive. Once folded, the contact tabs can electrically couple to corresponding electrical contacts of the vaporization device. *See* CX-0015C (Collins WS) Q/A 175 (Eonsmoke).

These flat contact tabs are “integrally formed.” As discussed above, the contact tabs are made as a unitary structure from a single piece of metal. Therefore, the pods meet this limitation. *See* CX-0015C (Collins WS) Q/A 176 (Eonsmoke).

To the extent that any differences may exist between the accused pods and the features recited in claim 12, these differences are insubstantial. The pods include a pair of flat contact tabs that are intended to perform substantially the same function, in substantially the same way, to achieve substantially the same result, for example “to complete a circuit with the vaporization device when the distal end is inserted into the vaporization device,” as recited in the above limitation of claim 12. Thus, this limitation is also met under the doctrine of equivalents. *See id.* at Q/A 177 (Eonsmoke).

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CX-1183.0029-.0032 (Eonsmokev2 Photo Set 6) (annotated).

As shown on CX-1183 (Eonsmokev2 Photo Set 6), outlined above in blue are the pair of flat contacted tabs integrally formed from the plates, to form a unitary structure. The tabs are flat and smooth. *See* CX-0015C (Collins WS) Q/A 174. This document also shows the contact tabs projecting from the pair of plates and extend outside the body, and folded over an outer surface of the flattened body proximate to the distal end. *See id.* As shown, when folded, the contact tabs are level, and are configured to complete a circuit with the vaporization device when the distal end is inserted into the vaporization device. *See* CX-1275C.0034-.0037 (Eonsmokev2 Photo Set 5). CX-1192 (Eonsmokev2 Photo Set 2) and CX-1275C (Eonsmokev2 Photo Set 5) similarly show the Eonsmoke cartridge includes “flat contact tabs.” *See* CX-0015C (Collins WS) Q/A 187.

The accused products therefore meet every limitation described in claim 12 of the ‘568 patent. *See id.* at Q/A 207.

b. Dependent Claim 17

Eonsmoke pods practice claim 17 because these pods meet the limitation

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“wherein the mouthpiece is coupled to the flattened body with a snap-fit coupling.” *See* CX-0015C (Collins WS) Q/A 220 (Eonsmoke). Each pod includes a mouthpiece that couples to the flattened body. The mouthpiece couples to the flattened body via a snap-fit coupling between protrusions on the lateral sides of the flattened body and openings on the lateral sides of the mouthpiece. *See id.* at Q/A 221 (Eonsmoke).

To secure the mouthpiece to the flattened body, the mouthpiece is inserted over the proximal end of the flattened body, and pressed downwards towards the distal end. *See id.* at Q/A 222 (Eonsmoke). As the mouthpiece slides over the protrusions, the protrusions initially deflect the mouthpiece, causing the mouthpiece to flex outwards over the protrusions. *See id.* When the protrusions align with the mouthpiece openings, the deflected mouthpiece elastically returns, or snaps back, to its original position, and the protrusions engage with the mouthpiece, thereby effecting the snap-fit coupling. The engagement between the flattened body protrusions and the mouthpiece openings secures the mouthpiece to the flattened body. *See id.*

To the extent that any differences may exist between the accused pods and the features disclosed in claim 17 of the ‘568 patent, a person of ordinary skill would have understood these differences to be insubstantial. *See* CX-0015C (Collins WS) Q/A 223 (Eonsmoke). The pod mouthpiece attaches to the storage compartment with a snap-fit coupling—in other words, performs substantially the same function, in substantially the same way, to achieve substantially the same result—to secure the mouthpiece to the flattened body as in claim 17. Thus, this claim is also met under the doctrine of equivalents. *See id.* at Q/A 245.

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c. Independent Claim 20

Asserted claim 20 is recited below:

20. An apparatus comprising:
- a vaporizer body comprising:
 - a power source;
 - a cartridge receptacle; and
 - a pair of contacts within the cartridge receptacle; and
 - [a] a cartridge comprising:
 - a flattened body having a proximal end, a distal end opposite the proximal end, a longitudinal axis between the proximal end and the distal end, and a transverse axis that is perpendicular to and shorter than the longitudinal axis;
 - [b] a mouthpiece proximate to the proximal end of the flattened body;
 - [c] a reservoir within the flattened body, the reservoir configured to hold a vaporizable material;
 - [d] a pair of plates extending in a direction of the longitudinal axis;
 - [e] a wick extending along at least the transverse axis, at least a first portion of the wick disposed between the pair of plates;
 - [f] a resistive heating element in contact with the pair of plates and the wick, wherein at least a second portion of the wick is configured to contact the vaporizable material when the vaporizable material is present; and
 - [g] a pair of flat contact tabs integrally formed from the pair of plates and folded over an outer surface of the flattened body proximate to the distal end of the flattened body, the pair of flat contact tabs configured to complete a circuit with the pair of contacts and the power source when the distal end is inserted into the cartridge receptacle.

JX-0001 ('568 Patent), claim 20.

Claim 20[p]

Eonsmokev2.0 devices practice claim element 20[p] because these devices are an

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apparatus having a “vaporizer body comprising a power source; a cartridge receptacle; and a pair of contacts within the cartridge receptacle.” *See* CX-0015C (Collins WS) Q/A 246-247. Each device is an apparatus with a cartridge receptacle, vaporizer body, pair of electrical contacts within the cartridge receptacle, and a power source within the vaporizer body. *See id.*

Claims 20[a]-[g]

Each of claim elements 20[a] through 20[g], for purposes of analyzing infringement, is materially identical to claim elements 12[a] through 12[g], respectively. For these reasons, and as supported by the evidence of record, Eonsmoke pods practice claim elements 20[a] through 20[g]. *See* CX-0015C (Collins WS) Q/A 250-277. The representative Eonsmoke device together with the representative Eonsmoke pod include every feature of claim 20. *See id.* at Q/A 278.

The evidence shows that Eonsmoke knows that the Eonsmoke Pod and 4X pod are inoperative without an infringing device, and are a material part of the cartridge plus device embodiment disclosed in claim 20 of the ‘568 patent, *i.e.*, the pods are not staple articles of commerce suitable for substantial non-infringing use. *See* CX-0018C (Tolmach Dep. Designations (Apr. 4, 2019)) 81-83, 184-186; CX-0407 (Eonsmoke v2.0 JUUL Compatible Screenshot); CX-1302C (Eonsmoke Pods Ad); CX-1304C (4X Pods Blue Blackberry Packaging).

Despite having notice of the ‘568 patent and the allegations of infringement, Eonsmoke nonetheless encourages and facilitates end users to practice claim 20 of the ‘568 patent by distributing instructions for, and supporting the use of the pods with an infringing device. *See* CX-1111 (Eonsmoke Instructions Screenshot); CX-1112

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(Eonsmoke Packaging Photo); CX-0217 (Eonsmoke Product & Packaging Images 4); CX-0218 (Eonsmoke Packaging Images); CX-0353 (4X Packaging & Pods Images). Moreover, the Eonsmoke pods and devices, Eonsmoke v2.0 devices, and the 4X pods, are expressly marketed as “JUUL Compatible” or “JUUL Pods Compatible.” *See* CX-1302C (Eonsmoke Pods Ad).

Eonsmoke pods are used by customers pursuant to the cartridges’ packaging instructions in a manner that infringes claim 20 of the ‘568 patent. *See* CX-0015C (Collins WS) Q/A 77, 91; CX-0018C (Tolmach Dep. Designations (Apr. 4, 2019)), 58-60; CX-0026C (Grishayev Dep. Designations (Apr. 17, 2019)) 55-57.

Eonsmoke indirectly infringed and continue to indirectly infringe at least claim 20 of the ‘568 patent, by way of contributory infringement, by selling after importation the Eonsmoke Pods and the 4X pods in the United States, and encouraging and facilitating manufacturers, distributors, retailers, and end users to perform actions using those devices and pods in a manner that Eonsmoke knows will infringe and with the intent that performance of the actions will infringe. *See* CX-0015C (Collins WS) Q/A 78 (Eonsmoke).

JLI’s expert, Dr. Collins, conducted a visual inspection and examination of the Eonsmoke pods, the individual components therein, and its packaging. He also considered the extensive other record evidence, including information available on webpages dedicated to the Eonsmoke pods, and testimony of various deponents relating to the Eonsmoke pods and Eonsmoke devices. This evidence is shown on CX-1302C (Eonsmoke Pods Ad); CX-1304C (4X Pods Blue Blackberry Packaging); CX-1302C (Eonsmoke Pods Ad); CX-0407.0001 (Eonsmoke v2.0 Juul Compatible Screenshot); CX-

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0018C (Tolmach Dep. Designations (Apr. 4, 2019)) 81-82, 184-186; CX-1111 (Eonsmoke Instructions Screenshot); CX-1112 (Eonsmoke Packaging Photo); CX-0170 (Eonsmoke Product & Packaging Images 3); CX-0026C (Grishayev Dep. Designations (Apr. 17, 2019)) 55-57; CX-0018C (Tolmach Dep. Designations (Apr. 4, 2019)) 58-60.

C. Validity of the ‘568 Patent

Respondent Eonsmoke argues that (1) Buchberger (RX-0107) alone renders obvious claims 12, 17 and 20 of the ‘568 patent; and (2) Buchberger (RX-0107) in combination with Qiu (RX-0108) renders obvious claims 12, 17 and 20 of the ‘568 patent. *See* Resp. Br. at 14-40. Eonsmoke argues and JLI and the Staff do not dispute that prior art alleged by Eonsmoke are prior to the priority date of the ‘568 patent. *See id.* at 4.

For the reasons set forth below, Eonsmoke has not shown by clear and convincing evidence that asserted claims 12, 17 and 20 of the ‘568 patent are invalid.

1. Buchberger (RX-0107) Alone

Respondent Eonsmoke argues that (1) Buchberger (RX-0107) alone renders obvious claims 12, 17 and 20 of the ‘568 patent. *See* Resp. Br. at 14-26.

Independent Claim 12

Eonsmoke argues, *inter alia*:

Juul does not dispute that Buchberger discloses the following features of claim 12:

- A cartridge for use with a vaporization device, the cartridge comprising:
- a flattened body having a proximal end, a distal end opposite the proximal end, a longitudinal axis between the

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- proximal end and the distal end, and a transverse axis that is perpendicular to and shorter than the longitudinal axis;
- a reservoir within the flattened body and holding a vaporizable material;
- a mouthpiece proximate to the proximal end of the flattened body;
- a heater comprising:
- a pair of plates extending in a direction of the longitudinal axis
- a resistive heating element directly in contact with each plate of the pair of plates and in thermal contact with the wick.

(CX-1352C.0048 and CDX-0006C.64). Complainant also does not dispute that Buchberger discloses contact tabs. The dispute as to the invalidity of claim is therefore whether Buchberger discloses a wick as claimed and whether it would have been obvious to modify Buchberger's tabs to be folded. As set forth below, Mr. Flolid correctly testified that Buchberger does disclose a wick as claimed and it would have been obvious to modify Buchberger's tabs to be folded in view of known integrated circuit principles.

Resp. Br. at 14-15.

Buchberger alone does not render obvious claim 12 for at least two reasons. *See* CX-1352C (Collins Rebuttal WS) Q/A 10. First, Buchberger does not disclose or suggest claim element 12[g]. Second, Buchberger does not disclose or suggest claim element 12[i]. *See* CX-1352C (Collins Rebuttal WS) Q/A 170-171, 182.

Asserted claim 12 is recited below:

12. A cartridge for use with a vaporization device, the cartridge comprising:

a flattened body having a proximal end, a distal end opposite the proximal end, a longitudinal axis between the proximal end and the distal end, and a transverse axis that is perpendicular to and shorter than the longitudinal axis;

a reservoir within the flattened body and holding a vaporizable material;

a mouthpiece proximate to the proximal end of the flattened body;

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[e] a heater comprising:

[f] a pair of plates extending in a direction of the longitudinal axis,

[g] a wick extending along at least the transverse axis, at least a first portion of the wick disposed between the pair of plates, and at least a second portion of the wick disposed within the reservoir and in contact with the vaporizable material, and

[h] a resistive heating element directly in contact with each plate of the pair of plates and in thermal contact with the wick; and

[i] a pair of flat contact tabs integrally formed from the pair of plates and folded over an outer surface of the flattened body proximate to the distal end of the flattened body, the pair of flat contact tabs extending from the heater and configured to complete a circuit with the vaporization device when the distal end is inserted into the vaporization device.

JX-0001 ('568 Patent), claim 12.¹⁸

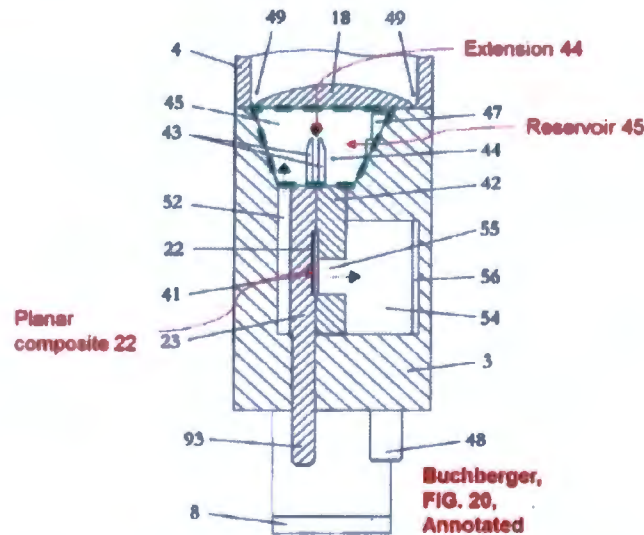
Claim 12[g]

Mr. Flolid opines that Buchberger's planar composite 22 corresponds to the wick recited in limitation 12[g], and then cites to two different embodiments (the embodiment disclosed in Figure 9 and the embodiment disclosed in Figures 26-28) for allegedly disclosing that a portion of planar composite 22 is disposed within a reservoir. *See* RX-0113 (Flolid WS) Q/A 73. Yet, neither embodiment disclose that a portion of composite 22 is disposed within a reservoir.

Regarding the first embodiment, Mr. Flolid opines that Buchberger's reservoir 45 corresponds to the claimed reservoir, and that Buchberger's plate-like contacts 23

¹⁸ JLI has given a letter designation for each element of the asserted independent claims. The letter designations used for the elements of this claim is different for infringement and validity analysis. The administrative law judge is adopting the different letter designations as appropriate.

correspond to the claimed pair of plates. *See* CX-1352C (Collins Rebuttal WS) Q/A 172-173. As shown in Figures 18 and 20, planar composite 22 is not disposed within reservoir 45. *See id.* at Q/A 177, 180.



RX-0107 (Buchberger), FIG. 20 (annotated).

Indeed, Mr. Flolid admitted that as shown in Figure 20, planar composite 22 is not within reservoir 45. Flolid Tr. 223-224. As shown above in RX-0107 (Buchberger), the liquid material 16 in reservoir 45 (in green) is channeled out to the planar composite 22 via the extension 44, which is formed by two plates. CX-1352C (Collins Rebuttal WS) Q/A 179; RX-0107 (Buchberger), ¶ [0139], FIGS. 18, 20. Planar composite 22 is not disposed within reservoir 45. Thus, the first embodiment of Buchberger does not disclose at least a second portion of the wick is disposed within a reservoir, as claimed.

Regarding the second embodiment in Figures 26-28, Mr. Flolid opines that component 84 is a reservoir. *See* RX-0113 (Flolid WS) Q/A 73; Flolid Tr. 231. Yet, component 84 is “an open-pored foam,” which is not a reservoir. *See* CX-1352C (Collins Rebuttal WS) Q/A 174; RX-0107 (Buchberger), [0147]. Indeed, a person of ordinary

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skill in the art would have understood that, if anything, reservoir 45 corresponds to the reservoir recited in claim limitation 12[g], not “reservoir 84” referenced by Mr. Flolid. *See* CX-1352C (Collins Rebuttal WS) Q/A 176-178. Even if foam 84 is considered a reservoir, as shown in Fig. 28, planar composite 22 is sandwiched between foam 84 and plate 23—planar composite 22 is not within foam 84. Thus, the second embodiment of Buchberger does not disclose at least a second portion of the wick is disposed within a reservoir, as claimed. Thus, Buchberger does not disclose claim limitation 12[g]. *See* CX-1352C (Collins Rebuttal WS) Q/A 180.

Claim 12[i]

Buchberger does not disclose or suggest limitation 12[i]. Mr. Flolid opines that Buchberger’s plug contacts 93 correspond to the claimed pair of flat contact tabs, inhalator component 2 corresponds to the claimed cartridge, and inhalator part 1 corresponds to the claimed vaporization device. *See* RX-0113 (Flolid WS) Q/A 75. He opines that modifying Buchberger’s plug contacts 93 to fold over the outer surface would have been obvious to a person of ordinary skill in the art in view of general integrated circuit packaging concepts. *See* CX-1352C (Collins Rebuttal WS) Q/A 182-183. The illustrations he uses to support his opinion, however, are not from any identified source. Additionally, combining integrated circuit concepts with Buchberger constitutes a separate 35 U.S.C. § 103 ground, for which Eonsmoke provides no analysis, motivation to combine, expectation of success, or other support.

Mr. Flolid admits that Buchberger does not explicitly disclose a pair of flat contact tabs that are folded over an outer surface, as required by the claim limitation. *See* Flolid Tr. 225-226. Instead, Mr. Flolid opines that modifying Buchberger’s plug contacts

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93 to fold over an outer surface would have been obvious to a person of ordinary skill in the art, “as this was a known way of forming electrical connections in integrated circuitry.” *See* RX-0113 (Flolid WS) Q/A 75; CX-1352C (Collins Rebuttal WS) Q/A 184. This is improper hindsight.

* * *

Additionally, the proposed modification is not obvious because: (1) the cited integrated circuit packaging concept is non-analogous art to the electrical connections in an ENDS device; (2) the cited art itself provides no reason to modify Buchberger in the proposed manner, and explicitly provides reasons not to do so; and (3) the proposed combination does not meet the claim limitation, even if implemented. *Id.* at Q/A 189.

Non-analogous Art

Art is analogous where either (a) the art is from the same field of endeavor as the claimed invention, or (b) even if the art is not within the same field of endeavor, the art is still reasonably pertinent to the particular problem with which the inventor is involved. *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004); *In re Oetiker*, 877 F.2d 1143, 1447 (Fed. Cir. 1992); CX-1352C (Collins Rebuttal WS) Q/A 190. The field of the claimed invention is “electronic inhalable aerosol devices including vaporization devices and cartridges configured for use with vaporization devices.” *See* JX-0001 (‘568 Patent), 1:36-40, 1:64-67, 2:1-4, 20:25-40. The claims are directed to this same field, “[a] cartridge for use with a vaporization device.” The contacts are used to convey enough power to the heater to vaporize the liquid. *See* CX-1352C (Collins Rebuttal WS) Q/A 191.

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For a reference to be “reasonably pertinent” to the problem with which the inventors are involved, it must logically have commended itself to the inventor’s attention in considering his problem. *In re Icon Health and Fitness, Inc.*, 496 F.3d 1374, 1379-80 (Fed. Cir. 2007); CX-1352C (Collins Rebuttal WS) Q/A 193. Integrated circuit packaging is unrelated to electronic inhalable aerosol devices. It has different problems, solutions, manufacturing processes, and other considerations compared with inhalable aerosol devices. *See* CX-1352C (Collins Rebuttal WS) Q/A 192. The ‘568 patent does not contemplate integrated circuitry packaging concepts, such as those cited by Mr. Flolid. It does not address techniques used to mount integrated circuits within the inhalable aerosol devices. *Id.*

On cross-examination, JLI’s expert Dr. Collins explained why integrated circuits are not analogous art, and also why one of skill in the art would not combine an integrated circuit with Buchberger to arrive at the folded-over contact tabs of the asserted claims:

So what do integrated circuits do? They are used for control of devices. And what is the electrical connection [in the claims]? It is for power conduction. So, no, integrated circuits do not convey meaningful power. As a matter of fact, they are supposed to use as little power as possible. So they conduct voltage signals as opposed to current, very different applications. As an engineer, I wouldn’t look to something that is only meant to convey a voltage to something that [] I need to convey significant power. That is one issue. The other issue is, you know, why are the tabs on the integrated circuits bent? Well, they are bent so that the tabs come out the side of the chip, and then they are bent down. And that allows you to axially insert an integrated circuit into a slot or a position where it can be surface-mounted. Well, in [] Buchberger [the tabs] are already pointing down, so there is no reason to bend them[. They already] work perfectly well being inserted into the device.

Collins Tr. 483-484.

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Dr. Collins also distinguished Buchberger and integrated circuits from the folded-over contact tabs recited in the asserted claims based on the role of the tabs in the overall integrated product:

[W]hat are [the folded-over contact] tabs doing? Again, multiple functions. So they are integrally connected to the plates, and they allow obviously electrical contact going from the battery into, through the plate to the heater.... But at the same time they are playing a significant role in the thermal management that they are dissipating heat [] that accumulate[s] into the plate down to the plates and away from the wick. So they are actively involved in thermal management. And also from a whole assembly perspective, that those plates are inserted and then those tabs are bent over, mechanically holding the heater assembly in place. So those are... all things that those tabs [] are doing.

Collins Tr. 481-482; *see also id.* at 477.

One of skill in the art therefore cannot merely pick and choose random components and attributes from disparate arts and combine them into an ENDS device without initiating a cascade of problems needing multifaceted solutions.

The Background section of the '568 patent describes that "the use of a cartridge at the proximal end of the device, which is also held by the user's mouth, particularly where the cartridge is held in the vaporizer device by a friction- or a snap-fit, may result in instability in the electrical contacts." JX-0001 ('568 Patent), 1:53-57. Another problem addressed is "[c]ontrol of the temperature of the resistive heater... based on the resistance of the resistive heating element." *Id.* at 1:40-43. Other problems addressed include cartridges "specifically adapted to be releasably but securely held within the cartridge-receiving opening of the vaporizer and resist disruption of the electrical contact with the controller and power supply in the vaporizer even when held by the user's mouth." *Id.* at 2:4-9. All of these problems are directed to delivering inhalable aerosol to a user in a

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reliable and consistent manner. *See* CX-1352C (Collins Rebuttal WS) Q/A 195.

The integrated circuit concept cited by Mr. Flolid is not reasonably pertinent to this problem. Rather, this concept lends itself to problems related to the packaging and mounting of integrated circuits, which are much different than the problems faced by the inventors of the '568 patent. Integrated circuits are not intended to be repeatedly connected and disconnected for replacement. Rather, integrated circuits are designed to be permanently connected to a printed circuit board. They are not intended to be replaced by consumers. *See id.* at Q/A 196.

To the extent that the '568 patent discloses integrated circuits, it is not to address problems relating to the packaging or mounting of the integrated circuits. Rather, the '568 patent discloses integrated circuits for controlling functionality of the electronic inhalable aerosol devices. *See id.* at Q/A 197. A person of ordinary skill in the art would not have looked to integrated circuit packaging concepts to solve the problems relating to electrical coupling of vaporization devices and corresponding cartridges. *See id.* at Q/A 198.

Reasons to Modify Buchberger

Even if the integrated circuitry art cited by Eonsmoke was analogous art, a person of ordinary skill in the art would not have modified Buchberger's plug contacts 93 as proposed by Mr. Flolid. There was no reason why a person of ordinary skill would have folded Buchberger's plug contacts 93. Mr. Flolid did not provide any reason for modifying Buchberger in view of the identified integrated circuit packaging concepts. *See* RX-0113 (Flolid WS) Q/A 75. He also did not describe how a person of ordinary skill would have implemented the modifications in Buchberger's inhalator component 2,

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or explain how the identified integrated circuitry concept would be implemented in Buchberger to modify plug contacts 93. As such, Mr. Flolid's opinion uses improper hindsight to reconstruct the claim from the blueprint provided by the inventors. A person of ordinary skill would not have modified Buchberger in the manner alleged. *See* CX-1352C (Collins Rebuttal WS) Q/A 188.

The cited references do not provide any reason to, and, in fact, provide reasons not to modify plug contacts 93 to fold over an outer surface of inhalator component 2. *Id.* at Q/A 199. The cited integrated circuitry shows integrated circuit pins or leads that are mechanically coupled to lateral sides of the integrated circuit housing and bent at a substantially right angle. *See* RX-0113 (Flolid WS) Q/A 75. The mere existence of integrated circuit pins bent at a right angle would not suggest to a person of ordinary skill to modify Buchberger's plug contacts 93 to fold over the outer surface. *See* RX-0107 (Buchberger), FIGS. 2, 6, 8. Doing so would have removed the secure mechanical connection between the plug contacts 93 and the spring contacts 94, thus lessening the mechanical stability of the inhalator device. *See* CX-1352C (Collins Rebuttal WS) Q/A 200.

The circuit in Buchberger is completed between component 2 and inhalator part 1 when plug contacts 93 and spring contact 94 are coupled. Plug contacts 93 are specifically configured to insert into spring contacts 94 to secure the connection between component 2 and inhalator part 1. *See id.* at Q/A 201. Therefore, in addition to providing the mechanism necessary to complete the circuit between component 2 and inhalator part 1, the configuration of plug contacts 93 also adds a further mechanical connection that helps to secure the inhalator device. A person of ordinary skill would

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have recognized the mechanical, structural, and dimensional differences of Buchberger's inhalator component 2 and inhalator part 1, and would not have sought to modify Buchberger using these integrated circuit packaging concepts. *See id.*; RX-0107 (Buchberger), FIG. 6 (annotated above).

Furthermore, folding the plug contacts 93 over the outer surface of the inhalator component 2 would render the inhalator device inoperable. *See* RX-0107 (Buchberger), FIG. 6 (excerpt) (annotated above). It would misalign plug contacts 93 relative to spring contacts 94 such that plug contacts 93 would no longer be able to couple with spring contacts 94 to complete the circuit between the inhalator component 2 and the inhalator part 1. A person of ordinary skill would have realized this, and thus would not modify the plug contacts 93 to fold over the outer surface. *See* CX-1352C (Collins Rebuttal WS) Q/A 202-204.

The Proposed Combination

Finally, inasmuch as modifying plug contacts 93 to fold over the outer surface would have prevented the coupling of plug contacts 93 and spring contacts 94, and thus would have prevented the completion of the circuit, the proposed modification would not meet limitation 12[i], which requires that "the pair of flat contact tabs [are] configured to complete a circuit with the vaporization device when the distal end is inserted..." *See id.* at Q/A 205.

Buchberger, with or without Mr. Flolid's proposed modification, does not disclose "the pair of flat contact tabs configured to complete a circuit with the vaporization device *when the distal end is inserted into the vaporization device*" because the distal end of Buchberger's inhalator component 2 is not "inserted into" Buchberger's

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inhalator part 1, as required by claim limitation 12[i]. *Id.* at Q/A 206. Mr. Flolid points to Buchberger's inhalator component 2 as corresponding to the claimed cartridge, and its inhalator part 1 as corresponding to the claimed vaporization device. *See* RX-0113 (Flolid WS) Q/A 75; RX-0107 (Buchberger), FIGS. 2, 8 (annotated above), 6 (excerpt) (annotated above). Inhalator component 2 is configured to engage with inhalator part 1 by fitting onto *and over* inhalator part 1, not by inserting into inhalator part 1. *See* CX-1352C (Collins Rebuttal WS) Q/A 207.

Buchberger's disclosure that plug contacts 93 of inhalator component 2 are inserted into spring contacts 94 of inhalator part 1 does not support Mr. Flolid's opinion for two reasons. *See* CX-1352C (Collins Rebuttal WS) Q/A 208. First, Mr. Flolid's proposed modification of folding plug contacts 93 over the outer surface of inhalator component 2 would prevent plug contacts 93 from being inserted into spring contacts 94. *Id.* at Q/A 209. Second, even if Mr. Flolid's proposed modification would allow for the insertion of the plug contact 93 into the spring contact 94, the proposed modification would still not meet the claim limitation. *See* RX-0107 (Buchberger), FIG. 6 (excerpt) (annotated above). A person of ordinary skill in the art would have understood that the insertion of plug contacts 93 into spring contacts 94 does not constitute an insertion of the distal end of inhalator component 2 into inhalator part 1, inasmuch as the plate-like contacts 23 protrude out of the outer surface of the housing 3 of inhalator component 2. *See* RX-0107 (Buchberger), ¶ [0148]; CX-1352C (Collins Rebuttal WS) Q/A 210-212; RX-0107 (Buchberger), FIG. 6 (excerpt) (annotated above). Buchberger therefore does not render obvious claim 12 of the '568 patent.

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Dependent Claim 17

Eonsmoke argues:

Buchberger does not expressly disclose the mouthpiece being coupled to the flattened body by a snap-fit coupling. However, snap-fit couplings were notoriously well known and it would have been obvious to modify *Buchberger* to include such a coupling. (RX-0113.0031).

As examples, *Buchberger* teaches snap-in hooks 8 and latching lugs 9, which provide a “snap connection” while still permitting selective detachment. *Tucker* also acknowledges that a snap-fit is a known coupling technique, such as at paragraph 0089. (RX-0109.0017, para. 0089). Accordingly, a POSA would have been aware of these very basic mechanical principles and would have found it obvious to modify *Buchberger* to include the claimed snap-fit arrangement. (RX-0113.0031, Q/A 77).

Further, as Mr. Flolid testified, snap-fits can provide a separable or non-separable connection. (Hearing Tr., 316:13-18).

Resp. Br. at 20-21.

Asserted claim 17 is recited below:

17. The cartridge of claim 12, wherein the mouthpiece is coupled to the flattened body with a snap-fit coupling.

JX-0001 (‘568 Patent), claim 17.

Mr. Flolid admits that *Buchberger* does not expressly disclose that its mouthpiece is coupled to inhalator component 2 by a snap-fit coupling, as required by claim 17. *See* RX-0113 (Flolid WS) Q/A 77. Mr. Flolid opines that it would have been obvious to modify *Buchberger* to implement the snap-fit coupling because “snap-fit couplings are notoriously well known.” *Id.* Mr. Flolid opines that *Buchberger* “teaches snap-in hooks 8 and latching lugs 9, which provide a ‘snap connection’ while still permitting selective detachment.” *Id.* Mr. Flolid also points to *Tucker* as an example of a snap-fit coupling. *Id.* Mr. Flolid has not provided, however, a sufficient explanation supporting a

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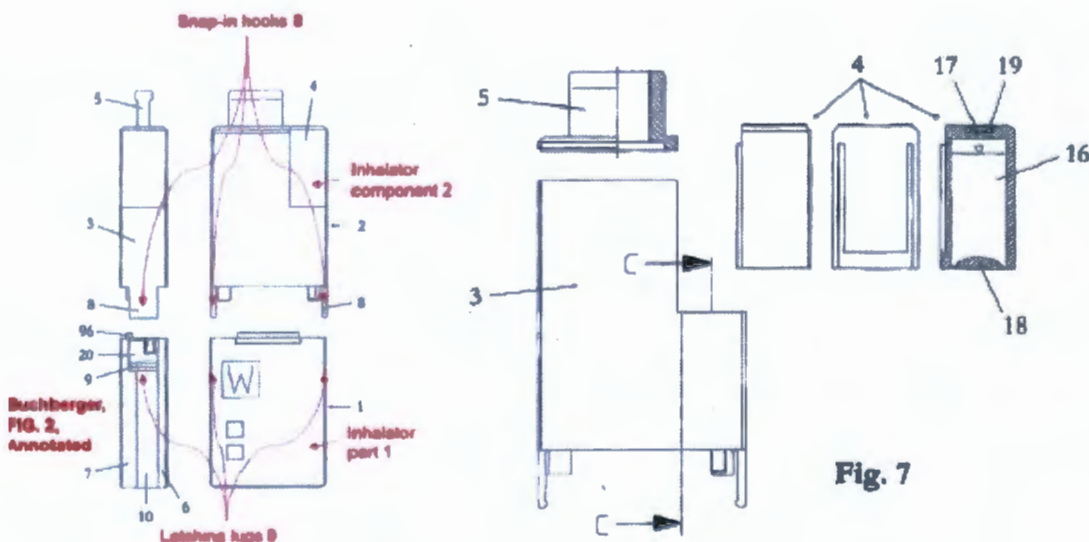
motivation to combine Buchberger and Tucker in the proposed manner, nor has he set forth adequate explanations as to why a person of ordinary skill in the art would have had a reasonable expectation of success in doing so. *See* CX-1352C (Collins Rebuttal WS) Q/A 243. Eonsmoke did not brief the combination of Buchberger and Tucker as a separate ground of obviousness and has therefore waived reliance on Tucker for this limitation.

Additionally, Mr. Flolid has not provided a sufficient explanation supporting a motivation to modify Buchberger in the proposed manner, nor has Mr. Flolid set forth adequate explanations as to why a person of ordinary skill in the art would have had a reasonable expectation of success in doing so. *See* CX-1352C (Collins Rebuttal WS) Q/A 215-217. His arguments are based on impermissible hindsight. *See id.* In particular, Mr. Flolid did not explain how Buchberger's mouthpiece 5 would have been modified to implement the snap-fit coupling, or how inhalator housing 3 would have been modified to engage mouthpiece 5 for the snap-fit coupling. Mr. Flolid did not explain how the modified device would disclose or render obvious claim 17. To the contrary, a person of ordinary skill in the art would not have modified Buchberger so that the mouthpiece is coupled via a snap-fit coupling in the manner proposed. *See id.* at Q/A 218.

Buchberger states that the mouthpiece is "connected nonseparably to the housing 3" of inhalator component 2. *See* RX-0107 (Buchberger), ¶ [0113]. Buchberger further explains that "[i]t is favorable in terms of production to manufacture the liquid container 4 and the mouthpiece 5 as separate parts and only to connect said parts subsequently to the housing 3, for example by an adhesive bonding or welding connection.... In

principle, of course, it is also conceivable to form the liquid container 4 or/and the mouthpiece 5 integrally with the housing 3.” *See id.* Thus, Buchberger specifically describes a nonseparable connection of the mouthpiece. *See CX-1352C (Collins Rebuttal WS) Q/A 219.* A person of ordinary skill would have understood that this nonseparable connection would have provided a seal to prevent the inhalable aerosol from leaking at the mouthpiece coupling. A person of ordinary skill in the art, having read Buchberger, would not have sought to modify the mouthpiece to form a separable connection (e.g. snap-fit) because Buchberger reveals specific advantages of a nonseparable connection. *See id.* at Q/A 220.

Mr. Flolid points to Buchberger’s snap-in hooks 8 and latching lugs 9 as an example of a snap-fit coupling that could be implemented in the mouthpiece 5. However, this snap-fit coupling technique is incompatible with the mouthpiece 5. *See id.* at Q/A 221.



RX-0107 (Buchberger), FIGS. 2 (annotated), 7.

Inhalator component 2 is coupled to inhalator part 1 via the snap-in hooks 8 and

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latching lugs 9. *See* RX-0107 (Buchberger), FIGS. 2 (annotated), 7. The snap-in hooks are carried by cantilevers that extend past the bottom surface on each lateral side of inhalator component 2. The cantilevers fit over inhalator part 1 to engage with the latching lugs 9. Buchberger describes that the snap-in hooks 8 couple with the latching lugs 9 by fitting onto and over the exterior housing wall. *See* CX-1352C (Collins Rebuttal WS) Q/A 222. Coupling mouthpiece 5 using this technique would include implementing snap-in hooks 8 to extend from the sides of the mouthpiece, and implementing corresponding latching lugs 9 on the lateral walls of housing 3 proximate to mouthpiece 5. *See id.* at Q/A 223. Doing this, however, would interfere with the coupling of liquid container 4. With this understanding, a person of ordinary skill in the art would not have sought to modify Buchberger's mouthpiece to couple using the snap-in hooks 8 and latching lugs 9. Buchberger thus does not render obvious claim 17 of the '568 patent. *See id.* at Q/A 224.

Independent Claim 20

Eonsmoke argues, *inter alia*:

Juul does not dispute that Buchberger discloses the following features of claim 20:

- An apparatus comprising:
- a vaporizer body comprising:
- a power source;
- a cartridge comprising:
- a flattened body having a proximal end, a distal end opposite the proximal end, a longitudinal axis between the proximal end and the distal end, and a transverse axis that is perpendicular to and shorter than the longitudinal axis;
- a mouthpiece proximate to the proximal end of the flattened body;

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- a reservoir within the flattened body, the reservoir configured to hold a vaporizable material;
- a pair of plates extending in a direction of the longitudinal axis;
- a wick extending along at least the transverse axis, at least a first portion of the wick disposed between the pair of plates;
- a resistive heating element in contact with the pair of plates and the wick, wherein at least a second portion of the wick is configured to contact the vaporizable material when the vaporizable material is present; and
- a pair of flat contact tabs integrally formed from the pair of plates.

(CX-1352C.0063; CDX-0006C.72; Hearing Tr. 476:14-18). The dispute for claim 20 is therefore whether Buchberger discloses a cartridge receptacle with a pair of contacts within the cartridge receptacle and whether it would have been obvious to fold Buchberger's tabs. Mr. Flolid correctly testified that Buchberger does disclose a cartridge receptacle and that the folded tabs would have been obvious to the POSA.

Resp. Br. at 21.

Asserted claim 20 is recited below:

20. [p] An apparatus comprising:

[a] a vaporizer body comprising:

[b] a power source;

[c] a cartridge receptacle; and

[d] a pair of contacts within the cartridge receptacle; and

[e] a cartridge comprising:

[f] a flattened body having a proximal end, a distal end opposite the proximal end, a longitudinal axis between the proximal end and the distal end, and a transverse axis that is perpendicular to and shorter than the longitudinal axis;

[g] a mouthpiece proximate to the proximal end of the flattened body;

[h] a reservoir within the flattened body, the reservoir configured to hold a vaporizable material;

[i] a pair of plates extending in a direction of the longitudinal axis;

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[j] a wick extending along at least the transverse axis, at least a first portion of the wick disposed between the pair of plates;

[k] a resistive heating element in contact with the pair of plates and the wick, wherein at least a second portion of the wick is configured to contact the vaporizable material when the vaporizable material is present; and

[l] a pair of flat contact tabs integrally formed from the pair of plates and folded over an outer surface of the flattened body proximate to the distal end of the flattened body, the pair of flat contact tabs configured to complete a circuit with the pair of contacts and the power source when the distal end is inserted into the cartridge receptacle.

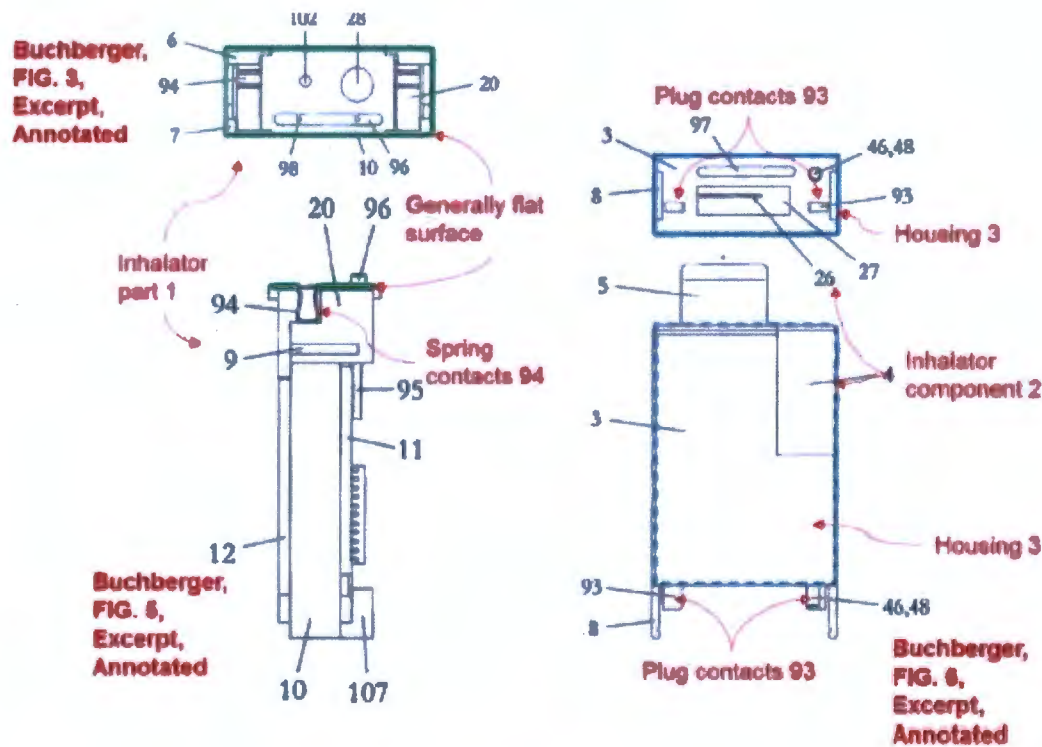
JX-0001 ('568 Patent), claim 20.¹⁹

As discussed below, Buchberger does not disclose claim limitations 20[c], 20[d], and 20[l]. See CX-1352C (Collins Rebuttal WS) Q/A 225-226, 232, 235.

Claim 20[c]

Buchberger does not disclose claim limitation 20[c] because it does not disclose “a cartridge receptacle.” *Id.* at Q/A 226-227; RX-0107 (Buchberger), FIGS. 3, 5, 6 (excerpt) (annotated below).

¹⁹ JLI has given a letter designation for each element of the asserted independent claims. The letter designations used for the elements of this claim is different for infringement and validity analysis. The administrative law judge is adopting the different letter designations as appropriate.



RX-0107 (Buchberger), FIGS. 3, 5-6 (excerpt) (annotated).

Mr. Flolid opines that Buchberger's cavities in inhalator part 1 that hold spring contacts 94 correspond to the claimed cartridge receptacle. *See* RX-0113 (Flolid WS) Q/A 80.

Mr. Flolid's opinion here is incorrect. *See* CX-1352C (Collins Rebuttal WS) Q/A 227.

As discussed for claim limitation 12[i], plug contacts 93 of inhalator component 2 are inserted into the cavities holding spring contacts 94 of inhalator part 1 to complete the circuit between component 2 and part 1. *See id.* at Q/A 228. The cavities holding spring contacts 94 do not correspond to the claimed cartridge receptacle because the cavities are not configured to receive a cartridge, as required by claim limitation 20[c]. Rather, the cavities are merely electrical contact receptacles configured to receive electrical contacts. *See id.* at Q/A 229.

Buchberger describes that plug contacts 93 protrude out of the outer surface of the

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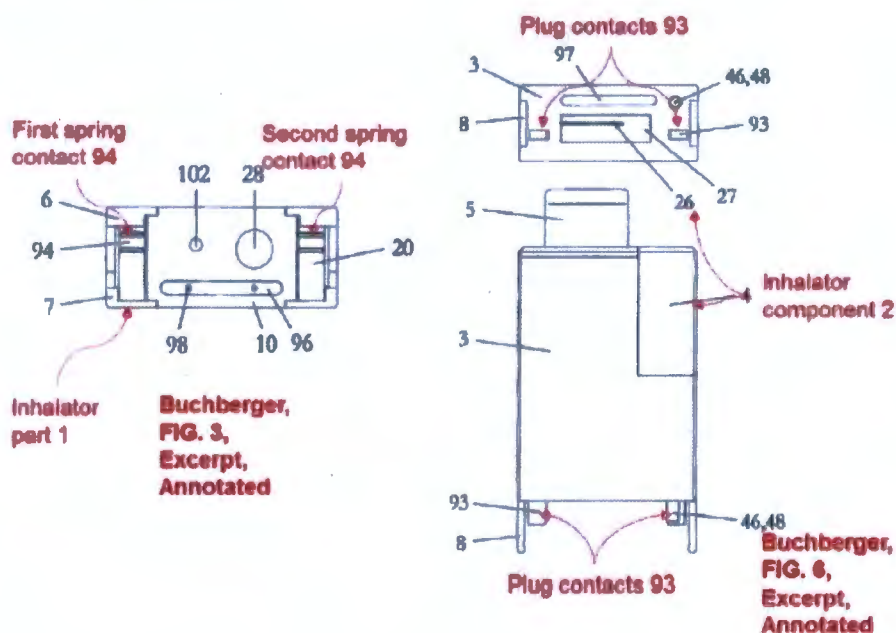
housing 3 of inhalator component 2. *See* RX-0107 (Buchberger), ¶ [0148]; RX-0107 (Buchberger), FIGS. 3, 5-6 (excerpt) (annotated above). When inhalator component 2 is coupled to inhalator part 1, plug contacts 93 are received within the spring contact 94 cavities. Housing 3 of inhalator component 2, which is outlined in blue, is positioned adjacent to and generally flush with the top end of inhalator part 1, which is outlined in green. RX-0107 (Buchberger), FIGS. 3, 5-6 (excerpt) (annotated above). Therefore, a person of ordinary skill in the art would have understood the difference between a cartridge receptacle, as claimed, and an electrical contact receptacle, like spring contact 94. Buchberger thus does not include a cartridge receptacle. CX-1352C (Collins Rebuttal WS) Q/A 230.

Mr. Flolid's proposed modification of folding plug contacts 93 over the outer surface of inhalator component 2 would misalign plug contacts 93 and spring contacts 94, and would thus prevent plug contacts 93 from being inserted into spring contacts 94. As a result, Mr. Flolid's modification would render the device incapable of having any portion of inhalator component 2 inserted into inhalator part 1. The modified spring contact 94 cavities would not be receptacles of any kind, because they would not receive any portion of inhalator component 2. *Id.* at Q/A 231.

Claim 20[d]

Buchberger does not disclose claim limitation 20[d], because it has no "pair of contacts within the cartridge receptacle." *Id.* at Q/A 232. Mr. Flolid opines that Buchberger's spring contacts 94 correspond to the claimed pair of contacts. RX-0113 (Flolid WS) Q/A 81. Mr. Flolid is erroneous. CX-1352C (Collins Rebuttal WS) Q/A 233. As described with respect to claim limitation 20[c], Buchberger does not include the

claimed cartridge receptacle.



RX-0107 (Buchberger), FIGS. 3, 6 (excerpt) (annotated).

Even if it did, Buchberger would not disclose a pair of contacts within the cartridge receptacle, because claim limitation 20[d] requires that *two* electrical contacts are located within a single cartridge receptacle. *See* RX-0107 (Buchberger), FIGS. 3, 6 (excerpt) (annotated above). The proposed corresponding components—spring contacts 94—are not both within a single cartridge receptacle. CX-1352C (Collins Rebuttal WS) Q/A 234. Rather, each spring contact 94 is disposed within a separate and distinct cavity on opposite sides of inhalator part 1. *Id.* Plug contacts 93 are then separately received within each cavity. RX-0107 (Buchberger), ¶ [0148].

