UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

Before The Honorable Doris Johnson Hines
Administrative Law Judge

In the Matter of CERTAIN PRE-FILLED SYRINGES FOR INTRAVITREAL INJECTION AND COMPONENTS THEREOF	Investigation No. 337-TA-1368

RESPONDENTS' INITIAL INVALIDITY CONTENTIONS

Pursuant to 19 C.F.R. §§ 210.27 and 210.29, the United States International Trade Commission's Rules of Practice and Procedure, the Ground Rules (Order No. 2), the Procedural Schedule (Order No. 7), and the Protective Order (Order No. 1) issued in this Investigation, Respondents NJOY, LLC, NJOY Holdings, Inc., Altria Group, Inc., Altria Group Distribution Company, and Altria Client Services LLC ("NJOY" or "Respondents") hereby provide these initial invalidity contentions.

Complainants JUUL Labs, Inc. and VMR Products LLC ("JLI" or "Complainant") alleged in its Complain that NJOY infringes claims 1, 5-7, 29, 30, 36, 43, 44, 76, 77, 80, 81, 86, 89, and 93 of U.S. Patent No. RE49,114 ("the '114 Patent"), claims 14, 16, 18, 27, 29, 31, and 32 of U.S. Patent No. 10,130,123 ("the '123 Patent"), claims 1, 2-4, 6-7, 15, 16, 18, 19, 20, 21-25, 28, and 30 of U.S. Patent No. 10,709,173 ("the '173 Patent"), claims 1, 3, 5, 7-9, 10, 11-14, 15, and 16-21 of U.S. Patent No. 11,134,722 ("the '722 Patent"), and claims 1, 2, 5, 6, 8, 9, 10, 11, 13, 14-16, 17, 18 of U.S. Patent No. 11,606,981 ("the '981 Patent").[1] Accordingly, the invalidity contentions set forth below address each of these claims. NJOY reserves the right to modify, amend, and/or supplement its invalidity contentions should JLI attempt to modify its asserted and/or domestic industry claims.

NJOY notes that the asserted claims have not yet been construed. NJOY reserves the right to modify, amend, and/or supplement these invalidity contentions following a claim construction ruling. NJOY also reserves the right to modify, amend, and/or supplement these invalidity contentions in response to any alteration or clarification by JLI of its claim constructions or alleged supporting evidence, including based on any additional or supplemental expert reports, briefing, arguments, or positions otherwise taken by JLI. As such, NJOY's invalidity contentions may reflect or rely on constructions of claim terms implicit in JLI's infringement allegations, but should not be construed as an adoption or agreement with such claim constructions, or JLI's theories of infringement.

NJOY bases these invalidity contentions on its current knowledge and understanding of the asserted patents and their claims, the prior art identified to date, and other facts and information available to date. NJOY has not yet completed its investigation, collection of information,

[1] The "Asserted Patents" refers collectively to the '114, '123, '173, '722, and '981 Patents.

discovery, and analysis relating to this action, and additional discovery may require NJOY to modify, amend, and/or supplement these contentions. For example, Complainants just produced over a million of pages of discovery less than one week before these contentions, which Respondents are continuing to review. Respondents are also seeking third-party discovery, which may yield additional information regarding the public availability of references and prior art that invalidates the asserted claims.

In addition, although JLI contends that each Asserted Patent was conceived and reduced to practice by at least the earliest priority date reflected on the date of the patent, it has not provided any purported evidence to substantiate this contention. *See* JLI Response to Interrogatory No. 1. Nor has JLI provided the written description support for its contention that each Asserted Patent is entitled to the earliest priority date reflected on the face of the patent. *See* JLI Response to Interrogatory No. 2. The burden is on JLI, however, to demonstrate entitlement to an effective filing date that pre-dates the filing date. *See PowerOasis, Inc. v. T-Mobile, U.S.A.*, 552 F.3d 1299, 1305-06 (Fed. Cir. 2008) ("The district court therefore correctly placed the burden on PowerOasis to come forward with evidence to prove entitlement to claim priority to an earlier filing date.").

In view of the status of document discovery and JLI's discovery responses to date, in addition to the ongoing third party discovery, NJOY expressly reserves the right to modify, amend, and/or supplement its contentions as new information is produced in discovery.

As set forth in the table below, NJOY's invalidity contentions regarding the Asserted Patents are provided in the attached exhibits:

Exhibit A	**Invalidity of the '114 Patent under 35 U.S.C. §§ 102, 103, 112**
Exhibit A-1	Invalidity of the '114 Patent under 35 U.S.C. §§ 102(a) and 102(e) based on U.S. Patent

	Application Publication No. 2011/0011396 ("Fang 396")
Exhibit A-2	Invalidity of the '114 Patent under 35 U.S.C. § 102(e) based on U.S. Patent Application Publication No. 2011/0303231 ("Li 231")
Exhibit A-3	Invalidity of the '114 Patent under 35 U.S.C. § 102(e) based on U.S. Patent Application Publication No. 2013/0056013 ("Terry 013")
Exhibit A-4	Invalidity of the '114 Patent under 35 U.S.C. § 102(a) based on WIPO Publication No. WO 2011/065754 A1 ("Cho 754")
Exhibit A-5	Invalidity of the '114 Patent under 35 U.S.C. § 102(a) based on KR200454110Y1 ("Yoon 110")
Exhibit A-6	Invalidity of the '114 Patent under 35 U.S.C. § 102(a) based on CN201869778U ("Qiuming 778")
Exhibit A-7	Invalidity of the '114 Patent under 35 U.S.C. § 102(a) based on KR20-0453400Y1 ("Yeom 400")
Exhibit A-8	Invalidity of the '114 Patent under 35 U.S.C. § 102(a) based on KR20-0453424Y1 ("Yeom 424")
Exhibit A-9	Invalidity of the '114 Patent under 35 U.S.C. § 102(b)based on CN201085044Y ("Fang 044")
Exhibit A-10	Invalidity of the '114 Patent under 35 U.S.C. § 102(b) based on U.S. Patent Application Publication No. 2009/0283103A1 ("Nielsen 103")
Exhibit B	**Invalidity of the '123 Patent under 35 U.S.C. §§ 102, 103, 112**
Exhibit B-1	Invalidity of the '123 Patent under 35 U.S.C. § 102(a)(1) based on WO2015/153443 ("Henry 443")

Exhibit B-2	Invalidity of the ’123 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent Publication No. 2014/0318559 (“Thorens 559”)
Exhibit B-3	Invalidity of the ’123 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent Publication No. 2015/0237917 (“Lord 917”)
Exhibit B-4	Invalidity of the ’123 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent Pub. No. 2016/0128389 (“Lamb 389”)
Exhibit B-5	Invalidity of the ’123 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent Publication No. 2014/0150810 (“Hon 810”)
Exhibit B-6	Invalidity of the ’123 Patent under 35 U.S.C. § 102(a)(1) based on CN204180941 (“Chen 941”)
Exhibit B-7	Invalidity of the ’123 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent Publication No. 2015/0020831 (“Weigensberg 831”)
Exhibit B-8	Invalidity of the ’123 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent Publication No. 2015/0245658 (“Worm 658”)
Exhibit B-9	Invalidity of the ’123 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent No. 8,393,331 (“Hon 331”)
Exhibit B-10	Invalidity of the ’123 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent Publication No. 2015/0128971 (“Verleur 971”)
Exhibit B-11	Invalidity of the ’123 Patent under 35 U.S.C. § 102(a)(1) based on WO2012/062600 (“Andersson 600”)
Exhibit B-12	Invalidity of the ’123 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent No. 8,528,569 (“Newton 569”)
Exhibit B-13	Invalidity of the ’123 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent No. 11,000,069 (“Ampolini 069”)

Exhibit B-14	Invalidity of the ’123 Patent under 35 U.S.C. § 102(a)(1) based on WO2012/142293 (“Levitz 293”)
Exhibit B-15	Invalidity of the ’123 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent No. 8,499,766 (“Newton 766”)
Exhibit B-16	Invalidity of the ’123 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent Publication No. 2014/0261495 (“Novak 495”)
Exhibit B-17	Invalidity of the ’123 Patent under 35 U.S.C. § 102(a)(1) based on KR200453424Y1 (“Yeom 424”)
Exhibit C	**Invalidity of the ’173 Patent under 35 U.S.C. §§ 102, 103, 112**
Exhibit C-1	Invalidity of the ’173 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent Publication No. 2015/0128971 (“Verleur 971”)
Exhibit C-2	Invalidity of the ’173 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent Publication No. 2009/0272379 (“Thorens 379”)
Exhibit C-3	Invalidity of the ’173 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent Publication No. 2016/0021933 (“Thorens 933”)
Exhibit C-4	Invalidity of the ’173 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent Publication No. 2009/0255534 (“Paterno 534”)
Exhibit C-5	Invalidity of the ’173 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent 8,156,944 (“Han 944”)
Exhibit C-6	Invalidity of the ’173 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent Publication No. 2014/0150783 (“Liu 783”)
Exhibit C-7	Invalidity of the ’173 Patent under 35 U.S.C. § 102(a)(1) based on KR200453424Y1 (“Yeom 424”)

Exhibit C-8	Invalidity of the ’173 Patent under 35 U.S.C. § 102(a)(1) based on KR200457694 (“Youn 694”)
Exhibit C-9	Invalidity of the ’173 Patent under 35 U.S.C. § 102(a)(1) based on CN202697716 (“Zhang 716”)
Exhibit C-10	Invalidity of the ’173 Patent under 35 U.S.C. § 102(a)(1) based on CN203353690U (“Qiuming 690”)
Exhibit C-11	Invalidity of the ’173 Patent under 35 U.S.C. § 102(a)(1) based on KR1020110084387 (“Cho 387”)
Exhibit C-12	Invalidity of the ’173 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent No. 8,205,622 (“Pan 622”)
Exhibit D	**Invalidity of the ’722 Patent under 35 U.S.C. §§ 102, 103, 112**
Exhibit D-1	Invalidity of the ’722 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent No. 11,229,239 (“Galloway 239”)
Exhibit D-2	Invalidity of the ’722 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent No. 8,156,944 (“Han 944”)
Exhibit D-3	Invalidity of the ’722 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent No. 9,427,022 (“Levin 022”)
Exhibit D-4	Invalidity of the ’722 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent No. 9,155,336 (“Liu 336”)
Exhibit D-5	Invalidity of the ’722 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent Publication No. 2014/0190502 (“Liu 502”)
Exhibit D-6	Invalidity of the ’722 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent Publication No. 2014/0150783 (“Liu 783”)

Exhibit D-7	Invalidity of the ’722 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent No. 8,528,569 (“Newton 569”)
Exhibit D-8	Invalidity of the ’722 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent No. 8,205,622 (“Pan 622”)
Exhibit D-9	Invalidity of the ’722 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent Publication No. 2009/0255534 (“Paterno 534”)
Exhibit D-10	Invalidity of the ’722 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent No. 8,794,231 (“Thorens 231”)
Exhibit D-11	Invalidity of the ’722 Patent under 35 U.S.C. § 102(a)(1) based on KR20130092251A (“Young 251”)
Exhibit E	**Invalidity of the ’981 Patent under 35 U.S.C. §§ 102, 103, 112**
Exhibit E-1	Invalidity of the ’981 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent No. 11,229,239 (“Galloway 239”)
Exhibit E-2	Invalidity of the ’981 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent No. 8,156,944 (“Han 944”)
Exhibit E-3	Invalidity of the ’981 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent No. 9,427,022 (“Levin 022”)
Exhibit E-4	Invalidity of the ’981 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent No. 9,155,336 (“Liu 336”)
Exhibit E-5	Invalidity of the ’981 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent Publication No. 2014/0190502 (“Liu 502”)
Exhibit E-6	Invalidity of the ’981 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent Publication No. 2014/0150783 (“Liu 783”)

Exhibit E-7	Invalidity of the ’981 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent No. 8,528,569 (“Newton 569”)
Exhibit E-8	Invalidity of the ’981 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent No. 8,205,622 (“Pan 622”)
Exhibit E-9	Invalidity of the ’981 Patent under 35 U.S.C. § 102(a)(2) based on U.S. Patent Publication No. 2009/0255534 (“Paterno 534”)
Exhibit E-10	Invalidity of the ’981 Patent under 35 U.S.C. § 102(a)(1) based on U.S. Patent No. 8,794,231 (“Thorens 231”)
Exhibit E-11	Invalidity of the ’981 Patent under 35 U.S.C. § 102(a)(1) based on CN202697716 (“Zhang 716”)
Exhibit E-12	Invalidity of the ’981 Patent under 35 U.S.C. § 102(a)(1) based on CN202919037U (“Fu 037”)
Exhibit E-13	Invalidity of the ’981 Patent under 35 U.S.C. § 102(a)(1) based on KR200453424 (“Yeom 424”)
Exhibit E-14	Invalidity of the ’981 Patent under 35 U.S.C. § 102(a)(1) based on KR20130092251A (“Young 251”)

Dated: October 3, 2023

Respectfully submitted,

/s/ Anish R. Desai

Anish R. Desai
Elizabeth S. Weiswasser
Adam B. Banks
Kathryn E. Leicht
Barry Zhang
Tom Yu
Derek E. Biehn
Aaron J. Curtis
Daniel M. Lifton
John J. Nolan
Ian Moore
Weil, Gotshal & Manges LLP
767 Fifth Avenue
New York, NY 10153

Christopher Pepe
W. Sutton Ansley
Amanda K. Branch
Matthew Sieger
Eric C. Westerhold
Taylor J. Lawrence
Allison D. Herzig
Weil, Gotshal & Manges LLP
2001 M Street, N.W., Suite 600
Washington, D.C. 20036

Adrian Percer
Weil, Gotshal & Manges LLP
201 Redwood Shores Parkway
Redwood Shores, CA 94065

Beth Wilkinson
Brian L. Stekloff
James Rosenthal
Alysha Bohanon
Wilkinson Stekloff LLP
2001 M Street N.W., 10th Floor
Washington, DC 20036

Counsel for Respondents NJOY, LLC, NJOY Holdings, Inc., Altria Group, Inc., Altria Group Distribution Company, and Altria Client Services LLC

CERTIFICATE OF SERVICE

I hereby certify the foregoing **RESPONDENTS' INITIAL INVALIDITY CONTENTIONS**, was served on this 3rd day of October, 2023, upon the following, by the indicated means:

Monisha Deka The Office of Unfair Import Investigations U.S. International Trade Commission 500 E Street, S.W. Washington, D.C. 20436	***Via Electronic Mail and BOX Upload*** Monisha.Deka@usitc.gov
Counsel for Complainants JUUL Labs, Inc. and VMR Products LLC S. Alex Lasher K. Kevin Chu Joshua Parzivand QUINN EMANUEL URQUHART & SULLIVAN, LLP 1300 I Street, NW, Suite 900 Washington, D.C. 20005 Kevin P.B. Johnson Victoria F. Maroulis QUINN EMANUEL URQUHART & SULLIVAN, LLP 555 Twin Dolphin Dr., 5th Floor Redwood Shores, CA 94065 Andrew M. Holmes Iman Lordgooei QUINN EMANUEL URQUHART & SULLIVAN, LLP 50 California Street, 22nd Floor San Francisco, CA 94111 Michael T. Renaud Adam S. Rizk Matthew A. Karambelas Catherine Xu Mintz Levin Cohn Ferris Glovsky and Popeo P.C. One Financial Center Boston, MA 02111	***Via Electronic Mail*** qe-jli-njoy-itc-1368@quinnemanuel.com Mintz-JUUL-ITC@mintz.com

Jonathan J. Engler Mintz Levin Cohn Ferris Glovsky and Popeo, P.C. 555 12th Street NW, Suite 1100 Washington, D.C. 20004	

/s/ Lauren McDuffie
Lauren McDuffie
Senior IP Paralegal
Weil, Gotshal & Manges LLP
2001 M Street, N.W., Suite 600
Washington, D.C. 20036
lauren.mcduffie@weil.com
202.682.7000

NJOY's Initial Invalidity Contentions in Inv. No. 337-TA-1368

Exhibit A: Invalidity of U.S. Patent No. RE49,114 Under 35 U.S.C. §§ 102, 103, 112

I. Invalidity of U.S. Patent No. RE49,114 Under 35 U.S.C. §§ 102, 103

NJOY contends that each of the references set forth below, either alone or in combination with other prior art, invalidates the claims of the '114 Patent under 35 U.S.C. §§ 102, 103:

Prior Art Reference	Date of Publication or Other Prior Art Date	Statutory Provision of Prior Art[1]	Beginning Bates Number
CN101986906A	March 23, 2011	§102(a)	NJOYITC1_00000019
CN201085044Y	July 16, 2008	§§102(a), (b)	NJOYITC1_00000046
CN201767029U	March 23, 2011	§102(a)	NJOYITC1_00000098
CN201860753U	June 15, 2011	§102(a)	NJOYITC1_00000105
CN201869778U	June 22, 2011	§102(a)	NJOYITC1_00000111
KR200453400Y1	April 28, 2011	§102(a)	NJOYITC1_00000357
KR200453424Y1	May 2, 2011	§102(a)	NJOYITC1_00000384
KR200454110Y1	June 15, 2011	§102(a)	NJOYITC1_00000409
US20090283103A1	May 13, 2009	§§102(a), (b), (e)	NJOYITC1_00001340
US20100242974A1	September 30, 2010	§§102(a), (e)	NJOYITC1_00003072
US20110011396A1	July 7, 2010	§§102(a), (e)	NJOYITC1_00001363
US20110303231A1	October 28, 2010	§102(e)	NJOYITC1_00001370
US20130056013A1	May 16, 2011	§102(e)	NJOYITC1_00001453
WO2011065754A2	June 3, 2011	§102(a)	NJOYITC1_00001914

Additionally, the following prior art systems, either alone or in combination with other prior art, invalidate the claims of the '114 Patent under 35 U.S.C. §§ 102, 103. The identification

[1] In light of JLI's failure to provide any basis to support its effective filing date and conception contentions with respect to the Asserted Patents, NJOY reserves the right to identify different statutory provisions under which each reference qualifies as prior art.

of these prior art systems is based on NJOY's investigation to date, is ongoing, and will be supplemented in due course.

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
21st Century Smoke	No later than August 2008	§102(a), (b)
Intellicig	No later than September 2008	§102(a), (b)
The Safe Cig	No later than December 2008	§102(a), (b)
Green Smoke	No later than December 2008	§102(a), (b)
SmokeTip	No later than May 2009	§102(a), (b)
Fuma	No later than August 2009	§102(a), (b)
Blu Starter Kit	No later than October 2009	§102(a), (b)
Vapor Corp. Smoke 51	No later than November 2009	§102(a), (b)
Boge Technology LEO Pod System	No later than June 2010	§102(a), (b)
ePuffer Magnum Uno D2	No later than 2011	§102(a)

Each piece of prior art identified in Exhibits A1–A10 of NJOY's initial invalidity contentions either anticipates one or more of the claims of the '114 Patent and/or renders obvious one or more of the claims of the '114 Patent when viewed in combination with other prior art. NJOY reserves the right to contend that each piece of anticipatory prior art renders the claims obvious either in view of the prior art alone or in combination with other prior art. The identification of any patent or patent application should be deemed an identification of any counterpart patent, application, or associated product; the identification of any article or

[2] In light of JLI's failure to provide any basis to support its effective filing date and conception contentions with respect to the Asserted Patents, NJOY reserves the right to identify different statutory provisions under which each reference qualifies as prior art.

publication should be deemed a disclosure of any substantially similar article if published in some other form, or of any patent or patent application whole, as understood by a POSA; the identification of any system or device should be deemed a disclosure of any article, manual, guide, patent, application, or other publication describing or corresponding to the system or device. Reference to a figure should be deemed to refer to the text describing the figure and vice versa.

In addition to the anticipatory prior art described in these invalidity contentions, the claims of the ’114 Patent are invalid based on obviousness under 35 U.S.C. § 103. In general, a claimed invention is unpatentable if the differences between it 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.” 35 U.S.C. § 103(a); *Graham v. John Deere Co.*, 383 U.S. 1, 13–14 (1966).

Each piece of prior art described in Exhibits A1–A10, either alone or in combination with other prior art, renders the claims of the ’114 Patent invalid as obvious. In particular, each piece of prior art may be combined with (1) information known to persons skilled in the art at the time of the alleged invention, (2) any of the other anticipatory prior art, and/or (3) any of the additional prior art identified herein and in the charts attached hereto. In addition to the prior art set forth above, NJOY incorporates by reference each and every piece of prior art of record in the prosecution of the ’114 Patent (as well as the prosecution of U.S. Patent No. 9,596,887 and all claimed priority applications), including the statements made therein by the applicant, as well as the prior art discussed in the specification.

In view of the Supreme Court’s *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 127 S.Ct. 1727, 1739 (2007) (“*KSR*”) decision, the USPTO issued a set of Examination Guidelines describing rationales for supporting an obviousness finding. *See* Examination Guidelines for

Determining Obviousness Under 35 U.S.C. § 103 in view of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, 72 Fed. Reg. 57, 526 (Oct. 10, 2007). Those rationales include:

- Combining prior art elements according to known methods to yield predictable results;
- Simple substitution of one known element for another to obtain predictable results;
- Use of a known technique to improve similar devices (methods, or products) in the same way;
- Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- "Obvious to try" – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;
- Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

Id. at 57, 529. These rationales are consistent with the Supreme Court's emphasis in *KSR* that "the results of ordinary innovation" from the perspective of a person of ordinary skill are not patentable, and further that "[a] person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR*, 550 U.S. at 421. NJOY contends that one or more of these rationales apply in considering the obviousness of the claims of the '114 Patent.

As the Supreme Court emphasized in *KSR*, issued patent claims may be found invalid as obvious even without a teaching, suggestion, or motivation to combine particular prior art. *Id.* at 419 ("The 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."). Nevertheless, a person of skill in the art would have been motivated to combine each of the identified pieces of prior art with the others identified with respect to the claims of the '114 Patent. NJOY contends that one of ordinary skill in the art, at the time the alleged inventions of the '114 Patent were made, would have been motivated to combine the prior art disclosed herein in such a way to reach the alleged inventions. The teaching, suggestion, or motivation to combine this prior art, although not required, is found, explicitly or implicitly, in one or more of at least the following: the knowledge or common sense of one of ordinary skill in the art; the prior art teachings themselves and/or the prior art as a whole, including interrelated teachings of multiple prior art; the common fields of technology of the prior art; the subject matter acknowledged as prior art in the '114 Patent; the nature of the problem to be solved and the existence of similar improvements in similar applications; design incentives and other market forces, including the advantages of creating a superior and more desirable product and the effects of demands known to the design community or present in the marketplace; the ability to implement the alleged invention as a predictable variation of the prior art; improvements in similar devices; any needs or problems known in the fields addressed by the '114 Patent; the teachings in the prior art directed to solving the problems that the '114 Patent allegedly directed to solving; and the number of identified, predictable solutions to the problems addressed by these patents. In addition, the simultaneous (and/or prior) inventions described above (and elsewhere in these

contentions) are evidence that motivation to combine the concepts described in or taught by the various prior art did, in fact, exist, and they were, in fact, combined.

This prior art identifies and addresses many of the same technical issues and suggest similar solutions to those issues. Moreover, much of the individual prior art cross-references and discusses one another, further illustrating the close technical relationship among this group of prior art. Accordingly, the teachings of the individual prior art and alleged inventions, combined with the industry knowledge of a person of ordinary skill in the art at the time of the alleged invention of the ’114 Patent, would render obvious the claims of the ’114 Patent for at least the reasons described herein and in the incorporated exhibits. A person of ordinary skill at the time of the alleged inventions had reason to combine or modify one or more of the listed prior art in light of the knowledge of a person of ordinary skill in the art at the time of the alleged invention and information in the prior art cited herein. Thus, this prior art would logically have been combined pursuant to 35 U.S.C. § 103, and there was abundant motivation to combine such prior art at the time of the purported inventions of the ’114 Patent.

The prior art set forth in Exhibits A1–A10 clearly demonstrate that each of the limitations of the claims of the ’114 Patent was known in the art. A person of ordinary skill would have been motivated to combine these known elements to arrive at the asserted claims of the ’114 Patent. Furthermore, a person of ordinary skill in the art at the time of the alleged invention would have had a reasonable expectation of success when combining the listed prior art and the known elements because the proposed combinations would have been well within the level of ordinary skill in the art. Indeed, the proposed combinations would have been merely the application of a known technique or component with a known system in the same field of endeavor. And, when

combined, each element merely performs the same predictable functions as it does separately without significantly altering or hindering the functions performed by the other elements.

Exemplary motivations are set forth below:

Chamber Wick Apertures

To the extent Complainants contend that any of the prior art identified above does not expressly or inherently disclose first and second wick apertures in an atomizing chamber, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a heating chamber with two wick apertures and wick ends installed therethrough. A POSA would have been motivated to include first and second wick apertures in an atomizing chamber based on, for example, the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

For example, a POSA would have been motivated to include Cho 754, Yoon 110, or Qiuming 778's first and second wick apertures with wick ends installed therethrough in, for example, Fang 396 and Yeom 400's atomizing chamber because it is a simple combination of prior

art elements that yields predictable results. Fang 396 and Yeom 400 disclose an atomizing chamber with at least one wick aperture and a wick that supplies liquid to an atomizer through that at least one wick aperture. Cho 754, Yoon 110, and Qiuming 778 disclose an atomizing chamber with two wick apertures and the device's wick ends passing through those apertures to supply liquid to an atomizer. Because of the similar designs and functions, a POSA would have known that Cho 754, Yoon 110, and Qiuming 778's first and second wick apertures with wick ends installed therethrough could be used in the atomizing chambers disclosed by Fang 396 and Yeom 400 to deliver liquid to an atomizer.

Furthermore, a POSA would have been motivated to add Cho 754, Yoon 110, or Qiuming 778's first and second wick apertures with wick ends installed therethrough to, for example, Fang 396 and Yeom 400, because that configuration would improve Fang 396 and Yeom 400's devices. For example, using two wick apertures with wick ends installed therethrough improves reliability. Two wick apertures provide redundancy in case one aperture is blocked, and two wick apertures ensure even, consistent liquid flow to the atomizer. Installing the wick ends through the two apertures further supports consistent liquid flow, and the pass-through ends ensure all of the liquid in the reservoir will be transferred to the atomizer.

A POSA would have had a reasonable expectation of successfully combining, for example, Fang 396 and Yeom 400 with Cho 754, Yoon 110, or Qiuming 778. A POSA would have known that Cho 754, Yoon 110, and Qiuming 778's first and second wick apertures with wick ends installed therethrough could be added to Fang 396 and Yeom 400 to produce a functional device because all five references are directed to the same field, which is, generally, electronic vaporizers. Combining Fang 396 and Yeom 400 with Cho 754, Yoon 110, or Qiuming 778 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it

would have been routine for a POSA to combine Fang 396 and Yeom 400 with Cho 754, Yoon 110, or Qiuming 778.

Reservoir Sealably Separated from Atomizing Chamber

To the extent Complainants contend that any of the prior art identified above does not expressly or inherently disclose a liquid reservoir sealably separated from an atomizing chamber, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to sealably separate a liquid reservoir from an atomizing chamber. A POSA would have been motivated to sealably separate a liquid reservoir from an atomizing chamber based on, for example, the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

For example, a POSA would have been motivated to use Cho 754 or Nielsen 103's sealably separated liquid reservoir and atomizing chamber in, for example, Fang 396, Yoon 110, and Yeom 400's devices because it is a simple combination of prior art elements that yields predictable results. Fang 396, Yoon 110, and Yeom 400 disclose separated liquid reservoirs and atomizing chambers. Cho 754 and Nielsen 103 disclose a liquid reservoir sealably separated from an

atomizing chamber. A POSA would have known that Cho 754 or Nielsen 103's seal between, or the techniques to seal the area between, the liquid reservoir and the atomizing chamber could be added to the liquid reservoirs and atomizing chambers disclosed by Fang 396, Yoon 110, and Yeom 400.

Furthermore, a POSA would have been motivated to add Cho 754 or Nielsen 103's sealably separated liquid reservoir and atomizing chamber to, for example, Fang 396, Yoon 110, and Yeom 400 because that configuration would improve Fang 396, Yoon 110, and Yeom 400's devices. For example, adding a seal between the liquid reservoir and the atomizing chamber would reduce waste and improve efficiency because liquid would not leak out of the device when it is not in use. The seal would further improve efficiency and also improve the device's reliability and longevity because it would prevent liquid from leaking into the atomizing chamber, which could potentially damage atomizing components or clog air passageways.

Moreover, the prior art itself provides motivation for a POSA to add Cho 754 or Nielsen 103's seal between, for example, Fang 396, Yoon 110, and Yeom 400's liquid reservoirs and atomizing chambers. For example, Yeom 400 and Yeom 424 explain that liquid leaking from the liquid reservoir could block the device's air intake.

A POSA would have had a reasonable expectation of successfully combining, for example, Fang 396, Yoon 110, and Yeom 400 with Cho 754 or Nielsen 103. A POSA would have known that Cho 754 and Nielsen 103's sealably separated liquid reservoir and atomizing chamber could be added to Fang 396, Yoon 110, and Yeom 400 to produce a functional device because all five references are directed to the same field, which is, generally, electronic vaporizers. Combining Fang 396, Yoon 110, and Yeom 400 with Cho 754 or Nielsen 103 is a predictable use of electronic

vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Fang 396, Yoon 110, and Yeom 400 with Cho 754 or Nielsen 103.

Chimney Sealably Passing Through Reservoir

To the extent Complainants contend that any of the prior art identified above does not expressly or inherently disclose a chimney sealably passing through a liquid reservoir, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a chimney that sealably passes through a liquid reservoir. A POSA would have been motivated to a use a chimney sealably passing through a liquid reservoir based on, for example, the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

For example, a POSA would have been motivated to use Cho 754, Yoon 110, or Fang 044's chimney sealably passing through a liquid reservoir in, for example, Fang 396 and Yeom 400's devices because it is a simple combination of prior art elements that yields predictable results. Fang 396 and Yeom 400 disclose a chimney passing through a liquid reservoir. Cho 754, Yoon 110, and Fang 044 similarly disclose a chimney passing through a liquid reservoir, but they

disclose it sealably passes through. A POSA would have known that Cho 754, Yoon 110, and Fang 044's sealing techniques could be applied to the chimneys passing through liquid reservoirs disclosed by Fang 396 and Yeom 400.

Furthermore, a POSA would have been motivated to add Cho 754, Yoon 110, or Fang 044's chimney sealably passing through a liquid reservoir to, for example, Fang 396 and Yeom 400 because sealed pass-through would improve Fang 396 and Yeom 400's devices. For example, configuring a chimney to sealably pass through a liquid reservoir would improve the adult consumer's experience because the seal prevents liquid from leaking into the chimney where it could be ingested by an adult consumer. Also, configuring a chimney to sealably pass through a liquid reservoir would improve device reliability and longevity because it would prevent liquid from leaking into the chimney and subsequently blocking air passageways or damaging atomizer components.

A POSA would have had a reasonable expectation of successfully combining, for example, Fang 396 and Yeom 400 with Cho 754, Yoon 110, or Fang 044. A POSA would have known that Cho 754, Yoon 110, and Fang 044's chimney sealably passing through a liquid reservoir could be added to Fang 396 and Yeom 400 to produce a functional device because all five references are directed to the same field, which is, generally, electronic vaporizers. Combining Fang 396 and Yeom 400 with Cho 754, Yoon 110, or Fang 044 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Fang 396 and Yeom 400 with Cho 754, Yoon 110, or Fang 044.

Sealed Outlet Air Path

To the extent Complainants contend that any of the prior art identified above does not expressly or inherently disclose a sealed path from an atomizer outlet, through a chimney to an

aerosol outlet, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to employ a sealed outlet air path from a device's atomizer outlet, through a chimney, to the device's aerosol outlet. A POSA would have been motivated to employ a sealed outlet air path from a device's atomizer outlet, through a chimney, to the device's aerosol outlet based on, for example, the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

For example, a POSA would have been motivated to use Cho 754 or Fang 044's sealed outlet air path in, for example, Fang 396, Yoon 110, and Yeom 400's devices because it is a simple combination of prior art elements that yields predictable results. Fang 396, Yoon 110, and Yeom 400 disclose paths from an atomizer outlet, through a chimney, to an aerosol outlet. Cho 754 and Fang 044 disclose a similar outlet air path, but Cho 754 and Fang 044 disclose that the outlet air path is sealed. A POSA would have recognized that Fang 396, Yoon 110, and Yeom 400's outlet air paths could be sealed, and a POSA would have known that Cho 754 or Fang 044's sealing techniques or sealed outlet air path could be added to the outlet air paths disclosed by Fang 396, Yoon 110, and Yeom 400.

Furthermore, a POSA would have been motivated to add Cho 754 or Fang 044's sealed outlet air path to, for example, Fang 396, Yoon 110, and Yeom 400 because it would improve Fang 396, Yoon 110, and Yeom 400's devices. For example, adding a sealed outlet air path would prevent an adult consumer from inhaling raw liquid or other contaminants that could otherwise enter the air path to the aerosol outlet. The sealed outlet air path would also increase suction, which would allow pressure switch to operate more reliably and increase smoke throughput to the adult consumer.

A POSA would have had a reasonable expectation of successfully combining, for example, Fang 396, Yoon 110, and Yeom 400 with Cho 754 or Fang 044. A POSA would have known that Cho 754 and Fang 044's sealed outlet air path could be added to Fang 396, Yoon 110, and Yeom 400 to produce a functional device because all five references are directed to the same field, which is, generally, electronic vaporizers. Combining Fang 396, Yoon 110, and Yeom 400 with Cho 754 or Fang 044 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Fang 396, Yoon 110, and Yeom 400 with Cho 754 or Fang 044.

Pressure Sensor Switch

To the extent Complainants contend that any of the prior art identified above does not expressly or inherently disclose a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to power an electronic vaporizer's atomizer via a pressure sensor switch. A POSA would have been motivated to power an electronic vaporizer's atomizer via a pressure sensor switch based on, for example, the nature

of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

For example, a POSA would have been motivated to add Fang 044, Fang 396, Cho 754, or Yoon 110's pressure sensor switch to, for example, Yeom 400 because it is a simple substitution of one known element for another that yields predictable results. Yeom 400 discloses a push-button switch used to apply battery power to an atomizer. Fang 044, Fang 396, Cho 754, and Yoon 110 similarly disclose a switch used to apply power to an atomizer, but they further disclose the switch may be a pressure sensor switch. A POSA would have known that Yeom 400's push-button switch could have been easily replaced with a pressure sensor switch like those disclosed by Fang 044, Fang 396, Cho 754, and Yoon 110.

Furthermore, a POSA would have been motivated to add Fang 044, Fang 396, Cho 754, or Yoon 110's pressure sensor switch to, for example, Yeom 400 because a pressure sensor switch provides several benefits that would improve Yeom 400's device. For example, a pressure sensor switch is automatic and turns off power when an adult consumer stops drawing on the device whereas a push-button switch is manual and requires the consumer to press the switch to turn off power. Thus, the pressure sensor switch would streamline an adult consumer's experience, and

because it would automatically turn off power, it would increase the device's battery life, prevent unintended liquid vaporization, and prevent unnecessary wear and tear on the device.

Moreover, a POSA would have recognized that Fang 044, Fang 396, Cho 754, and Yoon 110's well-known pressure sensor switch would be a selling-point for adult consumers. For example, when an adult consumer draws on an electronic vaporizer with a pressure sensor switch, the atomizer is automatically activated, liquid is vaporized, and the adult consumer may inhale smoke, similar to the experience of smoking a real cigarette. The pressure sensor switch thus provides a natural smoking experience along with the benefits of an electronic vaporizer, which would have been attractive to adult consumers.

A POSA would have had a reasonable expectation of successfully combining, for example, Yeom 400 with Fang 044, Fang 396, Cho 754, or Yoon 110. A POSA would have known that Fang 044, Fang 396, Cho 754, and Yoon 110's pressure sensor could be added to Yeom 400 to produce a functional device because all five references are directed to the same field, which is, generally, electronic vaporizers. Combining Yeom 400 with Fang 044, Fang 396, Cho 754, or Yoon 110 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Yeom 400 with Fang 044, Fang 396, Cho 754, or Yoon 110.

Liquid Level Window

To the extent Complainants contend that any of the prior art identified above does not expressly or inherently disclose a clear or translucent window in the device's cartridge housing that allows visual determination of the liquid level in the liquid reservoir, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to provide a clear or translucent window in a cartridge housing to allow visual determination of the device's liquid level. A POSA would have been motivated to provide a clear or translucent window in a cartridge housing to allow visual determination of the device's liquid level based on, for example, the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

For example, a POSA would have been motivated to add Yoon 110, Nielsen 103, or Yeom 400's liquid level window to, for example, Fang 396 and Cho 754 because it is a simple combination of prior art elements that yields predictable results. Fang 396 and Cho 754 disclose a cartridge housing containing a liquid reservoir. Yoon 110, Nielsen 103, and Yeom 400 also disclose a cartridge housing containing a liquid reservoir, but they further disclose that the liquid reservoir has a clear or translucent window to the exterior of the housing that allows visual determination of the liquid level in the reservoir. A POSA would have appreciated the benefits and would have known that a liquid level window like those disclosed by Yoon 110, Nielsen 103, and Yeom 400 could be easily added to Fang 396 and Cho 754's liquid reservoirs.

Furthermore, a POSA would have been motivated to add Yoon 110, Nielsen 103, or Yeom 400's liquid level window to, for example, Fang 396 and Cho 754 because a liquid level window provides several benefits that would improve Fang 396 and Cho 754's devices. For example, a liquid level window would allow adult consumers to visually determine how much liquid is left in the device, which is far more convenient than opening the device to determine how much liquid is left. The liquid level window would also improve device longevity in at least two ways: the device would not be subjected to unnecessary disassembly (and associated wear) to determine liquid levels, and adult consumers could easily verify that that there is enough liquid in the device to prevent any damage that may result from low liquid levels.

Moreover, the prior art itself provides motivation to add Yoon 110, Nielsen 103, or Yeom 400's liquid level window to, for example, Fang 396 and Cho 754. For example, Yeom 400 explains that the liquid reservoir's translucent portion allows the remaining liquid levels to be easily checked without removing the reservoir, which prevents the wick from burning out due to liquid depletion.

A POSA would have had a reasonable expectation of successfully combining, for example, Fang 396 and Cho 754 with Yoon 110, Nielsen 103, or Yeom 400. A POSA would have known that Yoon 110, Nielsen 103, and Yeom 400's liquid level window could be added to Fang 396 and Cho 754 to produce a functional device because all five references are directed to the same field, which is, generally, electronic vaporizers. Combining Fang 396 and Cho 754 with Yoon 110, Nielsen 103, or Yeom 400 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Fang 396 and Cho 754 with Yoon 110, Nielsen 103, or Yeom 400.

Atomizer Assembly

To the extent Complainants contend that any of the prior art identified above does not expressly or inherently disclose an atomizer assembly that closes a lower end of a cartridge, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use an atomizer that was part of an atomizer assembly where the assembly was installed into, and closed the lower end of a cartridge housing. A POSA would have been motivated to use an atomizer that was part of an atomizer assembly, that was installed into and closed the lower end of a cartridge housing, based on, for example, the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

For example, a POSA would have been motivated to add Fang 396, Cho 754, Yeom 400, Yeom 424, or Terry 013's atomizer assembly, that closes the lower end of a cartridge, to, for example, Yoon 110 because it is a simple combination of prior art elements that yields predictable results. Yoon 110 discloses an atomizer installed in the lower end of a cartridge housing. Fang 396, Cho 754, Yeom 400, Yeom 424, and Terry 013 disclose similar arrangements, but they further

disclose that the atomizer is part of an assembly that closes the lower end of the cartridge. A POSA would have recognized that Yoon 110's atomizer could be integrated into an overall atomizer assembly like those disclosed by Fang 396, Cho 754, Yeom 400, Yeom 424, and Terry 013, which would then close the lower end of the cartridge housing.

Furthermore, a POSA would have recognized that well-known atomizer assemblies, like those disclosed by Fang 396, Cho 754, Yeom 400, Yeom 424, and Terry 013, could have been used in, for example, Yoon 110's device to improve device manufacturing. For example, atomizers are often made of thin, delicate wires that could be damaged during manufacturing. By installing the delicate atomizers into an assembly, then installing the assembly into the device, atomizer damage would be reduced. This design choice would increase manufacturing speed and reduce defects, and the resulting devices would be more reliable.

A POSA would have had a reasonable expectation of successfully combining, for example, Yoon 110 with Fang 396, Cho 754, Yeom 400, Yeom 424, or Terry 013. A POSA would have known that Fang 396, Cho 754, Yeom 400, Yeom 424, and Terry 013's atomizer assembly, that closes the lower end of a cartridge, could be added to Yoon 110 to produce a functional device because all six references are directed to the same field, which is, generally, electronic vaporizers. Combining Yoon 110 with Fang 396, Cho 754, Yeom 400, Yeom 424, or Terry 013 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Yoon 110 with Fang 396, Cho 754, Yeom 400, Yeom 424, or Terry 013.

Rechargeable Battery

To the extent Complainants contend that any of the prior art identified above does not expressly or inherently disclose a rechargeable battery, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use rechargeable batteries in electronic vaporizing devices. A POSA would have been motivated to use a rechargeable battery in an electronic vaporizing device based on, for example, the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

For example, a POSA would have been motivated to add Cho 754, Yeom 424, Terry 013, or Nielsen 103's rechargeable battery to, for example, Fang 396, Yoon 110, and Yeom 400 because it is a simple substitution of one known element for another that yields predictable results. Fang 396, Yoon 110, and Yeom 400 disclose a battery installed in a detachable power supply that is used to power an atomizer. Cho 754, Yeom 424, Terry 013, and Nielsen 103 similarly disclose a battery installed in a detachable power supply that is used to power an atomizer, but they further disclose the battery may be rechargeable. A POSA would have known that the batteries disclosed

by Fang 396, Yoon 110, and Yeom 400 could have been rechargeable or else easily replaced with a rechargeable battery like those disclosed by Cho 754, Yeom 424, Terry 013, and Nielsen 103.

Furthermore, a POSA would have been motivated to add Cho 754, Yeom 424, Terry 013, or Nielsen 103's rechargeable battery to, for example, Fang 396, Yoon 110, and Yeom 400 because a rechargeable battery provides several benefits that would improve Fang 396, Yoon 110, and Yeom 400's devices. For example, compared to conventional, disposable batteries, rechargeable batteries save adult consumers money and provide a simplified experience. With a device powered by a conventional, disposable battery, each and every time their electronic cigarette loses power, adult consumers must purchase a new, expensive battery, then deal with the hassle of disassembling their device to replace the old battery. With a device powered by a rechargeable battery, adult consumers would simply plug in the device to recharge the battery.

Moreover, a POSA would have recognized that Cho 754, Yeom 424, Terry 013, and Nielsen 103's well-known rechargeable batteries could be used in, for example, Fang 396, Yoon 110, and Yeom 400's devices to reduce electronic waste, which was and is an industry-wide concern for electronics manufacturers. For example, each time a conventional, disposable battery is depleted, it is thrown in the garbage and ends up in a landfill. At best, the battery is recycled; it must be shipped to a recycling facility, and when it arrives, it undergoes processing to salvage a fraction of the materials contained therein. When a rechargeable battery is depleted, it would simply be recharged.

A POSA would have had a reasonable expectation of successfully combining, for example, Fang 396, Yoon 110, and Yeom 400 with Cho 754, Yeom 424, Terry 013, or Nielsen 103. A POSA would have known that Cho 754, Yeom 424, Terry 013, and Nielsen 103's rechargeable battery could be added to Fang 396, Yoon 110, and Yeom 400 to produce a functional device

because all seven references are directed to the same field, which is, generally, electronic vaporizers. Combining Fang 396, Yoon 110, and Yeom 400 with Cho 754, Yeom 424, Terry 013, or Nielsen 103 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Fang 396, Yoon 110, and Yeom 400 with Cho 754, Yeom 424, Terry 013, or Nielsen 103.

For these and other reasons set forth in Exhibits A1–A10, every asserted claim of the '114 Patent would have been anticipated and/or obvious to a person of ordinary skill in the art.

II. Invalidity of U.S. Patent No. RE49,114 Under 35 U.S.C. § 112

A. Lack of Written Description

All asserted claims of the '114 Patent are also invalid for failure to meet the written description requirement of 35 U.S.C. § 112. To satisfy the written description requirement, the specification must reasonably convey to those skilled in the art that the inventor had possession of the claimed subject matter. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). To demonstrate possession, the inventor must provide enough description in the specification to demonstrate that s/he actually invented what has been claimed. *Centocor Ortho Biotech, Inc. v. Abbott Labs.*, 636 F.3d 1341, 1348 (Fed. Cir. 2011). Doing so "serves the fundamental patent purpose of making known what has been invented, including any variations and alternatives contemplated by the inventor." *Space Sys./Loral, Inc. v. Lockheed Martin Corp.*, 405 F.3d 985, 987 (Fed. Cir. 2005). Moreover, "[a]dequate description of the invention guards against the inventor's overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation." *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1561, 19 U.S.P.Q.2d 1111 (Fed. Cir. 1991). "While the written description requirement does not require that the specification recite the claimed invention in any particular way, pointing to an 'amalgam of disclosures' from which an artisan could have created

the claimed invention does not satisfy this requirement." *Flash-Control, LLC v. Intel Corp.*, No. 2020-2141, 2021 WL 2944592, at *3 (Fed. Cir. July 14, 2021) (citing *Novozymes A/S v. DuPont Nutrition Biosciences APS*, 723 F.3d 1336, 1349 (Fed. Cir. 2013)). Instead, determining whether a claim has adequate written description support requires analyzing "each claim … as an integrated whole rather than as a collection of independent limitations." *Novozymes*, 723 F.3d at 1349.

To the extent Complainants contend that "wick aperture" in each of the asserted claims encompasses an open aperture without a wick, the asserted claims are invalid for lack of written description support. The '114 Patent consistently and only describes wick apertures that receive a wick. For example, in the Summary of the Invention, the '114 Patent teaches that the "present invention" teaches a "wick disposed through the first wick aperture" such that "it is configured to transfer the liquid by capillarity from the liquid reservoir to the atomizer." '114 Patent at 1:58–2:3. Each of the embodiments also teaches that the wick passes through a wick aperture. *See, e.g.*, *id.* at 2:23–27, 6:28–31, 6:51–65, 7:58–61, Figs. 7–10, 11d, 12a–12b. A POSA reviewing these disclosures would not have understood that the inventors were in possession of an electronic cigarette with wick apertures that were open and without a wick.

Additionally, to the extent Complainants contend that "wick" in each of the asserted claims encompasses a porous ceramic block, the asserted claims are invalid for lack of written description support. The '114 Patent only describes a wick that comprises bundle of fibers. For example, in the Summary of the Invention, the '114 Patent teaches that "the wick is fabricated as a bundle of heat resistant fibers," which may include fibers made of "fiberglass," "fluorocarbon sulfide, melamine, polyimide, carbon, and glass." '114 Patent at 2:28–34; *see also id.* at 7:44–48, Figs. 7–10, 11d. A POSA reviewing these disclosures would not have understood that the inventors were in possession of an electronic cigarette that used a porous ceramic block.

B. Indefiniteness

Asserted claims 1, 5–7, 29–30, 36, and 76 of the '114 Patent are also invalid because they are not sufficiently definite as required under 35 U.S.C. § 112. To be valid, a "patent's claims, viewed in light of the specification and prosecution history, [must] inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014). A "patent must be precise enough to afford clear notice of what is claimed, thereby appris[ing] the public of what is still open to them." *Id.* at 909 (internal quotations and citations omitted). Otherwise there would be "[a] zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims." *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236 (1942).

Each of asserted claims 1, 5–7, 29–30, 36, and 76 requires a "liquid reservoir" "sealably separated" from the "atomizing chamber," which is irreconcilably inconsistent with limitations in the very same claims. *TVnGO Ltd. v. LG Electronics, Inc.*, 2020 WL 1899781, *3–*6 (D.N.J. 2020), *aff'd*, No. 2020-1837, 2021 WL 2644227, *2–*4 (Fed. Cir. Jun. 28, 2021). These claims also require a wick "configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer" or a "wick disposed between the liquid reservoir and the atomizer." A POSA would not have understood the meaning of a liquid reservoir sealably separated from the atomizing chamber with reasonable certainty when the very same claims also require a fluid connection between the liquid reservoir and the atomizing chamber. Therefore, asserted claims 1, 5–7, 29–30, 36, and 76 are indefinite.

Moreover, asserted claims 5, 30, 43–44, 76–77, 80–81, 86, 89, and 93 are similarly indefinite. Claim 5 requires a chimney that "sealably passes through said liquid reservoir," claim 30 requires a "sealed path from the atomizer outlet, through the chimney to the aerosol outlet," and claims 43–44, 76–77, 80–81, 86, 89, and 93 require "a chimney forming at least part of an

aerosol outlet path sealably passing through the reservoir between the atomizer and the aerosol outlet." These limitations are irreconcilably inconsistent with limitations from the very same claims requiring a wick "configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer" or a "wick disposed between the liquid reservoir and the atomizer," whereby the chimney has a fluid connection with the atomizer. A POSA would not have understood the meaning of a sealed chimney with reasonable certainty when the very same claims also require a fluid connection between the liquid reservoir and the chimney. Therefore, asserted claims 43–44, 76–77, 80–81, 86, 89, and 93 are indefinite.

EXHIBIT A-1

EXHIBIT A-1

Invalidity Claim Chart of U.S. Patent Application Publication No. 2011/0011396 ("Fang 396") against U.S. Patent No. RE49,114

Fang 396, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 5–7, 29–30, 36, 43–44, 76–77, 80–81, 86, 89, and 93 of U.S. Patent No. RE49,114. Fang 396 was filed on July 7, 2010 and published on January 20, 2011. Fang 396 qualifies as prior art to the '114 Patent under at least pre-AIA 35 U.S.C. §§ 102(a) and 102(e).

The chart below identifies exemplary excerpts of Fang 396 that disclose and/or render obvious each Asserted Claim, at least under Complainants' apparent claim constructions. Citations to particular excerpts are exemplary and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the invalidity theories described herein.[1]

'114 Claim Limitation	Fang 396
[1.A] An electronic cigarette cartridge apparatus, comprising:	To the extent the preamble is limiting, Fang 396 discloses and/or renders obvious an electronic cigarette cartridge apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at Abstract, [0012]–[0016], Figs. 1–3.
[1.B] a housing having a mouthpiece with an aerosol outlet;	Fang 396 discloses and/or renders obvious a housing having a mouthpiece with an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at Abstract, [0012]–[0014], [0018], Figs. 1–3.
[1.C] an atomizer disposed within an atomizing chamber, and	Fang 396 discloses and/or renders obvious an atomizer disposed within an atomizing chamber.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '114 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’114 Claim Limitation	Fang 396
	For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0012]–[0014], [0018], Figs. 1–3.
[1.D] [the atomizer] operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough;	Fang 396 discloses and/or renders obvious the atomizer operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0014], [0016]–[0018], Figs. 1, 3–6.
[1.E] said atomizing chamber having an air inlet, an atomizer outlet coupled to said aerosol outlet,	Fang 396 discloses and/or renders obvious said atomizing chamber having an air inlet and an atomizer outlet coupled to said aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0012]–[0014], [0018], Figs. 1–3.
[1.F] [said atomizing chamber further having] a first wick aperture, and a second wick aperture;	Fang 396 discloses and/or renders obvious said atomizing chamber further having a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0014], [0018], Figs. 1–3.
[1.G] a liquid reservoir disposed within said housing and	Fang 396 discloses and/or renders obvious a liquid reservoir disposed within said housing. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at Abstract, [0012]–[0013], Figs. 1–2.
[1.H] [the liquid reservoir] sealably separated from said atomizing chamber; and	Fang 396 discloses and/or renders obvious the liquid reservoir sealably separated from said atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Fang 396
	Fang 396 at [0013]–[0014], Figs. 1–3.
[1.I] a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture,	Fang 396 discloses and/or renders obvious a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0014], [0018], Figs. 1–3.
[1.J] the wick disposed between the liquid reservoir and the atomizer and	Fang 396 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0014], [0018], Figs. 1–3.
[1.K] [the wick] configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer;	Fang 396 discloses and/or renders obvious the wick configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0014], [0018], Figs. 1–3.
[1.L] wherein said atomizer outlet and said aerosol outlet are coupled by a chimney.	Fang 396 discloses and/or renders obvious said atomizer outlet and said aerosol outlet are coupled by a chimney. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0013]–[0014], [0018], Figs. 1–3.
[5.A] The apparatus of claim 1, wherein said chimney sealably	Fang 396 discloses and/or renders obvious the apparatus of claim 1, wherein said chimney sealably passes through said liquid reservoir. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Fang 396
passes through said liquid reservoir.	Fang 396 at [0013]–[0014], [0018], Figs. 1–2.
[6.A] The apparatus of claim 1, wherein said atomizer is a resistive heating element.	Fang 396 discloses and/or renders obvious the apparatus of claim 1, wherein said atomizer is a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0014], [0016], [0018], Figs. 1, 3.
[7.A] The apparatus of claim 6, wherein said wick partially engages said resistive heating element.	Fang 396 discloses and/or renders obvious the apparatus of claim 6, wherein said wick partially engages said resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0014], [0018], Figs. 1, 3.
[29.A] The apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet.	Fang 396 discloses and/or renders obvious the apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0013]–[0014], [0018], Figs. 1–3.
[30.A] The apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet.	Fang 396 discloses and/or renders obvious the apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0013]–[0014], [0018], Figs. 1–3.
[36.A] The apparatus of claim 1, coupled to a power supply portion,	Fang 396 discloses and/or renders obvious the apparatus of claim 1, coupled to a power supply portion. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Fang 396
	Fang 396 at Abstract, [0012], [0016], Figs. 1, 3–4.
[36.B] wherein the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer.	Fang 396 discloses and/or renders obvious the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0016]–[0018], Figs. 1, 3–6.
[43.A] A cartridge comprising:	Fang 396 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[43.B] a cartridge housing;	Fang 396 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.C] a mouthpiece end comprising an aerosol outlet;	Fang 396 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.D] an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	Fang 396 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Fang 396
	Fang 396 at [0012], [0014], [0016]–[0018], Figs. 1–3.
[43.E] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Fang 396 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[43.F] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Fang 396 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[43.G] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Fang 396 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0013]–[0015], Figs. 1–3.
[43.H] the liquid reservoir configured to contain an atomization liquid;	Fang 396 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0012]–[0014], Figs. 1–2.
[43.I] a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	Fang 396 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Fang 396
	See disclosures for claim elements [1.L], [5.A].
[43.J] an atomizer disposed within the atomizing chamber,	Fang 396 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].
[43.K] the atomizer comprising a resistive heating element; and	Fang 396 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[43.L] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Fang 396 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[43.M] the wick disposed between the liquid reservoir and the atomizer.	Fang 396 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[44.A] An electronic cigarette comprising:	Fang 396 discloses and/or renders obvious an electronic cigarette. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].