Claim 20[i]

Buchberger does not disclose claim limitation 20[i]. CX-1352C (Collins Rebuttal WS) Q/A 235; RX-0113 (Flolid WS) Q/A 75; RX-0107 (Buchberger), FIGS. 2, 8 (annotated above), 6 (excerpt) (annotated above). In discussing this integrally formed,

folded-over contact tabs limitation, Mr. Flolid cross-references his analysis in claim 12[i]. RX-0113 (Flolid WS) Q/A 89. His analysis therefore is erroneous for the same reasons discussed above for limitation 12[i]. CX-1352C (Collins Rebuttal WS) Q/A 236; *compare* CDX-0006C.0067-.0069 *with id.* at .0075-.0077 (Collins Rebuttal Demonstrative). Buchberger thus does not disclose claim 20. *See* CX-1352C (Collins Rebuttal WS) at Q/A 237.

2. Buchberger (RX-0107) and Qiu (RX-0108)

Respondent Eonsmoke argues that Buchberger (RX-0107) in combination with Qiu (RX-0108) renders obvious claims 12, 17 and 20 of the '568 patent. *See* Resp. Br. at 26-40.

Independent Claim 12

Eonsmoke argues, *inter alia*:

Complainant does not dispute that *Qiu* discloses:

- A cartridge for use with a vaporization device, the cartridge comprising:
- a flattened body having a proximal end, a distal end opposite the proximal end, a longitudinal axis between the proximal end and the distal end, and a transverse axis that is perpendicular to and shorter than the longitudinal axis;
- a reservoir within the flattened body and holding a vaporizable material;
- a mouthpiece proximate to the proximal end of the flattened body.

(CX-1352C.0067 and CDX-0006C.82). The dispute is therefore whether it would have been obvious over *Buchberger* to include a heater and folded tabs as claimed. As set forth below, Mr. Flolid correctly testified that this modification would have been obvious.

Resp. Br. at 26-27.

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Asserted claim 12 is recited below:

12. A cartridge for use with a vaporization device, the cartridge comprising:

a flattened body having a proximal end, a distal end opposite the proximal end, a longitudinal axis between the proximal end and the distal end, and a transverse axis that is perpendicular to and shorter than the longitudinal axis;

a reservoir within the flattened body and holding a vaporizable material;

a mouthpiece proximate to the proximal end of the flattened body;

[e] a heater comprising:

[f] a pair of plates extending in a direction of the longitudinal axis,

[g] a wick extending along at least the transverse axis, at least a first portion of the wick disposed between the pair of plates, and at least a second portion of the wick disposed within the reservoir and in contact with the vaporizable material, and

[h] a resistive heating element directly in contact with each plate of the pair of plates and in thermal contact with the wick; and

[i] a pair of flat contact tabs integrally formed from the pair of plates and folded over an outer surface of the flattened body proximate to the distal end of the flattened body, the pair of flat contact tabs extending from the heater and configured to complete a circuit with the vaporization device when the distal end is inserted into the vaporization device.

JX-0001 ('568 Patent), claim 12.

Claim 12[e]

Mr. Flolid does not show that Qiu and Buchberger disclose claim limitations 12[e], 12[f], 12[g], 12[h], and 12[i]. *See* CX-1352C (Collins Rebuttal WS) Q/A 247. First, Mr. Flolid did not demonstrate that Qiu combined with Buchberger discloses the heater recited in claim limitation 12[e] of the '568 patent. *See id.* at Q/A 248. Mr. Flolid

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opines that “Qiu discloses a heater 311.” *See* RX-0113 (Flolid WS) Q/A 94. He then opines that Buchberger also discloses a heating element (composite 22), which could be included in Qiu as a simple substitution of one known heater for another. *See id.* at Q/A 71, 95. This theory appears to be inconsistent with his expert report. *See* CX-1352C (Collins Rebuttal WS) Q/A 250. Additionally, Mr. Flolid has not described how Qiu’s atomizer would be modified in implementing Buchberger’s planar composite 22, or how the modified device would operate. *See id.* at Q/A 251.

Claim 12[f]

Qiu combined with Buchberger does not disclose claim limitation 12[f]. *See id.* at Q/A 252. Mr. Flolid opines that Qiu combined with Buchberger discloses “a pair of plates extending in a direction of the longitudinal axis.” *See* RX-0113 (Flolid WS) Q/A 95. In particular, he argues that a person of ordinary skill in the art would have modified Qiu’s atomizer with Buchberger’s plate-like contacts 23, which he opines correspond to the claimed pair of plates, “as a simple substitution of one known electrical component connection method (the plates 23 of Buchberger) for another (the existing contacts 331 and wire of Qiu).” *See id.*

These positions are newly raised in his witness statement, and Mr. Flolid has not provided a sufficient explanation supporting a motivation to combine the cited references, or a reasonable expectation of success in doing so. Specifically, Mr. Flolid does not explain how the proposed modification would or could have been implemented, or how Qiu (as modified) would have operated. *See* CX-1352C (Collins Rebuttal WS) Q/A 255-257. Additionally, Mr. Flolid does not address the numerous elements in Qiu—including contacts 331 and wire—that would need to either be modified or removed in order to

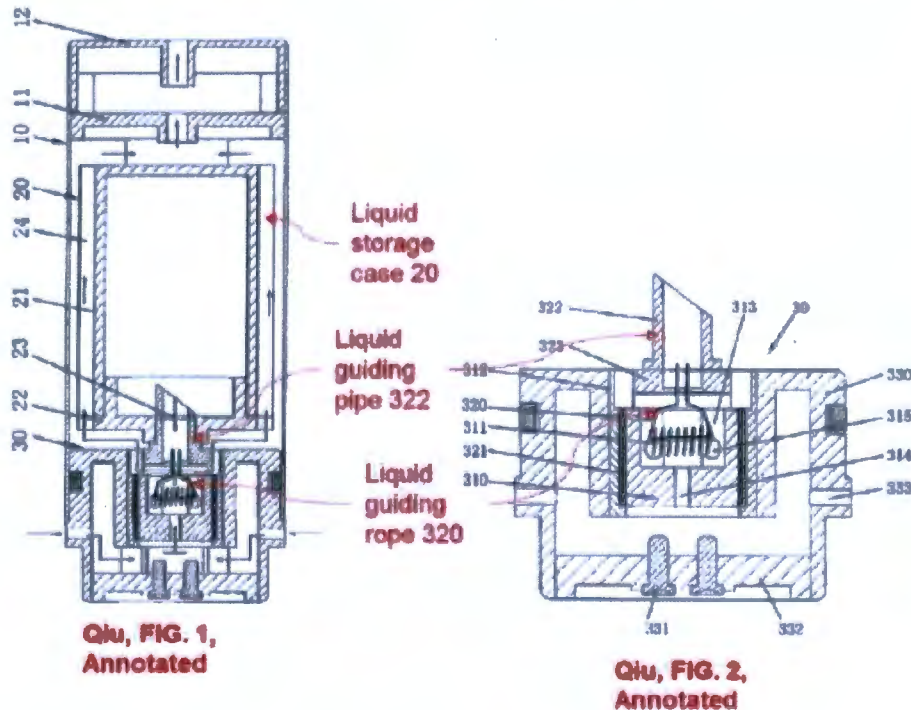
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accommodate Buchberger's plate-like contacts 23. *See* CX-1352C (Collins Rebuttal WS) Q/A 255-257.

Claim 12[g]

Qiu combined with Buchberger also does not disclose claim limitation 12[g]. *Id.* at Q/A 258. Mr. Flolid opines that Qiu's liquid guiding rope 320 and Buchberger's planar composite 22 each correspond to the claimed wick. *See* RX-0113 (Flolid WS) Q/A 96. Mr. Flolid opines that liquid storage case 20 is the claimed reservoir: "Qiu discloses a reservoir, labeled as 20, within the flattened body . . ." *See* RX-0113 (Flolid WS) Q/A 92; Flolid Tr. 277.

Yet, Qiu's liquid guiding rope 320 is not disposed within liquid storage case 20, which Mr. Flolid opines corresponds to the claimed reservoir. *Id.* at Q/A 263.



RX-0108 (Qiu), FIGS. 1-2 (annotated).

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Instead, a portion of Qiu's liquid guiding rope 320 is wound onto heater 311, while the two ends of liquid guiding rope 320 are disposed within the liquid guiding pipe 322. *See* CX-1352C (Collins Rebuttal WS) Q/A 264. No portion of Qiu's liquid guiding rope 320 is disposed within Qiu's liquid storage case 20. Mr. Flolid admitted at the hearing that Qiu's liquid guiding rope 320 is not disposed in liquid storage case 20. Flolid Tr. 243, 276.

As discussed above for claim limitation 12[g] in Ground 1, Buchberger does not disclose a wick disposed in a reservoir. *See* CX-1352C (Collins Rebuttal WS) Q/A 259-260. Even if it did, Mr. Flolid has not provided a motivation to modify Qiu to include that wick, nor has Mr. Flolid explained why a person of ordinary skill in the art would have had a reasonable expectation of success in doing so. It remains unclear how Qiu's atomizer would have been modified to implement Buchberger's wick and/or reservoir. *Id.* at Q/A 262.

The combination of Qiu and Buchberger thus does not disclose or suggest claim limitation 12[g]. CX-1352C (Collins Rebuttal WS) Q/A 264.

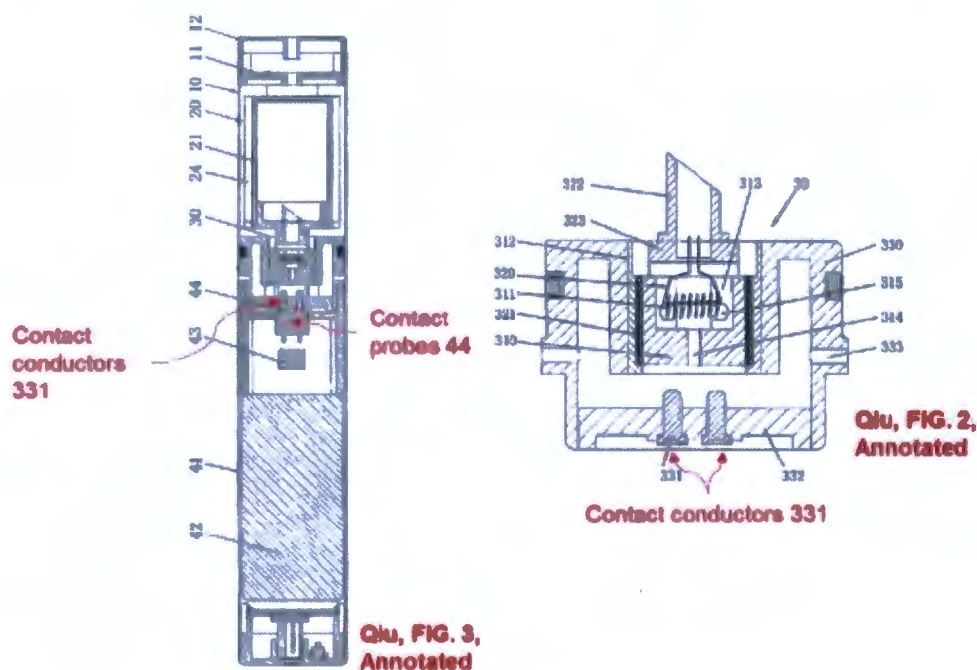
Claim 12[h]

Qiu combined with Buchberger further does not disclose claim limitation 12[h]. *See id.* at Q/A 265. Mr. Flolid opines that Qiu's heater 311 corresponds to the claimed heating element, that liquid guiding rope 320 corresponds to the claimed wick, and that Buchberger's plate-like contacts 23 correspond to the claimed wick. *See* RX-0113 (Flolid WS) Q/A 96-97. To the extent that Mr. Flolid is arguing that implementing Buchberger's wick in Qiu would have been obvious, Mr. Flolid has not provided a sufficient explanation supporting a motivation to modify Qiu in the proposed manner, or

a reasonable expectation of success in doing so. Mr. Flolid did not explain how Qiu's atomizer would implement Buchberger's wick, or how the modified device would satisfy claim limitation 12[h]. See CX-1352C (Collins Rebuttal WS) Q/A 268.

Claim 12[i]

The combination of Qiu and Buchberger does not disclose limitation 12[i]. See *id.* at Q/A 269. A person of ordinary skill in the art reading Buchberger would not modify plug contacts 93 in the manner proposed by Mr. Flolid as discussed above for claim limitation 12[i] in Ground 1. Qiu likewise does not provide any reason to modify a Qiu device combined with Buchberger's plug contacts 93 and, in fact, provides specific reasons not to modify a Qiu device combined with Buchberger's plug contacts 93 in the manner proposed by Mr. Flolid. *Id.* at Q/A 270. Specifically, the contact conductors 331 have indentations or access holes configured to receive the contact probes 44.



RX-0108 (Qiu), FIGS. 2-3 (annotated).

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When Qiu's atomizer 330 is inserted into the power supply housing 41, the contact probes 44 are inserted into the respective access holes of the contact conductors 331. This allows for a secure electrical and mechanical coupling between the power supply and the atomizer 330. *See* CX-1352C (Collins Rebuttal WS) Q/A 271-272. Qiu describes contact conductors 331 disposed within a contact conductor base 332, and configured to couple the heater in the atomizing device 30 to the fuel cell 42 in Qiu's power supply. *See* RX-0108 (Qiu), ¶¶ [0036]-[0037].

Buchberger's modified plug contacts 93, as implemented in Qiu's modified atomizer 330, would protrude out of and fold over the bottom end of the atomizer 330. *See* CX-1352C (Collins Rebuttal WS) Q/A 273. Implementing Buchberger's modified plug contacts 93 would prevent proper mechanical and electrical coupling of the power supply of atomizer 330. *Id.* In particular, Buchberger's modified plug contacts would not have access holes in which contact probes 44 would be received, so the electrical coupling would be unsecure and unreliable. Further, the protrusion of plug contacts 93 past the bottom end of the atomizer 330 would prevent the atomizer 330 from being inserted into the power supply housing 41 to secure the mechanical connection between the power supply and atomizer 330. Qiu combined with Buchberger thus does not render obvious limitation 12[i]. Qiu and Buchberger therefore do not disclose claim 12 of the '568 patent. *See id.* at Q/A 274.

Dependent Claim 17

Eonsmoke argues:

Qiu does not expressly teach that its mouthpiece is snap-fit to the flattened body. But snap-fit couplings were notoriously well known, and thus it would have been obvious to modify *Qiu* in view of *Buchberger* to

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include such an arrangement. (RX-0113.0046, Q/A 99).

Buchberger teaches snap-in hooks 8 and latching lugs 9, which provide a “snap connection” while still permitting selective detachment. *Tucker* also acknowledges that a snap-fit is a known coupling technique at paragraph 0089. (RX-0109.0019). A POSA would therefore have found it obvious to modify *Qiu* in view of *Buchberger* to include the claimed snap-fit arrangement. (RX-0113.0046, Q/A 99).

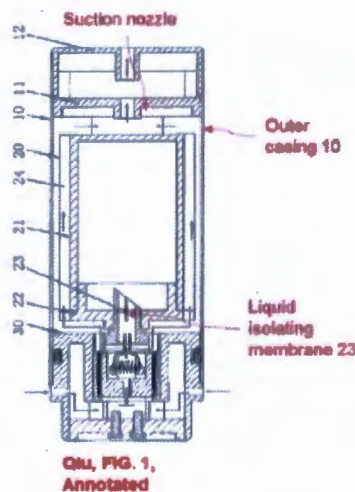
Resp. Br. at 33.

Mr. Flolid opines that *Qiu* combined with *Buchberger* discloses claim 17 because *Qiu*’s suction nozzle corresponds to the claimed mouthpiece, and that it would have been obvious to a person of ordinary skill to modify *Qiu*, as evidenced by *Buchberger*, to include snap fit coupling. *See* RX-0113 (Flolid WS) Q/A 77. Mr. Flolid admits that *Qiu* does not expressly disclose that its mouthpiece is coupled via a snap-fit coupling, but opines that it would have been obvious to modify *Qiu* because “snap-fit couplings were notoriously well-known,” and thus it would have been obvious to modify *Buchberger* to include such an arrangement. *See* RX-0113 (Flolid WS) Q/A 77, 99. Mr. Flolid opines that *Buchberger* “teaches snap-in hooks 8 and latching lugs 9, which provide a ‘snap connection’ while still permitting selective detachment.” *See id.*

Mr. Flolid has not provided a sufficient explanation supporting a motivation to modify *Qiu* in the proposed manner, nor has Mr. Flolid set forth adequate explanations as to why a person of ordinary skill would have had a reasonable expectation of success in doing so. *See* CX-1352C (Collins Rebuttal WS) Q/A 279. Specifically, Mr. Flolid has not explained how *Qiu*’s suction nozzle would have been modified to implement the snap-fit coupling. To the contrary, a person of ordinary skill would not have modified *Qiu* so that the mouthpiece is coupled via a snap-fit coupling in the manner proposed.

See id. at Q/A 280.

Qiu describes that its suction nozzle is inserted into the outer casing 10 so that it may couple with and puncture the liquid isolating membrane 23 of the liquid storage case 20. *See* RX-0108 (Qiu), ¶ [0029], FIG. 1.



RX-0108 (Qiu), FIG. 1 (annotated).

Mr. Flolid did not explain how casing 10 would have been modified to implement the snap fit coupling. A person of ordinary skill would not have sought to modify Qiu's suction nozzle using Buchberger's snap-in hooks 8 and latching lugs 9 because these components are not used to couple the mouthpiece. *See* CX-1352C (Collins Rebuttal WS) Q/A 281. Rather, Buchberger describes that its mouthpiece 5 is connected nonseparably to the housing 3 of inhalator component 2 using, for instance, an adhesive bonding or welding connection. *See* RX-0107 (Buchberger), ¶ [0113]. The snap-in hooks 8 and latching lugs 9 are used to couple inhalator part 1 to inhalator component 2. A person of ordinary skill would not have looked to these unrelated structures to modify Qiu's suction nozzle. *See* CX-1352C (Collins Rebuttal WS) Q/A 282. Moreover, Qiu's

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suction nozzle is positioned within the outer casing 10, where it would not make sense to use Buchberger's snap-in hooks 8 and latching lugs 9. *Id.* at Q/A 283. Qiu combined with Buchberger thus does not render obvious claim 17. *Id.* at Q/A 284.

Independent Claim 20

Eonsmoke argues, *inter alia*:

Juul does not dispute that *Qiu* discloses the following features of claim 20:

- An apparatus comprising:
- a vaporizer body comprising:
- a power source
- a cartridge receptacle; and
- a pair of contacts within the cartridge receptacle; and
- a cartridge comprising:
- a flattened body having a proximal end, a distal end opposite the proximal end, a longitudinal axis between the proximal end and the distal end, and a transverse axis that is perpendicular to and shorter than the longitudinal;
- a mouthpiece proximate to the proximal end of the flattened body;
- a reservoir within the flattened body, the reservoir configured to hold a vaporizable material.

(CX-1352C.0076 and CDX-0006C.93). The dispute under this invalidity theory for claim 20 is therefore whether it would have been obvious over *Buchberger* to modify *Qiu* to have the heater and tabs of claim 20. Mr. Flolid correctly testified that this would have been an obvious modification.

Resp. Br. at 33-34.

Asserted claim 20 is recited below:

20. [p] An apparatus comprising:
- [a] a vaporizer body comprising:
 - [b] a power source;
 - [c] a cartridge receptacle; and
 - [d] a pair of contacts within the cartridge receptacle; and

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[e] a cartridge comprising:

[f] a flattened body having a proximal end, a distal end opposite the proximal end, a longitudinal axis between the proximal end and the distal end, and a transverse axis that is perpendicular to and shorter than the longitudinal axis;

[g] a mouthpiece proximate to the proximal end of the flattened body;

[h] a reservoir within the flattened body, the reservoir configured to hold a vaporizable material;

[i] a pair of plates extending in a direction of the longitudinal axis;

[j] a wick extending along at least the transverse axis, at least a first portion of the wick disposed between the pair of plates;

[k] a resistive heating element in contact with the pair of plates and the wick, wherein at least a second portion of the wick is configured to contact the vaporizable material when the vaporizable material is present; and

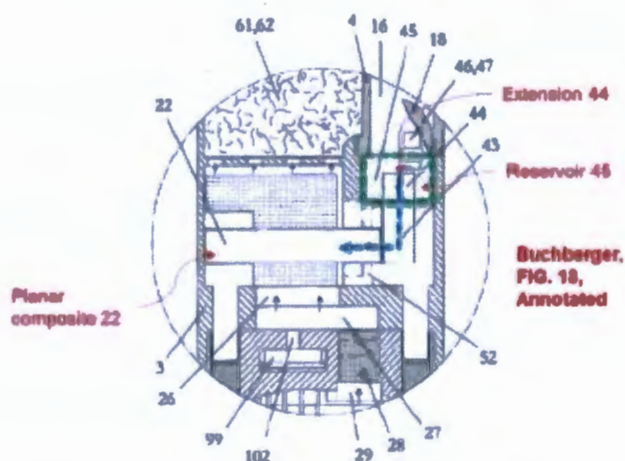
[l] a pair of flat contact tabs integrally formed from the pair of plates and folded over an outer surface of the flattened body proximate to the distal end of the flattened body, the pair of flat contact tabs configured to complete a circuit with the pair of contacts and the power source when the distal end is inserted into the cartridge receptacle.

JX-0001 ('568 Patent), claim 20.

Qiu and Buchberger do not disclose claim 20 because their combination does not teach limitations 20[i], 20[j], 20[k], and 20[l]. *See* CX-1352C (Collins Rebuttal WS) Q/A 285. The combination of Qiu with Buchberger does not disclose limitation 20[i] for the same reasons it does not disclose limitation 12[f]. *See* CX-1352C (Collins Rebuttal

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WS) Q/A 286; RX-0107 (Buchberger), FIG. 18 (annotated below); RX-0108 (Qiu), FIGS. 1-2 (annotated above).



RX-0107 (Buchberger), FIG. 18 (annotated).

The combination does not disclose limitation 20[j] for the same reasons it does not disclose limitation 12[g]. See CX-1352C (Collins Rebuttal WS) Q/A 287; RX-0107 (Buchberger), FIG. 18 (annotated); RX-0108 (Qiu), FIGS. 1-2 (annotated). The combination does not disclose limitation 20[k] for the same reasons it does not disclose limitation 12[h]. See CX-1352C (Collins Rebuttal WS) Q/A 288; RX-0107 (Buchberger), FIG. 6 (excerpt) (annotated above); RX-0108 (Qiu), FIGS. 2-3 (annotated above). It does not disclose limitation 20[l] for the same reasons it does not disclose limitation 12[i]. See CX-1352C (Collins Rebuttal WS) Q/A 289; RX-0107 (Buchberger), FIG. 6 (excerpt) (annotated above); RX-0108 (Qiu), FIGS. 2-3 (annotated above). Qiu combined with Buchberger thus does not render obvious claim 20 for reasons discussed above. *Id.* at Q/A 290.

D. Domestic Industry (Technical Prong)

Complainant asserts claims 12, 16, 17 and 20 of the '568 patent for domestic

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industry. *See* Compls. Br. at 66 (citing CX-0015C (Collins WS) at Q/A 25, 52; CX-1238 (Importation, Infringement, DI, and PI Stipulation)). The domestic industry products include the JUUL system, which includes the JUUL device and JUULpods. *See* Compls. Br. at 66 (citing CX-0015C (Collins WS) Q/A 279-280).

Dr. Collins physically inspected the JUUL system. He reviewed numerous documents and materials, as well as photographs of physical samples of the JUUL system, marketing materials including advertisements, product packaging, user manuals, information available on public webpages and the like, and technical documents such as engineering drawings and presentations that describe the structure and assembly of the JUUL system. *See* CX-0015C (Collins WS) Q/A 281; CX-1212 (JUUL Photo Set 4); JX-0001 ('568 Patent), FIGS. 24A, 28D.

1. Independent Claim 12

Asserted claim 12 is recited below:

12. A cartridge for use with a vaporization device, the cartridge comprising:

[a] a flattened body having a proximal end, a distal end opposite the proximal end, a longitudinal axis between the proximal end and the distal end, and a transverse axis that is perpendicular to and shorter than the longitudinal axis;

[b] a reservoir within the flattened body and holding a vaporizable material;

[c] a mouthpiece proximate to the proximal end of the flattened body;

[d] a heater comprising: a pair of plates extending in a direction of the longitudinal axis,

[e] a wick extending along at least the transverse axis, at least a first portion of the wick disposed between the pair of plates, and at least a second portion of the wick disposed within the reservoir and in contact with the vaporizable material, and

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[f] a resistive heating element directly in contact with each plate of the pair of plates and in thermal contact with the wick; and

[g] a pair of flat contact tabs integrally formed from the pair of plates and folded over an outer surface of the flattened body proximate to the distal end of the flattened body, the pair of flat contact tabs extending from the heater and configured to complete a circuit with the vaporization device when the distal end is inserted into the vaporization device.

JX-0001 ('568 Patent), claim 12.²⁰

Claim 12[p]

The JUUL system practices claim element 12[p]. The JUUL system includes a “cartridge for use with a vaporization device.” The JUULpod, is a cartridge for use with a vaporization device—the JUUL device. *See* CX-0015C (Collins WS) Q/A 284.

Claim 12[a]

The JUUL system practices claim element 12[a] because the JUUL system includes “a flattened body having a proximal end, a distal end opposite the proximal end, a longitudinal axis between the proximal end and the distal end, and a transverse axis that is perpendicular to and shorter than the longitudinal axis.” *See* CX-0015C (Collins WS) Q/A 285; CX-1184 (JUUL Photo Set 1); CX-0370C (JLI Step 2); CX-0388C (JLI Image). The cartridge includes a flattened body. *See* CX-1184 (JUUL Photo Set 1); CX-0370C (JLI Step 2); CX-0388C (JLI Image). The cartridge’s flattened body is rectangular and has a first dimension between opposing first and second sides that is

²⁰ JLI has given a letter designation for each element of the asserted independent claims. The letter designations used for the elements of this claim is different for technical prong and validity analysis. The administrative law judge is adopting the different letter designations as appropriate.

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smaller than a second dimension between opposing third and fourth sides. CX-0015C (Collins WS) Q/A 286.

Claim 12[b]

The JUUL system practices claim element 12[b] because the JUUL system includes “a reservoir within the flattened body, the reservoir configured to hold a vaporizable material.” *See* CX-0015C (Collins WS) Q/A 287; CX-1184 (JUUL Photo Set 1). The material in the JUULpod reservoir is a vaporizable material containing nicotine as shown on JLI’s website. *See* CX-0015C (Collins WS) Q/A 288; CX-1184 (JUUL Photo Set 1).

Claim 12[c]

The JUUL system practices claim element 12[c] because the JUUL system includes a “mouthpiece proximate to the proximal end of the flattened body.” *See* CX-0015C (Collins WS) Q/A 289; CX-1184 (JUUL Photo Set 1); CX-0370C (JLI Step 2); CX-0388C (JLI Image).

Claim 12[d]

The JUUL system practices claim element 12[d] because it includes a “heater comprising: a pair of plates extending in a direction of the longitudinal axis.” *See* CX-0015C (Collins WS) Q/A 290; CX-1184 (JUUL Photo Set 1); CX-0378C (JLI Step 12); CX-0379C (JLI Step 13); CX-0389C (JLI Step 5); CX-0446C (JLI Step 15); CX-0253C (Pod Assembly Overview). The cartridge has a pair of plates. As shown in CX-0015C (Collins WS) Q/A 290, CX-1184 (JUUL Photo Set 1), CX-0378C (JLI Step 12), CX-0379C (JLI Step 13), CX-0389C (JLI Step 5), CX-0446C (JLI Step 15), CX-0253C (Pod Assembly Overview), the cartridge’s plates are two corresponding relatively thin pieces

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of material that are used together to provide power to the coil. Portions of the two plates are also smooth, flat, thin pieces of metal that are parallel and face each other.

Claim 12[e]

The JUUL system practices claim element 12[e] because it includes “a wick extending along at least the transverse axis, at least a first portion of the wick disposed between the pair of plates, and at least a second portion of the wick disposed within the reservoir and in contact with the vaporizable material.” *See* CX-0015C (Collins WS) Q/A 292; CX-1184 (JUUL Photo Set 1); CX-0380C (JLI Step 14); CX-0381C (JLI Step 15); CX-0382C (JLI Step 19); CX-0383C (JLI Step 21); CX-0384C (JLI Step 25); CX-0385C (JLI Step 26); CX-0386C (JLI Step 27); CX-0387C (JLI Step 28); CX-0253C (Pod Assembly Overview). *See* CX-1184 (JUUL Photo Set 1) shows that the JUULpod has a wick extending along at least the transverse axis, with one portion of the wick disposed between the pair of plates, and another portion disposed within the reservoir and in contact with the vaporizable material. CX-0380C (JLI Step 14); CX-0381C (JLI Step 15); CX-0382C (JLI Step 19); CX-0383C (JLI Step 21); CX-0384C (JLI Step 25); CX-0385C (JLI Step 26); CX-0386C (JLI Step 27); CX-0387C (JLI Step 28); CX-0253C (Pod Assembly Overview) are schematic drawings that further support this conclusion. CX-0015C (Collins WS) Q/A 293.

Claim 12[f]

The JUUL system practices claim element 12[f] because it includes “a resistive heating element directly in contact with each plate of the pair of plates and in thermal contact with the wick.” *See* CX-0015C (Collins WS) Q/A 294. CX-1184 (JUUL Photo Set 1) shows that JUULpod’s heater includes a resistive heating element directly in

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contact with each of the pair of plates and in thermal contact with the wick. *See* CX-0380C (JLI Step 14); CX-0381C (JLI Step 15); CX-0382C (JLI Step 19); CX-0383C (JLI Step 21); CX-0384C (JLI Step 25); CX-0385C (JLI Step 26); CX-0386C (JLI Step 27); CX-0387C (JLI Step 28); CX-0253C (Pod Assembly Overview) are schematic drawings that further support this conclusion. CX-0015C (Collins WS) Q/A 295.

Claim 12[g]

The JUUL system practices claim element 12[g] because it includes “a pair of flat contact tabs integrally formed from the pair of plates and folded over an outer surface of the flattened body proximate to the distal end of the flattened body, the pair of flat contact tabs extending from the heater and configured to complete a circuit with the vaporization device when the distal end is inserted into the vaporization device.” *See* CX-0015C (Collins WS) Q/A 296; CX-1184 (JUUL Photo Set 1); CX-0389C (JLI Step 5); CX-0446C (JLI Step 15); CX-0369C (JLI Step 1); CX-0379C (JLI Step 13); CX-0253C (Pod Assembly Overview). The JUULpod includes “flat contact tabs.” As shown in CX-1184 (JUUL Photo Set 1), the contact tabs are made of metal and, thus, are electrically conductive. Once folded, the contact tabs can electrically couple to corresponding electrical contacts of the vaporization device, as shown in CX-1184 (JUUL Photo Set 1).

These flat contact tabs are also “integrally formed.” As discussed above, the contact tabs are made as a unitary structure and they are formed from a single piece of metal. *See* CX-1184 (JUUL Photo Set 1); CX-0389C (JLI Step 5); CX-0446C (JLI Step 15); CX-0369C (JLI Step 1); CX-0379C (JLI Step 13); CX-0253C (Pod Assembly Overview).

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To the extent that any differences may exist between the JUULpod and the features disclosed in claim 12 of the '568 patent, such differences are insubstantial. The JUULpod includes a pair of flat contact tabs that are intended to perform substantially the same function, in substantially the same way, to achieve substantially the same result, for example "to complete a circuit with the vaporization device when the distal end is inserted into the vaporization device," as recited in the above limitation of claim 12. Thus, this limitation is also met under the doctrine of equivalents. *See id.* at Q/A 299-300.

2. Dependent Claim 16

Asserted claim 16 is recited below:

16. The cartridge of claim 12, wherein the mouthpiece is fitted onto and over the proximal end of the flattened body.

JX-0001 ('568 Patent), claim 16.

The JUUL system practices claim 16 because the JUUL system includes a mouthpiece that is "fitted onto and over the proximal end of the flattened body." *See* CX-0015C (Collins WS) Q/A 301; CX-1184 (JUUL Photo Set 1); CX-0370C (JLI Step 2); CX-0388C (JLI Image). That is, the JUUL system includes every feature of claim 16, as well as claim 12 from which claim 16 depends. *See* CX-0015C (Collins WS) Q/A 302.

3. Dependent Claim 17

Asserted claim 17 is recited below:

17. The cartridge of claim 12, wherein the mouthpiece is coupled to the flattened body with a snap-fit coupling.

JX-0001 ('568 Patent), claim 17.

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The JUUL system practices claim 17 because the JUUL system includes a mouthpiece that is “coupled to the flattened body with a snap-fit coupling.” *See* CX-1184 (JUUL Photo Set 1); CX-0371C (JLI Step 4); CX-0372C (JLI Step 5); CX-0373C (JLI Product Step 6); CX-0374C (JLI Step 7); CX-0375C (JLI Step 8); CX-0376C (JLI Product Step 9). In particular, the mouthpiece couples to the flattened body via a snap-fit coupling between protrusions on the lateral sides of the flattened body and openings on the lateral sides of the mouthpiece. *See* CX-0015C (Collins WS) Q/A 303. To secure the mouthpiece to the flattened body, the mouthpiece is inserted over the proximal end of the flattened body, and pressed downwards towards the distal end. As the mouthpiece slides over the protrusions, the protrusions initially deflect the mouthpiece, causing the mouthpiece to flex outwards over the protrusions. When the protrusions align with the mouthpiece openings, the deflected mouthpiece returns, or snaps back, to its original position, and the protrusions engage with the mouthpiece, thereby effecting the snap-fit coupling. The engagement secures the mouthpiece to the flattened body. *Id.* at Q/A 304; CX-1184 (JUUL Photo Set 1); CX-0371C (JLI Step 4); CX-0372C (JLI Step 5); CX-0373C (JLI Product Step 6); CX-0374C (JLI Step 7); CX-0375C (JLI Step 8); CX-0376C (JLI Product Step 9). The JUUL system therefore includes every feature of claim 17, as well as claim 12 from which claim 17 depends. *See* CX-0015C (Collins WS) Q/A 305.

4. Independent Claim 20

Asserted claim 20 is recited below:

- 20.** An apparatus comprising:
a vaporizer body comprising:
a power source;

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a cartridge receptacle; and

a pair of contacts within the cartridge receptacle; and

[a] a cartridge comprising:

a flattened body having a proximal end, a distal end opposite the proximal end, a longitudinal axis between the proximal end and the distal end, and a transverse axis that is perpendicular to and shorter than the longitudinal axis;

[b] a mouthpiece proximate to the proximal end of the flattened body;

[c] a reservoir within the flattened body, the reservoir configured to hold a vaporizable material;

[d] a pair of plates extending in a direction of the longitudinal axis;

[e] a wick extending along at least the transverse axis, at least a first portion of the wick disposed between the pair of plates;

[f] a resistive heating element in contact with the pair of plates and the wick, wherein at least a second portion of the wick is configured to contact the vaporizable material when the vaporizable material is present; and

[g] a pair of flat contact tabs integrally formed from the pair of plates and folded over an outer surface of the flattened body proximate to the distal end of the flattened body, the pair of flat contact tabs configured to complete a circuit with the pair of contacts and the power source when the distal end is inserted into the cartridge receptacle.

JX-0001 ('568 Patent), claim 20.²¹

The JUUL device practices claim element 20[p] because the JUUL device is an apparatus having a “vaporizer body comprising a power source, a cartridge receptacle, and a pair of contacts within the cartridge receptacle.” *See* CX-0015C (Collins WS) Q/A

²¹ JLI has given a letter designation for each element of the asserted independent claims. The letter designations used for the elements of this claim is different for technical prong and validity analysis. The administrative law judge is adopting the different letter designations as appropriate.

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306; CX-1184 (JUUL Photo Set 1); CX-0364C (JLI Device Image Step 1); CX-0365C (JLI Device Image Step 7); CX-0366C (JLI Device Image Step 8); CX-0389C (JLI Step 5); CX-0446C (JLI Step 15). For purposes of the technical prong, each of claim elements 20[a] through 20[g] is materially identical to claim elements 12[a] through 12[g], respectively. *See* CX-0015C (Collins WS) Q/A 307-313; CX-1184 (JUUL Photo Set 1); CX-0370C (JLI Step 2); CX-0388C (JLI Image); CX-0378C (JLI Step 12); CX-0379C (JLI Step 13); CX-0389C (JLI Step 5); CX-0446C (JLI Step 15); CX-0369C (JLI Step 1); CX-0379C (JLI Product Image Step 13); CX-0253C (Pod Assembly Overview); CX-0380C (JLI Step 14); CX-0381C (JLI Step 15); CX-0382C (JLI Step 19); CX-0383C (JLI Step 21); CX-0384C (JLI Step 25); CX-0385C (JLI Step 26); CX-0386C (JLI Step 27); CX-0387C (JLI Step 28); CX-0364C (JLI Device Image Step 1); CX-0365C (JLI Device Image Step 7); CX-0366C (JLI Device Image Step 8). The JUULpod therefore practices all limitations of claim 20, for the reasons discussed above. *See* CX-1184 (JUUL Photo Set 1); CX-0370C (JLI Step 2); CX-0388C (JLI Image); CX-0378C (JLI Step 12); CX-0379C (JLI Step 13); CX-0389C (JLI Step 5); CX-0446C (JLI Step 15); CX-0369C (JLI Step 1); CX-0379C (JLI Step 13); CX-0253C (Pod Assembly Overview); CX-0380C (JLI Step 14); CX-0381C (JLI Step 15); CX-0382C (JLI Step 19); CX-0383C (JLI Step 21); CX-0384C (JLI Step 25); CX-0385C (JLI Step 26); CX-0386C (JLI Step 27); CX-0387C (JLI Step 28).

VI. U.S. Patent No. 10,058,130

United States Patent No. 10,058,130 (“the ‘130 patent”), entitled “Cartridge for use with a vaporizer device,” issued on August 28, 2018. JX-0002 (‘130 Patent). The

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'130 patent issued from Application No. 15/813,089, filed on November 14, 2017. *Id.* The '130 patent application is a continuation of, and claims priority to, Application No. 15/257,748 filed on September 6, 2016, which is a continuation-in-part of other patent applications. The '130 patent relates to "apparatuses, including systems and devices, for vaporizing material to form an inhalable aerosol. Specifically, these apparatuses may include vaporizers, cartridge for use with a vaporizer device, and vaporizers with cartridges." JX-0002, 2:32-36. The '130 patent has a total of 27 claims.

Complainant asserts claims 1, 2 and 4 of the '130 patent. *See* Compl. Br. at 14. As discussed below, the evidence shows that (1) the asserted claims are infringed by the accused products; (2) complainants have satisfied the technical prong of the domestic industry requirement; and (3) the asserted claims are not invalid.

Asserted claims 1, 2 and 4 are recited below:

1. A method of fabricating a cartridge, the method comprising:
 - [a] forming a storage compartment configured to hold a vaporizable material, the storage compartment having a first end and a second end opposite the first end;
 - [b] attaching a mouthpiece to the storage compartment at the second end; and
 - [c] attaching a heater at the first end, the heater comprising:
 - a heating element configured to heat the vaporizable material to generate an aerosol for delivery to a user;
 - [d] a first plate positioned proximate to a first side of the storage compartment, the first plate coupled to the heating element and attached proximate to the first end; and
 - [e] a second plate positioned proximate to a second side of the storage compartment, the second plate coupled to the heating element and attached proximate to the first end, the first side opposite the second side, the first plate and the second plate defining a volume therebetween, at least a portion of the heating element disposed within the volume.

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2. The method of claim 1, wherein the mouthpiece is attached at the second end by a snap fit coupling with the storage compartment.

4. The method of claim 1, wherein the first plate is attached to a first flexible tab having a first contact surface outside of the heater, and wherein the second plate is attached to a second flexible tab having a second contact surface outside of the heater.

JX-0002 ('130 Patent), claims 1, 2, 4.

A. Claim Construction²²

Complainant argues:

A person of ordinary skill in the art ("POSA") is one who is presumed to be aware of all pertinent art, thinks along conventional wisdom in the art, and is a person of ordinary creativity. A POSA in the context of the asserted patents would have had (1) a B.S. in mechanical engineering, electrical engineering, or an equivalent degree and (2) at least one year of experience designing consumer products. CX-0015C (Collins WS) Q/A 33; CX-0016C (Alarcon WS) Q/A 22.

Ziip's expert, Mr. Flolid has proposed that a POSA would have at least a bachelor's degree in mechanical engineering, electrical engineering, or an equivalent degree. RX-0113 (Flolid WS) Q/A 19. Alternatively, Mr. Flolid opined that a POSA could also have had at least two years' experience designing, developing, or testing electronic cigarettes or related electromechanical devices, such as electromechanical devices configured to heat liquid and generate an aerosol. *Id.* at Q/A 20. Mr. Flolid further opines that his definition is only "approximate" and that a skilled artisan could have a higher level of education to make up for less experience or a higher level of training or skill to make up for less education. *Id.* at Q/A 19. Mr. Flolid's definition of a POSA is vague and incorrect. CX-1353C (Alarcon Rebuttal WS) Q/A 41-42; CX-0015C

²² Respondent Eonsmoke did not discuss any of the disputed claim terms on the merits in its posthearing briefs. *See* Joint Outline – Eonsmoke and Joint Reply Outline – Eonsmoke. Indeed, Eonsmoke's only statement concerning claim construction is the following:

Ziip applies the agreed upon constructions for any terms that had agreed upon constructions, as set forth in the Joint Claim Construction Chart. Otherwise, Ziip applies the plain and ordinary meaning of the term.

Resp. Br. at 3-4.

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(Collins WS) Q/A 34. Regardless, the differences between JLI's proposed qualifications for a POSA and those proposed by Respondents would not change JLI's infringement or validity analysis. CX-0015C (Collins WS) Q/A 35; CX-1353C (Alarcon Rebuttal WS) Q/A 42.

Compl. Br. at 18-19 (citations omitted).

Respondent argues:

The key decision is the definition of a POSA. Both parties agree that a POSA would have at least a degree in mechanical or electrical engineering or a similar degree. And both agree that this POSA would have some design experience with products. Ziip proposes that this experience would be at least two years with electronic cigarettes or related electromechanical devices because this is the subject matter of the patents at issue.

Ziip's definition is a better one:

A person of ordinary skill in this art would have (1) at least a B.S. in mechanical engineering, electrical engineering, or an equivalent degree and/or (2) at least two years' experience designing, developing, or testing electronic cigarettes or related electromechanical devices, such as electromechanical devices configured to heat liquid and generate an aerosol. This description is approximate, and a higher level of training or skill might make up for less education, and vice-versa.

(RX-0113.0005-6, Q/A 18-20).

Juul has proposed a far broader definition – one year designing consumer products – because Juul wants its POSA to be as ignorant as possible so as not to see the connections that Ziip claims are obvious. But Juul's definition is deficient, as its expert, Mr. Ramon Alarcon, essentially admitted when he noted that not every consumer product would be relevant. (Hearing Tr., at 422:15-423:16).

Ziip's definition of a POSA as having at least two years' of experience with devices like an electronic cigarette makes more sense as this is the type of person would look to the prior art to find solutions to the known problems. And, as the United States Supreme Court has held, it is the solving of known problems that is a key determinant of obviousness.

Resp. Br. at 2-3.

The Staff argues:

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JLI contends that for all asserted patents, a person of ordinary skill in the art would have had (1) a B.S. in mechanical engineering, electrical engineering, or an equivalent degree and (2) at least one year of experience designing consumer products.” CPreHBr. at 15. Ziip, Eonsmoke and V4L did not present a contention in their respective pre-hearing briefs regarding the level of ordinary skill in the art for any of the asserted patents. Therefore, they waived any such contentions. *See* Ground Rule 7.c. Nonetheless, Ziip and Eonsmoke’s expert, Mr. Flolid, testified that he agreed with Ziip’s apparent contention “that a person of ordinary skill in the art would have at least (1) a B.S. degree in mechanical engineering, electrical engineering, or an equivalent degree and/or (2) at least two years of experience designing, developing, or testing electronic cigarettes or related electromechanical devices, such as electromechanical devices configured to heat liquid and generate an aerosol. This description is approximate, and a higher level of training or skill might make up for less education, and vice-versa.” RX-0113 at Q19.

To the extent the ALJ does not agree that Respondents waived their contentions as to one of ordinary skill in the art, the Staff agrees with JLI’s contention, favoring the lesser experience requirement. The Staff, however, is of the view that the difference between the private parties’ proposals with respect to the level of ordinary skill does not affect the infringement or invalidity issues in this Investigation.

Staff Br. at 19-20 (citations omitted).

As an initial matter, Eonsmoke did not discuss the level of ordinary skill in the art for any of the asserted patents in its pre-hearing brief. Therefore, it waived any such contention. *See* Ground Rule 7.c.

In any event, JLI’s proposed level of ordinary skill is more persuasive in the context of the ‘130 patent. JLI’s proposed level requires (1) a B.S. in mechanical engineering, electrical engineering, or an equivalent degree, and (2) at least one year of experience designing consumer products. Thus, the administrative law judge finds that a person of ordinary skill in the art with respect to the ‘130 patent is a person who has a B.S. in mechanical engineering, electrical engineering, or an equivalent degree, and at least one to two years of experience designing consumer products.

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2. Claim Construction

Below is a chart showing the parties' proposed claim constructions.

Claim Term	Claim(s)	JLI's Construction	Eonsmoke's Construction	Staff's Construction
"coupled"	1	Plain meaning, which is: "connected"	abandoned	Same as JLI
"proximate to"	1	Plain meaning, which is: "close or near"	abandoned	Same as JLI
"heating element configured to heat [a/the] vaporizable material to generate an aerosol for delivery to a user"	1	Plain meaning, which is: "a component that transforms electrical energy to heat for generating an aerosol for delivery to a user"	abandoned	Plain meaning, which is: "a component that transforms energy to heat for generating an aerosol for delivery to a user"
"plate"	1	"relatively thin piece of material"	abandoned	Same as JLI
"defining a volume therebetween"	1	"bounding a space between the first and second plates"	abandoned	Same as JLI
"flexible tab"	4	"a projection that can flex"	abandoned	Same as JLI

Compl. Br. at 96-99; Resp. Br. at 3-4; Staff Br. at 55-60.

Eonsmoke did not present any claim construction analyses in its pre-hearing brief, and thus waived any such contentions. *See* Ground Rule 7.c.

a. "coupled"

JLI argues and the Staff concurs that the claim term "coupled" is ubiquitous in

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patent claims and routinely construed to mean “connected,” in a wide variety of contexts and technologies. *See* Compl. Br. at 95-96. The ‘130 patent specification is consistent with this meaning of “coupled” as “connected” is how the specification uses the term, how the dictionary defines the term, and how a person of ordinary skill in the art would understand the term in the context of the claim and ‘130 patent. JX-0002 (‘130 Patent), 3:38-41, 8:46-48 (“the cartridge may couple with the vaporizer using a connector that is a snap fit, or other mechanical fit that is not a threaded connection”); *id.*, 9:5-11, 14:54-60 (“The separable coupling may comprise a friction assembly, a snap-fit assembly or a magnetic assembly.”), *id.*, 44:5-13 (“a cartridge receptacle 21 comprising one or more interior coupling surfaces”), *id.*, FIGS. 7B, 8B, 9A-9L, 14, 25A-B, 30, 31A-31L. The Staff agrees with JLI. *See* Staff Br. at 57-58.

The administrative law judge has determined that the claim term “coupled” should be construed to mean “connected.”

b. “proximate to”

As discussed above for the ‘568 patent, JLI argues in its brief that the claim term “proximate to” has a plain meaning, which is “at or near” but JLI’s chart shows the plain meaning JLI proposes is “close or near.” *See* Compl. Br. at 95-96. The Staff concurs that the claim term “proximate to” has a plain meaning, which is “close or near.” *See* Staff Br. at 58. The Staff believes “at or near” was a typographical error. *See* Staff Br. at 58 n.19.

This is how the ‘130 patent specification uses the term. JX-0002 (‘130 Patent), 14:3-5, 15:62-64, 33:60-61, 34:41-43 (“below the contact tips”), *id.*, 34:46 (“plates may affix to pins”), 34:50-51 (“placed between the first heater contact plates 33 and

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attached”), *id.*, 42:3-4 (“positioned between”), *id.*, 55:26-29, 56:4-5, 56:6-9, 57:27-30, 57:31-34. The Staff agrees with JLI. *See* Staff Br. at 58.

The administrative law judge has determined that the claim term “proximate to” should be construed to mean “close or near.”

c. “heating element configured to heat [a/the] vaporizable material to generate an aerosol for delivery to a user”

As discussed above for the ‘669 patent, JLI argues that this claim term should be construed according to its plain meaning, which is: “a component that transforms electrical energy to heat for generating an aerosol for delivery to a user.” *See* Compl. Br. at 96. The phrase “for delivery to a user” is a statement of intended use, and does not impact the proper claim scope. *See* Compl. Br. at 96. The ‘130 patent specification is generally consistent with this construction. *See* JX-0002 (‘130 Patent), 1:60-61, 20:4-9, FIGS. 4A-C, 7B-C, 8A-B, 9A-L, 10A-C, 14, 17A-B, 24A-B, 25A-B, 26A, 28C-D, 30.

However, as argued by the Staff, the ‘130 patent specification also discloses that instead of electrical energy, the heating element may “alternatively [use] a chemical reaction (e.g., combustion or other exothermic reaction) [to] provide energy to the heating element.” JX-0002 (‘130 Patent), 19:53-56; *see* Staff Br. at 58-59. Thus, the specification teaches that energy need not be limited to electrical energy.

The administrative law judge has determined that the claim term “heating element configured to heat [a/the] vaporizable material to generate an aerosol for delivery to a user” should be given its plain and ordinary meaning, *i.e.*, “a component that transforms energy to heat for generating the aerosol for delivery to a user.”

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d. “plate”

As discussed above for the ‘568 patent, JLI argues and the Staff concurs that the plain meaning of “plate” is a relatively thin piece of material. The ‘130 patent specification is consistent with this construction. *See* JX-0002 (‘130 Patent), 14:3-5 (“thin plates”), 34:18-20 (specifying “a flat plate,” implying that plates are not necessarily flat or “flat plate” would be redundant), FIGS. 7B, 8B, 24A, 28C, 28D, 30. “Plate” should be therefore be construed consistently and for the same reasons.

The administrative law judge has determined that the claim term “plate” should be construed to mean “relatively thin piece of material.”

e. “defining a volume therebetween”

JLI argues and the Staff concurs that this claim term should be construed as “bounding a space between the first and second plates.” *See* Compl. Br. at 97. The ‘130 patent specification supports this construction, as shown in the figures. *See* JX-0002 (‘130 Patent), FIGS. 7B, 8B, 9A-L, 10A-C, 14, 28D, 30. A person of ordinary skill in the art would understand first and second plates “defining a volume therebetween” to refer to plates bounding a space between them. The Staff agrees with JLI. *See* Staff Br. at 59-60.

The administrative law judge has determined that the claim term “defining a volume therebetween” should be construed to mean “bounding a space between the first and second plates.”

f. “flexible tab”

JLI argues and the Staff concurs that the claim term “flexible tab” is a projection (or projecting device) in the context of this claim. *See* Compl. Br. at 97-98. The specification is consistent with JLI’s proposed construction. *See* JX-0002 (‘130 Patent),

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34:43-46, 35:14-15 (“Flexible tabs may be inserted into the heater contacts.”), 55:45-49, 56:42-44 (“the first plate and the first flexible tab define a first formed shape, the first flexible tab extending out of the heater chamber”), 56:65-67. The Staff agrees with JLI. *See* Staff Br. at 60.

The administrative law judge has determined that the claim term “flexible tab” should be construed to mean “a projection that can flex.”

B. Infringement Analysis of the ‘130 Patent

JLI asserts claims 1, 2 and 4 of the ‘130 patent. JLI has demonstrated by a preponderance of the evidence that Eonsmoke’s accused products infringe the asserted claims of the ‘130 patent. *See* Compl. Br. at 98-105; CX-0015C (Collins WS) Q/A 315-452. Indeed, Eonsmoke did not contest infringement and did not present any non-infringement arguments in its post-hearing briefs. *See* Joint Outline – Eonsmoke; Joint Reply Outline – Eonsmoke.

Nonetheless, the administrative law judge adopts JLI’s infringement analysis with respect to Eonsmoke and provides the following infringement analysis of the ‘130 patent.

1. Importation and Accused Products

On August 5, 2019, the administrative law judge issued an initial determination granting complainant’s motion for summary determination with respect to importation. *See* Order No. 35 (Aug. 5, 2019) at 4-5, *aff’d in part*, Commission Determination to Review in Part an Initial Determination Granting in Part Complainant’s Motion for Summary Determination of Importation, Infringement, and Domestic Industry (Sept. 4, 2019) (Commission determining not to review importation).

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Eonsmoke is based in Clifton, New Jersey, and is an importer, distributor, and seller of ENDS devices and pods, including the Eonsmoke devices and pods manufactured by Ziip. The accused products with respect to Eonsmoke include the Eonsmoke device, the Eonsmoke v2.0 device, Eonsmoke (Eon) pod, and the 4X pod (individually and collectively, “Eonsmoke accused products”). *See* Compl. Br. at 10 (citing CX-0958C (Eonsmoke Invoices 13); CX-0858 (Eonsmoke’s Supp. Responses to JLI’s RFAs)).

JLI provided the following table showing the Eonsmoke accused products that are alleged to infringe the asserted patent claims:

Accused Product	‘669	‘915	‘568	‘130
<u>Eonsmoke Respondent</u>	1, 2, 13	1, 6, 21	12, 17, 20	1, 2, 4
Eonsmoke device				
Eonsmoke v2 device (stipulated representative)				
Eonsmoke pods (stipulated representative)				
4X pods				

Compl. Br. at 220.

Eonsmoke’s accused products include the Eonsmoke pod and the 4X pod. The Eonsmoke pod is representative of the other pods accused for respondent Eonsmoke, including the 4X pod, for the same reasons discussed above. *See* CX-0015C (Collins WS) Q/A 327-328.

a. Independent Claim 1

Asserted claim 1 is recited below:

1. A method of fabricating a cartridge, the method comprising:

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- [a] forming a storage compartment configured to hold a vaporizable material, the storage compartment having a first end and a second end opposite the first end;
- [b] attaching a mouthpiece to the storage compartment at the second end; and
- [c] attaching a heater at the first end, the heater comprising:
 - a heating element configured to heat the vaporizable material to generate an aerosol for delivery to a user;
 - [d] a first plate positioned proximate to a first side of the storage compartment, the first plate coupled to the heating element and attached proximate to the first end; and
 - [e] a second plate positioned proximate to a second side of the storage compartment, the second plate coupled to the heating element and attached proximate to the first end, the first side opposite the second side, the first plate and the second plate defining a volume therebetween, at least a portion of the heating element disposed within the volume.

JX-0002 ('130 Patent), claim 1.

As discussed below, the representative Eonsmoke pods embody every feature of claim 1. *See* CX-0015C (Collins WS) Q/A 405. Additionally, these pods are made by a process that practices every step of the claimed method, and therefore infringe under 35 U.S.C. § 271(g).

Claim 1[a]

The Eonsmoke pods practice claim element 1[a] because these pods are formed using “[a] method of fabricating a cartridge, the method comprising: forming a storage compartment configured to hold a vaporizable material, the storage compartment having a first end and a second end opposite the first end.” *See* CX-0015C (Collins WS) Q/A 346 (Eonsmoke Pod). The liquid in the pods is a vaporizable material. *See* CX-0015C (Collins WS) Q/A 348 (Eonsmoke).

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Claim 1[b]

The Eonsmoke pods practice claim element 1[b] because these pods are formed by “attaching a mouthpiece to the storage compartment at the second end.” *See* CX-0015C (Collins WS) Q/A 356 (Eonsmoke).

Claim 1[c]

The Eonsmoke pods practice claim element 1[c] because these pods are formed by “attaching a heater at the first end, the heater comprising: a heating element configured to heat the vaporizable material to generate an aerosol for delivery to a user.” *See* CX-0015C (Collins WS) Q/A 362 (Eonsmoke).

Claim 1[d]

The Eonsmoke pods practice claim element 1[d] because the heater at the first end of the pod includes “a first plate positioned proximate to a first side of the storage compartment, the first plate coupled to the heating element and attached proximate to the first end; and a second plate positioned proximate to a second side of the storage compartment, the second plate coupled to the heating element, and attached proximate to the first end.” *See* CX-0015C (Collins WS) Q/A 375 (Eonsmoke).

The claim term “coupled” has been construed in accordance with its plain meaning, which is “connected.” The first and second plates are “coupled” to the heating element. As shown in CX-1192 (Eonsmokev2 Photo Set 2), CX-1270C (Eonsmokev2 Photo Set 1), CX-1250C (Photo Set 3), CX-1251C (Photo Set 1), the ends of the heating element, or coil, are connected to the plates by crimping respective prongs on the plate, thereby affixing the ends of the coil to the plate. After crimping, the coil is both electrically and physically connected to the plate. *See* CX-0015C (Collins WS) Q/A 377

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(Eonsmoke).

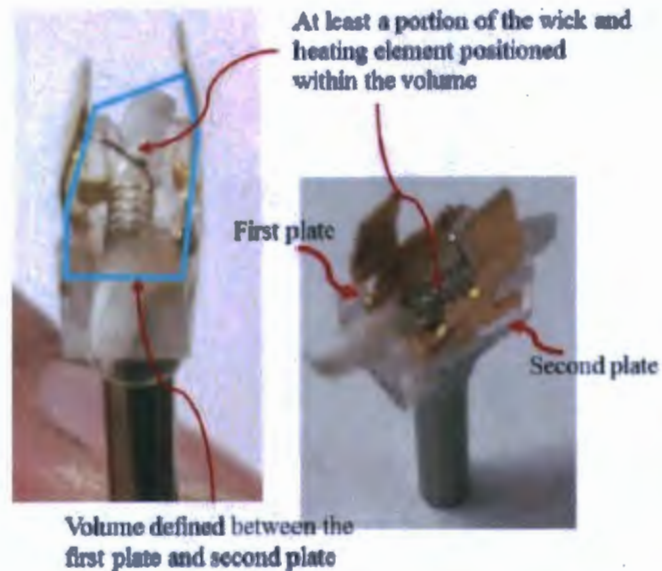
The claim term “plate” has been construed to mean “relatively thin piece of material.” The cartridge includes this limitation. This component is a relatively thin piece of material. It is generally smooth, flat, and metal. *See* CX-0015C (Collins WS) Q/A 378 (Eonsmoke).

Claim 1[e]

The Eonsmoke pods practice claim element 1[e] because these pods include the limitation “the first side opposite the second side, the first plate and the second plate defining a volume therebetween, at least a portion of the heating element disposed within the volume.”

The Eonsmoke pods meet the limitation of claim 1[e] under the correct construction of the claim term “defining a volume therebetween.” That term has been construed to mean “bounding a space between the first and second plates.” As shown below, the first and second plates bound a space therebetween. A portion of the wick is disposed in that space. The first and second plates are parallel to each other and face each other.

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CX-1192.0011-.0012 (Eonsmokev2 Photo Set 2) (annotated).

Specifically, the blue lines outline the volume defined between the first plate and second plate. *See* CX-0015C (Collins WS) Q/A 397-398 (Eonsmoke).

b. Dependent Claim 2

Asserted claim 2 is recited below:

2. The method of claim 1, wherein the mouthpiece is attached at the second end by a snap fit coupling with the storage compartment.

JX-0002 ('130 Patent), claim 2.

Each representative Eonsmoke pod includes every feature of claim 2, as well as claim 1 from which claim 2 depends, either literally or under the doctrine of equivalents. *See* CX-0015C (Collins WS) Q/A 436. In these pods “the mouthpiece is attached at the second end by a snap fit coupling with the storage compartment.” In particular, the mouthpiece couples to the storage compartment via a snap-fit coupling between protrusions on the lateral sides of the storage compartment and openings on the lateral

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sides of the mouthpiece. *See* CX-0015C (Collins WS) Q/A 409 (Eonsmoke).

To the extent that any differences may exist between the Eonsmoke pods and the features recited in claim 2, a person of ordinary skill in the art would have understood these differences to be insubstantial. The pod mouthpiece attaches to the storage compartment with a snap-fit coupling—in other words performs substantially the same function—in substantially the same way, to achieve substantially the same result—to secure the mouthpiece to the flattened body—as in claim 2. Thus, this claim is also met under the doctrine of equivalents. *See* CX-0015C (Collins WS) Q/A 411 (Eonsmoke).

The Eonsmoke pod storage compartment is coupled to the mouthpiece by a snap-fit coupling. *See id.* at Q/A 415 (Eonsmoke). The mouthpiece couples to the storage compartment by a snap-fit coupling because, as described above, the coupling is achieved when the mouthpiece is deflected by the protrusions, and then elastically returned to its original position when the protrusions and openings align, snapping into place and engaging. *See id.*

c. Dependent Claim 4

Asserted claim 4 is recited below:

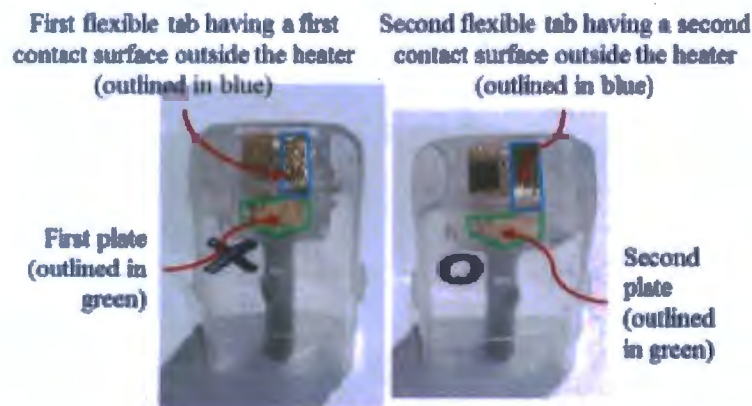
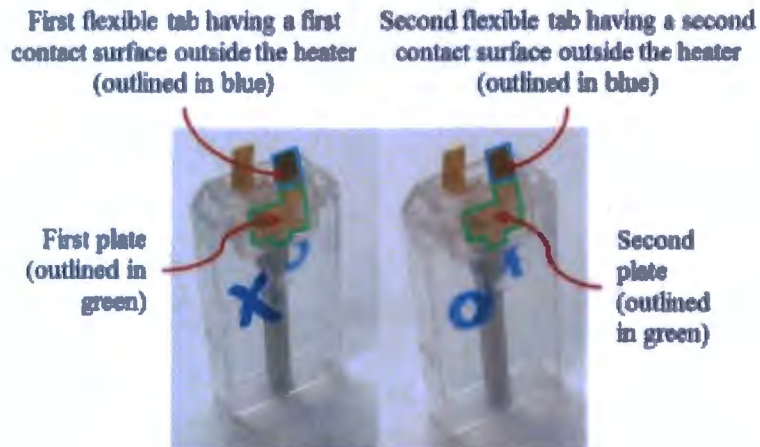
4. The method of claim 1, wherein the first plate is attached to a first flexible tab having a first contact surface outside of the heater, and wherein the second plate is attached to a second flexible tab having a second contact surface outside of the heater.

JX-0002 ('130 Patent), claim 4.

Each representative Eonsmoke pod includes every feature of claim 4, as well as claim 1 from which claim 4 depends. *See* CX-0015C (Collins WS) Q/A 452. These pods practice claim 4 because the pods are formed “wherein the first plate is attached to a first

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flexible tab having a first contact surface outside of the heater, and wherein the second plate is attached to a second flexible tab having a second contact surface outside of the heater.” See CX-0015C (Collins WS) Q/A 440 (Eonsmoke).



CX-1192.0019-.0020 (Eonsmokev2 Photo Set 2); CX-1270C.0018-.0019 (Eonsmokev2 Photo Set 1) (annotated).

The first flexible tab has a first contact surface outside the heater and the second flexible tab has a second surface outside the heater. The first plate and the second plate, outlined in green, are attached to the first flexible tab having a first contact surface outside the heater and the second flexible tab having a second surface outside the heater

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outlined in blue. *See* CX-0015C (Collins WS) Q/A 441 (Eonsmoke).

The Eonsmoke pods meet this limitation under the correct construction of the claim term “flexible tab.” The administrative law judge has determined that the claim term “flexible tab” should be construed to mean “a projection that can flex.” The tab projects from the plate and can be folded over without breaking. CX-0015C (Collins WS) Q/A 442 (Eonsmoke).

C. Validity of the ‘130 Patent

Respondent Eonsmoke argues that (1) Tucker (RX-0109) anticipates claims 1 and 2 of the ‘130 patent; (2) Tucker (RX-0109) alone renders obvious claim 2 of the ‘130 patent; (3) Tucker (RX-0109) in combination with Buchberger (RX-0107) renders obvious claims 1, 2 and 4 of the ‘130 patent; and (4) Tucker (RX-0109) in combination with Backstrom (RX-0105) renders obvious claims 1 and 2 of the ‘130 patent. *See* Resp. Br. at 40-48. Eonsmoke argues and JLI and the Staff do not dispute that prior art alleged by Eonsmoke are prior to the priority date of the ‘130 patent. *See id.* at 4.

For the reasons set forth below, Eonsmoke has not shown by clear and convincing evidence that asserted claims 1, 2 and 4 of the ‘130 patent are invalid.

1. Tucker (RX-0109) Alone

Eonsmoke argues that (1) Tucker (RX-0109) anticipates claims 1 and 2 of the ‘130 patent; and (2) Tucker (RX-0109) alone renders obvious claim 2 of the ‘130 patent. *See* Resp. Br. at 40-44.

Eonsmoke argues, *inter alia*:

Mr. Flolid correctly testified that Tucker discloses each and every element of claims 1 and 2. Juul’s response relies on a strained

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interpretation of the term “storage compartment,” alleging that Tucker’s storage compartment is limited to its reservoir and nothing more. However, Juul’s expert, Dr. Collins, admitted at the hearing that the claims do not require the “storage compartment” to be one piece. (Hearing Tr., 471:8-10). Dr. Collins further admitted that the heater is not limited to the elements recited in the claim. (Hearing Tr., 471:11-472:6).

Resp. Br. at 40.

Tucker does not anticipate or render obvious claims 1 and 2 because Tucker does not disclose claim limitations 1[c], 1[d], 1[f], 1[g], 1[h], and claim 2 (using Mr. Flolid’s claim element breakdown). *See* CX-1352C (Collins Rebuttal WS) Q/A 37. Each limitation or claim is discussed below.

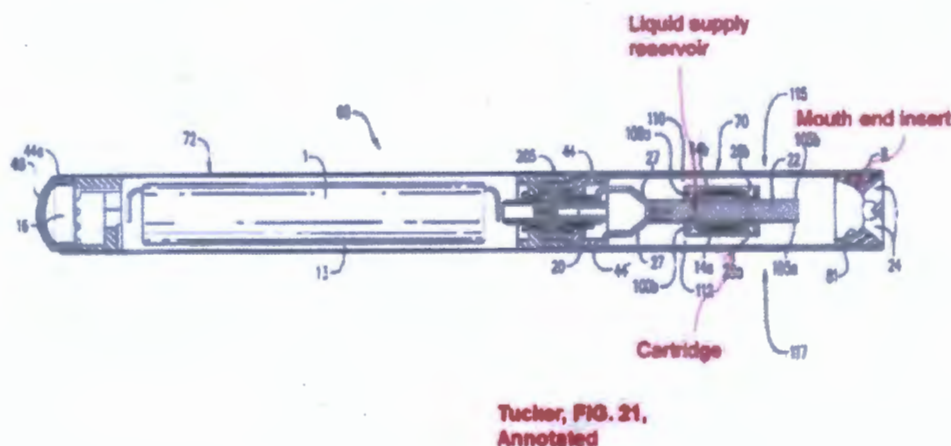
Asserted claim 1 is recited below:

1. [a] A method of fabricating a cartridge, the method comprising:
 - [b] forming a storage compartment configured to hold a vaporizable material, the storage compartment having a first end and a second end opposite the first end;
 - [c] attaching a mouthpiece to the storage compartment at the second end; and
 - [d] attaching a heater at the first end, the heater comprising:
 - [e] a heating element configured to heat the vaporizable material to generate an aerosol for delivery to a user;
 - [f] a first plate positioned proximate to a first side of the storage compartment, the first plate coupled to the heating element and attached proximate to the first end; and
 - [g] a second plate positioned proximate to a second side of the storage compartment, the second plate coupled to the heating element and attached proximate to the first end, the first side opposite the second side,
 - [h] the first plate and the second plate defining a volume therebetween, at least a portion of the heating element disposed within the volume.

JX-0002 ('130 Patent), claim 1.²³

Claim 1[c]

Eonsmoke argues that Tucker discloses claim limitation 1[c], which recites “attaching a mouthpiece to the storage compartment at the second end” by identifying Tucker’s mouth end insert 8 as corresponding to the claimed “mouthpiece,” and by characterizing the entire replaceable cartridge 70 of Figure 21 as a “storage compartment configured to hold a vaporizable material.” See RX-0113 (Flolid WS) Q/A 117.



RX-0109 (Tucker), FIG. 21 (annotated).

This reading of Tucker is incorrect. See CX-1352C (Collins Rebuttal WS) Q/A 39; RX-0109 (Tucker), FIG. 21 (annotated). Mr. Flolid relies on the erroneous generalization that the entire replaceable cartridge 70 of Figure 21 is the “storage compartment configured to hold a vaporizable material” recited in claim 1. See CX-1352C (Collins Rebuttal WS) Q/A 40. This opinion is erroneous because a person of

²³ JLI has given a letter designation for each element of the asserted independent claims. The letter designations used for the elements of this claim is different for infringement and validity analysis. The administrative law judge is adopting the different letter designations as appropriate.

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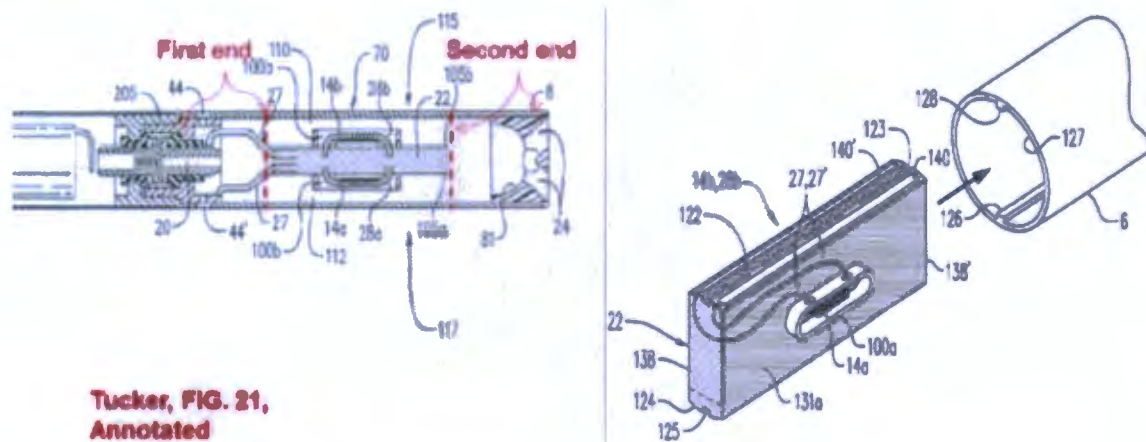
ordinary skill in the art would not have understood Tucker's replaceable cartridge 70 to be a storage compartment. Rather, the storage compartment in Tucker is its liquid supply reservoir 22, as that is the structure of Tucker that holds the liquid material. *See id.* at Q/A 41.

When properly characterized, even assuming Tucker's mouth end insert 8 is a "mouthpiece" as that term is used in the '130 patent, and is actually attached to outer tube 6 of the replaceable cartridge 70 rather than liquid supply reservoir 22, which a person of ordinary skill would again understand to be the claimed storage compartment, Tucker does not disclose claim limitation 1[c], which recites "attaching a mouthpiece to the storage compartment." *See id.* at Q/A 42.

Claim 1[d]

Tucker does not disclose attaching a heater to the end of the storage compartment that is opposite to the end where the mouthpiece is attached. *See* CX-1352C (Collins Rebuttal WS) Q/A 43-44. Mr. Flolid opines that Tucker discloses limitation 1[d] ("attaching a heater at the first end, the heater comprising"), referring to Tucker's "heaters 14a, 14b, end portions 27, 27', stripes 140, 140', and leads 145, 146" of Figures 21-23 as corresponding to the claimed "heater." *See* RX-0113 (Flolid WS) Q/A 118. Mr. Flolid then states that "leads 27 are attached at the first end of the replacement cartridge

70.” *See id.*



RX-0109 (Tucker), FIG. 21 (annotated), FIG. 22.

This opinion is unpersuasive for three reasons. *See* CX-1352C (Collins Rebuttal WS) Q/A 44-45. RX-0109 (Tucker), FIG. 21 (annotated), 22.

First, Mr. Flolid’s opinion relies on the same erroneous generalization discussed for limitation 1[c]. Specifically, a person of ordinary skill in the art would not have understood Tucker’s replaceable cartridge 70 to be the claimed storage compartment. Because claim limitation 1[d] requires that the heater be attached “at the first end” of the storage compartment, which is located opposite the location of the mouthpiece, Mr. Flolid’s understanding of what “the first end” is in Tucker is fundamentally incorrect. As a result, neither heaters 14a, 14b nor end portions 27, 27’ are connected to an end of receptacle 70 that is opposite of the mouth end insert 8, as required by claim limitation 1[d]. *See* CX-1352C (Collins Rebuttal WS) Q/A 46.

Second, Tucker’s electrical leads 26—which Mr. Flolid referred to as “leads 27”—are not a part of the heater. *See* CX-1352C (Collins Rebuttal WS) Q/A 47. Tucker, itself, identifies components 14a and 14b as multiple “heaters.” RX-0109 (Tucker),

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[0035], [0101]. Indeed, Mr. Flolid admitted this. *See* Flolid Tr. 195. As shown in Figures 21 and 22, the electrical leads 26—or “leads 27”—are not part of the heaters 14a, 14b, but rather are intermediary components configured to couple the contact strips 140, 140' to the battery 1. *See* RX-0109 (Tucker), ¶ [0107], FIG. 22. Mr. Flolid admitted that Tucker is configured to generate heat at heaters 14a and 14b, not at leads 27. *See* Flolid Tr. 200. In sum, the leads are not part of Tucker's heaters 14a and 14b, and heaters 14a and 14b are *not* attached at the first end of the storage compartment, as recited in claim limitation 1[d]. *See* CX-1352C (Collins Rebuttal WS) Q/A 47.

Third, even accepting that replaceable cartridge 70 corresponds to the claimed storage compartment, Tucker's heaters 14a, 14b, which Mr. Flolid opines corresponds to the claimed “heater,” are positioned in an equidistant fashion from the first end and the second end of cartridge 70, and are not opposite of the mouth end insert 8. *See* RX-0109 (Tucker), FIG. 21 (annotated above). Thus, Tucker does not disclose claim limitation 1[d], which recites “attaching a heater at the first end.” *See* CX-1352C (Collins Rebuttal WS) Q/A 48.

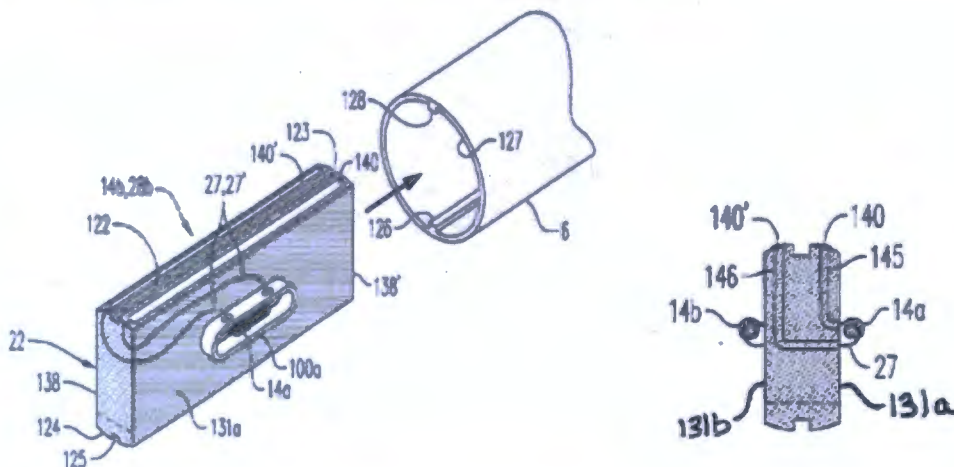
Claim 1[f]

Mr. Flolid opines that Tucker discloses limitation 1[f] (“a first plate positioned proximate to a first side of the storage compartment, the first plate coupled to the heating element and attached proximate to the first end”), suggesting that Tucker's panel 131a corresponds to the claimed “first plate.” *See* RX-0113 (Flolid WS) Q/A 120. Mr. Flolid's opinion is erroneous for at least the following reasons. *See* CX-1352C (Collins

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Rebuttal WS) Q/A 50.

First, Mr. Flolid's opinion relies on the same incorrect generalization discussed for the storage compartment of claim limitations 1[c] and 1[d].

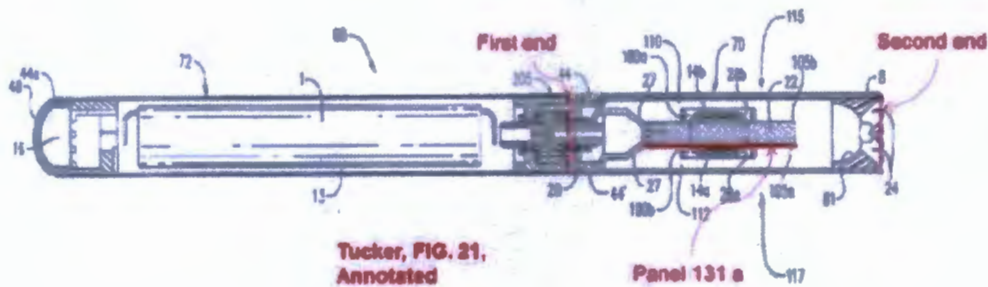


RX-0109 (Tucker), FIGS. 22-23.

Under a proper characterization, Mr. Flolid's opinion that panel 131a corresponds to the claimed "first plate" cannot be correct. As Figures 22 and 23 above show, panel 131a is part of liquid supply reservoir 22 (*i.e.*, the claimed "storage compartment"). However, claim limitation 1[f] requires that the first plate be "positioned proximate to a first side of the storage compartment." Panel 131a is not a separate component from and attached proximate to the storage compartment. *See* CX-1352C (Collins Rebuttal WS) Q/A 51.

Second, even assuming that panel 131a constitutes the recited plate, and that cartridge 70 constitutes the recited storage compartment, liquid supply reservoir 22, including panel 131a, is not attached proximate to the first end of Tucker's cartridge 70, as required by the claim limitation. *See id.* at Q/A 53-54.

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RX-0109 (Tucker), FIG. 21 (annotated).

As illustrated in Figure 21, Tucker's panel 131a is positioned approximately equidistant from the first end and the second end of cartridge 70. *See* RX-0109 (Tucker), FIG. 21 (annotated). Tucker's panel 131a is therefore not attached proximate to the first end of Tucker's cartridge 70. *See* CX-1352C (Collins Rebuttal WS) Q/A 55.

Third, Tucker's panel 131a is not a component of the heater, as claim limitation 1[f] requires, "the heater comprising... a first plate...." *See* RX-0109 (Tucker), FIG. 21 (annotated above), 22. Mr. Flolid acknowledges that the recited plates must be part of the claimed heater. *See* Flolid Tr. 313-314. Yet, Tucker's panel 131a is a wall of the reservoir tank 22. *See* RX-0109 (Tucker), ¶ [0102], ¶ [0102] (describing panels 131a and 131b as part of the tank reservoir 22), FIGS. 21-22. The reservoir tank 22 merely supplies the liquid material for heating by the heaters 14a and 14b. Reservoir tank 22, including panels 131a and 131b, are not involved in the heating of the liquid material. In fact, Mr. Flolid does not identify panel 131a as a part of Tucker's heater, describing the heater as "element 14a, 14b, end portions 27, 27', stripes 140, 140', and leads 145, 146." RX-0113 (Flolid WS) Q/A 118. Panel 131a is not included. Accordingly, Tucker does not meet the claim limitation. *See* CX-1352C (Collins Rebuttal WS) Q/A 56.

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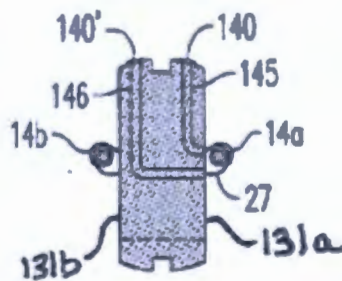
Claim 1[g]

Tucker does not disclose or render obvious claim limitation 1[g]. *See id.* at Q/A 57. Mr. Flolid opines that Tucker discloses “a second plate positioned proximate to a second side of the storage compartment, the second plate coupled to the heating element and attached proximate to the first end, the first side opposite the second side,” as required by claim limitation 1[g], pointing to Tucker’s panel 131b as the claimed “second plate.” *See* RX-0113 (Flolid WS) Q/A 121. Mr. Flolid’s opinion is erroneous for at least the following reasons. *See* CX-1352C (Collins Rebuttal WS) Q/A 58.

First, Mr. Flolid’s opinion relies on the same erroneous generalization discussed for claim limitations 1[c], 1[d], and 1[f]. Claim limitation 1[g] requires that the second plate, allegedly panel 131b, be “positioned proximate to a second side of the storage compartment.” Panel 131b cannot constitute the claimed second plate, because it is not a separate component from and attached proximate to the storage compartment. *See id.* at Q/A 59-60.

Second, Tucker explains that the reservoir 22 is made of plastic or fiberglass, not metal. *See* RX-0109 (Tucker), ¶ [0088].

Third, even assuming panel 131b constitutes the recited plate, and that cartridge 70 constitutes the recited storage compartment, liquid supply reservoir 22, including panel 131b, is not attached proximate to the first end of Tucker’s cartridge 70, as required by the claim limitation. It is equidistant from both ends. *See* CX-1352C (Collins Rebuttal WS) Q/A 61-62.



RX-0109 (Tucker), FIG. 23.

Tucker's panel 131b is positioned approximately equidistant from the first end and the second end of cartridge 70, and is therefore not proximate either end relative to the other. *See* CX-1352C (Collins Rebuttal WS) Q/A 63; RX-0109 (Tucker), FIG. 23.

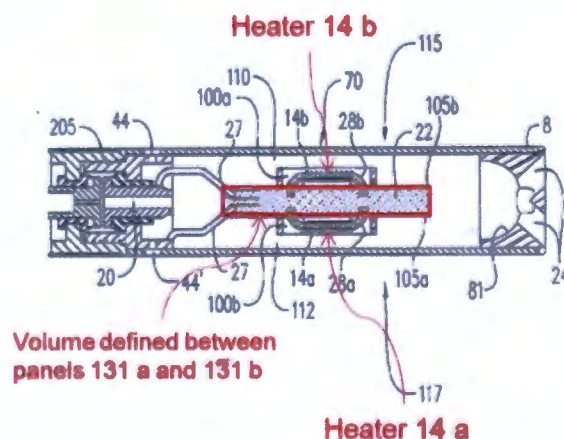
Fourth, as Mr. Flolid acknowledges, the recited plates must be part of the heater. *See* Flolid Tr. 313-314. Yet, Tucker's panel 131b is not a component of the heater, as required by claim limitation 1[f]. Tucker's panel 131b is a wall of the reservoir tank 22. RX-0109 (Tucker), ¶ [0102], FIGS. 21 (annotated above), 22. The reservoir tank 22 supplies the liquid material to the heater, but is not involved in the heating of the liquid material. Mr. Flolid's own identification of the heater components does not include panel 131b. *See* RX-0113 (Flolid WS) Q/A 118; CX-1352C (Collins Rebuttal WS) Q/A 64.

Fifth, Tucker does not meet this claim limitation because panel 131b is not coupled to Tucker's heater 14a. Claim limitations 1[f] and 1[g] require that the heating element is coupled to both the first and second plates. These claim limitations refer to only one heating element, and that each plate is coupled to the same element. *See* CX-1352C (Collins Rebuttal WS) Q/A 65. Under Mr. Flolid's analysis, Tucker's heater 14a is allegedly coupled to panel 131a, and heater 14b is allegedly coupled to a different

component—panel 131b. Accordingly, Tucker does not meet the requirements of the claim limitation 1[g]. *See id.* at Q/A 66.

Claim 1[h]

Tucker does not disclose or render obvious claim limitation 1[h]. *See id.* at Q/A 67. Mr. Flolid opines that Tucker discloses “the first plate and the second plate defining a volume therebetween, at least a portion of the heating element disposed within the volume,” as required by claim 1[h], arguing that Tucker’s heaters 14a and 14b correspond to the claimed “heating element.” *See* RX-0113 (Flolid WS) Q/A 118. That opinion is incorrect. Tucker’s heaters 14a and 14b are electrically resistive wires wrapped or coiled around wicks 28a and 28b, respectively. *See* RX-0109 (Tucker), ¶ [0091]; CX-1352C (Collins Rebuttal WS) Q/A 68-69.



RX-0109 (Tucker), FIG. 21 (excerpt) (annotated).

As shown in Figure 21, heaters 14a and 14b are both disposed outside of the volume defined between panels 131a and 131b. *See* CX-1352C (Collins Rebuttal WS) Q/A 70; RX-0109 (Tucker), FIG. 21 (excerpt) (annotated). Mr. Flolid agrees. Flolid Tr. 198. Therefore, heaters 14a and 14b cannot be “disposed within the volume” defined by

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the first and second plates, as required by limitation 1[h]. *See* CX-1352C (Collins Rebuttal WS) Q/A 70.

Mr. Flolid opines that Tucker describes an embodiment wherein a portion of the heater is disposed internally of tank reservoir 22. *See* RX-0113 (Flolid WS) Q/A 121. He opines that leads 145 and 146 are a portion of the heater, and are therefore located within the volume defined by the first and second plates. While Tucker describes leads 145 and 146 as being “disposed internally of the tank reservoir 22,” it does not support the opinion that leads 145 and 146 are a part of heater 14a. *See* RX-0109 (Tucker), ¶ [0104]; CX-1352C (Collins Rebuttal WS) Q/A 73.

Tucker describes leads 145 and 146 as electrical components that connect heaters 14a and 14b to the contact stripes 140 and 140'. *See* RX-0109 (Tucker), ¶ [0104]. Tucker further describes heaters 14a and 14b as terminating at end portions 27 and 27', and positions leads 145 and 146 internally of tank reservoir 22. *See* CX-1352C (Collins Rebuttal WS) Q/A 73. Based on this configuration, a person of ordinary skill would have understood leads 145 and 146 to be mere intermediary components between the heater and the contact stripes. Therefore, a person of ordinary skill in the art would have understood that leads 145 and 146 are not a part of heater 14a. *See id.* at Q/A 74.

The claim phrase “heating element configured to heat [a/the] vaporizable material to generate an aerosol for delivery to a user” has been construed to mean “a component that transforms energy to heat for generating an aerosol for delivery to a user.” Leads 145 and 146 are not components of the heater 14a because they do not play a role in “transform[ing] electrical energy to heat for generating an aerosol for delivery to a user.” *See* CX-1352C (Collins Rebuttal WS) Q/A 75.

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Tucker states that “the connection,” *i.e.*, leads 145 and 146, “between the uncoiled, end portions 27, 27’ (see FIG. 5) of the heater 14 and the electrical leads 26 are highly conductive and temperature resistant while the heater 14 is highly resistive so that heat generation occurs primarily along the heater 14 and not at the contacts.” *See* RX-0109 (Tucker), ¶ [0051]. Thus, leads 145 and 146 are not capable of generating heat for heating the liquid material within reservoir tank 22, nor are leads 145 and 146 intended to generate heat for heating the liquid material. *See* CX-1352C (Collins Rebuttal WS) Q/A 76. Mr. Flolid agrees that leads are not configured to generate heat. *See* Flolid Tr. 200. Instead, they are configured to provide an electrical connection between contact strips 140 and 140’ and heater 14a. Leads 145 and 146 have a low resistance so that the electrical connection is not impeded. *See id.* at Q/A 77.

If the liquid material were to be heated by leads 145 and 146 within the tank reservoir 22, it could not be properly vaporized and then aerosolized or delivered to a user because air does not enter, and vapor or aerosol cannot exit tank reservoir 22. Instead, Tucker describes that the liquid material can be drawn out of tank reservoir 22 to heater 14a by wick 28a. *See* RX-0109 (Tucker), ¶ [0106]; CX-1352C (Collins Rebuttal WS) Q/A 78. Tucker therefore does not render obvious claim 1 of the ‘130 patent. *See* CX-1352C (Collins Rebuttal WS) Q/A 79-80.

Dependent Claim 2

Eonsmoke argues:

Tucker discloses a mouthpiece 8, which is specifically referred to as a “mouth-end insert 8” at paragraph 0036. (RX-0109.0013). The term “insert” suggests that the mouth-end insert 8 is “inserted” into the replaceable cartridge 70 by a snap fit coupling. (RX-0113.0059, Q/A 124)....

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To the extent *Tucker* does not teach that “the mouthpiece is attached at the second end by a snap fit coupling with the storage compartment,” it would have been obvious to the POSA with an engineering background and experience to modify *Tucker* such that its mouth-end insert 8 is attached at the second end by a snap-fit coupling. Snap fits were a well-known mechanical interface that would have been known to a POSA having knowledge of basic mechanical principles. In fact, *Tucker* itself explicitly states that a snap-fit is a known coupling technique. (RX-0109.0017, para. 0089); (RX-0113.0059, Q/A 124).

Tucker discloses the remaining features of claims 1 and 2, as set forth above.

Resp. Br. at 44.

Asserted claim 2 is recited below:

2. The method of claim 1, wherein the mouthpiece is attached at the second end by a snap fit coupling with the storage compartment.

JX-0002 (‘130 Patent), claim 2.

Tucker alone does not render obvious claim 2. *See* CX-1352C (Collins Rebuttal WS) Q/A 82. Eonsmoke argues that *Tucker* discloses “the method of claim 1, wherein the mouthpiece is attached at the second end by a snap fit coupling with the storage compartment,” as recited in claim 2. *See* RX-0113 (Flolid WS) Q/A 124. Mr. Flolid’s opinion is wrong for the following reasons.

First, Mr. Flolid’s opinion relies on the same incorrect generalization discussed in the analysis of claim limitations 1[c], 1[d], 1[f], and 1[g] above. A person of ordinary skill in the art would have understood *Tucker*’s liquid supply reservoir 22, and not replaceable cartridge 70, to correspond to the claimed storage compartment. With this correct understanding, *Tucker*’s mouth end insert 8 is coupled to outer tube (or casing) 6 of cartridge 70, and not the second end of the storage compartment—i.e., *Tucker*’s liquid

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supply reservoir 22 that holds the liquid material. *See* CX-1352C (Collins Rebuttal WS) Q/A 84.

Second, Tucker's mouth end insert 8 is not coupled to cartridge 70 via a snap-fit coupling. Tucker is silent as to the connection of mouth end insert 8 to cartridge 70, but to a person of ordinary skill in the art, this figure shows a press fit. *See id.* at Q/A 85. Mr. Flolid's opinion that the term "'insert' strongly suggests... that the mouth-end insert 8 is 'inserted' into the replaceable cartridge 70 by a snap fit coupling," is not supported by any reasoning or evidence. *See* RX-0113 (Flolid WS) Q/A 124; CX-1352C (Collins Rebuttal WS) Q/A 86. Mouth end insert 8 can be inserted and attached to casing 6 of cartridge 70 in a number of ways, such as by a press (friction) fit, adhesives, or screw attachments. *See* CX-1352C (Collins Rebuttal WS) Q/A 87.

Mr. Flolid further opines that, "to the extent Tucker does not teach a snap fit coupling, it would have been obvious to modify Tucker such that its mouth-end insert 8 is attached at the second end by a snap-fit coupling." *See* RX-0113 (Flolid WS) Q/A 124. As evidence for this opinion, Mr. Flolid stated that "Tucker itself acknowledges at paragraph 0089 that a snap-fit is a known coupling technique." *See id.*; CX-1352C (Collins Rebuttal WS) Q/A 88. Mr. Flolid did not provide any other evidence or reasoning. *See* CX-1352C (Collins Rebuttal WS) Q/A 89. He has therefore not provided a sufficient explanation supporting a motivation to implement snap-fit coupling of mouth end insert 8, nor did Mr. Flolid set forth adequate explanations as to why a person of ordinary skill in the art would have had a reasonable expectation of success in doing so. *See id.* at Q/A 90. Mr. Flolid's testimony does not explain how a person of ordinary skill would have implemented the snap-fit coupling, how the modified casing of cartridge 70

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would have operated, or how the modified cartridge 70 and mouth end insert 8 would have satisfied claim 2. *See id.* at Q/A 91.

Tucker's snap-fit coupling is not in reference to mouth end insert 8. Rather, Tucker merely mentions that reservoir tank 22 may use a snap-fit coupling. *See* RX-0109 (Tucker), ¶¶ [0089], [0098], [0105]. Mr. Flolid did not, and cannot, point to any teaching or suggestion by Tucker that would motivate the specific asserted modification of implementing snap-fit coupling of mouth end insert 8. A person of ordinary skill would not have been motivated to modify the mouth-end insert 8 and cartridge 70 with a snap-fit coupling. *See* CX-1352C (Collins Rebuttal WS) Q/A 92-94.