’114 Claim Limitation	Fang 396
[44.B] a power supply portion comprising a rechargeable battery; and	Fang 396 discloses and/or renders obvious a power supply portion comprising a rechargeable battery. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at Abstract, [0012], [0016], Figs. 1, 3–4.
[44.C] a cartridge configured for separable attachment to the power supply portion;	Fang 396 discloses and/or renders obvious a cartridge configured for separable attachment to the power supply portion. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[44.D] a cartridge housing;	Fang 396 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.E] a mouthpiece end comprising an aerosol outlet;	Fang 396 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.F] an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	Fang 396 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.D].

’114 Claim Limitation	Fang 396
[44.G] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Fang 396 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[44.H] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Fang 396 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[44.I] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Fang 396 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.G].
[44.J] the liquid reservoir configured to contain an atomization liquid;	Fang 396 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.H].
[44.K] a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	Fang 396 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim elements [1.L], [5.A].

’114 Claim Limitation	Fang 396
[44.L] an atomizer disposed within the atomizing chamber,	Fang 396 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].
[44.M] the atomizer comprising a resistive heating element; and	Fang 396 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[44.N] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Fang 396 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[44.O] the wick disposed between the liquid reservoir and the atomizer.	Fang 396 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[76.A] The cartridge of claim 43, wherein the liquid reservoir is sealably separated from the atomizing chamber.	Fang 396 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir is sealably separated from the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.H].

’114 Claim Limitation	Fang 396
[77.A] The cartridge of claim 43, wherein the liquid reservoir is partially defined between the interior of the cartridge housing and the chimney.	Fang 396 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir is partially defined between the interior of the cartridge housing and the chimney. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0013]–[0014], Figs. 1–2.
[80.A] The cartridge of claim 43, wherein the liquid reservoir comprises a clear or translucent window to an exterior of the cartridge housing, the clear or translucent window allowing visual determination of a liquid level within the liquid reservoir.	Fang 396 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir comprises a clear or translucent window to an exterior of the cartridge housing, the clear or translucent window allowing visual determination of a liquid level within the liquid reservoir. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at Abstract, [0012]–[0014], [0018], Figs. 1–3.
[81.A] The cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer,	Fang 396 discloses and/or renders obvious the cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0012]–[0014], Figs. 1, 3.
[81.B] the atomizer assembly closing the lower end of the cartridge housing.	Fang 396 discloses and/or renders obvious the atomizer assembly closing the lower end of the cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at Abstract, [0012]–[0014], Figs. 1–3.
[86.A] The cartridge of claim 43, wherein the wick is configured to transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer.	Fang 396 discloses and/or renders obvious the cartridge of claim 43, wherein the wick is configured to transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Fang 396
	See disclosures for claim element [1.K].
[89.A] The cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber, and	Fang 396 discloses and/or renders obvious the cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0012]–[0014], [0018], Figs. 1–3.
[89.B] wherein the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber.	Fang 396 discloses and/or renders obvious the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.K].
[93.A] The cartridge of claim 43, further comprising the atomization liquid.	Fang 396 discloses and/or renders obvious the cartridge of claim 43, further comprising the atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Fang 396 at [0012]–[0014], Figs. 1–2.

EXHIBIT A-2

EXHIBIT A-2

Invalidity Claim Chart of U.S. Patent Application Publication No. 2011/0303231 ("Li 231") against U.S. Patent No. RE49,114

Li 231, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 5–7, 29–30, 36, 43–44, 76–77, 80–81, 86, 89, and 93 of U.S. Patent No. RE49,114. Li 231 was filed on October 28, 2010 and published on December 15, 2011. Li 231 qualifies as prior art to the '114 Patent under at least pre-AIA 35 U.S.C. § 102(e).

The chart below identifies exemplary excerpts of Li 231 that disclose and/or render obvious each Asserted Claim, at least under Complainants' apparent claim constructions. Citations to particular excerpts are exemplary and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the invalidity theories described herein.[1]

'114 Claim Limitation	Li 231
[1.A] An electronic cigarette cartridge apparatus, comprising:	To the extent the preamble is limiting, Li 231 discloses and/or renders obvious an electronic cigarette cartridge apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at Abstract, [0002], [0009], [0020], Figs. 1–2.
[1.B] a housing having a mouthpiece with an aerosol outlet;	Li 231 discloses and/or renders obvious a housing having a mouthpiece with an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0020]–[0021], [0023], Figs. 1–3.
[1.C] an atomizer disposed within an atomizing chamber, and	Li 231 discloses and/or renders obvious an atomizer disposed within an atomizing chamber.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '114 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

JUUL Ex. 1022
Case No. IPR2024-00161
Page 54 of 719

’114 Claim Limitation	Li 231
	For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0009], [0021]–[0022], Figs. 1–3.
[1.D] [the atomizer] operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough;	Li 231 discloses and/or renders obvious the atomizer operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0008]–[0009], [0014], [0020]–[0021], [0023], Figs. 1–3.
[1.E] said atomizing chamber having an air inlet, an atomizer outlet coupled to said aerosol outlet,	Li 231 discloses and/or renders obvious said atomizing chamber having an air inlet and an atomizer outlet coupled to said aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0021]–[0023], Figs. 1–2.
[1.F] [said atomizing chamber further having] a first wick aperture, and a second wick aperture;	Li 231 discloses and/or renders obvious said atomizing chamber further having a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0013], [0021]–[0022], Figs. 1–4.
[1.G] a liquid reservoir disposed within said housing and	Li 231 discloses and/or renders obvious a liquid reservoir disposed within said housing. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0014], [0021], Figs. 1–3.
[1.H] [the liquid reservoir] sealably separated from said atomizing chamber; and	Li 231 discloses and/or renders obvious the liquid reservoir sealably separated from said atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Li 231
	Li 231 at [0009], [0013]–[0014], [0021]–[0022], Figs. 1–2.
[1.I] a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture,	Li 231 discloses and/or renders obvious a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0009], [0013], [0021]–[0022], Figs. 1–3.
[1.J] the wick disposed between the liquid reservoir and the atomizer and	Li 231 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0009], [0013], [0021]–[0022], Figs. 1–3.
[1.K] [the wick] configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer;	Li 231 discloses and/or renders obvious the wick configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0009], [0013], [0021]–[0022], Figs. 1–3.
[1.L] wherein said atomizer outlet and said aerosol outlet are coupled by a chimney.	Li 231 discloses and/or renders obvious said atomizer outlet and said aerosol outlet are coupled by a chimney. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0009], [0013], [0021]–[0023], Figs. 1–3.
[5.A] The apparatus of claim 1, wherein said chimney sealably passes through said liquid reservoir.	Li 231 discloses and/or renders obvious apparatus of claim 1, wherein said chimney sealably passes through said liquid reservoir. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Li 231
	Li 231 at [0009], [0013], [0021]–[0023], Figs. 1–4.
[6.A] The apparatus of claim 1, wherein said atomizer is a resistive heating element.	Li 231 discloses and/or renders obvious the apparatus of claim 1, wherein said atomizer is a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0009], [0021]–[0022], Figs. 1–3.
[7.A] The apparatus of claim 6, wherein said wick partially engages said resistive heating element.	Li 231 discloses and/or renders obvious the apparatus of claim 6, wherein said wick partially engages said resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0009], [0021]–[0022], Figs. 1–3.
[29.A] The apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet.	Li 231 discloses and/or renders obvious the apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0009], [0013], [0021]–[0023], Figs. 1–3.
[30.A] The apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet.	Li 231 discloses and/or renders obvious the apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0009], [0013], [0021]–[0023], Figs. 1–3.
[36.A] The apparatus of claim 1, coupled to a power supply portion,	Li 231 discloses and/or renders obvious the apparatus of claim 1, coupled to a power supply portion. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0004], [0020]–[0021], Figs. 1–2.

’114 Claim Limitation	Li 231
[36.B] wherein the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer.	Li 231 discloses and/or renders obvious the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0004], [0020]–[0021], Figs. 1–2.
[43.A] A cartridge comprising:	Li 231 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[43.B] a cartridge housing;	Li 231 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.C] a mouthpiece end comprising an aerosol outlet;	Li 231 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.D] an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	

’114 Claim Limitation	Li 231
[43.E] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Li 231 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[43.F] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Li 231 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[43.G] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Li 231 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0009], [0021]–[0022], Figs. 1–3.
[43.H] the liquid reservoir configured to contain an atomization liquid;	Li 231 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0014], [0021], Figs. 1–3.
[43.I] a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	Li 231 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim elements [1.L], [5.A].

’114 Claim Limitation	Li 231
[43.J] an atomizer disposed within the atomizing chamber,	Li 231 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].
[43.K] the atomizer comprising a resistive heating element; and	Li 231 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[43.L] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Li 231 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[43.M] the wick disposed between the liquid reservoir and the atomizer.	Li 231 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[44.A] An electronic cigarette comprising:	Li 231 discloses and/or renders obvious an electronic cigarette. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].

’114 Claim Limitation	Li 231
[44.B] a power supply portion comprising a rechargeable battery; and	Li 231 discloses and/or renders obvious a power supply portion comprising a rechargeable battery. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0020]–[0021], Figs. 1–2.
[44.C] a cartridge configured for separable attachment to the power supply portion;	Li 231 discloses and/or renders obvious a cartridge configured for separable attachment to the power supply portion. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[44.D] a cartridge housing;	Li 231 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.E] a mouthpiece end comprising an aerosol outlet;	Li 231 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.F] an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	
[44.G] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Li 231 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Li 231
	See disclosures for claim element [1.E].
[44.H] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Li 231 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[44.I] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Li 231 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.G].
[44.J] the liquid reservoir configured to contain an atomization liquid;	Li 231 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.H].
[44.K] a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	Li 231 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim elements [1.L], [5.A].
[44.L] an atomizer disposed within the atomizing chamber,	Li 231 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Li 231
	See disclosures for claim element [1.C].
[44.M] the atomizer comprising a resistive heating element; and	Li 231 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[44.N] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Li 231 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[44.O] the wick disposed between the liquid reservoir and the atomizer.	Li 231 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[76.A] The cartridge of claim 43, wherein the liquid reservoir is sealably separated from the atomizing chamber.	Li 231 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir is sealably separated from the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.H].
[77.A] The cartridge of claim 43, wherein the liquid reservoir is partially defined between the	Li 231 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir is partially defined between the interior of the cartridge housing and the chimney.

’114 Claim Limitation	Li 231
interior of the cartridge housing and the chimney.	For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0009], [0021]–[0022], Figs. 1–3.
[80.A] The cartridge of claim 43, wherein the liquid reservoir comprises a clear or translucent window to an exterior of the cartridge housing, the clear or translucent window allowing visual determination of a liquid level within the liquid reservoir.	
[81.A] The cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer,	Li 231 discloses and/or renders obvious the cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0009], [0021]–[0022], Figs. 1–3.
[81.B] the atomizer assembly closing the lower end of the cartridge housing.	Li 231 discloses and/or renders obvious the cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0009]–[0010], [0021]–[0022], Figs. 1–3.
[86.A] The cartridge of claim 43, wherein the wick is configured to transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer.	Li 231 discloses and/or renders obvious the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.K].

’114 Claim Limitation	Li 231
[89.A] The cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber, and	Li 231 discloses and/or renders obvious the cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0009], [0021]–[0022], Figs. 1–3.
[89.B] wherein the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber.	discloses and/or renders obvious the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.K].
[93.A] The cartridge of claim 43, further comprising the atomization liquid.	Li 231 discloses and/or renders obvious the cartridge of claim 43, further comprising the atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Li 231 at [0014], [0021], Figs. 1–3.

EXHIBIT A-3

EXHIBIT A-3

Invalidity Claim Chart of U.S. Patent Application Publication No. 2013/0056013 ("Terry 013") against U.S. Patent No. RE49,114

Terry 013, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 5–7, 29–30, 36, 43–44, 76–77, 80–81, 86, 89, and 93 of U.S. Patent No. RE49,114. Terry 013 was filed on May 16, 2011 and published on March 7, 2013. Terry 013 qualifies as prior art to the '114 Patent under at least AIA 35 U.S.C. § 102(e).

The chart below identifies exemplary excerpts of Terry 013 that disclose and/or render obvious each Asserted Claim, at least under Complainants' apparent claim constructions. Citations to particular excerpts are exemplary and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the invalidity theories described herein.[1]

'114 Claim Limitation	Terry 013
[1.A] An electronic cigarette cartridge apparatus, comprising:	To the extent the preamble is limiting, Terry 013 discloses and/or renders obvious an electronic cigarette cartridge apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at Abstract, [0002]–[0003], [0091]–[0097], [0158], Figs. 1, 76A–76G, 76Q, 77A, 77C, 77E, 79.
[1.B] a housing having a mouthpiece with an aerosol outlet;	Terry 013 discloses and/or renders obvious a housing having a mouthpiece with an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at Figs. [0158]–[0166], [0179], [0207]–[0213], [0221], 76A–76G, 76Q, 77A, 77C, 77E, 79–80B.
[1.C] an atomizer disposed within an atomizing chamber, and	Terry 013 discloses and/or renders obvious an atomizer disposed within an atomizing chamber.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '114 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’114 Claim Limitation	Terry 013
	For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0165]–[0170], [0199]–[0206], Figs. 76G–76P, 76R–76S, 80A–80B.
[1.D] [the atomizer] operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough;	Terry 013 discloses and/or renders obvious the atomizer operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0158]–[0162], [0197]–[0199], [0210]–[0218], [0221], [0225], Figs. 77A–78, 81.
[1.E] said atomizing chamber having an air inlet, an atomizer outlet coupled to said aerosol outlet,	Terry 013 discloses and/or renders obvious said atomizing chamber having an air inlet and an atomizer outlet coupled to said aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0165]–[0170], [0199]–[0209], [0221], Figs. 76A–76S, 80A–80B.
[1.F] [said atomizing chamber further having] a first wick aperture, and a second wick aperture;	Terry 013 discloses and/or renders obvious said atomizing chamber further having a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0168]–[0178], [0200]–[0206], Figs. 76F–76S.
[1.G] a liquid reservoir disposed within said housing and	Terry 013 discloses and/or renders obvious a liquid reservoir disposed within said housing. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0165]–[0178], [0200]–[0206], Figs. 76F, 76P–76S.
[1.H] [the liquid reservoir] sealably separated from said atomizing chamber; and	Terry 013 discloses and/or renders obvious the liquid reservoir sealably separated from said atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Terry 013
	Terry 013 at [0165]–[0178], [0200]–[0206], Figs. 76F, 76P–76S.
[1.I] a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture,	Terry 013 discloses and/or renders obvious a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0184]–[0196], [0200]–[0207], Figs. 76F–76S.
[1.J] the wick disposed between the liquid reservoir and the atomizer and	Terry 013 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0184]–[0188], [0192]–[0196], [0200]–[0207], Figs. 76F–76S.
[1.K] [the wick] configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer;	Terry 013 discloses and/or renders obvious the wick configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0183]–[0188], [0192]–[0196], [0200]–[0207], Figs. 76F–76S.
[1.L] wherein said atomizer outlet and said aerosol outlet are coupled by a chimney.	Terry 013 discloses and/or renders obvious said atomizer outlet and said aerosol outlet are coupled by a chimney. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0158]–[0164], [0178]–[0179], [0196], [0205]–[0210], Figs. 76A–76S, 77A, 77C, 77E, 80A–80B.
[5.A] The apparatus of claim 1, wherein said chimney sealably	Terry 013 discloses and/or renders obvious the apparatus of claim 1, wherein said chimney sealably passes through said liquid reservoir. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Terry 013
passes through said liquid reservoir.	Terry 013 at Figs. [0165]–[0171], 76D–76F, 76P, 76R–76S.
[6.A] The apparatus of claim 1, wherein said atomizer is a resistive heating element.	Terry 013 discloses and/or renders obvious the apparatus of claim 1, wherein said atomizer is a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0191]–[0201], Figs. 76H–76S.
[7.A] The apparatus of claim 6, wherein said wick partially engages said resistive heating element.	Terry 013 discloses and/or renders obvious the apparatus of claim 6, wherein said wick partially engages said resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0188]–[0196], Figs. 76H–76MA.
[29.A] The apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet.	Terry 013 discloses and/or renders obvious the apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0164]–[0166], [0178]–[0179], [0196], Figs. 76D–76MA.
[30.A] The apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet.	Terry 013 discloses and/or renders obvious the apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0164]–[0166], [0178]–[0179], [0196], Figs. 76D–76MA.
[36.A] The apparatus of claim 1, coupled to a power supply portion,	Terry 013 discloses and/or renders obvious the apparatus of claim 1, coupled to a power supply portion. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Terry 013
	Terry 013 at [0092], [0097], [0101]–[0103], [0106], [0112], [0123], [0144]–[0148], [0159]–[0163], [0210]–[0222], Figs. 5–9, 70–72, 76C, 77A–77F.
[36.B] wherein the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer.	Terry 013 discloses and/or renders obvious the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0158]–[0162], [0197]–[0199], [0210]–[0218], [0221], [0225], Figs. 77A–78, 81
[43.A] A cartridge comprising:	Terry 013 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[43.B] a cartridge housing;	Terry 013 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.C] a mouthpiece end comprising an aerosol outlet;	Terry 013 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.D] an atomizing chamber disposed within the cartridge housing proximate a lower end of	Terry 013 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Terry 013
the cartridge housing opposite the mouthpiece end,	Terry 013 at [0165]–[0170], [0199]–[0206], Figs. 76C–76P, 76R–76S.
[43.E] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Terry 013 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[43.F] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Terry 013 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[43.G] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	
[43.H] the liquid reservoir configured to contain an atomization liquid;	Terry 013 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0104], [0166]–[0176], [0205], Figs. 7–9, 76P–76S.
[43.I] a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	Terry 013 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim elements [1.L], [5.A].

’114 Claim Limitation	Terry 013
[43.J] an atomizer disposed within the atomizing chamber,	Terry 013 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].
[43.K] the atomizer comprising a resistive heating element; and	Terry 013 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[43.L] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Terry 013 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[43.M] the wick disposed between the liquid reservoir and the atomizer.	Terry 013 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[44.A] An electronic cigarette comprising:	Terry 013 discloses and/or renders obvious an electronic cigarette. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].

’114 Claim Limitation	Terry 013
[44.B] a power supply portion comprising a rechargeable battery; and	Terry 013 discloses and/or renders obvious a power supply portion comprising a rechargeable battery. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0092], [0097], [0101]–[0103], [0106], [0112], [0123], [0144]–[0148], [0159]–[0163], [0210]–[0222], Figs. 5–9, 70–72, 76C, 77A–77F.
[44.C] a cartridge configured for separable attachment to the power supply portion;	Terry 013 discloses and/or renders obvious a cartridge configured for separable attachment to the power supply portion. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[44.D] a cartridge housing;	Terry 013 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.E] a mouthpiece end comprising an aerosol outlet;	Terry 013 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.F] an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	Terry 013 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.D].

’114 Claim Limitation	Terry 013
[44.G] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Terry 013 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[44.H] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Terry 013 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[44.I] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Terry 013 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.G].
[44.J] the liquid reservoir configured to contain an atomization liquid;	Terry 013 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.H].
[44.K] a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	Terry 013 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim elements [1.L], [5.A].

’114 Claim Limitation	Terry 013
[44.L] an atomizer disposed within the atomizing chamber,	Terry 013 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].
[44.M] the atomizer comprising a resistive heating element; and	Terry 013 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[44.N] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Terry 013 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[44.O] the wick disposed between the liquid reservoir and the atomizer.	Terry 013 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[76.A] The cartridge of claim 43, wherein the liquid reservoir is sealably separated from the atomizing chamber.	
[77.A] The cartridge of claim 43, wherein the liquid reservoir is partially defined between the	

’114 Claim Limitation	Terry 013
interior of the cartridge housing and the chimney.	
[80.A] The cartridge of claim 43, wherein the liquid reservoir comprises a clear or translucent window to an exterior of the cartridge housing, the clear or translucent window allowing visual determination of a liquid level within the liquid reservoir.	
[81.A] The cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer,	Terry 013 discloses and/or renders obvious the cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0165]–[0170], [0177]–[0179], [0190]–[0195], [0199]–[0206], Figs. 76C–76P, 76R–76S.
[81.B] the atomizer assembly closing the lower end of the cartridge housing.	Terry 013 discloses and/or renders obvious the atomizer assembly closing the lower end of the cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0165]–[0170], [0177]–[0179], [0190]–[0195], [0199]–[0206], Figs. 76C–76P, 76R–76S.
[86.A] The cartridge of claim 43, wherein the wick is configured to transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer.	
[89.A] The cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber, and	Terry 013 discloses and/or renders obvious the cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Terry 013
	Terry 013 at [0165]–[0170], [0199]–[0206], Figs. 76G–76P, 76R–76S, 80A–80B.
[89.B] wherein the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber.	
[93.A] The cartridge of claim 43, further comprising the atomization liquid.	Terry 013 discloses and/or renders obvious the cartridge of claim 43, further comprising the atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Terry 013 at [0104], [0166]–[0176], [0205], Figs. 7–9, 76P–76S.

EXHIBIT A-4

EXHIBIT A-4

Invalidity Claim Chart of WIPO Publication No. WO 2011/065754 A1 ("Cho 754") against U.S. Patent No. RE49,114

Cho 754, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 5–7, 29–30, 36, 43–44, 76–77, 80–81, 86, 89, and 93 of U.S. Patent No. RE49,114. Cho 754 was filed on November 24, 2010 and published on June 3, 2011. Cho 754 qualifies as prior art to the '114 Patent under at least pre-AIA 35 U.S.C. § 102(a).

The chart below identifies exemplary excerpts of Cho 754 that disclose and/or render obvious each Asserted Claim, at least under Complainants' apparent claim constructions. Citations to particular excerpts are exemplary and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the invalidity theories described herein.[1]

'114 Claim Limitation	Cho 754
[1.A] An electronic cigarette cartridge apparatus, comprising:	To the extent the preamble is limiting, Cho 754 discloses and/or renders obvious an electronic cigarette cartridge apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [3], [9], Figs. 1–2, 8.
[1.B] a housing having a mouthpiece with an aerosol outlet;	Cho 754 discloses and/or renders obvious a housing having a mouthpiece with an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [73], [81], [89], Figs. 7, 11.
[1.C] an atomizer disposed within an atomizing chamber, and	Cho 754 discloses and/or renders obvious an atomizer disposed within an atomizing chamber.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '114 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’114 Claim Limitation	Cho 754
	For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [82]–[83], Figs. 9, 11.
[1.D] [the atomizer] operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough;	Cho 754 discloses and/or renders obvious the atomizer operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [3], [14], [30], [77], Figs. 1–2, 8–9, 11.
[1.E] said atomizing chamber having an air inlet, an atomizer outlet coupled to said aerosol outlet,	Cho 754 discloses and/or renders obvious said atomizing chamber having an air inlet and an atomizer outlet coupled to said aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [82]–[83], [89], Figs. 8–9, 11.
[1.F] [said atomizing chamber further having] a first wick aperture, and a second wick aperture;	Cho 754 discloses and/or renders obvious said atomizing chamber further having a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [83], Figs. 8–9, 11.
[1.G] a liquid reservoir disposed within said housing and	Cho 754 discloses and/or renders obvious a liquid reservoir disposed within said housing. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [83], [89], Figs. 8, 10–11.
[1.H] [the liquid reservoir] sealably separated from said atomizing chamber; and	Cho 754 discloses and/or renders obvious the liquid reservoir sealably separated from said atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Cho 754
	Cho 754 at [83], [91]–[92], Figs. 8, 10–11.
[1.I] a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture,	Cho 754 discloses and/or renders obvious a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [83], [89]–[90], Figs. 8–9, 11.
[1.J] the wick disposed between the liquid reservoir and the atomizer and	Cho 754 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [89]–[90], Figs. 8–9, 11.
[1.K] [the wick] configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer;	Cho 754 discloses and/or renders obvious the wick configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [77], [83], [89], Figs. 8–9, 11.
[1.L] wherein said atomizer outlet and said aerosol outlet are coupled by a chimney.	Cho 754 discloses and/or renders obvious said atomizer outlet and said aerosol outlet are coupled by a chimney. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [83], [89], Figs. 8–11.
[5.A] The apparatus of claim 1, wherein said chimney sealably	Cho 754 discloses and/or renders obvious the apparatus of claim 1, wherein said chimney sealably passes through said liquid reservoir. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Cho 754
passes through said liquid reservoir.	Cho 754 at [73], [75], [81], [89], Figs. 8, 10–11.
[6.A] The apparatus of claim 1, wherein said atomizer is a resistive heating element.	Cho 754 discloses and/or renders obvious the apparatus of claim 1, wherein said atomizer is a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [77], Figs. 8–9, 11.
[7.A] The apparatus of claim 6, wherein said wick partially engages said resistive heating element.	Cho 754 discloses and/or renders obvious the apparatus of claim 6, wherein said wick partially engages said resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [84], [88], Figs. 9, 11.
[29.A] The apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet.	Cho 754 discloses and/or renders obvious the apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [74], [81], [83], [91], Figs. 8–11.
[30.A] The apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet.	Cho 754 discloses and/or renders obvious the apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [74], [81], [83], [89], [91], Figs. 8–11.
[36.A] The apparatus of claim 1, coupled to a power supply portion,	Cho 754 discloses and/or renders obvious the apparatus of claim 1, coupled to a power supply portion. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Cho 754
	Cho 754 at [35], [49], [79], Figs. 1–2, 8.
[36.B] wherein the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer.	Cho 754 discloses and/or renders obvious the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [14], [48], Figs. 2, 4, 6.
[43.A] A cartridge comprising:	Cho 754 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[43.B] a cartridge housing;	Cho 754 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.C] a mouthpiece end comprising an aerosol outlet;	Cho 754 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.D] an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	Cho 754 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Cho 754
	Cho 754 at [73], Figs. 7–8, 11.
[43.E] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Cho 754 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[43.F] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Cho 754 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[43.G] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Cho 754 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [74], [82]–[83], Figs. 7–8, 11.
[43.H] the liquid reservoir configured to contain an atomization liquid;	Cho 754 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [77], [89], Figs. 10–11.
[43.I] a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	Cho 754 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Cho 754
	See disclosures for claim elements [1.L], [5.A].
[43.J] an atomizer disposed within the atomizing chamber,	Cho 754 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].
[43.K] the atomizer comprising a resistive heating element; and	Cho 754 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[43.L] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Cho 754 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[43.M] the wick disposed between the liquid reservoir and the atomizer.	Cho 754 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[44.A] An electronic cigarette comprising:	Cho 754 discloses and/or renders obvious an electronic cigarette. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].

’114 Claim Limitation	Cho 754
[44.B] a power supply portion comprising a rechargeable battery; and	Cho 754 discloses and/or renders obvious a power supply portion comprising a rechargeable battery. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [33], [45], Figs. 1–2.
[44.C] a cartridge configured for separable attachment to the power supply portion;	Cho 754 discloses and/or renders obvious a cartridge configured for separable attachment to the power supply portion. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[44.D] a cartridge housing;	Cho 754 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.E] a mouthpiece end comprising an aerosol outlet;	Cho 754 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.F] an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	Cho 754 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.D].

’114 Claim Limitation	Cho 754
[44.G] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Cho 754 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[44.H] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Cho 754 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[44.I] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Cho 754 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.G].
[44.J] the liquid reservoir configured to contain an atomization liquid;	Cho 754 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.H].
[44.K] a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	Cho 754 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim elements [1.L], [5.A].

’114 Claim Limitation	Cho 754
[44.L] an atomizer disposed within the atomizing chamber,	Cho 754 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].
[44.M] the atomizer comprising a resistive heating element; and	Cho 754 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[44.N] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Cho 754 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[44.O] the wick disposed between the liquid reservoir and the atomizer.	Cho 754 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[76.A] The cartridge of claim 43, wherein the liquid reservoir is sealably separated from the atomizing chamber.	Cho 754 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir is sealably separated from the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.H].

’114 Claim Limitation	Cho 754
[77.A] The cartridge of claim 43, wherein the liquid reservoir is partially defined between the interior of the cartridge housing and the chimney.	Cho 754 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir is partially defined between the interior of the cartridge housing and the chimney. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [89], Figs. 8, 10–11.
[80.A] The cartridge of claim 43, wherein the liquid reservoir comprises a clear or translucent window to an exterior of the cartridge housing, the clear or translucent window allowing visual determination of a liquid level within the liquid reservoir.	Cho 754 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir comprises a clear or translucent window to an exterior of the cartridge housing, the clear or translucent window allowing visual determination of a liquid level within the liquid reservoir. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [73], [76]–[77], [81], [89], Figs. 7–8, 10–11.
[81.A] The cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer,	Cho 754 discloses and/or renders obvious the cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [82]–[83], Figs. 7–9, 11.
[81.B] the atomizer assembly closing the lower end of the cartridge housing.	Cho 754 discloses and/or renders obvious the atomizer assembly closing the lower end of the cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [82]–[83], Figs. 7–9, 11.
[86.A] The cartridge of claim 43, wherein the wick is configured to transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer.	Cho 754 discloses and/or renders obvious the cartridge of claim 43, wherein the wick is configured to transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Cho 754
	See disclosures for claim element [1.K].
[89.A] The cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber, and	Cho 754 discloses and/or renders obvious the cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [82]–[83], Figs. 8–9, 11.
[89.B] wherein the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber.	Cho 754 discloses and/or renders obvious the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.K].
[93.A] The cartridge of claim 43, further comprising the atomization liquid.	Cho 754 discloses and/or renders obvious the cartridge of claim 43, further comprising the atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Cho 754 at [77], [89], Figs. 10–11.

EXHIBIT A-5

EXHIBIT A-5

Invalidity Claim Chart of Korean Patent No. KR200454110Y1 ("Yoon 110") against U.S. Patent No. RE49,114

Yoon 110, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 5–7, 29–30, 36, 43–44, 76–77, 80–81, 86, 89, and 93 of U.S. Patent No. RE49,114. Yoon 110 was filed on March 24, 2011 and published on June 8, 2011. Yoon 110 qualifies as prior art to the '114 Patent under at least pre-AIA 35 U.S.C. § 102(a).

The chart below identifies exemplary excerpts of Yoon 110 that disclose and/or render obvious each Asserted Claim, at least under Complainants' apparent claim constructions. Citations to particular excerpts are exemplary and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the invalidity theories described herein.[1]

'114 Claim Limitation	Yoon 110
[1.A] An electronic cigarette cartridge apparatus, comprising:	To the extent the preamble is limiting, Yoon 110 discloses and/or renders obvious an electronic cigarette cartridge apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at Abstract, [0001], [0024], Figs. 1–3.
[1.B] a housing having a mouthpiece with an aerosol outlet;	Yoon 110 discloses and/or renders obvious a housing having a mouthpiece with an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at [0028]–[0035], Figs. 1–3.
[1.C] an atomizer disposed within an atomizing chamber, and	Yoon 110 discloses and/or renders obvious an atomizer disposed within an atomizing chamber.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '114 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’114 Claim Limitation	Yoon 110
	For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at Abstract, [0011]–[0012], [0029]–[0030], Fig. 3.
[1.D] [the atomizer] operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough;	Yoon 110 discloses and/or renders obvious the atomizer operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at [0003], [0035], [0044], Figs. 1–3.
[1.E] said atomizing chamber having an air inlet, an atomizer outlet coupled to said aerosol outlet,	Yoon 110 discloses and/or renders obvious said atomizing chamber having an air inlet and an atomizer outlet coupled to said aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at Abstract, [0011]–[0012], [0029]–[0030], Fig. 3.
[1.F] [said atomizing chamber further having] a first wick aperture, and a second wick aperture;	Yoon 110 discloses and/or renders obvious said atomizing chamber further having a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at Abstract, [0011], [0017], [0029], [0035], Fig. 3.
[1.G] a liquid reservoir disposed within said housing and	Yoon 110 discloses and/or renders obvious a liquid reservoir disposed within said housing. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at Abstract, [0011]–[0013], [0028]–[0031], [0040], Figs. 1–3.
[1.H] [the liquid reservoir] sealably separated from said atomizing chamber; and	Yoon 110 discloses and/or renders obvious the liquid reservoir sealably separated from said atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Yoon 110
	Yoon 110 at [0030]–[0032], [0038], [0048], [0052], Figs. 1–3.
[1.I] a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture,	Yoon 110 discloses and/or renders obvious a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at Abstract, [0011], [0017], [0029], [0035], Fig. 3.
[1.J] the wick disposed between the liquid reservoir and the atomizer and	Yoon 110 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at Abstract, [0011], [0017], [0029], [0035], Fig. 3.
[1.K] [the wick] configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer;	Yoon 110 discloses and/or renders obvious the wick configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at [0017], [0035], Fig. 3.
[1.L] wherein said atomizer outlet and said aerosol outlet are coupled by a chimney.	Yoon 110 discloses and/or renders obvious said atomizer outlet and said aerosol outlet are coupled by a chimney. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at [0030], [0036], Figs. 1, 3.
[5.A] The apparatus of claim 1, wherein said chimney sealably	Yoon 110 discloses and/or renders obvious the apparatus of claim 1, wherein said chimney sealably passes through said liquid reservoir. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Yoon 110
passes through said liquid reservoir.	Yoon 110 at [0013], [0030], Figs. 1, 3.
[6.A] The apparatus of claim 1, wherein said atomizer is a resistive heating element.	Yoon 110 discloses and/or renders obvious the apparatus of claim 1, wherein said atomizer is a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at [0029], [0035], [0043], Figs. 1–3.
[7.A] The apparatus of claim 6, wherein said wick partially engages said resistive heating element.	Yoon 110 discloses and/or renders obvious the apparatus of claim 6, wherein said wick partially engages said resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at [0011], [0037], Fig. 3.
[29.A] The apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet.	Yoon 110 discloses and/or renders obvious the apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at [0030]–[0032], [0038], Figs. 1–3.
[30.A] The apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet.	Yoon 110 discloses and/or renders obvious the apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at [0028], [0030]–[0032], [0036], [0038], Figs. 1–3.
[36.A] The apparatus of claim 1, coupled to a power supply portion,	Yoon 110 discloses and/or renders obvious the apparatus of claim 1, coupled to a power supply portion. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Yoon 110
	Yoon 110 at [0003], [0011], [0024]–[0027], [0029], [0035], [0043]–[0045], Figs. 1–2.
[36.B] wherein the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer.	Yoon 110 discloses and/or renders obvious the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at [0003].
[43.A] A cartridge comprising:	Yoon 110 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[43.B] a cartridge housing;	Yoon 110 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.C] a mouthpiece end comprising an aerosol outlet;	Yoon 110 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.D] an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	Yoon 110 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Yoon 110
	Yoon 110 at [0028], Figs. 1–3.
[43.E] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Yoon 110 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[43.F] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Yoon 110 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[43.G] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Yoon 110 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at [0011], [0029]–[0030], Figs. 1, 3.
[43.H] the liquid reservoir configured to contain an atomization liquid;	Yoon 110 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at Abstract, [0011], [0028], Figs. 1–3.
[43.I] a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	Yoon 110 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Yoon 110
	See disclosures for claim elements [1.L], [5.A].
[43.J] an atomizer disposed within the atomizing chamber,	Yoon 110 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].
[43.K] the atomizer comprising a resistive heating element; and	Yoon 110 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[43.L] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Yoon 110 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[43.M] the wick disposed between the liquid reservoir and the atomizer.	Yoon 110 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[44.A] An electronic cigarette comprising:	Yoon 110 discloses and/or renders obvious an electronic cigarette. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].

’114 Claim Limitation	Yoon 110
[44.B] a power supply portion comprising a rechargeable battery; and	Yoon 110 discloses and/or renders obvious a power supply portion. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at [0003], [0011], [0024]–[0027], [0029], [0035], [0043]–[0045], Figs. 1–2.
[44.C] a cartridge configured for separable attachment to the power supply portion;	Yoon 110 discloses and/or renders obvious a cartridge configured for separable attachment to the power supply portion. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[44.D] a cartridge housing;	Yoon 110 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.E] a mouthpiece end comprising an aerosol outlet;	Yoon 110 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.F] an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	Yoon 110 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.D].

’114 Claim Limitation	Yoon 110
[44.G] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Yoon 110 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[44.H] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Yoon 110 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[44.I] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Yoon 110 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.G].
[44.J] the liquid reservoir configured to contain an atomization liquid;	Yoon 110 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.H].
[44.K] a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	Yoon 110 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim elements [1.L], [5.A].

’114 Claim Limitation	Yoon 110
[44.L] an atomizer disposed within the atomizing chamber,	Yoon 110 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].
[44.M] the atomizer comprising a resistive heating element; and	Yoon 110 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[44.N] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Yoon 110 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[44.O] the wick disposed between the liquid reservoir and the atomizer.	Yoon 110 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[76.A] The cartridge of claim 43, wherein the liquid reservoir is sealably separated from the atomizing chamber.	Yoon 110 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir is sealably separated from the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.H].

’114 Claim Limitation	Yoon 110
[77.A] The cartridge of claim 43, wherein the liquid reservoir is partially defined between the interior of the cartridge housing and the chimney.	Yoon 110 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir is partially defined between the interior of the cartridge housing and the chimney. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at [011], [0030], Figs. 1, 3.
[80.A] The cartridge of claim 43, wherein the liquid reservoir comprises a clear or translucent window to an exterior of the cartridge housing, the clear or translucent window allowing visual determination of a liquid level within the liquid reservoir.	Yoon 110 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir comprises a clear or translucent window to an exterior of the cartridge housing, the clear or translucent window allowing visual determination of a liquid level within the liquid reservoir. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at [0034], [0040], Figs. 1–2.
[81.A] The cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer,	Yoon 110 discloses and/or renders obvious the cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at Abstract, [0011]–[0012], [0029]–[0030], Fig. 3.
[81.B] the atomizer assembly closing the lower end of the cartridge housing.	Yoon 110 discloses and/or renders obvious the atomizer assembly closing the lower end of the cartridge housing For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at Abstract, [0011]–[0012], [0029]–[0030], Fig. 3.
[86.A] The cartridge of claim 43, wherein the wick is configured to transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer.	Yoon 110 discloses and/or renders obvious the cartridge of claim 43, wherein the wick is configured to transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Yoon 110
	See disclosures for claim element [1.K].
[89.A] The cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber, and	Yoon 110 discloses and/or renders obvious the cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at Abstract, [0011]–[0012], [0029]–[0030], Fig. 3.
[89.B] wherein the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber.	Yoon 110 discloses and/or renders obvious the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.K].
[93.A] The cartridge of claim 43, further comprising the atomization liquid.	Yoon 110 discloses and/or renders obvious the cartridge of claim 43, further comprising the atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Yoon 110 at Abstract, [0011], [0028], Figs. 1–3.

EXHIBIT A-6

EXHIBIT A-6

Invalidity Claim Chart of Chinese Patent No. CN 201869778 U ("Qiuming 778") against U.S. Patent No. RE49,114

Qiuming 778, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 5–7, 29–30, 36, 43–44, 76–77, 80–81, 86, 89, and 93 of U.S. Patent No. RE49,114. Qiuming 778 was filed on November 19, 2010 and published on June 22, 2011. Qiuming 778 qualifies as prior art to the '114 Patent under at least pre-AIA 35 U.S.C. § 102(a).

The chart below identifies exemplary excerpts of Qiuming 778 that disclose and/or render obvious each Asserted Claim, at least under Complainants' apparent claim constructions. Citations to particular excerpts are exemplary and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the invalidity theories described herein.[1]

'114 Claim Limitation	Qiuming 778
[1.A] An electronic cigarette cartridge apparatus, comprising:	To the extent the preamble is limiting, Qiuming 778 discloses and/or renders obvious an electronic cigarette cartridge apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at Abstract, [0001]–[0002], [0005], [0014], [0022], [0028], Figs. 2–7.
[1.B] a housing having a mouthpiece with an aerosol outlet;	Qiuming 778 discloses and/or renders obvious a housing having a mouthpiece with an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0010], [0014], [0026], Figs. 2–7.
[1.C] an atomizer disposed within an atomizing chamber, and	Qiuming 778 discloses and/or renders obvious an atomizer disposed within an atomizing chamber.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '114 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’114 Claim Limitation	Qiuming 778
	For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at Abstract, [0007], [0012], [0014], [0016]-[0020], [0042]–[0046], Figs. 2–7.
[1.D] [the atomizer] operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough;	Qiuming 778 discloses and/or renders obvious the atomizer operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0002], [0007], [0023], [0032], Figs. 2–7.
[1.E] said atomizing chamber having an air inlet, an atomizer outlet coupled to said aerosol outlet,	Qiuming 778 discloses and/or renders obvious said atomizing chamber having an air inlet and an atomizer outlet coupled to said aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0010], [0014], [0016]-[0020], [0026], [0042]–[0046], Figs. 2–7.
[1.F] [said atomizing chamber further having] a first wick aperture, and a second wick aperture;	Qiuming 778 discloses and/or renders obvious said atomizing chamber further having a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0013], [0020], [0041]–[0046], Figs. 2–7.
[1.G] a liquid reservoir disposed within said housing and	Qiuming 778 discloses and/or renders obvious a liquid reservoir disposed within said housing. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0013]–[0014], [0041]–[0046], Figs. 2–7.

’114 Claim Limitation	Qiuming 778
[1.H] [the liquid reservoir] sealably separated from said atomizing chamber; and	Qiuming 778 discloses and/or renders obvious the liquid reservoir sealably separated from said atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0014], [0020], [0044]–[0046], Figs. 5–7.
[1.I] a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture,	Qiuming 778 discloses and/or renders obvious a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0013], [0020], [0041]–[0046], Figs. 2–7.
[1.J] the wick disposed between the liquid reservoir and the atomizer and	Qiuming 778 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0013], [0020], [0041]–[0046], Figs. 2–7.
[1.K] [the wick] configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer;	Qiuming 778 discloses and/or renders obvious the wick configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0002], [0013], [0041]–[0047], Figs. 2–7.
[1.L] wherein said atomizer outlet and said aerosol outlet are coupled by a chimney.	Qiuming 778 discloses and/or renders obvious said atomizer outlet and said aerosol outlet are coupled by a chimney. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0014], [0016]–[0017], [0019], [0025]–[0026], [0042]–[0046], Figs. 3–7.

’114 Claim Limitation	Qiuming 778
[5.A] The apparatus of claim 1, wherein said chimney sealably passes through said liquid reservoir.	Qiuming 778 discloses and/or renders obvious the apparatus of claim 1, wherein said chimney sealably passes through said liquid reservoir. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0014], [0020], [0044]–[0046], Figs. 5–7.
[6.A] The apparatus of claim 1, wherein said atomizer is a resistive heating element.	Qiuming 778 discloses and/or renders obvious the apparatus of claim 1, wherein said atomizer is a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0012]–[0013], [0041]–[0047], Figs. 2–7.
[7.A] The apparatus of claim 6, wherein said wick partially engages said resistive heating element.	Qiuming 778 discloses and/or renders obvious the apparatus of claim 6, wherein said wick partially engages said resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0013], Figs. 2–7.
[29.A] The apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet.	Qiuming 778 discloses and/or renders obvious the apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0014], [0020], [0044]–[0046], Figs. 5–7.
[30.A] The apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet.	Qiuming 778 discloses and/or renders obvious the apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0014], [0020], [0044]–[0046], Figs. 5–7.

’114 Claim Limitation	Qiuming 778
[36.A] The apparatus of claim 1, coupled to a power supply portion,	Qiuming 778 discloses and/or renders obvious the apparatus of claim 1, coupled to a power supply portion. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0002], [0023], Figs. 2–7, claim 8.
[36.B] wherein the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer.	
[43.A] A cartridge comprising:	Qiuming 778 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[43.B] a cartridge housing;	Qiuming 778 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.C] a mouthpiece end comprising an aerosol outlet;	Qiuming 778 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.D] an atomizing chamber disposed within the cartridge	Qiuming 778 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end.

’114 Claim Limitation	Qiuming 778
housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at Abstract, [0007], [0012], [0014], [0016]-[0020], [0042]–[0046], Figs. 2–7.
[43.E] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Qiuming 778 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[43.F] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Qiuming 778 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[43.G] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Qiuming 778 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0013]–[0014], Figs. 2–7.
[43.H] the liquid reservoir configured to contain an atomization liquid;	Qiuming 778 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0013]–[0014], [0041]–[0046], Figs. 2–7.
[43.I] a chimney forming at least part of an aerosol outlet path	Qiuming 778 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet.

’114 Claim Limitation	Qiuming 778
sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim elements [1.L], [5.A].
[43.J] an atomizer disposed within the atomizing chamber,	Qiuming 778 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].
[43.K] the atomizer comprising a resistive heating element; and	Qiuming 778 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[43.L] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Qiuming 778 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[43.M] the wick disposed between the liquid reservoir and the atomizer.	Qiuming 778 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[44.A] An electronic cigarette comprising:	Qiuming 778 discloses and/or renders obvious an electronic cigarette.

’114 Claim Limitation	Qiuming 778
	For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[44.B] a power supply portion comprising a rechargeable battery; and	Qiuming 778 discloses and/or renders obvious a power supply portion comprising a rechargeable battery. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0002], [0023], Figs. 2–7, claim 8.
[44.C] a cartridge configured for separable attachment to the power supply portion;	Qiuming 778 discloses and/or renders obvious a cartridge configured for separable attachment to the power supply portion. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[44.D] a cartridge housing;	Qiuming 778 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.E] a mouthpiece end comprising an aerosol outlet;	Qiuming 778 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.F] an atomizing chamber disposed within the cartridge housing proximate a lower end of	Qiuming 778 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Qiuming 778
the cartridge housing opposite the mouthpiece end,	*See* disclosures for claim element [43.D].
[44.G] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Qiuming 778 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[44.H] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Qiuming 778 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[44.I] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Qiuming 778 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.G].
[44.J] the liquid reservoir configured to contain an atomization liquid;	Qiuming 778 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.H].
[44.K] a chimney forming at least part of an aerosol outlet path sealably passing through the	Qiuming 778 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Qiuming 778
reservoir between the atomizer outlet and the aerosol outlet;	*See* disclosures for claim elements [1.L], [5.A].
[44.L] an atomizer disposed within the atomizing chamber,	Qiuming 778 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].
[44.M] the atomizer comprising a resistive heating element; and	Qiuming 778 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[44.N] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Qiuming 778 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[44.O] the wick disposed between the liquid reservoir and the atomizer.	Qiuming 778 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[76.A] The cartridge of claim 43, wherein the liquid reservoir is sealably separated from the atomizing chamber.	Qiuming 778 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir is sealably separated from the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Qiuming 778
	See disclosures for claim element [1.H].
[77.A] The cartridge of claim 43, wherein the liquid reservoir is partially defined between the interior of the cartridge housing and the chimney.	Qiuming 778 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir is partially defined between the interior of the cartridge housing and the chimney. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0013]–[0014], Figs. 2–7.
[80.A] The cartridge of claim 43, wherein the liquid reservoir comprises a clear or translucent window to an exterior of the cartridge housing, the clear or translucent window allowing visual determination of a liquid level within the liquid reservoir.	
[81.A] The cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer,	Qiuming 778 discloses and/or renders obvious the cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0012]–[0013], [0041]–[0046], Figs. 2–7.
[81.B] the atomizer assembly closing the lower end of the cartridge housing.	Qiuming 778 discloses and/or renders obvious the atomizer assembly closing the lower end of the cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0044]–[0045], Figs. 5–6.
[86.A] The cartridge of claim 43, wherein the wick is configured to	Qiuming 778 discloses and/or renders obvious the cartridge of claim 43, wherein the wick is configured to transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer.

’114 Claim Limitation	Qiuming 778
transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer.	For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.K].
[89.A] The cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber, and	Qiuming 778 discloses and/or renders obvious the cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at Abstract, [0007], [0012], [0014], [0016]-[0020], [0042]–[0046], Figs. 2–7.
[89.B] wherein the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber.	Qiuming 778 discloses and/or renders obvious the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.K].
[93.A] The cartridge of claim 43, further comprising the atomization liquid.	Qiuming 778 discloses and/or renders obvious the cartridge of claim 43, further comprising the atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 778 at [0013]–[0014], [0041]–[0046], Figs. 2–7.

EXHIBIT A-7

EXHIBIT A-7

Invalidity Claim Chart of Korean Utility Model No. KR 20-0453400 Y1 ("Yeom 400") against U.S. Patent No. RE49,114

Yeom 400, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 5–7, 29–30, 36, 43–44, 76–77, 80–81, 86, 89, and 93 of U.S. Patent No. RE49,114. Yeom 400 was filed on December 31, 2010 and published on April 28, 2011. Yeom 400 qualifies as prior art to the '114 Patent under at least pre-AIA 35 U.S.C. § 102(a).

The chart below identifies exemplary excerpts of Yeom 400 that disclose and/or render obvious each Asserted Claim, at least under Complainants' apparent claim constructions. Citations to particular excerpts are exemplary and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the invalidity theories described herein.[1]

'114 Claim Limitation	Yeom 400
[1.A] An electronic cigarette cartridge apparatus, comprising:	To the extent the preamble is limiting, Yeom 400 discloses and/or renders obvious an electronic cigarette cartridge apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at Abstract, [0001], [0007]–[0010], Fig. 4.
[1.B] a housing having a mouthpiece with an aerosol outlet;	Yeom 400 discloses and/or renders obvious a housing having a mouthpiece with an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0022], [0027]–[0029], [0053]–[0054], [0066]–[0068], Figs. 1–4.
[1.C] an atomizer disposed within an atomizing chamber, and	Yeom 400 discloses and/or renders obvious an atomizer disposed within an atomizing chamber.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '114 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’114 Claim Limitation	Yeom 400
	For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0013]–[0014], [0026], [0042]–[0049], [0055], Figs. 2, 4.
[1.D] [the atomizer] operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough;	Yeom 400 discloses and/or renders obvious the atomizer operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0030]–[0033], [0045], [0051], [0054]–[0056], Figs. 3–4.
[1.E] said atomizing chamber having an air inlet, an atomizer outlet coupled to said aerosol outlet,	Yeom 400 discloses and/or renders obvious said atomizing chamber having an air inlet and an atomizer outlet coupled to said aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0013], [0043]–[0046], [0055], Figs. 1–2, 4.
[1.F] [said atomizing chamber further having] a first wick aperture, and a second wick aperture;	Yeom 400 discloses and/or renders obvious said atomizing chamber further having a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0014], [0051], [0060]–[0061], [0068], Figs. 2, 4.
[1.G] a liquid reservoir disposed within said housing and	Yeom 400 discloses and/or renders obvious a liquid reservoir disposed within said housing. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at Abstract, [0013], [0024]–[0026], [0048], [0061], [0066]–[0067], Figs. 1, 4.

’114 Claim Limitation	Yeom 400
[1.H] [the liquid reservoir] sealably separated from said atomizing chamber; and	Yeom 400 discloses and/or renders obvious the liquid reservoir sealably separated from said atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at Abstract, [0001], [0010]–[0011], [0016], [0022]–[0024], [0057]–[0059].
[1.I] a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture,	Yeom 400 discloses and/or renders obvious a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0008], [0014], [0049]–[0051], [0054], [0060]–[0061], [0068], Figs. 2, 4.
[1.J] the wick disposed between the liquid reservoir and the atomizer and	Yeom 400 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0008], [0014], [0049]–[0051], [0054], [0060]–[0061], [0068], Figs. 2, 4.
[1.K] [the wick] configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer;	Yeom 400 discloses and/or renders obvious the wick configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0013]–[0014], [0051], [0054], Figs. 1–2, 4.
[1.L] wherein said atomizer outlet and said aerosol outlet are coupled by a chimney.	Yeom 400 discloses and/or renders obvious said atomizer outlet and said aerosol outlet are coupled by a chimney. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at Abstract, [0007], [0013], [0023], Figs. 1–2, 4.

’114 Claim Limitation	Yeom 400
[5.A] The apparatus of claim 1, wherein said chimney sealably passes through said liquid reservoir.	Yeom 400 discloses and/or renders obvious the apparatus of claim 1, wherein said chimney sealably passes through said liquid reservoir. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at Abstract, [0001], [0007], [0010]–[0011], [0013], [0016], [0023], [0055], [0057]–[0058], Figs. 1–2, 4.
[6.A] The apparatus of claim 1, wherein said atomizer is a resistive heating element.	Yeom 400 discloses and/or renders obvious the apparatus of claim 1, wherein said atomizer is a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0043]–[0046], Figs. 2, 4.
[7.A] The apparatus of claim 6, wherein said wick partially engages said resistive heating element.	Yeom 400 discloses and/or renders obvious the apparatus of claim 6, wherein said wick partially engages said resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0014], [0043]–[0046], [0051], Figs. 2, 4.
[29.A] The apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet.	Yeom 400 discloses and/or renders obvious the apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at Abstract, [0001], [0007], [0010]–[0013], [0016], [0023], [0043]–[0046], [0055]–[0058], Figs. 1–2, 4.
[30.A] The apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet.	Yeom 400 discloses and/or renders obvious the apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at Abstract, [0001], [0007], [0010]–[0013], [0016], [0022]–[0023], [0043]–[0046], [0055]–[0058], Figs. 1–2, 4.

’114 Claim Limitation	Yeom 400
[36.A] The apparatus of claim 1, coupled to a power supply portion,	Yeom 400 discloses and/or renders obvious the apparatus of claim 1, coupled to a power supply portion. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at Abstract, [0007], [0029]–[0033], [0045], [0056], Figs. 3–4.
[36.B] wherein the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer.	Yeom 400 discloses and/or renders obvious the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at Abstract, [0007], [0029]–[0033], [0054]–[0056], Figs. 3–4.
[43.A] A cartridge comprising:	Yeom 400 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[43.B] a cartridge housing;	Yeom 400 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.C] a mouthpiece end comprising an aerosol outlet;	Yeom 400 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].

’114 Claim Limitation	Yeom 400
[43.D] an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	Yeom 400 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at Abstract, [0007], [0013]–[0014], [0022], [0026], [0038], [0042]–[0049], [0055], Figs. 2, 4.
[43.E] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Yeom 400 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[43.F] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Yeom 400 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[43.G] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Yeom 400 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at Figs. Abstract, [0007], [0013]–[0014], [0047]–[0049], [0060]–[0061], 1–2, 4.
[43.H] the liquid reservoir configured to contain an atomization liquid;	Yeom 400 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0013], [0024]–[0026], [0048], [0061], [0066]–[0067], Figs. 1, 4.