2. Tucker (RX-0109) and Buchberger (RX-0107)

Eonsmoke argues that Tucker (RX-0109) in combination with Buchberger (RX-0107) renders obvious claims 1, 2 and 4 of the '130 patent. *See* Resp. Br. at 44-47.

Eonsmoke argues, *inter alia*:

Juul admits that Tucker discloses the following features of claim 1:

- A method of fabricating a cartridge, the method comprising:
- forming a storage compartment configured to hold a vaporizable material, the storage compartment having a first end and a second end opposite the first end;
- attaching a mouthpiece to the storage compartment at the second end; and
- attaching a heater at the first end, the heater comprising:
- a heating element configured to heat the vaporizable material to generate an aerosol for delivery to a user.

(CX-1352C.0028-29 and CDX-0006C.21). The dispute here is therefore centered on whether it would have been obvious to substitute *Tucker's* electrical leads for *Buchberger's* electrical plates as a simple substitution of one type of conductive element for another with predictable results. Mr. Flolid correctly testified that this would have been an obvious modification to the POSA with an engineering background and experience. This POSA would have had knowledge of these basic

electrical principles.

Resp. Br. at 44-45.

Mr. Flolid relies on Buchberger only for claims 1 and 4. His analysis for claim 2 therefore is wrong for the same reasons discussed above with respect to Tucker alone.

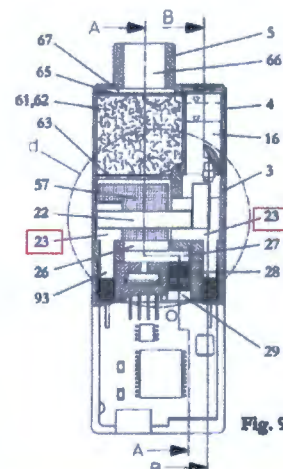
Mr. Flolid's reference to Buchberger in his analysis of claim 1 concerns only whether the '130 patent requires the first and second plates to be conductive. *See* RX-0113 (Flolid WS) Q/A 123. Mr. Flolid acknowledges that Tucker's plates 131a and 131b are not conductive. *See id.* at Q/A 122. He then opines "[i]t would have been obvious to replace Tucker's electrical leads with the electrical plates disclosed in Buchberger." *See id.* at Q/A 123. In particular, Mr. Flolid identifies Buchberger's plate-like contacts 23 as the alleged electrical components. *See* CX-1352C (Collins Rebuttal WS) Q/A 97. Yet, a person of ordinary skill in the art would not have replaced Tucker's plates 131a and 131b with any elements of Buchberger, including plate-like contacts 23. *See id.* at Q/A 98.

Independent Claim 1

Eonsmoke argues, *inter alia*:

To the extent the "first plate positioned proximate to a first side of the storage compartment, the first plate coupled to the heating element and attached proximate to the first end" and the "second plate positioned proximate to a second side of the storage compartment, the second plate coupled to the heating element and attached proximate to the first end, the first side opposite the second side, the first plate and the second plate defining a volume therebetween, at least a portion of the heating element disposed within the volume" are deemed to be electrical elements, these features are taught by *Buchberger*. (RX-0113.0058-59, Q/A 123).

Buchberger teaches teach a first plate positioned proximate to a first side of the storage compartment, the first plate coupled to the heating element and attached proximate to



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the first end and a second plate positioned proximate to a second side of the storage compartment, the second plate coupled to the heating element and attached proximate to the first end, the first side opposite the second side, the first plate and the second plate defining a volume therebetween, at least a portion of the heating element disposed within the volume – “plate-like contacts 23” with a composite formed therebetween. (RX-0113.0058-59, Q/A 123).

It would have been obvious to the POSA having an engineering background and experience to replace *Tucker*’s electrical leads with the electrical plates disclosed in *Buchberger*. It would have been obvious to replace *Tucker*’s electrical leads with the electrical plates disclosed in *Buchberger* as a simple substitution of one type of conductive element for another with predictable results. (RX-0113.0058-59, Q/A 123). *KSR*, 550 U.S. at 416. These are basic electrical principles, of which a POSA would have been aware.

Tucker discloses the remaining limitations of claims 1 and 2, as set forth above.

Resp. Br. at 45-46.

Asserted claim 1 is recited below:

1. [a] A method of fabricating a cartridge, the method comprising:
 - [b] forming a storage compartment configured to hold a vaporizable material, the storage compartment having a first end and a second end opposite the first end;
 - [c] attaching a mouthpiece to the storage compartment at the second end; and
 - [d] attaching a heater at the first end, the heater comprising:
 - [e] a heating element configured to heat the vaporizable material to generate an aerosol for delivery to a user;
 - [f] a first plate positioned proximate to a first side of the storage compartment, the first plate coupled to the heating element and attached proximate to the first end; and
 - [g] a second plate positioned proximate to a second side of the storage compartment, the second plate coupled to the heating element and attached proximate to the first end, the first side opposite the second side,
 - [h] the first plate and the second plate defining a volume therebetween, at least a portion of the heating element

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disposed within the volume.

JX-0002 ('130 Patent), claim 1.

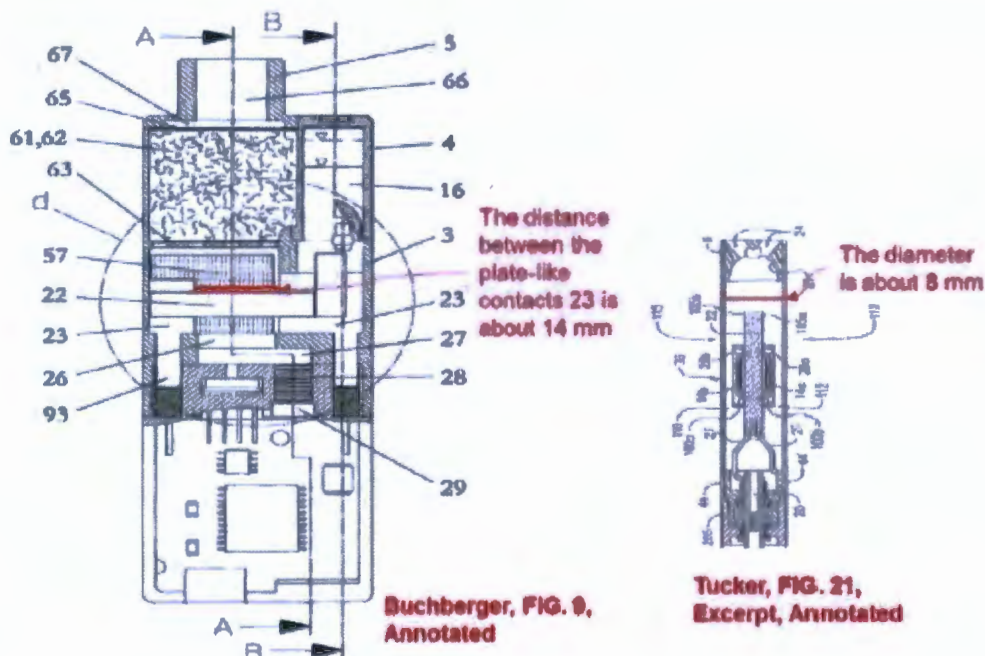
Claim 1[f]

Tucker combined with Buchberger does not disclose claim limitations 1[f], 1[g], and 1[h]. *See* CX-1352C (Collins Rebuttal WS) Q/A 99. First, Tucker and Buchberger do not disclose claim limitation 1[f]. *See* CX-1352C (Collins Rebuttal WS) Q/A 100. Eonsmoke argues that Tucker and Buchberger disclose “a first plate positioned proximate to a first side of the storage compartment, the first plate coupled to the heating element and attached proximate to the first end.” Mr. Flolid opines that Tucker’s panel 131a corresponds to the claimed “first plate.” *See* RX-0113 (Flolid WS) Q/A 120. For the same reasons discussed above for limitation 1[f] with respect to Tucker alone, Mr. Flolid’s opinion is incorrect. *See* CX-1352C (Collins Rebuttal WS) Q/A 101. Mr. Flolid’s reference to Buchberger does not save his opinions. *See id.*

Mr. Flolid identifies Buchberger’s plate-like contacts 23 as the alleged electrical components, but does not explain why a person of ordinary skill would have been motivated to “replace Tucker’s electrical leads with the electrical plates disclosed in Buchberger.” *See* RX-0113 (Flolid WS) Q/A 123; CX-1352C (Collins Rebuttal WS) Q/A 102; RX-0109 (Tucker), FIG. 21 (annotated). Mr. Flolid did not provide an explanation as to why a person of ordinary skill would have been motivated to combine Tucker with Buchberger, why a person of ordinary skill would have had a reasonable expectation of success in doing so, how Tucker’s modified device would operate, or how the modified device meets claim 1. Mr. Flolid’s opinion uses improper hindsight. *See* CX-1352C (Collins Rebuttal WS) Q/A 103.

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A person of ordinary skill in the art would have understood that the different sizes and shapes of Tucker's electronic cigarette 60 and Buchberger's inhalator component 2 prevent a simple swapping of components. See RX-0107 (Buchberger), FIG. 9 (annotated), 21 (excerpt) (annotated).



RX-0107 (Buchberger), FIG. 9 (annotated), 21 (excerpt) (annotated).

Tucker's cylindrical e-cigarette 60 is "about the same size as a conventional cigarette." RX-0109 (Tucker), ¶ [0077]. Conversely, Buchberger's rectangular inhalator is much larger, approximately half the size of a cigarette pack. See RX-0107 (Buchberger), ¶¶ [0108], [0123]. The distance between Buchberger's plate-like contacts alone is almost twice the diameter of Tucker's entire electronic cigarette 60. *Id.* at ¶ [0123]; CX-1352C (Collins Rebuttal WS) Q/A 104.

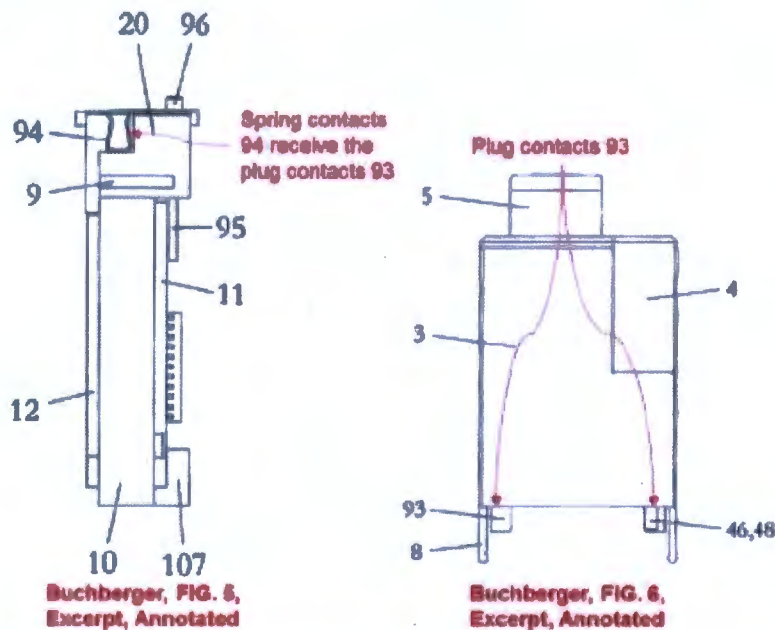
As illustrated above in RX-0107 (Buchberger), FIG. 9 (annotated), 21 (excerpt) (annotated), a person of ordinary skill in the art would have realized that the internal

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components of Buchberger's inhalator component 2 were specifically configured to work with the unique flat composite structure and fit within the relatively large, rectangular inhalator component 2. A person of ordinary skill in the art would also have realized that Buchberger's components could not be easily implemented into Tucker's smaller, cylindrical cartridge 70. More specifically, a person of ordinary skill would have understood that Buchberger's plate-like contacts 23 would not fit within Tucker's cartridge 70 by themselves, let alone in combination with the other components within the cartridge 70. Conversely, a person of ordinary skill would have understood that the components of Tucker's cartridge 70 were specifically configured to fit within the smaller cylindrical cartridge 70. In fact, Tucker uses thin leads 26, as opposed to larger conductive devices such as plates, to accommodate the small size of Tucker's cartridge 70. With this understanding, the person of ordinary skill would not have sought to implement Buchberger's plate-like contacts 23 in Tucker's cartridge. *See* CX-1352C (Collins Rebuttal WS) Q/A 105.

Additionally, a person of ordinary skill would not have replaced Tucker's leads 26 with Buchberger's plate-like contacts 23, because these components perform different functions. *See* RX-0107 (Buchberger), FIGS. 5-6 (excerpt) (annotated).

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RX-0107 (Buchberger), FIGS. 5-6 (excerpt) (annotated).

Tucker's leads 26 couple Tucker's heaters 14a, 14b to electrical contacts internally within cartridge 70. *See* CX-1352C (Collins Rebuttal WS) Q/A 106. In contrast, Buchberger's plate-like contacts 23 protrude out of inhalator component 2 to form plug contacts 93, which couple with the external spring contacts 94 of inhalator part 1. *See id.* They are also used in feeding liquid to the wick of Buchberger. These parts do not represent a simple substitution or yield a predictable result because implementation of Buchberger's plate-like contacts 23 would not achieve the internal coupling performed by Tucker's leads. *See id.*

Buchberger's plug contacts 93 are also incompatible with the threaded connection used to couple Tucker's cartridge 70 with second section 72. *See* RX-0107 (Buchberger), FIGS. 5-6 (excerpts) (annotated above). Tucker's device includes a threaded connection 205 that couples Tucker's cartridge 70 with second section 72. *See* RX-0109 (Tucker), ¶

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[0037]. In contrast, Buchberger's inhalator component 2 includes plug contacts 93 that protrude from inhalator component 2, and are received within corresponding spring contacts 94 of inhalator part 1. *See* CX-1352C (Collins Rebuttal WS) Q/A 107.

Buchberger's plate-like contacts 23 protrude out of inhalator component 2 to form plug contacts 93, which engage spring contacts 94 through longitudinal movement. *See* RX-0107 (Buchberger), FIGS. 5-6 (excerpt) (annotated). If Buchberger's plate-like contacts 23 were implemented in Tucker, Buchberger's plug contacts 93 would interfere with the mechanical coupling between Tucker's cartridge 70 and its second section 72, as Tucker's second section 72 is not configured to accommodate such protruding contacts. *See* CX-1352C (Collins Rebuttal WS) Q/A 108. The protruding plug contacts would prevent second section 72 from meeting and/or aligning with cartridge 70. *See id.*

Buchberger's plug contacts 93 would further interfere with Tucker's threaded connection 205. If Buchberger's plate-like contacts 23 and corresponding plug contacts 93 were to be implemented in Tucker's cartridge 70, cartridge 70 would be unable to twist or rotate for effecting threaded connection 205 once plug contacts 93 were received by corresponding contact receptacles in second section 72. *See id.* at Q/A 109. A person of ordinary skill would have expected that implementation of Buchberger's plate-like contacts 23 (and corresponding plug contacts 93) would render Tucker's electronic cigarette 60 inoperable by preventing cartridge 70 from mechanically and electrically coupling to second section 72. *See id.*

A person of ordinary skill in the art would not have been motivated to implement Buchberger's first plate within Tucker's cartridge 70. The dimensional and structural differences between the devices are such that Buchberger's plates would not fit within

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Tucker's electronic cigarette, and Tucker's threaded connection 205 is incompatible with Buchberger's plug contacts 93. *See id.* at Q/A 110.

Even if implemented in Tucker's cartridge 70, Buchberger's plate-like contacts 23 would not be components of the heater, as required by claim limitation 1[f]. *See id.* at Q/A 111. As discussed above for claim limitation 1[d] with respect to Tucker alone, the electrical leads 26 are not components of Tucker's heater. Thus, if the electrical leads 26 are replaced by Buchberger's alleged plates, then those plates would not be components of Tucker's heater either. *See CX-1352C (Collins Rebuttal WS) Q/A 112.* Even if Buchberger's alleged plates were implemented in Tucker, the modified cartridge 70 would still not meet limitation 1[f], which requires that the *heater* comprise the "first plate." *See id.*

Claim 1[g]

Claim limitation 1[g], relating to the second plate, presents the exact same problems as limitation 1[f]. It therefore is deficient for the same reasons. *See id.* at Q/A 113.

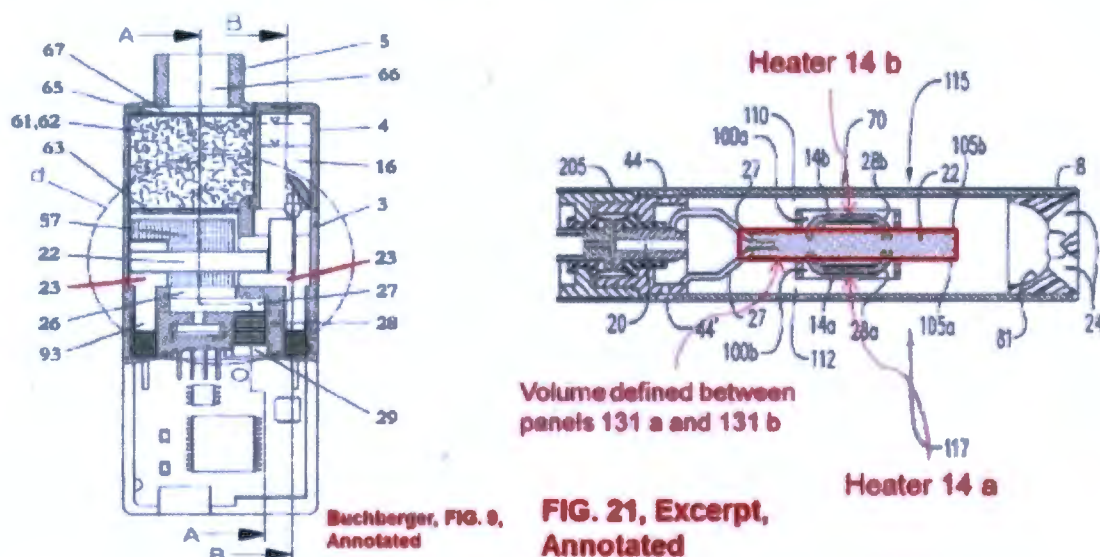
Claim 1[h]

The combination of Tucker and Buchberger also does not disclose claim limitation 1[h]. *See CX-1352C (Collins Rebuttal WS) Q/A 114-115.* Mr. Flolid's opinion here is the same as discussed above for limitations 1[f] and 1[g], and is wrong for the same reasons. *See CX-1352C (Collins Rebuttal WS) Q/A 116; RX-0113 (Flolid WS) Q/A 123.*

Additionally, implementation of Buchberger's plate-like contacts 23 would not meet the claim limitation because: (a) plate-like contacts 23 do not define a volume

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therebetween; and (b) even if plate-like contacts 23 defined a volume therebetween, neither of Tucker's heating elements 14a or 14b would be disposed within the volume. See CX-1352C (Collins Rebuttal WS) Q/A 117; RX-0107 (Buchberger), FIGS. 9, 21.



RX-0107 (Buchberger), FIGS. 9 (annotated), 21 (excerpt) (annotated).

As shown, the plate-like contacts 23 do not define a volume therebetween because they are very thin and substantially coplanar, and positioned laterally from each other. See RX-0107 (Buchberger), ¶ [0151]. The space between such plate-like contacts does not constitute a volume, as claimed. See CX-1352C (Collins Rebuttal WS) Q/A 118-119. Even if it did, the heaters 14a and 14b of Tucker would be placed outside the volume, not therebetween. See CX-1352C (Collins Rebuttal WS) Q/A 118-119; RX-0109 (Tucker), FIGS. 21 (annotated), 22-23.

The heaters 14a and 14b would thus not be disposed within a volume defined between Buchberger's plate-like contacts 23 in Mr. Flolid's proposed combination where Tucker's electrical leads are replaced with plate-like contacts 23. See CX-1352C (Collins

Rebuttal WS) Q/A 120. Tucker combined with Buchberger thus does not render obvious claim 1 of the '130 patent. *See id.* at Q/A 121.

Dependent Claim 2

As discussed above, Tucker combined with Buchberger does not disclose claim limitations 1[f], 1[g], and 1[h]. *See* CX-1352C (Collins Rebuttal WS) Q/A 99. Claim 2 depends from claim 1. Thus, for the same reasons discussed above, Tucker in combination with

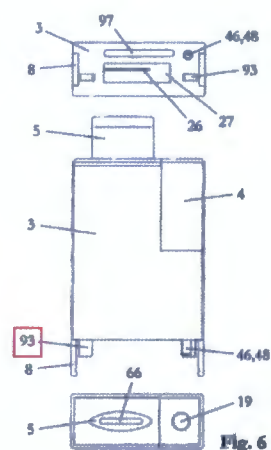
Buchberger does not establish a *prima facie* case of obviousness with respect to claim 2.

Dependent Claim 4

Eonsmoke argues:

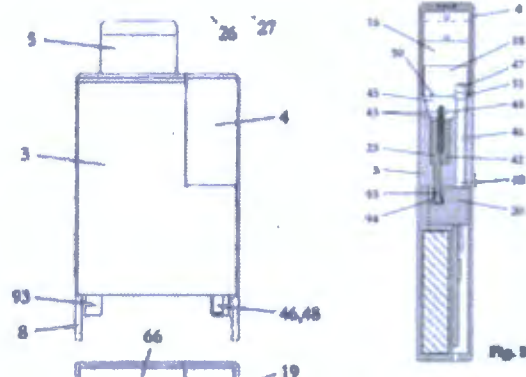
To the extent *Tucker* does not disclose flexible tabs, *Buchberger* at paragraphs 0060 and 0148 discloses the first plate is attached to a first flexible tab (93) having a first contact surface outside of the heater, and wherein the second plate is attached to a second flexible tab (93) having a second contact surface outside of the heater. (RX-0107.0037; RX-0107.0050).

Buchberger states "In a development of the invention, the plate-like contacts protrude out of the outer surface of the housing in the form of two plug contacts. The two plug contacts are provided in order to supply the required electric energy to the heating element." (RX-0107.0037, Paragraph 0060). It would have been obvious to replace *Tucker's* electrical leads with the electrical plates disclosed in *Buchberger* as a simple substitution of one type of conductive element for another with predictable results. (RX-0113.0059-60, Q/A 125). *KSR*, 550 U.S. at 416.



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Juul and the Staff have proposed the definition of “a projection that can flex” for the term “flexible tab.” (Joint Claim Construction Chart at page 9). *Buchberger’s* tab 93 meets this definition. Alternatively, it would have been obvious to provide the tab 93 to be made from a flexible material, as it was known to the the POSA having engineering background and experience to provide electrical connectors to be made of a flexible material.



Resp. Br. at 46-47.

Asserted claim 4 is recited below:

4. The method of claim 1, wherein the first plate is attached to a first flexible tab having a first contact surface outside of the heater, and wherein the second plate is attached to a second flexible tab having a second contact surface outside of the heater.

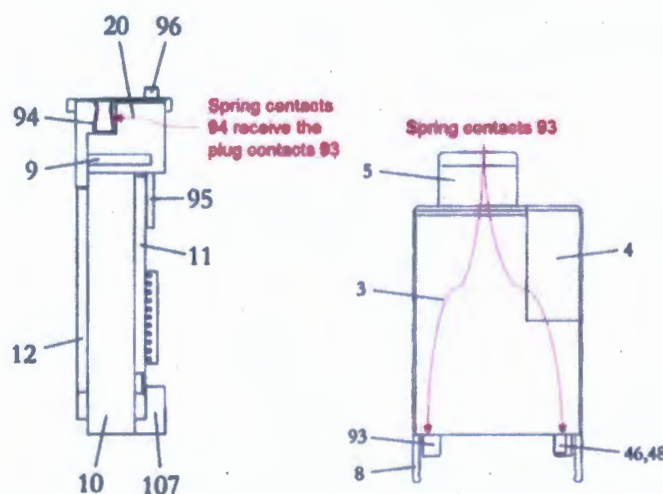
JX-0002 ('130 Patent), claim 4.

The combination of Tucker and Buchberger does not disclose or render obvious claim 4 of the '130 patent, which recites “wherein the first plate is attached to a first flexible tab having a first contact surface outside of the heater, and wherein the second plate is attached to a second flexible tab having a second contact surface outside of the heater.” *See* CX-1352C (Collins Rebuttal WS) Q/A 123. Eonsmoke argues that, “[t]o the extent Tucker does not disclose flexible tabs, Buchberger at paragraphs 0060 and 0148 discloses the first plate is attached to a first flexible tab, labeled as 93, having a first contact surface outside of the heater, and wherein the second plate is attached to a second flexible tab, labeled as 93 having a second contact surface outside of the heater.” *See* RX-0113 (Flolid WS) Q/A 125.

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As discussed above, a person of ordinary skill in the art would not have implemented Buchberger's plug contacts 93 in Tucker as Mr. Flolid suggests. *See* CX-1352C (Collins Rebuttal WS) Q/A 125-126. Furthermore, Buchberger's plug contacts 93 are not "flexible tabs," as claimed.

Buchberger's plate-like contacts 23 protrude longitudinally from the bottom end of inhalator component 2 to form plug contacts 93, which couple with the external spring contacts 94 of inhalator part 1. *See* RX-0107 (Buchberger), FIGS. 5-6 (excerpt) (annotated).



RX-0107 (Buchberger), FIGS. 5-6 (excerpt) (annotated).

Plug contacts 93 engage spring contacts 94 longitudinally without the need for bending. *See* CX-1352C (Collins Rebuttal WS) Q/A 129-131; RX-0107 (Buchberger), ¶ [0148]. A person of ordinary skill in the art would have understood that plug contacts 93 are substantially rigid to securely couple with spring contacts 94. The plug contacts would be unable to be received within spring contacts 94 when bent. *See* CX-1352C (Collins Rebuttal WS) Q/A 132.

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Mr. Flolid opines in the alternative that “it would have been obvious to provide the tab 93 to be made from a flexible material, as it was known to provide electrical connectors to be made of a flexible material,” but does not provide any reasoning or motivation as to why a person of ordinary skill would choose to make plug contacts flexible. *See* RX-0113 (Flolid WS) Q/A 125. In fact, a person of ordinary skill would not have made Buchberger’s plug contacts 93 to flex for at least the reason that plug contacts 93 would be unable to be received in the corresponding spring contacts 94 when bent relative to the bottom surface of inhalator component 2 discussed above. *See* CX-1352C (Collins Rebuttal WS) Q/A 134. Tucker combined with Buchberger thus does not render obvious claim 4 of the ‘130 patent. *See id.* at Q/A 135.

3. Tucker (RX-0109) and Backstrom (RX-0105)

Eonsmoke argues that Tucker (RX-0109) in combination with Backstrom (RX-0105) renders obvious claims 1 and 2 of the ‘130 patent. *See* Resp. Br. at 47-48.

Eonsmoke argues:

Similar to the modification in view of *Buchberger*’s plates, it alternatively would have been obvious to modify *Tucker* in view of *Backstrom*’s plates.

To the extent the “first plate positioned proximate to a first side of the storage compartment, the first plate coupled to the heating element and attached proximate to the first end” and the “second plate positioned proximate to a second side of the storage compartment, the second plate coupled to the heating element and attached proximate to the first end, the first side opposite the second side, the first plate and the second plate defining a volume there between, at least a portion of the heating element disposed within the volume” are deemed to be electrical elements, these features are taught by DE102006004484A1 to *Backstrom*. (RX-0105.0010); (RX-0113.0058-59, Q/A 123).

Backstrom teaches “first plate positioned proximate to a first side of the storage compartment, the first plate coupled to the heating element and attached proximate to the first end” and the “second plate positioned proximate to a second side of the storage compartment, the second plate coupled to the heating element and attached proximate to the first end, the first side opposite the second side, the first plate and the second plate defining a volume therebetween, at least a portion of the heating element disposed within the volume.” *Backstrom*’s

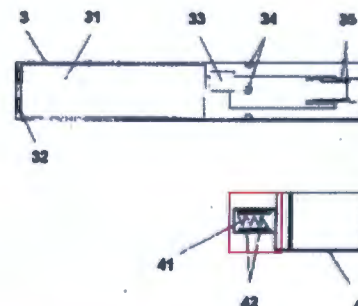


Figure 2 shows two plates with a volume therebetween and a portion of the heating element disposed within the volume. (RX-0105.0010); (RX-0113.0058-59, Q/A 123).

It would have been obvious to replace *Tucker*’s electrical leads with the electrical plates disclosed in *Backstrom*. It would have been obvious to replace *Tucker*’s electrical leads with the electrical plates disclosed in *Backstrom* as a simple substitution of one type of conductive element for another with predictable results. (RX-0113.0058-59, Q/A 123). *KSR*, 550 U.S. at 416.

Tucker discloses the remaining limitations of claims 1 and 2, as set forth above.

Resp. Br. at 47-48.

Mr. Flolid does not rely on *Backstrom* to disclose any of the subject matter recited in dependent claim 2. His opinions for these claims are wrong for the same reasons discussed above with respect to *Tucker* alone. Furthermore, *Tucker* combined with *Backstrom* does not disclose claim limitations 1[f], 1[g], and 1[h].

Mr. Flolid references *Backstrom* for only one limitation, similar to his reliance on *Buchberger* in the previous section with respect to *Tucker* in combination with *Buchberger*. See RX-0113 (Flolid WS) Q/A 123. His analysis is similarly incorrect. See CX-1352C (Collins Rebuttal WS) Q/A 138. Mr. Flolid opines that, like *Buchberger*, *Backstrom* “teach[es] a first plate positioned proximate to a first side of the storage

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compartment, the first plate coupled to the heating element and attached proximate to the first end.” *See* RX-0113 (Flolid WS) Q/A 123. He states “[i]t would have been obvious to replace Tucker’s electrical leads with the electrical plates disclosed in Buchberger... or Backstrom.” *See id.*

Mr. Flolid points to Backstrom’s Figure 2 for the proposition that Backstrom discloses two plates with a volume therebetween, and a portion of the heating element disposed within the volume. *See id.* Mr. Flolid does not identify the components from Figure 2 of Backstrom that he believes correspond to the claimed first and second plates. *See* CX-1352C (Collins Rebuttal WS) Q/A 143. It appears that Mr. Flolid is referring to Backstrom’s electrical filter contacts 42. However, these cylindrical contacts are not plates at all. *See id.* at Q/A 144. A person of ordinary skill in the art would not have replaced Tucker’s leads 26 with Backstrom’s electrical filter contacts 42, which are more akin to the electrical contacts within Tucker’s threaded connection 205. These contacts are configured to couple to Tucker’s second section 72, which is external to cartridge 70. *See id.* at Q/A 145.

The differences between Backstrom’s electrical filter contacts 42 and Buchberger’s plate-like contacts 23 are immaterial for purposes of rebutting Mr. Flolid’s opinion that Tucker combined with Backstrom renders claim limitations 1[f], 1[g], and 1[h] obvious. The combination of Tucker and Backstrom therefore does not disclose or render obvious “a second plate positioned proximate to a second side of the storage compartment, the second plate coupled to the heating element and attached proximate to the first end, the first side opposite the second side, the first plate and the second plate

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defining a volume therebetween, at least a portion of the heating element disposed within the volume.” *See* CX-1352C (Collins Rebuttal WS) Q/A 146.

D. Domestic Industry (Technical Prong)

Complainant asserts claims 1, 2, 4 and 7 of the ‘130 patent for domestic industry. *See* Compl. Br. at 106. The JUUL system includes the JUUL device and JUULpods. *See* CX-0015C (Collins WS) Q/A 453. As discussed below, JLI’s pod products are made by a process that meets each limitation of claims 1, 2, and 4 of the ‘130 patent. JLI’s JUUL system, including the JUUL device and JUULpod, practices claims 1, 2, 4, and 7 of the ‘130 patent.

2. Independent Claim 1

Asserted claim 1 is recited below:

1. A method of fabricating a cartridge, the method comprising:
 - [a] forming a storage compartment configured to hold a vaporizable material, the storage compartment having a first end and a second end opposite the first end;
 - [b] attaching a mouthpiece to the storage compartment at the second end; and
 - [c] attaching a heater at the first end, the heater comprising:
 - a heating element configured to heat the vaporizable material to generate an aerosol for delivery to a user;
 - [d] a first plate positioned proximate to a first side of the storage compartment, the first plate coupled to the heating element and attached proximate to the first end; and
 - [e] a second plate positioned proximate to a second side of the storage compartment, the second plate coupled to the heating element and attached proximate to the first end, the first side opposite the second side, the first plate and the second plate defining a volume therebetween, at least a portion of the heating element disposed within the volume.

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JX-0002 ('130 Patent), claim 1.²⁴

Claim 1[a]

The JUULpod practices claim element 1[a] because the JUULpod is created using “[a] method of fabricating a cartridge, the method comprising: forming a storage compartment configured to hold a vaporizable material, the storage compartment having a first end and a second end opposite the first end.” *See* CX-0015C (Collins WS) Q/A 458; CX-1193 (JUUL Photo Set 2); CX-0370C (JLI Step 2); CX-0388C (JLI Image). A person of ordinary skill in the art would have understood that the material in the JUULpod reservoir is a vaporization liquid that includes nicotine as an ingredient as shown on JLI’s website, as shown on the bottom of CX-0015C (Collins WS) Q/A 459; CX-1193 (JUUL Photo Set 2); CX-0370C (JLI Step 2); CX-0388C (JLI Image).

Claim 1[b]

The JUULpod practices claim element 1[b] because the JUULpod is formed by “attaching a mouthpiece to the storage compartment at the second end.” *See* CX-0015C (Collins WS) Q/A 460; CX-1193 (JUUL Photo Set 2); CX-0370C (JLI Step 2); CX-0388C (JLI Image).

Claim 1[c]

The JUULpod practices claim element 1[c] because the JUULpod is formed by “attaching a heater at the first end, the heater comprising: a heating element configured to heat the vaporizable material to generate an aerosol for delivery to a user.” *See* CX-

²⁴ JLI has given a letter designation for each element of the asserted independent claims. The letter designations used for the elements of this claim is different for technical prong and validity analysis. The administrative law judge is adopting the different letter designations as appropriate.

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0015C (Collins WS) Q/A 461; CX-1193 (JUUL Photo Set 2); CX-0369C (JLI Step 1); CX-0379C (JLI Step 13). CX-1193 (JUUL Photo Set 2) shows the heater of the JUULpod attached at the first end, the heater having a heating element, a coil wrapped around the wick, configured to heat the vaporizable material to generate an aerosol for delivery to a user, as required by this limitation. CX-1193 (JUUL Photo Set 2), CX-0369C (JLI Step 1), and CX-0379C (JLI Step 13) include schematic drawings of the heater, and language from JLI's website detailing how the vaporizable material is heated. *See* CX-0015C (Collins WS) Q/A 462.

As shown in CX-1193 (JUUL Photo Set 2), CX-0369C (JLI Step 1), and CX-0379C (JLI Step 13), the heating element is a wire or coil wrapped around the wick. A coil is a component that transforms electrical energy to heat for generating an aerosol for delivery to a user. *See* CX-0015C (Collins WS) Q/A 463.

The heating element of the JUULpod is configured to generate an aerosol. *See id.* at Q/A 464. Electrical energy passes from the JUUL device battery through the electrical contacts to the heating element, which converts the electrical energy to heat. *See id.* The heating element is wrapped around a wick. The heat from the heating element raises the temperature of the wick and the vaporizable material within the wick to generate a vapor. The vapor immediately mixes with air near the heating element and an aerosol is formed. *See id.* Therefore, the JUULpod includes a heating element that generates an aerosol as a result of heating the vaporizable material, which satisfies element 1[c].

Claim 1[d]

The JUULpod practices claim element 1[d] because the heater includes “a first plate positioned proximate to a first side of the storage compartment, the first plate

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coupled to the heating element and attached proximate to the first end; and a second plate positioned proximate to a second side of the storage compartment, the second plate coupled to the heating element, and attached proximate to the first end.” *See* CX-0015C (Collins WS) Q/A 467; CX-1193 (JUUL Photo Set 2); CX-0369C (JLI Step 1); CX-0379C (JLI Step 13); CX-0384C (JLI Step 25); CX-0385C (JLI Step 26); CX-0386C (JLI Step 27); CX-0253C (Pod Assembly Overview); CX-0380C (JLI Step 14); CX-0381C (JLI Step 15); CX-0382C (JLI Step 19); CX-0383C (JLI Step 21). CX-1193 (JUUL Photo Set 2), CX-0369C (JLI Step 1), and CX-0379C (JLI Step 13) show that the heater at the first end of the JUULpod includes a first plate that is positioned proximate to—in other words, close or near—a first side of the storage compartment, marked with a X. Similarly, this document shows a second plate is positioned proximate to—in other words, close or near—a second side of the storage compartment, marked with an O. This document also shows that the first plate is coupled to the heating element and attached proximate to the first end, and the second plate is coupled to the heating element and attached proximate to the first end. CX-0384C (JLI Step 25), CX-0385C (JLI Step 26), CX-0386C (JLI Step 27), CX-0253C (Pod Assembly Overview), CX-0380C (JLI Step 14), CX-0381C (JLI Step 15), CX-0382C (JLI Step 19), and CX-0383C (JLI Step 21) include schematic drawings that provide further support. *See* CX-0015C (Collins WS) Q/A 468.

As shown in CX-1193 (JUUL Photo Set 2), [

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See CX-0015C (Collins WS) Q/A 469.

As shown in CX-1193 (JUUL Photo Set 2), CX-0369C (JLI Step 1), and CX-0379C (JLI Step 13), this component is a relatively thin piece of material. This component is also generally smooth and flat, and a thin piece of metal. *See* CX-0015C (Collins WS) Q/A 470.

As shown in CX-1193 (JUUL Photo Set 2), CX-0369C (JLI Step 1), and CX-0379C (JLI Step 13), a first plate is positioned proximate to (i.e., close or near) a first side of the storage compartment, the first plate coupled to the heating element and attached proximate to the first end. And a second plate is positioned proximate to (i.e., close or near) a second side of the storage compartment, the second plate coupled to the heating element and attached proximate to the first end. CX-0384C (JLI Step 25), CX-0385C (JLI Step 26), CX-0386C (JLI Step 27), CX-0253C (Pod Assembly Overview), CX-0380C (JLI Step 14), CX-0381C (JLI Step 15), CX-0382C (JLI Step 19), and CX-0383C (JLI Step 21) include schematic drawings that provide further support. CX-0015C (Collins WS) Q/A 471.

Claim 1[e]

The JUULpod practices claim element 1[e] because the JUULpod includes the limitation “the first side opposite the second side, the first plate and the second plate defining a volume therebetween, at least a portion of the heating element disposed within the volume.” *See* CX-0015C (Collins WS) Q/A 472; CX-1193 (Juul Photo Set 2); CX-0369C (JLI Step 1); CX-0379C (JLI Step 13); CX-0380C (JLI Step 14); CX-0381C (JLI Step 15); CX-0382C (JLI Step 19); CX-0383C (JLI Step 21); CX-0384C (JLI Step 25); CX-0385C (JLI Step 26); CX-0386C (JLI Step 27); CX-0253C (Pod Assembly

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Overview). CX-1193 (JUUL Photo Set 2), CX-0369C (JLI Step 1), and CX-0379C (JLI Step 13) show that the first side of the storage compartment, marked X, is opposite the second side, marked O, and the first plate and the second plate define a volume therebetween, where at least a portion of the heating element disposed within the volume. The blue line outlines the volume defined between the first plate and second plate. CX-0380C (JLI Step 14), CX-0381C (JLI Step 15), CX-0382C (JLI Step 19), CX-0383C (JLI Step 21), CX-0384C (JLI Step 25), CX-0385C (JLI Step 26), CX-0386C (JLI Step 27), and CX-0253C (Pod Assembly Overview) show schematic drawings that provide further support. CX-0015C (Collins WS) Q/A 473.

As shown in CX-1193 (JUUL Photo Set 2), CX-0369C (JLI Step 1), and CX-0379C (JLI Step 13), the first and second plates bound a space therebetween, and a portion of the wick is disposed in that space. Also, as shown in CX-1193 (JUUL Photo Set 2), CX-0369C (JLI Step 1), and CX-0379C (JLI Step 13), the first and second plates are parallel and are facing each other. CX-0380C (JLI Step 14), CX-0381C (JLI Step 15), CX-0382C (JLI Step 19), CX-0383C (JLI Step 21), CX-0384C (JLI Step 25), CX-0385C (JLI Step 26), CX-0386C (JLI Step 27), and CX-0253C (Pod Assembly Overview) show schematic drawings that further support this conclusion. CX-0015C (Collins WS) Q/A 474. The JUULpod is made by a method that meets every limitation of claim 1. *See id.* at Q/A 475.

3. Dependent Claim 2

Asserted claim 2 is recited below:

2. The method of claim 1, wherein the mouthpiece is attached at the second end by a snap fit coupling with the storage compartment.

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JX-0002 ('130 Patent), claim 2.

The JUULpod practices claim 2 because the JUULpod meets the limitation “wherein the mouthpiece is attached at the second end by a snap fit coupling with the storage compartment.” *See also* CX-1193 (JUUL Photo Set 2); CX-0371C (JLI Step 4); CX-0372C (JLI Step 5); CX-0373C (JLI Product Step 6); CX-0374C (JLI Step 7); CX-0375C (JLI Step 8); CX-0376C (JLI Product Step 9). In particular, CX-1193 (JUUL Photo Set 2), CX-0371C (JLI Step 4), CX-0372C (JLI Step 5), CX-0373C (JLI Product Step 6), CX-0374C (JLI Step 7), CX-0375C (JLI Step 8), CX-0376C (JLI Product Step 9) show that the mouthpiece couples to the storage compartment via a snap-fit coupling between protrusions on the lateral sides of the storage compartment, as identified in the image on the left, and openings on the lateral sides of the mouthpiece, as identified in the image on the right. CX-0015C (Collins WS) Q/A 476.

To secure the mouthpiece to the storage compartment, the mouthpiece is inserted over the second end of the storage compartment, and pressed towards the first end. As the mouthpiece slides over the protrusions, the protrusions initially deflect the mouthpiece, causing the mouthpiece to flex outwards. When the protrusions align with the mouthpiece openings, the deflected mouthpiece elastically returns to its original position, and the protrusions engage with the mouthpiece, thereby effecting the snap-fit coupling. The engagement between the storage compartment protrusions and the mouthpiece openings secures the mouthpiece to the storage compartment. Thus, the JUULpod meets claim 2. *See id.* at Q/A 477.

The JUULpod also practices claim 2 of the '130 patent under the doctrine of equivalents to the extent that any differences may exist between the JUULpod and the

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features disclosed in claim 2 of the '130 patent. A person of ordinary skill in the art would have understood these differences to be insubstantial. *See id.* at Q/A 478. The JUULpod mouthpiece attaches to the storage compartment with a snap-fit coupling. In other words, these components perform substantially the same function—in substantially the same way, to achieve substantially the same result—to secure the mouthpiece to the flattened body—as in claim 2. *See id.* Thus, this claim is also met under the doctrine of equivalents. The JUULpod is made by a method that meets every limitation of claim 2, as well as claim 1 from which claim 2 depends, either literally or under the doctrine of equivalents. *See id.* at Q/A 479.

4. Dependent Claim 4

Asserted claim 4 is recited below:

4. The method of claim 1, wherein the first plate is attached to a first flexible tab having a first contact surface outside of the heater, and wherein the second plate is attached to a second flexible tab having a second contact surface outside of the heater.

JX-0002 ('130 Patent), claim 4.

The JUULpod practices claim 4 because the JUULpod is formed “wherein the first plate is attached to a first flexible tab having a first contact surface outside of the heater, and wherein the second plate is attached to a second flexible tab having a second contact surface outside of the heater.” *See* CX-0015C (Collins WS) Q/A 480; CX-1193 (JUUL Photo Set 2); CX-0369C (JLI Step 1); CX-0379C (JLI Step 13); CX-0380C (JLI Step 14); CX-0381C (JLI Step 15); CX-0382C (JLI Step 19); CX-0383C (JLI Step 21); CX-0384C (JLI Step 25); CX-0385C (JLI Step 26); CX-0386C (JLI Step 27); CX-0387C (JLI Step 28); CX-0253C (Pod Assembly Overview). CX-1193 (JUUL Photo Set 2)

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shows the first plate, outlined in green, is attached to a first flexible tab having a first contact surface, outlined in blue, and the second plate, also outlined in green, is attached to a second flexible tab having a second contact surface, also outlined in blue. The first flexible tab having a first contact surface and the second flexible tab having a second contact surface are outside the heater. CX-0369C (JLI Step 1), CX-0379C (JLI Step 13), CX-0380C (JLI Step 14), CX-0381C (JLI Step 15), CX-0382C (JLI Step 19), CX-0383C (JLI Step 21), CX-0384C (JLI Step 25), CX-0385C (JLI Step 26), CX-0386C (JLI Step 27), CX-0387C (JLI Step 28), and CX-0253C (Pod Assembly Overview) include schematic drawings that provide further support. CX-0015C (Collins WS) Q/A 481.

As shown in the images from CX-1193 (JUUL Photo Set 2), the cartridge includes a “flexible tab.” A person of ordinary skill in the art would understand that the contact tab shown above is made of a material that can flex. For example, the tab can be folded. The tab projects from the plate and extends outside the cartridge body. The tab is also a projecting device supple enough to bend freely or repeatedly without breaking. *See* CX-0015C (Collins WS) Q/A 482. As shown in CX-0369C (JLI Step 1), CX-0379C (JLI Step 13), CX-0380C (JLI Step 14), CX-0381C (JLI Step 15), CX-0382C (JLI Step 19), and CX-0383C (JLI Step 21), the JUULpod is made by a method that meets every limitation of claim 4, as well as claim 1 from which claim 4 depends. *See* CX-0015C (Collins WS) Q/A 483.

5. Dependent Claim 7

Asserted claim 7 is recited below:

7. The method of claim 1, wherein the cartridge further comprises the vaporizable material within the storage compartment, and wherein the vaporizable material comprises a nicotine formulation.

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JX-0002 ('130 Patent), claim 7.

The JUULpod practices claim 7 because the JUULpod is formed “wherein the cartridge further comprises the vaporizable material within the storage compartment, and wherein the vaporizable material comprises a nicotine formulation.” *See* CX-0015C (Collins WS) Q/A 484; CX-1193 (JUUL Photo Set 2). CX-1193 (JUUL Photo Set 2) shows that the JUULpod is created using the claimed method of fabricating a cartridge. It also shows that the vaporizable material within the storage compartment has a nicotine formulation. This document also includes a copy of a photo taken of the JUULpod packaging, which identifies nicotine as an ingredient, and as shown on JLI’s website, which describes the pod as containing liquid materials for vaping. CX-0015C (Collins WS) Q/A 485.

A person of ordinary skill in the art, based on the information provided on the JUULpod’s packaging and JLI’s website, would have reasonably understood that the liquid in the JUULpod is a vaporizable material that has a nicotine formulation. *See id.* at Q/A 486. The JUULpod is made by a method that meets every limitation of claim 7, as well as claim 1 from which claim 4 depends. *See* CX-0015C (Collins WS) Q/A 487.

VII. U.S. Patent No. 10,104,915

United States Patent No. 10,104,915 (“the ‘915 patent”), entitled “Securely attaching cartridges for vaporizer devices,” issued on October 23, 2018. JX-0004 ('915 Patent). The ‘915 patent issued from Application No. 15/815,666, filed on November 16, 2017. *See id.* The ‘915 patent application is a continuation of, and claims priority to, Application No. 15/430,357, filed on February 10, 2017, which is a continuation-in-part

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of other patent applications. The '915 patent also claims priority to Provisional Application No. 62/294,281, filed on February 11, 2016. The '915 patent relates to "apparatuses, including systems and devices, for vaporizing material to form an inhalable aerosol. Specifically, these apparatuses may include vaporizers." JX-0004, 2:64-67. The '915 patent has a total of 32 claims.

Complainant asserts claims 1, 6 and 21 of the '915 patent. *See* Compl. Br. at 14. As discussed below, the evidence shows that (1) the asserted claims are infringed by the accused products; (2) complainants have satisfied the technical prong of the domestic industry requirement; and (3) the asserted claims are not invalid.

Asserted claims 1, 6 and 21 are recited below:

1. A cartridge comprising:

[a] a storage compartment configured to hold a vaporizable material, the storage compartment having a non-circular cross section, the storage compartment having a top end and a bottom end opposite the top end along a first dimension, wherein the non-circular cross section includes two short sides and two long sides, the two short sides being shorter than the two long sides to result in the non-circular cross section, and wherein the storage compartment comprises a plastic material;

[b] an aerosol outlet disposed proximate to the top end of the storage compartment;

[c] a heater chamber disposed proximate to the bottom end of the storage compartment, the heater chamber comprising a heating element configured to aerosolize the vaporizable material, when the vaporizable material is present, to form an aerosol;

[d] a first electrical contact and a second electrical contact each configured and disposed to couple and complete an electrical circuit with a third electrical contact and a fourth electrical contact in a receptacle of a vaporizer device body, the electrical circuit configured to provide power to the heating element when the vaporizer device body is present;

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[e] an aerosol channel within the storage compartment, the aerosol channel extending from the heater chamber to the aerosol outlet, the aerosol channel configured so that the aerosol, when the aerosol is present, is inhalable through the aerosol channel;

[f] a first exterior wall extending between the top end and the bottom end;

a second exterior wall extending between the top end and the bottom end, wherein the first exterior wall and the second exterior wall are respectively intersected by the two short sides of the non-circular cross section;

[g] a first locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the first exterior wall, the first locking gap configured to engage with a first locking detent within the receptacle of the vaporizer device body when the vaporizer device body is present, wherein a height of a first interior wall of the vaporizer device body comprising the first locking detent is at least thirteen millimeters; and

a second locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the second exterior wall, the second locking gap configured to engage with a second locking detent within the receptacle of the vaporizer device body when the vaporizer device body is present, wherein a height of a second interior wall of the vaporizer device body comprising the second locking detent is at least thirteen millimeters.

4. The cartridge of claim 1, further comprising:

a mouthpiece comprising the aerosol outlet, wherein the first exterior wall has a first point between the bottom end of the storage compartment and the top end of the storage compartment, wherein the second exterior wall has a second point between the bottom end of the storage compartment and the top end of the storage compartment, wherein the mouthpiece terminates in a distal edge, and wherein the distal edge of the mouthpiece is disposed at the first point and the second point.

6. The cartridge of claim 4, further comprising:

a first mouthpiece detent on the first exterior wall proximate to the first point; and

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a second mouthpiece detent on the second exterior wall proximate to the second point, wherein the mouthpiece is secured to the storage compartment by the first detent and the second detent.

21. [p] An apparatus comprising:

[a] a vaporizer device body comprising:

a receptacle;

a third electrical contact and a fourth electrical contact disposed within the receptacle;

a first locking detent and a second locking detent within the receptacle; and

a first interior wall and a second interior wall within the receptacle, wherein each of the first interior wall and the second interior wall are at least thirteen millimeters in height, wherein the first interior wall and the second interior wall respectively comprise the first locking detent and the second locking detent; and

[b] a cartridge having a bottom end and a top end opposite the bottom end along a first dimension, the cartridge comprising:

a storage compartment configured to hold a vaporizable material, the storage compartment having a non-circular cross section, wherein the non-circular cross section includes two short sides and two long sides, the two short sides being shorter than the two long sides to result in the non-circular cross section, and wherein the storage compartment comprises a plastic material;

[c] an aerosol outlet at the top end of the cartridge;

[d] a heating element proximate to the bottom end of the cartridge, the heating element configured to aerosolize the vaporizable material to form an aerosol for delivery through the aerosol outlet;

[e] a first electrical contact and a second electrical contact configured and disposed to couple and complete an electrical circuit with the third electrical contact and the fourth electrical contact, the electrical circuit configured to provide power to the heating element;

[f] a first exterior wall and a second exterior wall extending between the top end and the bottom end, wherein the first exterior wall and the second exterior wall are respectively

intersected by the two short sides of the non-circular cross section;

[g] a first locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the first exterior wall, the first locking gap configured to engage with the first locking detent; and

a second locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the second exterior wall, the second locking gap configured to engage with the second locking detent.

JX-0004 ('915 Patent), claims 1, 4, 6, and 21.

A. Claim Construction²⁵

1. A Person of Ordinary Skill in the Art

Complainant argues:

A person of ordinary skill in the art ("POSA") is one who is presumed to be aware of all pertinent art, thinks along conventional wisdom in the art, and is a person of ordinary creativity. A POSA in the context of the asserted patents would have had (1) a B.S. in mechanical engineering, electrical engineering, or an equivalent degree and (2) at least one year of experience designing consumer products. CX-0015C (Collins WS) Q/A 33; CX-0016C (Alarcon WS) Q/A 22.

Ziip's expert, Mr. Flolid has proposed that a POSA would have at least a bachelor's degree in mechanical engineering, electrical engineering, or an equivalent degree. RX-0113 (Flolid WS) Q/A 19. Alternatively, Mr. Flolid opined that a POSA could also have had at least two years' experience designing, developing, or testing electronic cigarettes or related electromechanical devices, such as electromechanical devices configured to heat liquid and generate an aerosol. *Id.* at Q/A 20.

²⁵ Respondent Eonsmoke did not discuss any of the disputed claim terms on the merits in its posthearing briefs. *See* Joint Outline – Eonsmoke and Joint Reply Outline – Eonsmoke. Indeed, Eonsmoke's only statement concerning claim construction is the following:

Ziip applies the agreed upon constructions for any terms that had agreed upon constructions, as set forth in the Joint Claim Construction Chart. Otherwise, Ziip applies the plain and ordinary meaning of the term.

Resp. Br. at 3-4.

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Mr. Flolid further opines that his definition is only “approximate” and that a skilled artisan could have a higher level of education to make up for less experience or a higher level of training or skill to make up for less education. *Id.* at Q/A 19. Mr. Flolid’s definition of a POSA is vague and incorrect. CX-1353C (Alarcon Rebuttal WS) Q/A 41-42; CX-0015C (Collins WS) Q/A 34. Regardless, the differences between JLI’s proposed qualifications for a POSA and those proposed by Respondents would not change JLI’s infringement or validity analysis. CX-0015C (Collins WS) Q/A 35; CX-1353C (Alarcon Rebuttal WS) Q/A 42.

Compl. Br. at 18-19 (citations omitted).

Respondent argues:

The key decision is the definition of a POSA. Both parties agree that a POSA would have at least a degree in mechanical or electrical engineering or a similar degree. And both agree that this POSA would have some design experience with products. Ziip proposes that this experience would be at least two years with electronic cigarettes or related electromechanical devices because this is the subject matter of the patents at issue.

Ziip’s definition is a better one:

A person of ordinary skill in this art would have (1) at least a B.S. in mechanical engineering, electrical engineering, or an equivalent degree and/or (2) at least two years’ experience designing, developing, or testing electronic cigarettes or related electromechanical devices, such as electromechanical devices configured to heat liquid and generate an aerosol. This description is approximate, and a higher level of training or skill might make up for less education, and vice-versa.

(RX-0113.0005-6, Q/A 18-20).

Juul has proposed a far broader definition – one year designing consumer products – because Juul wants its POSA to be as ignorant as possible so as not to see the connections that Ziip claims are obvious. But Juul’s definition is deficient, as its expert, Mr. Ramon Alarcon, essentially admitted when he noted that not every consumer product would be relevant. (Hearing Tr., at 422:15-423:16).

Ziip’s definition of a POSA as having at least two years’ of experience with devices like an electronic cigarette makes more sense as this is the type of person would look to the prior art to find solutions to the

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known problems. And, as the United States Supreme Court has held, it is the solving of known problems that is a key determinant of obviousness.

Resp. Br. at 2-3.

The Staff argues:

JLI contends that for all asserted patents, a person of ordinary skill in the art would have had (1) a B.S. in mechanical engineering, electrical engineering, or an equivalent degree and (2) at least one year of experience designing consumer products.” CPreHBr. at 15. Ziip, Eonsmoke and V4L did not present a contention in their respective pre-hearing briefs regarding the level of ordinary skill in the art for any of the asserted patents. Therefore, they waived any such contentions. *See* Ground Rule 7.c. Nonetheless, Ziip and Eonsmoke’s expert, Mr. Flolid, testified that he agreed with Ziip’s apparent contention “that a person of ordinary skill in the art would have at least (1) a B.S. degree in mechanical engineering, electrical engineering, or an equivalent degree and/or (2) at least two years of experience designing, developing, or testing electronic cigarettes or related electromechanical devices, such as electromechanical devices configured to heat liquid and generate an aerosol. This description is approximate, and a higher level of training or skill might make up for less education, and vice-versa.” RX-0113 at Q19.

To the extent the ALJ does not agree that Respondents waived their contentions as to one of ordinary skill in the art, the Staff agrees with JLI’s contention, favoring the lesser experience requirement. The Staff, however, is of the view that the difference between the private parties’ proposals with respect to the level of ordinary skill does not affect the infringement or invalidity issues in this Investigation.

Staff Br. at 19-20 (citations omitted).

As an initial matter, Eonsmoke did not discuss the level of ordinary skill in the art for any of the asserted patents in its pre-hearing brief. Therefore, it waived any such contention. *See* Ground Rule 7.c.

In any event, JLI’s proposed level of ordinary skill is more persuasive in the context of the ‘915 patent. JLI’s proposed level requires (1) a B.S. in mechanical engineering, electrical engineering, or an equivalent degree, and (2) at least one year of

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experience designing consumer products. Thus, the administrative law judge finds that a person of ordinary skill in the art with respect to the '915 patent is a person who has a B.S. in mechanical engineering, electrical engineering, or an equivalent degree, and at least one to two years of experience designing consumer products.

2. Claim Construction

Below is a chart showing the parties' proposed claim constructions.

'915 Claim Term	Claim(s)	Complainant's Construction	Eonsmoke's Construction	Staff's Construction
"locking gap"	1, 21	"a channel, divot, pit, opening, or hole that can engage with a detent"	abandoned	Same as JLI
"locking detent"	1, 21, 22	"a projection that can engage a locking gap"	abandoned	Same as JLI
"two short sides"	1, 21	Plain meaning, which is: "two sides each with a smaller dimension than each of the two long sides"	abandoned	Same as JLI
"two long sides"	1, 21	Plain meaning, which is: "two long sides each with a larger dimension than each of the two short sides"	abandoned	Same as JLI
"heating element [configured to]"	1, 21	Plain meaning, which is: "a component that transforms electrical energy to heat" Not means plus function	abandoned	Plain meaning, which is: "a component that transforms energy to heat"

Compl. Br. at 136-39; Resp. Br. at 3-4; Staff Br. at 71-77.

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Eonsmoke did not present any claim construction analyses in its pre-hearing brief, and thus waived any such contentions. *See* Ground Rule 7.c.

a. “locking gap” and “locking detent”

JLI argues and the Staff concurs that the claim term “locking gap” should be construed to mean “a channel, divot, pit, opening, or hole that can engage with a detent,” and the related term “locking detent” should likewise be construed as “a projection that can engage a locking gap.” *See* Compl. Br. at 137-38. These complementary constructions reflect the fact that these terms recite complementary structures that engage one another.

These proposed constructions are supported by the specification. JX-0004 (‘915 Patent), 4:24-37 (“The locking gap is generally a gap that is surrounded at least on the upper and lower... sides by the lateral wall to allow the detent on the vaporizer to engage therewith.”), *id.*, 41:17-33 (“the locking gap may be a divot, pit, opening, or hole”), *id.*, 42:49-58 (“the pair of locking gaps... which engage with a detent projecting into the cartridge”), *id.*, FIGS. 24A, 25A, 28C, 28D (showing locking gaps). The specification explains that the locking detents engage the locking gaps by fitting into them. *Id.*, 4:10-13 (“detents extending from a major surface”), *id.*, 4:28-31 (“The locking gap is generally a gap... to allow the detent on the vaporizer to engage therewith”), *id.*, 41:44-52 (“two detents that may mate with the locking gaps”) (locking detent). The figures show the locking detents fitting into the locking gaps. *Id.*, FIGS. 27B, 28A-28D. The Staff agrees with JLI. *See* Staff Br. at 75-76.

The administrative law judge has determined that (1) the claim term “locking gap” should be construed to mean “a channel, divot, pit, opening, or hole that can engage

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with a detent,” and (2) the claim term “locking detent” should be construed to mean “a projection that can engage a locking gap.”

b. “two short sides” and “two long sides”

JLI argues and the Staff concurs that these terms have plain meanings, which is “two sides each with a smaller [or larger] dimension than other sides.” *See* Compl. Br. at 138-39. The terms appear in the context describing a rectangular-shaped object. *See* JX-0004 (‘915 Patent), 3:37-41, 3:66-4:3. Rectangles are widely understood to have two pairs of sides, one pair longer than the other pair. The figures, accordingly, show various embodiments of bodies that have two short sides and two long sides. *Id.*, FIGS. 5, 6A-6D, 7C, 9A-9L, 13, 26A, 26B, 27A, 27B, 29A-29D. The Staff agrees with JLI. *See* Staff Br. at 76.

Although the table above shows that JLI and the Staff propose the claim term “two long sides” to mean “two long sides each with a larger dimension than each of the two short sides,” the administrative law judge believes that to be in error. Based on the argument in JLI’s brief, it appears that JLI and the Staff propose that the term “two long sides” should be construed as “two sides each with a larger dimension than each of the two short sides.”

Thus, the administrative law judge has determined that (1) the claim term “two short sides” should be given its plain and ordinary meaning, *i.e.*, “two sides each with a smaller dimension than each of the two long sides,” and (2) the claim term “two long sides” should be given its plain and ordinary meaning, *i.e.*, “two sides each with a larger dimension than each of the two short sides.”

c. “heating element”

JLI argues that a heating element is “a component that transforms electrical energy to heat,” as discussed above for the ‘669 and ‘130 patents. *See* Compl. Br. at 139. The ‘915 patent specification is generally consistent with this construction. *See* JX-0004 (‘915 Patent), 13:41-48 (“[T]o operate the heating element, the energy may be derived from a battery in electrical communication with the heating element.”) *Id.*, 13:63-14:1, FIGS. 7B, 7C, 9A-9L, 24B, 26A, 26B, 28C, 28D.

However, as argued by the Staff, in addition to the citations to the specification provided by JLI to support its construction, the ‘915 patent specification also discloses that instead of electrical energy, the heating element may “alternatively [use] a chemical reaction (e.g., combustion or other exothermic reaction) [to] provide energy to the heating element.” *See* Staff Br. at 76-77 (citing JX-0004 (‘915 Patent), 13:46-49). Thus, the specification teaches that energy need not be limited to electrical energy.

The administrative law judge has determined that the claim term “heating element [configured to]” should be construed to mean “a component that transforms energy to heat.”

B. Infringement Analysis of the ‘915 Patent

JLI asserts claims 1, 6 and 21 of the ‘915 patent. JLI has demonstrated by a preponderance of the evidence that Eonsmoke’s accused products infringe the asserted claims of the ‘915 patent. *See* Compl. Br. at 139-147; CX-0016C (Alarcon) Q/A 39-261. Indeed, Eonsmoke did not contest infringement and did not present any non-infringement arguments in its post-hearing briefs. *See* Joint Outline – Eonsmoke; Joint Reply Outline – Eonsmoke.

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JLI asserts claims 1, 6 and 21 of the '915 patent. JLI has demonstrated by a preponderance of the evidence that Eonsmoke's accused products infringe the asserted claims of the '915 patent. *See* Compl. Br. at 139-147; CX-0016C (Alarcon) Q/A 39-261. Indeed, Eonsmoke did not contest infringement and did not present any non-infringement arguments in its post-hearing briefs. *See* Joint Outline – Eonsmoke; Joint Reply Outline – Eonsmoke.

Nonetheless, the administrative law judge adopts JLI's infringement analysis with respect to Eonsmoke and provides the following infringement analysis of the '915 patent.

1. Importation and Accused Products

On August 5, 2019, the administrative law judge issued an initial determination granting complainant's motion for summary determination with respect to importation. *See* Order No. 35 (Aug. 5, 2019) at 4-5, *aff'd in part*, Commission Determination to Review in Part an Initial Determination Granting in Part Complainant's Motion for Summary Determination of Importation, Infringement, and Domestic Industry (Sept. 4, 2019) (Commission determining not to review importation).

Eonsmoke is based in Clifton, New Jersey, and is an importer, distributor, and seller of ENDS devices and pods, including the Eonsmoke devices and pods manufactured by Ziip. The accused products with respect to Eonsmoke include the Eonsmoke device, the Eonsmoke v2.0 device, Eonsmoke (Eon) pod, and the 4X pod (individually and collectively, "Eonsmoke accused products"). *See* Compl. Br. at 10 (citing CX-0958C (Eonsmoke Invoices 13); CX-0858 (Eonsmoke's Supp. Responses to JLI's RFAs)).

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JLI provided the following table showing the Eonsmoke accused products that are alleged to infringe the asserted patent claims:

Accused Product	'669	'915	'568	'130
<u>Eonsmoke Respondent</u>	1, 2, 13	1, 6, 21	12, 17, 20	1, 2, 4
Eonsmoke device				
Eonsmoke v2 device (stipulated representative)				
Eonsmoke pods (stipulated representative)				
4X pods				

Compl. Br. at 220.

Eonsmoke's stipulations concerning representativeness discussed above for the '669 patent apply equally to '915 patent. *See* CX-0016C (Alarcon WS) Q/A 304-306, 319-320. JLI's expert, Dr. Collins, conducted a thorough visual inspection and examination of the representative Eonsmoke pods and 4X pods.

a. Independent Claim 1

Asserted claim 1 is recited below:

1. A cartridge comprising:

- [a] a storage compartment configured to hold a vaporizable material, the storage compartment having a non-circular cross section, the storage compartment having a top end and a bottom end opposite the top end along a first dimension, wherein the non-circular cross section includes two short sides and two long sides, the two short sides being shorter than the two long sides to result in the non-circular cross section, and wherein the storage compartment comprises a plastic material;
- [b] an aerosol outlet disposed proximate to the top end of the storage compartment;
- [c] a heater chamber disposed proximate to the bottom end of the storage compartment, the heater chamber comprising a heating element configured to aerosolize the vaporizable

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material, when the vaporizable material is present, to form an aerosol;

[d] a first electrical contact and a second electrical contact each configured and disposed to couple and complete an electrical circuit with a third electrical contact and a fourth electrical contact in a receptacle of a vaporizer device body, the electrical circuit configured to provide power to the heating element when the vaporizer device body is present;

[e] an aerosol channel within the storage compartment, the aerosol channel extending from the heater chamber to the aerosol outlet, the aerosol channel configured so that the aerosol, when the aerosol is present, is inhalable through the aerosol channel;

[f] a first exterior wall extending between the top end and the bottom end;

a second exterior wall extending between the top end and the bottom end, wherein the first exterior wall and the second exterior wall are respectively intersected by the two short sides of the non-circular cross section;

[g] a first locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the first exterior wall, the first locking gap configured to engage with a first locking detent within the receptacle of the vaporizer device body when the vaporizer device body is present, wherein a height of a first interior wall of the vaporizer device body comprising the first locking detent is at least thirteen millimeters; and

a second locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the second exterior wall, the second locking gap configured to engage with a second locking detent within the receptacle of the vaporizer device body when the vaporizer device body is present, wherein a height of a second interior wall of the vaporizer device body comprising the second locking detent is at least thirteen millimeters.

JX-0004 ('915 Patent), claim 1.

Claim 1[p]

The accused products practice claim element 1[p] because each pod is a cartridge.

See CX-0016C (Alarcon WS) Q/A 397 (listing underlying evidence), Q/A 398-399

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(discussing evidence).

Claim 1[a]

The accused products practice claim element 1[a] because the pod has a storage compartment with a top end and a bottom end opposite the top end along a first dimension. *See* CX-0016C (Alarcon WS) Q/A 406 (Eonsmoke). The storage compartment has a non-circular cross-section with two long and two short sides, highlighted in green in the images. The storage compartment is made of plastic. *See* CX-0016C (Alarcon WS) at Q/A 411.

Claim 1[b]

All accused products practice claim element 1[b] because the pod has an aerosol outlet near or proximate to the top end of the storage compartment. *See id.* at Q/A 414 (Eonsmoke).

Claim 1[c]

All accused products practice claim element 1[c] because the pod has a heater chamber near the bottom end, comprised of a heating element in the form of a coil. CX-0016C (Alarcon WS) Q/A 421 (Eonsmoke). The heating elements are configured to aerosolize the vaporizable material to form an aerosol. *See* CX-0016C (Alarcon WS) Q/A 426-427. Electrical energy passes from a compatible device battery through the electrical contacts to the heating element, which converts the electrical energy to heat. The heating element is wrapped around a wick. *See id.* The heat from the heating element raises the temperature of the wick and the vaporizable material within the wick to generate a vapor. The vapor immediately disperses in air at the heating element and an aerosol is immediately formed. *See id.*

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Claim 1[d]

The accused products practice claim element 1[d] because the pod has first and second electrical contacts that are located to couple with a third and fourth electrical contact on a compatible vaporizer device. *See id.* at Q/A 432 (Eonsmoke). When the pod is inserted into the receptacle of a device, an electrical circuit is completed, which provides power to the heating element. *See id.*

Claim 1[e]

The accused products practice claim element 1[e] because the pod has an aerosol channel inside the storage compartment that extends from the heater chamber to the aerosol outlet and through which aerosol travels when a user inhales. *See* CX-0016C (Alarcon WS) Q/A 439 (Eonsmoke).

Claim 1[f]

The accused products practice claim element 1[f] because the pod has a first and second exterior wall that extend between the top and bottom ends and are intersected by the two short sides of the non-circular cross-section. *See* CX-0016C (Alarcon WS) Q/A 446 (Eonsmoke).

Claim 1[g]

The accused products practice claim element 1[g] because the pod has a first and second locking gap formed within the first and second exterior walls, respectively. *See* CX-0016C (Alarcon WS) Q/A 453 (Eonsmoke). These locking gaps are configured such that they will engage with a first and second locking detent of a compatible device when the cartridge is inserted into the receptacle of the device. *See id.* As can be seen in the photographs, the locking gaps are disposed within 6 millimeters of the bottom end of the

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storage compartment. The height of the first and second interior walls of the receptacle is at least 13 millimeters. *See id.* Mr. Alarcon measured each product from approximately the bottom surface of the cartridge, which also is the bottom end of the storage compartment for these particular products, and found the 6 mm limitation to be satisfied. *See CX-0016C (Alarcon WS) Q/A 458.* There was no difference, within the degree of precision required by the claim, between the values measured on the calipers and the values observed using the ruler. *See id.*

b. Dependent Claim 6

Asserted claim 6 is recited below:

4. The cartridge of claim 1, further comprising:

a mouthpiece comprising the aerosol outlet, wherein the first exterior wall has a first point between the bottom end of the storage compartment and the top end of the storage compartment, wherein the second exterior wall has a second point between the bottom end of the storage compartment and the top end of the storage compartment, wherein the mouthpiece terminates in a distal edge, and wherein the distal edge of the mouthpiece is disposed at the first point and the second point.

6. The cartridge of claim 4, further comprising:

a first mouthpiece detent on the first exterior wall proximate to the first point; and

a second mouthpiece detent on the second exterior wall proximate to the second point, wherein the mouthpiece is secured to the storage compartment by the first detent and the second detent.

JX-0004 ('915 Patent), claims 4, 6.

Claim 6 depends from claim 4, which itself depends from claim 1. The accused products practice claim 4 because each pod includes a mouthpiece that includes an opening forming the aerosol outlet. *See CX-0016C (Alarcon WS) Q/A 464 (Eonsmoke).*

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Additionally, the pod has first and second points located on the first and second exterior walls, respectively, and between the bottom and top ends of the storage compartment.

The mouthpiece terminates in a distal edge at the first and second points. *See id.*

The accused products practice the additional limitation of claim 6 because the mouthpiece of the pod has a first and second mouthpiece detent on the first and second exterior walls that are proximate to the first and second points, respectively. *See CX-0016C (Alarcon WS) Q/A 471 (Eonsmoke).* The detents secure the mouthpiece to the storage compartment. *See id.*

c. Independent Claim 21

Asserted claim 21 is recited below:

21. [p] An apparatus comprising:

[a] a vaporizer device body comprising:

a receptacle;

a third electrical contact and a fourth electrical contact disposed within the receptacle;

a first locking detent and a second locking detent within the receptacle; and

a first interior wall and a second interior wall within the receptacle, wherein each of the first interior wall and the second interior wall are at least thirteen millimeters in height, wherein the first interior wall and the second interior wall respectively comprise the first locking detent and the second locking detent; and

[b] a cartridge having a bottom end and a top end opposite the bottom end along a first dimension, the cartridge comprising:

a storage compartment configured to hold a vaporizable material, the storage compartment having a non-circular cross section, wherein the non-circular cross section includes two short sides and two long sides, the two short sides being shorter than the two long sides to result in the non-circular cross section, and wherein the storage compartment comprises a plastic material;

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[c] an aerosol outlet at the top end of the cartridge;

[d] a heating element proximate to the bottom end of the cartridge, the heating element configured to aerosolize the vaporizable material to form an aerosol for delivery through the aerosol outlet;

[e] a first electrical contact and a second electrical contact configured and disposed to couple and complete an electrical circuit with the third electrical contact and the fourth electrical contact, the electrical circuit configured to provide power to the heating element;

[f] a first exterior wall and a second exterior wall extending between the top end and the bottom end, wherein the first exterior wall and the second exterior wall are respectively intersected by the two short sides of the non-circular cross section;

[g] a first locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the first exterior wall, the first locking gap configured to engage with the first locking detent; and

a second locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the second exterior wall, the second locking gap configured to engage with the second locking detent.

JX-0004 ('915 Patent), claim 21.

Claim 21 is an apparatus claim requiring a vaporizer device and a cartridge. The combination of a device and a cartridge directly infringes claim 21. However, the manufacture, import, or sale of either the accused cartridge or the accused device alone indirectly infringes because the only purpose and intended use of the accused devices and cartridges are to be combined with each other in an infringing manner. *See* CX-0016C (Alarcon WS) Q/A 478.

The Eonsmoke pods when combined with an infringing vaporizer device, such as the JUUL or Eonsmoke v2.0, directly infringe claim 21 of the '915 patent. *See* CX-0016C (Alarcon WS) 323 (Eonsmoke). The manufacture, sale, or import of these pods

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and devices separately induce and contributorily infringe claim 21 of the '915 patent, as discussed in more detail below. *See id.* at Q/A 308, Q/A 323.

Direct Infringement

Eonsmoke accused products practice claim element 21[p] because the pod, when combined with a device, is an apparatus. *See* CX-0016C (Alarcon WS) Q/A 479-485.

The accused products practice claim element 21[a] because the device comprises a vaporizer device that includes a receptacle and within the receptacle are a third and fourth electrical contact, a first and second locking detent, and a first and second interior wall. *See* CX-0016C (Alarcon WS) Q/A 488, 492. The interior walls comprise the locking detents and are at least 13 millimeters in height, which is represented in the images by a blue line on the cartridge, indicating the portion of the cartridge covered by the interior walls when inserted into the receptacle, and thus the height of the interior walls. *See id.*

Indirect Infringement

Under an indirect infringement analysis for claim 21, end users are the direct infringers. Eonsmoke has testified that it sells the accused products to end users. *See* CX-0018C (Tolmach Dep. Designations (Apr. 4, 2019)), 128, 130, 134; CX-0026C (Grishayev Dep. Designations (Apr. 17, 2019)) 210.

The only purpose of the cartridges and devices is to be combined into an ENDS apparatus that meets every element of claim 21. *See* CX-0016C (Alarcon WS) Q/A 309. An act of direct infringement of claim 21 occurs when a user combines an accused cartridge with an accused device, as intended by Eonsmoke. *See id.* at Q/A 324, 337,

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355, 386.

Eonsmoke has admitted notice of JLI's patents in 2017. *See* CX-1304C (4X Pods Blue Blackberry Packaging); CX-1302C (Eonsmoke Pods Ad); CX-0407 (Eonsmoke v2.0 Juul Compatible Screenshot); CX-0018C (Tolmach Dep. Designations (Apr. 4, 2019)) 58-60, 81-83, 184-186; CX-0170 (Eonsmoke Product & Packaging Images 3); CX-0026C (Grishayev Dep. Designations (Apr. 17, 2019)) 55-57.

Eonsmoke had notice of JLI's infringement allegations by October 26, 2018, the date the complaint was filed. Additionally, JLI virtually marks each of its products with a website that contains a list of issued patents covering the JUUL system. This website was updated to include the '915 patent by November 20, 2018, thus conferring notice on Eonsmoke at least as of that date. *See* CX-0016C (Alarcon WS) Q/A 312, 326, 345, 357, 392.

The Eonsmoke and 4X pods are a material part of an apparatus that infringes claim 21. These pods practice the majority of the elements of claim 21 and the apparatus would be inoperative without the pod. *See id.* at Q/A 313-14, 327-28, 346, 358, 393. All of the pods accused in this Investigation have no substantial noninfringing use. They are configured solely for use in an accused or JUUL ENDS device. Eonsmoke has not identified any noninfringing devices for which any accused pods are compatible. *See id.* at Q/A 348. Indeed, the pods have no use outside their use with a device as an ENDS. *See id.* at Q/A 315, Q/A 329, Q/A 330, Q/A 394.

The accused Eonsmoke devices practice numerous elements of claim 21, and each apparatus would be inoperative without the device. *See id.* at Q/A 347, Q/A 359. Like the pods, these devices have no substantial noninfringing use. They are vaporizer devices

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configured for use with an infringing ENDS cartridge. *See id.* at Q/A 316, Q/A 395.

Eonsmoke has not identified any noninfringing pods with which the accused devices are compatible. Additionally, these devices have no use outside of their use with pods as an ENDS. *See id.* at Q/A 349, Q/A 360-361, Q/A 396.

C. Validity of the '915 Patent

Eonsmoke argues that (1) Qiu (RX-0108) alone renders obvious claims 1, 6, and 21 of the '915 patent; (2) Qiu (RX-0108) in combination with Buchberger (RX-0107) renders obvious claims 1, 6, and 21 of the '915 patent; and (3) Qiu (RX-0108) in combination with Tucker (RX-0109) renders obvious claims 1, 6, and 21 of the '915 patent. *See Resp. Br.* at 48-68. Eonsmoke argues and JLI and the Staff do not dispute that prior art alleged by Eonsmoke are prior to the priority date of the '915 patent. *See id.* at 4.

For the reasons set forth below, Eonsmoke has not shown by clear and convincing evidence that asserted claims 1, 6, and 21 of the '915 patent are invalid.

1. Qiu (RX-0108) Alone

Eonsmoke argues that Qiu (RX-0108) alone renders obvious claims 1, 6, and 21 of the '915 patent. *See Resp. Br.* at 48-62.

Independent Claim 1

Eonsmoke argues, *inter alia*:

Juul does not dispute that *Qiu* discloses the following features of claim 1:

- A cartridge comprising:
- a storage compartment configured to hold a vaporizable material, the storage compartment having a non-circular cross section, the storage compartment having a top end and a

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bottom end opposite the top end along a first dimension, wherein the non-circular cross section includes two short sides and two long sides, the two short sides being shorter than the two long sides to result in the non-circular cross section, and wherein the storage compartment comprises a plastic material;

- an aerosol outlet disposed proximate to the top end of the storage compartment;
- a heater chamber disposed proximate to the bottom end of the storage compartment, the heater chamber comprising a heating element configured to aerosolize the vaporizable material, when the vaporizable material is present, to form an aerosol;
- a first electrical contact and a second electrical contact each configured and disposed to couple and complete an electrical circuit with a third electrical contact and a fourth electrical contact in a receptacle of a vaporizer device body, the electrical circuit configured to provide power to the heating element when the vaporizer device body is present;
- an aerosol channel within the storage compartment, the aerosol channel extending from the heater chamber to the aerosol outlet, the aerosol channel configured so that the aerosol, when the aerosol is present, is inhalable through the aerosol channel;
- wherein the first exterior wall and the second exterior wall are respectively intersected by the two short sides of the non-circular cross section.

(CX-1353C.0076 and CDX-0007C.86). The dispute for claim 1 therefore centers on whether the claimed location of the locking gaps and detents would have been an obvious modification to Qiu. Mr. Flolid correctly testified that these well-known mechanical interfaces would have been obvious to the POSA with an engineering background and experience. This POSA would have had knowledge of these basic mechanical principles.

Resp. Br. at 48-49.

Asserted claim 1 is recited below:

1. [p] A cartridge comprising:

[a] a storage compartment configured to hold a vaporizable material, the storage compartment having a non-circular cross section, the storage compartment having a top end and a bottom end opposite the top end along a first dimension, wherein the non-circular cross section includes two short sides and two long sides, the two short sides being shorter than the

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two long sides to result in the non-circular cross section, and wherein the storage compartment comprises a plastic material;

[b] an aerosol outlet disposed proximate to the top end of the storage compartment;

[c] a heater chamber disposed proximate to the bottom end of the storage compartment, the heater chamber comprising a heating element configured to aerosolize the vaporizable material, when the vaporizable material is present, to form an aerosol;

[d] a first electrical contact and a second electrical contact each configured and disposed to couple and complete an electrical circuit with a third electrical contact and a fourth electrical contact in a receptacle of a vaporizer device body, the electrical circuit configured to provide power to the heating element when the vaporizer device body is present;

[e] an aerosol channel within the storage compartment, the aerosol channel extending from the heater chamber to the aerosol outlet, the aerosol channel configured so that the aerosol, when the aerosol is present, is inhalable through the aerosol channel;

[f] a first exterior wall extending between the top end and the bottom end;

[g] a second exterior wall extending between the top end and the bottom end,

[h] wherein the first exterior wall and the second exterior wall are respectively intersected by the two short sides of the non-circular cross section;

[i] a first locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the first exterior wall, the first locking gap configured to engage with a first locking detent within the receptacle of the vaporizer device body when the vaporizer device body is present, wherein a height of a first interior wall of the vaporizer device body comprising the first locking detent is at least thirteen millimeters; and

[j] a second locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the second exterior wall, the second locking gap configured to engage with a second locking detent within the receptacle of the vaporizer device body when the vaporizer device body is present, wherein a height of a second interior wall of the

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vaporizer device body comprising the second locking detent is at least thirteen millimeters.

JX-0004 ('915 Patent), claim 1.²⁶

Claims 1[f]-[g]

Eonsmoke argues:

Qiu discloses a first exterior wall extending between the top end and the bottom end. Specifically, since *Qiu* is rectangular-shaped, the first exterior wall will be one of the larger two walls defining the rectangular shape. (RX-0108.0007, para. 0029); (RX-0113.0064, Q/A 135)....

Qiu discloses a second exterior wall extending between the top end and the bottom end. Specifically, when *Qiu* is rectangular-shaped, the second exterior wall is one of the larger two walls defining the rectangular shape, and is generally opposite the first wall. The first and second walls are intersected by the two short-side walls. (RX-0108.0007, para. 0029); (RX-0113.0064, Q/A 136).

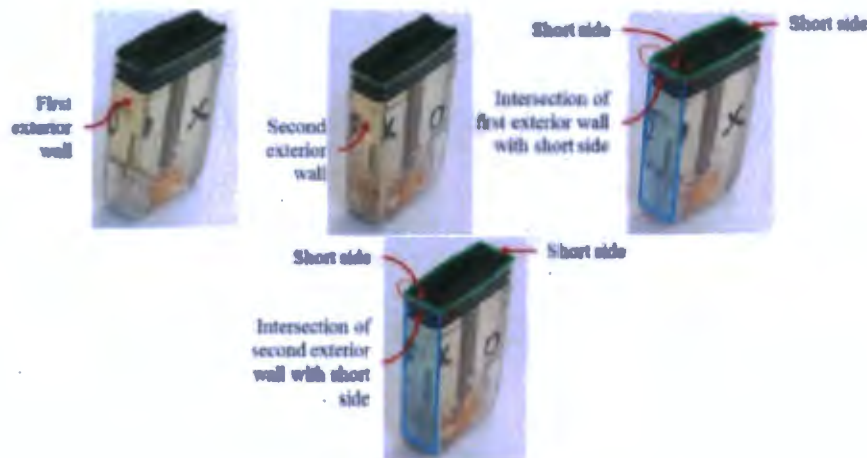
Resp. Br. at 53.

Mr. Flolid's opinion does not show that *Qiu* discloses limitations 1[f], 1[g], or 1[i]. First, Mr. Flolid opines that *Qiu* discloses elements 1[f] and 1[g] because *Qiu* is "rectangular-shaped." See RX-0113 (Flolid WS) Q/A 135-136. To reach his opinion, Mr. Flolid misreads the claim language "wherein the first exterior wall and the second exterior wall are respectively intersected by the two short sides of the non-circular cross section." Mr. Flolid's interpretation is that the first and second walls are the two longer walls and that these longer walls are intersected by a line parallel and coincident to the short sides of the cross-section. To the contrary, a person of ordinary skill in the art

²⁶ JLI has given a letter designation for each element of the asserted independent claims. The letter designations used for the elements of this claim is different for infringement and validity analysis. The administrative law judge is adopting the different letter designations as appropriate.

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would understand that “intersected by” requires that the first and second exterior walls are the two shorter walls, not the two longer walls.



CX-1222.0022-.0025 (Juul Photo Set 5)

The two short sides terminate at the two long sides. They do not pass through them and therefore do not intersect them. Instead, the short sides intersect the short walls. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 185; CX-1222.0022-.0025 (Juul Photo Set 5); JX-0004 ('915 Patent), FIG. 24A.

Claim 1[i]

Mr. Flolid admits that Qiu does not disclose the locking gaps of limitation 1[i]. *See* RX-0113 (Flolid WS) Q/A 137. Instead, he opines that locking gaps are so well known that a person of ordinary skill in the art would have found it obvious to modify Qiu to include locking gaps. *See id.* Mr. Flolid's opinion is conclusory and erroneous.

First, a person of ordinary skill in the art would have had neither reason to modify Qiu to include the required locking gaps nor a reasonable expectation of success if such modification would have been made. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 184. A person of ordinary skill in the art would not have considered using locking gaps and

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detents as coupling interfaces for Qiu's device simply because they may have been known coupling interfaces. *See id.* at Q/A 188. A person of ordinary skill would have understood that certain types of coupling interfaces are better suited for particular applications and specific use cases. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 188. Qiu's alleged receptacle of the device is shallow relative to the length of the other components shown in Figure 3 of Qiu. *See id.* Therefore, a person of ordinary skill would not have considered using locking gaps and detents as coupling interfaces—which can provide a weaker connection than press-fit connections in this application—because they may too easily allow the components to become detached, given the shallow receptacle and longer components being attached. *See id.* This would inconvenience the user by having the components separate unintentionally, for example, during use, storage, or transport. Accordingly, a person of ordinary skill would not have considered using locking gaps and detents as coupling interfaces for Qiu's device simply because they may have been known coupling interfaces. *See id.*

Second, the '915 patent claims do not merely recite using locking gaps and detents. The claims recite that they are located on specific components at specific locations. *See id.* Mr. Flolid essentially admits that the prior art does not disclose these specific recited locking gap configuration features, jumping straight to an obviousness analysis. *See* RX-0113 (Flolid Direct WS) Q/A 138. To allege, as Mr. Flolid does, that these specifics in the claims are “nothing more than a change of form, proportion, or degree” or routine optimization is naïve. *See id.* (quoting RX-0113 (Flolid Direct WS) Q/A 137).

Mr. Flolid does not provide any analysis as to how a person of ordinary skill

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would have sought to “optimize” the variables. Nor does Mr. Flolid provide any other evidence to corroborate his opinion. In fact, when asked whether it was known in the art that a particular height of the locking gaps and detents could achieve a particular result (such as stability), Mr. Flolid indicated he was not aware of any such knowledge. Flolid Tr. 286. Additionally, a typical receptacle depth (resulting from the height of the interior wall) for “nested” type products at the relevant time was only about 4-5 millimeters—significantly shorter than the claimed 13 millimeters. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 194. A person of ordinary skill would have no reason, and cited prior art provides none, to significantly expand the receptacle depth and place the locking gaps and detents in the recited locations. This lack of corroborating evidence or knowledge of a result-effective variable demonstrates that his opinion is based on hindsight.

Third, with respect to the claimed locking gap features, during prosecution of claim 1, JLI overcame a rejection presenting very similar arguments. *See* JX-0008 (‘915 FH) at 153-169. JLI overcame these arguments by rightly pointing out that the particular implementation of locking gaps claimed by the ‘915 patent provides additional utility, including stability of the cartridge and prevention of leaks. *See id.*; CX-1353C (Alarcon Rebuttal WS) Q/A 188. Even if it were obvious to modify Qiu to include locking gaps—which it is not—it would absolutely not be obvious to a person of ordinary skill to implement the specific locking gaps taught by claim 1. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 187.

Fourth, even if locking gaps were added to Qiu’s device, and detents were added to the alleged receptacle in housing 41—which a person of ordinary skill would not have done—the resulting modified device would *still* not meet the recited element of claim 1.

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See id. at Q/A 189. Particularly, the locking gap would not be “formed within the first exterior wall” of the *cartridge*. *See id.* at Q/A 189. Rather such locking gaps would be formed on the exterior wall of the atomizing device 30, which a person of ordinary skill would have understood to be a different component from the recited cartridge. *See id.* Indeed, a complete redesign of Qiu’s device would be required in order to satisfy these limitations—relocating any such locking gaps from the atomizer to the storage compartment and relocating the relative position of the atomizer and the storage compartment. A person of ordinary skill would not have had a reasonable expectation of success in performing such a complete overhaul, because it would require significant alterations to the airflow path and liquid path of Qiu’s device. Moreover, even if Qiu’s atomizing device 30 was permanently coupled to the liquid storage case 20, a person of ordinary skill would not have considered the atomizing device to constitute part of the “storage compartment” because it is not designed to “hold a vaporizable material,” as recited in claim 1. *See id.* Permanently coupling the atomizing device to the liquid storage case would change Qiu’s principle of operation of having separable components, which provides that “if the user does not want to continue using the medicinal liquid with a current flavor, a new liquid storage device could be used, and the old atomizer could be recycled or dismantled to avoid environmental pollution.” *See* RX-0108 (Qiu), ¶ [0039]; CX-1353C (Alarcon Rebuttal WS) Q/A 189.

Claim 1[i]

For this element, Eonsmoke’s entire argument is, “It would have been obvious to modify *Qiu* to include the claimed second locking gap for the same reasons set forth regarding the first locking gap. (RX-0113.0065-66, Q/A 139).” Resp. Br. at 55. Indeed,

Mr. Flolid provides only a single sentence for element 1[j], cross-referencing his analysis for element 1[i], *i.e.*, “It would have been obvious to modify Qiu to include the claimed second locking gap for the same reasons I testified previously relative to the first locking gap.” RX-0113 (Flolid WS) Q/A 139. His analysis thus is incorrect for the reasons discussed above. *See id.* at Q/A 195.

Dependent Claim 6

Eonsmoke argues:

Qiu does not disclose the manner in which its mouthpiece, the front cover of suction nozzle 11 and rear cover of suction nozzle 12, is fit to the body of the casing 10. However, as stated previously, detents are notoriously well known coupling interfaces and it would have been obvious to modify *Qiu* to include them. (RX-0113.0066, Q/A 140).

Snap fittings, including detents and corresponding notches, were well-known fittings/couplings, especially to the POSA aware of basic mechanical principles. If the POSA wanted to increase the security of *Qiu*’s mouthpiece coupling, he would have found it obvious to have substituted the well-known coupling interface of detents for *Qiu*’s press-fit interface. *KSR*, 550 U.S. at 416. According to Mr. Flolid, the easiest way of implementing a snap-fit coupling interface would be to arrange the mouthpiece such that it fits over the cartridge body. (RX-0113.0066, Q/A 140).

Resp. Br. at 55-56.²⁷

Asserted claim 6 is recited below:

4. The cartridge of claim 1, further comprising:

a mouthpiece comprising the aerosol outlet, wherein the first exterior wall has a first point between the bottom end of the storage compartment and the top end of the storage compartment, wherein the second exterior wall has a second point between the bottom end of the storage compartment and the top end of the storage compartment, wherein the

²⁷ It is noted that the undersigned struck a portion of Eonsmoke’s brief under the heading for claim 6. *See* Order No. 40 (Dec. 12, 2019).

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mouthpiece terminates in a distal edge, and wherein the distal edge of the mouthpiece is disposed at the first point and the second point.

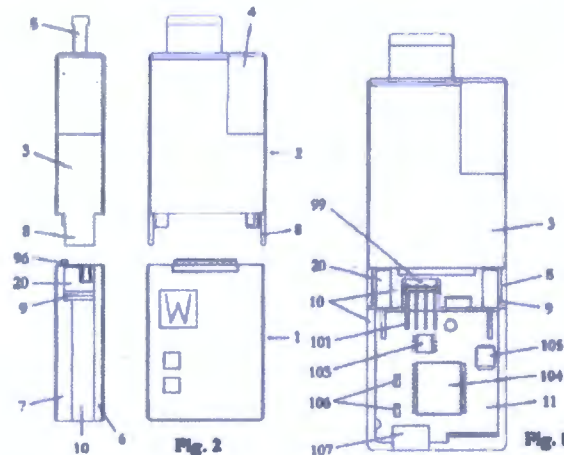
6. The cartridge of claim 4, further comprising:

a first mouthpiece detent on the first exterior wall proximate to the first point; and

a second mouthpiece detent on the second exterior wall proximate to the second point, wherein the mouthpiece is secured to the storage compartment by the first detent and the second detent.