’114 Claim Limitation	Yeom 400
[43.I] a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	Yeom 400 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim elements [1.L], [5.A].
[43.J] an atomizer disposed within the atomizing chamber,	Yeom 400 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].
[43.K] the atomizer comprising a resistive heating element; and	Yeom 400 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[43.L] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Yeom 400 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[43.M] the wick disposed between the liquid reservoir and the atomizer.	Yeom 400 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].

’114 Claim Limitation	Yeom 400
[44.A] An electronic cigarette comprising:	Yeom 400 discloses and/or renders obvious an electronic cigarette. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[44.B] a power supply portion comprising a rechargeable battery; and	Yeom 400 discloses and/or renders obvious a power supply portion comprising a rechargeable battery. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at Abstract, [0029]–[0033], [0045], Figs. 3–4.
[44.C] a cartridge configured for separable attachment to the power supply portion;	Yeom 400 discloses and/or renders obvious a cartridge configured for separable attachment to the power supply portion. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[44.D] a cartridge housing;	Yeom 400 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.E] a mouthpiece end comprising an aerosol outlet;	Yeom 400 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.F] an atomizing chamber disposed within the cartridge	Yeom 400 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end.

’114 Claim Limitation	Yeom 400
housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.D].
[44.G] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Yeom 400 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[44.H] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Yeom 400 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[44.I] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Yeom 400 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.G].
[44.J] the liquid reservoir configured to contain an atomization liquid;	Yeom 400 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.H].
[44.K] a chimney forming at least part of an aerosol outlet path	Yeom 400 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet.

’114 Claim Limitation	Yeom 400
sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim elements [1.L], [5.A].
[44.L] an atomizer disposed within the atomizing chamber,	Yeom 400 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].
[44.M] the atomizer comprising a resistive heating element; and	Yeom 400 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[44.N] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Yeom 400 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[44.O] the wick disposed between the liquid reservoir and the atomizer.	Yeom 400 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[76.A] The cartridge of claim 43, wherein the liquid reservoir is	Yeom 400 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir is sealably separated from the atomizing chamber.

’114 Claim Limitation	Yeom 400
sealably separated from the atomizing chamber.	For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.H].
[77.A] The cartridge of claim 43, wherein the liquid reservoir is partially defined between the interior of the cartridge housing and the chimney.	Yeom 400 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir is partially defined between the interior of the cartridge housing and the chimney. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0013], [0023], [0055], Figs. 1–2, 4.
[80.A] The cartridge of claim 43, wherein the liquid reservoir comprises a clear or translucent window to an exterior of the cartridge housing, the clear or translucent window allowing visual determination of a liquid level within the liquid reservoir.	Yeom 400 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir comprises a clear or translucent window to an exterior of the cartridge housing, the clear or translucent window allowing visual determination of a liquid level within the liquid reservoir. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0011], [0025], [0067], Figs. 1, 4.
[81.A] The cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer,	Yeom 400 discloses and/or renders obvious the cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0033], [0043], Figs. 2, 4.
[81.B] the atomizer assembly closing the lower end of the cartridge housing.	Yeom 400 discloses and/or renders obvious the atomizer assembly closing the lower end of the cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0033], [0043]–[0046], Figs. 2, 4.

’114 Claim Limitation	Yeom 400
[86.A] The cartridge of claim 43, wherein the wick is configured to transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer.	Yeom 400 discloses and/or renders obvious the cartridge of claim 43, wherein the wick is configured to transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.K].
[89.A] The cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber, and	Yeom 400 discloses and/or renders obvious the cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0013]–[0014], [0026], [0042]–[0049], [0055], Figs. 2, 4.
[89.B] wherein the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber.	Yeom 400 discloses and/or renders obvious the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.K].
[93.A] The cartridge of claim 43, further comprising the atomization liquid.	Yeom 400 discloses and/or renders obvious the cartridge of claim 43, further comprising the atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0013], [0024]–[0026], [0048], [0061], [0066]–[0067], Figs. 1, 4.

EXHIBIT A-8

EXHIBIT A-8

Invalidity Claim Chart of Korean Utility Model No. KR 20-0453424 Y1 ("Yeom 424") against U.S. Patent No. RE49,114

Yeom 424, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 5–7, 29–30, 36, 43–44, 76–77, 80–81, 86, 89, and 93 of U.S. Patent No. RE49,114. Yeom 424 was filed on November 8, 2010 and published on May 2, 2011. Yeom 424 qualifies as prior art to the '114 Patent under at least pre-AIA 35 U.S.C. § 102(a).

The chart below identifies exemplary excerpts of Yeom 424 that disclose and/or render obvious each Asserted Claim, at least under Complainants' apparent claim constructions. Citations to particular excerpts are exemplary and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the invalidity theories described herein.[1]

'114 Claim Limitation	Yeom 424
[1.A] An electronic cigarette cartridge apparatus, comprising:	To the extent the preamble is limiting, Yeom 424 discloses and/or renders obvious an electronic cigarette cartridge apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract, [0001], [0006], [0013], Figs. 1–4.
[1.B] a housing having a mouthpiece with an aerosol outlet;	Yeom 424 discloses and/or renders obvious a housing having a mouthpiece with an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract, [0006], [0013], [0024]–[0026], Figs. 1–4.
[1.C] an atomizer disposed within an atomizing chamber, and	Yeom 424 discloses and/or renders obvious an atomizer disposed within an atomizing chamber.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '114 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’114 Claim Limitation	Yeom 424
	For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0034]–[0047], Figs. 1–4.
[1.D] [the atomizer] operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough;	Yeom 424 discloses and/or renders obvious the atomizer operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract, [0006], [0013], [0028], [0030], [0032], [0043], [0046]–[0048], Figs. 2–4.
[1.E] said atomizing chamber having an air inlet, an atomizer outlet coupled to said aerosol outlet,	Yeom 424 discloses and/or renders obvious said atomizing chamber having an air inlet and an atomizer outlet coupled to said aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0026], [0034]–[0047], Figs. 1–4.
[1.F] [said atomizing chamber further having] a first wick aperture, and a second wick aperture;	Yeom 424 discloses and/or renders obvious said atomizing chamber further having a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0039]–[0043], [0046], [0052]–[0054], Figs. 2–4.
[1.G] a liquid reservoir disposed within said housing and	Yeom 424 discloses and/or renders obvious a liquid reservoir disposed within said housing. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract, [0006], [0013], [0024]–[0027], [0045]–[0046], [0052]–[0054], Figs. 2–4.

’114 Claim Limitation	Yeom 424
[1.H] [the liquid reservoir] sealably separated from said atomizing chamber; and	Yeom 424 discloses and/or renders obvious the liquid reservoir sealably separated from said atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract, [0001], [0005]–[0011], [0016], [0024]–[0027], [0049]–[0051], Figs. 1–4.
[1.I] a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture,	Yeom 424 discloses and/or renders obvious a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0007], [0013], [0039]–[0043], [0046], [0052]–[0054], Figs. 2–4.
[1.J] the wick disposed between the liquid reservoir and the atomizer and	Yeom 424 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0007], [0013], [0039]–[0043], [0046], [0052]–[0054], Figs. 2–4.
[1.K] [the wick] configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer;	Yeom 424 discloses and/or renders obvious the wick configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0007], [0013], [0039]–[0043], [0046], [0052]–[0054], Figs. 2–4.
[1.L] wherein said atomizer outlet and said aerosol outlet are coupled by a chimney.	Yeom 424 discloses and/or renders obvious said atomizer outlet and said aerosol outlet are coupled by a chimney. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract, [0006], [0013], [0025]–[0026], [0047], Figs. 2–4.

’114 Claim Limitation	Yeom 424
[5.A] The apparatus of claim 1, wherein said chimney sealably passes through said liquid reservoir.	Yeom 424 discloses and/or renders obvious the apparatus of claim 1, wherein said chimney sealably passes through said liquid reservoir. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract, [0001], [0005]–[0011], [0013], [0016], [0024]–[0027], [0047], [0049]–[0051], Figs. 1–4.
[6.A] The apparatus of claim 1, wherein said atomizer is a resistive heating element.	Yeom 424 discloses and/or renders obvious the apparatus of claim 1, wherein said atomizer is a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0035]–[0038], Figs. 2–4.
[7.A] The apparatus of claim 6, wherein said wick partially engages said resistive heating element.	Yeom 424 discloses and/or renders obvious the apparatus of claim 6, wherein said wick partially engages said resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0037], [0043], [0046], Figs. 2–4.
[29.A] The apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet.	Yeom 424 discloses and/or renders obvious the apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract, [0001], [0005]–[0011], [0013], [0016], [0024]–[0027], [0047], [0049]–[0051], Figs. 1–4.
[30.A] The apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet.	Yeom 424 discloses and/or renders obvious the apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract, [0001], [0005]–[0011], [0013], [0016], [0024]–[0027], [0047], [0049]–[0051], Figs. 1–4.

’114 Claim Limitation	Yeom 424
[36.A] The apparatus of claim 1, coupled to a power supply portion,	Yeom 424 discloses and/or renders obvious the apparatus of claim 1, coupled to a power supply portion. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract, [0006], [0010], [0013], [0028]–[0034], Figs. 1–4.
[36.B] wherein the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer.	Yeom 424 discloses and/or renders obvious the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract, [0006], [0010], [0013], [0028]–[0034], Figs. 1–4.
[43.A] A cartridge comprising:	Yeom 424 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[43.B] a cartridge housing;	Yeom 424 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.C] a mouthpiece end comprising an aerosol outlet;	Yeom 424 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].

’114 Claim Limitation	Yeom 424
[43.D] an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	Yeom 424 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0033]–[0037], [0040]–[0047], Figs. 1–4.
[43.E] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Yeom 424 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[43.F] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Yeom 424 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[43.G] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Yeom 424 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract, [0006], [0013], [0024]–[0027], [0039]–[0045], [0052]–[0054], Figs. 2–4.
[43.H] the liquid reservoir configured to contain an atomization liquid;	Yeom 424 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract, [0006], [0013], [0024]–[0027], [0045]–[0046], [0052]–[0054], Figs. 2–4.

’114 Claim Limitation	Yeom 424
[43.I] a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	Yeom 424 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim elements [1.L], [5.A].
[43.J] an atomizer disposed within the atomizing chamber,	Yeom 424 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].
[43.K] the atomizer comprising a resistive heating element; and	Yeom 424 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[43.L] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Yeom 424 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[43.M] the wick disposed between the liquid reservoir and the atomizer.	Yeom 424 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].

’114 Claim Limitation	Yeom 424
[44.A] An electronic cigarette comprising:	Yeom 424 discloses and/or renders obvious an electronic cigarette. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[44.B] a power supply portion comprising a rechargeable battery; and	Yeom 424 discloses and/or renders obvious a power supply portion comprising a rechargeable battery. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract, [0006], [0010], [0013], [0028]–[0034], Figs. 1–4.
[44.C] a cartridge configured for separable attachment to the power supply portion;	Yeom 424 discloses and/or renders obvious a cartridge configured for separable attachment to the power supply portion. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[44.D] a cartridge housing;	Yeom 424 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.E] a mouthpiece end comprising an aerosol outlet;	Yeom 424 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.F] an atomizing chamber disposed within the cartridge	Yeom 424 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end.

’114 Claim Limitation	Yeom 424
housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.D].
[44.G] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Yeom 424 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[44.H] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Yeom 424 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[44.I] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Yeom 424 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.G].
[44.J] the liquid reservoir configured to contain an atomization liquid;	Yeom 424 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.H].
[44.K] a chimney forming at least part of an aerosol outlet path	Yeom 424 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet.

’114 Claim Limitation	Yeom 424
sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim elements [1.L], [5.A].
[44.L] an atomizer disposed within the atomizing chamber,	Yeom 424 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].
[44.M] the atomizer comprising a resistive heating element; and	Yeom 424 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[44.N] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Yeom 424 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[44.O] the wick disposed between the liquid reservoir and the atomizer.	Yeom 424 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[76.A] The cartridge of claim 43, wherein the liquid reservoir is	Yeom 424 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir is sealably separated from the atomizing chamber.

’114 Claim Limitation	Yeom 424
sealably separated from the atomizing chamber.	For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.H].
[77.A] The cartridge of claim 43, wherein the liquid reservoir is partially defined between the interior of the cartridge housing and the chimney.	Yeom 424 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir is partially defined between the interior of the cartridge housing and the chimney. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract, [0006], [0013], [0024]–[0027], Figs. 1–4.
[80.A] The cartridge of claim 43, wherein the liquid reservoir comprises a clear or translucent window to an exterior of the cartridge housing, the clear or translucent window allowing visual determination of a liquid level within the liquid reservoir.	Yeom 424 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir comprises a clear or translucent window to an exterior of the cartridge housing, the clear or translucent window allowing visual determination of a liquid level within the liquid reservoir. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract, [0006], [0013], [0024]–[0027], [0045]–[0046], [0052]–[0054], Figs. 2–4.
[81.A] The cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer,	Yeom 424 discloses and/or renders obvious the cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0032]–[0038], Figs. 2–4.
[81.B] the atomizer assembly closing the lower end of the cartridge housing.	Yeom 424 discloses and/or renders obvious the atomizer assembly closing the lower end of the cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0032]–[0038], [0045]–[0047], Figs. 2–4.

’114 Claim Limitation	Yeom 424
[86.A] The cartridge of claim 43, wherein the wick is configured to transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer.	Yeom 424 discloses and/or renders obvious the cartridge of claim 43, wherein the wick is configured to transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.K].
[89.A] The cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber, and	Yeom 424 discloses and/or renders obvious the cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0034]–[0047], Figs. 1–4.
[89.B] wherein the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber.	Yeom 424 discloses and/or renders obvious the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.K].
[93.A] The cartridge of claim 43, further comprising the atomization liquid.	Yeom 424 discloses and/or renders obvious the cartridge of claim 43, further comprising the atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract, [0006], [0013], [0024]–[0027], [0045]–[0046], [0052]–[0054], Figs. 2–4.

EXHIBIT A-9

EXHIBIT A-9

Invalidity Claim Chart of Chinese Patent No. CN 201085044 Y ("Fang 044") against U.S. Patent No. RE49,114

Fang 044, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 5–7, 29–30, 36, 43–44, 76–77, 80–81, 86, 89, and 93 of U.S. Patent No. RE49,114. Fang 044 was filed on September 18, 2007 and published on July 16, 2008. Fang 044 qualifies as prior art to the '114 Patent under at least pre-AIA 35 U.S.C. § 102(b).

The chart below identifies exemplary excerpts of Fang 044 that disclose and/or render obvious each Asserted Claim, at least under Complainants' apparent claim constructions. Citations to particular excerpts are exemplary and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the invalidity theories described herein.[1]

'114 Claim Limitation	Fang 044
[1.A] An electronic cigarette cartridge apparatus, comprising:	To the extent the preamble is limiting, Fang 044 discloses and/or renders obvious an electronic cigarette cartridge apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at Abstract; p.4 ¶1,4; p.6 ¶1–4; Figs. 1–3.
[1.B] a housing having a mouthpiece with an aerosol outlet;	Fang 044 discloses and/or renders obvious a housing having a mouthpiece with an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at Abstract; p.4 ¶¶1,4; p.5 ¶¶1–3; p.6 ¶¶1–4; Figs. 1–3.
[1.C] an atomizer disposed within an atomizing chamber, and	Fang 044 discloses and/or renders obvious an atomizer disposed within an atomizing chamber.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '114 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’114 Claim Limitation	Fang 044
	For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at pp. 4–6; Figs. 1–2.
[1.D] [the atomizer] operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough;	Fang 044 discloses and/or renders obvious the atomizer operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at Abstract; p.4 ¶¶1,3–4; p.4 ¶¶2–3; p.6; p.7 ¶2; Figs. 1–3.
[1.E] said atomizing chamber having an air inlet, an atomizer outlet coupled to said aerosol outlet,	Fang 044 discloses and/or renders obvious said atomizing chamber having an air inlet and an atomizer outlet coupled to said aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at Abstract; pp. 5–6; p.7 ¶¶1,3; Figs. 1–2.
[1.F] [said atomizing chamber further having] a first wick aperture, and a second wick aperture;	Fang 044 discloses and/or renders obvious said atomizing chamber further having a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at p.5 ¶3; p.6 ¶¶4–5; p.7 ¶1; Figs. 1–2.
[1.G] a liquid reservoir disposed within said housing and	Fang 044 discloses and/or renders obvious a liquid reservoir disposed within said housing. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at Abstract; p.5 ¶¶1,3; p.6 ¶¶2,4–5; p.7 ¶1; Figs. 1–2.
[1.H] [the liquid reservoir] sealably separated from said atomizing chamber; and	Fang 044 discloses and/or renders obvious the liquid reservoir sealably separated from said atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Fang 044
	Fang 044 at p.7 ¶¶1,3; Figs. 1–2
[1.I] a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture,	Fang 044 discloses and/or renders obvious a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at p.5 ¶3; p.6 ¶¶4–5; p.7 ¶1; Figs. 1–2.
[1.J] the wick disposed between the liquid reservoir and the atomizer and	Fang 044 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at p.5 ¶3; p.6 ¶¶4–5; p.7 ¶1; Figs. 1–2.
[1.K] [the wick] configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer;	Fang 044 discloses and/or renders obvious the wick configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at p.5 ¶3; p.6 ¶¶4–5; Figs. 1–2.
[1.L] wherein said atomizer outlet and said aerosol outlet are coupled by a chimney.	Fang 044 discloses and/or renders obvious said atomizer outlet and said aerosol outlet are coupled by a chimney. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at Abstract; p.5 ¶1; p.6 ¶¶2,5; p.7 ¶3; Fig. 1.
[5.A] The apparatus of claim 1, wherein said chimney sealably	Fang 044 discloses and/or renders obvious the apparatus of claim 1, wherein said chimney sealably passes through said liquid reservoir. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Fang 044
passes through said liquid reservoir.	Fang 044 at Abstract; p.5 ¶1; p.6 ¶¶2,5; p.7 ¶3; Fig. 1.
[6.A] The apparatus of claim 1, wherein said atomizer is a resistive heating element.	Fang 044 discloses and/or renders obvious the apparatus of claim 1, wherein said atomizer is a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at pp. 5–6; Figs. 1–2.
[7.A] The apparatus of claim 6, wherein said wick partially engages said resistive heating element.	Fang 044 discloses and/or renders obvious the apparatus of claim 6, wherein said wick partially engages said resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at p.5 ¶3; p.6 ¶¶4–5; Figs. 1–2.
[29.A] The apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet.	Fang 044 discloses and/or renders obvious the apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at Abstract; p.5 ¶1; p.6 ¶¶2,5; p.7 ¶3; Fig. 1.
[30.A] The apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet.	Fang 044 discloses and/or renders obvious the apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at Abstract; p.5 ¶1; p.6 ¶¶2,5; p.7 ¶3; Fig. 1.
[36.A] The apparatus of claim 1, coupled to a power supply portion,	Fang 044 discloses and/or renders obvious the apparatus of claim 1, coupled to a power supply portion. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Fang 044
	Fang 044 at p.4 ¶4; p.5 ¶3; p.6 ¶¶1,4–5; p.7 ¶2; Figs. 1–3.
[36.B] wherein the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer.	Fang 044 discloses and/or renders obvious the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at pp.4–6; Figs. 1–3.
[43.A] A cartridge comprising:	Fang 044 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[43.B] a cartridge housing;	Fang 044 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.C] a mouthpiece end comprising an aerosol outlet;	Fang 044 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.D] an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	Fang 044 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Fang 044
	Fang 044 at pp. 5–6; Figs. 1–2.
[43.E] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Fang 044 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[43.F] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Fang 044 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[43.G] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Fang 044 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at Abstract; p.5 ¶¶1,3; p.6 ¶¶2,4–5; p.7 ¶¶1,3; Figs. 1–2.
[43.H] the liquid reservoir configured to contain an atomization liquid;	Fang 044 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at Abstract; pp.4–7; Figs. 1–2.
[43.I] a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	Fang 044 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Fang 044
	See disclosures for claim elements [1.L], [5.A].
[43.J] an atomizer disposed within the atomizing chamber,	Fang 044 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].
[43.K] the atomizer comprising a resistive heating element; and	Fang 044 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[43.L] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Fang 044 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[43.M] the wick disposed between the liquid reservoir and the atomizer.	Fang 044 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[44.A] An electronic cigarette comprising:	Fang 044 discloses and/or renders obvious an electronic cigarette. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].

’114 Claim Limitation	Fang 044
[44.B] a power supply portion comprising a rechargeable battery; and	Fang 044 discloses and/or renders obvious a power supply portion comprising a rechargeable battery. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at p.4 ¶4; p.5 ¶3; p.6 ¶¶1,4–5; p.7 ¶2; Figs. 1–3.
[44.C] a cartridge configured for separable attachment to the power supply portion;	Fang 044 discloses and/or renders obvious a cartridge configured for separable attachment to the power supply portion. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[44.D] a cartridge housing;	Fang 044 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.E] a mouthpiece end comprising an aerosol outlet;	Fang 044 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.F] an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	Fang 044 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.D].

’114 Claim Limitation	Fang 044
[44.G] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Fang 044 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[44.H] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Fang 044 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[44.I] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Fang 044 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.G].
[44.J] the liquid reservoir configured to contain an atomization liquid;	Fang 044 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.H].
[44.K] a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	Fang 044 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim elements [1.L], [5.A].

’114 Claim Limitation	Fang 044
[44.L] an atomizer disposed within the atomizing chamber,	Fang 044 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].
[44.M] the atomizer comprising a resistive heating element; and	Fang 044 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[44.N] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Fang 044 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[44.O] the wick disposed between the liquid reservoir and the atomizer.	Fang 044 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[76.A] The cartridge of claim 43, wherein the liquid reservoir is sealably separated from the atomizing chamber.	Fang 044 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir is sealably separated from the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.H].

’114 Claim Limitation	Fang 044
[77.A] The cartridge of claim 43, wherein the liquid reservoir is partially defined between the interior of the cartridge housing and the chimney.	Fang 044 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir is partially defined between the interior of the cartridge housing and the chimney. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at Abstract; p.5 ¶¶1,3; p.6 ¶¶2,4–5; p.7 ¶¶1,3; Figs. 1–2.
[80.A] The cartridge of claim 43, wherein the liquid reservoir comprises a clear or translucent window to an exterior of the cartridge housing, the clear or translucent window allowing visual determination of a liquid level within the liquid reservoir.	
[81.A] The cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer,	Fang 044 discloses and/or renders obvious the cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at pp. 4–6; Figs. 1–2.
[81.B] the atomizer assembly closing the lower end of the cartridge housing.	Fang 044 discloses and/or renders obvious the atomizer assembly closing the lower end of the cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at pp. 4–6; Figs. 1–2.
[86.A] The cartridge of claim 43, wherein the wick is configured to transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer.	Fang 044 discloses and/or renders obvious the cartridge of claim 43, wherein the wick is configured to transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Fang 044
	See disclosures for claim element [1.K].
[89.A] The cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber, and	Fang 044 discloses and/or renders obvious the cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at pp. 4–6; Figs. 1–2
[89.B] wherein the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber.	Fang 044 discloses and/or renders obvious the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.K].
[93.A] The cartridge of claim 43, further comprising the atomization liquid.	Fang 044 discloses and/or renders obvious the cartridge of claim 43, further comprising the atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Fang 044 at Abstract; pp.4–7; Figs. 1–2.

EXHIBIT A-10

EXHIBIT A-10

Invalidity Claim Chart of U.S. Patent Application Publication No. 2009/0283103A1 ("Nielsen 103") against U.S. Patent No. RE49,114

Nielsen 103, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 5–7, 29–30, 36, 43–44, 76–77, 80–81, 86, 89, and 93 of U.S. Patent No. RE49,114. Nielsen 103 was filed on May 13, 2009 and published on November 19, 2009. Nielsen 103 qualifies as prior art to the '114 Patent under at least pre-AIA 35 U.S.C. § 102(b).

The chart below identifies exemplary excerpts of Nielsen 103 that disclose and/or render obvious each Asserted Claim, at least under Complainants' apparent claim constructions. Citations to particular excerpts are exemplary and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the invalidity theories described herein.[1]

'114 Claim Limitation	Nielsen 103
[1.A] An electronic cigarette cartridge apparatus, comprising:	To the extent the preamble is limiting, Nielsen 103 discloses and/or renders obvious an electronic cigarette cartridge apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at Abstract, [0027]–[0028], [0035].
[1.B] a housing having a mouthpiece with an aerosol outlet;	Nielsen 103 discloses and/or renders obvious a housing having a mouthpiece with an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0006], [0028], [0035], [0038]–[0039], Figs. 1F, 2.
[1.C] an atomizer disposed within an atomizing chamber, and	Nielsen 103 discloses and/or renders obvious an atomizer disposed within an atomizing chamber.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '114 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’114 Claim Limitation	Nielsen 103
	For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0006], [0023]–[0028], [0035], [0038]–[0039], Figs. 1F, 2.
[1.D] [the atomizer] operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough;	Nielsen 103 discloses and/or renders obvious the atomizer operable to selectively generate an aerosol of a liquid in response to electric current flowing therethrough. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0024]–[0028], [0035], [0041], Figs. 1F, 2.
[1.E] said atomizing chamber having an air inlet, an atomizer outlet coupled to said aerosol outlet,	Nielsen 103 discloses and/or renders obvious said atomizing chamber having an air inlet and an atomizer outlet coupled to said aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0006], [0023]–[0025], [0028], [0035], [0038]–[0039], Figs. 1F, 2.
[1.F] [said atomizing chamber further having] a first wick aperture, and a second wick aperture;	Nielsen 103 discloses and/or renders obvious said atomizing chamber further having a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0026], [0036], [0039], Figs. 1F, 2.
[1.G] a liquid reservoir disposed within said housing and	Nielsen 103 discloses and/or renders obvious a liquid reservoir disposed within said housing. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0023]–[0028], [0035]–[0040], Figs. 1F, 2.

’114 Claim Limitation	Nielsen 103
[1.H] [the liquid reservoir] sealably separated from said atomizing chamber; and	Nielsen 103 discloses and/or renders obvious the liquid reservoir sealably separated from said atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0026], [0036], [0039], Figs. 1F, 2.
[1.I] a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture,	Nielsen 103 discloses and/or renders obvious a wick in contact with the liquid in the liquid reservoir through said first wick aperture and said second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0026], [0036], [0039], Figs. 1F, 2.
[1.J] the wick disposed between the liquid reservoir and the atomizer and	Nielsen 103 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0026], [0036], [0039], Figs. 1F, 2.
[1.K] [the wick] configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer;	Nielsen 103 discloses and/or renders obvious the wick configured to transfer the liquid by capillarity from said liquid reservoir to said atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0026], [0036], [0039], Figs. 1F, 2.
[1.L] wherein said atomizer outlet and said aerosol outlet are coupled by a chimney.	Nielsen 103 discloses and/or renders obvious said atomizer outlet and said aerosol outlet are coupled by a chimney. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0006], [0023]–[0025], [0028], [0035], [0038]–[0039], Figs. 1F, 2.

’114 Claim Limitation	Nielsen 103
[5.A] The apparatus of claim 1, wherein said chimney sealably passes through said liquid reservoir.	
[6.A] The apparatus of claim 1, wherein said atomizer is a resistive heating element.	
[7.A] The apparatus of claim 6, wherein said wick partially engages said resistive heating element.	
[29.A] The apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet.	Nielsen 103 discloses and/or renders obvious the apparatus of claim 1, wherein the chimney is sealed to the atomizer outlet. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0006], [0028], [0035], [0038]–[0039], Figs. 1F, 2.
[30.A] The apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet.	Nielsen 103 discloses and/or renders obvious the apparatus of claim 1, wherein the apparatus comprises a sealed path from the atomizer outlet, through the chimney to the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0006], [0028], [0035], [0038]–[0039], Figs. 1F, 2.
[36.A] The apparatus of claim 1, coupled to a power supply portion,	Nielsen 103 discloses and/or renders obvious the apparatus of claim 1, coupled to a power supply portion. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0023], [0027]–[0031], [0024], Figs. 1F, 2.
[36.B] wherein the power supply portion comprises a pressure	Nielsen 103 discloses and/or renders obvious the power supply portion comprises a pressure sensor configured to detect negative pressure within the power supply portion and energize the atomizer.

’114 Claim Limitation	Nielsen 103
sensor configured to detect negative pressure within the power supply portion and energize the atomizer.	For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0024]–[0028], [0035], [0041], Figs. 1F, 2.
[43.A] A cartridge comprising:	Nielsen 103 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[43.B] a cartridge housing;	Nielsen 103 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.C] a mouthpiece end comprising an aerosol outlet;	Nielsen 103 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[43.D] an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	Nielsen 103 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0006], [0023]–[0028], [0035], [0038]–[0039], Figs. 1F, 2.

’114 Claim Limitation	Nielsen 103
[43.E] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Nielsen 103 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].
[43.F] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Nielsen 103 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[43.G] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	
[43.H] the liquid reservoir configured to contain an atomization liquid;	Nielsen 103 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0023]–[0028], [0035]–[0040], Figs. 1F, 2.
[43.I] a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	Nielsen 103 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim elements [1.L], [5.A].
[43.J] an atomizer disposed within the atomizing chamber,	Nielsen 103 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Nielsen 103
	See disclosures for claim element [1.C].
[43.K] the atomizer comprising a resistive heating element; and	Nielsen 103 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[43.L] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Nielsen 103 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[43.M] the wick disposed between the liquid reservoir and the atomizer.	Nielsen 103 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[44.A] An electronic cigarette comprising:	Nielsen 103 discloses and/or renders obvious an electronic cigarette. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[44.B] a power supply portion comprising a rechargeable battery; and	Nielsen 103 discloses and/or renders obvious a power supply portion comprising a rechargeable battery. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Nielsen 103
	Nielsen 103 at [0023], [0027]–[0031], [0024], Figs. 1F, 2.
[44.C] a cartridge configured for separable attachment to the power supply portion;	Nielsen 103 discloses and/or renders obvious a cartridge configured for separable attachment to the power supply portion. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.A].
[44.D] a cartridge housing;	Nielsen 103 discloses and/or renders obvious a cartridge housing. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.E] a mouthpiece end comprising an aerosol outlet;	Nielsen 103 discloses and/or renders obvious a mouthpiece end comprising an aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.B].
[44.F] an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end,	Nielsen 103 discloses and/or renders obvious an atomizing chamber disposed within the cartridge housing proximate a lower end of the cartridge housing opposite the mouthpiece end. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.D].
[44.G] the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet;	Nielsen 103 discloses and/or renders obvious the atomizing chamber comprising an atomizer outlet and an atomizing chamber air inlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.E].

’114 Claim Limitation	Nielsen 103
[44.H] the atomizing chamber further comprising a first wick aperture and a second wick aperture;	Nielsen 103 discloses and/or renders obvious the atomizing chamber further comprising a first wick aperture and a second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.F].
[44.I] a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber,	Nielsen 103 discloses and/or renders obvious a liquid reservoir at least partially defined by an interior of the cartridge housing and an exterior of the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.G].
[44.J] the liquid reservoir configured to contain an atomization liquid;	Nielsen 103 discloses and/or renders obvious the liquid reservoir configured to contain an atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [43.H].
[44.K] a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet;	Nielsen 103 discloses and/or renders obvious a chimney forming at least part of an aerosol outlet path sealably passing through the reservoir between the atomizer outlet and the aerosol outlet. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim elements [1.L], [5.A].
[44.L] an atomizer disposed within the atomizing chamber,	Nielsen 103 discloses and/or renders obvious an atomizer disposed within the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.C].

’114 Claim Limitation	Nielsen 103
[44.M] the atomizer comprising a resistive heating element; and	Nielsen 103 discloses and/or renders obvious the atomizer comprising a resistive heating element. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [6.A].
[44.N] a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture,	Nielsen 103 discloses and/or renders obvious a wick in contact with the atomization liquid in the liquid reservoir through the first wick aperture and the second wick aperture. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.I].
[44.O] the wick disposed between the liquid reservoir and the atomizer.	Nielsen 103 discloses and/or renders obvious the wick disposed between the liquid reservoir and the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.J].
[76.A] The cartridge of claim 43, wherein the liquid reservoir is sealably separated from the atomizing chamber.	Nielsen 103 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir is sealably separated from the atomizing chamber. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.H].
[77.A] The cartridge of claim 43, wherein the liquid reservoir is partially defined between the interior of the cartridge housing and the chimney.	

’114 Claim Limitation	Nielsen 103
[80.A] The cartridge of claim 43, wherein the liquid reservoir comprises a clear or translucent window to an exterior of the cartridge housing, the clear or translucent window allowing visual determination of a liquid level within the liquid reservoir.	Nielsen 103 discloses and/or renders obvious the cartridge of claim 43, wherein the liquid reservoir comprises a clear or translucent window to an exterior of the cartridge housing, the clear or translucent window allowing visual determination of a liquid level within the liquid reservoir. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0027].
[81.A] The cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer,	Nielsen 103 discloses and/or renders obvious the cartridge of claim 43, further comprising an atomizer assembly comprising the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0006], [0023]–[0028], [0035], [0038]–[0039], Figs. 1F, 2.
[81.B] the atomizer assembly closing the lower end of the cartridge housing.	
[86.A] The cartridge of claim 43, wherein the wick is configured to transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer.	Nielsen 103 discloses and/or renders obvious the cartridge of claim 43, wherein the wick is configured to transfer the atomization liquid by capillarity from the liquid reservoir to the atomizer. For example, see the following passages and/or figures, as well as all related disclosures: *See* disclosures for claim element [1.K].
[89.A] The cartridge of claim 43, wherein the atomizing chamber comprises an open atomization chamber, and	
[89.B] wherein the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization	Nielsen 103 discloses and/or renders obvious the wick causes capillarity-driven transfer of the atomization liquid from the liquid reservoir to the open atomization chamber in a controlled manner without flooding the open atomization chamber. For example, see the following passages and/or figures, as well as all related disclosures:

’114 Claim Limitation	Nielsen 103
chamber in a controlled manner without flooding the open atomization chamber.	*See* disclosures for claim element [1.K].
[93.A] The cartridge of claim 43, further comprising the atomization liquid.	Nielsen 103 discloses and/or renders obvious the cartridge of claim 43, further comprising the atomization liquid. For example, see the following passages and/or figures, as well as all related disclosures: Nielsen 103 at [0023]–[0028], [0035]–[0040], Figs. 1F, 2.

NJOY's Initial Invalidity Contentions in Inv. No. 337-TA-1368

Exhibit B:
Invalidity of U.S. Patent No. 10,130,123 Under 35 U.S.C. §§ 102, 103, 112

I. Invalidity of U.S. Patent No. 10,130,123 Under 35 U.S.C. §§ 102, 103

NJOY contends that each of the references set forth below, either alone or in combination with other prior art, invalidates the claims of the '123 Patent under 35 U.S.C. §§ 102, 103:

Prior Art Reference	Date of Publication or Other Prior Art Date	Statutory Provision of Prior Art[1]	Bates Number
US5261424	November 16, 1993	§§ 102(a)(1), (a)(2)	NJOYITC1_00002459
US7726320	October 18, 2006	§§ 102(a)(1), (a)(2)	NJOYITC1_00000579
US8393331	March 18, 2005	§§ 102(a)(1), (a)(2)	NJOYITC1_00000682
US8499766	September 15, 2010	§§ 102(a)(1), (a)(2)	NJOYITC1_00000693
US8528569	September 10, 2013	§§ 102(a)(1), (a)(2)	NJOYITC1_00000715
US20140261495	September 1, 2014	§§ 102(a)(1), (a)(2)	NJOYITC1_00002587
US20120318882	June 18, 2012	§§ 102(a)(1), (a)(2)	NJOYITC1_00001396
US20140150810	August 4, 2011	§§ 102(a)(1), (a)(2)	NJOYITC1_00001598
US20150157055	July 15, 2013	§§ 102(a)(1), (a)(2)	NJOYITC1_00001764
US20150245658	February 28, 2014	§§ 102(a)(1), (a)(2)	NJOYITC1_00001794
US20150020831	June 18, 2014	§§ 102(a)(1), (a)(2)	NJOYITC1_00001652
US20160128389	November 12, 2014	§§ 102(a)(1), (a)(2)	NJOYITC1_00001844
WO2016005533	July 11, 2014	§§ 102(a)(1), (a)(2)	NJOYITC1_00002160
US20150237917	October 9, 2013	§§ 102(a)(1), (a)(2)	NJOYITC1_00001782
US20140318559	April 29, 2009	§§ 102(a)(1), (a)(2)	NJOYITC1_00001644
WO2010/003480	January 14, 2010	§§ 102(a)(1), (a)(2)	NJOYITC1_00001888; NJOYITC1_00002714

[1] In light of JLI's failure to provide any basis to support its effective filing date and conception contentions with respect to the Asserted Patents, NJOY reserves the right to identify different statutory provisions under which each reference qualifies as prior art.

Prior Art Reference	Date of Publication or Other Prior Art Date	Statutory Provision of Prior Art[1]	Bates Number
WO2012/142293	October 18, 2012	§§ 102(a)(1), (a)(2)	NJOYITC1_00002740
WO2015120588	February 12, 2014	§§ 102(a)(1), (a)(2)	NJOYITC1_00001969
WO2015153443	April 4, 2014	§§ 102(a)(1), (a)(2)	NJOYITC1_00001999
WO2012062600	November 8, 2010	§§ 102(a)(1), (a)(2)	NJOYITC1_00001946
US20120318882	June 18, 2012	§§ 102(a)(1), (a)(2)	NJOYITC1_00001396
WO2015168912	May 8, 2014	§§ 102(a)(1), (a)(2)	NJOYITC1_00002039
WO2015176254	May 21, 2014	§§ 102(a)(1), (a)(2)	NJOYITC1_00002106
CN2014180941	October 20, 2014	§§ 102(a)(1), (a)(2)	NJOYITC1_00000254
KR200453400	April 28, 2011	§§ 102(a)(1), (a)(2)	NJOYITC1_00000357

Additionally, the following prior art systems either alone or in combination with other prior art, invalidate the claims of the '123 Patent under 35 U.S.C. §§ 102, 103. The identification of these prior art systems is based on NJOY's investigation to date, is ongoing, and will be supplemented in due course.

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
21st Century Smoke	No later than August 2008	§102(a)(1)
Intellicig	No later than September 2008	§102(a)(1)
The Safe Cig	No later than December 2008	§102(a)(1)
Green Smoke	No later than December 2008	§102(a)(1)

[2] In light of JLI's failure to provide any basis to support its effective filing date and conception contentions with respect to the Asserted Patents, NJOY reserves the right to identify different statutory provisions under which each reference qualifies as prior art.

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
SmokeTip	No later than May 2009	§102(a)(1)
Fuma	No later than August 2009	§102(a)(1)
Blu Starter Kit	No later than October 2009	§102(a)(1)
Vapor Corp. Smoke 51	No later than November 2009	§102(a)(1)
Boge Technology LEO Pod System	No later than June 2010	§102(a)(1)
ePuffer Magnum Uno D2	No later than 2011	§102(a)(1)
ePuffer Phantom T1	No later than 2012	§102(a)(1)
VMR V2 e-cig	No later than 2012	§102(a)(1)
Vinirette Aurora Pod	No later than January 2012	§102(a)(1)
Innokin iTaste VV	No later than June 2012	§102(a)(1)
iWand	No later than June 2012	§102(a)(1)
JWell Ivary V2 Pod	No later than July 2012	§102(a)(1)
KangerTech T2 Ego Clearomizer	No later than November 2012	§102(a)(1)
Boge Technology EGO Passthrough CE4 EGOKIT	No later than December 2012	§102(a)(1)
Smart Evolution Trading Puff Avatar 1 Pod System	No later than December 2012	§102(a)(1)
Smart Evolution Trading Puff Avatar 2 Pod System	No later than December 2012	§102(a)(1)
Smart Evolution Trading Puff Quantum	No later than 2013	§102(a)(1)
KangerTech iPh-8	No later than March 2013	§102(a)(1)
KangerTech eVod	No later than April 2013	§102(a)(1)
Ijoy SS-ITop Pod System	No later than July 2013	§102(a)(1)
VUSE Solo	No later than July 2013	§102(a)(1)
Apollo eGo-vv	No later than August 2013	§102(a)(1)

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
Bedford Slims	No later than August 2013	§102(a)(1)
Breathe Fresh eCigs	No later than August 2013	§102(a)(1)
Bull Smoke Automatic	No later than August 2013	§102(a)(1)
Bull Smoke Manual	No later than August 2013	§102(a)(1)
Cigarti	No later than August 2013	§102(a)(1)
Cigavette Premier	No later than August 2013	§102(a)(1)
Crown 7	No later than August 2013	§102(a)(1)
Duopro	No later than August 2013	§102(a)(1)
E-Lites	No later than August 2013	§102(a)(1)
Eluma	No later than August 2013	§102(a)(1)
Eon Smoke	No later than August 2013	§102(a)(1)
ePuffer Colibri	No later than August 2013	§102(a)(1)
eSmoke	No later than August 2013	§102(a)(1)
Eversmoke	No later than August 2013	§102(a)(1)
Fifty-One Trio	No later than August 2013	§102(a)(1)
Firebrand Millennium	No later than August 2013	§102(a)(1)
Frii	No later than August 2013	§102(a)(1)
Green Nicotine	No later than August 2013	§102(a)(1)
Halo G6	No later than August 2013	§102(a)(1)
J510L	No later than August 2013	§102(a)(1)
Logic Power Series	No later than August 2013	§102(a)(1)
Luci	No later than August 2013	§102(a)(1)
Metro Platinum	No later than August 2013	§102(a)(1)

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
Modern Vapor Sidesho	No later than August 2013	§102(a)(1)
New Day	No later than August 2013	§102(a)(1)
Nirvana Eco	No later than August 2013	§102(a)(1)
Ozone Smoke	No later than August 2013	§102(a)(1)
Premium	No later than August 2013	§102(a)(1)
Prosmoke	No later than August 2013	§102(a)(1)
Pure	No later than August 2013	§102(a)(1)
Revolver G2	No later than August 2013	§102(a)(1)
Seminole	No later than August 2013	§102(a)(1)
Smokeless Delite Premo Cartomizer	No later than August 2013	§102(a)(1)
Smokeless Delite Premo Cartridge	No later than August 2013	§102(a)(1)
Smokesation	No later than August 2013	§102(a)(1)
SmokeTip	No later than August 2013	§102(a)(1)
South Beach Smoke	No later than August 2013	§102(a)(1)
Ultra	No later than August 2013	§102(a)(1)
Vapage	No later than August 2013	§102(a)(1)
Victory	No later than August 2013	§102(a)(1)
White Cloud Cirrus 3	No later than August 2013	§102(a)(1)
Joyetech eGo-C	No later than August 2013	§102(a)(1)
Joytech eVic	No later than August 2013	§102(a)(1)
Joytech eCab	No later than August 2013	§102(a)(1)
Joytech eRoll	No later than August 2013	§102(a)(1)

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
Jocor Enterprises Lavatube	No later than August 2013	§102(a)(1)
Jocor Enterprises Magma	No later than August 2013	§102(a)(1)
Bloog	No later than August 2013	§102(a)(1)
Da Vinci	No later than August 2013	§102(a)(1)
EGO 1100 Dual Coil	No later than August 2013	§102(a)(1)
Elite Variable Voltage e-Cigarette	No later than August 2013	§102(a)(1)
Firebrand Diablo Falcon Elite	No later than August 2013	§102(a)(1)
Panda eGo Ismoka	No later than August 2013	§102(a)(1)
Panda Evolve	No later than August 2013	§102(a)(1)
Premium EGO	No later than August 2013	§102(a)(1)
Smokeless Delite Ego-T	No later than August 2013	§102(a)(1)
SmokeTech S.I.D. Variable Volage eCig	No later than August 2013	§102(a)(1)
Vapor King	No later than August 2013	§102(a)(1)
Vapor King Storm 2.0	No later than August 2013	§102(a)(1)
Vgo	No later than August 2013	§102(a)(1)
Winder Noval XL	No later than August 2013	§102(a)(1)
Vapor4Life WOW EGO	No later than August 2013	§102(a)(1)
Vapor4Life Zeus	No later than August 2013	§102(a)(1)
Zerocig Georgie	No later than August 2013	§102(a)(1)
Joye 510	No later than August 2013	§102(a)(1)
Joyetech Elips-C	No later than September 2013	§102(a)(1)
SMOKio	No later than December 2013	§102(a)(1)

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
MarkTen	No later than December 2013	§102(a)(1)
VMR Vapor Couture	No later than March 2014	§102(a)(1)
VMR V2 Pro Series 3	No later than May 2014	§102(a)(1)
JWell Inova 1.0 Pod System	No later than July 2014	§102(a)(1)
JWell Inova 2.0	No later than August 2014	§102(a)(1)
VMR V2 EX Series	No later than October 2014	§102(a)(1)
Evoke Kickstarter	No later than December 2014	§102(a)(1)

Each piece of prior art identified in Exhibits B1-B17 of NJOY's initial invalidity contentions either anticipates one or more of the claims of the '123 Patent and/or renders obvious one or more of the claims of the '123 Patent when viewed in combination with other prior art. NJOY reserves the right to contend that each of the anticipatory prior art renders the claims obvious either in view of the prior art alone or in combination with other prior art. The identification of any patent or patent application should be deemed an identification of any counterpart patent, application, or associated product; the identification of any article or publication should be deemed a disclosure of any substantially similar article if published in some other form, or of any patent or patent application whole, as understood by a POSA; the identification of any system or device should be deemed a disclosure of any article, manual, guide, patent, application, or other publication describing or corresponding to the system or device. Reference to a figure should be deemed to refer to the text describing the figure and vice versa.

In addition to the anticipatory prior art described in these invalidity contentions, the claims of the '123 Patent are invalid based on obviousness under 35 U.S.C. § 103. In general, a claimed invention is unpatentable if the differences between it 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." 35 U.S.C. § 103(a); *Graham v. John Deere Co.*, 383 U.S. 1, 13-14 (1966).

Each piece of prior art described in Exhibits B1-B#, either alone or in combination with other prior art, renders the claims of the '123 Patent invalid as obvious. In particular, each piece of prior art may be combined with (1) information known to persons skilled in the art at the time of the alleged invention, (2) any of the other anticipatory prior art, and/or (3) any of the additional prior art identified herein and in the charts attached hereto. In addition to the prior art set forth above, NJOY incorporates by reference each and every piece of prior art of record in the prosecution of the '123 Patent, including the statements made therein by the applicant, as well as the prior art discussed in the specification.

In view of the Supreme Court's *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 127 S.Ct. 1727, 1739 (2007) ("*KSR*") decision, the USPTO issued a set of Examination Guidelines. *See* Examination Guidelines for Determining Obviousness Under 35 U.S.C. § 103 in view of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, 72 Fed. Reg. 57, 526 (Oct. 10, 2007). Those rationales include:

- Combining prior art elements according to known methods to yield predictable results;
- Simple substitution of one known element for another to obtain predictable results;
- Use of a known technique to improve similar devices (methods, or products) in the same way;
- Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;

- "Obvious to try" – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;
- Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

Id. at 57, 529. These rationales are consistent with the Supreme Court's emphasis in *KSR* that "the results of ordinary innovation" from the perspective of a person of ordinary skill are not patentable, and further that "[a] person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR*, 550 U.S. at 421. NJOY contends that one or more of these rationales apply in considering the obviousness of the claims of the '123 Patent.

As the Supreme Court emphasized in *KSR*, issued patent claims may be determined to be invalid as obvious even without a teaching, suggestion, or motivation to combine particular prior art. *Id.* at 419 ("The 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."). Nevertheless, a person of skill in the art would have been motivated to combine each of the identified pieces of prior art with the others identified with respect to the claims of the '123 Patent. NJOY contends that one of ordinary skill in the art, at the time the alleged inventions of the '123 Patent were made, would have been motivated to combine the prior art disclosed herein in such a way to reach the alleged inventions. The teaching, suggestion, or motivation to combine this prior art, although not required, is found, explicitly or

implicitly, in one or more of at least the following: the knowledge or common sense of one of ordinary skill in the art; the prior art teachings themselves and/or the prior art as a whole, including interrelated teachings of multiple prior art; the common fields of technology of the prior art; the subject matter acknowledged as prior art in the '123 Patent; the nature of the problem to be solved and the existence of similar improvements in similar applications; design incentives and other market forces, including the advantages of creating a superior and more desirable product and the effects of demands known to the design community or present in the marketplace; the ability to implement the alleged invention as a predictable variation of the prior art; improvements in similar devices; any needs or problems known in the fields addressed by the '123 Patent; the teachings in the prior art directed to solving the problems that the '123 Patent allegedly directed to solving; and the number of identified, predictable solutions to the problems addressed by these patents. In addition, the simultaneous (and/or prior) inventions described above (and elsewhere in these contentions) are evidence that motivation to combine the concepts described in or taught by the various prior art did, in fact, exist, and they were, in fact, combined.

This prior art identifies and addresses many of the same technical issues and suggest similar solutions to those issues. Moreover, much of the prior art cross-reference and discuss one another, further illustrating the close technical relationship among this group of prior art. Accordingly, the teachings of the individual prior art and alleged inventions, combined with the industry knowledge of a person of ordinary skill in the art at the time of the alleged invention of the '123 Patent, would render obvious the claims of the '123 Patent for at least the reasons described herein and in the incorporated exhibits. A person of ordinary skill at the time of the alleged inventions had reason to combine or modify one or more of the listed prior art in light of the knowledge of a person of ordinary skill in the art at the time of the alleged invention and information in the prior art cited

herein. Thus, this prior art would logically have been combined pursuant to 35 U.S.C. § 103, and there was abundant motivation to combine such prior art at the time of the purported inventions of the ’123 Patent.

The prior art set forth in Exhibits B1-B17 clearly demonstrate that each of the limitations of the claims of the ’123 Patent was known in the art. A person of ordinary skill would have been motivated to combine these known elements to arrive at the asserted claims of the ’123 Patent. Furthermore, a person of ordinary skill in the art at the time of the alleged invention would have had a reasonable expectation of success when combining the listed prior art and the known elements because the proposed combinations would have been well within the level of ordinary skill in the art. Indeed, the proposed combinations would have been merely the application of a known technique or component with a known system in the same field of endeavor. And, when combined, each element merely performs the same predictable functions as it does separately without significantly altering or hindering the functions performed by the other elements.

Exemplary motivations are set forth below[3]:

Insertable cartridge and cartridge receptacle

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose an insertable cartridge with a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

[3] Citations supporting Respondents’ obviousness contentions are provided in the identified above-charted references. Respondents’ citations are exemplary and Respondents hereby reserve the right to supplement these initial invalidity contentions.

At the time of the alleged invention, it was well known and common to use an insertable cartridge that includes a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater. A POSA would have been motivated to use such an insertable cartridge, such as disclosed in Lord 917, Thorens 559, Levitz 293, Hon 331, Worm 658, Lamb 389, Ampolini 069, Newton 569, Newton 766, Novak 495, and/or Verleur 971, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use an insertable cartridge with a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater, because this configuration provides several benefits. A POSA would also have been motivated to include a cartomizer receiving segment for receiving such cartridge because of the numerous benefits this configuration provides. First, this design enhances safety by adding another layer of protection between the cartomizer and the adult consumer's hand, thereby preventing potential burns. Second, this configuration protects components of the cartomizer from potential damage due to accidental drops or impacts. Third, this configuration allows for a more compact and streamlined design, increasing aesthetics and

portability. Fourth, this configuration provides a more secure connection between the cartomizer and the chamber, ensuring more consistent electrical connections, and reducing the risk of potential malfunctions due to loose electrical connections. Having the cartomizer more securely surrounded by the chamber ensures a more stable electrical connection thereby leading to consistent power delivery and vapor production.

There were several such standardized cartridges available that coupled to standard battery components. For example, Levitz 293 discloses the advantages of using such standardized cartridges. Weigensberg 831, for example, discloses such a cartridge, but looks to Levitz 293 for the details. As another example, Hon 331 includes a removable mouthpiece and refillable liquid reservoir. A POSA would have been motivated to use a standardized cartridge because the consumer would have more cartridge selections and a standardized disposable cartridge would yield several improvements. First, cartridges are more convenient; it is easier to replace a cartridge than to refill a reusable reservoir. Second, fluid is less likely to leak from a cartridge. Third, disposable cartridges, especially those with mouthpieces are more sanitary. Fourth, atomizer performance degrades over time, so replacing the atomizer via the disposable cartridge maintains peak performance.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation. For example, Weigensberg 831 and Hon 331 could be used with such cartridge (including a heater, reservoir and mouthpiece) and receptacle configurations taught by Lord 917, Thorens 559, Levitz 293, Worm 658, Lamb 389, Ampolini 069, Newton 569, Newton 766, Novak 495, and/or Verleur 971. A POSA would have known that the cartridge and cartridge receptacle configurations disclosed in Lord 917, Thorens 559, Levitz 293, Worm 658, Lamb 389, Ampolini 069, Newton 569, Newton

766, Novak 495, and/or Verleur 971, could be added to, for example, Weigensberg and Hon 331 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Weigensberg and Hon 331 with Lord 917, Thorens 559, Levitz 293, Worm 658, Lamb 389, Ampolini 069, Newton 569, Newton 766, Novak 3495, and/or Verleur 971, is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Weigensberg 831 and Hon 331 with Lord 917, Thorens 559, Levitz 293, Worm 658, Lamb 389, Ampolini 069, Newton 569, Newton 766, Novak 495, and/or Verleur 971.

Male/Female Connectors

To the extent Complainants contend that any of the prior art identified do not expressly or inherently disclose a connection, with a male connector on the cartridge side and a female cartridge receptacle on the battery side, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a connector between the cartridge and the cartridge receptacle. A POSA would have known that the female/male connection and reverse connection may be equally suitable in an aerosol delivery device, as disclosed in Levitz 293, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known

work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use a male connector on the cartridge and a female cartridge receptacle on the battery side because it is a simple substitution of one known element for another that yields predictable results. Moreover, the manner in which the cartridge and cartridge receptacle are connected can be accomplished several different ways and one of those ways is through a male connection on the cartridge and a female cartridge receptacle on the battery side, as described in Levitz 293. For example, Levitz 293 discloses that the male connector can be on the cartomizer and the female cartridge receptacle on the battery side. Further, Worm 658, Ampolini 069, Lamb 389, Yeom 400, and Novak 295 all have cartridges with a male connector on the cartridge and a female cartridge receptacle on the battery side.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as, for example, Newton 569 and Weigensberg 831, with the male/female configurations taught by Levitz 293, Lamb 389, Ampolini 069, Yeom 400, and/or Worm 568. Further, Newton 569 contemplates using a male connection on the cartridge and a female connection on the battery portion. A POSA would have known that using a male connector in the cartridge could be used and it is a matter of design choice. A POSA would have known that the use of a male connector for the cartridge, as taught by Levitz 293, could be added to any of the identified prior art to produce a functional device because the prior art are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining, for example, Weigensberg 831, Ampolini 069, Yeom 400, Lamb 389, or Newton 569 with Levitz 293 is a predictable use of electronic vaporizer architecture according to their established functions. Accordingly, it would have been routine for a POSA to

combine Newton 569 with Levitz 293, Worm 658, Ampolini 069, Yeom 400, Lamb 389, and/or Novak 495.

Pressure sensor

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a pressure sensor, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a pressure sensor in aerosol delivery devices. The ’123 Patent recognized that pressure sensors that detect a pressure differential in an aerosol delivery device were well known. ’123 Patent at 41:56-58, 42:1-13. A POSA also would have known that several different types of pressure sensors could be used. As the ’123 patent recognized, any differential pressure sensor that can distinguish positive and negative pressure may be used. ’123 patent at 42:1-14. A POSA also would have been motivated to use a pressure sensor, such as those disclosed in Worm 568, Ampolini 069, Weigensberg 831, Thorens 559, Newton 569, Newton 766, Lord 917, Hon 810, Chen 941, Andersson 600, or Lamb 389, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use a pressure sensor because a pressure sensor provides several benefits. For example, a pressure sensor is automatic and turns off power when an adult consumer stops drawing on the device whereas a push-button switch is manual and requires the consumer to press the switch to turn off power. Thus, the pressure sensor switch would streamline an adult consumer's experience, and because it would automatically turn off power, it would increase the device's battery life, prevents unintended liquid vaporization, and prevents unnecessary wear and tear on the device.

Moreover, a POSA would have recognized that, for example, Worm 658, Ampolini 069, Weigensberg 831, Thorens 559, Newton 569, Newton 766, Lord 917, Hon 810, Chen 941, Andersson 600, or Lamb 389's well-known pressure sensor would be a selling-point for adult consumers. For example, when an adult consumer draws on an electronic vaporizer with a pressure sensor switch, the atomizer is automatically activated, liquid is vaporized, and the adult consumer may inhale smoke, similar to the experience of smoking a real cigarette. The pressure sensor switch thus provides a natural smoking experience along with the benefits of an electronic vaporizer, which would have been attractive to adult consumers. Additionally, a pressure sensor can control the heating element in response to pressure values and indicate when the device is in operation. Further, it was known in the art to incorporate a pressure sensor into an aerosol deliver device, such as disclosed in Worm 658, Ampolini 069, Weigensberg 831, Thorens 559, Newton 569, Newton 766, Lord 917, Hon 810, Chen 941, Andersson 600, or Lamb 389. Verleur 971, for example, teaches the use of a pressure switch for automatically turning on the device and indicating an active inhaling status. A POSA would have understood that, for example, Verleur could have benefited from the advantages of using a pressure sensor and would have been motivated to adapt, for example, Verleur to include a pressure sensor like that disclosed in Worm 658, Ampolini 069,

Weigensberg 831, Thorens 559, Newton 569, Newton 766, Lord 917, Hon 810, Chen 941, Andersson 600, or Lamb 389, and in particular a MEMS pressure sensor like that disclosed in Thorens 559 and Lamb 389 as discussed below.

A POSA would have had a reasonable expectation of success modifying, for example, Verleur 971 because Worm 658, Ampolini 069, Weigensberg 831, Thorens 559, Newton 569, Newton 766, Lord 917, Hon 810, Chen 941, Andersson 600, and Lamb 389 suggest the use of a pressure sensor in an aerosol delivery device, and Thorens 559 and Lamb 389 in particular disclose the use of a MEMS pressure sensor. Accordingly, it would have been routine for a POSA to combine Verleur 971 with Worm 568, Ampolini 069, Weigensberg 831, Thorens 559, Newton 569, Newton 766, Lord 917, Hon 810, Chen 941, Andersson 600, or Lamb 389 since it is a predictable use of a pressure sensor according to its established function and would have been routine for a POSA to combine Verleur 971 with Worm 568, Ampolini 069, Weigensberg 831, Thorens 559, Newton 569, Newton 766, Lord 917, Hon 810, Chen 941, Andersson 600, or Lamb 389.

MEMS pressure sensor

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a MEMS pressure sensor, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a MEMS pressure sensor in aerosol delivery devices. A POSA also would have been motivated to use a MEMS sensor, such as those disclosed in Lamb 389, Thorens 559 and Flick 480, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of

the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use a MEMS pressure sensor because this type of pressure sensor provides several benefits. A POSA would have known that the advantages of using a MEMS pressure sensor include low manufacturing costs, low power consumption, high-sensitivity, and easy integration. Further, it was known in the art to incorporate a MEMS pressure sensor into an aerosol deliver device, such as disclosed in Lamb 389, Thorens 559, and Flick 480. Worm 658, Ampolini 069, and Weigensberg 831, for example, all disclose pressure sensors and teach that other known pressure sensors could be used in the respective aerosol delivery devices. A POSA would have understood that, for example, Worm 658, Ampolini 069, and Weigensberg 831 could have benefited from the advantages of using a MEMS pressure sensor. A POSA would have been motivated to adapt, for example, Worm 658, Ampolini 069, and Weigensberg 831, to include a MEMS pressure sensor like that disclosed in Lamb 389, Thorens 559, and Flick 480 because a MEMS sensor better resists false actuations, improves battery life, and reduces manufacturing costs.

A POSA would have had a reasonable expectation of success modifying, for example, Worm 658, Ampolini 069, and Weigensberg 831, because these references suggest the use of other known pressure sensors, and Lamb 389, Thorens 559, and Flick 480 already disclose the use of a

MEMS pressure sensor in aerosol delivery devices. Accordingly, it would have been routine for a POSA to combine Worm, Ampolini, or Weigensberg with Lamb 389, Thorens 559, and Flick 480 since it is a predictable use of a MEMS pressure sensor according to its established function and would have been routine for a POSA to combine Worm 658, Ampolini 069, and Weigensberg 831 with Lamb 389, Thorens 559, and/or Flick 480.

Pressure sensor that outputs pressure values

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a pressure sensor that outputs pressure values, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common for a pressure sensor to output pressure values. A POSA also would have been motivated to use a pressure sensor that output pressure values, such as disclosed in Lamb 389, Flick 480, Sprinkel 424, or Henry 443 based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have known that a pressure sensor typically outputs pressure values. A POSA would also have known that the prior art teaches that aerosol delivery devices could incorporate pressure sensors that output pressure values. For example, Lamb 389 and Henry 443 disclose the use of a pressure sensor capable of outputting pressure value to control the amount of power supplied to the heater to vaporize a proportionate amount of vaporizable material in relation to the rate of the breath inhale and to prevent false activations. A POSA would have understood that using pressure values to control the amount of vapor in proportion to the rate of inhale by an adult consumer in, for example, Worm 658, Thorens 559, Ampolini 069, and Weigensberg 831 would better simulate traditional smoking. Additionally, a POSA would have recognized that outputting pressure values in, for example, Worm 658, Ampolini 069, Thorens 559, and/or Weigensberg 831, allows the aerosol deliver device to adjust its performance and detect error conditions based on different pressure values. For example, an LED could glow brighter based on the amount of drag, or the pressure values could provide a safety feature where excess pressure shutdown the operation of the device.

A POSA would have had a reasonable expectation of success modifying, for example, Worm, Ampolini, and/or Weigensberg because each of these references already disclose electronic cigarettes incorporating pressure sensors. Combining, for example, Worm 658, Ampolini 069, Thorens 559, and Weigensberg 831 with a pressure sensor that outputs pressure values is a predictable use of a pressure sensor according to its established function. Accordingly, it would have been routine for a POSA to combine, for example, Worm 658, Ampolini 069, Thorens 559, and Weigensberg 831 with Lamb 389, Flick 480, Sprinkel 424 and/or Henry 443.

Channel

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a channel as defined by the claims of the ’123 Patent, it would

have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to create an air flow path in a channel formed between an interior surface of the cartridge receptacle and an exterior of the cartridge. A POSA also would have been motivated to use a channel formed between an interior surface of the cartridge receptacle and an exterior of the cartridge as an air flow path, such as those disclosed in Verleur 971, Thorens 559, Newton 766, or Newton 569, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to include a channel formed by an exterior surface of the cartridge and an internal surface of the receptacle because this configuration provides several benefits. For example, a POSA would have known that this design ensures that the air is drawn into the device in a controlled and predictable manner. Controlling the airflow can aid in cooling the system and prevent overheating and extending the lifespan of the heating element. A POSA would also have known that an air flow defined by such a channel would be ideal because the length and width of the channel could be used to dial in the amount of resistance experienced by the adult consumer during inhalation such that it matches the resistance encountered during

traditional smoking. Further, a POSA would have known that the manner in which air enters the device can be accomplished several different ways and one of those ways is between the interface of the cartridge and the receptacle as described in Verleur 971, Thorens 559, Newton 766, and Newton 569. Additionally, moving the airflow away from the battery's direct contact, there is a reduced risk of the vaporizable material from leaking into the battery portion of the device and therefore the lifespan of the device would potentially increase. Further, the design is also simple and straightforward and uses fewer components, thereby making the design inexpensive to manufacture.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Worm 658, Ampolini 069, and Weigensberg 831, with the channel design taught by Verleur 971, Thorens 559, Newton 569, and Newton 766. Further, and similarly, for example, Worm 658, Ampolini 069, and Weigensberg 831 disclose methods of drawing air into the device during inhalation. A POSA would have known that there are many ways to accomplish drawing air into an aerosol device, it is a matter of design choice among many equally effective design choices. A POSA would further have known that the channel design disclosed by Verleur 971, Thorens 559, Newton 569, and Newton 766 could be added to Worm 658, Ampolini 069, and Weigensberg 831 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Worm 658, Ampolini 069, and Weigensberg 831 with Verleur 971, Thorens 559, Newton 569, and Newton 766 is a predictable use of electronic vaporizer architecture according to their established functions. Accordingly, it would have been routine for a POSA to combine Worm 658, Ampolini 069, or Weigensberg 831 with Verleur 971, Thorens 559, Newton 569, and/or Newton 766.

Second Side of Pressure Sensor

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a second side of the pressure sensor is exposed to a device air path open to ambient pressure, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common place to include a pressure sense in aerosol delivery devices exposed to ambient air on one side. A POSA also would have been motivated to use ambient air as a reference pressure, such as disclosed in Worm 658 and/or Weigensberg 831, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to include a second side of a pressure sensor exposed to a device air path open to ambient pressure to detect a pressure differential when an adult consumer inhales on the aerosol delivery device. A POSA would have known that exposure to this air path is simple and would not be subject to external pressure, which would increase the accuracy of measuring a difference between the ambient pressure side and the negative pressure side. For example, the ambient air pressure side can be used as the baseline pressure to measure against. Thus, changes in environmental pressure – i.e., from elevation would not interfere with the

operation of the pressure sensor. Weigensberg 831 recognized a reference signal such as ambient air could be used to detect a pressure differential inside an aerosol delivery device. Thus, a POSA would have been motivated to include exposure to ambient pressure on one side of the pressure sensor.

A POSA would have had a reasonable expectation of modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Thorens 559, Hon 331, Ampolini 069, Newton 569 or Newton 766, with a pressure sensor where one sided is exposed to ambient pressure taught by Worm 658 and/or Weigensberg 831. Further, Newton 569 discloses that differential pressure sensors within the housing of the aerosol delivery device were known, and a POSA would have had a reasonable expectation of success in using an ambient pressure side because it incorporates a known technique as disclosed by Worm 658 and/or Weigensberg 831. *See, e.g.*, Newton 569 at 5:30-59. A POSA would have known that incorporating a pressure sensor with one side exposed to ambient pressure could be added to Thorens 559, Hon 331, Ampolini 069, Newton 569 or Newton 766 to produce a functional device because the references are directed to the same field, electronic vaporizers. Combining Thorens 559, Hon 331, Ampolini 069, Newton 569 or Newton 766 with Worm 658 and/or Weigensberg 831 is a predictable use of electronic vaporizer architecture according to their established functions. Accordingly, it would have been routine for a POSA to combine Thorens 559, Hon 331, Ampolini 069, Newton 569, or Newton 766 with Worm 658 and/or Weigensberg 831.

Air inlet

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose an air inlet to an air flow path that passes through a channel formed

between an interior surface of the cartridge receptacle and an exterior surface of the cartridge, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to locate an air inlet at the junction of the cartridge receptacle and the cartridge. A POSA would have known that the location of the air inlet is merely a matter of design choice, as taught by Newton 569. Further, a POSA also would have recognized that the use of pressure sensors to detect a draw and the associated components were well known. A POSA would have been motivated to locate the air inlet at this junction, such as disclosed in Newton 569, Newton 766, Novak 495, Levitz 293, and Andersson 600, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to locate an air inlet to an air flow path that passes through a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge because air entering at this interface would be an ideal location to control the air flow to enhance the adult consumer experience. For example, the length and width of the channel formed between the cartridge receptacle and cartridge could be used to adjust the amount

of resistance experienced by the adult consumer during inhalation such that it matches the resistance encountered during traditional smoking. Moreover, the manner in which air may enter the device can be accomplished several different ways and one of those ways is at the junction of the cartridge receptacle and the cartridge as described in Newton 569, Newton 766, Novak 495, Levitz 293, and Andersson 600, all include an air inlet in the side of an aerosol delivery device that is connected to a channel formed between the cartridge receptacle and the cartridge. For example, Andersson 600 teaches the use of an air inlet to a channel formed between the cartridge and cartridge receptacle. Andersson 600 at 4:29-5:3, Figs. 1, 6. As another example, Levitz 293 teaches the use of a side air inlet at the junction of the cartridge receptacle and cartridge as preferred over air inlets at the end of the device. A POSA would have been motivated to include the air inlet at this location in the prior art, for example Worm 658, because an air inlet in the junction between the cartridge receptacle and the cartridge, such as the threads as disclosed in Newton 569 at 5:17-29, is in a low-contact area where an adult consumer is not likely to block it, there is no need to align apertures and it does not require drawing air in through the battery portion of the device, which could allow moisture to enter the battery chamber as taught by Levitz 293. A POSA would have known that this design ensures that the air is drawn into the device in a controlled and predictable manner. Controlling the airflow can aid in cooling the system and prevent overheating and extending the lifespan of the heating element. Additionally, by moving the airflow away from the battery's direct contact, there is a reduced risk of the vaporizable material from leaking into the battery portion of the device and therefore the lifespan of the device would potentially increase.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Worm, with the air inlet configurations taught by Newton 569, Newton 766, Novak 495, Levitz 293,

and/or Andersson 600. Further, and similarly, for example, Worm 658 discloses methods of drawing air into the device during inhalation and it would have been a matter of simple substitution to alter the air inlet as disclosed by Newton 569, Newton 766, Novak 495, Levitz 293, and/or Andersson 600. A POSA would have known that there are many ways to accomplish drawing air into an aerosol device and it is a matter of design choice among many equally effective design choices. A POSA would have known that the air inlet configurations taught by Newton 569, Newton 766, Novak 495, Levitz 293, and/or Andersson 600 could be added to any of the identified prior art to produce a functional device because the prior art are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Worm 658 with Newton 569, Newton 766, Novak 495, Levitz 293, or Andersson 600 is a predictable use of electronic vaporizer architecture according to their established functions. Accordingly, it would have been routine for a POSA to combine Worm 658 with Newton 569, Newton 766, Novak 495, Levitz 293, and/or Andersson 600.

Gasket

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a gasket around a pressure sensor, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to include a gasket around a pressure sensor. A POSA also would have been motivated to include a gasket around a pressure sensor such as those disclosed in Henry 443, Worm 658, Newton 569, or Newton 766, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known

element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have understood that detecting breath inhalation through a mouthpiece could be performed by detecting a pressure differential. A POSA further would have understood that using a pressure sensor for detecting a pressure differential would require a reference pressure and a measured pressure that are different. A gasket, comprised of rubbery materials, is a common component for air-tight seals and sealing one side of a component from the other side. For example, Newton 766 describes a resilient surround that pneumatically seals the sensor from the other side. Newton 766 at 7:50-53. It would have been obvious to a POSA to use a gasket to protect sensitive components within the sensor from potential damage due to accidental drops or impacts, provide an air-tight seal to ensure accurate measurements, and to protect the sensor from damage from vaporizable material. It was known in the art to incorporate a sensor with a gasket such as in Worm 658 that is designed to go around the sensor. Further, gaskets are relatively inexpensive and easy to manufacture and would therefore be an ideal component in an e-cigarette to isolate one side of the sensor from the other. Ampolini 069, for example, already discloses the use of an air-tight support plate and Weigensberg 831, for example, discloses the use of a chamber surrounding the pressure sensor, so it would be obvious to include a gasket to improve the protection and operation of the pressure sensors. Each, for example, could benefit from incorporating a gasket around the respective pressure sensors to protect the pressure sensor and create an air-tight seals.

A POSA would have had a reasonable expectation of success modifying, for example, Thorens 559, Ampolini 069, or Weigensberg 831 because Worm 658, Newton 569, Newton 766, and Henry 443 are also aerosol delivery devices and the addition of a gasket as taught by Henry 443, Newton 569, Newton 766, and Worm 658, is a predictable use of gasket according to its established function. Accordingly, it would have been routine for a POSA to combine, for example, Thorens 559, Ampolini 069, or Weigensberg 831 with Henry 443, Worm 658, Newton 569, or Newton 766.

Nicotine

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose nicotine in a vaporizable material, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use nicotine as an ingredient in the vaporizable material for an aerosol delivery device. A POSA also would have been motivated to use nicotine in the vaporizable material, such as disclosed in Verleur 971, Ampolini 069, Lamb 389, Weigensberg 831, Newton 569, Newton 766, Andersson 600, Chen 941, Hon 810, Lord 917, Thorens 559, or Henry 443 based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable

expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use a vaporizable material comprising a nicotine formulation. For example, Ampolini 069 discloses that the aerosol precursor preferably incorporates tobacco or components derived from tobacco and specifically mentions nicotine. It would have been obvious to a POSA, for example, to include nicotine in Worm 658's vaporizable material as disclosed in Verleur 971, Ampolini 069, Lamb 389, Weigensberg 831, Newton 569, Newton 766, Andersson 600, Chen 941, Hon 810, Lord 917, Thorens 559, and Henry 443. Worm is directed to an aerosol delivery device configured to vaporize precursor liquids, including those with tobacco derivatives, which a POSA would have recognized includes nicotine. A POSA would have been motivated to modify, for example, Worm to incorporate nicotine within the vaporizable material since nicotine is a common and popular ingredient in vaporizable materials for adult consumer aerosol delivery devices.

A POSA would have had a reasonable expectation of success modifying any of the prior art references identified above that Complainants may contend do not disclose this limitation, such as Worm, with the vaporizable material comprising a nicotine formulation taught by Verleur 971, Ampolini 069, Lamb 389, Weigensberg 831, Newton 569, Newton 766, Andersson 600, Chen 941, Hon 810, Lord 917, Thorens 559, and Henry 443. A POSA would have known that a nicotine formulation disclosed by Verleur 971, Ampolini 069, Lamb 389, Weigensberg 831, Newton 569, Newton 766, Andersson 600, Chen 941, Hon 810, Lord 917, Thorens 559, and Henry 443 could be added to Worm 658's aerosol precursor to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Worm 658 with Verleur 971, Ampolini 069, Lamb 389, Weigensberg 831, Newton 569, Newton

766, Andersson 600, Chen 941, Hon 810, Lord 917, Thorens 559, and Henry 443 is a predictable use of aerosol precursor ingredients according to their established functions. Accordingly, it would have been routine for a POSA to combine Worm 658 with Verleur 971, Ampolini 069, Lamb 389, Weigensberg 831, Newton 569, Newton 766, Andersson 600, Chen 941, Hon 810, Lord 917, Thorens 559, and Henry 443.

EXHIBIT B-1

EXHIBIT B-1

Invalidity Claim Chart of WO2015/153443 ("Henry 443") against U.S. Patent No. 10,130,123

Henry 443, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 14, 16, 18, 27, 29, 31, and 32 of U.S. Patent No. 10,130,123. Henry 443 was filed on March 30, 2015, and published on October 8, 2015. Henry 443 qualifies as prior art to the '123 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Henry 443. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'123 Claim Limitations	WO2015/153443 ("Henry 443")
[14.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Henry 443 discloses and/or renders obvious a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Henry 443 at Abstract, 3:4-12, Figure 1, Figure 2, Figure 4, Figure 5, Figure 6.
[14.B] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Henry 443 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Henry 443 at 9:34-10:6, 10:28-11:2, 11:18-12:2, 18:1-23, Figure 1, Figure 2, Figure 4, Figure 5, Figure 6.
[14.C] a pressure sensor configured to output sensor readings,	Henry 443 discloses and/or renders obvious a pressure sensor configured to output sensor readings. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '123 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’123 Claim Limitations	WO2015/153443 (“Henry 443”)
	Henry 443 at 13:8-21, 17:26-31, 18:24-31, 19:5-7, 24:7-19.
[14.D] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Henry 443 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. For example, see the following passages and/or figures, as well as all related disclosures: Henry 443 at Abstract, 3:4-18, 12:29-13:2, 17:26-31, 18:1-31, 18:24-31, 19:5-7, 22:7-33, Figure 1, Figure 2, Figure 4, Figure 5, Figure 6.
[14.E] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Henry 443 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Henry 443 at Abstract, 3:4-18, 12:29-13:2, 17:26-31, 18:1-31, 19:5-7, 22:7-33, Figures 1, Figure 2, Figure 4, Figure 5, Figure 6. *See also* analysis and citations for limitation [14.D] above.
[14.F] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Henry 443 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Henry 443 at Abstract, 3:4-18, 12:29-13:2, 17:16-31, 18:1-31, 22:7-33, Figure 1, Figure 2, Figure 5, Figure 6. *See also* analysis and citations for limitation [14.D] and [14.E] above.
[14.G] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Henry 443 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. For example, see the following passages and/or figures, as well as all related disclosures: Henry 443 at 22:20-33, Figure 6. *See also* analysis and citations for limitation [14.D], [14.E], and [14.F] above.

’123 Claim Limitations	WO2015/153443 (“Henry 443”)
[16] The vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor.	Henry 443 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor. For example, see the following passages and/or figures, as well as all related disclosures: Henry 443 at 13:8-21, 17:26-31, 18:24-31, 19:5-7, 24:7-19. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[18] The vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values.	Henry 443 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values. For example, see the following passages and/or figures, as well as all related disclosures: Henry 443 at 13:8-21, 17:26-31, 18:24-31, 19:5-7, 24:7-19. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[27.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Henry 443 discloses and/or renders obvious a vaporizer device body comprising. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.B] a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater; and	Henry 443 discloses and/or renders obvious a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater. For example, see the following passages and/or figures, as well as all related disclosures: Henry 443 at 8:30-9:9, 11:3-17, 12:29-13:2, 17:16-25, Figure 1, Figure 2, Figure 4, Figure 5, Figure 6. *See also* analysis and citations for claim 14, including limitation [14.B] and [14.F] above.
[27.C] a device body comprising:	Henry 443 discloses and/or renders obvious a device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.D] a cartridge receptacle configured to insertably receive	Henry 443 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material.

’123 Claim Limitations	WO2015/153443 (“Henry 443”)
a cartridge containing a vaporizable material;	*See* analysis and citations for claim 14, including limitation [14.B] above.
[27.E] a pressure sensor configured to output sensor readings,	Henry 443 discloses and/or renders obvious a pressure sensor configured to output sensor readings. *See* analysis and citations for claim 14, including limitation [14.C] above.
[27.F] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Henry 443 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. *See* analysis and citations for claim 14, including limitation [14.D] above.
[27.G] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Henry 443 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. *See* analysis and citations for claim 14, including limitation [14.E] above.
[27.H] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Henry 443 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. *See* analysis and citations for claim 14, including limitation [14.F] above.
[27.I] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Henry 443 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for claim 14, including limitation [14.G] above.
[29] The vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor.	Henry 443 discloses and/or renders obvious the vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 16 above.

’123 Claim Limitations	WO2015/153443 (“Henry 443”)
[31] The vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values.	Henry 443 discloses and/or renders obvious the vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values. *See* analysis and citations for claim 18 above.
[32] The vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Henry 443 discloses and/or renders obvious the vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Henry 443 at 14:7-17, 15:9-18.

EXHIBIT B-2

EXHIBIT B-2

Invalidity Claim Chart of U.S. Patent Publication No. 2014/0318559 ("Thorens 559") against U.S. Patent No. 10,130,123

Thorens 559, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 14, 16, 18, 27, 29, 31, and 32 of U.S. Patent No. 10,130,123. Thorens 559 was filed on July 7, 2014, and published on October 30, 2014. Thorens 559 qualifies as prior art to the '123 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Thorens 559. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the Thorens 559. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'123 Claim Limitations	U.S. Patent Publication No. 2014/0318559 ("Thorens 559")
[14.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Thorens 559 discloses and/or renders obvious a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 559 at Abstract, [0042], [0045], Figure 1, Figure 3.
[14.B] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Thorens 559 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 559 at [0042], [0043], [0044], [0045], Figure 1, Figure 2, Figure 3.
[14.C] a pressure sensor configured to output sensor readings,	Thorens 559 discloses and/or renders obvious a pressure sensor configured to output sensor readings. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '123 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’123 Claim Limitations	U.S. Patent Publication No. 2014/0318559 (“Thorens 559”)
	Thorens 559 at [0015], [0017], [0020], [0034], [0042], [0045], Figure 1, Figure 3.
[14.D] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Thorens 559 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 559 at [0017], [0020], [0045], [0048], Figure 3.
[14.E] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Thorens 559 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 559 at [0017], [0020], [0045], [0048], Figure 3. *See also* analysis and citations for limitation [14.D] above.
[14.F] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Thorens 559 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 559 at [0017], [0020], [0042], [0045], [0048], Figure 3. *See also* analysis and citations for limitation [14.D] and [14.E] above.
[14.G] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Thorens 559 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. For example, see the following passages and/or figures, as well as all related disclosures: *See also* analysis and citations for limitation [14.D], [14.E], and [14.F] above.
[16] The vaporizer device body of claim 14, wherein the pressure	Thorens 559 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor.

’123 Claim Limitations	U.S. Patent Publication No. 2014/0318559 (“Thorens 559”)
sensor comprises a MEMS pressure sensor.	For example, see the following passages and/or figures, as well as all related disclosures: Thorens 559 at [0015]. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[18] The vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values.	Thorens 559 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 559 at [0015], [0034], [0046], [0051], [0052]. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[27.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Thorens 559 discloses and/or renders obvious a vaporizer device body comprising. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.B] a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater; and	Thorens 559 discloses and/or renders obvious a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 559 at [0042], [0043], [0044], [0045], Figure 2, Figure 3. *See also* analysis and citations for claim 14, including limitation [14.B] above.
[27.C] a device body comprising:	Thorens 559 discloses a device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.D] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Thorens 559 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. *See* analysis and citations for claim 14, including limitation [14.B] above.

’123 Claim Limitations	U.S. Patent Publication No. 2014/0318559 (“Thorens 559”)
[27.E] a pressure sensor configured to output sensor readings,	Thorens 559 discloses and/or renders obvious a pressure sensor configured to output sensor readings. *See* analysis and citations for claim 14, including limitation [14.C] above.
[27.F] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Thorens 559 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. *See* analysis and citations for claim 14, including limitation [14.D] above.
[27.G] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Thorens 559 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. *See* analysis and citations for claim 14, including limitation [14.E] above.
[27.H] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Thorens 559 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. *See* analysis and citations for claim 14, including limitation [14.F] above.
[27.I] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Thorens 559 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for claim 14, including limitation [14.G] above.
[29] The vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor.	Thorens 559 discloses and/or renders obvious the vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 16 above.
[31] The vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values.	Thorens 559 discloses and/or renders obvious the vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values. *See* analysis and citations for claim 18 above.

’123 Claim Limitations	U.S. Patent Publication No. 2014/0318559 (“Thorens 559”)
[32] The vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Thorens 559 discloses and/or renders obvious the vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 559 at [0023]. *See also* analysis and citations for claim 14 above, including limitation [14.B].

EXHIBIT B-3

EXHIBIT B-3

Invalidity Claim Chart of U.S. Patent Publication No. 2015/0237917 ("Lord 917") against U.S. Patent No. 10,130,123

Lord 917, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 14, 16, 18, 27, 29, 31, and 32 of U.S. Patent No. 10,130,123. Lord 917 was filed on March 31, 2015, and published on August 27, 2015. Lord 917 qualifies as prior art to the '123 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Lord 917. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'123 Claim Limitations	U.S. Patent Publication No. 2015/0237917 ("Lord 917")
[14.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Lord 917 discloses and/or renders obvious a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Lord 917 at Abstract, [0051], [0069], Figures 1-8.
[14.B] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Lord 917 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Lord 917 at Abstract, [0051], [0052], [0061], [0062], [0069], [0070], [0072], [0073], Figures 1-8.
[14.C] a pressure sensor configured to output sensor readings,	Lord 917 discloses and/or renders obvious a pressure sensor configured to output sensor readings. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '123 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’123 Claim Limitations	U.S. Patent Publication No. 2015/0237917 (“Lord 917”)
	Lord 917 at [0008], [0018], [0054], [0065], [0066], [0067], [0077], [0078].
[14.D] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Lord 917 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. For example, see the following passages and/or figures, as well as all related disclosures: Lord 917 at [0053], [0054], [0056], [0077], [0078], Figure 7, Figure 8.
[14.E] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Lord 917 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Lord 917 at Lord 917 at [0054], [0056], [0077], [0078], Figure 7, Figure 8. *See also* analysis and citations for limitation [14.D] above.
[14.F] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Lord 917 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Lord 917 at [0069], [0070], [0077], [0078], Figure 7, Figure 8. *See also* analysis and citations for limitation [14.D] and [14.E] above.
[14.G] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Lord 917 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. For example, see the following passages and/or figures, as well as all related disclosures: Lord 917 at [0077], [0078]. *See also* analysis and citations for limitation [14.D], [14.E], and [14.F] above.

’123 Claim Limitations	U.S. Patent Publication No. 2015/0237917 (“Lord 917”)
[16] The vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor.	Lord 917 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor. For example, see the following passages and/or figures, as well as all related disclosures: Lord 917 at [0055], [0066], [0078]. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[18] The vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values.	Lord 917 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values. For example, see the following passages and/or figures, as well as all related disclosures: Lord 917 at [0015], [0052], [0054], [0056], [0065], [0066], [0067], [0077], [0078]. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[27.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Lord 917 discloses and/or renders obvious a vaporizer device body comprising. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.B] a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater; and	Lord 917 discloses and/or renders obvious a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater. For example, see the following passages and/or figures, as well as all related disclosures: Lord 917 at [0052], [0053], [0062], [0070], [0077], Figure 7, Figure 8. *See also* analysis and citations for claim 14, including limitation [14.B] above.
[27.C] a device body comprising:	Lord 917 discloses and/or renders obvious a device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.D] a cartridge receptacle configured to insertably receive	Lord 917 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material.

’123 Claim Limitations	U.S. Patent Publication No. 2015/0237917 (“Lord 917”)
a cartridge containing a vaporizable material;	*See* analysis and citations for claim 14, including limitation [14.B] above.
[27.E] a pressure sensor configured to output sensor readings,	Lord 917 discloses and/or renders obvious a pressure sensor configured to output sensor readings. *See* analysis and citations for claim 14, including limitation [14.C] above.
[27.F] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Lord 917 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. *See* analysis and citations for claim 14, including limitation [14.D] above.
[27.G] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Lord 917 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. *See* analysis and citations for claim 14, including limitation [14.E] above.
[27.H] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Lord 917 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. *See* analysis and citations for claim 14, including limitation [14.F] above.
[27.I] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Lord 917 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for claim 14, including limitation [14.G] above.
[29] The vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor.	Lord 917 discloses the vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 16 above.

’123 Claim Limitations	U.S. Patent Publication No. 2015/0237917 (“Lord 917”)
[31] The vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values.	Lord 917 discloses and/or renders obvious the vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values. *See* analysis and citations for claim 18 above.
[32] The vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Lord 917 discloses and/or renders obvious the vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Lord 917 at [0053], [0070]. *See also* analysis and citations for claim 14 above, including limitation [14.B].

EXHIBIT B-4

EXHIBIT B-4

Invalidity Claim Chart of U.S. Patent Pub. No. 2016/0128389 ("Lamb 389") against U.S. Patent No. 10,130,123

Lamb 389, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 14, 16, 18, 27, 29, 31, and 32 of U.S. Patent No. 10,130,123. Lamb 389 was filed on November 12, 2014, and published on May 12, 2016. Lamb 389 qualifies as prior art to the '123 Patent under at least AIA 35 U.S.C. § 102(a)(2).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Lamb 389. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'123 Claim Limitations	U.S. Patent Pub. No. 2016/0128389 ("Lamb 389")
[14.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Lamb 389 discloses and/or renders obvious a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Lamb 389 at [0024], [0026], Figure 1, Figure 2, Figure 4.
[14.B] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Lamb 389 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Lamb 389 at [0026], [0031], [0032], [0034], [0040], Figure 1.
[14.C] a pressure sensor configured to output sensor readings,	Lamb 389 discloses and/or renders obvious a pressure sensor configured to output sensor readings. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '123 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’123 Claim Limitations	U.S. Patent Pub. No. 2016/0128389 (“Lamb 389”)
	Lamb 389 at [0004], [0006], [0030], [0043], [0044], [0045], [0046], [0049], [0057], Figure 2, Figure 4.
[14.D] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Lamb 389 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. For example, see the following passages and/or figures, as well as all related disclosures: Lamb 389 at [0004], [0031], [0035], [0043], [0046], Figure 2, Figure 4.
[14.E] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Lamb 389 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Lamb 389 at [0004], [0031], [0032], [0035], [0043], [0046], Figure 2, Figure 4. *See also* analysis and citations for limitation [14.D] above.
[14.F] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Lamb 389 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Lamb 389 at [0004], [0028], [0031], [0032], [0035], [0043], [0046], Figure 2, Figure 4. *See also* analysis and citations for limitation [14.D] and [14.E] above.
[14.G] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Lamb 389 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. For example, see the following passages and/or figures, as well as all related disclosures: Lamb 389 at [0026], [0031]. *See also* analysis and citations for limitation [14.D], [14.E], and [14.F] above.

’123 Claim Limitations	U.S. Patent Pub. No. 2016/0128389 (“Lamb 389”)
[16] The vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor.	Lamb 389 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor. For example, see the following passages and/or figures, as well as all related disclosures: Lamb 389 at Abstract, [0004], [0043], [0044], [0045], [0046], [0049], [0057], Figure 2, Figure 4. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[18] The vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values.	Lamb 389 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values. For example, see the following passages and/or figures, as well as all related disclosures: Lamb 389 at Abstract, [0004], [0006], [0043], [0046], [0049], [0057]. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[27.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Lamb 389 discloses and/or renders obvious a vaporizer device body comprising. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.B] a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater; and	Lamb 389 discloses and/or renders obvious a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater. For example, see the following passages and/or figures, as well as all related disclosures: Lamb 389 at [0019], [0020], [0022], [0026], [0034], [0035], [0040], Figure 1. *See also* analysis and citations for claim 14, including limitation [14.B] above.
[27.C] a device body comprising:	Lamb 389 discloses and/or renders obvious a device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.D] a cartridge receptacle configured to insertably receive	Lamb 389 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material.

’123 Claim Limitations	U.S. Patent Pub. No. 2016/0128389 (“Lamb 389”)
a cartridge containing a vaporizable material;	*See* analysis and citations for claim 14, including limitation [14.B] above.
[27.E] a pressure sensor configured to output sensor readings,	Lamb 389 discloses and/or renders obvious a pressure sensor configured to output sensor readings. *See* analysis and citations for claim 14, including limitation [14.C] above.
[27.F] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Lamb 389 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. *See* analysis and citations for claim 14, including limitation [14.D] above.
[27.G] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Lamb 389 discloses a and/or renders obvious vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. *See* analysis and citations for claim 14, including limitation [14.E] above.
[27.H] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Lamb 389 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. *See* analysis and citations for claim 14, including limitation [14.F] above.
[27.I] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Lamb 389 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for claim 14, including limitation [14.G] above.
[29] The vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor.	Lamb 389 discloses the vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 16 above.

’123 Claim Limitations	U.S. Patent Pub. No. 2016/0128389 (“Lamb 389”)
[31] The vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values.	Lamb 389 discloses and/or renders obvious the vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values. *See* analysis and citations for claim 18 above.
[32] The vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Lamb 389 discloses and/or renders obvious the vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Lamb 389 at [0040].

EXHIBIT B-5

EXHIBIT B-5

Invalidity Claim Chart of U.S. Patent Pub. 2014/0150810 ("Hon 810") against U.S. Patent No. 10,130,123

Hon 810, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 14, 16, 18, 27, 29, 31, and 32 of U.S. Patent No. 10,130,123. Hon 810 was filed on February 4, 2014, and published on June 5, 2014. Hon 810 qualifies as prior art to the '123 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Hon 810. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'123 Claim Limitations	U.S. Patent Pub. 2014/0150810 ("Hon 810")
[14.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Hon 810 and/or renders obvious discloses a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Hon 810 at Title, Abstract, [0002], [0004], [0025], [0026], [0062], Figure 1, claim 1.
[14.B] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Hon 810 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Hon 810 at [0025], [0026], [0065].
[14.C] a pressure sensor configured to output sensor readings,	Hon 810 discloses and/or renders obvious a pressure sensor configured to output sensor readings. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '123 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’123 Claim Limitations	U.S. Patent Pub. 2014/0150810 (“Hon 810”)
	Hon 810 at [0004], [0024], [0025], [0027], [0028], [0040], [0041], Figure 2, Figure 3a, Figure 3b, Figure 3c, Figure 5a, Figure 5b, Figure 7.
[14.D] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Hon 810 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. For example, see the following passages and/or figures, as well as all related disclosures: Hon 810 at Abstract, [0004], [0026], [0027], [0031], [0041], [0046], [0047], [0048], [0049], [0053], Figure 2, Figure 3a, Figure 3b, Figure 3c, Figure 5a, Figure 5b, Figure 7.
[14.E] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Hon 810 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Hon 810 at [0025], [0026], [0053]. *See also* analysis and citations for limitation [14.D] above.
[14.F] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Hon 810 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Hon 810 at [0025], [0026], [0049], [0053], *See also* analysis and citations for limitation [14.D] and [14.E] above.
[14.G] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Hon 810 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. For example, see the following passages and/or figures, as well as all related disclosures: Hon 810 at [0028], [0041], [0048], [0049], Figure 2, Figure 3a, Figure 3b, Figure 3c, Figure 5a, Figure 5b, Figure 7.

’123 Claim Limitations	U.S. Patent Pub. 2014/0150810 (“Hon 810”)
	See also analysis and citations for limitation [14.D], [14.E], and [14.F] above.
[16] The vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor.	Hon 810 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor. For example, see the following passages and/or figures, as well as all related disclosures: Hon 810 at [0023], [0025], [0027]. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[18] The vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values.	Hon 810 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values. For example, see the following passages and/or figures, as well as all related disclosures: Hon 810 at [0040], [0041], [0049]. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[27.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Hon 810 discloses and/or renders obvious a vaporizer device body comprising. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.B] a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater; and	Hon 810 discloses and/or renders obvious a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater. For example, see the following passages and/or figures, as well as all related disclosures: Hon 810 at [0025], [0026], [0057], [0062]. *See also* analysis and citations for claim 14 above, including limitation [14.B].
[27.C] a device body comprising:	Hon 810 discloses and/or renders obvious a device body. *See* analysis and citations for claim 14, including limitation [14.A] above.

’123 Claim Limitations	U.S. Patent Pub. 2014/0150810 (“Hon 810”)
[27.D] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Hon 810 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. *See* analysis and citations for claim 14, including limitation [14.B] above.
[27.E] a pressure sensor configured to output sensor readings,	Hon 810 and/or renders obvious discloses a pressure sensor configured to output sensor readings. *See* analysis and citations for claim 14, including limitation [14.C] above.
[27.F] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Hon 810 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. *See* analysis and citations for claim 14, including limitation [14.D] above.
[27.G] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Hon 810 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. *See* analysis and citations for claim 14, including limitation [14.E] above.
[27.H] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Hon 810 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. *See* analysis and citations for claim 14, including limitation [14.F] above.
[27.I] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Hon 810 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for claim 14, including limitation [14.G] above.
[29] The vaporizer device of claim 27, wherein the pressure	Hon 810 discloses and/or renders obvious the vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 16 above.

’123 Claim Limitations	U.S. Patent Pub. 2014/0150810 (“Hon 810”)
sensor comprises a MEMS pressure sensor.	
[31] The vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values.	Hon 810 discloses and/or renders obvious the vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values. *See* analysis and citations for claim 18 above.
[32] The vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Hon 810 discloses and/or renders obvious the vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Hon 810 at [0025], [0026], [0057].

EXHIBIT B-6

EXHIBIT B-6

Invalidity Claim Chart of CN204180941 ("Chen 941") against U.S. Patent No. 10,130,123

Chen 941, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 14, 16, 18, 27, 29, 31, and 32 of U.S. Patent No. 10,130,123. Chen 941 was filed on October 20, 2014, and was granted on March 4, 2015. Chen 941 qualifies as prior art to the '123 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Chen 941. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'123 Claim Limitations	CN204180941 ("Chen 941")
[14.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Chen 941 discloses and/or renders obvious a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Chen 941 at [0001], [0005], [0039], [0041], Figure 1, Figure 1, Figure 2, Figure 4, Figure 5, Figure 8, Figure 9, Figure 14.
[14.B] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Chen 941 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Chen 941 at [0039], [0060], [0063], Figure 5, Figure 14.
[14.C] a pressure sensor configured to output sensor readings,	Chen 941 discloses and/or renders obvious a pressure sensor configured to output sensor readings. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '123 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’123 Claim Limitations	CN204180941 (“Chen 941”)
	Chen 941 at [0048], [0053], [0064].
[14.D] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Chen 941 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. For example, see the following passages and/or figures, as well as all related disclosures: Chen 941 at [0048], [0052], [0053], [0056], [0064], Figure 2, Figure 5, Figure 8, Figure 9.
[14.E] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Chen 941 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Chen 941 at [0041], [0043], [0045], [0056], [0064], Figure 5. *See also* analysis and citations for limitation [14.D] above.
[14.F] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Chen 941 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Chen 941 at [0009], [0041], [0045], [0056], [0055], [0057], Figure 4, Figure 5. *See also* analysis and citations for limitation [14.D] and [14.E] above.
[14.G] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Chen 941 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. For example, see the following passages and/or figures, as well as all related disclosures: Chen 941 at [0045], [0055], [0057], [0058], [0059]. *See also* analysis and citations for limitation [14.D], [14.E], and [14.F] above.

’123 Claim Limitations	CN204180941 (“Chen 941”)
[16] The vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor.	Chen 941 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor. For example, see the following passages and/or figures, as well as all related disclosures: Chen 941 at [0053]. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[18] The vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values.	Chen 941 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values. Chen 941 at [0053]. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[27.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Chen 941 discloses and/or renders obvious a vaporizer device body comprising. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.B] a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater; and	Chen 941 discloses and/or renders obvious a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater. For example, see the following passages and/or figures, as well as all related disclosures: Chen 941 at [0039], [0060], [0063], [0064], Figure 4, Figure 5, Figure 14. *See also* analysis and citations for claim 14, including limitation [14.B] above.
[27.C] a device body comprising:	Chen 941 discloses and/or renders obvious a device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.D] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Chen 941 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. *See* analysis and citations for claim 14, including limitation [14.B] above.

’123 Claim Limitations	CN204180941 (“Chen 941”)
[27.E] a pressure sensor configured to output sensor readings,	Chen 941 discloses and/or renders obvious a pressure sensor configured to output sensor readings. *See* analysis and citations for claim 14, including limitation [14.C] above.
[27.F] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Chen 941 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. *See* analysis and citations for claim 14, including limitation [14.D] above.
[27.G] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Chen 941 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. *See* analysis and citations for claim 14, including limitation [14.E] above.
[27.H] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Chen 941 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. *See* analysis and citations for claim 14, including limitation [14.F] above.
[27.I] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Chen 941 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for claim 14, including limitation [14.G] above.
[29] The vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor.	Chen 941 discloses and/or renders obvious the vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 16 above.
[31] The vaporizer device of claim 27, wherein the sensor	Chen 941 discloses and/or renders obvious the vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values.

’123 Claim Limitations	CN204180941 (“Chen 941”)
readings output by the pressure sensor comprise pressure values.	*See* analysis and citations for claim 18 above.
[32] The vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Chen 941 discloses and/or renders obvious the vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Chen 941 at [0002], [0058], [0063].

EXHIBIT B-7

EXHIBIT B-7

Invalidity Claim Chart of U.S. Patent Pub. No. 2015/0020831 ("Weigensberg 831") against U.S. Patent No. 10,130,123

Weigensberg 831, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 14, 16, 18, 27, 29, 31, and 32 of U.S. Patent No. 10,130,123. Weigensberg 831 was filed on June 18, 2014, and published on January 22, 2015. Weigensberg 831 qualifies as prior art to the '123 Patent under at least AIA 35 U.S.C. § 102(a)(1). Weigensberg 831 incorporated by reference certain disclosures in other commonly assigned patents. For example, Weigensberg 831 cited 61/474569 (WO 2012/142293) ("Levitz 293") for components of the cartridge and details of the threaded connector. Weigensberg 831 at [0058], [0060].

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Weigensberg 831. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'123 Claim Limitations	U.S. Patent Pub. No. 2015/0020831 ("Weigensberg 831")
[14.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Weigensberg 831 discloses and/or renders obvious a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Weigensberg 831 at Abstract, [0004], [0005], [0006], [0058], Figure 1, claim 1. Levitz 293 at [0005], [0006], [0007], [0008], [0017], Figure 1, Figure 4, Figure 18.
[14.B] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Weigensberg 831 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Weigensberg 831 at Abstract, [0004], [0005], [0006], [0058], [0060], Figure 1. Levitz 293 at [0005], [0006], [0007], [0008], [0017], [0045], [0046], [0048], Figure 1, Figure 4, Figure 18.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '123 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’123 Claim Limitations	U.S. Patent Pub. No. 2015/0020831 (“Weigensberg 831”)
[14.C] a pressure sensor configured to output sensor readings,	Weigensberg 831 discloses and/or renders obvious a pressure sensor configured to output sensor readings. For example, see the following passages and/or figures, as well as all related disclosures: Weigensberg 831 at [0023], [0058], [0059], [0061], [0081], [0097], [0107], Figure 1. Levitz 293 at [0017], Figure 4.
[14.D] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Weigensberg 831 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. For example, see the following passages and/or figures, as well as all related disclosures: Weigensberg 831 at [0012], [0013], [0015], [0024], [0030], [0059], [0062], [0064], [0081], [0105], [0107], [0108], Figure 2, Figure 3, Figure 4, Figure 5, Figure 6, Figure 21, Figure 23. Levitz 293 at [0017], [0045], [0046], Figure 4, Figure 18.
[14.E] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Weigensberg 831 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Weigensberg 831 at [0012], [0013], [0030], [0058], [0059], [0060], [0061], [0062], [0064], [0071], Figure 1, Figure 2, Figure 3, Figure 4, Figure 5, Figure 6. Levitz 293 at [0017], [0045], [0046], Figure 4, Figure 18. *See also* analysis and citations for limitation [14.D] above.
[14.F] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Weigensberg 831 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Weigensberg 831 at [0012], [0013], [0015], [0024], [0030], [0059], [0061], [0062], [0064], [0078], [0107]. Levitz 293 at [0017], [0045], [0046], Figure 4, Figure 18.

’123 Claim Limitations	U.S. Patent Pub. No. 2015/0020831 (“Weigensberg 831”)
	See also analysis and citations for limitation [14.D] and [14.E] above.
[14.G] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Weigensberg 831 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. For example, see the following passages and/or figures, as well as all related disclosures: Weigensberg 831 at [0012], [0013], [0024], [0062], Figure 2, Figure 3, Figure 4, Figure 5, Figure 6, Figure 21, Figure 23. Levitz 293 at [0017], Figure 4. *See also* analysis and citations for limitation [14.D], [14.E], and [14.F] above.
[16] The vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor.	Weigensberg 831 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor. For example, see the following passages and/or figures, as well as all related disclosures: Weigensberg 831 at [0023], [0059], [0077], [0081], [0107]. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[18] The vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values.	Weigensberg 831 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values. For example, see the following passages and/or figures, as well as all related disclosures: Weigensberg 831 at [0023], [0059], [0077], [0081], [0107]. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[27.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Weigensberg 831 discloses and/or renders obvious a vaporizer device body comprising. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.B] a cartridge comprising a reservoir configured to hold a vaporizable material, a heater	Weigensberg 831 discloses and/or renders obvious a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater.

’123 Claim Limitations	U.S. Patent Pub. No. 2015/0020831 (“Weigensberg 831”)
configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater; and	Levitz 293 at [0005], [0006], [0007], [0008], Figure 1, Figure 4, Figure 18. *See also* analysis and citations for claim 14, including limitation [14.B] above.
[27.C] a device body comprising:	Weigensberg 831 discloses and/or renders obvious a device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.D] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Weigensberg 831 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. *See* analysis and citations for claim 14, including limitation [14.B] above.
[27.E] a pressure sensor configured to output sensor readings,	Weigensberg 831 discloses and/or renders obvious a pressure sensor configured to output sensor readings. *See* analysis and citations for claim 14, including limitation [14.C] above.
[27.F] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Weigensberg 831 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. *See* analysis and citations for claim 14, including limitation [14.D] above.
[27.G] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Weigensberg 831 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. *See* analysis and citations for claim 14, including limitation [14.E] above.
[27.H] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Weigensberg 831 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. *See* analysis and citations for claim 14, including limitation [14.F] above.

’123 Claim Limitations	U.S. Patent Pub. No. 2015/0020831 (“Weigensberg 831”)
[27.I] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Weigensberg 831 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for claim 14, including limitation [14.G] above.
[29] The vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor.	Weigensberg 831 discloses and/or renders obvious the vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 16 above.
[31] The vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values.	Weigensberg 831 discloses and/or renders obvious the vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values. *See* analysis and citations for claim 18 above.
[32] The vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Weigensberg 831 discloses and/or renders obvious the vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Weigensberg 831 at [0002], [0004], [0058], [0060]. Levitz 293 at [0005].

EXHIBIT B-8

EXHIBIT B-8

Invalidity Claim Chart of U.S. Patent Publication No. 2015/0245658 ("Worm 658") against U.S. Patent No. 10,130,123

Worm 658, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 14, 16, 18, 27, 29, 31, and 32 of U.S. Patent No. 10,130,123. Worm 658 was filed on February 28, 2014, and published on September 3, 2015. Worm 658 qualifies as prior art to the '123 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Worm 658. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'123 Claim Limitations	U.S. Patent Publication No. 2015/0245658 ("Worm 658")
[14.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Worm 658 discloses and/or renders obvious a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Worm 658 at Abstract, [0026], [0032], [0053], Figure 2, Figure 3, Figure 4, Figure 5, Figure 7.
[14.B] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Worm 658 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Worm 658 at [0029], [0032], [0053], [0056], [0057], [0059], Figure 2, Figure 3.
[14.C] a pressure sensor configured to output sensor readings,	Worm 658 discloses and/or renders obvious and/or renders obvious a pressure sensor configured to output sensor readings. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '123 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’123 Claim Limitations	U.S. Patent Publication No. 2015/0245658 (“Worm 658”)
	Worm 658 at [0008], [0053], [0054], [0060], [0077], Figure 2, Figure 3, Figure 4, Figure 5.
[14.D] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Worm 658 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. For example, see the following passages and/or figures, as well as all related disclosures: Worm 658 at [0007], [0044], [0063], [0064], [0076], Figure 5, Figure 7.
[14.E] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Worm 658 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Worm 658 at [0007], [0063], [0064], [0076], Figure 5, Figure 7. *See also* analysis and citations for limitation [14.D] above.
[14.F] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Worm 658 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Worm 658 at [0044], [0053], [0056], [0057], [0068], [0073], [0074], [0075], [0076], [0077], Figure 1, Figure 2, Figure 7. *See also* analysis and citations for limitation [14.D] and [14.E] above.
[14.G] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Worm 658 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. For example, see the following passages and/or figures, as well as all related disclosures: Worm 658 at [0007], [0064], [0077], Figure 5. *See also* analysis and citations for limitation [14.D], [14.E], and [14.F] above.

’123 Claim Limitations	U.S. Patent Publication No. 2015/0245658 (“Worm 658”)
[16] The vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor.	Worm 658 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor. For example, see the following passages and/or figures, as well as all related disclosures: Worm 658 at [0007], [0060], [0077]. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[18] The vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values.	Worm 658 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values. For example, see the following passages and/or figures, as well as all related disclosures: Worm 658 at [0007], [0060], [0077]. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[27.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Worm 658 discloses and/or renders obvious a vaporizer device body comprising. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.B] a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater; and	Worm 658 discloses and/or renders obvious a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater. For example, see the following passages and/or figures, as well as all related disclosures: Worm 658 at [0011], [0044], [0053], Figure 2. *See also* analysis and citations for claim 14, including limitation [14.B] above.
[27.C] a device body comprising:	Worm 658 discloses and/or renders obvious a device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.D] a cartridge receptacle configured to insertably receive	Worm 658 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material.

’123 Claim Limitations	U.S. Patent Publication No. 2015/0245658 (“Worm 658”)
a cartridge containing a vaporizable material;	*See* analysis and citations for claim 14, including limitation [14.B] above.
[27.E] a pressure sensor configured to output sensor readings,	Worm 658 discloses and/or renders obvious a pressure sensor configured to output sensor readings. *See* analysis and citations for claim 14, including limitation [14.C] above.
[27.F] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Worm 658 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. *See* analysis and citations for claim 14, including limitation [14.D] above.
[27.G] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Worm 658 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. *See* analysis and citations for claim 14, including limitation [14.E] above.
[27.H] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Worm 658 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. *See* analysis and citations for claim 14, including limitation [14.F] above.
[27.I] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Worm 658 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for claim 14, including limitation [14.G] above.
[29] The vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor.	Worm 658 discloses and/or renders obvious the vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 16 above.

’123 Claim Limitations	U.S. Patent Publication No. 2015/0245658 (“Worm 658”)
[31] The vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values.	Worm 658 discloses and/or renders obvious the vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values. *See* analysis and citations for claim 18 above.
[32] The vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Worm 658 discloses and/or renders obvious the vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Worm 658 at [0002], [0025], [0029], [0039].