JX-0004 ('915 Patent), claims 4, 6.

Claim 6 depends from claim 4, which in turn depends from claim 1. *See CX-1353C (Alarcon Rebuttal WS) Q/A 196.* Mr. Flolid's direct testimony provides no opinion with respect to the additional limitation of claim 4, and thus Eonsmoke cannot meet its burden with respect to claim 6. Moreover, as discussed above regarding claim elements 1[f], 1[g], and 1[h], the first and second exterior walls that Mr. Flolid identifies do not meet the claim limitations.



RX-0107 (Buchberger), FIGS. 2, 8.

The walls identified by Mr. Flolid therefore also cannot meet the elements of claim 4.

See CX-1353C (Alarcon Rebuttal WS) Q/A 197.

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Claim 6 adds “a first mouthpiece detent on the first exterior wall proximate to the first point; and a second mouthpiece detent on the second exterior wall proximate to the second point, wherein the mouthpiece is secured to the storage compartment by the first detent and the second detent.” Mr. Flolid states that Qiu is silent as to the manner in which its mouthpiece, the front cover of suction nozzle 11 and rear cover of suction nozzle 12, fit to the body of the casing 10. *See* RX-0113 (Flolid WS) Q/A 140. He opines, however, that because snap fittings were so well known, it would have been obvious to modify Qiu to use such a fitting to secure its mouthpiece. *See id.* This analysis is flawed for several reasons. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 198. First, Mr. Flolid’s opinion that Qiu is silent is false because Qiu states that “[o]ne end of the casing 10 is securely connected to the suction nozzle, for example, by way of insertion of threading.” *See* RX-0108 (Qiu), ¶ [0029]. Qiu thus describes ways of attaching the suction nozzle that do *not* use detents. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 199.

Mr. Flolid follows up that flawed rationale with an unsupported opinion that “[i]n my experience, the easiest way of implementing a snap-fit coupling interface would be to arrange the mouthpiece such that it fits *over* the cartridge body.” *See* RX-0113 (Flolid WS) Q/A 140. First, Mr. Flolid does not explain what “experience” this is based on. Second, his proposal would require a modification to Qiu that he does not explain. As shown in Figures 1 and 3 of Qiu, the suction nozzle 11/12 is disposed inside of the casing 10. Mr. Flolid’s modification would dispose the suction nozzle outside (*i.e.*, “over”) the casing, which would require increasing the overall size of the device or decreasing the size of the casing and thus the amount of liquid that could be stored inside. A snap-fit

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connection over the outside of the casing would also be more prone to leakage compared to the interior press-fit connection disclosed in Qiu. Further, modifying the mouthpiece as Mr. Flolid suggests would increase product complexity. A person of ordinary skill would have wanted to avoid these effects. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 201.

Independent Claim 21

Eonsmoke argues, *inter alia*:

Juul does not dispute that Qiu discloses the following features of claim 21:

- An apparatus comprising:
- a vaporizer device body comprising:
- a receptacle;
- a third electrical contact and a fourth electrical contact disposed within the receptacle;
- a cartridge having a bottom end and a top end opposite the bottom end along a first dimension, the cartridge comprising:
- a storage compartment configured to hold a vaporizable material, the storage compartment having a non-circular cross section, wherein the non-circular cross section includes two short sides and two long sides, the two short sides being shorter than the two long sides to result in the non-circular cross section, and wherein the storage compartment comprises a plastic material;
- an aerosol outlet at the top end of the cartridge;
- a heating element proximate to the bottom end of the cartridge, the heating element configured to aerosolize the vaporizable material to form an aerosol for delivery through the aerosol outlet;
- a first electrical contact and a second electrical contact configured and disposed to couple and complete an electrical circuit with the third electrical contact and the fourth electrical contact, the electrical circuit configured to provide power to the heating element.

(CX-1353C.0076; CX-1353C.0086; CDX-0007C.86; and CDX-0007C.93). Like claim 1, the dispute for claim 21 therefore centers on whether the claimed location of the locking gaps and detents would have been an obvious modification to Qiu. Mr. Flolid correctly testified that

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these well-known mechanical interfaces were basic mechanical principles that would have been obvious to the POSA having engineering background and experience.

Resp. Br. at 56-57 (footnote omitted).

Asserted claim 21 is recited below:

21. [p] An apparatus comprising:

[a] a vaporizer device body comprising:

a receptacle;

[b] a third electrical contact and a fourth electrical contact disposed within the receptacle;

[c] a first locking detent and a second locking detent within the receptacle; and

[d] a first interior wall and a second interior wall within the receptacle, wherein each of the first interior wall and the second interior wall are at least thirteen millimeters in height, wherein the first interior wall and the second interior wall respectively comprise the first locking detent and the second locking detent; and

[e] a cartridge having a bottom end and a top end opposite the bottom end along a first dimension, the cartridge comprising:

[f] a storage compartment configured to hold a vaporizable material, the storage compartment having a non-circular cross section, wherein the non-circular cross section includes two short sides and two long sides, the two short sides being shorter than the two long sides to result in the non-circular cross section, and wherein the storage compartment comprises a plastic material;

[g] an aerosol outlet at the top end of the cartridge;

[h] a heating element proximate to the bottom end of the cartridge, the heating element configured to aerosolize the vaporizable material to form an aerosol for delivery through the aerosol outlet;

[i] a first electrical contact and a second electrical contact configured and disposed to couple and complete an electrical circuit with the third electrical contact and the fourth electrical contact, the electrical circuit configured to provide power to the heating element;

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[j] a first exterior wall and a second exterior wall extending between the top end and the bottom end, wherein the first exterior wall and the second exterior wall are respectively intersected by the two short sides of the non-circular cross section;

[k] a first locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the first exterior wall, the first locking gap configured to engage with the first locking detent; and

[l] a second locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the second exterior wall, the second locking gap configured to engage with the second locking detent.

JX-0004 ('915 Patent), claim 21.²⁸

As discussed below, Qiu does not disclose elements 21[a], 21[c], 21[d], 21[j], 21[k], and 21[l]. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 202.

Claim 21[a]

It has not been shown that Qiu discloses a receptacle. *See* RX-0113 (Flolid WS) Q/A 141. Mr. Flolid points to Figure 3 of Qiu, but does not name a feature or reference number that supposedly comprises the claimed receptacle. Therefore, Eonsmoke has not shown that Qiu teaches a receptacle as recited in claim 21[a]. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 203.

Claim 21[c]

For claim element 21[c], Mr. Flolid refers back to his flawed analysis of limitation 1[i] regarding the casing 10 of Qiu allegedly being press-fit into a receptacle of

²⁸ JLI has given a letter designation for each element of the asserted independent claims. The letter designations used for the elements of this claim is different for infringement and validity analysis. The administrative law judge is adopting the different letter designations as appropriate.

the housing 41. *See* RX-0113 (Flolid WS) Q/A 143. His analysis is incorrect for the same reasons. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 204. Claim element 21[d] is substantially similar to elements 1[i] and 1[j]. Mr. Flolid thus refers back to the previously discussed analysis of claim 1. For at least the same reasons discussed in relation to elements 1[i] and 1[j], element 21[d] is not rendered obvious by Qiu. *See id.* at Q/A 205.

Claim 21[j], [k], [l]

For claim element 21[j], Mr. Flolid provides an analysis similar to the one he provided for elements 1[g] and 1[h]. *See* RX-0113 (Flolid WS) Q/A 150. Thus, it is erroneous for the same reasons. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 206. Claim element 21[k] is essentially identical to features in element 1[i], and Mr. Flolid's analysis is incorrect for the same reasons. *See id.* at Q/A 207. Claim element 21[l] is essentially identical to element 1[j]. Therefore, the analysis of element 1[j] applies here. Additionally, the analysis of element 21[k] and element 1[i], which is referenced in the discussion of element 21[k] also applies here. For at least the reasons articulated above for these elements, Qiu does not disclose element 21[l]. *See id.* at Q/A 208.

2. Qiu (RX-0108) and Buchberger (RX-0107)

Eonsmoke argues that Qiu (RX-0108) in combination with Buchberger (RX-0107) renders obvious claims 1, 6, and 21 of the '915 patent. *See* Resp. Br. at 62-65.

Mr. Flolid only cites Buchberger for the teaching of one limitation, element 1[i] requiring locking gaps and locking detents. Buchberger does not disclose these elements, and does not supply a reason to modify Qiu to include them.

Independent Claim 1

Eonsmoke argues:

To the extent *Qiu* does not disclose “a first locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the first exterior wall, the first locking gap configured to engage with a first locking detent within the receptacle of the vaporizer device body when the vaporizer device body is present, wherein a height of a first interior wall of the vaporizer device body comprising the first locking detent is at least thirteen millimeters,” this feature would have been obvious over *Buchberger*. *Buchberger* describes see snap-in hooks 8 and latching lugs 9, which provide a “snap connection” while still permitting selective detachment. (RX-0113.0064-66, Q/A 137).

Accordingly, one would have found it obvious to modify *Qiu* such that its storage compartment included the claimed first locking gap, as the substitution of one well known coupling interface for another. (RX-0113.0064-66, Q/A 137). *KSR*, 550 U.S. at 416.

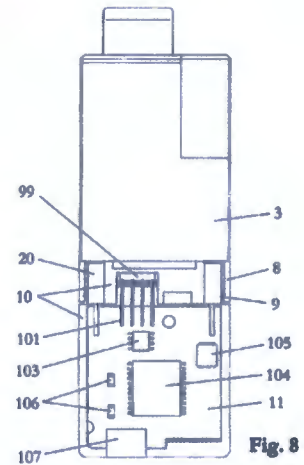
To the extent that *Qiu* or *Buchberger* does not disclose a detent specifically within the cartridge receptacle, it would have been obvious to place the detent within the cartridge receptacle over *Buchberger*’s disclosure of using a detent generally. When using a detent, there would be two possible choices as to the location of the detent: 1) detent on the cartridge or 2) detent on the device. Tucker recognized that detents could be used generally for attaching the cartridge to the receptacle, there were a finite number of ways to make such an attachment, and one of ordinary skill would have had a reasonable expectation of success that the detent could be placed within the receptacle. (RX-0113.0065-66, Q/A 137). *KSR*, 550 U.S. at 421.

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The location would have been obvious as a routine optimization in the design process. To the extent the prior art does not teach a locking gap disposed within 6 mm from a bottom end of the storage compartment, and where a first interior wall is at least 13 mm, it would have been obvious to select these values using routine optimization. (RX-0113.0065-66, Q/A 138).

Locking gaps and detents were known in the prior art, such as those disclosed in *Buchberger*. The claimed location of the locking gaps and detents is nothing more than a change of form, proportion, or degree from the locking gaps that were already disclosed in the prior art. (RX-0113.0065-66, Q/A 138).

It would have been obvious to modify *Qiu* to include the claimed second locking gap for the same reasons set forth regarding the first locking gap. (RX-0113.0065-66, Q/A 137-139).



Resp. Br. at 62-63 (emphasis in original).

Asserted claim 1 is recited below:

1. [p] A cartridge comprising:
 - [a] a storage compartment configured to hold a vaporizable material, the storage compartment having a non-circular cross section, the storage compartment having a top end and a bottom end opposite the top end along a first dimension, wherein the non-circular cross section includes two short sides and two long sides, the two short sides being shorter than the two long sides to result in the non-circular cross section, and wherein the storage compartment comprises a plastic material;
 - [b] an aerosol outlet disposed proximate to the top end of the storage compartment;
 - [c] a heater chamber disposed proximate to the bottom end of the storage compartment, the heater chamber comprising a heating element configured to aerosolize the vaporizable material, when the vaporizable material is present, to form an aerosol;
 - [d] a first electrical contact and a second electrical contact each configured and disposed to couple and complete an electrical circuit with a third electrical contact and a fourth electrical contact in a receptacle of a vaporizer device body, the electrical

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circuit configured to provide power to the heating element when the vaporizer device body is present;

[e] an aerosol channel within the storage compartment, the aerosol channel extending from the heater chamber to the aerosol outlet, the aerosol channel configured so that the aerosol, when the aerosol is present, is inhalable through the aerosol channel;

[f] a first exterior wall extending between the top end and the bottom end;

[g] a second exterior wall extending between the top end and the bottom end,

[h] wherein the first exterior wall and the second exterior wall are respectively intersected by the two short sides of the non-circular cross section;

[i] a first locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the first exterior wall, the first locking gap configured to engage with a first locking detent within the receptacle of the vaporizer device body when the vaporizer device body is present, wherein a height of a first interior wall of the vaporizer device body comprising the first locking detent is at least thirteen millimeters; and

[j] a second locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the second exterior wall, the second locking gap configured to engage with a second locking detent within the receptacle of the vaporizer device body when the vaporizer device body is present, wherein a height of a second interior wall of the vaporizer device body comprising the second locking detent is at least thirteen millimeters.

JX-0004 (915 Patent), claim 1.

Buchberger does not provide a reason to use snap-in hooks and latching lugs to connect Qiu's cartridge with its device. Mr. Flolid does not identify a reason, other than his opinion that snap-in hooks and lugs were known generally, as to why a person of ordinary skill in the art would do so with a reasonable expectation of success. *See id.* at Q/A 190. Buchberger's snap-in hook 8 is part of support housing 10, not liquid container

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4. See RX-0107 (Buchberger), ¶ [0115]. Additionally, “[t]he contact elements 20 are fastened to the support housing 10 of the reusable inhalator part 1.” See *id.* Thus, snap-in hook 8, which Mr. Flolid presumably purports to be the claimed “locking gap,” is part of “extensions of the housing.” It is not “formed within the first exterior wall,” as recited by claim 1. Indeed, snap-in hook 8 is formed as an inwardly extending protrusion that engages the indentions formed by latching lugs 9. See CX-1353C (Alarcon Rebuttal WS) Q/A 191. It is not a locking gap as recited in claim 1. Likewise, Buchberger’s latching lug 9 forms an indentation, which Mr. Flolid presumably purports to be the claimed “detent,” disposed on an exterior surface of the inhalator part 1. This indentation is not “within the receptacle of the vaporizer device body” per claim 1. The combination of Qiu and Buchberger thus does not disclose every limitation of claim 1.

Dependent Claim 6

Eonsmoke argues:

To the extent *Qiu* does not disclose “**a first mouthpiece detent on the first exterior wall proximate to the first point; and a second mouthpiece detent on the second exterior wall proximate to the second point, wherein the mouthpiece is secured to the storage compartment by the first detent and the second detent,**” detents are notoriously well known coupling interfaces and it would have been obvious to modify *Qiu* to include them. (RX-0113.0066, Q/A 140).

As mentioned, snap fittings, including detents and corresponding notches, are well-known fittings/couplings. Detents were disclosed in *Buchberger*. If one wanted to increase the security of *Qiu*’s mouthpiece coupling, one could have substituted the well-known coupling interface of detents for *Qiu*’s press-fit interface. *KSR*, 550 U.S. at 416. According to Mr. Flolid, the easiest way of implementing a snap-fit coupling interface would be to arrange the mouthpiece such that it fits over the cartridge body. (RX-0113.0066, Q/A 140).

Resp. Br. at 63-64 (emphasis in original).

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Asserted claim 6 is recited below:

4. The cartridge of claim 1, further comprising:

a mouthpiece comprising the aerosol outlet, wherein the first exterior wall has a first point between the bottom end of the storage compartment and the top end of the storage compartment, wherein the second exterior wall has a second point between the bottom end of the storage compartment and the top end of the storage compartment, wherein the mouthpiece terminates in a distal edge, and wherein the distal edge of the mouthpiece is disposed at the first point and the second point.

6. The cartridge of claim 4, further comprising:

a first mouthpiece detent on the first exterior wall proximate to the first point; and

a second mouthpiece detent on the second exterior wall proximate to the second point, wherein the mouthpiece is secured to the storage compartment by the first detent and the second detent.

JX-0004 ('915 Patent), claims 4, 6.

Claim 6 depends from claim 4, which in turn depends from claim 1. *See CX-1353C (Alarcon Rebuttal WS) Q/A 196.* Mr. Flolid's direct testimony provides no opinion whatsoever with respect to the additional limitation of claim 4, and thus Eonsmoke cannot meet its burden with respect to claim 6. Claim 6 adds "a first mouthpiece detent on the first exterior wall proximate to the first point; and a second mouthpiece detent on the second exterior wall proximate to the second point, wherein the mouthpiece is secured to the storage compartment by the first detent and the second detent."

Mr. Flolid does not cite Buchberger for a disclosure of this limitation of claim 6. The combination of Buchberger with Qiu thus is erroneous for the reasons discussed at length above. *See CX-1353C (Alarcon Rebuttal WS) Q/A 200.*

Independent Claim 21

Eonsmoke argues:

To the extent *Qiu* does not disclose **“a first locking detent and a second locking detent within the receptacle,”** it would have been obvious to modify *Qiu* to include them. This would have been an obvious modification in view of *Buchberger*, which describes detents as known attachment methods as set forth above. (RX-0113. 0067, Q/A 143).

To the extent *Qiu* does not disclose **“a first interior wall and a second interior wall within the receptacle, wherein each of the first interior wall and the second interior wall are at least thirteen millimeters in height, wherein the first interior wall and the second interior wall respectively comprise the first locking detent and the second locking detent,”** as stated previously regarding claim 1, detents at the claimed location within the receptacle would have been obvious over *Qiu* in view of *Buchberger* and as a matter of routine optimization. (RX-0113.0064-66, 67, Q/A 137-138, 144).

To the extent *Qiu* does not disclose **“a first locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the first exterior wall, the first locking gap configured to engage with the first locking detent,”** as stated above, the claimed location of the locking gaps and detents would have been an obvious modification of *Qiu* in view of *Buchberger* and as a matter of routine optimization. (RX-0113.0064-0066, 0071, Q/A 137-138, 151).

To the extent *Qiu* does not disclose **“a second locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the second exterior wall, the second locking gap configured to engage with the second locking detent,”** it would have been obvious to modify *Qiu* in view of *Buchberger* to include the claimed second locking gap for the same reasons as articulated above relative to the first locking gap. (RX-0113.0064-0066, 0071, Q/A 137-138, 152).

Resp. Br. at 64-65 (emphasis in original).

Asserted claim 21 is recited below:

21. [p] An apparatus comprising:

[a] a vaporizer device body comprising:
a receptacle;

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- [b] a third electrical contact and a fourth electrical contact disposed within the receptacle;
- [c] a first locking detent and a second locking detent within the receptacle; and
- [d] a first interior wall and a second interior wall within the receptacle, wherein each of the first interior wall and the second interior wall are at least thirteen millimeters in height, wherein the first interior wall and the second interior wall respectively comprise the first locking detent and the second locking detent; and
- [e] a cartridge having a bottom end and a top end opposite the bottom end along a first dimension, the cartridge comprising:
 - [f] a storage compartment configured to hold a vaporizable material, the storage compartment having a non-circular cross section, wherein the non-circular cross section includes two short sides and two long sides, the two short sides being shorter than the two long sides to result in the non-circular cross section, and wherein the storage compartment comprises a plastic material;
 - [g] an aerosol outlet at the top end of the cartridge;
 - [h] a heating element proximate to the bottom end of the cartridge, the heating element configured to aerosolize the vaporizable material to form an aerosol for delivery through the aerosol outlet;
 - [i] a first electrical contact and a second electrical contact configured and disposed to couple and complete an electrical circuit with the third electrical contact and the fourth electrical contact, the electrical circuit configured to provide power to the heating element;
 - [j] a first exterior wall and a second exterior wall extending between the top end and the bottom end, wherein the first exterior wall and the second exterior wall are respectively intersected by the two short sides of the non-circular cross section;
 - [k] a first locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the first exterior wall, the first locking gap configured to engage with the first locking detent; and
 - [l] a second locking gap disposed within six millimeters from the bottom end of the storage compartment and

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formed within the second exterior wall, the second locking gap configured to engage with the second locking detent.

JX-0004 ('915 Patent), claim 21.

Qiu in view of Buchberger does not disclose elements 21[a], 21[c], 21[d], 21[j], 21[k], and 21[l]. CX-1353C (Alarcon Rebuttal WS) Q/A 202-203. For claim element 21[c], Mr. Flolid refers back to his flawed analysis of limitation 1[i] regarding the casing 10 of Qiu allegedly being press-fit into a receptacle of the housing 41. RX-0113 (Flolid WS) Q/A 143. His analysis is erroneous for the same reasons. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 204.

Claim element 21[d] is substantially similar to elements 1[i] and 1[j]. Mr. Flolid thus refers back to the previously discussed analysis of claim 1. For at least the same reasons discussed in relation to elements 1[i] and 1[j], element 21[d] is not rendered obvious by Qiu in combination with Buchberger. *See id.* at Q/A 205.

For claim element 21[j], Mr. Flolid provides an analysis similar to the one he provided for element 1[g] and 1[h]. *See* RX-0113 (Flolid WS) Q/A 150. Thus, it is erroneous for the same reasons. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 206.

Claim element 21[k] is essentially identical to features in element 1[i], and Mr. Flolid's analysis is incorrect for the same reasons. *See id.* at Q/A 207. Claim element 21[l] is essentially identical to element 1[j]. Therefore, the analysis of element 1[j] applies here. Additionally, the analysis of element 21[k] and element 1[i], which is referenced in the discussion of element 21[k], would also be applicable here. For at least the reasons articulated in relation to each of these elements, Qiu in view of Buchberger does not disclose element 21[l]. *See id.* at Q/A 208.

3. **Qiu (RX-0108) and Tucker (RX-0109)**

Eonsmoke argues that Qiu (RX-0108) in combination with Tucker (RX-0109) renders obvious claims 1, 6, and 21 of the '915 patent. *See* Resp. Br. at 48-68.

Independent Claim 1

Eonsmoke argues:

To the extent *Qiu* does not disclose “a first locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the first exterior wall, the first locking gap configured to engage with a first locking detent within the receptacle of the vaporizer device body when the vaporizer device body is present, wherein a height of a first interior wall of the vaporizer device body comprising the first locking detent is at least thirteen millimeters,” this feature would have been obvious over *Tucker*. (RX-0113.0064-66, Q/A 137).

Tucker discloses “As shown in FIGS. 1, 4, 6, 8, 9 and 13, a novel electronic cigarette 60 comprises a replaceable cartridge (or first section) 70 and a reusable fixture (or second section) 72, which are coupled together at a threaded connection 205 or by other convenience such as a snug-fit, detent, clamp and/or clasp.” (RX-0109.0012, para. 0033); (RX-0113.0064-66).

It would have been obvious to modify the *Qiu* device to include the claimed locking gaps and detents, as taught by *Tucker*, as a simple substitution of one known way of interfacing the cartridge and the device with another, yielding predictable results. (RX-0113.0064-66, Q/A 137). *KSR*, 550 U.S. at 416.

To the extent that *Tucker* does not disclose a detent specifically within the cartridge receptacle, it would have been obvious to place the detent within the cartridge receptacle over *Tucker*'s disclosure of using a detent generally. (RX-0113.0064, q/a 137). When using a detent, there would be two possible choices as to the location of the detent: 1) detent on the cartridge or 2) detent on the device. *Tucker* recognized that detents could be used generally for attaching the cartridge to the receptacle, there were a finite number of ways to make such an attachment, and one of ordinary skill would have had a reasonable expectation of success that the detent could be placed within the receptacle. (RX-0113.0065-66, Q/A 137). *KSR*, 550 U.S. at 421.

The location would have been obvious as a routine optimization in the design process. To the extent the prior art does not teach a locking gap disposed within 6 mm from a bottom end of the storage compartment, and where a first interior wall is at least 13 mm, it would have been obvious to select these values using routine optimization. (RX-0113.0065-66, Q/A 138).

Locking gaps and detents were known in the prior art, such as those disclosed in *Tucker*. The claimed location of the locking gaps and detents is nothing more than a change of form, proportion, or degree from the locking gaps that were already disclosed in the prior art. (RX-0113.0065-66, Q/A 138).

It would have been obvious to modify *Qiu* to include the claimed second locking gap for the same reasons set forth regarding the first locking gap. (RX-0113.0065-66, Q/A 137-139).

Resp. Br. at 65-66 (emphasis in original).

Mr. Flolid opines that Tucker provides a second example of a detent and locking gap interface. *See* RX-0113 (Flolid WS) Q/A 137. Mr. Flolid's opinion lacks sufficient analysis. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 192. He opines that merely disclosing a detent of any kind is sufficient for a person of ordinary skill in the art to be able to combine the teachings of Tucker with Qiu to arrive at the claimed locking gaps and detents of claim 1. *See id.* He opines that such a modification would merely be "a simple substitution of one known way of interfacing the cartridge and the device with another, yielding predictable results." *See* RX-0113 (Flolid WS) Q/A 137. Mr. Flolid makes no attempt to explain how the generic "detent" disclosed in Tucker would teach the specific implementation of locking gaps disposed within a first and second exterior wall and within 6 millimeters of the bottom end of the storage compartment. These types of broad, unsupported statements are insufficient to establish that the combination of Qiu and Tucker discloses or renders obvious the claimed elements. *See* CX-1353C (Alarcon

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Rebuttal WS) Q/A 192. Mr. Flolid opines that, when using a detent (which itself would not have been obvious), there are only two possible choices as to the location of the detent, *i.e.*, a detent on the cartridge or a detent on the device. Notwithstanding Eonsmoke's reply argument that "utilizing detents and locking gaps in Qiu would have merely been the substitution of one known mechanical coupling interface for another," this argument without any explanation is insufficient to show that a person of ordinary skill in the art would have combined Tucker with Qiu to arrive at the claimed features. *See id.* at Q/A 193; Resp. Reply at 14.

Dependent Claim 6

Eonsmoke argues:

To the extent *Qiu* does not disclose **"a first mouthpiece detent on the first exterior wall proximate to the first point; and a second mouthpiece detent on the second exterior wall proximate to the second point, wherein the mouthpiece is secured to the storage compartment by the first detent and the second detent,"** detents are well known coupling interfaces, and it would have been obvious to modify *Qiu* to include them. (RX-0113.0066, Q/A 140).

As mentioned, snap fittings, including detents and corresponding notches, are well-known fittings/couplings. Detents were disclosed in *Tucker*. If one wanted to increase the security of *Qiu*'s mouthpiece coupling, one could have substituted the well-known coupling interface of detents for *Qiu*'s press-fit interface. *KSR*, 550 U.S. at 416. According to Mr. Flolid, the easiest way of implementing a snap-fit coupling interface would be to arrange the mouthpiece such that it fits over the cartridge body. (RX-0113.0066, Q/A 140).

Resp. Br. at 66-67 (emphasis in original).

Asserted claim 6 is recited below:

4. The cartridge of claim 1, further comprising:
a mouthpiece comprising the aerosol outlet, wherein the first exterior wall has a first point between the bottom end of the

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storage compartment and the top end of the storage compartment, wherein the second exterior wall has a second point between the bottom end of the storage compartment and the top end of the storage compartment, wherein the mouthpiece terminates in a distal edge, and wherein the distal edge of the mouthpiece is disposed at the first point and the second point.

6. The cartridge of claim 4, further comprising:

a first mouthpiece detent on the first exterior wall proximate to the first point; and

a second mouthpiece detent on the second exterior wall proximate to the second point, wherein the mouthpiece is secured to the storage compartment by the first detent and the second detent.

JX-0004 ('915 Patent), claims 4, 6.

Claim 6 depends from claim 4, which in turn depends from claim 1. Eonsmoke does not cite Tucker for any limitations of claims 4 or 6, and therefore the combination of Qiu with Tucker does not disclose the limitations of dependent claim 6 for the reasons discussed above. The combination of Qiu with Tucker does not establish a *prima facie* case of obviousness with respect to claim 6.

Independent Claim 21

Eonsmoke argues:

To the extent *Qiu* does not disclose “a first locking detent and a second locking detent within the receptacle,” locking gaps and detents are notoriously well-known coupling interfaces and it would have been obvious to modify *Qiu* to include them. This would have been an obvious modification in view of *Tucker*, which describes detents as known attachment methods, as set forth above regarding claim 1. (RX-0113.0067, Q/A 143).

To the extent *Qiu* does not disclose “a first interior wall and a second interior wall within the receptacle, wherein each of the first interior wall and the second interior wall are at least thirteen millimeters in height, wherein the first interior wall and the second

interior wall respectively comprise the first locking detent and the second locking detent,” as stated previously regarding claim 1, detents at the claimed location within the receptacle would have been obvious over *Qiu* in view of *Tucker* and as a matter of routine optimization. (RX-0113.0064-66, 67, Q/A 137-138, 144).

To the extent *Qiu* does not disclose **“a first locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the first exterior wall, the first locking gap configured to engage with the first locking detent,”** as stated above, the claimed location of the locking gaps and detents would have been an obvious modification of *Qiu* in view of *Tucker* and as a matter of routine optimization. (RX-0113.0064-0066, 0071, Q/A 137-138, 151).

To the extent *Qiu* does not disclose **“a second locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the second exterior wall, the second locking gap configured to engage with the second locking detent,”** it would have been obvious to modify *Qiu* to include the claimed second locking gap for the same reasons as articulated above relative to the first locking gap. (RX-0113.0064-0066, 0071, Q/A 137-138, 152).

Resp. Br. at 67-68 (emphasis in original).

Asserted claim 21 is recited below:

21. [p] An apparatus comprising:

[a] a vaporizer device body comprising:

a receptacle;

[b] a third electrical contact and a fourth electrical contact disposed within the receptacle;

[c] a first locking detent and a second locking detent within the receptacle; and

[d] a first interior wall and a second interior wall within the receptacle, wherein each of the first interior wall and the second interior wall are at least thirteen millimeters in height, wherein the first interior wall and the second interior wall respectively comprise the first locking detent and the second locking detent; and

[e] a cartridge having a bottom end and a top end opposite the bottom end along a first dimension, the cartridge comprising:

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[f] a storage compartment configured to hold a vaporizable material, the storage compartment having a non-circular cross section, wherein the non-circular cross section includes two short sides and two long sides, the two short sides being shorter than the two long sides to result in the non-circular cross section, and wherein the storage compartment comprises a plastic material;

[g] an aerosol outlet at the top end of the cartridge;

[h] a heating element proximate to the bottom end of the cartridge, the heating element configured to aerosolize the vaporizable material to form an aerosol for delivery through the aerosol outlet;

[i] a first electrical contact and a second electrical contact configured and disposed to couple and complete an electrical circuit with the third electrical contact and the fourth electrical contact, the electrical circuit configured to provide power to the heating element;

[j] a first exterior wall and a second exterior wall extending between the top end and the bottom end, wherein the first exterior wall and the second exterior wall are respectively intersected by the two short sides of the non-circular cross section;

[k] a first locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the first exterior wall, the first locking gap configured to engage with the first locking detent; and

[l] a second locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the second exterior wall, the second locking gap configured to engage with the second locking detent.

JX-0004 ('915 Patent), claim 21.

Qiu in view of Tucker does not disclose elements 21[a], 21[c], 21[d], 21[j], 21[k], and 21[l]. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 202. For claim element 21[c], Mr. Flolid refers back to his flawed analysis of limitation 1[i] regarding the casing 10 of Qiu allegedly being press-fit into a receptacle of the housing 41. *See* RX-0113 (Flolid WS) Q/A 143. Thus, his analysis is deficient for the same reasons. CX-1353C (Alarcon

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Rebuttal WS) Q/A 204. Claim element 21[d] is substantially similar to elements 1[i] and 1[j]. Mr. Flolid thus refers back to the previously discussed analysis of claim 1. For at least the same reasons discussed in relation to elements 1[i] and 1[j], element 21[d] is not rendered obvious by Qiu, alone or in combination with Buchberger or Tucker. *See id.* at Q/A 205. For claim element 21[j], Mr. Flolid provides an analysis similar to the one he provided for elements 1[g] and 1[h]. *See* RX-0113 (Flolid WS) Q/A 150. Thus, it is deficient for the same reasons. *See* CX-1353C (Alarcon Rebuttal WS) Q/A 206. Claim element 21[k] is essentially identical to features in element 1[i], and Mr. Flolid's analysis is erroneous for the same reasons. *See id.* at Q/A 207. Claim element 21[l] is essentially identical to element 1[j]. Therefore, the analysis of element 1[j] applies here. Additionally, the analysis of element 21[k] and element 1[i], which is referenced in the discussion of element 21[k], would also be applicable here. For at least the reasons articulated in relation to each of these elements, Qiu in view of Tucker also does not disclose element 21[l]. *See id.* at Q/A 208.

D. Domestic Industry (Technical Prong)

Complainant asserts claims 1, 6, 15, 18, and 21 of the '915 patent for domestic industry. *See* Compl. Br. at 149. As discussed below, the JUULpod practices claims 1, 6, 15, and 18, and the combination of the JUUL device and JUULpod practices claim 21. Additionally, Mr. Alarcon physically inspected the JUUL system, including the JUUL device and JUULpod. He also reviewed numerous documents and materials and concluded that the JUUL system practiced these claims. *See* CX-0016C (Alarcon WS) Q/A 505.

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1. Independent Claim 1

Asserted claim 1 is recited below:

1. A cartridge comprising:

[a] a storage compartment configured to hold a vaporizable material, the storage compartment having a non-circular cross section, the storage compartment having a top end and a bottom end opposite the top end along a first dimension, wherein the non-circular cross section includes two short sides and two long sides, the two short sides being shorter than the two long sides to result in the non-circular cross section, and wherein the storage compartment comprises a plastic material;

[b] an aerosol outlet disposed proximate to the top end of the storage compartment;

[c] a heater chamber disposed proximate to the bottom end of the storage compartment, the heater chamber comprising a heating element configured to aerosolize the vaporizable material, when the vaporizable material is present, to form an aerosol;

[d] a first electrical contact and a second electrical contact each configured and disposed to couple and complete an electrical circuit with a third electrical contact and a fourth electrical contact in a receptacle of a vaporizer device body, the electrical circuit configured to provide power to the heating element when the vaporizer device body is present;

[e] an aerosol channel within the storage compartment, the aerosol channel extending from the heater chamber to the aerosol outlet, the aerosol channel configured so that the aerosol, when the aerosol is present, is inhalable through the aerosol channel;

[f] a first exterior wall extending between the top end and the bottom end;

a second exterior wall extending between the top end and the bottom end, wherein the first exterior wall and the second exterior wall are respectively intersected by the two short sides of the non-circular cross section;

[g] a first locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the first exterior wall, the first locking gap configured to engage with a first locking detent within the receptacle of the vaporizer device body when the vaporizer device body is present,

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wherein a height of a first interior wall of the vaporizer device body comprising the first locking detent is at least thirteen millimeters; and

a second locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the second exterior wall, the second locking gap configured to engage with a second locking detent within the receptacle of the vaporizer device body when the vaporizer device body is present, wherein a height of a second interior wall of the vaporizer device body comprising the second locking detent is at least thirteen millimeters.

JX-0004 ('915 Patent), claim 1.²⁹

Claims 1[p]-[a]

The JUULpod is a cartridge for an ENDS system. *See* CX-0016C (Alarcon WS)

Q/A 507. The JUULpod practices element 1[a] because it has a storage compartment that holds a vaporizable material, namely, the liquid nicotine solution. *See* CX-1222 (JUUL Photo Set 5). The storage compartment has a non-circular cross-section having two long sides and two short sides. The two “long sides” have a larger dimension than the two “short sides.” The storage compartment also has a top end and a bottom end that is opposite the top end along a first dimension. *See* CX-1222 (JUUL Photo Set 5). The storage compartment of the JUULpod is made of plastic. *See* CX-1222 (JUUL Photo Set 5). For all these reasons, the JUULpod practices element 1[a]. *See* CX-0016C (Alarcon WS) Q/A 508.

Claim 1[b]

The JUULpod satisfies element 1[b]. In use, the JUULpod generates an aerosol.

²⁹ JLI has given a letter designation for each element of the asserted independent claims. The letter designations used for the elements of this claim is different for technical prong and validity analysis. The administrative law judge is adopting the different letter designations as appropriate.

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This aerosol exits the storage compartment at one opening near the top end of the storage compartment. This opening is the claimed aerosol outlet disposed proximate to the top end of the storage compartment. *See* CX-0016C (Alarcon WS) Q/A 509.

Claim 1[c]

The JUULpod satisfies element 1[c]. As shown in CX-1222 (JUUL Photo Set 5), the JUULpod includes a heater chamber that is disposed proximate to the bottom end of the storage compartment. *See* CX-1222 (JUUL Photo Set 5). The heater chamber includes a heating element in the form of a resistive wire coil. *See id.* The JUULpod contains the claimed heating element. The wire coil transforms electrical energy to heat, thereby satisfying this element. The JUULpod also includes a pair of plates having contact tabs. *See* CX-0369C (JLI Step 1); CX-0379C (JLI Product Image Step 13); CX-0377C (JLI Step 10); CX-0380C (JLI Step 14); CX-0381C (JLI Step 15); CX-0382C (JLI Step 19); CX-0383C (JLI Step 21); CX-0384C (JLI Step 25); CX-0385C (JLI Step 26); CX-0386C (JLI Step 27); CX-0387C (JLI Step 28). The contact tabs are integrally formed with the respective plate and constitute contact tips. *See* CX-0016C (Alarcon WS) Q/A 510.

The heating element in the JUULpod is configured to aerosolize the vaporizable material to form an aerosol. *See id.* at Q/A 511. As explained above regarding the '669 patent, electrical energy passes from the JUUL device battery through the electrical contacts to the heating element, which converts the electrical energy to heat. *See id.* The heating element is wrapped around a wick. The heat from the heating element raises the temperature of the wick and the vaporizable material within the wick to generate a vapor. The vapor immediately disperses in air at the heating element, generating an aerosol. *See*

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id. Therefore, the JUULpod includes a heating element configured to aerosolize the vaporizable material per element 1[c]. *See id.* at Q/A 513.

Claim 1[d]

The JUULpod satisfies element 1[d], because it contains first and second electrical contacts. *See* CX-1222 (JUUL Photo Set 5); CX-0378C (JLI Step 12); CX-0379C (JLI Product Image Step 13); CX-0389C (JLI Step 5); CX-0446C (JLI Step 15); CX-0253C (Pod Assembly Overview). These contacts are configured to couple to and complete an electric circuit with third and fourth electrical contacts located in the receptacle of the JUUL device, which is a vaporizer device. When the JUULpod is connected to the JUUL device, the electrical circuit sends power from the battery inside the device to the heating element. *See* CX-0016C (Alarcon WS) Q/A 514.

Claim 1[e]

The JUULpod satisfies element 1[e] because it has an aerosol channel in the form of a cannula or tube that runs from the heater chamber to the aerosol outlet. *See* CX-1222 (JUUL Photo Set 5); CX-0377C (JLI Step 10). The aerosol outlet permits the user to inhale the aerosol, when present, by permitting the aerosol to travel from the heater chamber where it is first created to the aerosol outlet and ultimately through the mouthpiece when suction is applied by the user in the form of an inhalation of breath on the mouthpiece. *See* CX-0016C (Alarcon WS) Q/A 515.

Claim 1[f]

The JUULpod satisfies element 1[f] because it has a first exterior wall that extends between the top end and bottom end of the cartridge. *See* CX-1222 (JUUL Photo Set 5); CX-0371C (JLI Step 4); CX-0372C (JLI Step 5); CX-0373C (JLI Step 6); CX-

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0374C (JLI Step 7); CX-0375C (JLI Step 8); CX-0376C (JLI Product Step 9). The JUULpod also has a second exterior wall extending between the top end and bottom end of the cartridge. *See id.* Both the first and second exterior walls are respectively intersected by, or in other words coincide with, the two short sides of the non-circular cross-section. *See* CX-0016C (Alarcon WS) Q/A 516.

Claim 1[g]

The JUULpod satisfies element 1[g] because it has two locking gaps that are respectively formed within the first and second exterior wall. *See* CX-1222 (JUUL Photo Set 5); CX-0371C (JLI Step 4); CX-0372C (JLI Step 5); CX-0373C (JLI Step 6); CX-0374C (JLI Step 7); CX-0375C (JLI Step 8); CX-0376C (JLI Product Step 9). Each locking gap is well within six millimeters from the bottom end of the storage compartment. *See* CX-1222 (JUUL Photo Set 5). When measuring from the bottom end of the storage compartment, which is substantially coextensive with the bottom of the cartridge, the locking gaps are disposed within six millimeters from the bottom end. *See* CX-0016C (Alarcon WS) Q/A 517.

The locking gaps are configured to engage with locking detents. The presence of both locking detents within the receptacle is confirmed by physical inspection of the JUUL device. *See* CPX-0001 (JUUL Starter Kit). When the JUULpod is inserted into the JUUL device, these locking detents are located so that they engage with the locking gaps on the JUULpod's exterior walls. Finally, the height of the first and second interior walls of the JUUL device receptacle that includes the locking detents is at least 13 millimeters. *See* CX-0016C (Alarcon WS) Q/A 518; CX-1222 (JUUL Photo Set 5).

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2. Dependent Claim 6

Asserted claim 6 is recited below:

4. The cartridge of claim 1, further comprising:

a mouthpiece comprising the aerosol outlet, wherein the first exterior wall has a first point between the bottom end of the storage compartment and the top end of the storage compartment, wherein the second exterior wall has a second point between the bottom end of the storage compartment and the top end of the storage compartment, wherein the mouthpiece terminates in a distal edge, and wherein the distal edge of the mouthpiece is disposed at the first point and the second point.

6. The cartridge of claim 4, further comprising:

a first mouthpiece detent on the first exterior wall proximate to the first point; and

a second mouthpiece detent on the second exterior wall proximate to the second point, wherein the mouthpiece is secured to the storage compartment by the first detent and the second detent.

JX-0004 ('915 Patent), claims 4, 6.

Claim 6 depends from claim 4, which in turn depends from claim 1. As explained above, the JUULpod practices every element of claim 1. *See* CX-0016C (Alarcon WS) Q/A 521-522. The JUULpod practices claim 4 because it includes a mouthpiece that itself includes an opening forming the aerosol outlet. *See id.* at Q/A 523. Additionally, the JUULpod has first and second points located on the first and second exterior walls, respectively, and between the bottom and top ends of the storage compartment. vCX-1222 (JUUL Photo Set 5); CX-0369C (JLI Step 1); CX-0370C (JLI Step 2); CX-0388C (JLI Image). The mouthpiece terminates in a distal edge at the first and second points. CX-0016C (Alarcon WS) Q/A 524. The JUULpod practices claim 6 because it includes first and second mouthpiece detents on the first and second exterior walls, respectively.

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See id. at Q/A 525; CX-1222 (JUUL Photo Set 5); CX-0371C (JLI Step 4); CX-0372C (JLI Step 5); CX-0373C (JLI Product Step 6); CX-0374C (JLI Step 7); CX-0375C (JLI Step 8); CX-0376C (JLI Product Step 9). Further, the mouthpiece contains openings on its sides that engage with the first and second mouthpiece detents to secure the mouthpiece to the storage compartment. *See* CX-0016C (Alarcon WS) Q/A 526.

3. Dependent Claim 15

Asserted claim 15 is recited below:

15. The cartridge of claim 1, further comprising: a wick configured to draw the vaporizable material towards the heating element, wherein the heating element is in thermal contact with the wick.

JX-0004 ('915 Patent), claim 15.

Claim 15 depends from claim 1. As explained above, the JUULpod practices claim 1. *See* CX-0016C (Alarcon WS) Q/A 527. Claim 15 requires “a wick configured to draw the vaporizable material towards the heating element, wherein the heating element is in thermal contact with the wick.” *See id.* at Q/A 568. The JUULpod practices claim 15 because it includes a wick as claimed. *See* CX-1222 (JUUL Photo Set 5); CX-0380C (JLI Step 14); CX-0381C (JLI Step 15); CX-0382C (JLI Step 19); CX-0383C (JLI Step 21); CX-0384C (JLI Step 25); CX-0385C (JLI Step 26); CX-0386C (JLI Step 27); CX-0387C (JLI Step 28). The wick is located such that it is in contact with the vaporizable material and also proximate to the heating element. *See* CX-0016C (Alarcon WS) Q/A 529. Specifically, the heating element is wrapped around the central portion of the wick, which is sufficient for the heating element to be in thermal contact with the wick. *See id.* The ends of the wick contact the vaporizable material, and draw the vaporizable material inward toward the center, which causes the vaporizable material to

be drawn toward the heating element. *See id.*

4. Dependent Claim 18

Asserted claim 18 is recited below:

18. The cartridge of claim 1, further comprising the vaporizable material, wherein the vaporizable material comprises a liquid nicotine formulation.

JX-0004 ('915 Patent), claim 18.

Claim 18 depends from claim 1 and adds that “the vaporizable material comprises a liquid nicotine formulation.” *See id.* at Q/A 531. The JUULpod practices claim 18 because the storage compartment of the JUULpod contains a liquid, and this liquid is a nicotine-containing liquid. *See* CX-1222 (JUUL Photo Set 5). The JUUL packaging indicates that the vaporizable material contains “nicotine,” and is therefore a liquid nicotine formulation. *See* CX-0016C (Alarcon WS) Q/A 532.

5. Independent Claim 21

Asserted claim 21 is recited below:

21. [p] An apparatus comprising:

[a] a vaporizer device body comprising:

a receptacle;

a third electrical contact and a fourth electrical contact disposed within the receptacle;

a first locking detent and a second locking detent within the receptacle; and

a first interior wall and a second interior wall within the receptacle, wherein each of the first interior wall and the second interior wall are at least thirteen millimeters in height, wherein the first interior wall and the second interior wall respectively comprise the first locking detent and the second locking detent; and

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[b] a cartridge having a bottom end and a top end opposite the bottom end along a first dimension, the cartridge comprising:

a storage compartment configured to hold a vaporizable material, the storage compartment having a non-circular cross section, wherein the non-circular cross section includes two short sides and two long sides, the two short sides being shorter than the two long sides to result in the non-circular cross section, and wherein the storage compartment comprises a plastic material;

[c] an aerosol outlet at the top end of the cartridge;

[d] a heating element proximate to the bottom end of the cartridge, the heating element configured to aerosolize the vaporizable material to form an aerosol for delivery through the aerosol outlet;

[e] a first electrical contact and a second electrical contact configured and disposed to couple and complete an electrical circuit with the third electrical contact and the fourth electrical contact, the electrical circuit configured to provide power to the heating element;

[f] a first exterior wall and a second exterior wall extending between the top end and the bottom end, wherein the first exterior wall and the second exterior wall are respectively intersected by the two short sides of the non-circular cross section;

[g] a first locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the first exterior wall, the first locking gap configured to engage with the first locking detent; and

a second locking gap disposed within six millimeters from the bottom end of the storage compartment and formed within the second exterior wall, the second locking gap configured to engage with the second locking detent.