EXHIBIT B-9

EXHIBIT B-9

Invalidity Claim Chart of U.S. Patent No. 8,393,331 ("Hon 331") against U.S. Patent No. 10,130,123

Hon 331, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 14, 16, 18, 27, 29, 31, and 32 of U.S. Patent No. 10,130,123. Hon 331 was filed on November 11, 2010, and published on July 14, 2011. Hon 331 qualifies as prior art to the '123 Patent under at least AIA 35 U.S.C. § 102 (a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Hon 331. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'123 Claim Limitations	U.S. Patent No. 8,393,331 ("Hon 331")
[14.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Hon 331 discloses and/or renders obvious a vaporizer device For example, see the following passages and/or figures, as well as all related disclosures: Hon 331 at Abstract, 1:56-67, Figure 1, Figure 4, Figure 6, Figure 7, claim 1.
[14.B] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Hon 331 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Hon 331 at 1:56-67, 3:65-4:3.
[14.C] a pressure sensor configured to output sensor readings,	Hon 331 discloses and/or renders obvious a pressure sensor configured to output sensor readings. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '123 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’123 Claim Limitations	U.S. Patent No. 8,393,331 (“Hon 331”)
	Hon 331 at 1:56-65, 2:33-47, 3:30-45, Figure 1, Figure 4.
[14.D] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Hon 331 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. For example, see the following passages and/or figures, as well as all related disclosures: Hon 331 at 1:56-67, 2:33-47, 3:8-17, 3:30-64, Figure 1, Figure 4, Figure 6, Figure 7.
[14.E] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Hon 331 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Hon 331 at 1:56-67, 2:40-47, 2:63-3:64, Figure 1, Figure 4, Figure 6, Figure 7. *See also* analysis and citations for limitation [14.D] above.
[14.F] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Hon 331 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Hon 331 at 1:33-39, 2:33-39, 2:63-3:17, 3:46-64, Figure 1, Figure 6, Figure 7. *See also* analysis and citations for limitation [14.D] and [14.E] above.
[14.G] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Hon 331 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. For example, see the following passages and/or figures, as well as all related disclosures: Hon 331 at 2:40-47, 4:4-7, Figure 4. *See also* analysis and citations for limitation [14.D], [14.E], and [14.F] above.

’123 Claim Limitations	U.S. Patent No. 8,393,331 (“Hon 331”)
[16] The vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor.	Hon 331 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 14 above, including limitation [14.C].
[18] The vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values.	Hon 331 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values. Hon 331 at 3:30-45, 4:47-55. *See* analysis and citations for claim 14 above, including limitation [14.C].
[27.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Hon 331 discloses and/or renders obvious a vaporizer device body comprising. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.B] a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater; and	Hon 331 discloses and/or renders obvious a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater. For example, see the following passages and/or figures, as well as all related disclosures: Hon 331 at 1:56-67, 2:33-47, 2:63-3:17, 3:30-45, 4:8-21, Figure 1. *See also* analysis and citations for claim 14, including limitation [14.B] and [14.F] above.
[27.C] a device body comprising:	Hon 331 discloses and/or renders obvious a device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.D] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Hon 331 discloses a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. *See* analysis and citations for claim 14, including limitation [14.B] above.
[27.E] a pressure sensor configured to output sensor readings,	Hon 331 discloses and/or renders obvious a pressure sensor configured to output sensor readings. *See* analysis and citations for claim 14, including limitation [14.C] above.

’123 Claim Limitations	U.S. Patent No. 8,393,331 (“Hon 331”)
[27.F] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Hon 331 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. *See* analysis and citations for claim 14, including limitation [14.D] above.
[27.G] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Hon 331 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. *See* analysis and citations for claim 14, including limitation [14.E] above.
[27.H] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Hon 331 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. *See* analysis and citations for claim 14, including limitation [14.F] above.
[27.I] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Hon 331 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for claim 14, including limitation [14.G] above.
[29] The vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor.	Hon 331 discloses and/or renders obvious the vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 16 above.
[31] The vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values.	Hon 331 discloses the vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values. *See* analysis and citations for claim 18 above.
[32] The vaporizer device of claim 27, wherein the cartridge	Hon 331 discloses and/or renders obvious the vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.

’123 Claim Limitations	U.S. Patent No. 8,393,331 (“Hon 331”)
comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	For example, see the following passages and/or figures, as well as all related disclosures: Hon 331 at 3:46-55, 3:65-4:3, 4:61-64.

EXHIBIT B-10

EXHIBIT B-10

Invalidity Claim Chart of U.S. Patent Publication No. 2015/0128971 ("Verleur 971") against U.S. Patent No. 10,130,123

Verleur 971, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 14, 16, 18, 27, 19, 31, and 32 of U.S. Patent No. 10,130,123. Verleur 971, filed on March 4, 2014, published May 14, 2015 and claiming priority to Provisional 61,903,344 ("Verleur 971-Prov"), filed November 12, 2013, is prior art under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Verleur 971. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'123 Claim Limitations	U.S. Patent Publication No. 2015/0128971 ("Verleur 971")
[14.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Verleur 971 discloses and/or renders obvious a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0005], [0006], Figures 1, 5, 12, 13, 15.
[14.B] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Verleur 971 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0005] [0006], [0025], [0028], [0030], Figure 1.
[14.C] a pressure sensor configured to output sensor readings,	Verleur 971 discloses and/or renders obvious a pressure sensor configured to output sensor readings. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '123 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’123 Claim Limitations	U.S. Patent Publication No. 2015/0128971 (“Verleur 971”)
	Verleur 971 at [0029], [0031], [0032], [0034], [0039].
[14.D] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Verleur 971 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0029], [0031], [0032], [0034], [0039], [0043], [0052], Figures 1, 2, 13.
[14.E] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Verleur 971 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0029], [0031], [0032], [0034], [0039], [0043], [0052], Figures 1, 13. *See also* analysis and citations for limitation [14.D] above.
[14.F] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Verleur 971 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0005], [0039], [0043], [0052], Figures 1, 2, 13. *See also* analysis and citations for limitation [14.D] and [14.E] above.
[14.G] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Verleur 971 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0029], [0031], [0032], [0034], [0039], [0040], [0049]. *See also* analysis and citations for limitation [14.D], [14.E], and [14.F] above.

’123 Claim Limitations	U.S. Patent Publication No. 2015/0128971 (“Verleur 971”)
[16] The vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor.	Verleur 971 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0029], [0031], [0034], [0039], Figure 1. *See also* analysis and citations for claim 14 above, including limitation [14.B].
[18] The vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values.	Verleur 971 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0029], [0031], [0032], [0033], [0034], [0039]. *See also* analysis and citations for claim 14 above, including limitation [14.B].
[27.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Verleur 971 discloses and/or renders obvious a vaporizer device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.B] a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater; and	Verleur 971 discloses a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0005], [0029], [0038], [0039], [0040], Figure 1, Figure 2, Figure 13. *See also* analysis and citations for claim 14, including limitation [14.A] above.
[27.C] a device body comprising:	Verleur 971 discloses and/or renders obvious a device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.D] a cartridge receptacle configured to insertably receive	Verleur 971 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material.

’123 Claim Limitations	U.S. Patent Publication No. 2015/0128971 (“Verleur 971”)
a cartridge containing a vaporizable material;	*See* analysis and citations for claim 14, including limitation [14.B] above.
[27.E] a pressure sensor configured to output sensor readings,	Verleur 971 discloses and/or renders obvious a pressure sensor configured to output sensor readings. *See* analysis and citations for claim 14, including limitation [14.C] above.
[27.F] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Verleur 971 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. *See* analysis and citations for claim 14, including limitation [14.D] above.
[27.G] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Verleur 971 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. *See* analysis and citations for claim 14, including limitation [14.E] above.
[27.H] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Verleur 971 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. *See* analysis and citations for claim 14, including limitation [14.F] above.
[27.I] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Verleur 971 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for claim 14, including limitation [14.G] above.
[29] The vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor.	Verleur 971 discloses and/or renders obvious the vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 16 above.

’123 Claim Limitations	U.S. Patent Publication No. 2015/0128971 (“Verleur 971”)
[31] The vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values.	Verleur 971 discloses and/or renders obvious the vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values. *See* analysis and citations for claim 18 above.
[32] The vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Verleur 971 discloses and/or renders obvious the vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0038], Figure 1.

EXHIBIT B-11

EXHIBIT B-11

Invalidity Claim Chart of WO 2012/062600 ("Andersson 600") U.S. Patent No. 10,130,123

Andersson 600, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 14, 16, 18, 27, 29, 31, and 32 of U.S. Patent No. 10,130,123. Andersson 600 was filed on October 27, 2011, and published on May 18, 2012. Andersson 600 qualifies as prior art to the '123 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Andersson 600. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'123 Claim Limitations	WO 2012/062600 ("Andersson 600")
[14.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Andersson 600 discloses and/or renders obvious a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Andersson 600 at Abstract, 3:7-14, Figures 1-8.
[14.B] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Andersson 600 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Andersson 600 at 3:7-33, 6:16-22, Figures 1-6.
[14.C] a pressure sensor configured to output sensor readings,	Andersson 600 discloses and/or renders obvious a pressure sensor configured to output sensor readings. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '123 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’123 Claim Limitations	WO 2012/062600 (“Andersson 600”)
	Andersson 600 at 3:7-14, 5:5-6:12.
[14.D] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Andersson 600 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. For example, see the following passages and/or figures, as well as all related disclosures: Andersson 600 at Abstract, 4:29-5:3, 5:5-14, Figure 4, Figure 5, Figure 6.
[14.E] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Andersson 600 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Andersson 600 at Abstract, 3:16-33, 4:1-19, 4:29-5:3, 5:5-14, Figure 1, Figure 5, Figure 6. *See also* analysis and citations for limitation [14.D] above.
[14.F] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Andersson 600 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Andersson 600 at Abstract, 3:16-33, 4:1-19, 4:29-5:3, 5:1-30, Figure 1, Figure 5, Figure 6. *See also* analysis and citations for limitation [14.D] and [14.E] above.
[14.G] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Andersson 600 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. For example, see the following passages and/or figures, as well as all related disclosures: Andersson 600 at 4:1-19, 5:32-6:12. *See also* analysis and citations for limitation [14.D], [14.E], and [14.F] above.

’123 Claim Limitations	WO 2012/062600 (“Andersson 600”)
[16] The vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor.	Andersson 600 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor. Andersson 600 at 3:7-14, 5:5-6:12. *See* analysis and citations for claim 14 above, including limitation [14.C].
[18] The vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values.	Andersson 600 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values. Andersson 600 at 3:7-14, 5:5-6:12. *See* analysis and citations for claim 14 above, including limitation [14.C].
[27.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Andersson 600 discloses and/or renders obvious a vaporizer device body comprising. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.B] a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater; and	Andersson 600 discloses and/or renders obvious a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater. For example, see the following passages and/or figures, as well as all related disclosures: Andersson 600 at 3:7-13, 3:16-33,6:16-22, Figures 1-8. *See also* analysis and citations for claim 14, including limitation [14.B] above.
[27.C] a device body comprising:	Andersson 600 discloses and/or renders obvious a device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.D] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Andersson 600 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. *See* analysis and citations for claim 14, including limitation [14.B] above.

’123 Claim Limitations	WO 2012/062600 (“Andersson 600”)
[27.E] a pressure sensor configured to output sensor readings,	Andersson 600 discloses and/or renders obvious a pressure sensor configured to output sensor readings. *See* analysis and citations for claim 14, including limitation [14.C] above.
[27.F] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Andersson 600 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. *See* analysis and citations for claim 14, including limitation [14.D] above.
[27.G] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Andersson 600 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. *See* analysis and citations for claim 14, including limitation [14.E] above.
[27.H] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Andersson 600 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. *See* analysis and citations for claim 14, including limitation [14.F] above.
[27.I] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Andersson 600 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for claim 14, including limitation [14.G] above.
[29] The vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor.	Andersson 600 discloses and/or renders obvious the vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 16 above.
[31] The vaporizer device of claim 27, wherein the sensor	Andersson 600 discloses and/or renders obvious the vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values.

’123 Claim Limitations	WO 2012/062600 (“Andersson 600”)
readings output by the pressure sensor comprise pressure values.	*See* analysis and citations for claim 18 above.
[32] The vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Andersson 600 discloses and/or renders obvious the vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Andersson 600 at 6:16-19.

EXHIBIT B-12

EXHIBIT B-12

Invalidity Claim Chart of U.S. Patent No. 8,528,569 ("Newton 569") against U.S. Patent No. 10,130,123

Newton, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 14, 16, 18, 27, 19, 31, and 32 of U.S. Patent No. 10,130,123. Newton was filed on June 28, 2011, published on September 5, 2013, and issued September 10, 2013. Newton qualifies as prior art to the '123 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Newton. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'123 Claim Limitations	U.S. Patent No. 8,528,569 ("Newton 569")
[14.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Newton discloses and/or renders obvious a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Newton at Abstract, 1:50-63, 4:5-25, Figure 1, Figures 4a-4c, Figures 5a-5b.
[14.B] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Newton discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Newton at Abstract, 4:5-61, 5:17-47, 6:17-33, 7:16-36, Figure 3b, Figure 5b, Figure 7, Figures 11a-11d.
[14.C] a pressure sensor configured to output sensor readings,	Newton discloses and/or renders obvious a pressure sensor configured to output sensor readings. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '123 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’123 Claim Limitations	U.S. Patent No. 8,528,569 (“Newton 569”)
	Newton at Abstract, 1:50-63, 5:30-60, 6:17-33, Figure 4b, Figure 5a, Figure 6.
[14.D] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Newton discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. For example, see the following passages and/or figures, as well as all related disclosures: Newton at 5:30-47, Figure 4b, Figure 5a, Figure 6.
[14.E] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Newton discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Newton at 1:64-2:3, 4:5-44, 5:17-47, 5:61-7:33, 7:16-36, Figure 3b, Figure 7, Figures 11a-11d. *See also* analysis and citations for limitation [14.D] above.
[14.F] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Newton discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Newton at 1:64-2:3, 4:5-44, 5:17-29, 5:61-7:33, 7:16-36, Figure 3b, Figure 7, Figures 11a-11d. *See also* analysis and citations for limitation [14.D] and [14.E] above.
[14.G] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Newton discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. For example, see the following passages and/or figures, as well as all related disclosures: Newton at 5:30-47, Figure 4b, Figure 5a. *See also* analysis and citations for limitation [14.D], [14.E], and [14.F] above.

’123 Claim Limitations	U.S. Patent No. 8,528,569 (“Newton 569”)
[16] The vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor.	Newton discloses and/or renders obvious the vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor. For example, see the following passages and/or figures, as well as all related disclosures: Newton at Abstract, 1:50-63, 5:30-60, 6:17-33, Figure 4b, Figure 5a, Figure 6. *See also* analysis and citations for claim 14 above, including limitation [14.B].
[18] The vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values.	Newton discloses and/or renders obvious the vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values. For example, see the following passages and/or figures, as well as all related disclosures: Newton at Abstract, 1:50-63, 5:30-60, 6:17-33, Figure 4b, Figure 5a, Figure 6. *See also* analysis and citations for claim 14 above, including limitation [14.B].
[27.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Newton discloses and/or renders obvious a vaporizer device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.B] a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater; and	Newton discloses and/or renders obvious a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater. For example, see the following passages and/or figures, as well as all related disclosures: Newton at Abstract, 4:5-5:29, 6:17-33, 7:16-36, Figure 3b, Figure 5b, Figure 7, Figures 11a-11d. *See also* analysis and citations for claim 14, including limitation [14.A] above.
[27.C] a device body comprising:	Newton discloses and/or renders obvious a device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.D] a cartridge receptacle configured to insertably receive	Newton discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material.

’123 Claim Limitations	U.S. Patent No. 8,528,569 (“Newton 569”)
a cartridge containing a vaporizable material;	*See* analysis and citations for claim 14, including limitation [14.B] above.
[27.E] a pressure sensor configured to output sensor readings,	Newton discloses and/or renders obvious a pressure sensor configured to output sensor readings. *See* analysis and citations for claim 14, including limitation [14.C] above.
[27.F] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Newton discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. *See* analysis and citations for claim 14, including limitation [14.D] above.
[27.G] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Newton discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. *See* analysis and citations for claim 14, including limitation [14.E] above.
[27.H] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Newton discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. *See* analysis and citations for claim 14, including limitation [14.F] above.
[27.I] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Newton discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for claim 14, including limitation [14.G] above.
[29] The vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor.	Newton discloses and/or renders obvious the vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 16 above.

’123 Claim Limitations	U.S. Patent No. 8,528,569 (“Newton 569”)
[31] The vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values.	Newton discloses and/or renders obvious the vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values. *See* analysis and citations for claim 18 above.
[32] The vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Newton discloses and/or renders obvious the vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Newton at 1:11-33.

EXHIBIT B-13

EXHIBIT B-13

Invalidity Claim Chart of U.S. Patent No. 11,000,069 ("Ampolini 069") against U.S. Patent No. 10,130,123

Ampolini 069, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 14, 16, 18, 27, 19, 31, and 32 of U.S. Patent No. 10,130,123. Ampolini 069 was filed on May 15, 2015, and published on November 17, 2016. Ampolini 069 qualifies as prior art to the '123 Patent under at least AIA 35 U.S.C. § 102(a)(2). Ampolini 069 incorporates by reference certain disclosures in other commonly assigned patents. For example, Ampolini 069 cited U.S. Patent No. 5,261,424 ("Sprinkel 424") and WO 2010/003480 ("Flick 480") for additional sensing or detection mechanisms and additionally cites U.S. Patent Publication No. 2014/02614965 ("Novak 495") for an additional connector. Ampolini 069 at 9:31-34, 12:5-11.

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Ampolini 069. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'123 Claim Limitations	U.S. Patent No. 11,000,069 ("Ampolini 069")
[14.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Ampolini 069 discloses and/or renders obvious a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Ampolini 069 at 8:63-9:6, 10:14-24, Figure 1. Sprinkel 424 at 3:51-67, Figure 1.
[14.B] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Ampolini 069 discloses a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Ampolini 069 at 9:8-10, 9:40-67, 10:14-54, 16:43-17:12, 18:35-63, Figure 1, Figure 4.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '123 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’123 Claim Limitations	U.S. Patent No. 11,000,069 (“Ampolini 069”)
[14.C] a pressure sensor configured to output sensor readings,	Ampolini 069 discloses a pressure sensor configured to output sensor readings. For example, see the following passages and/or figures, as well as all related disclosures: Ampolini 069 at Abstract, 4:39-61, 9:24-39, 10:1-13, 11:63-12:11, 17:13-54, Figure 1, Figure 5a, Figure 5b. Sprinkel 424 at 4:14-30, Figure 2, Figure 3. Flick 480 at 4:28-5:3, 8:13-29.
[14.D] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Ampolini 069 discloses a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. For example, see the following passages and/or figures, as well as all related disclosures: Ampolini 069 at 11:9-20, 16:43-17:54, 18:64-19:30, Figure 4, Figure 5a, Figure 5b.
[14.E] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Ampolini 069 discloses a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Ampolini 069 at 11:9-20, 16:34-17:12, 17:20-39, 18:14-21, 18:59-19:14. *See also* analysis and citations for limitation [14.D] above.
[14.F] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Ampolini 069 discloses a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Ampolini 069 at 11:9-20, 17:20-44, 18:14-19:14, Figure 4, Figure 5a, Figure 5b, Figure 6. *See also* analysis and citations for limitation [14.D] and [14.E] above.
[14.G] a gasket around the pressure sensor, the gasket configured to seal the device air	Ampolini 069 discloses a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.

’123 Claim Limitations	U.S. Patent No. 11,000,069 (“Ampolini 069”)
path from the sealed air flow path.	For example, see the following passages and/or figures, as well as all related disclosures: Ampolini 069 at 17:20-39, 18:14-21, Figure 5a, Figure 5b. *See also* analysis and citations for limitation [14.D], [14.E], and [14.F] above.
[16] The vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor.	Ampolini 069 discloses the vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor. For example, see the following passages and/or figures, as well as all related disclosures: Ampolini 069 at Abstract, 11:63-12:11, 17:13-54, Figure 5a. Flick 480 at 5:13-15. *See also* analysis and citations for claim 14 above, including limitation [14.B].
[18] The vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values.	Ampolini 069 discloses the vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values. For example, see the following passages and/or figures, as well as all related disclosures: Ampolini 069 at 11:62-12:11, 17:13-54, Figure 5a. Flick 480 at 4:28-5:3, 8:13-29. *See also* analysis and citations for claim 14 above, including limitation [14.B].
[27.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Ampolini 069 discloses a vaporizer device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.B] a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid	Ampolini 069 discloses a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater. For example, see the following passages and/or figures, as well as all related disclosures: Ampolini 069 at 9:40-53, 10:61-11:20, 18:35-58, Figure 1, Figure 6.

’123 Claim Limitations	U.S. Patent No. 11,000,069 (“Ampolini 069”)
communication with the heater; and	*See also* analysis and citations for claim 14, including limitation [14.A] above.
[27.C] a device body comprising:	Ampolini 069 discloses a device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.D] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Ampolini 069 discloses a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. *See* analysis and citations for claim 14, including limitation [14.B] above.
[27.E] a pressure sensor configured to output sensor readings,	Ampolini 069 discloses a pressure sensor configured to output sensor readings. *See* analysis and citations for claim 14, including limitation [14.C] above.
[27.F] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Ampolini 069 discloses a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. *See* analysis and citations for claim 14, including limitation [14.D] above.
[27.G] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Ampolini 069 discloses a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. *See* analysis and citations for claim 14, including limitation [14.E] above.
[27.H] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Ampolini 069 discloses a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. *See* analysis and citations for claim 14, including limitation [14.F] above.

’123 Claim Limitations	U.S. Patent No. 11,000,069 (“Ampolini 069”)
[27.I] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Ampolini 069 discloses a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for claim 14, including limitation [14.G] above.
[29] The vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor.	Ampolini 069 discloses the vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 16 above.
[31] The vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values.	Ampolini 069 discloses the vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values. *See* analysis and citations for claim 18 above.
[32] The vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Ampolini 069 discloses the vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Ampolini 069 at 12:38-13:9.

EXHIBIT B-14

EXHIBIT B-14

Invalidity Claim Chart of WO 2012/142293 ("Levitz 293") against U.S. Patent No. 10,130,123

Levitz 293, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 14, 16, 18, 27, 29, 31, and 32 of U.S. Patent No. 10,130,123. Levitz 293 was filed on April 12, 2012 and published on October 18, 2012. Levitz 293 qualifies as prior art to the '123 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Levitz 293. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'123 Claim Limitations	WO 2012/142293 ("Levitz 293")
[14.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Levitz 293 discloses and/or renders obvious a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Levitz 293 at Abstract, [0005], [0007], [0017], [0030], [0032], Figure 4, Figure 18.
[14.B] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Levitz 293 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Levitz 293 at [0005], [0007], [0017], [0030], [0031], [0048], Figure 4, Figure 18.
[14.C] a pressure sensor configured to output sensor readings,	Levitz 293 discloses and/or renders obvious a pressure sensor configured to output sensor readings. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '123 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’123 Claim Limitations	WO 2012/142293 (“Levitz 293”)
	Levitz 293 at [0017], [0018], Figure 4, Figure 18.
[14.D] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Levitz 293 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. For example, see the following passages and/or figures, as well as all related disclosures: Levitz 293 at [0017], [0018], Figure 4, Figure 18.
[14.E] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Levitz 293 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Levitz 293 at [0015], [0016], [0017], [0018], [0030], [0032], [0042], Figure 4, Figure 18. *See also* analysis and citations for limitation [14.D] above.
[14.F] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Levitz 293 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Levitz 293 at [0015], [0016], [0017], [0018], [0030], [0032], [0042], Figure 4, Figure 18. *See also* analysis and citations for limitation [14.D] and [14.E] above.
[14.G] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Levitz 293 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. For example, see the following passages and/or figures, as well as all related disclosures: Levitz 293 at [0017], [0018], Figure 4, Figure 18. *See also* analysis and citations for limitation [14.D], [14.E], and [14.F] above.

’123 Claim Limitations	WO 2012/142293 (“Levitz 293”)
[16] The vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor.	Levitz 293 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor. For example, see the following passages and/or figures, as well as all related disclosures: Levitz 293 at [0017], [0018], Figure 4, Figure 18. *See also* analysis and citations for claim 14 above, including limitation [14.B].
[18] The vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values.	Levitz 293 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values. For example, see the following passages and/or figures, as well as all related disclosures: Levitz 293 at [0017], [0018], Figure 4, Figure 18. *See also* analysis and citations for claim 14 above, including limitation [14.B].
[27.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Levitz 293 discloses and/or renders obvious a vaporizer device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.B] a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater; and	Levitz 293 discloses and/or renders obvious a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater. For example, see the following passages and/or figures, as well as all related disclosures: Levitz 293 at [0005], [0007], [0017], [0030], [0031], [0048], Figure 4, Figure 18. *See also* analysis and citations for claim 14, including limitation [14.A] above.
[27.C] a device body comprising:	Levitz 293 discloses and/or renders obvious a device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.D] a cartridge receptacle configured to insertably receive	Levitz 293 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material.

’123 Claim Limitations	WO 2012/142293 (“Levitz 293”)
a cartridge containing a vaporizable material;	*See* analysis and citations for claim 14, including limitation [14.B] above.
[27.E] a pressure sensor configured to output sensor readings,	Levitz 293 discloses and/or renders obvious a pressure sensor configured to output sensor readings. *See* analysis and citations for claim 14, including limitation [14.C] above.
[27.F] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Levitz 293 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. *See* analysis and citations for claim 14, including limitation [14.D] above.
[27.G] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Levitz 293 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. *See* analysis and citations for claim 14, including limitation [14.E] above.
[27.H] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Levitz 293 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. *See* analysis and citations for claim 14, including limitation [14.F] above.
[27.I] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Levitz 293 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for claim 14, including limitation [14.G] above.
[29] The vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor.	Levitz 293 discloses and/or renders obvious the vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 16 above.

’123 Claim Limitations	WO 2012/142293 (“Levitz 293”)
[31] The vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values.	Levitz 293 discloses and/or renders obvious the vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values. *See* analysis and citations for claim 18 above.
[32] The vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Levitz 293 discloses and/or renders obvious the vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Levitz 293 at [0004], Figure 4, Figure 18.

EXHIBIT B-15

EXHIBIT B-15

Invalidity Claim Chart of U.S. Patent No. 8,499,766 ("Newton 766") against U.S. Patent No. 10,130,123

Newton 766, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 14, 16, 18, 27, 29, 31, and 32 of U.S. Patent No. 10,130,123. Newton 766 was filed on September 15, 2010, and issued on August 6, 2013. Newton 766 qualifies as prior art to the '123 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Newton 766. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'123 Claim Limitations	U.S. Patent No. 8,499,766 ("Newton 766")
[14.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Newton 766 discloses a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Newton 766 at 4:35-54, 5:26-48, Figure 1, Figures 2a-2c, Figure 3, Figures 4a-4c, Figure 5, Figure 6, Figures 7a-7c, Figure 8, Figure 9.
[14.B] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Newton 766 discloses a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Newton 766 at 4:35-54, 5:26-62, Figure 1, Figures 4a-4c, Figure 5, Figures 7a-7c, Figure 8.
[14.C] a pressure sensor configured to output sensor readings,	Newton 766 discloses a pressure sensor configured to output sensor readings. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '123 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’123 Claim Limitations	U.S. Patent No. 8,499,766 (“Newton 766”)
	Newton 766 at 5:49-6:26, 6:39-67, Figures 4a-4c, Figure 5, Figure 6, Figures 7a-7c, Figure 8, Figure 9.
[14.D] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Newton 766 discloses a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. For example, see the following passages and/or figures, as well as all related disclosures: Newton 766 at 6:3-26, 7:35-64, Figures 4a-4c, Figure 5, Figure 6, Figures 7a-7c, Figure 8, Figure 9,
[14.E] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Newton 766 discloses a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Newton 766 at 4:35-5:7, 5:47-64, Figure 1, Figures 2a-2c, Figure 3. *See also* analysis and citations for limitation [14.D] above.
[14.F] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Newton 766 discloses a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Newton 766 at 4:55-5:7, 5:47-6:2, Figures 2a-2c, Figure 3, Figures 4a-4c, Figure 5, Figures 7a-7c, Figure 8. *See also* analysis and citations for limitation [14.D] and [14.E] above.
[14.G] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Newton 766 discloses a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. For example, see the following passages and/or figures, as well as all related disclosures: Newton 766 at 6:3-26, 7:35-64, Figure 4a, Figure 5, Figure 6, Figure 7a, Figure 8, Figure 9. *See also* analysis and citations for limitation [14.D], [14.E], and [14.F] above.

’123 Claim Limitations	U.S. Patent No. 8,499,766 (“Newton 766”)
[16] The vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor.	Newton 766 discloses the vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[18] The vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values.	Newton 766 discloses the vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values. Newton 766 at 5:49-6:26, 6:39-67, Figures 4a-4c, Figure 5, Figure 6, Figures 7a-7c, Figure 8, Figure 9. *See also* analysis and citations for claim 14 above, including limitation [14.C].
[27.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Newton 766 discloses a vaporizer device body comprising. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.B] a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater; and	Newton 766 discloses a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater. *See also* analysis and citations for claim 14, including limitation [14.B] and [14.F] above.
[27.C] a device body comprising:	Newton 766 discloses a device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.D] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Newton 766 discloses a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. *See* analysis and citations for claim 14, including limitation [14.B] above.
[27.E] a pressure sensor configured to output sensor readings,	Newton 766 discloses a pressure sensor configured to output sensor readings. *See* analysis and citations for claim 14, including limitation [14.C] above.

’123 Claim Limitations	U.S. Patent No. 8,499,766 (“Newton 766”)
[27.F] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Newton 766 discloses a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. *See* analysis and citations for claim 14, including limitation [14.D] above.
[27.G] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Newton 766 discloses a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. *See* analysis and citations for claim 14, including limitation [14.E] above.
[27.H] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Newton 766 discloses a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. *See* analysis and citations for claim 14, including limitation [14.F] above.
[27.I] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Newton 766 discloses a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for claim 14, including limitation [14.G] above.
[29] The vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor.	Newton 766 discloses the vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 16 above.
[31] The vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values.	Newton 766 discloses the vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values. *See* analysis and citations for claim 18 above.
[32] The vaporizer device of claim 27, wherein the cartridge	Newton 766 discloses the vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.

’123 Claim Limitations	U.S. Patent No. 8,499,766 (“Newton 766”)
comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Newton 766 at 1:11-45.

EXHIBIT B-16

EXHIBIT B-16

Invalidity Claim Chart of U.S. Patent Publication No. 2014/0261495 ("Novak 495") against U.S. Patent No. 10,130,123

Novak 495, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 14, 16, 18, 27, 19, 31, and 32 of U.S. Patent No. 10,130,123. Novak 495 was filed on March 15, 2013 and was published on September 18, 2014. Novak 495 qualifies as prior art to the '123 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Novak 495. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'123 Claim Limitations	U.S. Patent Publication No. 2014/0261495 ("Novak 495")
[14.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Novak 495 discloses and/or renders obvious a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Novak 495 at [0047], [0050], [0060], [0061], [0063], [0077], [0080], [0092], [0094], [0097], Figure 1, Figure 2, Figure 15, Figure 16.
[14.B] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Novak 495 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Novak 495 at [0050], [0051], [0053], [0054], [0053], [0060], [0063], [0065], [0066], [0077], [0080], [0081], [0088], [0092], [0094], [0097], [0098], Figure 2, Figure 6, Figure 7, Figure 11, Figure 12.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '123 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’123 Claim Limitations	U.S. Patent Publication No. 2014/0261495 (“Novak 495”)
[14.C] a pressure sensor configured to output sensor readings,	Novak 495 discloses and/or renders obvious a pressure sensor configured to output sensor readings. For example, see the following passages and/or figures, as well as all related disclosures: Novak 495 at [0049], [0054], [0057], [0059], [0060], [0061], Figure 2.
[14.D] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Novak 495 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. For example, see the following passages and/or figures, as well as all related disclosures: Novak 495 at [0044], [0050], [0051], [0054], [0077], [0081], [0088], [0091], [0097], Figure 1, Figure 2, Figure 14, Figure 15, Figure 16.
[14.E] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Novak 495 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Novak 495 at [0044], [0050], [0051], [0054], [0077], [0080], [0081], [0088], [0091], [0097], [0098], Figure 1, Figure 2, Figure 14, Figure 15, Figure 16. *See also* analysis and citations for limitation [14.D] above.
[14.F] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Novak 495 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Novak 495 at [0044], [0050], [0051], [0054], [0077], [0080], [0081], [0088], [0091], [0097], [0098], Figure 1, Figure 2, Figure 14, Figure 15, Figure 16. *See also* analysis and citations for limitation [14.D] and [14.E] above.
[14.G] a gasket around the pressure sensor, the gasket	Novak 495 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.

’123 Claim Limitations	U.S. Patent Publication No. 2014/0261495 (“Novak 495”)
configured to seal the device air path from the sealed air flow path.	For example, see the following passages and/or figures, as well as all related disclosures: Novak at [0052], [0060], Figure 1, Figure 2. *See also* analysis and citations for limitation [14.D], [14.E], and [14.F] above.
[16] The vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor.	Novak 495 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor. Novak 495 at [0049], [0054], [0057], [0059], [0060], [0061], Figure 2 *See* analysis and citations for claim 14 above, including limitation [14.B].
[18] The vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values.	Novak 495 discloses and/or renders obvious the vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values. Novak 495 at [0049], [0054], [0057], [0059], [0060], [0061], Figure 2 *See* analysis and citations for claim 14 above, including limitation [14.B].
[27.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Novak 495 discloses and/or renders obvious a vaporizer device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.B] a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater; and	Novak 495 discloses and/or renders obvious a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater. Novak 495 at [0050], [0051], [0053], [0054], [0053], [0060], [0063], [0065], [0066], [0077], [0080], [0081], [0088], [0092], [0094], [0097], [0098], Figure 2, Figure 6, Figure 7, Figure 11, Figure 12. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.C] a device body comprising:	Novak 495 discloses and/or renders obvious a device body. *See* analysis and citations for claim 14, including limitation [14.A] above.

’123 Claim Limitations	U.S. Patent Publication No. 2014/0261495 (“Novak 495”)
[27.D] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Novak 495 discloses and/or renders obvious a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. *See* analysis and citations for claim 14, including limitation [14.B] above.
[27.E] a pressure sensor configured to output sensor readings,	Novak 495 discloses and/or renders obvious a pressure sensor configured to output sensor readings. Novak 495 at [0049], [0054], [0057], [0059], [0060], [0061], Figure 2 *See* analysis and citations for claim 14, including limitation [14.C] above.
[27.F] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Novak 495 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. *See* analysis and citations for claim 14, including limitation [14.D] above.
[27.G] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Novak 495 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. *See* analysis and citations for claim 14, including limitation [14.E] above.
[27.H] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Novak 495 discloses and/or renders obvious a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. *See* analysis and citations for claim 14, including limitation [14.F] above.
[27.I] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Novak 495 discloses and/or renders obvious a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for claim 14, including limitation [14.G] above.

’123 Claim Limitations	U.S. Patent Publication No. 2014/0261495 (“Novak 495”)
[29] The vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor.	Novak 495 discloses and/or renders obvious the vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 16 above.
[31] The vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values.	Novak 495 discloses and/or renders obvious the vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values. *See* analysis and citations for claim 18 above.
[32] The vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Novak 495 discloses and/or renders obvious the vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Novak 495 at [0080].

EXHIBIT B-17

EXHIBIT B-17

Invalidity Claim Chart of KR200453400 ("Yeom 400") against U.S. Patent No. 10,130,123

Yeom 400, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 14, 16, 18, 27, 29, 31, and 32 of U.S. Patent No. 10,130,123. Yeom 400 was filed on December 31, 2010 and issued on April 28, 2011 and is prior art under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Yeom 400. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'123 Claim Limitations	KR200453400 ("Yeom 400")
[14.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Yeom 400 discloses a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0013], [0022], [0024], [0027], [0031], [0040], Figure 2, Figure 3, Figure 4.
[14.B] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Yeom 400 discloses a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0013], [0022], [0024], [0031], [0040], Figure 2, Figure 3, Figure 4.
[14.C] a pressure sensor configured to output sensor readings,	Yeom 400 discloses a pressure sensor configured to output sensor readings.
[14.D] wherein a first side of the pressure sensor is exposed to a	Yeom 400 discloses a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '123 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’123 Claim Limitations	KR200453400 (“Yeom 400”)
sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	
[14.E] the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge,	Yeom 400 discloses a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0013], [0023], [0044], [0046], [0048], [0055], Figure 2, Figure 4. *See also* analysis and citations for limitation [14.D] above.
[14.F] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Yeom 400 discloses a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0013], [0022], [0044], [0046], [0048], [0055], Figure 2, Figure 4. *See also* analysis and citations for limitation [14.D] and [14.E] above.
[14.G] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Yeom 400 discloses a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for limitation [14.D], [14.E], and [14.F] above.
[16] The vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor.	Yeom 400 discloses the vaporizer device body of claim 14, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 14 above, including limitation [14.B].
[18] The vaporizer device body of claim 14, wherein the sensor	Yeom 400 discloses the vaporizer device body of claim 14, wherein the sensor readings output by the pressure sensor comprise pressure values.

’123 Claim Limitations	KR200453400 (“Yeom 400”)
readings output by the pressure sensor comprise pressure values.	*See* analysis and citations for claim 14 above, including limitation [14.B].
[27.A] A vaporizer device body comprising:	To the extent the preamble is limiting, Yeom 400 discloses a vaporizer device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.B] a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater; and	Yeom 400 discloses a cartridge comprising a reservoir configured to hold a vaporizable material, a heater configured to heat the vaporizable material, and a mouthpiece in fluid communication with the heater. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.C] a device body comprising:	Yeom 400 discloses a device body. *See* analysis and citations for claim 14, including limitation [14.A] above.
[27.D] a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material;	Yeom 400 discloses a cartridge receptacle configured to insertably receive a cartridge containing a vaporizable material. *See* analysis and citations for claim 14, including limitation [14.B] above.
[27.E] a pressure sensor configured to output sensor readings,	Yeom 400 discloses a pressure sensor configured to output sensor readings. *See* analysis and citations for claim 14, including limitation [14.C] above.
[27.F] wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure,	Yeom 400 discloses a vaporizer device body comprising a pressure sensor wherein a first side of the pressure sensor is exposed to a sealed air flow path and a second side of the pressure sensor is exposed to a device air path open to ambient pressure. *See* analysis and citations for claim 14, including limitation [14.D] above.
[27.G] the sealed air flow path comprising a channel formed between an interior surface of	Yeom 400 discloses a vaporizer device body comprising a pressure sensor wherein the sealed air flow path comprising a channel formed between an interior surface of the cartridge receptacle and an exterior surface of the cartridge.

’123 Claim Limitations	KR200453400 (“Yeom 400”)
the cartridge receptacle and an exterior surface of the cartridge,	*See* analysis and citations for claim 14, including limitation [14.E] above.
[27.H] the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge; and	Yeom 400 discloses a vaporizer device body comprising a pressure sensor wherein the sealed air flow path passing from an air inlet, through the channel and to a heater and an outlet of a mouthpiece within the cartridge. *See* analysis and citations for claim 14, including limitation [14.F] above.
[27.I] a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path.	Yeom 400 discloses a vaporizer device body comprising a gasket around the pressure sensor, the gasket configured to seal the device air path from the sealed air flow path. *See* analysis and citations for claim 14, including limitation [14.G] above.
[29] The vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor.	Yeom 400 discloses the vaporizer device of claim 27, wherein the pressure sensor comprises a MEMS pressure sensor. *See* analysis and citations for claim 16 above.
[31] The vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values.	Yeom 400 discloses the vaporizer device of claim 27, wherein the sensor readings output by the pressure sensor comprise pressure values. *See* analysis and citations for claim 18 above.
[32] The vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Yeom 400 discloses the vaporizer device of claim 27, wherein the cartridge comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 400 at [0022].

NJOY's Initial Invalidity Contentions in Inv. No. 337-TA-1368

Exhibit C: Invalidity of U.S. Patent No. 10,709,173 Under 35 U.S.C. §§ 102, 103, 112

I. Invalidity of U.S. Patent No. 10,709,173 Under 35 U.S.C. §§ 102, 103

NJOY contends that each of the references set forth below, either alone or in combination with other prior art, invalidates the claims of the '173 Patent under 35 U.S.C. §§ 102, 103:

Prior Art Reference	Date of Publication or Other Prior Art Date	Statutory Provision of Prior Art[1]	Bates Number
US20090272379A1	April 29, 2009	§§ 102(a)(1), (a)(2)	NJOYITC1_00002579
US20130306065A1	December 1, 2011	§§ 102(a)(1), (a)(2)	NJOYITC1_00001534
US20150090280A1	September 29, 2013	§ 102(a)(2)	NJOYITC1_00001706
US20130037041A1	August 9, 2011	§§ 102(a)(1), (a)(2)	NJOYITC1_00001419
CN202999299U	December 5, 2012	§§ 102(a)(1), (a)(2)	NJOYITC1_00000159
US20150136124A1	November 21, 2013	§ 102(a)(2)	NJOYITC1_00001750
US20150128971A1	March 4, 2014	§ 102(a)(2)	NJOYITC1_00001729
Prov. App. 61/903,344	November 12, 2013	§ 102(a)(2)	NJOYITC1_00000462
WO2014139609	December 20, 2013	§ 102(a)(2)	NJOYITC1_00002777
US20040237974A1	July 3, 2003	§§ 102(a)(1), (a)(2)	NJOYITC1_00001271
US5505214A	September 11, 1992	§§ 102(a)(1), (a)(2)	NJOYITC1_00000520
CN201767027U	February 11, 2010	§ 102(a)(1)	NJOYITC1_00000091
EP2614731A1	January 12, 2012	§ 102(a)(1)	NJOYITC1_00000308
AU2011328313A1	November 8, 2010	§ 102(a)(1)	NJOYITC1_00000001
CN202890462U	October 30, 2012	§ 102(a)(1)	NJOYITC1_00000130
CN204217907U	September 19, 2014	§ 102(a)(1)	NJOYITC1_00000293

[1] In light of JLI's failure to provide any basis to support its effective filing date and conception contentions with respect to the Asserted Patents, NJOY reserves the right to identify different statutory provisions under which each reference qualifies as prior art.

Prior Art Reference	Date of Publication or Other Prior Art Date	Statutory Provision of Prior Art[1]	Bates Number
US20090255534A1	April 13, 2009	§§ 102(a)(1), (a)(2)	NJOYITC1_00001324
US20150117842	June 19, 2014	§ 102(a)(2)	NJOYITC1_00002633
EP13149544	March 15, 2013	§ 102(a)(2)	NJOYITC1_00002436
US20160021933A1	March 15, 2013	§ 102(a)(2)	NJOYITC1_00002705
CN203087525U	June 14, 2012	§ 102(a)(1)	NJOYITC1_00000186
US8156944	April 16, 2009	§ 102(a)(1)	NJOYITC1_00000654
CN104382237A	November 14, 2014	§ 102(a)(1)	NJOYITC1_00000034
CN201104488Y	September 30, 2007	§ 102(a)(1)	NJOYITC1_00000055
CN201750712U	April 2, 2010	§ 102(a)(1)	NJOYITC1_00000071
CN204120231U	August 4, 2014	§ 102(a)(1)	NJOYITC1_00000248
KR101011453B1	September 27, 2010	§ 102(a)(1)	NJOYITC1_00000323
KR200457694Y1	April 7, 2011	§ 102(a)(1)	NJOYITC1_00000422
KR200453424Y1	May 2, 2011	§ 102(a)(1)	NJOYITC1_00000384
KR20130107658A	March 22, 2012	§ 102(a)(1)	NJOYITC1_00000439
CN202697716	August 6, 2012	§ 102(a)(1)	NJOYITC1_00002795
CN203353690	December 25, 2013	§ 102(a)(1)	NJOYITC1_00002801
KR1020110084387	July 13, 2012	§ 102(a)(1)	NJOYITC1_00002821
US10058122B2	June 11, 2014	§ 102(a)(2)	NJOYITC1_00001154
US10092713B2	May 15, 2010	§ 102(a)(2)	NJOYITC1_00001194
US20040099266A1	May 20, 2003	§§ 102(a)(1), (a)(2)	NJOYITC1_00001256
US20090151717A1	December 16, 2008	§§ 102(a)(1), (a)(2)	NJOYITC1_00001294
US20090283103A1	May 13, 2009	§§ 102(a)(1), (a)(2)	NJOYITC1_00001340

Prior Art Reference	Date of Publication or Other Prior Art Date	Statutory Provision of Prior Art[1]	Bates Number
US20100031968A1	July 24, 2009	§§ 102(a)(1), (a)(2)	NJOYITC1_00001354
US20120199663A1	November 1, 2010	§§ 102(a)(1), (a)(2)	NJOYITC1_00001378
US20120318882A1	June 18, 2012	§§ 102(a)(1), (a)(2)	NJOYITC1_00001396
US20140150783A1	December 5, 2012	§§ 102(a)(1), (a)(2)	NJOYITC1_00001583
US20140182612A1	December 28, 2012	§§ 102(a)(1), (a)(2)	NJOYITC1_00001620
US20140299140A1	April 3, 2013	§§ 102(a)(1), (a)(2)	NJOYITC1_00002620
US20150059784A1	August 29, 2013	§ 102(a)(2)	NJOYITC1_00001677
US20150078735A1	September 16, 2013	§ 102(a)(2)	NJOYITC1_00001692
US20150101622A1	October 15, 2013	§ 102(a)(2)	NJOYITC1_00001719
US20150272217A1	March 27, 2014	§ 102(a)(2)	NJOYITC1_00001816
US20150272221A1	April 1, 2014	§ 102(a)(2)	NJOYITC1_00001827
US20150282525A1	December 30, 2011	§ 102(a)(2)	NJOYITC1_00002693
US20160150821A1	August 15, 2013	§ 102(a)(2)	NJOYITC1_00001855
US4945931A	July 14, 1989	§§ 102(a)(1), (a)(2)	NJOYITC1_00000514
US5865185A	September 11, 1992	§§ 102(a)(1), (a)(2)	NJOYITC1_00000545
US7726320B2	October 18, 2006	§§ 102(a)(1), (a)(2)	NJOYITC1_00000603
US7802569B2	December 22, 2005	§§ 102(a)(1), (a)(2)	NJOYITC1_00000627
US8205622B2	March 24, 2009	§§ 102(a)(1), (a)(2)	NJOYITC1_00000670
US8770187B2	May 6, 2008	§§ 102(a)(1), (a)(2)	NJOYITC1_00000727
US8851068B2	August 26, 2010	§ 102(a)(2)	NJOYITC1_00000747
US9078473B2	August 9, 2011	§ 102(a)(2)	NJOYITC1_00000775
US9167849B2	April 22, 2011	§§ 102(a)(1), (a)(2)	NJOYITC1_00000831

Prior Art Reference	Date of Publication or Other Prior Art Date	Statutory Provision of Prior Art[1]	Bates Number
US9332787B2	September 27, 2012	§ 102(a)(2)	NJOYITC1_00000875
US9364025B2	December 5, 2012	§ 102(a)(2)	NJOYITC1_00000889
US9408416B2	August 16, 2012	§§ 102(a)(1), (a)(2)	NJOYITC1_00000926
US9427022B2	March 12, 2013	§§ 102(a)(1), (a)(2)	NJOYITC1_00000959
US9516899B2	December 30, 2011	§§ 102(a)(1), (a)(2)	NJOYITC1_00001001
US9532601B2	January 15, 2013	§ 102(a)(2)	NJOYITC1_00001013
US9693587B2	November 21, 2011	§§ 102(a)(1), (a)(2)	NJOYITC1_00001028
US9717276B2	October 31, 2013	§ 102(a)(2)	NJOYITC1_00001049
US9839238B2	February 28, 2014	§ 102(a)(2)	NJOYITC1_00001090

Additionally, the following prior art systems either alone or in combination with other prior art, invalidate the claims of the '173 Patent under 35 U.S.C. §§ 102, 103. The identification of these prior art systems is based on NJOY's investigation to date, is ongoing, and will be supplemented in due course.

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
21st Century Smoke	No later than August 2008	§102(a)(1)
Intellicig	No later than September 2008	§102(a)(1)
The Safe Cig	No later than December 2008	§102(a)(1)
Green Smoke	No later than December 2008	§102(a)(1)

[2] In light of JLI's failure to provide any basis to support its effective filing date and conception contentions with respect to the Asserted Patents, NJOY reserves the right to identify different statutory provisions under which each reference qualifies as prior art.

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
SmokeTip	No later than May 2009	§102(a)(1)
Fuma	No later than August 2009	§102(a)(1)
Blu Starter Kit	No later than October 2009	§102(a)(1)
Vapor Corp. Smoke 51	No later than November 2009	§102(a)(1)
Boge Technology LEO Pod System	No later than June 2010	§102(a)(1)
ePuffer Magnum Uno D2	No later than 2011	§102(a)(1)
ePuffer Phantom T1	No later than 2012	§102(a)(1)
VMR V2 e-cig	No later than 2012	§102(a)(1)
Vinirette Aurora Pod	No later than January 2012	§102(a)(1)
Innokin iTaste VV	No later than June 2012	§102(a)(1)
iWand	No later than June 2012	§102(a)(1)
JWell Ivary V2 Pod	No later than July 2012	§102(a)(1)
KangerTech T2 Ego Clearomizer	No later than November 2012	§102(a)(1)
Boge Technology EGO Passthrough CE4 EGOKIT	No later than December 2012	§102(a)(1)
Smart Evolution Trading Puff Avatar 1 Pod System	No later than December 2012	§102(a)(1)
Smart Evolution Trading Puff Avatar 2 Pod System	No later than December 2012	§102(a)(1)
Smart Evolution Trading Puff Quantum	No later than 2013	§102(a)(1)
KangerTech iPh-8	No later than March 2013	§102(a)(1)
KangerTech eVod	No later than April 2013	§102(a)(1)
JWELL Inova 1.0 Pod System	No later than June 2013	§102(a)(1)
Ijoy SS-ITop Pod System	No later than July 2013	§102(a)(1)
VUSE Solo	No later than July 2013	§102(a)(1)

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
Apollo eGo-vv	No later than August 2013	§102(a)(1)
Bedford Slims	No later than August 2013	§102(a)(1)
Breathe Fresh eCigs	No later than August 2013	§102(a)(1)
Bull Smoke Automatic	No later than August 2013	§102(a)(1)
Bull Smoke Manual	No later than August 2013	§102(a)(1)
Cigarti	No later than August 2013	§102(a)(1)
Cigavette Premier	No later than August 2013	§102(a)(1)
Crown 7	No later than August 2013	§102(a)(1)
Duopro	No later than August 2013	§102(a)(1)
E-Lites	No later than August 2013	§102(a)(1)
Eluma	No later than August 2013	§102(a)(1)
Eon Smoke	No later than August 2013	§102(a)(1)
ePuffer Colibri	No later than August 2013	§102(a)(1)
eSmoke	No later than August 2013	§102(a)(1)
Eversmoke	No later than August 2013	§102(a)(1)
Fifty-One Trio	No later than August 2013	§102(a)(1)
Firebrand Millennium	No later than August 2013	§102(a)(1)
Frii	No later than August 2013	§102(a)(1)
Green Nicotine	No later than August 2013	§102(a)(1)
Halo G6	No later than August 2013	§102(a)(1)
J510L	No later than August 2013	§102(a)(1)
Logic Power Series	No later than August 2013	§102(a)(1)
Luci	No later than August 2013	§102(a)(1)

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
Metro Platinum	No later than August 2013	§102(a)(1)
Modern Vapor Sidesho	No later than August 2013	§102(a)(1)
New Day	No later than August 2013	§102(a)(1)
Nirvana Eco	No later than August 2013	§102(a)(1)
Ozone Smoke	No later than August 2013	§102(a)(1)
Premium	No later than August 2013	§102(a)(1)
Prosmoke	No later than August 2013	§102(a)(1)
Pure	No later than August 2013	§102(a)(1)
Revolver G2	No later than August 2013	§102(a)(1)
Seminole	No later than August 2013	§102(a)(1)
Smokeless Delite Premo Cartomizer	No later than August 2013	§102(a)(1)
Smokeless Delite Premo Cartridge	No later than August 2013	§102(a)(1)
Smokesation	No later than August 2013	§102(a)(1)
SmokeTip	No later than August 2013	§102(a)(1)
South Beach Smoke	No later than August 2013	§102(a)(1)
Ultra	No later than August 2013	§102(a)(1)
Vapage	No later than August 2013	§102(a)(1)
Victory	No later than August 2013	§102(a)(1)
White Cloud Cirrus 3	No later than August 2013	§102(a)(1)
Joyetech eGo-C	No later than August 2013	§102(a)(1)
Joytech eVic	No later than August 2013	§102(a)(1)
Joytech eCab	No later than August 2013	§102(a)(1)

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
Joytech eRoll	No later than August 2013	§102(a)(1)
Jocor Enterprises Lavatube	No later than August 2013	§102(a)(1)
Jocor Enterprises Magma	No later than August 2013	§102(a)(1)
Bloog	No later than August 2013	§102(a)(1)
Da Vinci	No later than August 2013	§102(a)(1)
EGO 1100 Dual Coil	No later than August 2013	§102(a)(1)
Elite Variable Voltage e-Cigarette	No later than August 2013	§102(a)(1)
Firebrand Diablo Falcon Elite	No later than August 2013	§102(a)(1)
Panda eGo Ismoka	No later than August 2013	§102(a)(1)
Panda Evolve	No later than August 2013	§102(a)(1)
Premium EGO	No later than August 2013	§102(a)(1)
Smokeless Delite Ego-T	No later than August 2013	§102(a)(1)
SmokeTech S.I.D. Variable Volage eCig	No later than August 2013	§102(a)(1)
Vapor King	No later than August 2013	§102(a)(1)
Vapor King Storm 2.0	No later than August 2013	§102(a)(1)
Vgo	No later than August 2013	§102(a)(1)
Winder Noval XL	No later than August 2013	§102(a)(1)
Vapor4Life WOW EGO	No later than August 2013	§102(a)(1)
Vapor4Life Zeus	No later than August 2013	§102(a)(1)
Zerocig Georgie	No later than August 2013	§102(a)(1)
Joye 510	No later than August 2013	§102(a)(1)
Joyetech Elips-C	No later than September 2013	§102(a)(1)

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
SMOKio	No later than December 2013	§102(a)(1)
MarkTen	No later than December 2013	§102(a)(1)

Each piece of prior art identified in Exhibits C1-C12 of NJOY's initial invalidity contentions either anticipates one or more of the claims of the '173 Patent and/or renders obvious one or more of the claims of the '173 Patent when viewed in combination with other prior art. NJOY reserves the right to contend that each of the anticipatory prior art renders the claims obvious either in view of the prior art alone or in combination with other prior art. The identification of any patent or patent application should be deemed an identification of any counterpart patent, application, or associated product; the identification of any article or publication should be deemed a disclosure of any substantially similar article if published in some other form, or of any patent or patent application whole, as understood by a POSA; the identification of any system or device should be deemed a disclosure of any article, manual, guide, patent, application, or other publication describing or corresponding to the system or device. Reference to a figure should be deemed to refer to the text describing the figure and vice versa.