JX-0004 ('915 Patent), claim 21.³⁰

Claim 21 is similar to claim 1, but requires both a vaporizer device and a

³⁰ JLI has given a letter designation for each element of the asserted independent claims. The letter designations used for the elements of this claim is different for technical prong and validity analysis. The administrative law judge is adopting the different letter designations as appropriate.

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cartridge. *See* CX-0016C (Alarcon WS) Q/A 533. The combination of the JUUL device and JUULpod is an apparatus as shown in CX-1222 (JUUL Photo Set 5). *See* CX-0016C (Alarcon WS) Q/A 534. The JUUL system practices element 21[a] because it includes the JUUL device, which is a vaporizer device comprising a receptacle with locking detents. *See* CX-1222 (JUUL Photo Set 5); CX-0389C (JLI Step 5); CX-0446C (JLI Step 15); CX-0371C (JLI Step 4); CX-0372C (JLI Step 5); CX-0373C (JLI Product Step 6); CX-0374C (JLI Step 7); CX-0375C (JLI Step 8); CX-0376C (JLI Product Step 9). The height of the interior walls is at least 13 millimeters. *See id.*; CX-0016C (Alarcon WS) Q/A 539. Each of elements 21[b] through 21[g] is materially identical to each of elements 1[a] through 1[g], respectively, and read on the JUUL device and cartridge for the same reasons discussed above. *See id.* at Q/A 535-537; CX-1222 (JUUL Photo Set 5); CX-0369C (JLI Step 1); CX-0379C (JLI Step 13); CX-0377C (JLI Step 10); CX-0380C (JLI Step 14); CX-0381C (JLI Step 15); CX-0382C (JLI Step 19); CX-0383C (JLI Step 21); CX-0384C (JLI Step 25); CX-0385C (JLI Step 26); CX-0386C (JLI Step 27); CX-0387C (JLI Step 28); CX-0253C (Pod Assembly Overview); CX-0378C (JLI Step 12); CX-0389C (JLI Step 5); CX-0446C (JLI Step 15); CX-0371C (JLI Step 4); CX-0372C (JLI Step 5); CX-0373C (JLI Step 6); CX-0374C (JLI Step 7); CX-0375C (JLI Step 8); CX-0376C (JLI Product Step 9); CX-0449C (JLI PDF).

VIII. Other Issues

A. Secondary Considerations for the Asserted Patents

The objective evidence, also known as “secondary considerations,” includes commercial success, long felt need, and failure of others. *See Graham v. John Deere*

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Co., 383 U.S. 1, 13-17 (1966); *Dystar Textilfarben GmbH v. C.H. Patrick Co.*, 464 F.3d 1356, 1361 (Fed. Cir. 2006). “[E]vidence arising out of the so-called ‘secondary considerations’ must always when present be considered en route to a determination of obviousness.” *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983). Secondary considerations, such as commercial success, will not always dislodge a determination of obviousness based on analysis of the prior art. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 426 (2007) (commercial success did not alter conclusion of obviousness).

* * *

As discussed above in previous sections of this initial determination, Eonsmoke has not shown that any of the asserted claims of the four asserted patents are invalid as either anticipated or obvious in light of the prior art. Further, secondary considerations of non-obviousness illustrate the validity of the asserted claims. As discussed below, the administrative law judge finds that there is some record evidence of secondary considerations that supports non-obviousness of the asserted claims.

Long-felt, unmet need and failure of others

Electronic cigarettes have been in development and on the market for decades, but there remained a long-felt and unmet need for a reliable commercial product that provided an alternative to combustible cigarettes. *See CX-1353C (Alarcon Rebuttal WS)* at Q/A 222. Existing products were not helping smokers stop, as indicated by such high rates of failure in smoking cessation. *See CX-1353C (Alarcon Rebuttal WS)* at Q/A 225.

Companies have been attempting to develop a successful ENDS product since the

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1960s. *See* CX-0250.0003-.0004 (Tolentino Article); *see also* CX-1353C (Alarcon Rebuttal WS) at Q/A 225; CX-1352C (Collins Rebuttal WS) at Q/A 310. For example, in the 1980's, companies such as Philip Morris and R.J. Reynolds reportedly invested billions of dollars in developing alternative heat-not-burn products. *See* CX-0250.0003-.0004 (Tolentino Article); CX-1353C (Alarcon Rebuttal WS) at Q/A 225. However, these earlier ENDS products were not successful. *See* CX-0250.0004 (Tolentino JUUL Article); CX-1352C (Collins Rebuttal WS) at Q/A 312; CX-1353C (Alarcon Rebuttal WS) at Q/A 227.

There were also early e-liquid based ENDS products that were created as an alternative to combustible cigarettes. These e-liquid based products included cigarette-like e-cigarettes, also known as "cigalikes" arrived on the market in the 2000s. Those devices were also cylindrical like a traditional cigarette. *See* CX-0013C (Bowen WS) at Q/A 39; CX-1352C (Collins Rebuttal WS) at Q/A 311; CX-1353C (Alarcon Rebuttal WS) at Q/A 226. Starting in the late 2000s, three different types of e-cigarettes started entering the market. The first type entered the market around 2009 and included a replaceable atomizer, a refillable liquid reservoir, and a battery. Users had to fill the liquid reservoir themselves with liquid nicotine. These types of products were also cylindrical, and attached by a 510 threaded connection. *See id.* at Q/A 40; CX-1352C (Collins Rebuttal WS) at Q/A 311; Alarcon Tr. 454-455.

By 2010, mechanical "mods" came on the market. *See* CX-0013C (Bowen WS) at Q/A 40. Mechanical mods are devices without any circuitry that are powered by a battery, so the device continues to run and heat until the battery dies. There was no way to turn the system and heater off. They were big and unwieldy, and also required users to

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purchase liquid nicotine separately and fill the device themselves. *See id.* By 2013, box mods entered the market. Box mods are large box-shaped devices requiring more battery power. *See id.* These devices were bulky and had cylindrical liquid reservoirs that users had to fill themselves. At no point prior to the introduction of JLI's JUUL system were there other e-cigarettes on the market that worked like the JUUL system or looked like the JUUL system. *See* CX-0013C (Bowen WS) at Q/A 40; CX-1352C (Collins Rebuttal WS) at Q/A 311-313. In sum, various e-cigarette devices existed for years by the time of JLI's entry into the market. They had collectively failed to gain consistent adoption due to a variety of issues related to form, construction, quality, and customer satisfaction. *See* CX-1352C (Collins Rebuttal WS) at Q/A 312; CX-1353C (Alarcon Rebuttal WS) at Q/A 227.

Dr. Collins opines that the JUUL system, which embodies and is coextensive with the asserted claims of the asserted patents, is an ENDS product that is very different from products that existed in the marketplace before the asserted patents. *See* CX-1352C (Collins Rebuttal WS) at Q/A 313-14; CX-1353C (Alarcon Rebuttal WS) at Q/A 228. Furthermore, JLI's product has gained significant market traction and demand has increased. *See* CX-1354C (Mulhern Rebuttal WS) at Q/A 18-19.

Industry skepticism and unexpected results

At first, the combustible tobacco industry reacted to the JUUL system with skepticism and sales were flat. One of the early investors in Ploom and Pax was a company called Japan Tobacco. After initially backing Ploom and Pax's heat-not-burn efforts, Japan Tobacco withdrew as an investor in 2015 after the company shifted focus to the e-liquid based JUUL system because [

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]. *See* CX-0013C (Bowen WS) at Q/A 52.

Many in the industry did not think the JUUL system would work technologically. Making a reliable, easily manufactured, user-friendly device with such a compact structure was unique and challenging because there was nothing like it on the market. Devices at the time were larger, allowing for more space to fit all the circuitry and electrical components. *See id.* at Q/A 43. Considering the close proximity of the heating element to the interior wall of the tank, some expected there would be damage to the interior surfaces of the tank. However, the JLI system avoided such damage due at least in part to the heater configurations claimed in the '130 and '568 patents. *See* CX-1352C (Collins Rebuttal WS) at Q/A 316-17.

The inventors needed to overcome serious challenges in developing the JUUL system. JLI sought to develop a simple, reliable, and highly manufacturable system, and the innovative features had to integrate with each other. For example, achieving an adequate connection between the device and pod without using typical screw-in connectors that most previous systems used was not a simple solution. *See* CX-1352C (Collins Rebuttal WS) at Q/A 318; CX-0013C (Bowen WS) at Q/A 38, 44, 45. Securing a pod easily and reliably in a device without the screw attachments was uncertain. Many forces act on the pod, including aspects of system like the mouthpiece and the contact tabs, and outside forces like user activity. These forces could dislodge the pod or disrupt the connection and the electrical circuit through the contact tabs to the heater and battery. The product needed a locking system to secure the pod in the device that would also allow users to easily remove the pod out of the device, while maintaining steady and efficient airflow when the system was assembled. The JUUL system uses a locking gaps

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system to overcome these concerns. This improved the ease of installation, allowing users to quickly and easily swap out pods into the device. *See* CX-0013C (Bowen WS) at Q/A 44.

In developing the locking gaps mechanism, the inventors had to remain mindful of and accommodate other significant challenges, such as the electrical connection between the pod and the device. Given the compact structure, there were concerns about constructing an electrical contact that would make an efficient electrical connection. Prior e-cigarette devices used the screw connection between the pod and the device to ensure a secure and consistent electrical connection. The JUUL system could not use this type of screw attachment to fit the compact structure. In combination with the locking gap connection, the inventors developed folded-over contact tabs. The integral folded-over contact tabs provide a large and accessible contact surface to ensure a secure electrical connection when the locking gaps of the JUULpod are engaged with the detents of the JUUL device. *See id.* at Q/A 45.

Heat dissipation was also a challenge given the narrow structure of the device. The JUUL system includes a compact heater with paired plates in the narrow pod. The paired plates are space-efficient but also act as a heat sink and/or heat shield that absorbs and dissipates excess heat produced by the heating element. This prevents damage to the pod and the device caused by excess heat. There was also a concern for the ease of manufacturing and, of course, reliability. The integrally formed contact tabs, for example, reduced the number of required components and electrical connections, improving both manufacturability and reliability. *See id.* at Q/A 46.

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Industry praise and widespread acceptance after invention

The JUUL system has received widespread recognition from its customers and others in the industry, which further evidences the nonobviousness of the patented features. *See* CX-1352C (Collins Rebuttal WS) at Q/A 319-21; CX-1353C (Alarcon Rebuttal WS) at Q/A 233. For example, Bloomberg has called the JUUL system a “runaway success” and called the JUUL system the leading alternative for adult smokers. *See* CX-0392.0002 (Bloomberg Article (Zaleski)). Business Insider called the JUUL system the “iPhone of vaporizers” and highlighted the JUUL system’s compact form factor as being a factor for its popularity. *See* CX-0394.0001 (Business Insider (Robinson)). Similarly, Wells Fargo highlighted JLI’s “Apple-like approach” and credited the JUUL system’s “ease of use,” and its “long, lean, lightweight build” as factors for the JUUL system’s success. *See* CX-0367.0001, .0009 (Wells Fargo Article).

JLI has received numerous design awards for the JUUL system. For example, the patented JUUL system’s innovative construction received the San Francisco Design Award, the International Design Award, and the iF International Forum Design Award. *See* CX-0225 (2016 San Francisco Design Award); CX-0226 (2015 International Design Award); and CX-0227 (2016 iF International Forum Design Award); CX-0013C (Bowen WS) at Q/A 47-48.

The JUUL system has received extensive praise from competitors, including some respondents in this investigation. *See* CX-1354C (Mulhern Rebuttal WS) at Q/A 34-42.

Commercial success

JLI’s share of the ENDS market has grown quickly from [

]. *See* CX-1354C (Mulhern

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Rebuttal WS) at Q/A 25-31.

JLI's domestic investments are the largest in the market, and those investments support sales volumes that exceed the volumes of all other respondents combined. As discussed below with respect to the economic prong of the domestic industry requirement, JLI's and its contract manufacturers' investments in plant and equipment allocable to the domestic industry products ("DI Products") include assets with an allocated book value of \$[] and \$[] of operating expenses. *See* CX-0017C (Mulhern WS) Q/A 36; CX-0735C (Corrected DI Investment Summary); CX-0457C (P&L 2016-Q2 2018); CX-0465C (JLI P&L 2018); CX-0836C (CM Income Statements); CX-0835 (CM Capital Assets); CX-0837C (CM Annual Sales Summary).

[

]

JLI's and its contract manufacturers' investments in labor and capital allocable to the DI Products total []. *See* CX-0017C (Mulhern WS) Q/A 256; CX-0457C (P&L 2016 - Q2 2018); CX-0465C (JLI P&L 2018); CX-0836C (CM Income Statements).

Copying

A number of competitors, including some respondents, have admitted to using the JUUL system as a reference when manufacturing their own ENDS products. The Ziip

respondents³¹ [

] See CX-1353C (Alarcon Rebuttal WS) at Q/A 240; CX-0020C (Shelton Designations (Apr. 2019)) 40-41, 148, 154. The Ziip respondents have indicated that it would have been “impossible” to design the Ziip JUUL-compatible products if they did not have the JUUL system “as a point of reference.” See CX-0033C (Shelton Designations (May 2019)) 78.

JLI’s Affirmative Evidence Specific to Nexus

JLI has shown that the patented features of the JUUL system have contributed to its success in the marketplace. See CX-1354C (Mulhern Rebuttal WS) at Q/A 43. Claims of the asserted patents are coextensive with the JUUL system, including the filled JUULpod (a cartridge) and the JUUL device (a vaporizer device body or vaporizer), and relate to their technical design and features. See *id.* at Q/A 44; CX-1352C (Alarcon Rebuttal WS) at Q/A 303-306 (‘130 and ‘568 patents); CX-1353C (Alarcon Rebuttal WS) at Q/A 220, 221, 246 (‘669 and ‘915 patents). Indeed, JLI’s expert testimony regarding coextensive scope of the asserted patents is un rebutted by respondent’s expert, Mr. Flolid, who admitted that he did not consider any objective indicia evidence. Flolid Tr. 288.

The ‘568 and ‘130 patents recite, among other features, paired metal plates as part of the heating assembly with integrated, folded-over contact tabs. See CX-0015C

³¹ The “Ziip respondents” refer to respondents ZLab S.A.; SS Group Holdings; and Shenzhen Yibo Technology Co., Ltd. As noted, on November 19, 2019, the administrative law judge issued an initial determination granting a joint motion to terminate the investigation as the Ziip respondents based on a settlement agreement. See Order No. 39.

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(Collins WS) at Q/A 47-50, 315-316; CX-1352C (Collins Rebuttal WS) at Q/A 315-318, 324-333. The '568 and the '130 patents provide improved heat shielding, enabling a narrow and space-efficient structure, which results in a technical design with compact overall dimensions that is easier for consumers to use. *See* CX-0015C (Collins WS) at Q/A 47, 50; CX-1352C (Collins Rebuttal WS) at Q/A 316-318, 324-333; Collins Tr. 480-481. The technologies of the '568 and '130 patents also help minimize the potential failure of the pod, making the JUUL system more reliable. *See* CX-1352C (Collins Rebuttal WS) Q/A 315, 324-334; CX-1354C (Mulhern Rebuttal WS) at Q/A 47.

The '915 patent recites, among other features, use of locking gaps to securely attach the e-liquid-filled pod with the device. *See* CX-0016C (Alarcon WS) at Q/A 38; CX-1353C (Alarcon Rebuttal WS) at Q/A 28, 30-32, 135. The claimed features relate to attaching the filled JUULpods to the JUUL device, and provides consumers with convenience and ease of use, especially relative to prior threaded connection mechanisms. *See* CX-1353C (Alarcon Rebuttal WS) at Q/A 30. As a result of the '915 patented technology, together with the folded-over contact technology of the '568 patent, the JUUL system includes an easily releasable connection between the pod and the device, which is secure and reliable, and easy for a user to install. *See* CX-1353C (Alarcon Rebuttal WS) at Q/A 30, 232; Alarcon Tr. 456; CX-0013C (Bowen WS) at Q/A 38, 44, 45; Bowen Tr. 111. The claimed locking gap configuration in collaboration with the folded-over contact feature of the '568 patent, which are embodied in the JUULpod, allow a user to easily couple the cartridge to the device by merely sliding the cartridge relative to the device—without twisting the cartridge as required with a threaded connection. *See* CX-1353C (Alarcon Rebuttal WS) at Q/A 30; CX-0013C (Bowen WS)

at Q/A 38, 44, 45; Bowen Tr. 111.

The '669 patent recites, among other features, a notched mouthpiece that enables a user to see the e-liquid remaining in the pod, both prior to and during use. *See* CX-0016C (Alarcon WS) at Q/A 37; CX-1353C (Alarcon Rebuttal WS) at Q/A 28-30, 34, 231; CX-1354C (Mulhern Rebuttal WS) at Q/A 48-50. The ability to see remaining e-liquid benefits consumers by making consumers aware when pods are empty or near empty, thereby contributing to ease of use and avoidance of possible dry hits. *See* CX-1353C (Alarcon Rebuttal WS) at Q/A 28-30; Mulhern Tr. 546.

The claimed features of the '669 patent, the '568 patent, the '130 patent, and the '915 patent are coextensive with the e-liquid based JUUL system. Each of the asserted patents recites core components of an e-liquid based cartridge that contributed to the overall function of the JUUL system. The features in the asserted patent are among the innovations that are integrated together into a cohesive system that delivers the overall user experience JLI pioneered. While each asserted patent recites different inventive aspects of an e-liquid based system, each patent claims inventive features that are coextensive with the entire product.

JLI's expert, Ms. Mulhern, analyzed the extent to which the patented features contribute to the marketplace success of the JUUL system, evidence from JLI market research, JUUL sales and promotional materials, and the survey performed by respondents' expert Dr. Thomas Maronick.³² *See* CX-1354C (Mulhern Rebuttal WS) at

³² It appears that Dr. Maronick's witness statement was prepared on behalf of the respondents who participated in the evidentiary hearing, *i.e.*, Vapor 4 Life Holdings, Inc.; Ziip respondents; and Eonsmoke. As noted, on November 19, 2019, the administrative law judge issued initial determinations granting joint motions to terminate the

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Q/A 54. As discussed below, from an economic perspective, market research such as consumer surveys, provides evidence of the factors that contribute to demand for the JUUL system. Similarly, JLI's sales and promotional materials for the JUUL system would be expected to emphasize the features that are important to consumers and, thus, contribute to the purchase decision. *See id.* at Q/A 55.

JLI market research

JLI's market research appears to support the conclusion that the benefits of the features enabled by the asserted patents—ease of use, technical design, and reliability—are among those described by consumers as important to the purchase decision. *See id.* at Q/A 56. Ms. Mulhern's opinion is based in part on a consumer survey conducted by JLI from June to July 2018 that probed for the factors that impact consumers' purchase decisions, and asked consumers to identify which e-cigarette brand was their "most preferred." Respondents were then asked a follow-up question to determine why a particular brand was their most preferred. *See id.* at Q/A 57.

Survey respondents who indicated that JUUL was their most preferred brand were asked the reason for their preference, and the most frequent response was because "[i]t's easy to use," with a majority of respondents indicating the importance of ease of use. *See* CX-1354C (Mulhern Rebuttal WS) at Q/A 58-59. The second-most frequent response to that question was JUUL system's design. Moreover, approximately a third of respondents indicated the reason they most preferred JUUL was because "[i]t's the most

investigation as to Vapor 4 Life and Ziip respondents based on settlement agreements. *See* Order Nos. 38, 39.

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reliable.” *See id.* These consumers thus identified the benefits of the patented features as contributors to their decision to purchase the JUUL system. This data provides evidence of the nexus between the asserted patents and the marketplace success of the JUUL system. *See* CX-1354C (Mulhern Rebuttal WS) at Q/A 60-61; CX-0327 (JLI Q2 2018 Business Presentation).

JUUL sales and promotional materials

As with the JLI market research, JUUL sales and promotional materials also highlight the benefits of the patented features. *See* CX-1354C (Mulhern Rebuttal WS) at Q/A 65-67; *see, e.g.*, CX-0735C (Corrected DI Investment Summary); CX-0713C (Corrected Labor & Capital Summary (2016-2018)); CX-0457C (P&L 2016 - Q2 2018); CX-0465C (JLI P&L 2018); CX-0836C (CM Income Statements); CX-1323C (Rental Spreadsheet); CX-1325C (Modification Spreadsheet); CX-1326C (Employee Spreadsheet CM Document); CX-0792C (JLI Headcount 2017-2018); CX-0819C (Email re: Pricing Review and Attach); CX-0649 (JLI Getting Started Screenshot 2); CX-0648 (JLI Learning About Device Screenshot); CX-0650 (JUULpod Basics Screenshot); CX-0601 (JLI Device Basics Screenshot); CX-0647 (JUUL Community Screenshot); CX-0654 (JLI Quality & Standards Screenshot).

Ms. Mulhern reviewed customer product reviews from JLI’s website. *See* CX-1354C (Mulhern Rebuttal WS) at Q/A 68. The customer product reviews appear to confirm that the patented features are important to consumers, with multiple references to the technical design and ease of use of the JUUL system. *See* CX-1354C (Mulhern Rebuttal WS) at Q/A 68-70; CX-0464C (JLI Assets 12/31/2018); CX-0337C (2018-12-06 COGS Analysis); CX-0837C (CM Annual Sales Summary); CX-0830C (JLI Excel

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Spreadsheet); CX-0014C (Danaher WS) at Q/A 20; CX-0462 (JLI Starter Kit Screenshot 4); CX-0459 (JLI Starter Kit Screenshot 1); CX-0463 (JLI Starter Kit Screenshot 5); CX-0461 (JLI Starter Kit Screenshot 3); CX-0460 (JLI Starter Kit Screenshot 2).

* * *

Accordingly, the administrative law judge finds that there is some record evidence of secondary considerations that supports non-obviousness of the asserted claims.

B. Inequitable Conduct

Eonsmoke did not raise inequitable conduct as an affirmative defense in response to the complaint.³³ Eonsmoke made the following vague statement in its prehearing brief, “Eonsmoke joins in all issues to be presented by its co-Respondents, including particularly the patent invalidity contentions set forth herein by Ziip.” Ziip and Eonsmoke P.H. Br. at 3. Eonsmoke did not specifically raise or brief inequitable conduct in its pre-hearing brief.³⁴

After the hearing, the respondents did not file a consolidated brief. Eonsmoke did not include a discussion of inequitable conduct in its initial post-hearing brief, or its reply

³³ See 19 C.F.R. § 210.13(b) (concerning the pleading of defenses, including affirmative defenses).

³⁴ Ground Rule 7.a provides in part: “A statement of the issues to be considered at the hearing that sets forth with particularity a party’s contentions on each of the proposed issues, including citations to supporting facts and legal authorities, *e.g.*, proposed exhibits. Incorporation by reference is not allowed. Any contentions not set forth in detail as required therein shall be deemed abandoned or withdrawn, except for contentions of which a party is not aware and could not be aware in the exercise of reasonable diligence at the time of filing the prehearing statement.”

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brief. Eonsmoke did not indicate in the Comprehensive Joint Outline of issues to be decided in the final Initial Determination filed in connection with the parties' initial post-hearing briefs (8/23/2019) or Comprehensive Joint Outline filed in connection with the parties' reply briefs (9/3/2019) that it had an inequitable conduct defense. *See* Ground Rule 11.a ("On the same day the initial posthearing briefs are due, the parties shall file a comprehensive joint outline of all of the issues, including sub-issues, to be decided in the final Initial Determination. * * * The outline shall refer to specific sections and pages of the posthearing briefs." (emphasis in original)).

In the later Comprehensive Joint Outline for the parties' reply briefs that was filed with the expectation that Eonsmoke may be the only remaining respondent (10/23/19), Eonsmoke indicated in footnote: "Eonsmoke's position is that it preserved the issue of inequitable conduct by joining V4L's contentions in the pre-hearing briefing and at the August 2019 hearing. Any failure to incorporate the inequitable conduct arguments in the post-hearing briefing was an oversight which should be excused given the importance of the issue to the merits." In that footnote, JLI and the Staff opposed Eonsmoke's position.

Vapor 4 Life Holdings, Inc. ("V4L") has settled with JLI. V4L was the only party to assert an affirmative defense of patent unenforceability due to inequitable conduct. V4L was the only party to file post-hearing briefing on that issue, pursuant to 19 C.F.R. § 210.4. There is no basis to attribute V4L's briefing to Eonsmoke. Accordingly, alleged unenforceability due to inequitable conduct is not an issue to be decided in this investigation.

IX. Domestic Industry (Economic Prong)

For the reasons discussed below, the record evidence supports a finding that JLI's domestic activities: (1) add significant value to its domestic industry products; and (2) are significant in the context of its worldwide operations. The evidence shows that JLI has made and continues to make significant U.S. investments in plant, equipment, labor and capital under 19 U.S.C. § 1337(a)(3)(A) and (B).

Overview of JLI's Operations

Consumers can purchase a JUUL Basic Kit containing a device and charger, a Refill Kit containing two or four filled pods of various flavors and nicotine strengths, or a Starter Kit containing a Basic Kit and a Refill Kit with four pods of different flavors. *See* CX-0014C (Danaher WS) Q/A 9. The Starter Kit retails for \$49.99, the Basic Kit retails for \$34.99, and the Refill Kit retails for \$9.95 for a two-pod package and \$15.99 for a four-pod package. *See* CX-0014C (Danaher WS) Q/A 10. CX-0825 (JLI Excel Spreadsheet) shows JLI's pricing and margins for the JUUL system as of October 2018.

[
]. *See* CX-0014C (Danaher WS) Q/A 11. CX-0797C (JLI 2015 Financial Info) and CX-0793C (JLI 2017 Audited Financial Statements) are financial reports that were generated before or at the time of the split from Pax Labs. They were used to divide up the assets between JLI and Pax Labs. *See* CX-0014C (Danaher WS) Q/A 13.

JLI began selling the JUUL system on June 1, 2015. *See* CX-0014C (Danaher WS) Q/A 14. CX-0336C (2016-2018 JUUL Sales) shows sales of the JUUL system from 2016 through 2018. *See* CX-0014C (Danaher WS) Q/A 15. Extensive survey data shows sales of the JUUL system relative to other ENDS products from a sample of convenience

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stores on a weekly basis. CX-0813 (JLI Excel Spreadsheet) contains 4-week Nielsen data from 2016 through November 2018. CX-0458C (IRI 4WK Retailer) contains 4-week data from IRI from April 22 through September 9, 2018. CX-0798C (Nielsen Weekly Retailer) contains weekly Nielsen data from June 23 - July 28, 2018. JLI uses Nielsen and IRI survey data in the ordinary course of business. *See* CX-0014C (Danaher WS) Q/A 16.

JLI's domestic activities include managing contract manufacturers ("CMs") located both inside and outside of the U.S., performing warranty and customer support, conducting R&D and engineering, complying with regulations, engaging with scientific and political groups, and performing sales and administrative activities. *See* CX-0014C (Danaher WS) Q/A 17. The JUUL system is JLI's only commercial product in the United States. *See id.* at 18.

JLI is based in California, with its headquarters and numerous additional facilities in San Francisco and an R&D center in Mountain View. *See id.* at 19. As of September 30, 2018, []% of JLI's workforce was based in the United States. *See* CX-0014C (Danaher WS) Q/A 20. CX-1315C (Email re Labor and Attachments) and CX-1316C (Email re Pricing and Attachments) show JLI's labor and pricing rates. *See* CX-0014C (Danaher WS) Q/A 21.

JLI and its contractors also have facilities in []

[]. *See* CX-0014C

(Danaher WS) Q/A 17. CX-0792C (JLI Headcount 2017-2018), CX-0465C (JLI P&L 2018), CX-0457C (P&L 2016 - Q2 2018), and CX-0337C (2018-12-06 COGS Analysis) are spreadsheets containing information from JLI's enterprise resource planning software

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related to profit and loss, operating expenses, headcount, and employee compensation.

See CX-0014C (Danaher WS) Q/A 19.

Manufacturing

JLI's supply chain group manages JLI's existing manufacturing lines and the rollout of additional manufacturing lines, including the activities of all CMs involved.

JLI has [

]. See CX-0014C (Danaher WS) Q/A 22. JLI's manufacturing

capacity [

]. As of August, 2018, JLI had [

]. By January 2020, JLI expects to

have [

]. See *id.* at Q/A 23.

As of October 3, 2018, [

]

manufacture the device and charger and [

]. The

Basic Kit is imported into the United States and is either sent to a distributor to go out for

retail sale or it is sent to a domestic contract manufacturer to be combined with a Refill

Kit to make a Starter Kit. See *id.* at Q/A 24. The Refill Kit contains pods which are

assembled in [] and imported into the United States where they are filled with e-

liquid using JLI's proprietary automation equipment. Specifically, the empty pods are

assembled using JLI's proprietary assembly equipment. As of October 3, 2018, assembly

was [

]. All other

manufacturing activity occurred and continues to occur in the United States, including the

manufacture of e-liquid. See *id.* at Q/A 25.

The e-liquid is—and always has been—manufactured in the United States by

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JLI's suppliers, [

]. JLI's supply chain team in the United States manages all manufacturing activity globally. These suppliers use formulas and processes that are proprietary to JLI and unique to the JUUL system. *See id.* at Q/A 26.

JLI has [] that complete the manufacturing of the pods:

[] use equipment designed and purchased by JLI to fill the empty pods with e-liquid [

] as Refill Kits for distribution and retail sale. They also combine Refill Kits and Device Kits to create Starter Kits for retail sale. *See id.* at Q/A 27.

The processes used to manufacture the JUUL system [

]. *See* CX-0411C (JLI Supply Chain Overview); CX-0452C (CM Liquid Filling Process); CX-0453C (CM Vacuum Test Procedure); CX-0454C (CM Machine & Auto Checkweigher Packaging Instructions); CX-0455C (CM Final Packaging Inspection); CX-0456C (JLI Overall Testing Process); and CX-0412C (Pax Pod Assembly Overview).

CX-0794C (JUUL Agreement 5), CX-0795C (JUUL Agreement 6), CX-0302C (JLI-CM Amended Supply Agreement), CX-0303C (JLI-CM Supply Agreement), CX-0304C (JLI-CM Mfg. and Purchase Agreement), CX-0796C (JUUL Agreement 7), CX-0305C (JLI-CM Supply and Services Agreement), and CX-0306C (JLI-CM Master

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Services Agreement) show agreements with JLI's contract manufacturers. *See* CX-0014C (Danaher WS) Q/A 29. CX-0284 (JLI COPE Worksheet), CX-0285 (JLI COPE 1), CX-0286 (JLI COPE 2), and CX-0287 (JLI COPE 3) show the square footage of various facilities. *See* CX-0014C (Danaher WS) Q/A 30.

JLI does not sell the empty pods after importing them. JLI only sells filled pods that are sealed and packaged for retail sale. For the quality and reliability of the pods, JLI coordinates activities of JLI and its CMs in the United States. Filling, sealing, packaging, and quality control are essential to creating a successful and reliable commercial product. The success of the pod is critical to the success of the system. Consumers of the JUUL system purchase many more pods than devices, often multiple pods per week. The devices are [REDACTED]. *See* CX-0014C (Danaher WS) Q/A 31.

On October 3, 2018, [REDACTED]. Also, JLI has continued to [REDACTED]. JLI began a [REDACTED]. This proprietary process was invented by JLI in the United States and will [REDACTED].

[REDACTED]. In the fall of 2018, JLI [REDACTED] at its Mountain View facility. It was expected that [REDACTED].

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]. See CX-0014C (Danaher WS) Q/A 32.

[] make investments in facilities, equipment, and labor to manufacture e-liquid for the JUUL system. For pods, [] each make investments in facilities and labor to support those efforts, and []

[] all the equipment used in this process. See CX-0014C (Danaher WS) Q/A 33. CPX-0070 (Pod Packaging Video) and CPX-0071(Pod Filling and Sealing Video) show the domestic filling and packaging operations at []. The videos walk through the process and show the equipment used to fill, seal, and package pods for the JUUL system. The videos show just a portion of one manufacturing line. JLI continues to invest in []

]. See CX-0014C (Danaher WS) Q/A 34.

CX-0464C (JLI Assets 12/31/2018) is a spreadsheet containing an output from JLI's ERP software showing all the equipment owned by JLI globally. It contains a description of each piece, its location, the purchase value, and the book value (depreciated value) as of December 31, 2018. See CX-0014C (Danaher WS) Q/A 35.

[] manufacturing costs associated with pod manufacturing for the JUUL system as of the date of the email. See CX-1316C (Email re Pricing and Attachments); CX-0819C (Email re Pricing and Attachments); CX-0295C (Email re CM Labor Rate); and CX-1315C (Email re Labor and Attachments).

Manufacturing costs for [] are estimated below. These costs []

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]. See CX-0014C (Danaher

WS) Q/A 37.

Cost Type	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Material Cost	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]
Freight & Import Duties	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]
Direct Labor	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]
Indirect Labor	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]
Facilities & Utilities	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]
Equipment MRO	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]
Miscellaneous	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]
SG&A	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]
Manufacturer Profit	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]	\$[REDACTED]

R&D and Engineering

JLI has an R&D group and an engineering group that are responsible for research and development for the JUUL system, its manufacturing process, and assisting the supply chain team with troubleshooting any issues that arise during manufacture. JLI purchased a [REDACTED]

]. See CX-0014C (Danaher

WS) Q/A 38.

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JLI conducts R&D and engineering activities for the JUUL system at its headquarters in San Francisco as well as at its R&D facility in Mountain View. In addition, JLI employees based in the United States, [] assist with developing and improving manufacturing equipment and processes. See CX-0014C (Danaher WS) Q/A 39.

R&D for the JUUL system began prior to its launch in 2015. R&D continues at JLI today to develop and improve the manufacturing processes for the JUUL system, and []. JLI R&D efforts also include mechanical design, electrical and software engineering, vaporization, chemistry, and developing new features and functionalities of the JUUL system. Additionally, JLI funds clinical research that furthers its mission. See CX-0014C (Danaher WS) Q/A 40.

Warranty and Customer Support

JLI has a consumer support department that engages in a variety of customer support and warranty activities related to the JUUL system in the United States. JLI invests in labor compensation and in operating expenses for these efforts. See CX-0014C (Danaher WS) Q/A 41. JLI offers consumers a one-year warranty on JUUL devices for defects related to materials and workmanship under normal use. []

See CX-0014C (Danaher WS) Q/A 42.

Regulatory Compliance

The ENDS market is a regulated industry, and JLI has invested in facilities,

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equipment, labor, and operating expenses to support its regulatory compliance efforts.

JLI has departments working on regulatory compliance as well as quality, pre-clinical, clinical, and behavioral research, and youth prevention. As shown in CX-0465C (JLI P&L 2018), since October 2018, some employees [

]. These

activities all began prior to October 2018. See CX-0014C (Danaher WS) Q/A 43.

Sales and Other Activities

JLI has a number of additional departments engaged in activities exclusively for the JUUL system. The sales team manages distributors and retail accounts, takes orders, ensures that purchase orders are filled, and conducts strategic analyses of JLI's distribution system and pricing issues. JLI also engages in general administrative activities through its executive team, IT/technical support, legal, human resources, finance and accounting, facility expansion, and administrative assistance. See CX-0014C (Danaher WS) Q/A 44.

Total Investments in Plant and Equipment

As of September 30, 2018, JLI owned U.S.-based plant and equipment assets allocable to the DI Products with a book value of \$[]. Over the period 2016 through September 2018, JLI incurred plant and equipment operating expenses in the U.S. allocated to the DI Products that totaled \$[]. See CX-0017C (Mulhern WS) at Q/A 90-92, 100-125. In addition to JLI's direct investments, third-party manufacturers operating under contract with JLI have made additional investments in the U.S. related to the DI Products in plant and equipment with a book value of equipment

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assets of \$[] around the time of the amended complaint and cumulative operating expenses totaling at least \$[] over the period 2016 through September 30, 2018. *See* CX-0017C (Mulhern WS) at Q/A 93-99, 135-189.

Outside of investments related to sales, marketing, and administrative activities, JLI and its contractors' investments in plant and equipment fixed assets had a book value of \$[] as of September 30, 2018, and plant and equipment operating expenses totaled \$[] over the period 2016 through September 2018. *See* CX-0017C (Mulhern WS) at Q/A 190.

Total Investments in Labor and Capital

Over the period 2016 through September 2018, JLI's U.S. investments in labor and capital allocated to the DI Products totaled \$[]. *See* CX-0017C (Mulhern WS) at Q/A 196-218. Third-party contract manufacturers have also made U.S. investments in labor and capital totaling at least \$[] over the period 2016 through September 2018. *See id.* at Q/A 219-255.

Commercial Significance and Context of JLI's Investments

JLI's investments are significant in the context of the ENDS industry because JLI is the leading ENDS provider in the United States. At the time of filing the Complaint, JLI supplied []% of refill pods for the ENDS market. *See* CX-1354C (Mulhern Rebuttal WS) at Q/A 25. JLI's domestic investments are therefore the largest in the market, and those investments support sales volumes that exceed the volumes of all other respondents combined. JLI's and its contract manufacturers' investments in plant and equipment allocable to the DI Products include assets with an allocated book value of \$[] and \$[] of operating expenses. *See* CX-0017C (Mulhern WS)

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at Q/A 36; CX-0735C (Corrected DI Investment Summary); CX-0457C (P&L 2016-Q2 2018); CX-0465C (JLI P&L 2018); CX-0836C (CM Income Statements); CX-1323C (Rental Spreadsheet); CX-1324C (Asset Spreadsheet); CX-0792C (JLI Headcount 2017-2018); CX-0464C (JLI Assets 12/31/2018); CX-0830C (JLI Excel Spreadsheet); CX-0835 (CM Capital Assets); CX-0837C (CM Annual Sales Summary).

[

]

JLI's and its contract manufacturers' investments in labor and capital allocable to the DI products total approximately \$[]. See CX-0017C (Mulhern WS) at Q/A 256; CX-0457C (P&L 2016 - Q2 2018); CX-0465C (JLI P&L 2018); CX-0836C (CM Income Statements); CX-1323C (Rental Spreadsheet); CX-1324C (Asset Spreadsheet); CX-0792C (JLI Headcount 2017-2018); CX-0464C (JLI Assets 12/31/2018); CX-0830C (JLI Excel Spreadsheet); CX-0835C (CM Capital Assets); CX-0837C (CM Annual Sales Summary). Exclusive of sales, marketing, and administrative activities as shown in CX-0735C (Corrected DI Investment Summary); CX-0457C (P&L 2016 - Q2 2018); CX-0465C (JLI P&L 2018); CX-0836C (CM Income Statements); CX-1323C (Rental Spreadsheet); CX-1324C (Asset Spreadsheet); CX-0792C (JLI Headcount 2017-2018); CX-0464C (JLI Assets 12/31/2018); CX-0830C (JLI Excel Spreadsheet); CX-0835C (CM Capital Assets); CX-0837C (CM Annual Sales Summary), these investments in plant and equipment have an allocated book value of \$[] and

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operating expenses of \$[].

[

]

The investments in labor and capital exclusive of these activities total \$[].

As discussed below, such investments are qualitatively and quantitatively significant.

See CX-0017C (Mulhern WS) at Q/A 257-258.

Qualitative Significance

JLI's investments are qualitatively significant for several reasons. JLI, which is a company valued at approximately \$36.6 billion, has been solely dedicated to the development, manufacturing, and sale of the DI Products, since June 30, 2017. See CX-0014C (Danaher WS) Q/A 6, 18; CX-0017C (Mulhern WS) at Q/A 260. Altria initially invested \$12.8 billion in exchange for a 35% minority ownership in JLI, based on the \$36.6 billion valuation for JLI as a whole. See CX-0598 (JLI Press Release Altria Minority Investment). Prior to June 30, 2017, JLI's investments in plant and equipment related to both the JUUL system as well as the PAX system. Since June 30, 2017, when JLI spun-off all non-JUUL related operations to a separate entity, all JLI's investments in plant and equipment have been in support of the DI Products, which are JLI's only products. See CX-0017C (Mulhern WS) at Q/A 262.

The vast majority of JLI's employees are located in the U.S., and are based at its facilities in San Francisco, California and Mountain View, California. See CX-0017C

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(Mulhern WS) at Q/A 263. The JUUL system was developed in the U.S., and JLI's ongoing R&D activities similarly occur primarily in the U.S. *See* CX-0014C (Danaher WS) Q/A 39-40. Beginning in 2018, [

]. *See* CX-0014C (Danaher WS) Q/A 39.

[

] accounts for only a minority of JLI's current R&D investments. *See* CX-0017C (Mulhern WS) at Q/A 266.

Finally, the U.S.-based activities of JLI and its contract manufacturers relate to critical aspects of the JUUL system. *See* CX-0017C (Mulhern WS) at Q/A 268. Without the contributions by JLI and its contract manufacturers in the U.S., such as the manufacture of the e-liquid and the pod filling and packaging activities, there would not be a saleable JUUL system. *See* CX-0017C (Mulhern WS) at Q/A 269.

Although JLI's devices and empty pods are manufactured by [

], the research and development of the components and associated manufacturing processes were conducted by JLI employees in the U.S. *See* CX-0017C (Mulhern WS) at Q/A 270. Moreover, the activities conducted by JLI and its contract manufacturers in the U.S. that are associated with the manufacture of the e-liquid and filling and packaging of pods, as well as the final packaging of the JUUL system, are critical aspects of the manufacture of the JUUL system and essential for a saleable product, which supports a finding of qualitative significance. *See id.*

Quantitative Significance

As shown in CX-0464C (JLI Assets 12/31/2018), CX-0337C (2018-12-06 COGS Analysis), CX-0837C (CM Annual Sales Summary), CX-0830C (JLI Excel Spreadsheet),

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CX-0014C (Danaher WS) Q/A 20, JLI and its contractors' U.S. investments in the DI Products are significant from a quantitative perspective for several reasons. *See* CX-0017C (Mulhern WS) at Q/A 272. Since June 30, 2017, 100% of JLI's U.S. investments and activities have been in support of the JUUL system. *See id.* at Q/A 273. At the time of the amended complaint, approximately []% of JLI's employees were based in the U.S. *See* CX-0014C (Danaher WS) Q/A 20. Approximately []% of JLI's investments in equipment used to manufacture the DI Products are in the U.S. *See* CX-0017C (Mulhern WS) at Q/A 275.

JLI has invested in equipment used in the manufacture of the devices and empty pods overseas, in addition to the equipment []

[] in the U.S. in support of pod filling and packaging activities. *See* CX-0017C (Mulhern WS) at Q/A 276-77. As of September 30, 2018, JLI reported a book value of total manufacturing equipment worldwide of \$[], of which \$[]

[] was based in the U.S. *See* CX-0754C (JLI Manufacturing Equipment Summary). In addition to fixed assets owned by JLI at []

[], JLI owns assets at []. *See* CX-0754C (JLI Manufacturing Equipment Summary); CX-0464C (JLI Assets 12/31/2018).

As shown in CX-0464C (JLI Assets 12/31/2018), CX-0337C (2018-12-06 COGS Analysis), CX-0837C (CM Annual Sales Summary), CX-0830C (JLI Excel Spreadsheet), CX-0014C (Danaher WS) Q/A 20, JLI's U.S. operations contribute approximately []% of the JUUL system's value. *See* CX-0017C (Mulhern WS) at Q/A 279. In other words, although the device, charger, and empty pod are manufactured outside the U.S., a considerable portion of the value of the JUUL system is derived from U.S. manufacturing

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activities associated with the e-liquid and the filling and packaging of the pods. *See id.* The devices are manufactured outside the U.S. and the pods are manufactured partially outside the U.S. and partially in the U.S. Thus, the share of overall system value attributable to U.S. activities depends on how many pods are associated with a single device. *See* CX-0017C (Mulhern WS) at Q/A 281.

JLI historical sales data indicates a [REDACTED]. *See* CX-0734C (JUUL Sales Summary). This estimate of pods associated with each device is conservative, given that [REDACTED] and JLI provides a one-year device warranty. *See* CX-0014C (Danaher WS) Q/A 31, 42; CX-0017C (Mulhern WS) at Q/A 282. [REDACTED] results in the conclusion that approximately [REDACTED]% of the JUUL system value-added is related to U.S. operations. *See* CX-0017C (Mulhern WS) at Q/A 283; CX-0755C (JLI Domestic Value Added Summary); CX-0337C (2018-12-06 COGS Analysis).

Between [REDACTED] activities relate to the JUUL system, further supporting a finding of quantitative significance. *See* CX-0017C (Mulhern WS) at Q/A 286. JLI's pod-filling and packaging contract-manufacturers [REDACTED]

[REDACTED]. Similarly, in 2018, [REDACTED]% of [REDACTED] were associated with the JUUL system. *See* CX-0745C (CM Plant & Equipment Investments by DI Products). [REDACTED], in 2018, [REDACTED]% of [REDACTED] were associated with the JUUL system and [REDACTED], as shown in CX-0746C (CM Plant & Equipment Investments by DI Products 2).

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* * *

Accordingly, the record evidence supports a finding that JLI's domestic activities: (1) add significant value to its domestic industry products; and (2) are significant in the context of its worldwide operations. The evidence shows that JLI has made and continue to make significant U.S. investments in plant, equipment, labor and capital under 19 U.S.C. § 1337(a)(3)(A) and (B).

X. Remedy and Bonding

This is the recommended determination of the administrative law judge on remedy and bonding.

A. Limited Exclusion Order

The Commission has broad discretion in selecting the form, scope, and extent of the remedy in a section 337 proceeding. *Viscofan, S.A. v. United States Int'l Trade Comm'n*, 787 F.2d 544, 548 (Fed. Cir. 1986). A limited exclusion order directed to respondents' infringing products is among the remedies that the Commission may impose. *See* 19 U.S.C. § 1337(d).

The administrative law judge recommends that in the event the Commission determines that a violation of section 337 has occurred, and if consideration of the statutory public interest factors does not require that remedies be set aside or modified, the Commission should issue a limited exclusion order covering all of the infringing articles imported, sold for importation, or sold after importation by Eonsmoke and respondent XFire, Inc. ("XFire")³⁵ and should apply to Eonsmoke's and XFire's affiliated

³⁵ As noted, on April 23, 2019 the administrative law judge issued an initial

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companies, parents, subsidiaries or other related business entities, or their successors or assigns.

Further, in the event the Commission does issue a limited exclusion order in this investigation, the exclusion order should include a provision that allows Eonsmoke to certify, pursuant to procedures to be specified by U.S. Customs and Border Protection, that it is familiar with the terms of the order, that it has made appropriate inquiry, and that, to the best of its knowledge and belief, the products being imported are not excluded from entry under the order.