In addition to the anticipatory prior art described in these invalidity contentions, the claims of the '173 Patent are invalid based on obviousness under 35 U.S.C. § 103. In general, a claimed invention is unpatentable if the differences between it 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." 35 U.S.C. § 103(a); *Graham v. John Deere Co.*, 383 U.S. 1, 13-14 (1966).

Each piece of prior art described in Exhibits C1-C12, either alone or in combination with other prior art, renders the claims of the '173 Patent invalid as obvious. In particular, each piece of prior art may be combined with (1) information known to persons skilled in the art at the time

of the alleged invention, (2) any of the other anticipatory prior art, and/or (3) any of the additional prior art identified herein and in the charts attached hereto. In addition to the prior art set forth above, NJOY incorporates by reference each and every piece of prior art of record in the prosecution of the '173 Patent, including the statements made therein by the applicant, as well as the prior art discussed in the specification.

In view of the Supreme Court's *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 127 S.Ct. 1727, 1739 (2007) ("*KSR*") decision, the USPTO issued a set of Examination Guidelines. *See* Examination Guidelines for Determining Obviousness Under 35 U.S.C. § 103 in view of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, 72 Fed. Reg. 57, 526 (Oct. 10, 2007). Those rationales include:

- Combining prior art elements according to known methods to yield predictable results;
- Simple substitution of one known element for another to obtain predictable results;
- Use of a known technique to improve similar devices (methods, or products) in the same way;
- Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- "Obvious to try" – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;

- Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

Id. at 57, 529. These rationales are consistent with the Supreme Court's emphasis in *KSR* that "the results of ordinary innovation" from the perspective of a person of ordinary skill are not patentable, and further that "[a] person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR*, 550 U.S. at 421. NJOY contends that one or more of these rationales apply in considering the obviousness of the claims of the '173 Patent.

As the Supreme Court emphasized in *KSR*, issued patent claims may be determined to be invalid as obvious even without a teaching, suggestion, or motivation to combine particular prior art. *Id.* at 419 ("The 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."). Nevertheless, a person of skill in the art would have been motivated to combine each of the identified pieces of prior art with the others identified with respect to the claims of the '173 Patent. NJOY contends that one of ordinary skill in the art, at the time the alleged inventions of the '173 Patent were made, would have been motivated to combine the prior art disclosed herein in such a way to reach the alleged inventions. The teaching, suggestion, or motivation to combine this prior art, although not required, is found, explicitly or implicitly, in one or more of at least the following: the knowledge or common sense of one of ordinary skill in the art; the prior art teachings themselves and/or the prior art as a whole, including interrelated teachings of multiple prior art; the common fields of technology of the prior art; the subject matter acknowledged as prior art in the '173 Patent; the nature of the problem to be solved and the existence of similar improvements in similar applications; design incentives and other

market forces, including the advantages of creating a superior and more desirable product and the effects of demands known to the design community or present in the marketplace; the ability to implement the alleged invention as a predictable variation of the prior art; improvements in similar devices; any needs or problems known in the fields addressed by the ’173 Patent; the teachings in the prior art directed to solving the problems that the ’173 Patent allegedly directed to solving; and the number of identified, predictable solutions to the problems addressed by these patents. In addition, the simultaneous (and/or prior) inventions described above (and elsewhere in these contentions) are evidence that motivation to combine the concepts described in or taught by the various prior art did, in fact, exist, and they were, in fact, combined.

This prior art identifies and addresses many of the same technical issues and suggest similar solutions to those issues. Moreover, much of the prior art cross-reference and discuss one another, further illustrating the close technical relationship among this group of prior art. Accordingly, the teachings of the individual prior art and alleged inventions, combined with the industry knowledge of a person of ordinary skill in the art at the time of the alleged invention of the ’173 Patent, would render obvious the claims of the ’173 Patent for at least the reasons described herein and in the incorporated exhibits. A person of ordinary skill at the time of the alleged inventions had reason to combine or modify one or more of the listed prior art in light of the knowledge of a person of ordinary skill in the art at the time of the alleged invention and information in the prior art cited herein. Thus, this prior art would logically have been combined pursuant to 35 U.S.C. § 103, and there was abundant motivation to combine such prior art at the time of the purported inventions of the ’173 Patent.

The prior art set forth in Exhibits C1-C12 clearly demonstrate that each of the limitations of the claims of the ’173 Patent was known in the art. A person of ordinary skill would have been

motivated to combine these known elements to arrive at the asserted claims of the ’173 Patent. Furthermore, a person of ordinary skill in the art at the time of the alleged invention would have had a reasonable expectation of success when combining the listed prior art and the known elements because the proposed combinations would have been well within the level of ordinary skill in the art. Indeed, the proposed combinations would have been merely the application of a known technique or component with a known system in the same field of endeavor. And, when combined, each element merely performs the same predictable functions as it does separately without significantly altering or hindering the functions performed by the other elements.

Exemplary motivations are set forth below:

Heater chamber

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose heater chamber, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to locate a heating element in a chamber. A POSA would have been motivated to locate the heating element in a chamber, such as those disclosed in Verleur 971, Liu 783, Yeom 424, and/or Youm 694, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that

could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to locate a heating element in a chamber because this configuration provides several benefits. For example, Liu 783 discloses a combustion unit to vaporize liquid having advantages that include preventing liquid from leaking, preventing liquid from being supplied excessively, and preventing the wick from burning. A POSA would have known that having a chamber comprising the heating element reduces leakage, ensures that most of the e-liquid is vaporized and inhaled rather than being wasted, increases safety, and increases the adult consumer experience by reducing the likelihood of liquid droplets from being inhaled.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Thorens 379 or Thorens 933, with the heater chambers taught by Verleur 971, Liu 783, Yeom 424, and/or Youm 694. A POSA would have known that Verleur 971, Liu 783, Yeom 424, and/or Youm 694's heater chamber could be added to Thorens 379 or Thorens 933 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Thorens 379 or Thorens 933 with Verleur 971, Liu 783, Yeom 424, and/or Youm 694 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Thorens 379 or Thorens 933 with Verleur 971, Liu 783, Yeom 424, and/or Youm 694.

Resistive heating element

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a resistive heating element, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a resistive heating element in an electronic vaporizer device. A POSA would have been motivated to use a resistive heating element, such as those disclosed in Thorens 379, Thorens 933, Liu 783, Yeom 424, and/or Youm 694, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use a resistive heating element because this configuration provides several benefits. For example, Thorens 379 discloses a resistive heating element having advantages that include controlling the operating temperature to ensure that no undesirable degradations of the vaporizable liquid occurs. Thorens 379 describes that using a resistive heating element offers other benefits such as providing a rapid response time (time between the adult consumer puffing on the system and the aerosol entering the adult consumer's mouth). A POSA would have been motivated to use a heating element with minimal response time since adult consumers want immediate vapor production upon activating the device. Resistive heating elements are also very efficient for their purpose, and convert almost all of the electrical energy they consume into heat. A POSA also would have also been motivated to use a resistive

heating elements because the design and function is simple and straightforward, use fewer components that can fail, and inexpensive to manufacture.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Verleur 971 or Han 944, with the resistive heating elements taught by Thorens 379, Thorens 933, Liu 783, Yeom 424, and/or Youm 694. A POSA would have known that the resistive heating elements disclosed in Thorens 379, Thorens 933, Liu 783, Yeom 424, and/or Youm 694 could be added to Verleur 971 or Han 944 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Verleur 971 or Han 944 with Thorens 379, Thorens 933, Liu 783, Yeom 424, and/or Youm 694 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Verleur 971 or Han 944 with Thorens 379, Thorens 933, Liu 783, Yeom 424, and/or Youm 694.

Heater chamber disposed within the receptacle when the receptacle insertably receives the cartridge

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a heater chamber disposed within the receptacle when the receptacle insertably receives the cartridge, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common for the heater chamber to be disposed within the receptacle of the device's body when the receptacle insertably receives and couples to the cartridge in electronic vaporizer device. A POSA would have been motivated to position the heater chamber to be disposed within the receptacle when the receptacle insertably receives and couples to the cartridge, such as the configurations disclosed in Verleur 971, Thorens

379, Paterno 534, Liu 783, Pan 622, and/or Youm 694, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to position the heater chamber within the receptacle when the receptacle insertably receives a cartridge because of the numerous benefits this configuration provides. For example, Verleur 971 discloses a receptacle having advantages that include protecting an inserted or received cartridge. First, this design enhancing safety by adding another layer of protection between the heating element and the adult consumer's hand, thereby preventing potential burns. Second, this configuration protects components of the heater chamber from potential damage due to accidental drops or impacts. Third, this configuration allows for a more compact and streamlined design, increasing aesthetics and portability. Fourth, this configuration provides a more secure connection between the cartridge and the receptacle, ensuring more consistent electrical connections, and reducing the risk of potential malfunctions due to loose electrical connections. Having the cartridge more securely surrounded by the receptacle ensures a more stable electrical connection thereby leading to consistent power delivery and vapor production.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Han 944 or Yeom 424, with the heater chamber and receptacle configurations taught by Verleur 971, Thorens 379, Paterno 534, Liu 783, Pan 622, and/or Youm 694. A POSA would have known that the heater chamber and receptacle configurations disclosed in Verleur 971, Thorens 379, Paterno 534, Liu 783, Pan 622, and/or Youm 694 could be added to Han 944 or Yeom 424 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Han 944 or Yeom 424 with Verleur 971, Thorens 379, Paterno 534, Liu 783, Pan 622, and/or Youm 694 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Han 944 or Yeom 424 with Verleur 971, Thorens 379, Paterno 534, Liu 783, Pan 622, and/or Youm 694.

Air inlet passage with sides formed by exterior surface of the cartridge and an internal surface of the receptacle

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose an air inlet passage with sides formed by exterior surface of the cartridge and an internal surface of the receptacle, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to have an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge in an electronic vaporizer device. A POSA would have been motivated to have an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples

to the cartridge in an electronic vaporizer device, such as those disclosed in Verleur 971, Thorens 379, and/or Thorens 933, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to include an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge because this configuration provides several benefits. For example, A POSA would have known that this design ensures that the air is drawn into the device in a controlled and predictable manner. The length and width of the air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle could be used to adjust the amount of resistance experienced by the adult consumer during inhalation such that it matches the resistance encountered during traditional smoking. Controlling the airflow can aid in cooling the system and prevent overheating and extending the lifespan of the heating element. This design provides flexibility in the location of the air inlet passage, allowing the air inlet passage to be located in a low-contact area where an adult consumer is not likely to block it.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Paterno 534, Han 944, Liu 783, Yeom 424, Pan 622, or Youm 694, with the air inlet passage design taught by Verleur 971, Thorens 379, and/or Thorens 933. A POSA would have known that the air inlet passage design disclosed by Verleur 971, Thorens 379, and/or Thorens 933 could be added to Paterno 534, Han 944, Liu 783, Yeom 424, Pan 622, and Youm 694 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Paterno 534, Han 944, Liu 783, Yeom 424, Pan 622, and Youm 694 with Verleur 971, Thorens 379, and/or Thorens 933 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Paterno 534, Han 944, Liu 783, Yeom 424, Pan 622, and Youm 694 with Verleur 971, Thorens 379, and/or Thorens 933.

Protrusion extending from the exterior surface of the cartridge and disposed within the receptacle

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a protrusion extending from the exterior surface of the cartridge and disposed within the receptacle, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to have a protrusion extending from the exterior surface of the cartridge and disposed within the receptacle in an electronic vaporizer device. A POSA would have been motivated to add a protrusion extending from the exterior surface of the cartridge and disposed within the receptacle, such as those disclosed in Verleur 971, Paterno 534, Liu 783, Yeom 424, and Qiuming based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs;

the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to add a protrusion extending from the exterior surface of the cartridge and disposed within the receptacle because this configuration provides several benefits. For example, Verleur 971 discloses an alignment protrusion having advantages that include ensuring proper alignment between the cartridge and receptacle. A POSA would have known that a protrusion can act as a guide, ensuring that the cartridge is always inserted in the correct orientation. Moreover, having a unique protrusion design also reduces the risk of using non-official cartridges, which can be important for safety and performance.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation with the protrusions taught by Verleur 971, Paterno 534, Liu 783, Yeom 424, and Qiuming. A POSA would have known that the protrusions disclosed in Verleur 971, Paterno 534, Liu 783, Yeom 424, and Qiuming could be added to any of the prior art references that Complainants may contend do not disclose this limitation produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining any of the prior art references that Complainants may contend do not disclose this limitation with Verleur 971, Paterno 534, Liu 783, Yeom 424, and Qiuming is a predictable use of electronic vaporizer components according

to their established functions. Accordingly, it would have been routine for a POSA to combine any of the prior art references that Complainants may contend do not disclose this limitation with Verleur 971, Paterno 534, Liu 783, Yeom 424, and Qiuming.

Heater chamber proximate to the distal end

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a heater chamber proximate to the distal end, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to have the heater chamber positioned at a location proximate to the distal end of the cartridge in an electronic vaporizer device. A POSA would have been motivated to position the heater chamber proximate to the distal end of the cartridge, such as those disclosed in Verleur 971, Thorens 379, Paterno 534, Liu 783, Yeom 424, and/or Youm 694, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to position the heater chamber proximate to the distal end of the cartridge because this configuration provides several benefits. First, a POSA would have

known that positioning the heater chamber proximate the distal end minimizes the aerosol temperature at the outlet, thus preventing the adult consumer from being scalded. Second, placing the heater chamber (and its heating element) near the distal end reduces the length of the electrical contacts needed to connect the heating element to the power source. This reduces cost and complexity to manufacture the cartridge. Third, positioning the heater chamber proximate to the distal end reduces exposure of the heating element and wick to outside air, which would operate to dry out the wick and facilitate unwanted evaporation.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Thorens 933 and Han 944, with the design disclosed in Verleur 971, Thorens 379, Paterno 534, Liu 783, Yeom 424, and/or Youm 694. A POSA would have known that the design disclosed in Verleur 971, Thorens 379, Paterno 534, Liu 783, Yeom 424, and/or Youm 694 that position the heater chamber proximate to the distal end of the cartridge could be added to Thorens 933 and Han 944 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Thorens 933 and Han 944 with Verleur 971, Thorens 379, Paterno 534, Liu 783, Yeom 424, and/or Youm 694 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Thorens 933 and Han 944 with Verleur 971, Thorens 379, Paterno 534, Liu 783, Yeom 424, and/or Youm 694.

Air inlet passage extending from proximal edge of the receptacle towards the distal end of the cartridge

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose an air inlet passage extending from proximal edge of the receptacle

towards the distal end of the cartridge, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to have an air inlet passage that extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge in an electronic vaporizer device. A POSA would have been motivated to have an air inlet passage that extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge, such as the design disclosed in Thorens 933 and/or Cho 387, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to include an air inlet passage that extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge because this configuration provides several benefits. First, a POSA would have known that, having the air flow path extend from the proximal edge of the receptacle towards the distal end of the cartridge would be advantageous because having the airflow initiate at the proximal end of the receptacle would be ergonomically

advantageous, as it is less likely for adult consumers to inadvertently block the airflow with their fingers while holding the device. Second, by moving the airflow away from the battery's direct contact, there is a reduced risk of the vaporizable material from leaking into the battery portion of the device and therefore the lifespan of the device would potentially increase. Third, there is also a decreased risk of leakage of the vaporizable material since there is a decreased risk that the vaporizable material enters the air flow path and therefore would lead to cleaner and more user-friendly experience.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Verleur 971, Thorens 379, Paterno 534, Han 944, Liu 783, Yeom 424, Pan 622, and Youm 694, with the air inlet passage design taught by Thorens 933 and/or Cho 387. A POSA would have known that Thorens 933 and/or Cho 387's air inlet passage design could be added to Verleur 971, Thorens 379, Paterno 534, Han 944, Liu 783, Yeom 424, Pan 622, and Youm 694 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Verleur 971, Thorens 379, Paterno 534, Han 944, Liu 783, Yeom 424, Pan 622, and Youm 694 with Thorens 933 and/or Cho 387 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Verleur 971, Thorens 379, Paterno 534, Han 944, Liu 783, Yeom 424, Pan 622, and Youm 694 with Thorens 933 and/or Cho 387.

Storage compartment forming the first side of the air inlet passage

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a storage compartment forming the first side of the air inlet

passage, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to have a storage compartment that comprises the exterior surface of the cartridge and forming the first side of the air inlet passage in an electronic vaporizer device. A POSA would have been motivated to have a storage compartment that comprises the exterior surface of the cartridge and forming the first side of the air inlet passage, such as those disclosed in Verleur 971 and/or Thorens 933, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to have a storage compartment that comprises the exterior surface of the cartridge and forming the first side of the air inlet passage because this configuration provides several benefits. For example, A POSA would have known that this design ensures that the air is drawn into the device in a controlled and predictable manner. Controlling the airflow can aid in cooling the system and prevent overheating and extending the lifespan of the heating element. This design is also simple and straightforward and uses fewer components, thereby making the design inexpensive to manufacture.

A POSA would have had a reasonable expectation of success modifying any of the prior art references identified above that Complainants may contend do not disclose this limitation, such as Thorens 379, Paterno 534, Han 944, Liu 783, Yeom 424, and Youm 694, with the storage compartment that comprises the exterior surface of the cartridge and forming the first side of the air inlet passage taught by Verleur 971 and/or Thorens 933. A POSA would have known that Verleur 971 and Thorens 933's design could be added to Thorens 379, Paterno 534, Han 944, Liu 783, Yeom 424, and Youm 694 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Thorens 379, Paterno 534, Han 944, Liu 783, Yeom 424, and Youm 694 with Verleur 971 and/or Thorens 933 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Thorens 379, Paterno 534, Han 944, Liu 783, Yeom 424, and Youm 694 with Verleur 971 and/or Thorens 933.

First and second electrical contacts of the cartridge electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge third and fourth receptacle electrical contacts disposed in a second plane substantially parallel to the distal end of the cartridge

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose first and second electrical contacts of the cartridge electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge third and fourth receptacle electrical contacts disposed in a second plane substantially parallel to the distal end of the cartridge, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to have a cartridge that includes first and second electrical contacts that are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge and a receptacle having third and fourth

electrical contacts disposed in a second plan substantially parallel to the distal end of the cartridge in an electronic vaporizer device. A POSA would have been motivated to include a first and second electrical contacts on the cartridge that are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge, and a receptacle having third and fourth electrical contacts disposed in a second plane substantially parallel to the distal end of the cartridge, such as those disclosed in Verleur 971, Yeom 424, and/or Zhang 716, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to have a cartridge that includes first and second electrical contacts that are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge and a receptacle having third and fourth electrical contacts disposed in a second plan substantially parallel to the distal end of the cartridge because this configuration provides several benefits. A POSA would have known that placing the electrical contacts in a plane parallel to the distal end of the cartridge that connect to corresponding electrical contacts in receptacle results in a more compact and space-efficient design. This configuration also makes it easier for adult consumers to insert or replace cartridges and allows for designs where the adult consumer can “drop-in” the cartridge. By aligning contacts in a plane parallel to the distal end, the

wear and tear from repeated insertions is minimized. A POSA also would have known that electrically isolating the contacts disposed in this configuration reduces the risks associated with short circuits or malfunction.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Thorens 379, Thorens 933, Paterno 534, Han 944, Liu 783, Pan 622, and Youm 694, with the electrical contacts taught by Verleur 971, Yeom 424, and/or Zhang 716. A POSA would have known that Verleur 971, Yeom 424, and/or Zhang 716's electrical contacts could be added to Thorens 379, Thorens 933, Paterno 534, Han 944, Liu 783, Pan 622, and Youm 694 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Thorens 379, Thorens 933, Paterno 534, Han 944, Liu 783, and Pan 622, Youm 694 with Verleur 971, Yeom 424, and/or Zhang 716 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Thorens 379, Thorens 933, Paterno 534, Han 944, Liu 783, and Pan 622, Youm 694 with Verleur 971, Yeom 424, and/or Zhang 716.

Body having a non-cylindrical shape

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a body having a non-cylindrical shape, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common for electronic vaporizer devices to have non-cylindrical shapes. A POSA would have been motivated to have a body with a non-cylindrical shape, such as those disclosed in Verleur 971, Yeom 424, and/or Youm

694, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to have a body with a non-cylindrical shape because this configuration provides several benefits. For example, a POSA would have known that devices with non-cylindrical shapes would not roll easily when placed on a surface, reducing the risk of them falling off tables or counters. Non-cylindrical shapes can be designed to better fit adult consumer's hand, providing a more comfortable grip and reducing the risk dropping the device. Non-cylindrical shapes can also make the device more visually appealing or distinctive, setting it apart from traditional cigarette looks or other generic designs.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Thorens 379, Thorens 933, Paterno 534, Han 944, and Liu 783, with the non-cylindrical shapes of the devices taught by Verleur 971, Yeom 424, and/or Youm 694. A POSA would have known that Verleur 971, Yeom 424, and Youm 694's non-cylindrical shape could be added to Thorens 379, Thorens 933, Paterno 534, Han 944, and Liu 783 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid.

Combining Thorens 379, Thorens 933, Paterno 534, Han 944, and Liu 783 with Verleur 971, Yeom 424, and/or Youm 694 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Thorens 379, Thorens 933, Paterno 534, Han 944, and Liu 783 with Verleur 971, Yeom 424, and/or Youm 694.

Nicotine formulation

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a nicotine formulation it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a vaporizable material comprising a nicotine formulation in an electronic vaporizer device. A POSA would have been motivated to use a vaporizable material comprising a nicotine formulation, such as those disclosed in Verleur 971, Thorens 933, Paterno 534, Han 944, and/or Yeom 424, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use a vaporizable material comprising a nicotine formulation. For example, Han 944 discloses an electronic vaporizer that uses a vaporizable material comprising a nicotine formulation that substitutes for cigarettes and helps smokers quit smoking. Paterno 534 describes that nicotine is known to have therapeutic effects in humans, for example as an anti-inflammatory and in treatments for some brain and neurological disorders.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Thorens 379, Liu 783, and Youm 694, with the vaporizable material comprising a nicotine formulation taught by Verleur 971, Thorens 933, Paterno 534, Han 944, and Yeom 424. A POSA would have known that the vaporizable material comprising a nicotine formulation disclosed by Verleur 971, Thorens 933, Paterno 534, Han 944, and/or Yeom 424 could be added to Thorens 379, Liu 783, and Youm 694 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Thorens 379, Liu 783, and Youm 694 with Verleur 971, Thorens 933, Paterno 534, Han 944, and/or Yeom 424 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Thorens 379, Liu 783, or Youm 694 with Verleur 971, Thorens 933, Paterno 534, Han 944, and/or Yeom 424.

For these and other reasons set forth in Exhibits C1-C12, every asserted claim of the ’173 Patent would have been anticipated and/or obvious to a person of ordinary skill in the art.

II. Invalidity of U.S. Patent No. 10,709,173 Under 35 U.S.C. § 112

A. Lack of Written Description

All asserted claims of the ’173 Patent are also invalid for failure to meet the written description requirement of 35 U.S.C. § 112. To satisfy the written description requirement, the specification must reasonably convey to those skilled in the art that the inventor had possession of

the claimed subject matter. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). To demonstrate possession, the inventor must provide enough description in the specification to demonstrate that s/he actually invented what has been claimed. *Centocor Ortho Biotech, Inc. v. Abbott Labs.*, 636 F.3d 1341, 1348 (Fed. Cir. 2011). Doing so "serves the fundamental patent purpose of making known what has been invented, including any variations and alternatives contemplated by the inventor." *Space Sys./Loral, Inc. v. Lockheed Martin Corp.*, 405 F.3d 985, 987 (Fed. Cir. 2005). Moreover, "[a]dequate description of the invention guards against the inventor's overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation." *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1561, 19 U.S.P.Q.2d 1111 (Fed. Cir. 1991). "While the written description requirement does not require that the specification recite the claimed invention in any particular way, pointing to an 'amalgam of disclosures' from which an artisan could have created the claimed invention does not satisfy this requirement." *Flash-Control, LLC v. Intel Corp.*, No. 2020-2141, 2021 WL 2944592, at *3 (Fed. Cir. July 14, 2021) (citing *Novozymes A/S v. DuPont Nutrition Biosciences APS*, 723 F.3d 1336, 1349 (Fed. Cir. 2013)). Instead, determining whether a claim has adequate written description support requires analyzing "each claim … as an integrated whole rather than as a collection of independent limitations." *Novozymes*, 723 F.3d at 1349.

To the extent Complainants contend that "mouthpiece" in each of the asserted claims encompasses a "mouthpiece" for a cartridge that is not separate from the "storage compartment," the asserted claims are invalid for lack of written description support. The '173 Patent consistently and only describes cartridges that have a mouthpiece that is a distinct component from the liquid storage compartment. *See, e.g.*, '173 Patent at 2:51-55, 3:6-9, 3:63-64, 4:48-60, 5:18-20, 5:46-47, 5:61-62, 6:8-9, 6:31-32, 7:2-3, 7:51-54, 8:61-63, 9:21-23, 9:57-59, 16:33-35, 17:7-8, 17:21-23,

32:39-41, 35:20-43, 35:37-39, 36:1-19, 36:17-19, 42:48-52, 44:50-54, 47:33-36, 49:3-10, 49:33-37, 50:20-24, 50:39-55, 51:40-47, 52:4-15, Figs. 5, 7A-7C, 8B, 9, 11-16C, 24A-26B, 28A-34L. Indeed, the '173 Patent only describes how to assemble and fill a cartridge with a mouthpiece that is separate from the liquid storage compartment. *See, e.g., id.* at 35:20-43, Fig. 9. A mouthpiece separate and distinct from the liquid storage compartment is therefore key to the '173 Patent's cartridge design. A POSA reviewing these disclosures would not have understood that the inventors were in possession of an electronic cigarette cartridge whereby the mouthpiece is not separate and distinct from the storage component.

EXHIBIT C-1

EXHIBIT C-1

Invalidity Claim Chart of U.S. Patent Publication No. 2015/0128971 to Verleur, et al. ("Verleur 971") against U.S. Patent No. 10,709,173

Verleur 971, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 3, 4, 6, 7, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 28, and 30 of U.S. Patent No. 10,709,173. Verleur, filed on March 4, 2014 and claiming priority to Provisional 61,903,344 ("Verleur-Prov"), filed November 12, 2013, is prior art under at least 35 U.S.C. §102(a)(2).

Verleur 971 is entitled to priority to Verleur-Prov, filed November 12, 2013. Under 35 U.S.C. §102(a)(2), a published patent application is prior art as of its effective filing date. An application is considered to have been effectively filed, with respect to any subject matter described in the application, as of the filing date of the earliest application describing the subject matter to which the application is entitled to claim a right of priority. 35 U.S.C. §102(d)(2). Verleur 971 was filed not later than 12 months after the filing of Verleur-Prov and contains a specific reference to Verleur-Prov. *See* Verleur 971 at (22), (60), [0001].

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Verleur. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'173 Claim Limitations	**U.S. Patent Publication No. 2015/0128971 ("Verleur 971")**
[1.A] An apparatus comprising:	To the extent the preamble is limiting, Verleur 971 discloses and/or renders obvious an apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at Abstract; [0005]; [0006]; Figs 1, 5, 12, 15. Verleur-Prov at [0001]; [0022]; Figs 1, 5, 6, 12, 15.
[1.B] a cartridge comprising	Verleur 971 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '173 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’173 Claim Limitations	U.S. Patent Publication No. 2015/0128971 (“Verleur 971”)
	Verleur 971 at [0030]; [0039]; Fig. 1. Verleur-Prov at [0022]; [0029]; [0030];Fig. 1.
[1.C] a mouthpiece,	Verleur 971 discloses and/or renders obvious a mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0006]; [0039]; [0040]; Fig. 1. Verleur-Prov at [0030]; [0031]; Fig. 1.
[1.D] a storage compartment configured to hold a vaporizable material, and	Verleur 971 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0038]; [0039]; [0040]; Figure 1. Verleur-Prov at [0029]; [0030]; [0031]; Fig. 1.
[1.E] a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Verleur 971 discloses and/or renders obvious a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0006]; [0028]; [0039]; [0041]; Figs 1, 4, 5, 12, 15. Verleur-Prov at [0029]; [0030]; Figs 1, 4, 5, 12, 15.
[1.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Verleur 971 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0005]; [0006]; [0028]; [0030]; Fig. 1. Verleur-Prov at [0022]; [0025]; [0027]; [0028]; Fig. 1.

’173 Claim Limitations	U.S. Patent Publication No. 2015/0128971 (“Verleur 971”)
[1.G] wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Verleur 971 discloses and/or renders obvious wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0006]; [0030]; [0038]; [0039]; Figs. 1, 5. Verleur-Prov at [0022]; [0029]; [0030]; Figs. 1, 5.
[1.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	Verleur 971 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0039]; Fig. 1. Verleur-Prov at [0030]; Fig. 1.
[1.I] wherein the air inlet passage is configured to deliver the air to the heater chamber; and	Verleur 971 discloses and/or renders obvious wherein the air inlet passage is configured to deliver the air to the heater chamber. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0039]; Fig. 1. Verleur-Prov at [0030]; Fig. 1.
[1.J] a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece.	Verleur 971 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0005]; [0039]; Fig. 1. Verleur-Prov at [0030]; Fig. 1.
[2] The apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion	Verleur 971 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.

’173 Claim Limitations	U.S. Patent Publication No. 2015/0128971 (“Verleur 971”)
is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0036]; Fig. 1. Verleur-Prov at [0027]; Fig. 1.
[3] The apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end.	Verleur 971 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0028]; [0037]; [0039]; [0040]; Figs 1, 10. Verleur-Prov at [0028]; [0030]; [0031]; Figs. 1, 10.
[4] The apparatus of claim 3, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	Verleur 971 discloses and/or renders obvious The apparatus of claim 3, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0039]; Fig. 1. Verleur-Prov at [0030]; Fig. 1.
[6] The apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	Verleur 971 discloses and/or renders obvious the apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at Figs. 1, 12. Verleur-Prov at Figs. 1, 12.

’173 Claim Limitations	U.S. Patent Publication No. 2015/0128971 (“Verleur 971”)
[7] The apparatus of claim 3, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	Verleur 971 discloses and/or renders obvious the apparatus of claim 3, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0039]; Fig. 1. Verleur-Prov at [0030]; Fig. 1.
[15] The apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge.	Verleur 971 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0006]; [0033]; Fig. 1. Verleur-Prov at [0025]; Fig. 1.
[16] The apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle.	Verleur 971 discloses and/or renders obvious the apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0006]; [0033]; Fig. 1. Verleur-Prov at [0025]; Fig. 1.
[18] The apparatus of claim 1, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	Verleur 971 discloses and/or renders obvious the apparatus of claim 1, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at Figs. 12, 15.

’173 Claim Limitations	U.S. Patent Publication No. 2015/0128971 (“Verleur 971”)
	Verleur-Prov at Figs. 12, 15.
[19] The apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Verleur 971 discloses and/or renders obvious the apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Verleur 971 at [0038]. Verleur-Prov at [0002]; [0003].
[20.A] An apparatus comprising:	Verleur 971 discloses and/or renders obvious an apparatus. *See* Limitation [1.A].
[20.B] a cartridge comprising	Verleur 971 discloses and/or renders obvious a cartridge. *See* Limitation [1.B].
[20.C] a mouthpiece,	Verleur 971 discloses and/or renders obvious a mouthpiece. *See* Limitation [1.C].
[20.D] a storage compartment configured to hold a vaporizable material, and	Verleur 971 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. *See* Limitation [1.D].
[20.E] a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Verleur 971 discloses and/or renders obvious a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. *See* Limitation [1.E].
[20.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Verleur 971 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge. *See* Limitation [1.F].
[20.G] wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Verleur 971 discloses and/or renders obvious wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.

’173 Claim Limitations	U.S. Patent Publication No. 2015/0128971 (“Verleur 971”)
	See Limitation [1.G].
[20.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	Verleur 971 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Limitation [1.H].
[20.I] wherein the air inlet passage is configured to deliver the air towards the resistive heating element; and	Verleur 971 discloses and/or renders obvious wherein the air inlet passage is configured to deliver the air towards the resistive heating element. *See* Limitation [1.I].
[20.J] a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece.	Verleur 971 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece. *See* Limitation [1.J].
[21] The apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Verleur 971 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Claim [2].
[22] The apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end.	Verleur 971 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end. *See* Claim [3].
[23] The apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	Verleur 971 discloses and/or renders obvious the apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge. *See* Claim [4].
[24] The apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and	Verleur 971 discloses and/or renders obvious the apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the

’173 Claim Limitations	U.S. Patent Publication No. 2015/0128971 (“Verleur 971”)
wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. *See* Claim [6].
[25] The apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	Verleur 971 discloses and/or renders obvious the apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage. *See* Claim [7].
[28] The apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	Verleur 971 discloses and/or renders obvious the apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis. *See* Claim [18].
[30] The apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Verleur 971 discloses and/or renders obvious the apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. *See* Claim [19].

EXHIBIT C-2

EXHIBIT C-2

Invalidity Claim Chart of U.S. Patent Publication No. 2009/0272379 ("Thorens 379") against U.S. Patent No. 10,709,173

Thorens 379, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 3, 4, 6, 7, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 28, and 30 of U.S. Patent No. 10,709,173. Thorens 379 was filed on April 29, 2009, and published on November 5, 2009. Thorens 379 qualifies as prior art to the '173 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Thorens 379. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'173 Claim Limitations	Thorens 379
[1.A] An apparatus comprising:	To the extent the preamble is limiting, Thorens 379 discloses and/or renders obvious an apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 379 at Abstract, [0002]; [0007]; [0022]; [0041]; [0042]; [0043]; Figures 1-3.
[1.B] a cartridge comprising	Thorens 379 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 379 at [0042]; [0043]; Figures 1-3.
[1.C] a mouthpiece,	Thorens 379 discloses and/or renders obvious a mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '173 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’173 Claim Limitations	Thorens 379
	Thorens 379 at [0006]; [0042; [0044]; [0046]; Figures 2-3.
[1.D] a storage compartment configured to hold a vaporizable material, and	Thorens 379 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 379 at [0006]; [0022]; [0042]; [0044]; Figures 2-3.
[1.E] a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Thorens 379 discloses and/or renders obvious a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 379 at [0010]; [0042]; [0043]; [0044]; [0047]; Figures 1-3.
[1.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Thorens 379 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 379 at [0006]; [0020]; [0042]; [0043]; [0049]; [0051]; Figures 1-3.
[1.G] wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Thorens 379 discloses and/or renders obvious wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 379 at [0042]; [0047]; Figures 1-3.
[1.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	Thorens 379 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures:

’173 Claim Limitations	Thorens 379
	Thorens 379 at [0029]; [0047]; Figures 1-3.
[1.I] wherein the air inlet passage is configured to deliver the air to the heater chamber; and	Thorens 379 discloses and/or renders obvious wherein the air inlet passage is configured to deliver the air to the heater chamber. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 379 at [0029]; [0047]; Figures 1-3.
[1.J] a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece.	Thorens 379 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 379 at [0029]; [0044]; [0047]; Figures 1-3.
[2] The apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Thorens 379 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 379 at Figures 2-3.
[3] The apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end.	Thorens 379 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 379 at [0042]; [0047]; Figures 2-3
[4] The apparatus of claim 3, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle	

’173 Claim Limitations	Thorens 379
towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	
[6] The apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	Thorens 379 discloses and/or renders obvious the apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 379 at [0049]; Figures 1-3.
[7] The apparatus of claim 3, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	Thorens 379 discloses and/or renders obvious the apparatus of claim 3, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 379 at [0029]; [0047]; Figures 1-3.
[15] The apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge.	Thorens 379 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 379 at Abstract; [0029]; [0041]; [0043]; [0047]; Claim 1; Figures 1-3.
[16] The apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle.	Thorens 379 discloses and/or renders obvious the apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 379 at Abstract; [0029]; [0041]; [0043]; [0047]; Claim 1; Figures 1-3.
[18] The apparatus of claim 1, wherein the body has a top end and a bottom end opposite the top end, wherein the	Thorens 379 discloses and/or renders obvious the apparatus of claim 1, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis

’173 Claim Limitations	Thorens 379
receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 379 at [0049].
[19] The apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Thorens 379 discloses and/or renders obvious the apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 379 at [0006]; [0022].
[20.A] An apparatus comprising:	Thorens 379 discloses and/or renders obvious an apparatus. *See* Limitation [1.A].
[20.B] a cartridge comprising	Thorens 379 discloses and/or renders obvious a cartridge. *See* Limitation [1.B].
[20.C] a mouthpiece,	Thorens 379 discloses and/or renders obvious a mouthpiece. *See* Limitation [1.C].
[20.D] a storage compartment configured to hold a vaporizable material, and	Thorens 379 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. *See* Limitation [1.D].
[20.E] a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Thorens 379 discloses and/or renders obvious a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. *See* Limitation [1.E].
[20.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Thorens 379 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge.

’173 Claim Limitations	Thorens 379
	See Limitation [1.F].
[20.G] wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Thorens 379 discloses and/or renders obvious wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Limitation [1.G].
[20.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	Thorens 379 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Limitation [1.H].
[20.I] wherein the air inlet passage is configured to deliver the air towards the resistive heating element; and	Thorens 379 discloses and/or renders obvious wherein the air inlet passage is configured to deliver the air towards the resistive heating element. *See* Limitation [1.I].
[20.J] a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece.	Thorens 379 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece. *See* Limitation [1.J].
[21] The apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Thorens 379 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Claim [2].
[22] The apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end.	Thorens 379 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end. *See* Claim [3].
[23] The apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle	Thorens 379 discloses and/or renders obvious the apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.

’173 Claim Limitations	Thorens 379
towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	*See* Claim [4].
[24] The apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	Thorens 379 discloses and/or renders obvious the apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. *See* Claim [6].
[25] The apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	Thorens 379 discloses and/or renders obvious the apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage. *See* Claim [7].
[28] The apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	Thorens 379 discloses and/or renders obvious the apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis. *See* Claim [18].
[30] The apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Thorens 379 discloses and/or renders obvious the apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. *See* Claim [19].

EXHIBIT C-3

EXHIBIT #C-3

Invalidity Claim Chart of U.S. Patent Application Publication No. 2016/0021933 ("Thorens 933") against U.S. Patent No. 10,709,173

Thorens 933, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 3, 4, 6, 7, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 28, and 30 of U.S. Patent No. 10,709,173. Thorens 933 was filed on September 14, 2015, and claims priority to EP13159544 ("Thorens 544") filed March 15, 2013, is prior art under at least AIA 35 U.S.C. § 102(a)(2).

Thorens 933 is entitled to priority to Thorens 544, filed March 15, 2013. Under 35 U.S.C. §102(a)(2), a published patent application is prior art as of its effective filing date. An application is considered to have been effectively filed, with respect to any subject matter described in the application, as of the filing date of the earliest application describing the subject matter to which the application is entitled to claim a right of priority. 35 U.S.C. §102(d)(2).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Thorens 933. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'173 Claim Limitations	**Thorens 933**
[1.A] An apparatus comprising:	To the extent the preamble is limiting, Thorens 933 discloses and/or renders obvious an apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at Abstract;.[0010]; [0034]; Figs. 1-4.
[1.B] a cartridge comprising	Thorens 933 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at [0010]; [0071]; [0072]; [0073]; [0074]; Figs. 1-4.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '173 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’173 Claim Limitations	Thorens 933
[1.C] a mouthpiece,	Thorens 933 discloses and/or renders obvious a mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at Abstract; [0072]; [0075]; [0076]; [0077]; Figs. 1-4.
[1.D] a storage compartment configured to hold a vaporizable material, and	Thorens 933 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at [0046]; [0049]; [0057]; [0074]; Figs. 1-2.
[1.E] a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Thorens 933 discloses and/or renders obvious a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at [0052]; [0053]; [0054]; [0055]; [0062]; [0074]; [0075]; [0076]; Figs. 1-2.
[1.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Thorens 933 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at [0067]-[0073]; [0074]; [0080]; Figs. 1-4.
[1.G] wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Thorens 933 discloses and/or renders obvious wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at [0052]; [0053]; [0054]; [0055]; [0062]; [0073]; [0074]; [0075]; [0076]; Figs. 1-2.
[1.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal	Thorens 933 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge.

’173 Claim Limitations	Thorens 933
surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at [0075]; Figs. 1-4.
[1.I] wherein the air inlet passage is configured to deliver the air to the heater chamber; and	Thorens 933 discloses and/or renders obvious wherein the air inlet passage is configured to deliver the air to the heater chamber. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at [0052]; [0053]; [0054]; [0055]; [0062]; [0074]; [0075]; [0076]; Figs. 1-2.
[1.J] a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece.	Thorens 933 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at [0002]; [0043]; [0046]; Figs. 1-2.
[2] The apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Thorens 933 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at Figs. 1-4.
[3] The apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end.	Thorens 933 discloses and/or renders obvious wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at [0052]; [0053]; [0054]; [0055]; [0062]; [0073]; [0074]; [0075]; [0076]; Figs. 1-2.

’173 Claim Limitations	Thorens 933
[4] The apparatus of claim 3, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	Thorens 933 discloses and/or renders obvious the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at [0075]; Figs. 1-4.
[6] The apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	Thorens 933 discloses and/or renders obvious the apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at [0017]; Figs. 1-4
[7] The apparatus of claim 3, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	Thorens 933 discloses and/or renders obvious the apparatus of claim 3, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at [0075]; Figs. 1-4.
[15] The apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge.	Thorens 933 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at [0051]; [0060]; [0074]; Figs. 1-2.
[16] The apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane	Thorens 933 discloses and/or renders obvious the apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle.

’173 Claim Limitations	Thorens 933
substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle.	For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at [0051]; [0060]; [0074]; Figs. 1-2.
[18] The apparatus of claim 1, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	
[19] The apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Thorens 933 discloses and/or renders obvious the apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 933 at [0044]; [0048].
[20.A] An apparatus comprising:	Thorens 933 discloses and/or renders obvious an apparatus. *See* Limitation [1.A].
[20.B] a cartridge comprising	Thorens 933 discloses and/or renders obvious a cartridge. *See* Limitation [1.B].
[20.C] a mouthpiece,	Thorens 933 discloses and/or renders obvious a mouthpiece. *See* Limitation [1.C].
[20.D] a storage compartment configured to hold a vaporizable material, and	Thorens 933 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. *See* Limitation [1.D].

’173 Claim Limitations	Thorens 933
[20.E] a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Thorens 933 discloses and/or renders obvious a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. *See* Limitation [1.E].
[20.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Thorens 933 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge. *See* Limitation [1.F].
[20.G] wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Thorens 933 discloses and/or renders obvious wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Limitation [1.G].
[20.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	Thorens 933 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Limitation [1.H].
[20.I] wherein the air inlet passage is configured to deliver the air towards the resistive heating element; and	Thorens 933 discloses and/or renders obvious wherein the air inlet passage is configured to deliver the air towards the resistive heating element. *See* Limitation [1.I].
[20.J] a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece.	Thorens 933 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece. *See* Limitation [1.J].
[21] The apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Thorens 933 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Claim [2].

’173 Claim Limitations	Thorens 933
[22] The apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end.	Thorens 933 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end. *See* Claim [3].
[23] The apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	Thorens 933 discloses and/or renders obvious the apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge. *See* Claim [4].
[24] The apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	Thorens 933 discloses and/or renders obvious the apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. *See* Claim [6].
[25] The apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	Thorens 933 discloses and/or renders obvious the apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage. *See* Claim [7].
[28] The apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	Thorens 933 discloses and/or renders obvious the apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis. *See* Claim [18].
[30] The apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and	Thorens 933 discloses and/or renders obvious the apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.

’173 Claim Limitations	Thorens 933
wherein the vaporizable material comprises a nicotine formulation.	*See* Claim [19].

EXHIBIT C-4

EXHIBIT C-4

Invalidity Claim Chart of U.S. Patent Publication No. 2009/0255534 ("Paterno 534") against U.S. Patent No. 10,709,173

Paterno 534, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 3, 4, 6, 7, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 28, and 30 of U.S. Patent No. 10,709,173. Paterno 534 was filed on April 13, 2009, and published on October 15, 2009. Paterno 534 qualifies as prior art to the '173 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Paterno 534. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'173 Claim Limitations	Paterno 534
[1.A] An apparatus comprising:	To the extent the preamble is limiting, Paterno 534 discloses and/or renders obvious an apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0002]; [0007]; [0025]; [0027]; Figs. 1-3, 5.
[1.B] a cartridge comprising	Paterno 534 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0024]; [0025]; [0027]; [0033]; [0034]; Figs. 1-5.
[1.C] a mouthpiece,	Paterno 534 discloses and/or renders obvious a mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '173 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’173 Claim Limitations	Paterno 534
	Paterno 534 at [0009]; [0033]; [0034]; [0036]; [0037]; Figs. 4-5..
[1.D] a storage compartment configured to hold a vaporizable material, and	Paterno 534 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0007]; [0027]; [0028]; [0029]; [0030]; Figs. 1-5.
[1.E] a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Paterno 534 discloses and/or renders obvious a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0007]; [0027]; [0028]; [0029]; [0032]; [0033]; [0034]; Figs. 1, 3-5.
[1.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Paterno 534 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0008]; [0027]; [0030]; [0034]; Figs. 5, 8.
[1.G] wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Paterno 534 discloses and/or renders obvious wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0033]; [0034]; Figs. 1, 4-5.
[1.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	Paterno 534 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0004]; [0008]; [0009]; [0025]; [0026]; [0033]; [0034]; Figs. 1-5.

’173 Claim Limitations	Paterno 534
[1.I] wherein the air inlet passage is configured to deliver the air to the heater chamber; and	Paterno 534 discloses and/or renders obvious wherein the air inlet passage is configured to deliver the air to the heater chamber. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0025]; [0026]; [0034]
[1.J] a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece.	Paterno 534 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0007]; [0027]; [0028];[0033]; [0034]; Figs. 1-4.
[2] The apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Paterno 534 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at Figs. 4-5.
[3] The apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end.	Paterno 534 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0009]; [0033]; [0034]; Fig. 4.
[4] The apparatus of claim 3, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	Paterno 534 discloses and/or renders obvious The apparatus of claim 3, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures:

’173 Claim Limitations	Paterno 534
	Paterno 534 at [0004]; [0008]; [0009]; [0025]; [0026]; [0033]; [0034]; Figs. 1-5.
[6] The apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	Paterno 534 discloses and/or renders obvious the apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at Figs. 4-5
[7] The apparatus of claim 3, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	Paterno 534 discloses and/or renders obvious the apparatus of claim 3, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0004]; [0008]; [0009]; [0025]; [0026]; [0033]; [0034]; Figs. 1-5.
[15] The apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge.	Paterno 534 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0024]; [0027]; [0028]; [0030]; [0034] ; Figs. 1, 3-5.
[16] The apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle.	Paterno 534 discloses and/or renders obvious the apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0024]; [0027]; [0028]; [0030]; [0034]; Figs. 1, 3-5.
[18] The apparatus of claim 1, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body	Paterno 534 discloses and/or renders obvious the apparatus of claim 1, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse

’173 Claim Limitations	Paterno 534
longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0039]; Fig. 9
[19] The apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Paterno 534 discloses and/or renders obvious the apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0004]; [0006].
[20.A] An apparatus comprising:	Paterno 534 discloses and/or renders obvious an apparatus. *See* Limitation [1.A].
[20.B] a cartridge comprising	Paterno 534 discloses and/or renders obvious a cartridge. *See* Limitation [1.B].
[20.C] a mouthpiece,	Paterno 534 discloses and/or renders obvious a mouthpiece. *See* Limitation [1.C].
[20.D] a storage compartment configured to hold a vaporizable material, and	Paterno 534 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. *See* Limitation [1.D].
[20.E] a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Paterno 534 discloses and/or renders obvious a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. *See* Limitation [1.E].
[20.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Paterno 534 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge.

’173 Claim Limitations	Paterno 534
	See Limitation [1.F].
[20.G] wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Paterno 534 discloses and/or renders obvious wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Limitation [1.G].
[20.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	Paterno 534 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Limitation [1.H].
[20.I] wherein the air inlet passage is configured to deliver the air towards the resistive heating element; and	Paterno 534 discloses and/or renders obvious wherein the air inlet passage is configured to deliver the air towards the resistive heating element. *See* Limitation [1.I].
[20.J] a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece.	Paterno 534 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece. *See* Limitation [1.J].
[21] The apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Paterno 534 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Claim [2].
[22] The apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end.	Paterno 534 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end. *See* Claim [3].
[23] The apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle	Paterno 534 discloses and/or renders obvious the apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.

’173 Claim Limitations	Paterno 534
towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	*See* Claim [4].
[24] The apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	Paterno 534 discloses and/or renders obvious the apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. *See* Claim [6].
[25] The apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	Paterno 534 discloses and/or renders obvious the apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage. *See* Claim [7].
[28] The apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	Paterno 534 discloses and/or renders obvious the apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis. *See* Claim [18].
[30] The apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Paterno 534 discloses and/or renders obvious the apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. *See* Claim [19].

EXHIBIT C-5

EXHIBIT #C-5

Invalidity Claim Chart of U.S. Patent 8,156,944 ("Han 944") against U.S. Patent No. 10,709,173

Han 944, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 3, 4, 6, 7, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 28, and 30 of U.S. Patent No. 10,709,173. Han 944 was filed on May 15, 2007, and published on April 16, 2009. Han 944 qualifies as prior art to the '173 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Han 944. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'173 Claim Limitations	Han 944
[1.A] An apparatus comprising:	To the extent the preamble is limiting, Han 944 discloses and/or renders obvious an apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:55-60; 2:33-34; 2:60-67; Figs.5-6.
[1.B] a cartridge comprising	Han 944 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:61-2:3; 2:5-9; 2:18-19; 5:45-46; 6:49-55; Figs. 1-2.
[1.C] a mouthpiece,	Han 944 discloses and/or renders obvious a mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '173 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’173 Claim Limitations	Han 944
	Han 944 at 6:66-7:2; 8:26-29; Figs. 1-2, 4.
[1.D] a storage compartment configured to hold a vaporizable material, and	Han 944 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 3:13-15; 3:51-55; 6:58-61; Figs. 3-4.
[1.E] a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Han 944 discloses and/or renders obvious a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 2:33-34; 2:35-37; 2:44-46; 2:60-67; 3:4-6; 6:35-48; 8:50-54; Figs. 6-8, 13, 16-18.
[1.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Han 944 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:61-2:3; 2:5-9; 2:18-19; 5:45-46; 6:49-55; Figs. 1-2.
[1.G] wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Han 944 discloses and/or renders obvious wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 3:57-59; 5:38-43; 6:49-53; Figs. 1-2.
[1.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	Han 944 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 2:35-38; 5:38-46; 6:13-21; 7:22-46; 8:17-31; 8:43-47; Figs. 5-8, 11-12; 14-16.

’173 Claim Limitations	Han 944
[1.I] wherein the air inlet passage is configured to deliver the air to the heater chamber; and	Han 944 discloses and/or renders obvious wherein the air inlet passage is configured to deliver the air to the heater chamber. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 2:35-38; 5:38-46; 6:13-21; 7:22-46; 8:17-31; 8:43-47; Figs. 5-8, 11-12; 14-16.
[1.J] a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece.	Han 944 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 2:35-38; 6:13-21; 8:43-47; Figs. 5-8, 14-16.
[2] The apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Han 944 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 8:17-22; Figs. 11-12.
[3] The apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end.	Han 944 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 6:66-7:2; 8:26-29; Figs. 1-2, 4.
[4] The apparatus of claim 3, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	

’173 Claim Limitations	Han 944
[6] The apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	Han 944 discloses and/or renders obvious the apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at Figs. 1-2
[7] The apparatus of claim 3, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	Han 944 discloses and/or renders obvious wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 2:35-38; 5:38-46; 6:13-21; 7:22-46; 8:17-31; 8:43-47; Figs. 5-8, 11-12; 14-16.
[15] The apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge.	
[16] The apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle.	
[18] The apparatus of claim 1, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom	

’173 Claim Limitations	Han 944
end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	
[19] The apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Han 944 discloses and/or renders obvious he apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:5-7; 1:20-44; 4:51-66
[20.A] An apparatus comprising:	Han 944 discloses and/or renders obvious an apparatus. *See* Limitation [1.A].
[20.B] a cartridge comprising	Han 944 discloses and/or renders obvious a cartridge. *See* Limitation [1.B].
[20.C] a mouthpiece,	Han 944 discloses and/or renders obvious a mouthpiece. *See* Limitation [1.C].
[20.D] a storage compartment configured to hold a vaporizable material, and	Han 944 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. *See* Limitation [1.D].
[20.E] a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Han 944 discloses and/or renders obvious a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. *See* Limitation [1.E].
[20.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Han 944 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge. *See* Limitation [1.F].

’173 Claim Limitations	Han 944
[20.G] wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Han 944 discloses and/or renders obvious wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Limitation [1.G].
[20.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	Han 944 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Limitation [1.H].
[20.I] wherein the air inlet passage is configured to deliver the air towards the resistive heating element; and	Han 944 discloses and/or renders obvious wherein the air inlet passage is configured to deliver the air towards the resistive heating element. *See* Limitation [1.I].
[20.J] a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece.	Han 944 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece. *See* Limitation [1.J].
[21] The apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Han 944 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Claim [2].
[22] The apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end.	Han 944 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end. *See* Claim [3].
[23] The apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	Han 944 discloses and/or renders obvious the apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge. *See* Claim [4].

’173 Claim Limitations	Han 944
[24] The apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	Han 944 discloses and/or renders obvious the apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. *See* Claim [6].
[25] The apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	Han 944 discloses and/or renders obvious the apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage. *See* Claim [7].
[28] The apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	Han 944 discloses and/or renders obvious the apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis. *See* Claim [18].
[30] The apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Han 944 discloses and/or renders obvious the apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. *See* Claim [19].

EXHIBIT C-6

EXHIBIT C-6

Invalidity Claim Chart of U.S. Patent Publication No. 2014/0150783 ("Liu 783")against U.S. Patent No. 10,709,173

Liu 783, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 3, 4, 6, 7, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 28, and 30 of U.S. Patent No. 10,709,173. Liu 783 was filed on was filed on December 5, 2012, and published on June 5, 2014. Liu 783 qualifies as prior art to the '173 Patent under at least AIA 35 U.S.C. § 102(a)(2).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Liu 783. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'173 Claim Limitations	Liu 783
[1.A] An apparatus comprising:	To the extent the preamble is limiting, Liu 783 discloses and/or renders obvious an apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0003]; [0004]; [0035]; Figs. 1-5.
[1.B] a cartridge comprising	Liu 783 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0004]; [0014]; [0030]; [0031]; Figs. 1-3, 5-6.
[1.C] a mouthpiece,	Liu 783 discloses and/or renders obvious a mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0031]; [0044]; Figs. 4-5.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '173 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’173 Claim Limitations	Liu 783
[1.D] a storage compartment configured to hold a vaporizable material, and	Liu 783 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0012]; [0016]; [0017]; [0035]; Fig. 5.
[1.E] a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Liu 783 discloses and/or renders obvious a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0015]; [0034]; [0035]; Figs. 3-5.
[1.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Liu 783 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0004]; [0014]; [0030]; [0031]; Figs. 3, 7.
[1.G] wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Liu 783 discloses and/or renders obvious wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0004]; [0014]; [0030]; [0031]; Figs. 1-3.
[1.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	Liu 783 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0044]; Figs. 3-8.

’173 Claim Limitations	Liu 783
[1.I] wherein the air inlet passage is configured to deliver the air to the heater chamber; and	Liu 783 discloses and/or renders obvious wherein the air inlet passage is configured to deliver the air to the heater chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0015]; [0034]; [0035]; [0044]; Figs. 5-6.
[1.J] a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece.	Liu 783 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0031]; [0034]; [0035]; [0044]; Figs. 3-5.
[2] The apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Liu 783 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0030], [0031]; [0032]; [0036]
[3] The apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end.	Liu 783 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0031]; [0044]; Figs. 4-5.
[4] The apparatus of claim 3, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	

’173 Claim Limitations	Liu 783
[6] The apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	Liu 783 discloses and/or renders obvious the apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0030]; [0031]; [0044]; Figs. 3-5.
[7] The apparatus of claim 3, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	Liu 783 discloses and/or renders obvious the apparatus of claim 3, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0044]; Figs. 3-8.
[15] The apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge.	Liu 783 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0005]; [0009]; [0032]; Figs 4-5.
[16] The apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle.	Liu 783 discloses and/or renders obvious the apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0005]; [0009]; [0036]; Figs. 6-7.
[18] The apparatus of claim 1, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom	

’173 Claim Limitations	Liu 783
end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	
[19] The apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	
[20.A] An apparatus comprising:	Liu 783 discloses and/or renders obvious an apparatus. *See* Limitation [1.A].
[20.B] a cartridge comprising	Liu 783 discloses and/or renders obvious a cartridge. *See* Limitation [1.B].
[20.C] a mouthpiece,	Liu 783 discloses and/or renders obvious a mouthpiece. *See* Limitation [1.C].
[20.D] a storage compartment configured to hold a vaporizable material, and	Liu 783 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. *See* Limitation [1.D].
[20.E] a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Liu 783 discloses and/or renders obvious a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. *See* Limitation [1.E].
[20.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Liu 783 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge. *See* Limitation [1.F].

’173 Claim Limitations	Liu 783
[20.G] wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Liu 783 discloses and/or renders obvious wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Limitation [1.G].
[20.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	Liu 783 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Limitation [1.H].
[20.I] wherein the air inlet passage is configured to deliver the air towards the resistive heating element; and	Liu 783 discloses and/or renders obvious wherein the air inlet passage is configured to deliver the air towards the resistive heating element. *See* Limitation [1.I].
[20.J] a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece.	Liu 783 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece. *See* Limitation [1.J].
[21] The apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Liu 783 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Claim [2].
[22] The apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end.	Liu 783 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end. *See* Claim [3].
[23] The apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	Liu 783 discloses and/or renders obvious the apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge. *See* Claim [4].

’173 Claim Limitations	Liu 783
[24] The apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	Liu 783 discloses and/or renders obvious the apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. *See* Claim [6].
[25] The apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	Liu 783 discloses and/or renders obvious the apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage. *See* Claim [7].
[28] The apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	Liu 783 discloses and/or renders obvious the apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis. *See* Claim [18].
[30] The apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Liu 783 discloses and/or renders obvious the apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. *See* Claim [19].

EXHIBIT C-7

EXHIBIT C-7

Invalidity Claim Chart of KR200453424Y1 ("Yeom 424") against U.S. Patent No. 10,709,173

Yeom 424, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 3, 4, 6, 7, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 28, and 30 of U.S. Patent No. 10,709,173. Yeom 424 was filed on November 8, 2010, and published on May 2, 2011. Yeom 424 qualifies as prior art to the '173 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Yeom 424. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'173 Claim Limitations	Yeom 424
[1.A] An apparatus comprising:	To the extent the preamble is limiting, Yeom 424 discloses and/or renders obvious an apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract; [0013]; Claim 1; Figs. 1-4.
[1.B] a cartridge comprising	Yeom 424 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract; [0013]; [0023]; Figs. 1-4.
[1.C] a mouthpiece,	Yeom 424 discloses and/or renders obvious a mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '173 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’173 Claim Limitations	Yeom 424
	Yeom 424 at [0025]; [0047]; Figs. 1-4
[1.D] a storage compartment configured to hold a vaporizable material, and	Yeom 424 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0024]; [0027]; [0046]; [0049]; Figs 2-3.
[1.E] a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Yeom 424 discloses and/or renders obvious a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0032]; [0035]; [0036]; [0037]; Figs. 2, 3, 4.
[1.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Yeom 424 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0026]; [0033]; [0034]; Figs. 1-4.
[1.G] wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Yeom 424 discloses and/or renders obvious wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract; [0006]; [0013]; [0026]; [0032]; [0035]; [0036]; [0037]; Figs. 2, 3, 4.
[1.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	Yeom 424 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract; [0006]; [0013]; [0036]; [0040]; [0047]; Claim 1; Figs. 1-3.

’173 Claim Limitations	Yeom 424
[1.I] wherein the air inlet passage is configured to deliver the air to the heater chamber; and	Yeom 424 discloses and/or renders obvious wherein the air inlet passage is configured to deliver the air to the heater chamber. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract; [0006]; [0013]; [0036]; [0047]; Claim 1; Figs. 2-3.
[1.J] a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece.	Yeom 424 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at Abstract; [0006]; [0013]; [0036]; [0047]; Claim 1; Figs. 2-3.
[2] The apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Yeom 424 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0033]; Figs. 1-3
[3] The apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end.	Yeom 424 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0025]; Figs. 1-3.
[4] The apparatus of claim 3, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	Yeom 424 discloses and/or renders obvious The apparatus of claim 3, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures:

’173 Claim Limitations	Yeom 424
	Yeom 424 at [0013]; [0033]; [0040]; [0047]; Figs. 1-3
[6] The apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	Yeom 424 discloses and/or renders obvious the apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0025]; [0026]; Figure 1.
[7] The apparatus of claim 3, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	
[15] The apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge.	Yeom 424 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0034]; [0037]; Figs. 2, 3.
[16] The apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle.	Yeom 424 discloses and/or renders obvious the apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0030]; [0034]; Figs. 2, 3..
[18] The apparatus of claim 1, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to	Yeom 424 discloses and/or renders obvious the apparatus of claim 1, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.

’173 Claim Limitations	Yeom 424
the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0025]; [0026]; Figure 1.
[19] The apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Yeom 424 discloses and/or renders obvious the apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0001]; [0002]; [0024]; [0027].
[20.A] An apparatus comprising:	Yeom 424 discloses and/or renders obvious an apparatus. *See* Limitation [1.A].
[20.B] a cartridge comprising	Yeom 424 discloses and/or renders obvious a cartridge. *See* Limitation [1.B].
[20.C] a mouthpiece,	Yeom 424 discloses and/or renders obvious a mouthpiece. *See* Limitation [1.C].
[20.D] a storage compartment configured to hold a vaporizable material, and	Yeom 424 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. *See* Limitation [1.D].
[20.E] a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Yeom 424 discloses and/or renders obvious a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. *See* Limitation [1.E].
[20.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Yeom 424 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge. *See* Limitation [1.F].

’173 Claim Limitations	Yeom 424
[20.G] wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Yeom 424 discloses and/or renders obvious wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Limitation [1.G].
[20.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	Yeom 424 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Limitation [1.H].
[20.I] wherein the air inlet passage is configured to deliver the air towards the resistive heating element; and	Yeom 424 discloses and/or renders obvious wherein the air inlet passage is configured to deliver the air towards the resistive heating element. *See* Limitation [1.I].
[20.J] a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece.	Yeom 424 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece. *See* Limitation [1.J].
[21] The apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Yeom 424 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Claim [2].
[22] The apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end.	Yeom 424 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end. *See* Claim [3].
[23] The apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	Yeom 424 discloses and/or renders obvious the apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge. *See* Claim [4].

’173 Claim Limitations	Yeom 424
[24] The apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	Yeom 424 discloses and/or renders obvious the apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. *See* Claim [6].
[25] The apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	Yeom 424 discloses and/or renders obvious the apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage. *See* Claim [7].
[28] The apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	Yeom 424 discloses and/or renders obvious the apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis. *See* Claim [18].
[30] The apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Yeom 424 discloses and/or renders obvious the apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. *See* Claim [19].

EXHIBIT C-8

EXHIBIT C-8

Invalidity Claim Chart of KR200457694 ("Youn 694") against U.S. Patent No. 10,709,173

Youn 694, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 3, 4, 6, 7, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 28, and 30 of U.S. Patent No. 10,709,173. Youn 694 was filed on October 1, 2009, and published on April 7, 2011. Youn 694 qualifies as prior art to the '173 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Youn 694. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'173 Claim Limitations	Youn 694
[1.A] An apparatus comprising:	To the extent the preamble is limiting, Youn 694 discloses and/or renders obvious an apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Youn 694 at Abstract; [0008]; Figs. 1-5.
[1.B] a cartridge comprising	Youn 694 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Youn 694 at [0014]; [0016]; [0032]; [0034]; Figs. 3-4.
[1.C] a mouthpiece,	Youn 694 discloses and/or renders obvious a mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '173 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’173 Claim Limitations	Youn 694
	Youn 694 at [0014]; [0035]; [0041]; Figs. 1-4.
[1.D] a storage compartment configured to hold a vaporizable material, and	Youn 694 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Youn 694 at [0008]; [0034]; [0035]; [0043]; Figs. 3-4.
[1.E] a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Youn 694 discloses and/or renders obvious a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. For example, see the following passages and/or figures, as well as all related disclosures: Youn 694 at [0008]; [0014]; [0031]; [0032]; [0033]; [0034]; [0043]; Figs. 3-4.
[1.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Youn 694 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Youn 694 at [0014]; [0015]; [0016]; Figs. 1-4.
[1.G] wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Youn 694 discloses and/or renders obvious wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Youn 694 at [0008]; [0014]; [0015]; [0016]; [0031]; [0032]; [0033]; [0034]; [0043]; Figs. 3-4.
[1.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	
[1.I] wherein the air inlet passage is configured to deliver the air to the heater chamber; and	

’173 Claim Limitations	Youn 694
[1.J] a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece.	Youn 694 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures: Youn 694 at [0014]; [0016]; [0032]; [0034]; Figs. 3-4.
[2] The apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Youn 694 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Youn 694 at [0014]; [0015]; [0016]; Figs. 3-4.
[3] The apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end.	Youn 694 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end. For example, see the following passages and/or figures, as well as all related disclosures: Youn 694 at [0001]; Figs. 3-4.
[4] The apparatus of claim 3, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	
[6] The apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	Youn 694 discloses and/or renders obvious the apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures:

’173 Claim Limitations	Youn 694
	Youn 694 at Figs. 3-4.
[7] The apparatus of claim 3, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	
[15] The apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge.	Youn 694 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Youn 694 at Abstract; [0008]; [0014]; [0032]; [0043]; Figs. 3-4.
[16] The apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle.	Youn 694 discloses and/or renders obvious the apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle. For example, see the following passages and/or figures, as well as all related disclosures: Youn 694 at Abstract; [0008]; [0014]; [0032]; [0043]; Figs. 3-4.
[18] The apparatus of claim 1, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	Youn 694 discloses and/or renders obvious the apparatus of claim 1, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis. For example, see the following passages and/or figures, as well as all related disclosures: Youn 694 at Abstract; [0001]; [0003]; [0004]; [0006]; Figs. 1-5.
[19] The apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Youn 694 discloses and/or renders obvious the apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures:

’173 Claim Limitations	Youn 694
	Youn 694 at Abstract; [0008].
[20.A] An apparatus comprising:	Youn 694 discloses and/or renders obvious an apparatus. *See* Limitation [1.A].
[20.B] a cartridge comprising	Youn 694 discloses and/or renders obvious a cartridge. *See* Limitation [1.B].
[20.C] a mouthpiece,	Youn 694 discloses and/or renders obvious a mouthpiece. *See* Limitation [1.C].
[20.D] a storage compartment configured to hold a vaporizable material, and	Youn 694 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. *See* Limitation [1.D].
[20.E] a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Youn 694 discloses and/or renders obvious a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. *See* Limitation [1.E].
[20.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Youn 694 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge. *See* Limitation [1.F].
[20.G] wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Youn 694 discloses and/or renders obvious wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Limitation [1.G].
[20.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	Youn 694 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Limitation [1.H].

’173 Claim Limitations	Youn 694
[20.I] wherein the air inlet passage is configured to deliver the air towards the resistive heating element; and	Youn 694 discloses and/or renders obvious wherein the air inlet passage is configured to deliver the air towards the resistive heating element. *See* Limitation [1.I].
[20.J] a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece.	Youn 694 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece. *See* Limitation [1.J].
[21] The apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Youn 694 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Claim [2].
[22] The apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end.	Youn 694 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end. *See* Claim [3].
[23] The apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	Youn 694 discloses and/or renders obvious the apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge. *See* Claim [4].
[24] The apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	Youn 694 discloses and/or renders obvious the apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. *See* Claim [6].

’173 Claim Limitations	Youn 694
[25] The apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	Youn 694 discloses and/or renders obvious the apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage. *See* Claim [7].
[28] The apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	Youn 694 discloses and/or renders obvious the apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis. *See* Claim [18].
[30] The apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Youn 694 discloses and/or renders obvious the apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. *See* Claim [19].

EXHIBIT C-9

EXHIBIT C-9

Invalidity Claim Chart of CN202697716U ("Zhang 716") against U.S. Patent No. 10,709,173

Zhang 716, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 3, 4, 6, 7, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 28, and 30 of U.S. Patent No. 10,709,173. Zhang 716 was filed on August 6, 2012, and published on January 30, 2013. Zhang 716 qualifies as prior art to the '173 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Zhang 716. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'173 Claim Limitations	Zhang 716
[1.A] An apparatus comprising:	To the extent the preamble is limiting, Zhang 716 discloses and/or renders obvious an apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Zhang 716 at [0003]; [0005]; [0016]; [0018]; Figs. 1-4.
[1.B] a cartridge comprising	
[1.C] a mouthpiece,	
[1.D] a storage compartment configured to hold a vaporizable material, and	
[1.E] a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '173 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’173 Claim Limitations	Zhang 716
[1.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	
[1.G] wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	
[1.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	Zhang 716 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge For example, see the following passages and/or figures, as well as all related disclosures: Zhang 716 at [0018]; Figs. 1, 3, 4.
[1.I] wherein the air inlet passage is configured to deliver the air to the heater chamber; and	Zhang 716 discloses and/or renders obvious wherein the air inlet passage is configured to deliver the air to the heater chamber For example, see the following passages and/or figures, as well as all related disclosures: Zhang 716 at [0018]; Figs. 1, 3, 4.
[1.J] a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece.	
[2] The apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	
[3] The apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end.	

’173 Claim Limitations	Zhang 716
[4] The apparatus of claim 3, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	
[6] The apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	
[7] The apparatus of claim 3, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	
[15] The apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge.	Zhang 716 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Zhang 716 at [0006]; [0017]; Figs. 1-4.
[16] The apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle.	Zhang 716 discloses and/or renders obvious the apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle. For example, see the following passages and/or figures, as well as all related disclosures: Zhang 716 at [0006]; [0017]; Figs. 1-4
[18] The apparatus of claim 1, wherein the body has a top end and a bottom end opposite the top end, wherein the	

’173 Claim Limitations	Zhang 716
receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	
[19] The apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	
[20.A] An apparatus comprising:	
[20.B] a cartridge comprising	
[20.C] a mouthpiece,	
[20.D] a storage compartment configured to hold a vaporizable material, and	
[20.E] a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	
[20.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	
[20.G] wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	
[20.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	Zhang 716 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Limitation [1.H].

’173 Claim Limitations	Zhang 716
[20.I] wherein the air inlet passage is configured to deliver the air towards the resistive heating element; and	Zhang 716 discloses and/or renders obvious wherein the air inlet passage is configured to deliver the air towards the resistive heating element. *See* Limitation [1.I].
[20.J] a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece.	
[21] The apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	
[22] The apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end.	
[23] The apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	
[24] The apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	
[25] The apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	

’173 Claim Limitations	Zhang 716
[28] The apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	
[30] The apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	

EXHIBIT C-10

EXHIBIT C-10

Invalidity Claim Chart of CN203353690U ("Qiuming 690") against U.S. Patent No. 10,709,173

Qiuming 690, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 3, 4, 6, 7, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 28, and 30 of U.S. Patent No. 10,709,173. Qiuming 690 published on December 25, 2013. Qiuming 690 qualifies as prior art to the '173 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Qiuming 690. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'173 Claim Limitations	Qiuming 690
[1.A] An apparatus comprising:	To the extent the preamble is limiting, Qiuming 690 discloses and/or renders obvious an apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 690 at Abstract.
[1.B] a cartridge comprising	
[1.C] a mouthpiece,	
[1.D] a storage compartment configured to hold a vaporizable material, and	
[1.E] a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '173 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’173 Claim Limitations	Qiuming 690
[1.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	
[1.G] wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	
[1.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	
[1.I] wherein the air inlet passage is configured to deliver the air to the heater chamber; and	
[1.J] a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece.	
[2] The apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Qiuming 690 discloses and/or renders obvious wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Qiuming 690 at Abstract; [0041]; [0042]; [0043]; [0044]; [0045]; [0046]; Figs. 1-15.
[3] The apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end.	
[4] The apparatus of claim 3, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	

’173 Claim Limitations	Qiuming 690
[6] The apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	
[7] The apparatus of claim 3, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	
[15] The apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge.	
[16] The apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle.	
[18] The apparatus of claim 1, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	

’173 Claim Limitations	Qiuming 690
[19] The apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	
[20.A] An apparatus comprising:	
[20.B] a cartridge comprising	
[20.C] a mouthpiece,	
[20.D] a storage compartment configured to hold a vaporizable material, and	
[20.E] a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	
[20.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	
[20.G] wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	
[20.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	
[20.I] wherein the air inlet passage is configured to deliver the air towards the resistive heating element; and	
[20.J] a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece.	
[21] The apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the	Qiuming 690 discloses and/or renders obvious wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.

’173 Claim Limitations	Qiuming 690
protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	*See* Claim 2.
[22] The apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end.	
[23] The apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	
[24] The apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	
[25] The apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	
[28] The apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	

’173 Claim Limitations	Qiuming 690
[30] The apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	

EXHIBIT C-11

EXHIBIT C-11

Invalidity Claim Chart of KR20110084387 ("Cho 387") against U.S. Patent No. 10,709,173

Cho 387, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 3, 4, 6, 7, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 28, and 30 of U.S. Patent No. 10,709,173. Cho 387 published on July 13, 2012. Cho 387 qualifies as prior art to the '173 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Cho 387. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'173 Claim Limitations	Cho 387
[1.A] An apparatus comprising:	To the extent the preamble is limiting, Cho 387 discloses and/or renders obvious an apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Cho 387 at Abstract; [0001]; [0060]; [0061]; [0062]; [0063]; Figure 9
[1.B] a cartridge comprising	
[1.C] a mouthpiece,	
[1.D] a storage compartment configured to hold a vaporizable material, and	
[1.E] a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '173 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’173 Claim Limitations	Cho 387
[1.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	
[1.G] wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	
[1.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	Cho 387 discloses and/or renders obvious wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Cho 387 at Abstract; [0001]; [0060]; [0061]; [0062]; [0063]; Figure 9
[1.I] wherein the air inlet passage is configured to deliver the air to the heater chamber; and	
[1.J] a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece.	
[2] The apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	
[3] The apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end.	
[4] The apparatus of claim 3, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	Cho 387 discloses and/or renders obvious wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures:

’173 Claim Limitations	Cho 387
	Cho 387 at Abstract; [0001]; [0060]; [0061]; [0062]; [0063]; Figure 9
[6] The apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	
[7] The apparatus of claim 3, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	
[15] The apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge.	
[16] The apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle.	
[18] The apparatus of claim 1, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater	

’173 Claim Limitations	Cho 387
dimension along the first body transverse axis than along the second body transverse axis.	
[19] The apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	
[20.A] An apparatus comprising:	
[20.B] a cartridge comprising	
[20.C] a mouthpiece,	
[20.D] a storage compartment configured to hold a vaporizable material, and	
[20.E] a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	
[20.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	
[20.G] wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	
[20.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	
[20.I] wherein the air inlet passage is configured to deliver the air towards the resistive heating element; and	
[20.J] a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece.	

’173 Claim Limitations	Cho 387
[21] The apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	
[22] The apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end.	
[23] The apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	
[24] The apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	
[25] The apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	
[28] The apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater	

’173 Claim Limitations	Cho 387
dimension along the first body transverse axis than along the second body transverse axis.	
[30] The apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	

EXHIBIT C-12

EXHIBIT C-12

Invalidity Claim Chart of U.S. Patent No. 8,205,622 ("Pan 622") against U.S. Patent No. 10,709,173

Pan 622, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 3, 4, 6, 7, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 28, and 30 of U.S. Patent No. 10,709,173. Pan 622 was filed on May 7, 2009, and published on June 26, 2012. Pan 622 qualifies as prior art to the '173 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Pan 622. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'173 Claim Limitations	Pan 622
[1.A] An apparatus comprising:	To the extent the preamble is limiting, Pan 622 discloses and/or renders obvious an apparatus. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:16-18; 2:25-28; 2:39-43; 3:21-23; Figs. 6-7.
[1.B] a cartridge comprising	Pan 622 discloses and/or renders obvious a cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:48-50; 4:33-45; 4:63-5:7; 6:4-9; Figs 2-3, 6-7.
[1.C] a mouthpiece,	Pan 622 discloses and/or renders obvious a mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures:

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '173 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’173 Claim Limitations	Pan 622
	Pan 622 at 2:43-45; 2:51-54; 5:6-7; 6:19-24; Figs 2-3.
[1.D] a storage compartment configured to hold a vaporizable material, and	Pan 622 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:39-43; 4:12-18; 4:35-43; 4:48-53; Figs 2-3.
[1.E] a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Pan 622 discloses and/or renders obvious a heater chamber comprising a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:57-60; 4:55-62; 4:63-5:7; 5:62-67; Figs 2-3, 6-7.
[1.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Pan 622 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:48-50; 4:33-45; 4:63-5:7; 6:4-9; Figs 2-3, 6-7.
[1.G] wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Pan 622 discloses and/or renders obvious wherein the heater chamber is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at Fig. 7.
[1.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	
[1.I] wherein the air inlet passage is configured to deliver the air to the heater chamber; and	

'173 Claim Limitations	Pan 622
[1.J] a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece.	Pan 622 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the heater chamber and the mouthpiece. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:39-43; 2:57-62; 4:35-43; Figs 2-3, 6-7.
[2] The apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Pan 622 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:48-50; 4:33-45; 4:63-5:7; 6:4-9; Figs 2-3, 6-7.
[3] The apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end.	Pan 622 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the heater chamber is disposed proximate to the distal end. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:57-60; 4:55-62; 4:63-5:3; 5:62-67; Figs 2-3, 6-7.
[4] The apparatus of claim 3, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	
[6] The apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	Pan 622 discloses and/or renders obvious the apparatus of claim 3, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. For example, see the following passages and/or figures, as well as all related disclosures:

’173 Claim Limitations	Pan 622
	Pan 622 at Figs 2-3, 6-7.
[7] The apparatus of claim 3, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	
[15] The apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge.	Pan 622 discloses and/or renders obvious the apparatus of claim 1, wherein the cartridge comprises a first electrical contact and a second electrical contact at a distal end of the cartridge, the mouthpiece disposed at a proximal end of the cartridge opposite the distal end, wherein the first electrical contact and the second electrical contact are electrically isolated and disposed in a plane substantially parallel to the distal end of the cartridge. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:39-47; 4:33-35; 4:65-5:5; 4:58-61; Figs 2-3.
[16] The apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle.	Pan 622 discloses and/or renders obvious the apparatus of claim 15, wherein the receptacle comprises a third electrical contact and a fourth electrical contact disposed in a second plane, the second plane substantially parallel to the distal end of the cartridge when the cartridge is received within the receptacle. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:39-47; 4:33-35; 4:65-5:5; 4:58-61; Figs 2-3.
[18] The apparatus of claim 1, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	
[19] The apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Pan 622 discloses and/or renders obvious the apparatus of claim 1, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. For example, see the following passages and/or figures, as well as all related disclosures:

’173 Claim Limitations	Pan 622
	Pan 622 at 2:28-57; 3:4-12; 3:16-22.
[20.A] An apparatus comprising:	Pan 622 discloses and/or renders obvious an apparatus. *See* Limitation [1.A].
[20.B] a cartridge comprising	Pan 622 discloses and/or renders obvious a cartridge. *See* Limitation [1.B].
[20.C] a mouthpiece,	Pan 622 discloses and/or renders obvious a mouthpiece. *See* Limitation [1.C].
[20.D] a storage compartment configured to hold a vaporizable material, and	Pan 622 discloses and/or renders obvious a storage compartment configured to hold a vaporizable material. *See* Limitation [1.D].
[20.E] a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path; and	Pan 622 discloses and/or renders obvious a resistive heating element configured to heat the vaporizable material, wherein the heating of the vaporizable material generates an aerosol comprising the vaporizable material and air passing along an airflow path. *See* Limitation [1.E].
[20.F] a body comprising a receptacle configured to insertably receive and couple to the cartridge,	Pan 622 discloses and/or renders obvious a body comprising a receptacle configured to insertably receive and couple to the cartridge. *See* Limitation [1.F].
[20.G] wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge,	Pan 622 discloses and/or renders obvious wherein the resistive heating element is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Limitation [1.G].
[20.H] wherein the airflow path comprises: an air inlet passage having a first side formed by an exterior surface of the cartridge and a second side formed by an internal surface of the receptacle when the receptacle insertably receives and couples to the cartridge,	

’173 Claim Limitations	Pan 622
[20.I] wherein the air inlet passage is configured to deliver the air towards the resistive heating element; and	
[20.J] a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece.	Pan 622 discloses and/or renders obvious a fluid connection in the cartridge, the fluid connection connecting the resistive heating element and the mouthpiece. *See* Limitation [1.J].
[21] The apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge.	Pan 622 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge further comprises a protrusion extending from the exterior surface of the cartridge, and wherein at least part of the protrusion is disposed within the receptacle when the receptacle insertably receives and couples to the cartridge. *See* Claim [2].
[22] The apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end.	Pan 622 discloses and/or renders obvious the apparatus of claim 20, wherein the cartridge has a proximal end and a distal end opposite the proximal end, wherein the mouthpiece is disposed at the proximal end, and wherein the resistive heating element is disposed proximate to the distal end. *See* Claim [3].
[23] The apparatus of claim 22, wherein the receptacle terminates in a proximal edge, wherein the air inlet passage extends from the proximal edge of the receptacle towards the distal end of the cartridge when the receptacle insertably receives and couples to the cartridge.	
[24] The apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge.	Pan 622 discloses and/or renders obvious the apparatus of claim 22, wherein the cartridge has a longitudinal dimension extending from the proximal end of the cartridge to the distal end of the cartridge, and wherein the exterior surface of the cartridge and the internal surface of the receptacle are substantially parallel to the longitudinal dimension when the receptacle insertably receives and couples to the cartridge. *See* Claim [6].
[25] The apparatus of claim 22, wherein the storage compartment comprises the exterior surface of the cartridge forming the first side of the air inlet passage.	

’173 Claim Limitations	Pan 622
[28] The apparatus of claim 20, wherein the body has a top end and a bottom end opposite the top end, wherein the receptacle is disposed at the top end, wherein a body longitudinal axis extends from the top end to the bottom end, and wherein a first body transverse axis and a second body transverse axis extend substantially perpendicular to the body longitudinal axis, the body having a greater dimension along the first body transverse axis than along the second body transverse axis.	
[30] The apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation.	Pan 622 discloses and/or renders obvious the apparatus of claim 20, wherein the storage compartment comprises the vaporizable material, and wherein the vaporizable material comprises a nicotine formulation. *See* Claim [19].

NJOY's Initial Invalidity Contentions in Inv. No. 337-TA-1368

Exhibit D: Invalidity of U.S. Patent No. 11,134,722 Under 35 U.S.C. §§ 102, 103, 112

I. Invalidity of U.S. Patent No. 11,134,722 Under 35 U.S.C. §§ 102, 103

NJOY contends that each of the references set forth below, either alone or in combination with other prior art, invalidates the claims of the '722 Patent under 35 U.S.C. §§ 102, 103:

Prior Art Reference	Date of Publication or Other Prior Art Date	Statutory Provision of Prior Art[1]	Bates Number
US2057353	September 27, 1935	§§ 102(a)(1), (a)(2)	NJOYITC1_00000511
US8156944	May 16, 2007	§§ 102(a)(1), (a)(2)	NJOYITC1_00000654
US8205622	March 24, 2009	§§ 102(a)(1), (a)(2)	NJOYITC1_00000670
US8528569	June 28, 2011	§ 102(a)(2)	NJOYITC1_00000715
US8794231	April 30, 2008	§§ 102(a)(1), (a)(2)	NJOYITC1_00000737
US9078473	August 9, 2011	§§ 102(a)(1), (a)(2)	NJOYITC1_00000775
US9155336	June 16, 2012	§ 102(a)(2)	NJOYITC1_00000811
US9386805	July 9, 2012	§ 102(a)(2)	NJOYITC1_00000905
US9408416	August 16, 2012	§§ 102(a)(1), (a)(2)	NJOYITC1_00000926
US9420831	April 3, 2013	§ 102(a)(2)	NJOYITC1_00000947
US9427022	March 12, 2013	§ 102(a)(2)	NJOYITC1_00000959
US9861138	January 31, 2013	§ 102(a)(2)	NJOYITC1_00001115
US11229239	July 19, 2013	§ 102(a)(2)	NJOYITC1_00003046
US20090126745A1	May 15, 2007	§§ 102(a)(1), (a)(2)	NJOYITC1_00001278
US20090255534A1	April 13, 2009	§§ 102(a)(1), (a)(2)	NJOYITC1_00001324
US20100031968A1	July 24, 2009	§§ 102(a)(1), (a)(2)	NJOYITC1_00001354

[1] In light of JLI's failure to provide any basis to support its effective filing date and conception contentions with respect to the Asserted Patents, NJOY reserves the right to identify different statutory provisions under which each reference qualifies as prior art.

Prior Art Reference	Date of Publication or Other Prior Art Date	Statutory Provision of Prior Art[1]	Bates Number
US20120285475A1	May 23, 2012	§§ 102(a)(1), (a)(2)	NJOYITC1_00001389
US20130319438A1	June 5, 2012	§ 102(a)(2)	NJOYITC1_00001564
US20140150783A1	December 5, 2012	§ 102(a)(2)	NJOYITC1_00001583
US20140190502A1	September 27, 2012	§ 102(a)(2)	NJOYITC1_00003059
US20140224267A1	February 12, 2013	§ 102(a)(2)	NJOYITC1_00001630
US20160345631A1	July 19, 2005	§ 102(a)(2)	NJOYITC1_00001860
KR200457694Y1	October 1, 2009	§ 102(a)(1)	NJOYITC1_00000422
KR200453424Y1	May 2, 2011	§ 102(a)(1)	NJOYITC1_00000384
KR20130092251A	August 20, 2013	§ 102(a)(1)	NJOYITC1_00002933
CN203015840U	January 4, 2013	§ 102(a)(1)	NJOYITC1_00000174
CN203058295U	January 23, 2013	§ 102(a)(1)	NJOYITC1_00000179
CN203182014U	March 14, 2013	§ 102(a)(1)	NJOYITC1_00000235
Universal Serial Bus Cables and Connectors Class Document, Revision 2.0, August 2007, available at https://www.usb.org/sites/default/files/CabConn20.pdf	August 2007	§ 102(a)(1)	NJOYITC1_00002998

Additionally, the following prior art systems either alone or in combination with other prior art, invalidate the claims of the '722 Patent under 35 U.S.C. §§ 102, 103. The identification of these prior art systems is based on NJOY's investigation to date, is ongoing, and will be supplemented in due course.

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
21st Century Smoke	No later than August 2008	§102(a)(1)
Intellicig	No later than September 2008	§102(a)(1)
The Safe Cig	No later than December 2008	§102(a)(1)
Green Smoke	No later than December 2008	§102(a)(1)
SmokeTip	No later than May 2009	§102(a)(1)
Fuma	No later than August 2009	§102(a)(1)
Blu Starter Kit	No later than October 2009	§102(a)(1)
Vapor Corp. Smoke 51	No later than November 2009	§102(a)(1)
Boge Technology LEO Pod System	No later than June 2010	§102(a)(1)
ePuffer Magnum Uno D2	No later than 2011	§102(a)(1)
ePuffer Phantom T1	No later than 2012	§102(a)(1)
VMR V2 e-cig	No later than 2012	§102(a)(1)
Vinirette Aurora Pod	No later than January 2012	§102(a)(1)
Innokin iTaste VV	No later than June 2012	§102(a)(1)
iWand	No later than June 2012	§102(a)(1)
JWell Ivary V2 Pod	No later than July 2012	§102(a)(1)
KangerTech T2 Ego Clearomizer	No later than November 2012	§102(a)(1)
Boge Technology EGO Passthrough CE4 EGOKIT	No later than December 2012	§102(a)(1)
Smart Evolution Trading Puff Avatar 1 Pod System	No later than December 2012	§102(a)(1)
Smart Evolution Trading Puff Avatar 2 Pod System	No later than December 2012	§102(a)(1)

[2] In light of JLI's failure to provide any basis to support its effective filing date and conception contentions with respect to the Asserted Patents, NJOY reserves the right to identify different statutory provisions under which each reference qualifies as prior art.

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
Smart Evolution Trading Puff Quantum	No later than 2013	§102(a)(1)
KangerTech iPh-8	No later than March 2013	§102(a)(1)
KangerTech eVod	No later than April 2013	§102(a)(1)
JWELL Inova 1.0	No later than June 2013	§102(a)(1)
Ijoy SS-ITop Pod System	No later than July 2013	§102(a)(1)
VUSE Solo	No later than July 2013	§102(a)(1)
Apollo eGo-vv	No later than August 2013	§102(a)(1)
Bedford Slims	No later than August 2013	§102(a)(1)
Breathe Fresh eCigs	No later than August 2013	§102(a)(1)
Bull Smoke Automatic	No later than August 2013	§102(a)(1)
Bull Smoke Manual	No later than August 2013	§102(a)(1)
Cigarti	No later than August 2013	§102(a)(1)
Cigavette Premier	No later than August 2013	§102(a)(1)
Crown 7	No later than August 2013	§102(a)(1)
Duopro	No later than August 2013	§102(a)(1)
E-Lites	No later than August 2013	§102(a)(1)
Eluma	No later than August 2013	§102(a)(1)
Eon Smoke	No later than August 2013	§102(a)(1)
ePuffer Colibri	No later than August 2013	§102(a)(1)
eSmoke	No later than August 2013	§102(a)(1)
Eversmoke	No later than August 2013	§102(a)(1)
Fifty-One Trio	No later than August 2013	§102(a)(1)
Firebrand Millennium	No later than August 2013	§102(a)(1)

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
Frii	No later than August 2013	§102(a)(1)
Green Nicotine	No later than August 2013	§102(a)(1)
Halo G6	No later than August 2013	§102(a)(1)
J510L	No later than August 2013	§102(a)(1)
Logic Power Series	No later than August 2013	§102(a)(1)
Luci	No later than August 2013	§102(a)(1)
Metro Platinum	No later than August 2013	§102(a)(1)
Modern Vapor Sidesho	No later than August 2013	§102(a)(1)
New Day	No later than August 2013	§102(a)(1)
Nirvana Eco	No later than August 2013	§102(a)(1)
Ozone Smoke	No later than August 2013	§102(a)(1)
Premium	No later than August 2013	§102(a)(1)
Prosmoke	No later than August 2013	§102(a)(1)
Pure	No later than August 2013	§102(a)(1)
Revolver G2	No later than August 2013	§102(a)(1)
Seminole	No later than August 2013	§102(a)(1)
Smokeless Delite Premo Cartomizer	No later than August 2013	§102(a)(1)
Smokeless Delite Premo Cartridge	No later than August 2013	§102(a)(1)
Smokesation	No later than August 2013	§102(a)(1)
SmokeTip	No later than August 2013	§102(a)(1)
South Beach Smoke	No later than August 2013	§102(a)(1)
Ultra	No later than August 2013	§102(a)(1)

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
Vapage	No later than August 2013	§102(a)(1)
Victory	No later than August 2013	§102(a)(1)
White Cloud Cirrus 3	No later than August 2013	§102(a)(1)
Joyetech eGo-C	No later than August 2013	§102(a)(1)
Joytech eVic	No later than August 2013	§102(a)(1)
Joytech eCab	No later than August 2013	§102(a)(1)
Joytech eRoll	No later than August 2013	§102(a)(1)
Jocor Enterprises Lavatube	No later than August 2013	§102(a)(1)
Jocor Enterprises Magma	No later than August 2013	§102(a)(1)
Bloog	No later than August 2013	§102(a)(1)
Da Vinci	No later than August 2013	§102(a)(1)
EGO 1100 Dual Coil	No later than August 2013	§102(a)(1)
Elite Variable Voltage e-Cigarette	No later than August 2013	§102(a)(1)
Firebrand Diablo Falcon Elite	No later than August 2013	§102(a)(1)
Panda eGo Ismoka	No later than August 2013	§102(a)(1)
Panda Evolve	No later than August 2013	§102(a)(1)
Premium EGO	No later than August 2013	§102(a)(1)
Smokeless Delite Ego-T	No later than August 2013	§102(a)(1)
SmokeTech S.I.D. Variable Volage eCig	No later than August 2013	§102(a)(1)
Vapor King	No later than August 2013	§102(a)(1)
Vapor King Storm 2.0	No later than August 2013	§102(a)(1)
Vgo	No later than August 2013	§102(a)(1)

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
Winder Noval XL	No later than August 2013	§102(a)(1)
Vapor4Life WOW EGO	No later than August 2013	§102(a)(1)
Vapor4Life Zeus	No later than August 2013	§102(a)(1)
Zerocig Georgie	No later than August 2013	§102(a)(1)
Joye 510	No later than August 2013	§102(a)(1)
Joyetech Elips-C	No later than September 2013	§102(a)(1)

Each of the prior art identified in Exhibits D1-D11 of NJOY's initial invalidity contentions either anticipates one or more of the claims of the '722 Patent and/or renders obvious one or more of the claims of the '722 Patent when viewed in combination with other prior art references. NJOY reserves the right to contend that each of the anticipatory references renders the claims obvious either in view of the reference alone or in combination with other references. The identification of any patent or patent application should be deemed an identification of any counterpart patent, application, or associated product; the identification of any article or publication should be deemed a disclosure of any substantially similar article if published in some other form, or of any patent or patent application whole, as understood by a POSA. For example, a reference to a figure should be deemed to refer to the text describing the figure and vice versa.

In addition to the anticipatory references described in these invalidity contentions, the claims of the '722 Patent are invalid based on obviousness under 35 U.S.C. § 103. In general, a claimed invention is unpatentable if the differences between it 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." 35 U.S.C. § 103(a); *Graham v. John Deere Co.*, 383 U.S. 1, 13-14 (1966).

Each prior art reference described in Exhibits D1-D11, either alone or in combination with other prior art, renders the claims of the ’722 Patent invalid as obvious. In particular, each prior art reference may be combined with (1) information known to persons skilled in the art at the time of the alleged invention, (2) any of the other anticipatory prior art references, and/or (3) any of the additional prior art identified herein and in the charts attached hereto. In addition to the art set forth above, NJOY incorporates by reference each and every prior art reference of record in the prosecution of the ’722 Patent, including the statements made therein by the applicant, as well as the prior art discussed in the specification.

In view of the Supreme Court’s *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 127 S.Ct. 1727, 1739 (2007) (“*KSR*”) decision, the USPTO issued a set of Examination Guidelines. *See* Examination Guidelines for Determining Obviousness Under 35 U.S.C. § 103 in view of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, 72 Fed. Reg. 57, 526 (Oct. 10, 2007). Those rationales include:

- Combining prior art elements according to known methods to yield predictable results;
- Simple substitution of one known element for another to obtain predictable results;
- Use of a known technique to improve similar devices (methods, or products) in the same way;
- Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- “Obvious to try” – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

- Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;
- Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

Id. at 57, 529. These rationales are consistent with the Supreme Court's emphasis in *KSR* that "the results of ordinary innovation" from the perspective of a person of ordinary skill are not patentable, and further that "[a] person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR*, 550 U.S. at 421. NJOY contends that one or more of these rationales apply in considering the obviousness of the claims of the '722 Patent.

As the Supreme Court emphasized in *KSR*, issued patent claims may be determined to be invalid as obvious even without a teaching, suggestion, or motivation to combine particular references. *Id.* at 419 ("The 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."). Nevertheless, a person of skill in the art would have been motivated to combine each of the identified references with the others identified with respect to the claims of the '722 Patent. NJOY contends that one of ordinary skill in the art, at the time the alleged inventions of the '722 Patent were made, would have been motivated to combine the references disclosed herein in such a way to reach the alleged inventions. The teaching, suggestion, or motivation to combine these references, although not required, is found, explicitly or implicitly, in one or more of at least the following: the knowledge or common sense of one of ordinary skill in the art; the prior art references themselves and/or the prior art as

a whole, including interrelated teachings of multiple prior art references; the common fields of technology of the references; the subject matter acknowledged as prior art in the '722 Patent; the nature of the problem to be solved and the existence of similar improvements in similar applications; design incentives and other market forces, including the advantages of creating a superior and more desirable product and the effects of demands known to the design community or present in the marketplace; the ability to implement the alleged invention as a predictable variation of the prior art; improvements in similar devices; any needs or problems known in the fields addressed by the '722 Patent; the teachings in the references directed to solving the problems that the '722 Patent allegedly directed to solving; and the number of identified, predictable solutions to the problems addressed by these patents. In addition, the simultaneous (and/or prior) inventions described above (and elsewhere in these contentions) are evidence that motivation to combine the concepts described in the various prior art references did, in fact, exist, and they were, in fact, combined.

These references identify and address many of the same technical issues and suggest similar solutions to those issues. Moreover, many of these references cross-reference and discuss one another, further illustrating the close technical relationship among this group of references. Accordingly, the teachings of the individual prior art references and alleged inventions, combined with the industry knowledge of a person of ordinary skill in the art at the time of the alleged invention of the '722 Patent, would render obvious the claims of the '722 Patent for at least the reasons described herein and in the incorporated exhibits. A person of ordinary skill at the time of the alleged inventions had reason to combine or modify one or more of the listed references in light of the knowledge of a person of ordinary skill in the art at the time of the alleged invention and information in the prior art cited herein. Thus, these references would logically have been

combined pursuant to 35 U.S.C. § 103, and there was abundant motivation to combine such references at the time of the purported inventions of the ’722 Patent.

The prior art references set forth in Exhibits D1-D11 clearly demonstrate that each of the limitations of the claims of the ’722 Patent was known in the art. A person of ordinary skill would have been motivated to combine these known elements to arrive at the asserted claims of the ’722 Patent. Furthermore, a person of ordinary skill in the art at the time of the alleged invention would have had a reasonable expectation of success when combining the listed references and the known elements because the proposed combinations would have been well within the level of ordinary skill in the art. Indeed, the proposed combinations would have been merely the application of a known technique or component with a known system in the same field of endeavor. And, when combined, each element merely performs the same predictable functions as it does separately without significantly altering or hindering the functions performed by the other elements.

Exemplary motivations are set forth below:

Cartomizer receiving segment having a chamber

To the extent Complainants contend that any of the prior art referenced identified above do not expressly or inherently disclose a cartomizer receiving segment having a chamber, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to include a cartomizer receiving segment having a chamber in an electronic vaporizer device. A POSA would have been motivated to include a cartomizer receiving segment having a chamber, such as those disclosed in Han 944, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the

predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to include a cartomizer receiving segment because of the numerous benefits this configuration provides. First, this design enhances safety by adding another layer of protection between the cartomizer and the adult consumer's hand, thereby preventing potential burns. Second, this configuration protects components of the cartomizer from potential damage due to accidental drops or impacts. Third, this configuration allows for a more compact and streamlined design, increasing aesthetics and portability. Fourth, this configuration provides a more secure connection between the cartomizer and the chamber, ensuring more consistent electrical connections, and reducing the risk of potential malfunctions due to loose electrical connections. Having the cartomizer more securely surrounded by the chamber ensures a more stable electrical connection thereby leading to consistent power delivery and vapor production.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239, with the cartomizer receiving segment having a chamber taught by Han 944, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231. A POSA would have known that the cartomizer receiving segment having a chamber disclosed in Han 944, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231 could have been added to Galloway 239 to produce a functional

device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Galloway 239 with Han 944, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Galloway 239 with Han 944, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231.

Charger electrical contacts located opposite the insertion end

To the extent Complainants contend that any of the prior art referenced identified above do not expressly or inherently disclose charger electrical contacts, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to include charger electrical contacts located opposite the insertion end in an electronic vaporizer device. A POSA would have been motivated to include charger electrical contacts, such as those disclosed in Galloway 239, Han 944, and/or Levin 022, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to include charger electrical contacts located opposite the insertion end because of the numerous benefits this configuration provides. First, including a charging port, especially standard ports like micro-USB, allows adult consumers to charge the

device using commonly available cables and chargers. Second, including a charging port allows the adult consumer to recharge the device when the battery is depleted, thereby providing cost savings to the adult consumer and being more environmentally friendly since depleted batteries can be recharged instead of discarded. Third, positioning the charger electrical contacts opposite the insertion end provides numerous benefits, including allowing the adult consumer to charge the device while a cartridge is still attached without any interference. Fourth, there are also safety benefits to this configuration because there is reduced risk the vaporizable liquid comes in contact with the electrical contacts and potentially result in short circuits or other electrical issues.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Liu 502, Liu 783, Pan 622, Paterno 534, and Thorens 231, with the charger electrical contacts taught by Galloway 239, Han 944, and/or Levin 022. A POSA would have known that the charger electrical contacts disclosed in Galloway 239, Han 944, and/or Levin 022 could have been added to Liu 502, Liu 783, Pan 622, Paterno 534, and Thorens 231 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Liu 502, Liu 783, Pan 622, Paterno 534, and Thorens 231 with Galloway 239, Han 944, and/or Levin 022 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Liu 502, Liu 783, Pan 622, Paterno 534, and Thorens 231 with Galloway 239, Han 944, and/or Levin 022.

Commonly shared outer shell

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a commonly shared outer shell, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a commonly shared outer shell in an electronic vaporizer device. A POSA would have been motivated to use a commonly shared outer shell, such as those disclosed in Han 944, Liu 502, Pan 622, Paterno 534, and/or Thorens 231, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to include a commonly shared outer shell because of the numerous benefits this configuration provides. First, a commonly shared outer shell provides better protection since there are fewer exposed parts or seams that could be damaged and/or fail. Second, a commonly shared outer shell simplifies the construction of the device and therefore reduces the manufacturing complexity and cost. Third, having a commonly shared outer shell reduces the risk from contaminants, moisture, and dust.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239 and Liu 783, with the commonly shared outer shell taught by Han 944, Liu 502, Pan 622, Paterno 534, and/or Thorens 231. A POSA would have known that the commonly shared outer shell disclosed in Han 944, Liu 502, Pan 622, Paterno 534, and/or Thorens 231 could have

been added to, for example, Galloway 239 and Liu 783 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining, for example, Galloway 239 and Liu 783 with Han 944, Liu 502, Pan 622, Paterno 534, and/or Thorens 231 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Galloway 239 and Liu 783 with Han 944, Liu 502, Pan 622, Paterno 534, and/or Thorens 231.

Insertable cartomizer

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose an insertable cartomizer, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use an insertable cartomizer in an electronic vaporizer device. A POSA would have been motivated to use an insertable cartomizer, such as those disclosed in Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use a cartomizer that is insertable into the chamber of the cartomizer receiving segment because of the numerous benefits this configuration provides.

First, this design enhances safety by adding another layer of protection between the cartomizer and the adult consumer's hand, thereby preventing potential burns. Second, this configuration protects components of the cartomizer from potential damage due to accidental drops or impacts. Third, this configuration allows for a more compact and streamlined design, increasing aesthetics and portability. Fourth, this configuration provides a more secure connection between the cartomizer and the chamber, ensuring more consistent electrical connections, and reducing the risk of potential malfunctions due to loose electrical connections. Having the cartomizer more securely surrounded by the chamber ensures a more stable electrical connection thereby leading to consistent power delivery and vapor production.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239 and Han 344, with the insertable cartomizer taught by Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231. A POSA would have known that the insertable cartomizer disclosed in Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231 could have been added to Galloway 239 and Han 344 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Galloway 239 and Han 344 with Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Galloway 239 and Han 344 with Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231.

Heating element in the cartomizer body

To the extent Complainants contend that any of the prior art referenced identified above do not expressly or inherently disclose a heating element in the cartomizer body, it would have been

obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a heating element in the cartomizer body in an electronic vaporizer device. A POSA would have been motivated to use a heating element in the cartomizer body, such as those disclosed in Galloway 239, Liu 336, Liu 502, Liu 783, Newton 569, Pan 622, Paterno 534, and/or Thorens 231, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use a heating element in the cartomizer body because of the numerous benefits this configuration provides. First, this design results in less leakage, since the heating element can be integrated into the cartridge as a single unit with less points of failure and/or areas for liquid to leak. Safety is also increased when the cartridge is non-refillable, as the adult consumer must use a new heating element every time a cartomizer needs to be replaced. Second, this design allows for a more compact and streamlined device because there is no need for additional connections between the heating element and the cartomizer body.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Han 344, with the heating element in the cartomizer body taught by, for example, Galloway 239, Liu 336, Liu 502, Liu 783, Newton 569, Pan 622, Paterno 534, and/or Thorens 231. A POSA would have known that the heating element in the cartomizer body disclosed in, for example, Galloway 239, Liu 336, Liu 502, Liu 783, Newton 569, Pan 622, Paterno 534, and/or Thorens 231 could have been added to Han 344 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining, for example, Han 344 with Galloway 239, Liu 336, Liu 502, Liu 783, Newton 569, Pan 622, Paterno 534, and/or Thorens 231 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Han 344 with Galloway 239, Liu 336, Liu 502, Liu 783, Newton 569, Pan 622, Paterno 534, and/or Thorens 231.

Heating element disposed between insertion end and base end of chamber

To the extent Complainants contend that any of the prior art referenced identified above do not expressly or inherently disclose a heating element disposed between insertion end and base end of chamber, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to include a heating element disposed between insertion end and base end of chamber in an electronic vaporizer device. A POSA would have been motivated to include a heating element disposed between insertion end and base end of chamber, such as those disclosed in Liu 783, Pan 622, Paterno 534, and/or Thorens 231, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one

known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to position the heater chamber between the insertion end and the base end of the chamber receptacle when the cartomizer is inserted into the chamber because of the numerous benefits this configuration provides. First, this design enhances safety by adding another layer of protection between the heating chamber and the adult consumer's hand, thereby preventing potential burns. Second, this configuration protects components of the heater chamber from potential damage due to accidental drops or impacts. Third, this configuration allows for a more compact and streamlined design, increasing aesthetics and portability. Fourth, this configuration provides a more secure connection between the cartomizer and the chamber, ensuring more consistent electrical connections, and reducing the risk of potential malfunctions due to loose electrical connections. Having the cartomizer more securely surrounded by the chamber ensures a more stable electrical connection thereby leading to consistent power delivery and vapor production.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Liu 783 and Pan 622, with the heating element disposed between insertion end and base end of chamber taught by Liu 783, Pan 622, Paterno 534, and/or Thorens 231. A POSA would have known that the heating element disposed between insertion end and base end of chamber disclosed in, for

example, Liu 783, Pan 622, Paterno 534, and/or Thorens 231 could have been added to Liu 783 and Pan 622 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining, for example, Liu 783 and Pan 622 with Liu 783, Pan 622, Paterno 534, and/or Thorens 231 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Liu 783 and Pan 622 with Liu 783, Pan 622, Paterno 534, and/or Thorens 231.

Friction fit between the cartomizer and chamber

To the extent Complainants contend that any of the prior art referenced identified above do not expressly or inherently disclose a friction fit between the cartomizer and chamber, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a friction fit between the cartomizer and chamber in an electronic vaporizer device. A POSA would have been motivated to use a friction fit between the cartomizer and chamber, such as those disclosed in Paterno 534 and/or Thorens 231, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use a friction fit between the cartomizer and chamber because of the numerous benefits this configuration provides. First, this design simplifies the design and increases the adult consumer's experience by allowing adult consumers to quickly switch between different cartridges. Second, friction fit designs simplify the overall construction of the device and reduce the manufacturing complexity. Third, friction fits can ensure a consistent and solid connection between the cartridge and the device, which is important for effective vapor production and device performance.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239, Han 344, Liu 502, Liu 783, and Pan 622, with the friction fit between the cartomizer and chamber taught by Paterno 534 and/or Thorens 231. A POSA would have known that the friction fit between the cartomizer and chamber disclosed in, for example, Paterno 534 and/or Thorens 231 could have been added to Galloway 239, Han 344, Liu 502, Liu 783, and Pan 622 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining, for example, Galloway 239, Han 344, Liu 502, Liu 783, and Pan 622 with Paterno 534 and/or Thorens 231 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Galloway 239, Han 344, Liu 502, Liu 783, and Pan 622 with Paterno 534 and/or Thorens 231.