B. Cease and Desist Order

Section 337 provides that in addition to, or in lieu of, the issuance of an exclusion order, the Commission may issue a cease and desist order as a remedy for a violation of section 337. 19 U.S.C. § 1337(f)(1). The Commission “generally issues a cease and desist order only when a respondent maintains a commercially significant inventory of infringing products in the United States.” *Certain Ground Fault Circuit Interrupters and Products Containing Same*, Inv. No. 337-TA-615, Comm’n Op. at 24 (Mar. 26, 2009); *Certain Video Game Systems, Accessories, and Components Thereof*, Inv. No. 337-TA-473, Comm’n Op. at 2 (Dec. 24, 2002).

The evidence shows that the inventory of the accused products held by Eonsmoke is commercially significant. *See* CX-0017C (Mulhern WS) Q/A 313. Eonsmoke’s domestic operations include an office and warehouse in New Jersey, employing more than 30 individuals. *See* CX-0017C (Mulhern WS) Q/A 293. Eonsmoke’s inventory of

determination finding respondent XFire, Inc. in default. *See* Order No. 22.

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pods on March 8, 2019 was valued at between \$2 million and \$5 million, which equates to approximately 133,422 to 333,556 packs of pods at retail prices. *See* CX-0756C (Respondents US Inventory of Accused products Summary); CX-0757C (Eonsmoke US Inventory & Unit Sales of Accused Products); CX-0851 (Eonsmoke's Supp. Responses to JLI's First Set of Rogs).

Eonsmoke's inventory thus represents approximately 0.45 months (or approximately 14 days) of sales of packs of pods. *See* CX-0017C (Mulhern WS) Q/A 307; CX-0851 (Eonsmoke's Supp. Responses to JLI's First Set of Rogs indicating that in the 17 months from October 2017 through February 2019, Eonsmoke has sold 5 million units); CX-0757C (Eonsmoke US Inventory & Unit Sales of Accused products); CX-0960C (Eonsmoke 2018 EoY Inventory). Eonsmoke's General Manager testified that device inventory information is not always tracked comprehensively. *See* CX-0023C (Zeller Dep. Designations) 42-43, 51-54. The March 8, 2019 inventory levels are significantly higher than Eonsmoke's apparent year-end 2018 inventory, which was approximately 85,600 packs of pods. *See* CX-0017C (Mulhern WS) Q/A 291.

A cease and desist order should also issue against XFire, a domestic respondent who was found in default. JLI's amended complaint alleged that XFire imported infringing devices and pods and that it "maintain[s] a commercially-significant inventory of the XFire devices and pods in the United States." *See* Am. Compl. ¶¶ 147-149, 162, 192.

C. Bond

Pursuant to section 337(j)(3), the administrative law judge and the Commission must determine the amount of bond to be required of a respondent, during the 60-day

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Presidential review period following the issuance of permanent relief, in the event that the Commission determines to issue a remedy. The purpose of the bond is to protect the complainant from any injury. 19 U.S.C. § 1337(j)(3); 19 C.F.R. §§ 210.42(a)(1)(ii), 210.50(a)(3).

When reliable price information is available, the Commission has often set bond by eliminating the differential between the domestic product and the imported, infringing product. *Certain Microsphere Adhesives, Processes for Making Same, and Products Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, Comm'n Op. at 24 (1995). In other cases, the Commission has turned to alternative approaches, especially when the level of a reasonable royalty rate could be ascertained. *Certain Integrated Circuit Telecommunication Chips and Products Containing Same, Including Dialing Apparatus*, Inv. No. 337-TA-337, Comm'n Op. at 41 (1995). A 100 percent bond has been required when no effective alternative existed. *Certain Flash Memory Circuits and Products Containing Same*, Inv. No. 337-TA-382, USITC Pub. No. 3046, Comm'n Op. at 26-27 (July 1997) (a 100% bond imposed when price comparison was not practical because the parties sold products at different levels of commerce, and the proposed royalty rate appeared to be *de minimis* and without adequate support in the record).

The evidence shows that there is direct competition between participating respondents'³⁶ accused products and JLI's JUUL system, which will result in continuing injury to JLI in the form of displaced sales. See CX-0017C (Mulhern WS) Q/A 316.

³⁶ Participating respondents refer to V4L, Ziip respondents and Eonsmoke.

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Both the JUUL system and respondents' accused products compete generally in the U.S. marketplace for ENDS devices and associated refill pods. *See id.* at Q/A 317.

Like the JUUL system, participating respondents' accused products are sold through a variety of distribution channels, including online and through retail outlets such as convenience stores, gas stations, and tobacco/specialty shops. JLI and several of the respondents (such as Ziip respondents) make wholesale sales to distributors. *See* CX-0638 (EY ENDS Report) (identifying distribution channels for JUUL). In some cases, retailers sell both JLI's JUUL system as well as participating respondents' accused products. For example, the e-commerce retailer printpointny.com sells the JUUL system as well as the accused products from Eonsmoke. Similarly, respondent V4L sells both JUUL products as well as other Accused products. *See* CX-0666 (Price Point JUUL Collection Screenshot); CX-0665 (Price Point Eonsmoke Screenshot).

Additionally, participating respondents have directly targeted JLI and the JUUL system with their marketing. *See* CX-0017C (Mulhern WS) Q/A 318-321. Some of participating respondents' accused pods are marketed as "JUUL compatible." The JUUL designation on participating respondents' pod products emphasizes the direct competition between the JUUL system and participating respondents' accused products. *See* CX-0275C (V4L's 2nd Supp. Responses to JLI's First Set of Rogs), at 2-3; CX-0632 (Eonsmoke Buy Page Screenshot showing "JUUL compatible" marketing) and CX-0710 (Ziip Stock JUUL Compatible Pods Search Screenshot; same).

As explained in CX-0759C (Bond Price Differential Summary), CX-0307C (JLI Pricing Summary), CX-0851 (Eonsmoke's Supp. Responses to JLI's First Set of Rogs), at Exhibit A, CX-0782C (Ziip's Supp. Responses to JLI's First Set of Rogs), at Exhibit

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A; CX-0026C (Grishayev Designations) 209-210, a bond amount based on price differentials is appropriate in cases such as this where there is direct competition between Complainant's DI products and participating respondents' accused imports. *See* CX-0017C (Mulhern WS) Q/A 323. While Ms. Mulhern performed a price differential analysis for JLI and the various accused products, she explained that such an analysis was complicated in this investigation due to a number of factors. *See* CX-0017C (Mulhern WS) Q/A 324. First, complainant and participating respondents operate at various levels of the supply chain. For example, JLI sells to wholesalers as well as directly to end-consumers. Participating respondents range from manufacturers (*e.g.*, Ziip) to retailers (*e.g.*, V4L). Second, some of the respondents, such as defaulted respondent XFire, did not provide information regarding the prices of the accused products.

Third, publicly available pricing data even on the same respondents' websites is, at times, inconsistent. For example, a search of Eonsmoke pods on V4L's website results in a page that indicates the price for a four-pack of pods is \$15.99. *See* CX-0017C (Mulhern WS) Q/A 328. However, a search for Eonsmoke Lush Ice pods directly results in a different page, indicating a reduced price of \$13.99. *See* CX-0676 (V4L Eon Pods Screenshot 2) and CX-0683 (V4L Eonsmoke Search Results Screenshot 2). Similarly, Mr. Grishayev, *Eonsmoke's Co-Founder and Operating Officer*, testified that the price range for customers buying directly from the Eonsmoke website was "[a]fter using a discount code, probably like 12.99, 11.99, 12.99, all the way up to 14.99." *See* CX-0026C (Grishayev Dep.) 210.

Fourth, there is evidence that participating respondents consistently provide discounts or coupons for their products beyond the publicly available price. For example,

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Mr. Tolmach, *Eonsmoke Co-founder and CEO*, testified in that Eonsmoke provides “coupons at the top of our website” for 20% off that is “always live” and that “[p]eriodically we will e-mail our customer base with like 25 or 30%” discounts. *See* CX-0018C (Tolmach Designations (Apr. 4, 2019)) 200.

Finally, the DI and accused products are sold in a variety of configurations, making direct pricing comparisons difficult. *See* CX-0017C (Mulhern WS) Q/A 325. For instance, “Starter kits” sold by JLI contain a device, charger, and four pods. In contrast, the Flair Infinity starter kit includes a device, charger, and eight pods. Moreover, the volume of e-liquid in a single pod differs across participating respondents. *See* CX-0762C (Bond Price Differential – Pods). *See also* CX-0656 (JUUL Starter Kit Retail Website).

Accordingly, if the Commission imposes a remedy that prohibits importation, it is recommended that the Commission subject Eonsmoke’s and XFire’s importations during the Presidential review period to 100 percent bond.

D. Public Interest Factors

The Commission’s notice of investigation provides in part:

Pursuant to Commission Rule 210.50(b)(1), 19 C.F.R. § 210.50(b)(1), the presiding administrative law judge shall take evidence or other information and hear arguments from the parties or other interested persons with respect to the public interest in this investigation, as appropriate, and provide the Commission with findings of fact and a recommended determination on this issue, which shall be limited to the statutory public interest factors set forth in 19 U.S.C. §§ 1337(d)(1), (f)(1), (g)(1)[.]

83 Fed. Reg. 64156 (Dec. 13, 2018).

As indicated in the Commission’s notice, the public interest information and

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recommendation of the administrative law judge in this investigation is limited to the factors set forth by statute in 19 U.S.C. §§ 1337(d)(1), (f)(1), (g)(1). Those statutory factors do not address broader trade policy questions of whether products at issue in an investigation should be imported or sold after importation. Rather, the statutory factors to be considered by the administrative law judge and the Commission relate to the question of whether it would be in the public interest to allow the products to be imported or sold after importation even if there is a violation of section 337.³⁷ As discussed below, there is no evidence relating to the statutory factors to indicate that the Commission should allow products to be imported or sold after importation even if there is a violation of section 337. Thus, it is the recommendation of the administrative law judge that the Commission issue any appropriate remedy pursuant to 337 with respect to any products or parties found in violation of section 337 or any party found to be in default.

The statutory public interest factors were not briefed by Eonsmoke, or indeed by any respondent.

³⁷ For example, section 337(d)(1) provides:

(1) If the Commission determines, as a result of an investigation under this section, that there is a violation of this section, it shall direct that the articles concerned, imported by any person violating the provision of this section, be excluded from entry into the United States, *unless*, after considering the effect of such exclusion upon the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers, *it finds that such articles should not be excluded from entry*. The Commission shall notify the Secretary of the Treasury of its action under this subsection directing such exclusion from entry, and upon receipt of such notice, the Secretary shall, through the proper officers, refuse such entry.

19 U.S.C. § 1337(d)(1) (emphasis added).

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JLI provided some briefing relating to the statutory public interest factors. *See* JLI Br. at 217.

The Staff noted in its initial posthearing brief, “Even though public interest was delegated in this Investigation, none of the Respondents argued in their pre-hearing briefs that the public interest should preclude a remedy.” Staff Br. at 121. Furthermore, the Staff argued, “Additionally, the Staff agrees with JLI that there are no public health, safety or welfare concerns implicated by the requested LEO. *See* CPreHBr. at 200.” *Id.*

The public interest does not preclude issuance of limited exclusion orders or cease and desist orders. JLI has more than adequate capacity to meet any increase in demand if the accused products were to be excluded from importation. JLI’s expanding capacity has been responsible for over 90% of the growth in the ENDS market in the U.S. from 2016 to Nov. 2018. *See* CX-1354C (Mulhern Rebuttal WS) Q/A 33. JLI expects to

[

]. *See* CX-0014C (Danaher WS) Q/A 23.

* * *

It is the RECOMMENDED DETERMINATION (“RD”) of the administrative law judge that in the event a violation of section 337 is found, the Commission should issue a limited exclusion order, and a cease and desist order. Further, if the Commission imposes a remedy that prohibits importation, it is recommended that the Commission subject Eonsmoke’s and XFire’s importations during the Presidential review period to a 100 percent bond.

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XI. Conclusions of Law

1. The Commission has subject matter, personal, and *in rem* jurisdiction in this investigation.
2. The accused products have been imported or sold for importation into the United States.
3. The accused products infringe the asserted claims of U.S. Patent No. 10,070,669; U.S. Patent No. 10,045,568; U.S. Patent No. 10,058,130; and U.S. Patent No. 10,104,915.
4. The domestic industry requirement has been satisfied with respect to U.S. Patent No. 10,070,669; U.S. Patent No. 10,045,568; U.S. Patent No. 10,058,130; and U.S. Patent No. 10,104,915.
5. It has not been shown by clear and convincing evidence that the asserted claims of U.S. Patent No. 10,070,669; U.S. Patent No. 10,045,568; U.S. Patent No. 10,058,130; and U.S. Patent No. 10,104,915 are invalid.

XII. Initial Determination and Order

Accordingly, it is the INITIAL DETERMINATION of the undersigned that a violation of section 337 (19 U.S.C. § 1337) has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation, of certain electronic nicotine delivery systems and components thereof that infringe the asserted claims of U.S. Patent No. 10,070,669; U.S. Patent No. 10,045,568; U.S. Patent No. 10,058,130; and U.S. Patent No. 10,104,915.

Further, this Initial Determination, together with the record of the hearing in this investigation consisting of (1) the transcript of the hearing, with appropriate corrections

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as may hereafter be ordered, and (2) the exhibits received into evidence in this investigation, is CERTIFIED to the Commission.

In accordance with 19 C.F.R. § 210.39(c), all material found to be confidential by the undersigned under 19 C.F.R. § 210.5 is to be given *in camera* treatment.

The Secretary shall serve a public version of this ID upon all parties of record and the confidential version upon counsel who are signatories to the Protective Order issued in this investigation.

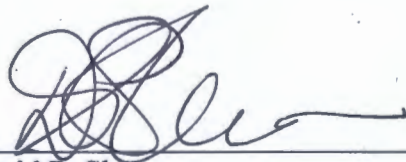
Pursuant to 19 C.F.R. § 210.42(h), this Initial Determination shall become the determination of the Commission unless a party files a petition for review pursuant to § 210.43(a) or the Commission, pursuant to § 210.44, orders on its own motion a review of the ID or certain issues herein.

* * *

To expedite service of the public version, each party is hereby ordered to file with the Commission Secretary no later than December 20, 2019, a copy of this initial determination with bold red brackets to show any portion considered by the party (or its suppliers of information) to be confidential, accompanied by a list indicating each page on which such a bracket is to be found. At least one copy of such a filing shall be served upon the office of the undersigned. If a party (and its suppliers of information) considers

PUBLIC VERSION

nothing in the initial determination to be confidential, and thus makes no request that any portion be redacted from the public version, then a statement to that effect shall be filed.³⁸

A handwritten signature in dark ink, appearing to read 'D. Shaw', written over a horizontal line.

David P. Shaw
Administrative Law Judge

Issued: December 13, 2019

³⁸ Confidential business information (“CBI”) is defined in accordance with 19 C.F.R. § 201.6(a) and § 210.5(a). When redacting CBI or bracketing portions of documents to indicate CBI, a high level of care must be exercised in order to ensure that non-CBI portions are not redacted or indicated. Other than in extremely rare circumstances, block-redaction and block-bracketing are prohibited. In most cases, redaction or bracketing of only discrete CBI words and phrases will be permitted.

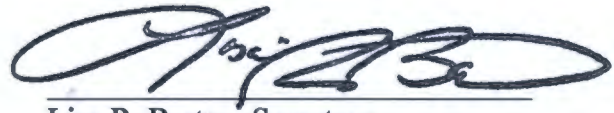
**CERTAIN ELECTRONIC NICOTINE DELIVERY SYSTEMS AND COMPONENTS
THEREOF**

INV. NO. 337-TA-1139

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **Final Initial Determination and Recommended Determination** has been served by hand upon the Commission Investigative Attorney, **Paul Gennari, Esq.**, and the following parties as indicated, on

JAN 13 2020



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street SW, Room 112A
Washington, DC 20436

FOR COMPLAINANT JUUL LABS, INC.:	
Daniel E. Yonan, Esq. STERNE, KESSLER, GOLDSTEIN & FOX PLLC 1100 New York Avenue, NW Washington, DC 20005	<input type="checkbox"/> Via Hand Delivery <input checked="" type="checkbox"/> Express Delivery <input type="checkbox"/> Via First Class Mail <input type="checkbox"/> Other: _____
FOR RESPONDENT EONSMOKE, LLC:	
Stephen M. Lobbin, Esq. SML AVVOCATI P.C. 7538 Draper Avenue San Diego, CA 92037	<input type="checkbox"/> Via Hand Delivery <input checked="" type="checkbox"/> Express Delivery <input type="checkbox"/> Via First Class Mail <input type="checkbox"/> Other: _____
RESPONDENT:	
Keep Vapor Electronic Tech. Co., Ltd. Block D, XinLong Techno Park ShaJing Town, Bao An District Shenzhen, China	<input type="checkbox"/> Via Hand Delivery <input checked="" type="checkbox"/> Express Delivery <input type="checkbox"/> Via First Class Mail <input type="checkbox"/> Other: _____

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

**CERTAIN ELECTRONIC NICOTINE
DELIVERY SYSTEMS AND
COMPONENTS THEREOF**

Investigation No. 337-TA-1139

**NOTICE OF A COMMISSION DETERMINATION TO REVIEW IN
PART AN INITIAL DETERMINATION GRANTING IN PART
COMPLAINANT'S MOTION FOR SUMMARY DETERMINATION OF
IMPORTATION, INFRINGEMENT, AND DOMESTIC INDUSTRY**

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined to review in part an initial determination ("ID") (Order No. 35) of the presiding administrative law judge ("ALJ") granting in part the Complainant's motion for summary determination of importation, infringement, and domestic industry. The Commission has determined to remand to the ALJ for clarification regarding the analysis of infringement and the statement regarding mootness.

FOR FURTHER INFORMATION CONTACT: Lynde Herzbach, Office of the General Counsel, U.S. International Trade Commission, 500 E Street SW, Washington, D.C. 20436, telephone 202-205-3228. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, SW, Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server at <https://www.usitc.gov>. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <https://edis.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: On December 13, 2018, the Commission instituted this investigation under section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337 ("section 337") based on a complaint filed on behalf of Juul Labs, Inc. ("JLI") of San Francisco, California. 83 *Fed. Reg.* 64156-57 (Dec. 13, 2018). The complaint, as amended and supplemented, alleges violations of section 337 based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain

electronic nicotine delivery systems and components thereof by reason of infringement of certain claims of U.S. Patent Nos. 10,070,669; 10,076,139; 10,045,568; 10,058,130; and 10,104,915 (collectively, “the Asserted Patents”). *Id.* The Commission’s notice of investigation names twenty-one respondents, including Zlab S.A. of Punta del Este – Maldonado, Uruguay; SS Group Holdings of Shenzhen City, China; and Shenzhen Yibo Technology Co. Ltd. of Shenzhen City, China (collectively, “the Ziip Respondents”); Eonsmoke LLC of Clifton, New Jersey (“Eonsmoke”); ALD Group Ltd. of Shenzhen City, China (“ALD”); Shenzhen Joecig Technology Co., Ltd. of Shenzhen City, China (“Joecig”); and Vapor 4 Life Holdings, Inc. of Northbrook, Illinois (“V4L”) (all collectively, “Motion Respondents”). *Id.*; *see also* Order No. 26 (May 21, 2019), *not reviewed*, Notice (June 14, 2019) (amending the complaint and notice of investigation). The Office of Unfair Import Investigations (“OUII”) is also a party to the investigation. *Id.*

On June 7, 2019, JLI filed a motion for summary determination of importation and infringement as to Motion Respondents’ accused products as well as the satisfaction of the domestic industry requirement. *See* ID at 1; *see also* JLI’s Amended Motion for Summary Determination Regarding Importation, Infringement, and Domestic Industry (“JLI’s Motion”). On June 14, 2019, JLI filed an amended motion. *Id.*

On June 26, 2019, ALD and Joecig jointly filed a response in opposition to JLI’s Motion, but on July 26, 2019, they filed a notice to withdraw the response. ID at 1. No other Motion Respondents filed a response to JLI’s Motion. *Id.*

On July 1, 2019, OUII filed a response supporting JLI’s Motion in part. ID at 2.

On July 8, 2019, JLI filed a motion for leave to file a reply. ID at 1-2. The ID grants JLI leave to file the reply, which is attached to the motion for leave as Exhibit A. *Id.*

On July 19, 2019, JLI filed an update withdrawing JLI’s Motion as to the importation requirement for ALD, Joecig, and their accused products. *Id.* at 1 (n.2).

On August 5, 2019, the ALJ issued the subject ID granting the motion for summary determination in part. *See* ID. The ID finds that JLI is entitled to summary determination of importation with respect to the Ziip Respondents and their accused products; Eonsmoke and its accused products; and V4L and certain V4L accused products. ID at 4-11. The ID’s analysis of whether the Ziip Respondents’ accused products infringe the Asserted Patents states, “the question of whether Ziip accused products contain or perform each limitation of asserted claims is moot.” *Id.* at 11. The ID does not specifically state whether summary determination of infringement as to the Ziip Respondents is denied or granted nor the reasoning supporting grant or denial of the motion as to this issue. *Id.*

The Commission has determined to review the subject ID in part. Specifically, the Commission reviews the ID’s analysis as to infringement and statement regarding mootness on page 11. ID at 11.

The Commission remands to the ALJ for clarification of the analysis and statement regarding mootness on page 11, and for clarification as to whether the ID grants or denies summary determination that the Ziip Respondents infringe the Asserted Patents and reasoning in support thereof. The Commission does not seek further briefing at this time. Further, the Commission's review in part and remand does not change the target date for completion of the investigation.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, and in Part 210 of the Commission's Rules of Practice and Procedure, 19 CFR Part 210.

By order of the Commission.

A handwritten signature in black ink, appearing to read 'Lisa R. Barton', with a stylized flourish at the end.

Lisa R. Barton
Secretary to the Commission

Issued: September 4, 2019

**CERTAIN ELECTRONIC NICOTINE DELIVERY SYSTEMS
AND COMPONENTS THEREOF**

Inv. No. 337-TA-1139

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, **Paul Gennari, Esq.**, and the following parties as indicated, on 9/4/2019



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainants Juul Labs, Inc.:

Daniel E. Yonan, Esq.
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1100 New York Avenue, N.W.
Washington, DC 20005

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☒ Via Express Delivery
☐ Via First Class Mail
☐ Other: _____

On Behalf of Respondent Vapor 4 Life Holdings, Inc:

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THOMPSON HINE LLP
1919 M Street, N.W.,
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Washington, DC 20036

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☐ Via First Class Mail
☐ Other: _____

On Behalf of Respondents Eonsmoke, LLC,

Stephen M. Lobbin, Esq.
SML AVVOCATI P.C.
7538 Draper Avenue
San Diego, California 92037

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☒ Via Express Delivery
☐ Via First Class Mail
☐ Other: _____

**CERTAIN ELECTRONIC NICOTINE DELIVERY
SYSTEMS AND COMPONENTS THEREOF**

Inv. No. 337-TA-1139

Certificate of Service – Page 2

**On Behalf of Respondents ZLab S.A., Ziip Lab Co., Limited,
and Shenzhen Yibo Technology Co., Ltd.**

Steven Susser Esq.
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Suite 350
Birmingham, MI 48009

Respondents:

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ShaJing Town, Bao An District
Shenzhen, China

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☒ Via Express Delivery
☐ Via First Class Mail
☐ Other: _____

- ☐ Via Hand Delivery
☒ Via Express Delivery
☐ Via First Class Mail
☐ Other: _____

PUBLIC VERSION

**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.**

In the Matter of

**CERTAIN ELECTRONIC NICOTINE
DELIVERY SYSTEMS AND
COMPONENTS THEREOF**

Inv. No. 337-TA-1139

Order No. 35 (Initial Determination)

On June 7, 2019, pursuant to Commission Rule 210.21(b), complainant Juul Labs, Inc. (“JLI” or “Juul”) filed a motion for summary determination of importation, infringement, and domestic industry as to respondents Zlab S.A., SS Group Holdings, and Shenzhen Yibo Technology Co. Ltd. (collectively “the Ziip respondents” or “Ziip”), Eonsmoke LLC (“Eonsmoke”), ALD Group Ltd. (“ALD”), Shenzhen Joecig Technology Co., Ltd. (“Joecig”), and Vapor 4 Life Holdings, Inc. (“V4L” or “Vapor 4 Life”) (all collectively, “respondents”). Motion Docket No. 1139-51. On June 14, 2019, Juul filed an amended motion. Motion Docket No. 1139-51.¹

On June 26, 2019, ALD and Joecig filed a response in opposition.² On July 1, 2019, the Commission investigative attorney (“Staff”) filed a response supporting the pending motion in part. No other response was filed. On July 8, 2019, Juul filed a motion for leave to file a reply

¹ References to the pending motion hereinafter refer to the amended motion filed on June 14, 2019.

² On July 18, 2019, ALD and Joecig filed a notice to withdraw their opposition to the pending motion. On July 19, 2019, Juul filed an update pursuant to Ground Rule 5.h, withdrawing the motion for summary determination that the importation requirement is met for ALD’s and Joecig’s accused products. Thus, those aspects of the pending motion are moot.

in support of the pending motion. Motion Docket No. 1139-56. No response was filed. Motion No. 1139-56 is granted.

Juul argues that it is entitled to summary determination regarding the following issues:

- (A) Importation, sale for importation, or sale after importation into the United States under 19 U.S.C. § 1337(a)(1)(B) for all accused products for all Respondents;
- (B) Infringement of all asserted claims by all accused products for the Ziip Respondents, Eonsmoke, and V4L;
- (C) The technical prong of the domestic industry requirement of 19 U.S.C. § 1337(a)(2) for all asserted patents; and
- (D) The economic prong of domestic-industry requirement of 19 U.S.C. § 1337(a)(2) for all asserted patents.

Mot. at 1-2.

The Staff argues:

- (1) summary determination of importation is appropriate for the following:
 - a. Ziip Respondents and all of Ziip's Accused Products;
 - b. Eonsmoke and all of Eonsmoke's Accused Products;
 - c. Vapor 4 Life with respect to the "First Category" of Vapor 4 Life Accused Products;
 - d. Vapor 4 Life with respect to the following Second Category of Vapor 4 Life Accused Products: SMOK Infinix device, ViV pod, Sourin iShare device and Sourin iShare pod;
 - e. ALD with respect to the XFire devices and XFire pods but only with respect to the '669 patent; and
 - f. Joecig with respect to Joecig's Accused Products;
- (2) summary determination of infringement with respect to all Respondents and each of the asserted patents is not appropriate;
- (3) summary determination that JLI's JUUL-system domestic industry product satisfies the technical prong of the domestic industry requirement is not appropriate;
- (4) summary determination that JLI satisfies the economic prong of the domestic industry requirement under 19 U.S.C. § 1337(a)(3)(A) is not appropriate.

Staff Resp. at 1-2.

Section 337 prohibits “[t]he importation into the United States, the sale for importation, or the sale within the United States after importation by the owner, importer, or consignee, of articles that (i) infringe a valid and enforceable United States patent” 19 U.S.C.

§ 1337(a)(1)(B). A complainant need only prove importation of a single accused product to satisfy the importation element. *See Certain Trolley Wheel Assemblies*, Inv. No. 337-TA-161, Comm’n Op. at 7-8, USITC Pub. No. 1605 (Nov. 1984).

The Commission Rules provide that “[a]ny party may move with any necessary supporting affidavits for a summary determination in its favor upon all or part of the issues to be determined in the investigation. 19 C.F.R. § 210.18(a). Summary determination “shall be rendered if pleadings and any depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to summary determination as a matter of law.” 19 C.F.R. § 210.18(b).

1. Importation

A. The Ziip Respondents

The Ziip Respondents manufacture, import, and sell various accused products. Mot. at 2. The accused Ziip products are the Ziip devices, Ziip Pods, Plus Pods, Airbender Pods, Iced Pods, Eonsmoke Pods (also known as Eon Pods), Loon Pods, Mr. Fog Pods, Cali Pods, Delicious Pods, ViV Pods, Unique Pods, I-pods, Jewel pods, Amo pods, Vape Heads pods, OG pods, Pods pods, Cigma pods, Salteez pods, Magic Pods, Sonic pods, and Pūr Pods. Mot. at 2-3; Statement of Undisputed Material Fact (“SUMF”), ¶ 4.

Ziip respondents admit that they have manufactured in China and have sold for importation into the United States at least one unit of each of the their accused pod and device

products after issuance of U.S. Patent Nos. 10,070,669, 10,045,568, 10,058,130, and 10,104,915. *See* SUMF, ¶¶ 11-12. Indeed, the Ziip respondents have stipulated that they “have imported into the United States, sold for importation into the United States, or sold within the United States after importation, within the meaning of 19 U.S.C. § 1337(a)(1)(B), at least one unit of each Ziip Respondents’ Accused Pod Product and Accused Device Product as of the time of execution of this Stipulation and after issuance of [the asserted patents].” *See* Mot. at 14; SUMF, ¶ 13; Mot. Ex. 7 (5/22/19 Stipulation Regarding Importation, Infringement, Domestic Industry, and Public Interest (“May 22 Stipulation”)), ¶¶ 5, 1, 2. The Staff agrees that Juul is entitled to summary determination with respect to the importation requirement for the Ziip respondents. *See* Staff Resp. at 7.

There is no genuine issue as to any material fact concerning importation with respect to Ziip’s accused products. Juul is entitled to summary determination as a matter of law that it has satisfied the importation requirement with respect to all accused products for the Ziip respondents.

B. Eonsmoke

Eonsmoke is an importer and retailer that sells various accused products manufactured and/or imported by the Ziip respondents, and other manufacturers. Mot. at 3. The accused Eonsmoke products are the Eonsmoke devices, Eonsmoke v2.0 devices and pods, Eonsmoke pods, and 4X pods. *See* Mot. at 3; SUMF, ¶¶ 5, 16.

As discussed below, Eonsmoke admits that it imports and sells after importation the accused Eonsmoke devices, Eonsmoke pods, and 4X pods. *See* Mot. at 14; SUMF, ¶¶ 14-16.

The evidence shows Eonsmoke imports and sells after importation into the United States the accused 4X pods. *See, e.g.*, Mot. Ex. 4 (EON000001), Mot. Ex. 5 (EON000012 –

EON000014) (various invoices showing Eonsmoke purchases from China for delivery to Clifton, New Jersey); Supp. Resp. to RFA Nos. 69, 70, and 77 (admitting that Eonsmoke imports the 4X pods into the U.S.). SUMF, ¶ 14. Eonsmoke imports and sells after importation into the United States the accused Eonsmoke devices and pods. *See, e.g.*, Mot. Ex. 6 (Supp. Resp. to RFA Nos. 1, 2, 18, and 19) (admitting that Eonsmoke imports the Eonsmoke devices and pods sold in the U.S.). SUMF, ¶ 15. Eonsmoke imports and sells after importation into the United States the accused Eonsmoke v2.0 devices and pods. *See, e.g.*, Mot. Ex. 6 (Supp. Resp. to RFA Nos. 35, 36, 43-48, 52-53, and 60) (admitting that Eonsmoke sells after importation and imports the Eonsmoke v2.0 devices and pods). The Staff agrees that Juul is entitled to summary determination with respect to the importation requirement for Eonsmoke products. *See* Staff Resp. at 7-8.

The Staff provided a chart of the Eonsmoke's admissions relevant to importation of each of Eonsmoke's accused products as shown below.

Accused Products		
	Ex. #	Evidence of Admissions
Eonsmoke device	6	RFA 1 (import)
Eonsmoke pods	6	RFA 18 (import)
Eonsmoke v2.0 device	6	RFA 35 (import) RFA 47 (manufactured in China)
Eonsmoke v2.0 pods	6	RFA 52 (import) RFA 64 (manufactured in China)
4X pods	6	RFA 69 (import)

Staff Resp. at 8 (footnotes omitted).

There is no genuine issue as to any material fact concerning importation with respect to Eonsmoke's accused products. Juul is entitled to summary determination as a matter of law that it has satisfied the importation requirement with respect to all accused products for Eonsmoke.

C. Vapor 4 Life

V4L is a reseller of imported products that are manufactured and imported by other respondents in this investigation. The accused V4L products include the Ziip devices and pods, Eonsmoke devices, Eonsmoke pods, Plus pods, 4X Pods, and ViV pods. *See* Mot. at 3; SUMF, ¶ 6.

There are two categories of Vapor 4 Life accused products. The first category of accused products overlap with products of the Ziip respondents and Eonsmoke, given that Vapor 4 Life is a reseller of products imported either by those respondents or by Vapor 4 Life. These accused products are: (a) from the Ziip respondents: Ziip Devices, Ziip pods, Ziip's Plus Pods, and Ziip Ice Pods, and (b) from Eonsmoke: Eonsmoke devices, Eonsmoke pods, and 4X pods. *See* Mot. at 3; SUMF, ¶ 17.

The second category of accused Vapor 4 Life products are those that are not associated with any other respondent; these are: SMOK Infinix device, SMOK Infinix pod, SMOK Fit Device, SMOK Fit pod, Sourin iShare device, Sourin iShare pod, Bombz pod, Cync Device, and Cync Pod. *See* Mot. at 3; SUMF, ¶ 18.

First Category

The evidence with respect to the Ziip respondents and Eonsmoke discussed above demonstrates that the first category of accused products are imported. The Staff provided a chart of Vapor 4 Life's admissions for each the first category of accused products as shown below.

Accused Products		
	Ex. #	Evidence of Admissions
Ziip devices	3	Rog 7 (has sold and continues to sell) Rog 10 (has sold, and continues to sell)
	15	Parag. 45 (distributes)
Ziip pods	3	Rog 7 (has sold and continues to sell; and imported)

		Rog 10 (has sold, and continues to sell)
	15	Parag. 45 (distributes)
Ziip Plus pods	3	Rog 4 (identifies suppliers) Rog 7 (sells or has sold)
Ziip Iced pods	27	RFA 639 (imported Ziip pods including Iced pods after 10/23/18)
Eonsmoke device	28	RFA 678 (sold after 10/23/18)
Eonsmoke pods	3	Rog 7 (has sold and continues to sell) Rog 10 (has sold, and continues to sell)
	15	Parag. 37 (distributes)
	28	RFA 678 (sold after 10/23/18) RFA 680 (sold after 10/23/18)
4X pods	28	RFA 686 (sold after importation)
	3	Rog 7 (has sold and continues to sell) Rog 10 (has sold, and continues to sell)
	3	Rog 4 (Eonsmoke supplied 4X pods)
	15	Parag. 37 (distributes)

Staff Resp. at 9-10 (footnotes omitted).

There is no genuine issue as to any material fact concerning importation with respect to the first category of Vapor 4 Life accused products. Juul is entitled to summary determination as a matter of law that it has satisfied the importation requirement with respect to the first category of Vapor 4 Life accused products.

Second Category

As noted above, the second category of accused Vapor 4 Life products are those that are not associated with any other respondent; these are: SMOK Infinix device, SMOK Infinix pod, SMOK Fit Device, SMOK Fit pod, ViV pod, Sourin iShare device, Sourin iShare pod, Bombz pod, Cync Device, and Cync Pod. *See* Mot. at 3; SUMF, ¶ 18.

The Staff agreed that the evidence supports importation for SMOK Infinix device, ViV

pod, Sourin iShare device, and Sourin iShare pod. The Staff, however, argues that JLI was missing importation evidence for the SMOK Infinix pod, SMOK Fit device, SMOK Fit pod, Bombz pod, Cync device, and Cync pod. *See* Staff Resp. at 1, 11-12, 30-31.

For the ViV pod, Vapor 4 Life admits that it imported those products. Mot. Ex. 27 (RFA 623); SUMF, ¶ 18. In addition, Juul presented a packing list demonstrating that ViV Pods were purchased in September 2018 by Vapor 4 Life from a Chinese vendor. Mot. Ex. 20; SUMF, ¶ 18. For the Sourin iShare devices and pods, Vapor 4 Life admits that it sold those products in the United States. Mot. Ex. 28 (RFA 700); SUMF, ¶ 18. Additionally, Juul submitted photographs of the Sourin iShare packaging, which shows that the device and the pod are made in China. *See* Mot. Ex. 31.

With respect to SMOK Infinix device, SMOK Infinix pod, SMOK Fit Device, and SMOK Fit pod, the evidence presented by Juul summarized in a table (shown below) demonstrates that those products were imported, and sold after importation in the United States.

Product	Evidence cited in MSD
SMOK Infinix Pods	Motion Confidential Exhibit 27 (V4L's Responses to JLI's 3rd Set of RFAs) at RFA 334 (admitting importation of the SMOK Infinix Pods before October 23, 2018), RFA 345 (admitting involvement in U.S. sale of SMOK Infinix Pods after October 23, 2018), RFAs 346-347 (admitting SMOK Infinix Pods are manufactured outside the U.S., in China); Motion Confidential Exhibit 3 Second Supp. Response to Interrogatory 4 (listing Chinese supplier); Motion Confidential Exhibit 28 (V4L's Responses to JLI's 4th Set of RFAs) at RFA 694 (admitting U.S. sale of SMOK Infinix Pods after October 23, 2018).

SMOK Infinix Device	Motion Confidential Exhibit 27 (V4L's Responses to JLI's 3rd Set of RFAs) at RFA 318 (admitting importation of the SMOK Infinix Device before October 23, 2018), RFA 329 (admitting involvement in U.S. sale of SMOK Infinix Devices after October 23, 2018) RFA 330-331 (admitting SMOK Infinix Device is manufactured outside the U.S., in China); Motion Confidential Exhibit 3 Second Supp. Response to Interrogatory 4 (listing Chinese supplier); Motion Confidential Exhibit 28 (V4L's Responses to JLI's 4th Set of RFAs) at RFA 692 (admitting U.S. sale of SMOK Infinix Devices after October 23, 2018).
SMOK Fit Device	Motion Confidential Exhibit 27 (V4L's Responses to JLI's 3rd Set of RFAs) at RFA 350 (admitting importation of the SMOK Fit Device before October 23, 2018), RFA 361 (admitting involvement in U.S. sale of SMOK Fit Device after October 23, 2018), RFAs 362-363 (admitting SMOK Fit Device is manufactured outside the U.S., in China); Motion Confidential Exhibit 3 Second Supp. Response to Interrogatory 4 (listing Chinese supplier); Motion Confidential Exhibit 28 (V4L's Responses to JLI's 4th Set of RFAs) at RFA 696 (admitting U.S. sale of SMOK Fit Device after October 23, 2018).
SMOK Fit Pods	Motion Confidential Exhibit 27 (V4L's Responses to JLI's 3rd Set of RFAs) at RFA 366 (admitting importation of the SMOK Fit Pods before October 23, 2018), RFA 377 (admitting involvement in U.S. sale of SMOK Fit Pods after October 23, 2018), RFAs 378-379 (admitting SMOK Fit Pods are manufactured outside the U.S., in China); Motion Confidential Exhibit 3 Second Supp. Response to Interrogatory 4 (listing Chinese supplier); Motion Confidential Exhibit 28 (V4L's Responses to JLI's 4th Set of RFAs) at RFA 698 (admitting U.S. sale of SMOK Fit Pods after October 23, 2018).
Bombz Pods	Motion Confidential Exhibit 27 (V4L's Responses to JLI's 3rd Set of RFAs) at RFA 425 (admitting involvement in U.S. sale of Bombz Pods after October 23, 2018); Motion Confidential Exhibit 28 (V4L's Responses to JLI's 4th Set of RFAs) at RFA 704 (admitting U.S. sale of Bombz Pods after October 23, 2018).

Cync Device	Motion Confidential Exhibit 27 (V4L's Responses to JLI's 3rd Set of RFAs) at RFA 393 (admitting involvement in U.S. sale of Cync Device after October 23, 2018); Motion Confidential Exhibit 28 (V4L's Responses to JLI's 4th Set of RFAs) at RFA 708 (admitting U.S. sale of Cync Device after October 23, 2018).
Cync Pods	Motion Confidential Exhibit 27 (V4L's Responses to JLI's 3rd Set of RFAs) at RFA 409 (admitting involvement in U.S. sale of Bombz Pods after October 23, 2018); Motion Confidential Exhibit 28 (V4L's Responses to JLI's 4th Set of RFAs) at RFA 710 (admitting U.S. sale of Cync Device after October 23, 2018).

See Reply at 2.

The evidence presented in the above table shows that for SMOK Infinix device, SMOK Infinix pod, SMOK Fit Device, and SMOK Fit pod, Vapor 4 Life admitted those products are manufactured in China and imported into the United States. *See e.g.*, Mot. Ex. 27 (V4L's Responses to JLI's 3rd Set of RFAs) at RFA 334 (admitting importation of the SMOK Infinix Pods before October 23, 2018), RFA 345 (admitting involvement in U.S. sale of SMOK Infinix Pods after October 23, 2018), RFAs 346-347 (admitting SMOK Infinix Pods are manufactured outside the U.S., in China); Mot. Ex. 3 (Second Supp. Response to Interrogatory 4) (listing Chinese supplier); Mot. Ex. 28 (V4L's Responses to JLI's 4th Set of RFAs) at RFA 694 (admitting U.S. sale of SMOK Infinix Pods after October 23, 2018).

Accordingly, there is no genuine issue as to any material fact concerning importation with respect to ViV pod, Sourin iShare device, and Sourin iShare pod, SMOK Infinix device, SMOK Infinix pod, SMOK Fit Device, and SMOK Fit pod. Juul is entitled to summary determination as a matter of law that it has satisfied the importation requirement with respect to those products.

However, for Bombz pod, Cync device, and Cync pod, Juul did not submit evidence such as photographs of the product packaging, demonstrating that the products are made outside the

U.S. or any admissions that the products are imported. *See* Reply at 3 (the table only shows evidence of U.S. sales, not importation). Thus, Juul is not entitled to summary determination as a matter of law that it has satisfied the importation requirement with respect to those products.

2. Infringement

JLI and the Ziip respondents agree that the “Ziip pod” product is representative of all accused Ziip-manufactured pod products for purposes of infringement of the ‘669, ‘568, ‘130, and ‘915 patents. *See* SUMF, ¶ 36; Mot. Ex. 2 (Joint Stipulation Regarding Representative Accused Products) at 2.

The Ziip respondents do not contest that their accused pod products, alone or in combination with a Ziip accused device product or other compatible device, contain or perform each limitation of claims 1, 2, 4, 5, 7, 8, 10, 12, 13, 16, 17, 20, and 21 of U.S. Patent No. 10,070,669; claims 1-4, 9-11, 13, 14, 19-21, 24, 28, and 29 of U.S. Patent No. 10,076,139; claims 1-3, 5-9, 12, and 17-20 of U.S. Patent No. 10,045,568; claims 1, 2, 4-6, 8-10, 16, 19, 21, and 27 of U.S. Patent No. 10,058,130; and claims 1-4, 6, 9, 11, 12, 18-23, and 27 of U.S. Patent No. 10,104,915. *See* SUMF, ¶ 37; Mot. Ex. 7 (May 22 Stipulation), ¶ 18.

Thus, the question of whether Ziip accused products contain or perform each limitation of asserted claims is moot.

3. Remaining Issues

It has not been shown that Juul is entitled to summary determination as a matter of law with respect to the remaining issues, *i.e.*, (1) infringement of all asserted claims by all accused products for Eonsmoke and Vapor 4 Life that are not moot; (2) the technical prong of the domestic industry requirement for all asserted patents; and (3) the economic prong of domestic-industry requirement for all asserted patents. Eonsmoke and Vapor 4 Life did not agree to a

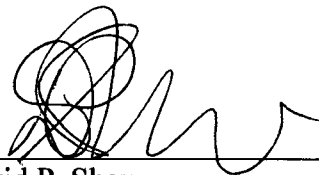
stipulation that their products contain or perform each limitation of the asserted claims.

Moreover, as argued by the Staff, there are genuine issues of material fact with respect to the remaining issues. *See* Staff Resp. at 28-30.

* * *

Accordingly, it is the initial determination of the undersigned that Motion No. 1139-51 is granted in part to the extent indicated.

Pursuant to 19 C.F.R. § 210.42(h), this initial determination shall become the determination of the Commission unless a party files a petition for review of the initial determination pursuant to 19 C.F.R. § 210.43(a), or the Commission, pursuant to 19 C.F.R. § 210.44, orders on its own motion a review of the initial determination or certain issues contained herein.³

A handwritten signature in black ink, appearing to read 'David P. Shaw', is written over a horizontal line.

David P. Shaw
Administrative Law Judge

Issued: August 5, 2019


³ The parties are reminded to comply with Ground Rules 5.n and 5.l.

**CERTAIN ELECTRONIC NICOTINE DELIVERY SYSTEMS AND COMPONENTS
THEREOF**

INV. NO. 337-TA-1139

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **Order No. 35 (Initial Determination)** has been served by hand upon the Commission Investigative Attorney, **Paul Gennari, Esq.**, and the following parties as indicated, on **AUG 27 2019**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street SW, Room 112A
Washington, DC 20436

FOR COMPLAINANT JUUL LABS, INC.:	
Daniel E. Yonan, Esq. STERNE, KESSLER, GOLDSTEIN & FOX PLLC 1100 New York Avenue, NW Washington, DC 20005	<input type="checkbox"/> Via Hand Delivery <input type="checkbox"/> Express Delivery <input checked="" type="checkbox"/> Via First Class Mail <input type="checkbox"/> Other: _____
FOR RESPONDENT VAPOR 4 LIFE HOLDINGS, INC.:	
Eric N. Heyer, Esq. THOMPSON HINE LLP 1919 M Street, NW, Suite 700 Washington, DC 20036 (202)-331-8800	<input type="checkbox"/> Via Hand Delivery <input type="checkbox"/> Express Delivery <input checked="" type="checkbox"/> Via First Class Mail <input type="checkbox"/> Other: _____
FOR RESPONDENT EONSMOKE, LLC:	
Stephen M. Lobbin, Esq. SML AVVOCATI P.C. 7538 Draper Avenue San Diego, CA 92037	<input type="checkbox"/> Via Hand Delivery <input type="checkbox"/> Express Delivery <input checked="" type="checkbox"/> Via First Class Mail <input type="checkbox"/> Other: _____

**CERTAIN ELECTRONIC NICOTINE DELIVERY SYSTEMS AND COMPONENTS
THEREOF**

INV. NO. 337-TA-1139

FOR RESPONDENTS ZLAB S.A.; SS GROUP HOLDINGS; AND SHENZHEN YIBO TECHNOLOGY CO., LTD.:	
Steven Susser, Esq. CARLSON, GASKEY AND OLDS, P.C. 400 West Maple Road, Suite 350 Birmingham, MI 48009	<input type="checkbox"/> Via Hand Delivery <input type="checkbox"/> Express Delivery <input checked="" type="checkbox"/> Via First Class Mail <input type="checkbox"/> Other: _____
RESPONDENT:	
Keep Vapor Electronic Tech. Co., Ltd. Block D, XinLong Techno Park ShaJing Town, Bao An District Shenzhen, China	<input type="checkbox"/> Via Hand Delivery <input type="checkbox"/> Express Delivery <input checked="" type="checkbox"/> Via First Class Mail <input type="checkbox"/> Other: _____