Linearly arranged charger electrical contacts

To the extent Complainants contend that any of the prior art referenced identified above do not expressly or inherently disclose linearly arranged charger electrical contacts, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use linearly arranged charger electrical contacts in an electronic vaporizer device. A POSA would have been motivated to use linearly arranged charger electrical contacts, such as those disclosed in Galloway 239, Han 944, and/or Levin 022, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use linearly arranged charger electrical contacts because of the numerous benefits this configuration provides. A POSA would have known that arranging the charger electrical contacts linearly results in a more compact and space-efficient design. This configuration also makes it easier for adult consumers to connect the charger to the charger electrical contacts. Moreover, electrical contacts are typically arranged linearly and a POSA would have been motivated to adopt a schema that was commercially prevalent.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Liu 502, Liu 783, Pan 622, Paterno 534 and Thorens 231, with the linearly arranged charger electrical contacts taught by, for example, Galloway 239, Han 944, and/or Levin 022. A POSA would have known that the linearly arranged charger electrical contacts disclosed in, for example, Galloway

239, Han 944, and/or Levin 022 could have been added to, for example, Liu 502, Liu 783, Pan 622, Paterno 534 and Thorens 231 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Liu 502, Liu 783, Pan 622, Paterno 534 and Thorens 231 with Galloway 239, Han 944, and/or Levin 022 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Liu 502, Liu 783, Pan 622, Paterno 534 and Thorens 231 with Galloway 239, Han 944, and/or Levin 022.

Shell having a transparent portion

To the extent Complainants contend that any of the prior art referenced identified above do not expressly or inherently disclose a shell having a transparent portion, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a shell having a transparent portion in an electronic vaporizer device. A POSA would have been motivated to use a shell having a transparent portion, such as those disclosed in Levin 022, Liu336, and/or Newton 569, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use a shell with a transparent portion because of the numerous benefits this configuration provides. A POSA would have known that having a shell with a transparent portion advantageously allows adult consumers to easily see the level of e-liquid remaining in the cartridge, thereby letting the adult consumer more easily know when it is time to refill or replace the cartridge. A transparent portion of the shell can also add a unique aesthetic design to the device. This design also can improve safety, by allowing the adult consumer to visually inspect the cartridge for any issues that may affect the operation of the device.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239, Han 344, Liu 502, Liu 783, Pan 622, Paterno 534, and Thorens 231, with the shell having a transparent portion taught by, for example, Levin 022, Liu 336, and/or Newton 569. A POSA would have known that the shell having a transparent portion disclosed in Levin 022, Liu 336, and/or Newton 569 could have been added to, for example, Galloway 239, Han 344, Liu 502, Liu 783, Pan 622, Paterno 534, and Thorens 231 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Galloway 239, Han 344, Liu 502, Liu 783, Pan 622, Paterno 534, and Thorens 231 with Levin 022, Liu336, and/or Newton 569 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Galloway 239, Han 344, Liu 502, Liu 783, Pan 622, Paterno 534, and Thorens 231 with Levin 022, Liu 336, and/or Newton 569.

Electrical circuitry in the cartomizer connected with the heating element

To the extent Complainants contend that any of the prior art referenced identified above do not expressly or inherently disclose electrical circuitry in the cartomizer connected with the heating

element, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use electrical circuitry in the cartomizer connected with the heating element in an electronic vaporizer device. A POSA would have been motivated to use electrical circuitry in the cartomizer connected with a heating element, such as those disclosed in Galloway 239, Liu 336, Liu 502, Liu 783, Newton 569, Paterno 534, and/or Thorens 231, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use electrical circuitry in the cartomizer connected with the heating element because of the numerous benefits this configuration provides. A POSA would have known that power needs to be supplied to a heating element in order for the device to work, and including electrical circuitry in the cartomizer is necessary.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Han 344 and Pan 622, with the electrical circuitry in the cartomizer connected with the heating element taught by, for example, Galloway 239, Liu 336, Liu 502, Liu 783, Newton 569, Paterno 534, and/or

Thorens 231. A POSA would have known that the electrical circuitry in the cartomizer connected with the heating element disclosed in Galloway 239, Liu 336, Liu 502, Liu 783, Newton 569, Paterno 534, and/or Thorens 231 could have been added to Han 344 and Pan 622 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Han 344 and Pan 622 with Galloway 239, Liu 336, Liu 502, Liu 783, Newton 569, Paterno 534, and/or Thorens 231 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Han 344 and Pan 622 with Galloway 239, Liu 336, Liu 502, Liu 783, Newton 569, Paterno 534, and/or Thorens 231.

Magnet of the battery portion in or proximate to cartomizer chamber

To the extent Complainants contend that any of the prior art referenced identified above do not expressly or inherently disclose a magnet of the battery portion in or proximate to cartomizer chamber, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a magnet of the battery portion in or proximate to cartomizer chamber in an electronic vaporizer device. A POSA would have been motivated to use a magnet of the battery portion in or proximate to cartomizer chamber, such as those disclosed in Levin 022, Liu 502, and/or Liu 783, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions

that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use a magnet of the battery portion in or proximate to cartomizer chamber because of the numerous benefits this configuration provides. First, this design simplifies the process of attaching and detaching cartomizer, allowing adult consumers to easily insert cartridges into the device. Second, magnetic connections between the cartomizer and the battery portion reduces wear and tear that can occur with other attachment means such as screw threads. Third, placing the magnets in the battery portion instead of the cartomizer reduces costs, since cartomizers are disposed of more often than the battery. Fourth, this design increases the safety of the device, since an accidental drop may allow for the cartomizer to detach and reduce the risk of damage to the battery portion or the cartomizer.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239, Pan 622, Paterno 534, and Thorens 231, with the magnet of the battery portion in or proximate to cartomizer chamber taught by, for example, Levin 022, Liu 502, and/or Liu 783. A POSA would have known that the magnet of the battery portion in or proximate to cartomizer chamber disclosed in Levin 022, Liu 502, and/or Liu 783 could have been added to, for example, Galloway 239, Pan 622, Paterno 534, and Thorens 231 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Galloway 239, Pan 622, Paterno 534, and Thorens 231 with Levin 022, Liu 502, and/or Liu 783 is a predictable use of electronic vaporizer components according to their established

functions. Accordingly, it would have been routine for a POSA to combine Galloway 239, Pan 622, Paterno 534, and Thorens 231 with Levin 022, Liu 502, and/or Liu 783.

Metal element for coupling with magnet of the battery portion

To the extent Complainants contend that any of the prior art referenced identified above do not expressly or inherently disclose a metal element for coupling with magnet of the battery portion, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a metal element for coupling with magnet of the battery portion in an electronic vaporizer device. A POSA would have been motivated to use a metal element for coupling with magnet of the battery portion, such as those disclosed in Levin 022, Liu 502, and/or Liu 783, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use a metal element for coupling with a magnet of the battery portion because of the numerous benefits this configuration provides. First, this design simplifies the process of attaching and detaching cartomizer, allowing adult consumers to easily insert cartridges into the device. Second, magnetic connections between the cartomizer and the battery portion reduces wear and tear that can occur with other attachment means such as screw

threads. Third, a POSA would have recognized that a metal piece is necessary for a magnet to attach to. Fourth, this design increases the safety of the device, since an accidental drop may allow for the cartomizer to detach and reduce the risk of damage to the battery portion or the cartomizer.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239, Han 344, Pan 622, Paterno 534, and Thorens 231, with the metal element for coupling with magnet of the battery portion taught by, for example, Levin 022, Liu 502, and/or Liu 783. A POSA would have known that the metal element for coupling with magnet of the battery portion disclosed in Levin 022, Liu 502, and/or Liu 783 could have been added to, for example, Galloway 239, Han 344, Pan 622, Paterno 534, and Thorens 231 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Galloway 239, Han 344, Pan 622, Paterno 534, and Thorens 231 with Levin 022, Liu 502, and/or Liu 783 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Galloway 239, Han 344, Pan 622, Paterno 534, and Thorens 231 with Levin 022, Liu 502, and/or Liu 783.

Battery electrical contacts in or proximate the cartomizer chamber

To the extent Complainants contend that any of the prior art referenced identified above do not expressly or inherently disclose battery electrical contacts in or proximate the cartomizer chamber, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use battery electrical contacts in or proximate the cartomizer chamber in an electronic vaporizer device. A POSA would have been motivated to use battery electrical contacts in or proximate the cartomizer

chamber, such as those disclosed in Liu 336, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use battery electrical contacts in or proximate the cartomizer chamber because of the numerous benefits this configuration provides. First, a POSA would have known that power needs to be transmitted from the battery to the heating element in the cartomizer in order for the device to function. Having the contacts in or proximate to the cartomizer chamber ensures that the cartomizer sits firmly and securely in the device, making a consistent and stable electrical connection with the battery electrical contacts. Positioning the battery contacts in or proximate the cartomizer chamber simplifies the design and construction of the device, since the cartomizer is received into the cartomizer chamber, which is where the battery electrical contacts are located.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239 and Han 344, with the battery electrical contacts in or proximate the cartomizer chamber taught by, for example, Liu 336, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens

231. A POSA would have known that the battery electrical contacts in or proximate the cartomizer chamber disclosed in, for example, Liu 336, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231 could have been added to Galloway 239 and Han 344 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining, for example, Galloway 239 and Han 344 with Liu 336, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Galloway 239 and Han 344 with Liu 336, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231.

Cartomizer electrical contacts for connecting with battery electrical contacts

To the extent Complainants contend that any of the prior art referenced identified above do not expressly or inherently disclose cartomizer electrical contacts for connecting with battery electrical contacts, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use cartomizer electrical contacts for connecting with battery electrical contacts in an electronic vaporizer device. A POSA would have been motivated to use cartomizer electrical contacts for connecting with battery electrical contacts, such as those disclosed in Liu 336, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number

of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use cartomizer electrical contacts for connecting with battery electrical contacts because of the numerous benefits this configuration provides. First, a POSA would have known that power needs to be transmitted from the battery to the heating element in the cartomizer in order for the device to function. Having cartomizer electrical contacts for connecting to battery electrical contacts in or proximate to the cartomizer chamber ensures that the cartomizer sits firmly and securely in the device, making a consistent and stable electrical connection with the battery electrical contacts. Having cartomizer electrical contacts for connecting to battery contacts in or proximate the cartomizer chamber simplifies the design and construction of the device, since the cartomizer is received into the cartomizer chamber, which is where the battery electrical contacts are located.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239 and Han 344, with the cartomizer electrical contacts for connecting with battery electrical contacts taught by, for example, Liu 336, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231. A POSA would have known that the cartomizer electrical contacts for connecting with battery electrical contacts disclosed in, for example, Liu 336, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231 could have been added to Galloway 239 and Han 344 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining, for example, Galloway 239 and Han 344 with Liu 336, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231 is a predictable use of electronic vaporizer

components according to their established functions. Accordingly, it would have been routine for a POSA to combine Galloway 239 and Han 344 with Liu 336, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231.

Window on or proximate to the shell permitting viewing of the cartomizer

To the extent Complainants contend that any of the prior art referenced identified above do not expressly or inherently disclose a window on or proximate to the shell permitting viewing of the cartomizer, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to include a window on or proximate to the shell permitting viewing of the cartomizer in an electronic vaporizer device. A POSA would have been motivated to include a window on or proximate to the shell permitting viewing of the cartomizer, such as those disclosed in Liu 336, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to include a window on or proximate to the shell permitting viewing of the cartomizer because of the numerous benefits this configuration provides. A POSA would have known that having a shell with a transparent portion advantageously allows adult consumers to easily see the level of e-liquid remaining in the cartridge, thereby letting the

adult consumer more easily know when it is time to refill or replace the cartridge. A transparent portion of the shell can also add a unique aesthetic design to the device. This design also can improve safety, by allowing the adult consumer to visually inspect the cartridge for any issues that may affect the operation of the device.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239, Han 344, Liu 502, Liu 783, Pan 622, Paterno 534, Thorens 231, with the window on or proximate to the shell permitting viewing of the cartomizer taught by Liu 336 and Young 251. A POSA would have known that the window on or proximate to the shell permitting viewing of the cartomizer disclosed in, for example, Liu 336 and Young 251 could have been added to Galloway 239, Han 344, Liu 502, Liu 783, Pan 622, Paterno 534, Thorens 231 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Galloway 239, Han 344, Liu 502, Liu 783, Pan 622, Paterno 534, Thorens 231 with, for example, Liu 336 and Young 251 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Galloway 239, Han 344, Liu 502, Liu 783, Pan 622, Paterno 534, Thorens 231 with Liu 336 and Young 251.

II. Invalidity of U.S. Patent No. 11,134,722 Under 35 U.S.C. § 112

A. Lack of Written Description

All asserted claims of the ’722 Patent are also invalid for failure to meet the written description requirement of 35 U.S.C. § 112. To satisfy the written description requirement, the specification must reasonably convey to those skilled in the art that the inventor had possession of the claimed subject matter. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). To demonstrate possession, the inventor must provide enough description in the

specification to demonstrate that s/he actually invented what has been claimed. *Centocor Ortho Biotech, Inc. v. Abbott Labs.*, 636 F.3d 1341, 1348 (Fed. Cir. 2011). Doing so "serves the fundamental patent purpose of making known what has been invented, including any variations and alternatives contemplated by the inventor." *Space Sys./Loral, Inc. v. Lockheed Martin Corp.*, 405 F.3d 985, 987 (Fed. Cir. 2005). Moreover, "[a]dequate description of the invention guards against the inventor's overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation." *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1561, 19 U.S.P.Q.2d 1111 (Fed. Cir. 1991). "While the written description requirement does not require that the specification recite the claimed invention in any particular way, pointing to an 'amalgam of disclosures' from which an artisan could have created the claimed invention does not satisfy this requirement." *Flash-Control, LLC v. Intel Corp.*, No. 2020-2141, 2021 WL 2944592, at *3 (Fed. Cir. July 14, 2021) (citing *Novozymes A/S v. DuPont Nutrition Biosciences APS*, 723 F.3d 1336, 1349 (Fed. Cir. 2013)). Instead, determining whether a claim has adequate written description support requires analyzing "each claim … as an integrated whole rather than as a collection of independent limitations." *Novozymes*, 723 F.3d at 1349.

To the extent Complainants contend that "wicking element" in each of the asserted claims encompasses a porous ceramic block, the asserted claims are invalid for lack of written description support. The '722 Patent only describes a wick that comprises long bundle, twist or braid of fibers. *See* '722 Patent at 8:47-58, Figs. 1, 4, 12, and 15. A POSA reviewing these disclosures would not have understood that the inventors were in possession of an electronic cigarette that used a porous ceramic block.

To the extent Complainants contend that "mouthpiece" in asserted claim 7 encompasses a "mouthpiece" for a cartridge that is not separate from the cartomizer "body" for holding the

vaporizable liquid, claim 7 is invalid for lack of written description support. The '722 Patent consistently and only describes cartridges that have a mouthpiece that is a distinct component from the cartridge body. *See, e.g.*, '722 Patent at 8:43-56 ("a mouthpiece 220 provided on body 208"). Indeed, the '722 Patent's mouthpiece is intended to be separate in order to fill the cartomizer body with liquid. *Id.* at 9:7-12. A mouthpiece separate and distinct from the cartomizer body is key to the '722 Patent's cartridge design. A POSA reviewing these disclosures would not have understood that the inventors were in possession of an electronic cigarette cartridge whereby the mouthpiece is not separate and distinct from the cartomizer body.

Asserted claims 14 and 17 are additionally invalid, because there is no written description support for "a window on or proximate to the shell." Rather, the specification only teaches a window ***on*** the shell, not proximate to it. *See, e.g.*, '722 Patent at 8:10-19, Figs. 1, 4-7. Indeed, '722 Patent explains that the window allows one to see through the exterior shell to view the cartomizer—*i.e.*, "to permit a user of electronic cigarette 10 to view the cartomizer 200 when it is inserted into cartomizer chamber 108." *Id.* at 8:14-19. A POSA reviewing these disclosures would not have understood that the inventors were in possession of an electronic cigarette having a window that was proximate to the shell.

B. Indefiniteness

All asserted claims of the '722 Patent are also invalid because they are not sufficiently definite as required under 35 U.S.C. § 112. To be valid, a "patent's claims, viewed in light of the specification and prosecution history, [must] inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014). A "patent must be precise enough to afford clear notice of what is claimed, thereby appris[ing] the public of what is still open to them." *Id.* at 909 (internal quotations and citaitons omitted). Otherwise there would be "[a] zone of uncertainty which enterprise and experimentation

may enter only at the risk of infringement claims." *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236 (1942).

In order for a means-plus-function limitation to satisfy this definiteness requirement, "the corresponding structure(s) of a means-plus-function limitation must be disclosed in the written description in such a manner that one skilled in the art will know and understand what structure corresponds to the means limitation." *Amtel Corp. v. Information Storage Devices, Inc.*, 198 F.3d 1374, 1382 (Fed. Cir. 1999).

The asserted claims are invalid as being indefinite, because they each recite a means-plus-function limitation without disclosing the corresponding structure for that limitation. For example, each of the asserted claims recites "heating element," which should be construed according to 35 U.S.C. § 112(f). A POSA would not have been understood the term "heating element" to have a sufficiently definite meaning as the name for structure. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015). Rather, the term "heating element" recites a function (heating a vaporizable fluid) without reciting sufficient structure for performing function. *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000). The '722 Patent specification also does not recite any structure for heating a vaporizable fluid. *See* '722 Patent at 8:47-9:6. Therefore, the asserted claims, which each recite the "heating element," are invalid as indefinite.

Additionally, asserted claims 14 and 17 are indefinite. Each of these claims requires "a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the cartomizer chamber." A POSA would have not understood the scope of these claims with reasonable certainty, because it is not clear how window proximate to, but not on, the shall would "permit[] viewing of the cartomizer when the cartomizer is inserted into the cartomizer chamber." For the window to permit viewing the cartomizer when its inserted, the

window would have to be on the shell, yet the claims also purportedly encompass a window that is not on the shell, but proximate to it. Therefore, asserted claims 14 and 17 are invalid as indefinite.

EXHIBIT D-1

EXHIBIT D-1

Invalidity Claim Chart of U.S. Pat. No. 11,229,239 ("Galloway 239") against U.S. Patent No. 11,134,722

Galloway 239, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 3, 5, 7-9, 10, 11-14, 15, and 16-21 of U.S. Patent No. 11,134,722. Galloway 239 was filed on July 19, 2013, and published on January 22, 2015. Galloway 239 qualifies as prior art to the '722 Patent under at least AIA 35 U.S.C. § 102(a)(2).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Galloway 239. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'722 Claim Limitations	Galloway 239
[1.A] A vaporizer comprising:	To the extent the preamble is limiting, Galloway 239 discloses and/or renders obvious an vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 4:4-7; 4:15-23; 8:27-30; Figs. 1-2.
[1.B] a battery portion comprising a battery housing segment and a cartomizer receiving segment	Galloway 239 discloses and/or renders obvious a battery portion comprising a battery housing segment and a cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 4:66-5:6; 6:26-32; 6:41-44; 10:14-19; Figs. 1-2.
[1.C] the cartomizer receiving segment defining a chamber having an insertion end distal from the	Galloway 239 discloses and/or renders obvious a cartomizer receiving segment defining a chamber having an insertion end distal from the battery housing segment and a base end proximate to the battery housing segment.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '722 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

'722 Claim Limitations	Galloway 239
battery housing segment and a base end proximate to the battery housing segment,	For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 4:66-5:6; 6:26-32; 6:41-44; 10:14-19; Figs. 1-2.
[1.D] the battery portion further comprising a plurality of charger electrical contacts to provide electrical charge to a battery housed in the battery housing segment, the charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the chamber of the cartomizer receiving segment,	Galloway 239 discloses and/or renders obvious the battery portion further comprising a plurality of charger electrical contacts to provide electrical charge to a battery housed in the battery housing segment, the charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the chamber of the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 4:66-5:6; 6:26-36; 6:41-45.
[1.E] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	Galloway 239 discloses and/or renders obvious wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 4:51-53; 4:66-5:6; 6:41-45; Figs. 1-2.
[1.F] a cartomizer insertable into the chamber at the insertion end, the cartomizer comprising:	Galloway 239 discloses and/or renders obvious wherein a cartomizer insertable into the chamber at the insertion end. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 3:6-8; 6:65-7:3; 7:9-15; 6:16-23; Figs. 1-2.
[1.G] a body including a structure configured to hold a vaporizable liquid;	Galloway 239 discloses and/or renders obvious wherein a body including a structure configured to hold a vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 5:16-33; 7:9-12; 7:51-53; 7:58-59; Figs. 1-2.
[1.H] a wicking element provided within the body and at least partially in contact with the vaporizable liquid; and	Galloway 239 discloses and/or renders obvious a wicking element provided within the body and at least partially in contact with the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures:

'722 Claim Limitations	Galloway 239
	Galloway 239 at 3:8-12; 7:9-12; 7:56-64; 12:33-37; Figs. 1-2.
[1.I] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	Galloway 239 discloses and/or renders obvious a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 3:4-6; 5:17-26; 7:9-12; 7:64-66; Figs 1-2.
[1.J] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	Galloway 239 discloses and/or renders obvious wherein the wicking element is configured to deliver the vaporizable liquid to the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 3:8-12; 7:9-12; 7:64-66;12:33-37; Figs. 1-2.
[1.K] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element.	
[3] The vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber.	Galloway 239 discloses and/or renders obvious wherein the wicking element is configured to deliver the vaporizable liquid to the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 6:20-23; 6:54-60; Figs. 1-2.
[5] The vaporizer of claim 1, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	Galloway 239 discloses and/or renders obvious the vaporizer of claim 1, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 6:26-36; 6:41-45.
[7] The vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece	Galloway 239 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber.

'722 Claim Limitations	Galloway 239
opposite an end of the cartomizer configured for insertion into the chamber.	For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 6:65-7:3; 8:8:30-33; 9:10-17; Figs. 1-2.
[8] The vaporizer of claim 1, wherein at least a portion of the shell is formed of a translucent material.	
[9] The vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element.	Galloway 239 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 6:1-5; 7:12-15; 7:34-41; Fig. 1.
[10.A] A vaporizer comprising:	*See* [1.A].
[10.B] a battery portion comprising:	*See* [1.B].
[10.C] a battery housing segment;	*See* [1.B].
[10.D] a cartomizer receiving segment defining a cartomizer chamber having an insertion end distal from the battery housing segment,	*See* [1.C].
[10.E] the cartomizer chamber further having a base end proximate to the battery housing segment,	Galloway 239 discloses and/or renders obvious a cartomizer chamber further having a base end proximate to the battery housing segment. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 4:66-5:6; 6:26-32; 6:41-44; 10:14-19; Figs. 1-2.
[10.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment;	*See* [1.E].
[10.G] a plurality of charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the cartomizer chamber, the insertion end of the cartomizer	*See* [1.D]

'722 Claim Limitations	Galloway 239
chamber being at a second end of the battery portion; and	
[10.H] at least one magnet of the battery portion, the at least one magnet of the battery portion in or proximate to the cartomizer chamber; and	Galloway 239 discloses and/or renders obvious at least one magnet of the battery portion, the at least one magnet of the battery portion in or proximate to the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 6:20-23; Fig. 2.
[10.I] a cartomizer insertable into the cartomizer chamber at the insertion end, the cartomizer comprising:	Galloway 239 discloses and/or renders obvious a cartomizer insertable into the cartomizer chamber at the insertion end. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 4:66-5:6; 6:26-32; 6:41-44; 10:14-19; Figs. 1-2.
[10.J] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[10.K] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].
[10.L] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[10.M] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[10.N] wherein the entire heating element is disposed between the insertion end of the cartomizer chamber and the base end of the cartomizer chamber when the cartomizer is inserted into the cartomizer chamber such that the outer shell protects the heating element; and	

’722 Claim Limitations	Galloway 239
[10.O] a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	Galloway 239 discloses and/or renders obvious at least one magnet of the battery portion, the at least one magnet of the battery portion in or proximate to the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 6:20-23; Fig. 2.
[11] The vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment.	Galloway 239 discloses and/or renders obvious the vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 6:54-60; 7:13-15; 7:34-41; 12:45-49; Fig. 2.
[12] The vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber.	Galloway 239 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 6:54-60; 7:13-15; 7:34-41; 12:45-49; Fig. 2.
[13] The vaporizer of claim 10, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	*See* [5].
[14] The vaporizer of claim 10, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the cartomizer chamber.	
[15.A] A vaporizer comprising:	*See* [1.A].
[15.B] a battery portion comprising:	*See* [1.B].
[15.C] a plurality of charger electrical contacts disposed at a first end of the battery portion;	*See* [1.D].

’722 Claim Limitations	Galloway 239
[15.D] a battery housing segment for housing a battery between the first end of the battery portion and a second end of the battery portion;	*See* [1.B], [1.C].
[15.E] a cartomizer receiving segment defining a chamber having an insertion end at the second end of the battery portion and distal from the battery housing segment, the chamber further having a base end proximate to the battery housing segment,	*See* [1.B], [1.C].
[15.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	*See* [1.E].
[15.G] one or more battery electrical contacts in or proximate the chamber of the cartomizer receiving segment; and	*See* [11].
[15.H] a cartomizer insertable into the insertion end of the chamber, the cartomizer comprising:	*See* [1.F].
[15.I] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[15.J] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].
[15.K] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[15.L] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[15.M] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element; and	

’722 Claim Limitations	Galloway 239
[15.N] one or more cartomizer electrical contacts for connecting with the one or more battery electrical contacts in or proximate the chamber.	*See* [12].
[16] The vaporizer of claim 15, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	*See* [5].
[17] The vaporizer of claim 15, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the chamber.	
[18] The vaporizer of claim 1, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	*See* [10.H].
[19] The vaporizer of claim 18, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	*See* [10.O].
[20] The vaporizer of claim 15, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	*See* [10.H].
[21] The vaporizer of claim 20, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	*See* [10.O].

EXHIBIT D-2

EXHIBIT D-2

Invalidity Claim Chart of U.S. Patent 8,156,944 ("Han 944") against U.S. Patent No. 11,134,722

Han 944, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 3, 5, 7-9, 10, 11-14, 15, and 16-21 of U.S. Patent No. 11,134,722. Han 944 was filed on May 15, 2007, and published on April 16, 2009. Han 944 qualifies as prior art to the '722 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Han 944. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'173 Claim Limitations	Han 944
[1.A] A vaporizer comprising:	To the extent the preamble is limiting, Han 944 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:55-60; 2:33-34; 2:60-67; Figs. 5-6.
[1.B] a battery portion comprising a battery housing segment and a cartomizer receiving segment	Han 944 discloses and/or renders obvious a battery portion comprising a battery housing segment and a cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:61-2:3; 2:5-9; 2:18-19; 5:45-46; 6:49-55; Figs. 1-2.
[1.C] the cartomizer receiving segment defining a chamber having an insertion end distal from the battery	Han 944 discloses and/or renders obvious the cartomizer receiving segment defining a chamber having an insertion end distal from the battery housing segment and a base end proximate to the battery housing segment.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '722 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’173 Claim Limitations	Han 944
housing segment and a base end proximate to the battery housing segment,	For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:65-2:3; 5:45-46; 6:49-55; Figs. 1-2.
[1.D] the battery portion further comprising a plurality of charger electrical contacts to provide electrical charge to a battery housed in the battery housing segment, the charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the chamber of the cartomizer receiving segment,	Han 944 discloses and/or renders obvious the battery portion further comprising a plurality of charger electrical contacts to provide electrical charge to a battery housed in the battery housing segment, the charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the chamber of the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 2:1-13; 2:18-19; 3:66-4:1; 5:58-59; Figs. 1-2.
[1.E] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	Han 944 discloses and/or renders obvious wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:61-64; 2:14-17; 3:13-20; 5:38-46; Figs. 1-2.
[1.F] a cartomizer insertable into the chamber at the insertion end,	Han 944 discloses and/or renders obvious wherein a cartomizer insertable into the chamber at the insertion end. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:67-2:1; 2:42-43; 3:13-20; 5:38-46; Figs. 1-2.
[1.G] the cartomizer comprising: a body including a structure configured to hold a vaporizable liquid;	Han 944 discloses and/or renders obvious the cartomizer comprising: a body including a structure configured to hold a vaporizable liquid: For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 3:13-15; 3:51-55; 6:58-61; Figs. 3-4.
[1.H] a wicking element provided within the body and at least partially in contact with the vaporizable liquid; and	Han 944 discloses and/or renders obvious a wicking element provided within the body and at least partially in contact with the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures:

’173 Claim Limitations	Han 944
	Han 944 at 2:33-34; 2:46-48; 3:1-3; 6:30-34; 7:25-29; 7:43-47; Figs. 5, 7, 14.
[1.I] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	Han 944 discloses and/or renders obvious a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 2:33-34; 2:35-37; 2:44-46; 2:60-67; 3:4-6; 8:50-54; Figs. 6-8, 13, 16-18.
[1.J] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	Han 944 discloses and/or renders obvious wherein the wicking element is configured to deliver the vaporizable liquid to the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 2:60-67; 3:4-6; 7:16-29; 8:50-54; Figs. 6-8, 13, 16-18.
[1.K] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element.	Han 944 discloses and/or renders obvious wherein the wicking element is configured to deliver the vaporizable liquid to the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 3:57-59; 5:38-43; 6:49-53; Figs. 1-2.
[3] The vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber.	Han 944 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 2:1-3; 5:45-46; Figs. 1-2.
[5] The vaporizer of claim 1, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	Han 944 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 3:66-4:1; Figs. 1-2.

’173 Claim Limitations	Han 944
[7] The vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber.	Han 944 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 6:66-7:2; 8:26-29; Figs. 1-2, 4.
[8] The vaporizer of claim 1, wherein at least a portion of the shell is formed of a translucent material.	Han 944 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 6:2-3; 7:15-22; Figs. 1-2.
[9] The vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element.	Han 944 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 5:47-52; 6:3-7; 7:18-22.
[10.A] A vaporizer comprising:	*See* [1.A].
[10.B] a battery portion comprising:	*See* [1.B].
[10.C] a battery housing segment;	*See* [1.B].
[10.D] a cartomizer receiving segment defining a cartomizer chamber having an insertion end distal from the battery housing segment,	*See* [1.C].
[10.E] the cartomizer chamber further having a base end proximate to the battery housing segment,	*See* [1.C].
[10.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment;	*See* [1.E].
[10.G] a plurality of charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the cartomizer chamber, the insertion end of the	*See* [1.D].

’173 Claim Limitations	Han 944
cartomizer chamber being at a second end of the battery portion; and	
[10.H] at least one magnet of the battery portion, the at least one magnet of the battery portion in or proximate to the cartomizer chamber; and	
[10.I] a cartomizer insertable into the cartomizer chamber at the insertion end,	*See* [1.F]
[10.J] the cartomizer comprising: a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[10.K] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].
[10.L] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[10.M] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[10.N] wherein the entire heating element is disposed between the insertion end of the cartomizer chamber and the base end of the cartomizer chamber when the cartomizer is inserted into the cartomizer chamber such that the outer shell protects the heating element; and	*See* [1.K].
[10.O] a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	
[11] The vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment.	
[12] The vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery	

’173 Claim Limitations	Han 944
electrical contacts in or proximate the cartomizer chamber.	
[13] The vaporizer of claim 10, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	*See* [5].
[14] The vaporizer of claim 10, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the cartomizer chamber.	
[15.A] A vaporizer comprising:	*See* [1.A].
[15.B] a battery portion comprising:	*See* [1.B].
[15.C] a plurality of charger electrical contacts disposed at a first end of the battery portion;	*See* [1.D].
[15.D] a battery housing segment for housing a battery between the first end of the battery portion and a second end of the battery portion;	*See* [1.B].
[15.E] a cartomizer receiving segment defining a chamber having an insertion end at the second end of the battery portion and distal from the battery housing segment, the chamber further having a base end proximate to the battery housing segment,	*See* [1.B], [1.C].
[15.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	*See* [1.E].
[15.G] one or more battery electrical contacts in or proximate the chamber of the cartomizer receiving segment; and	
[15.H] a cartomizer insertable into the insertion end of the chamber,	*See* [1.F].
[15.I] the cartomizer comprising: a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].

’173 Claim Limitations	Han 944
[15.J] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].
[15.K] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[15.L] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[15.M] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element; and	*See* [1.K].
[15.N] one or more cartomizer electrical contacts for connecting with the one or more battery electrical contacts in or proximate the chamber.	
[16] The vaporizer of claim 15, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	*See* [5].
[17] The vaporizer of claim 15, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the chamber.	
[18] The vaporizer of claim 1, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	
[19] The vaporizer of claim 18, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	
[20] The vaporizer of claim 15, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	

'173 Claim Limitations	Han 944
[21] The vaporizer of claim 20, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	

EXHIBIT D-3

EXHIBIT D-3

Invalidity Claim Chart of U.S. Pat. No. 9,427,022 ("Levin 022") against U.S. Patent No. 11,134,722

Levin 022, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 3, 5, 7-9, 10, 11-14, 15, and 16-21 of U.S. Patent No. 11,134,722. Levin 022 was filed on March 12, 2013, and published on November 14, 2013. Levin 022 qualifies as prior art to the '722 Patent under at least AIA 35 U.S.C. § 102(a)(2).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Levin 022. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'173 Claim Limitations	Levin 022
[1.A] A vaporizer comprising:	To the extent the preamble is limiting, Levin 022 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 1:14-17; 2:31-33; 2:34-50; Fig. 1-2.
[1.B] a battery portion comprising a battery housing segment and a cartomizer receiving segment	Levin 022 discloses and/or renders obvious a battery portion comprising a battery housing segment and a cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 8:35-39; 10:31-34; 22:5-23; 24:23-25; Fig. 1.
[1.C] the cartomizer receiving segment defining a chamber having an insertion end distal from the battery	

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '722 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’173 Claim Limitations	Levin 022
housing segment and a base end proximate to the battery housing segment,	
[1.D] the battery portion further comprising a plurality of charger electrical contacts to provide electrical charge to a battery housed in the battery housing segment, the charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the chamber of the cartomizer receiving segment,	Levin 022 discloses and/or renders obvious the battery portion further comprising a plurality of charger electrical contacts to provide electrical charge to a battery housed in the battery housing segment, the charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the chamber of the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 5:44-53; 10:34-35; 13:39-44; 23:58-62; Fig 14.
[1.E] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	Levin 022 discloses and/or renders obvious wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 10:31-38; 11:4-14; Figs. 1-3.
[1.F] a cartomizer insertable into the chamber at the insertion end, the cartomizer comprising:	Levin 022 discloses and/or renders obvious a cartomizer insertable into the chamber at the insertion end. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 19:39-41; 21:10-20; 22:7-9; Figs. 1-3.
[1.G] a body including a structure configured to hold a vaporizable liquid;	Levin 022 discloses and/or renders obvious a body including a structure configured to hold a vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 4:6-17; 21:20-29; 23:3-10; Figs. 2, 11.
[1.H] a wicking element provided within the body and at least partially in contact with the vaporizable liquid; and	
[1.I] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	Levin 022 discloses and/or renders obvious a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid.

’173 Claim Limitations	Levin 022
	For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 2:42-50; 14:49-64; 15:21-37; 23:22-26; Fig. 3.
[1.J] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	
[1.K] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element.	
[3] The vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber.	Levin 022 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 22:17-19; 24:52-59; Fig 3.
[5] The vaporizer of claim 1, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	Levin 022 discloses and/or renders obvious the vaporizer of claim 1, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 5:44-53; 10:34-35; 13:39-44; 23:58-62; Fig 14.
[7] The vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber.	Levin 022 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 19:39-41; 21:10-20; 22:7-9; Figs. 1-3, 13.
[8] The vaporizer of claim 1, wherein at least a portion of the shell is formed of a translucent material.	Levin 022 discloses and/or renders obvious the vaporizer of claim 1, wherein at least a portion of the shell is formed of a translucent material..

’173 Claim Limitations	Levin 022
	For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 13:30-35; 22:7-14; 23:51-53; Figs 2, 14.
[9] The vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element.	
[10.A] A vaporizer comprising:	*See* [1.A].
[10.B] a battery portion comprising:	*See* [1.B].
[10.C] a battery housing segment;	*See* [1.B].
[10.D] a cartomizer receiving segment defining a cartomizer chamber having an insertion end distal from the battery housing segment,	
[10.E] the cartomizer chamber further having a base end proximate to the battery housing segment,	
[10.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment;	*See* [1.E].
[10.G] a plurality of charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the cartomizer chamber, the insertion end of the cartomizer chamber being at a second end of the battery portion; and	*See* [1.D]
[10.H] at least one magnet of the battery portion, the at least one magnet of the battery portion in or proximate to the cartomizer chamber; and	Levin 022 discloses and/or renders obvious at least one magnet of the battery portion, the at least one magnet of the battery portion in or proximate to the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 3:64-4:2; 19:63-67; 20:48-51; 25:16-22; Figs 3, 9.
[10.I] a cartomizer insertable into the cartomizer chamber at the insertion end, the cartomizer comprising:	*See* [1.F].

’173 Claim Limitations	Levin 022
[10.J] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[10.K] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	
[10.L] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[10.M] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	
[10.N] wherein the entire heating element is disposed between the insertion end of the cartomizer chamber and the base end of the cartomizer chamber when the cartomizer is inserted into the cartomizer chamber such that the outer shell protects the heating element; and	
[10.O] a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	Levin 022 discloses and/or renders obvious a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 3:64-4:2; 19:63-67; 20:48-51; 25:16-22; Figs 3, 9.
[11] The vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment.	
[12] The vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber.	

’173 Claim Limitations	Levin 022
[13] The vaporizer of claim 10, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	*See* [5].
[14] The vaporizer of claim 10, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the cartomizer chamber.	
[15.A] A vaporizer comprising:	*See* [1.A].
[15.B] a battery portion comprising:	*See* [1.B].
[15.C] a plurality of charger electrical contacts disposed at a first end of the battery portion;	*See* [1.D].
[15.D] a battery housing segment for housing a battery between the first end of the battery portion and a second end of the battery portion;	*See* [1.B], [1.C].
[15.E] a cartomizer receiving segment defining a chamber having an insertion end at the second end of the battery portion and distal from the battery housing segment, the chamber further having a base end proximate to the battery housing segment,	*See* [1.B], [1.C].
[15.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	*See* [1.E].
[15.G] one or more battery electrical contacts in or proximate the chamber of the cartomizer receiving segment; and	
[15.H] a cartomizer insertable into the insertion end of the chamber, the cartomizer comprising:	*See* [1.F].
[15.I] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[15.J] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	

’173 Claim Limitations	Levin 022
[15.K] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[15.L] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	
[15.M] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element; and	
[15.N] one or more cartomizer electrical contacts for connecting with the one or more battery electrical contacts in or proximate the chamber.	
[16] The vaporizer of claim 15, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	*See* [5].
[17] The vaporizer of claim 15, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the chamber.	
[18] The vaporizer of claim 1, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	*See* [10.H].
[19] The vaporizer of claim 18, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	*See* [10.O].
[20] The vaporizer of claim 15, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	*See* [10.H].

’173 Claim Limitations	Levin 022
[21] The vaporizer of claim 20, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	*See* [10.O].

EXHIBIT D-4

EXHIBIT D-4

Invalidity Claim Chart of U.S. 9,155,336 ("Liu 336") against U.S. Patent No. 11,134,722

Liu 336, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 3, 5, 7-9, 10, 11-14, 15, and 16-21 of U.S. Patent No. 11,134,722. Liu 336 was filed on June 16, 2012, and published on December 19, 2013. Liu 336 qualifies as prior art to the '772 Patent under at least AIA 35 U.S.C. § 102(a)(2).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Liu 336. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'722 Claim Limitations	Liu 336
[1.A] A vaporizer comprising:	To the extent the preamble is limiting, Liu 336 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 1:42-45; 2:58-61; 4:64-66; 16:24-25; Figs. 1-2.
[1.B] a battery portion comprising a battery housing segment and a cartomizer receiving segment	Liu 336 discloses and/or renders obvious a battery portion comprising a battery housing segment and a cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 4:52-57; 4:63-5:1; 8:16-21; 8:33-37; Fig. 8.
[1.C] the cartomizer receiving segment defining a chamber having an insertion end distal from the battery	Liu 336 discloses and/or renders obvious the cartomizer receiving segment defining a chamber having an insertion end distal from the battery housing segment and a base end proximate to the battery housing segment.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '722 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

'722 Claim Limitations	Liu 336
housing segment and a base end proximate to the battery housing segment,	For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 8:16-21; 8:21-23; 8:37-40; Fig. 8.
[1.D] the battery portion further comprising a plurality of charger electrical contacts to provide electrical charge to a battery housed in the battery housing segment, the charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the chamber of the cartomizer receiving segment,	Liu 336 discloses and/or renders obvious the battery portion further comprising a plurality of charger electrical contacts to provide electrical charge to a battery housed in the battery housing segment, the charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the chamber of the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 11:5-6; 11:15-17; 11:27-31; 12:29-34.
[1.E] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	Liu 336 discloses and/or renders obvious wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 8:16-21; 8:23-25; 8:59-61; Fig. 8.
[1.F] a cartomizer insertable into the chamber at the insertion end, the cartomizer comprising:	Liu 336 discloses and/or renders obvious a cartomizer. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 2:3-6; 4:52-54; Fig. 3.
[1.G] a body including a structure configured to hold a vaporizable liquid;	Liu 336 discloses and/or renders obvious a body including a structure configured to hold a vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 2:32-40; 2:53-57; 4:63-66; Fig. 3.
[1.H] a wicking element provided within the body and at least partially in contact with the vaporizable liquid; and	Liu 336 discloses and/or renders obvious a wicking element provided within the body and at least partially in contact with the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures:

’722 Claim Limitations	Liu 336
	Liu 336 at 2:58-61; 3:5-9; 6:7-9; 6:14-15; Fig. 3.
[1.I] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	Liu 336 discloses and/or renders obvious a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 2:58-61; 3:5-9; 4:64-66; 6:7-9; Fig. 3.
[1.J] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	Liu 336 discloses and/or renders obvious wherein the wicking element is configured to deliver the vaporizable liquid to the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 2:58-61; 3:5-9; 6:7-9; Fig. 3.
[1.K] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element.	
[3] The vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber.	Liu 336 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 3:18-27; 4:55-57; 5:56-58; Fig. 2.
[5] The vaporizer of claim 1, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	Liu 336 discloses and/or renders obvious the vaporizer of claim 1, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 11:5-6; 11:31-32.

’722 Claim Limitations	Liu 336
[7] The vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber.	Liu 336 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 3:52-54; 4:63-5:1; 5:5:1-3; 8:4-15; Figs. 3, 7.
[8] The vaporizer of claim 1, wherein at least a portion of the shell is formed of a translucent material.	Liu 336 discloses and/or renders obvious the vaporizer of claim 1, wherein at least a portion of the shell is formed of a translucent material. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 1:66-2:2; 5:15-21; 7:57-58.
[9] The vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element.	Liu 336 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 5:24-26; 5:36-39; 7:40-52; Fig. 3.
[10.A] A vaporizer comprising:	*See* [1.A].
[10.B] a battery portion comprising:	*See* [1.B].
[10.C] a battery housing segment;	*See* [1.B].
[10.D] a cartomizer receiving segment defining a cartomizer chamber having an insertion end distal from the battery housing segment,	*See* [1.C].
[10.E] the cartomizer chamber further having a base end proximate to the battery housing segment,	*See* [1.C].
[10.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment;	*See* [1.E].
[10.G] a plurality of charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the cartomizer chamber, the insertion end of the	*See* [1.D]

'722 Claim Limitations	Liu 336
cartomizer chamber being at a second end of the battery portion; and	
[10.H] at least one magnet of the battery portion, the at least one magnet of the battery portion in or proximate to the cartomizer chamber; and	
[10.I] a cartomizer insertable into the cartomizer chamber at the insertion end, the cartomizer comprising:	*See* [1.F]
[10.J] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[10.K] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].
[10.L] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[10.M] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[10.N] wherein the entire heating element is disposed between the insertion end of the cartomizer chamber and the base end of the cartomizer chamber when the cartomizer is inserted into the cartomizer chamber such that the outer shell protects the heating element; and	
[10.O] a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	
[11] The vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment.	Liu 336 discloses and/or renders obvious the vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 5:24-26; 5:36-39; 7:40-52; 8:16-21; Fig. 8.

'722 Claim Limitations	Liu 336
[12] The vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber.	Liu 336 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 5:24-30; 5:36-39; 5:65-6:2; Figs. 3, 5, 6.
[13] The vaporizer of claim 10, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	*See* [5].
[14] The vaporizer of claim 10, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the cartomizer chamber.	Liu 336 discloses and/or renders obvious the vaporizer of claim 10, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 5:15-21; 7:57-58.
[15.A] A vaporizer comprising:	*See* [1.A].
[15.B] a battery portion comprising:	*See* [1.B].
[15.C] a plurality of charger electrical contacts disposed at a first end of the battery portion;	*See* [1.D].
[15.D] a battery housing segment for housing a battery between the first end of the battery portion and a second end of the battery portion;	*See* [1.B], [1.C].
[15.E] a cartomizer receiving segment defining a chamber having an insertion end at the second end of the battery portion and distal from the battery housing segment, the chamber further having a base end proximate to the battery housing segment,	*See* [1.B], [1.C].
[15.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	*See* [1.E].

’722 Claim Limitations	Liu 336
[15.G] one or more battery electrical contacts in or proximate the chamber of the cartomizer receiving segment; and	*See* [11].
[15.H] a cartomizer insertable into the insertion end of the chamber, the cartomizer comprising:	*See* [1.F].
[15.I] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[15.J] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].
[15.K] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[15.L] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[15.M] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element; and	
[15.N] one or more cartomizer electrical contacts for connecting with the one or more battery electrical contacts in or proximate the chamber.	*See* [12].
[16] The vaporizer of claim 15, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	*See* [5].
[17] The vaporizer of claim 15, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the chamber.	*See* [14].
[18] The vaporizer of claim 1, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	

'722 Claim Limitations	Liu 336
[19] The vaporizer of claim 18, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	
[20] The vaporizer of claim 15, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	
[21] The vaporizer of claim 20, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	

EXHIBIT D-5

EXHIBIT D-5

Invalidity Claim Chart of U.S. Pat. Pub. 2014/0190502 ("Liu 502") against U.S. Patent No. 11,134,722

Liu 502, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 3, 5, 7-9, 10, 11-14, 15, and 16-21 of U.S. Patent No. 11,134,722. Liu 502 was filed on September 27, 2012, and published on July 10, 2014. Liu 502 qualifies as prior art to the '722 Patent under at least AIA 35 U.S.C. § 102(a)(2).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Liu 502. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'722 Claim Limitations	Liu 502
[1.A] A vaporizer comprising:	To the extent the preamble is limiting, Liu 502 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 [0003]; [0004]; [0033]; [0037]; Figs. 1-3.
[1.B] a battery portion comprising a battery housing segment and a cartomizer receiving segment,	Liu 502 discloses and/or renders obvious a battery portion comprising a battery housing segment and a cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0004]; [0013]; [0016]; [0028]; [0040]; Fig. 4.
[1.C] the cartomizer receiving segment defining a chamber having an insertion end distal from the battery	Liu 502 discloses and/or renders obvious the cartomizer receiving segment defining a chamber having an insertion end distal from the battery housing segment and a base end proximate to the battery housing segment.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '722 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’722 Claim Limitations	Liu 502
housing segment and a base end proximate to the battery housing segment,	For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0004]; [0028]; [0040]; [0041]; Fig. 4.
[1.D] the battery portion further comprising a plurality of charger electrical contacts to provide electrical charge to a battery housed in the battery housing segment, the charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the chamber of the cartomizer receiving segment,	
[1.E] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	Liu 502 discloses and/or renders obvious wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0004]; [0016]; [0040]; Fig. 4.
[1.F] a cartomizer insertable into the chamber at the insertion end, the cartomizer comprising:	Liu 502 discloses and/or renders obvious a cartomizer insertable into the chamber at the insertion end. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0014]; [0028]; [0047]; Figs. 1-3.
[1.G] a body including a structure configured to hold a vaporizable liquid;	Liu 502 discloses and/or renders obvious a body including a structure configured to hold a vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0016]; [0029]; [0033]; [0034]; [0036]; Fig. 3.
[1.H] a wicking element provided within the body and at least partially in contact with the vaporizable liquid; and	Liu 502 discloses and/or renders obvious a wicking element provided within the body and at least partially in contact with the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0033]; [0034]; [0037]; [0038]; Fig. 3.

’722 Claim Limitations	Liu 502
[1.I] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	Liu 502 discloses and/or renders obvious a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0032]; [0034]; [0037]; [0038]; Fig. 3.
[1.J] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	Liu 502 discloses and/or renders obvious wherein the wicking element is configured to deliver the vaporizable liquid to the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0033]; [0034]; [0037]; [0038]; Fig. 3.
[1.K] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element.	
[3] The vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber.	Liu 502 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0014]; [0028]; [0047]; Fig. 2.
[5] The vaporizer of claim 1, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[7] The vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber.	Liu 502 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0029]; [0034]; [0036]; Fig. 3.

’722 Claim Limitations	Liu 502
[8] The vaporizer of claim 1, wherein at least a portion of the shell is formed of a translucent material.	
[9] The vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element.	Liu 502 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0016]; [0030]; [0033]; Fig. 3.
[10.A] A vaporizer comprising:	*See* [1.A].
[10.B] a battery portion comprising:	*See* [1.B].
[10.C] a battery housing segment;	*See* [1.B].
[10.D] a cartomizer receiving segment defining a cartomizer chamber having an insertion end distal from the battery housing segment,	*See* [1.C].
[10.E] the cartomizer chamber further having a base end proximate to the battery housing segment,	*See* [1.C].
[10.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment;	*See* [1.E].
[10.G] a plurality of charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the cartomizer chamber, the insertion end of the cartomizer chamber being at a second end of the battery portion; and	
[10.H] at least one magnet of the battery portion, the at least one magnet of the battery portion in or proximate to the cartomizer chamber; and	Liu 502 discloses and/or renders obvious at least one magnet of the battery portion, the at least one magnet of the battery portion in or proximate to the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0004]; [0010]; [0041]; [0042]; [0046]; Fig. 4.

’722 Claim Limitations	Liu 502
[10.I] a cartomizer insertable into the cartomizer chamber at the insertion end, the cartomizer comprising:	*See* [1.F].
[10.J] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[10.K] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].
[10.L] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[10.M] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[10.N] wherein the entire heating element is disposed between the insertion end of the cartomizer chamber and the base end of the cartomizer chamber when the cartomizer is inserted into the cartomizer chamber such that the outer shell protects the heating element; and	
[10.O] a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	Liu 502 discloses and/or renders obvious a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0003]; [0004]; [0031]; [0046]; Fig. 3.
[11] The vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment.	Liu 502 discloses and/or renders obvious the vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0016]; [0033]; [0043]; [0044]; Figs. 2, 4-6.
[12] The vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical	Liu 502 discloses and/or renders obvious the vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment.

’722 Claim Limitations	Liu 502
contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber.	For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0004]; [0016]; [0030]; [0031]; Figs. 2-3.
[13] The vaporizer of claim 10, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[14] The vaporizer of claim 10, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the cartomizer chamber.	
[15.A] A vaporizer comprising:	*See* [1.A].
[15.B] a battery portion comprising:	*See* [1.B].
[15.C] a plurality of charger electrical contacts disposed at a first end of the battery portion;	*See* [1.D].
[15.D] a battery housing segment for housing a battery between the first end of the battery portion and a second end of the battery portion;	*See* [1.B], [1.C].
[15.E] a cartomizer receiving segment defining a chamber having an insertion end at the second end of the battery portion and distal from the battery housing segment, the chamber further having a base end proximate to the battery housing segment,	*See* [1.B], [1.C].
[15.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	*See* [1.E].
[15.G] one or more battery electrical contacts in or proximate the chamber of the cartomizer receiving segment; and	*See* [11].
[15.H] a cartomizer insertable into the insertion end of the chamber, the cartomizer comprising:	*See* [1.F].

’722 Claim Limitations	Liu 502
[15.I] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[15.J] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].
[15.K] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[15.L] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[15.M] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element; and	
[15.N] one or more cartomizer electrical contacts for connecting with the one or more battery electrical contacts in or proximate the chamber.	*See* [12].
[16] The vaporizer of claim 15, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[17] The vaporizer of claim 15, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the chamber.	
[18] The vaporizer of claim 1, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	*See* [10.H].
[19] The vaporizer of claim 18, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	*See* [10.O].

’722 Claim Limitations	Liu 502
[20] The vaporizer of claim 15, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	*See* [10.H].
[21] The vaporizer of claim 20, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	*See* [10.O].

EXHIBIT D-6

EXHIBIT D-6

Invalidity Claim Chart of U.S. 2014/0150783 ("Liu 783") against U.S. Patent No. 11,134,722

Liu 783, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 3, 5, 7-9, 10, 11-14, 15, and 16-21 of U.S. Patent No. 11,134,722. Liu 783 was filed on December 5, 2012, and published on June 5, 2014. Liu 783 qualifies as prior art to the '722 Patent under at least AIA 35 U.S.C. § 102(a)(2).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Liu 783. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'722 Claim Limitations	Liu 783
[1.A] A vaporizer comprising:	To the extent the preamble is limiting, Liu 783 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0003]; [0004]; [0035]; Figs. 1-5.
[1.B] a battery portion comprising a battery housing segment and a cartomizer receiving segment	Liu 783 discloses and/or renders obvious and/or renders obvious a battery portion comprising a battery housing segment and a cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0004]; [0014]; [0030]; [0043]; Figs. 3, 7-8.
[1.C] the cartomizer receiving segment defining a chamber having an insertion end distal from the battery	Liu 783 discloses and/or renders obvious the cartomizer receiving segment defining a chamber having an insertion end distal from the battery housing segment and a base end proximate to the battery housing segment.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '722 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

'722 Claim Limitations	Liu 783
housing segment and a base end proximate to the battery housing segment,	For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0004]; [0014]; [0030]; [0031]; Figs. 3, 7.
[1.D] the battery portion further comprising a plurality of charger electrical contacts to provide electrical charge to a battery housed in the battery housing segment, the charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the chamber of the cartomizer receiving segment,	
[1.E] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	Liu 783 discloses and/or renders obvious wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0009]; [0036]; [0037]; [0043]; Figs. 3, 7-8.
[1.F] a cartomizer insertable into the chamber at the insertion end, the cartomizer comprising:	Liu 783 discloses and/or renders obvious a cartomizer insertable into the chamber at the insertion end. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0004]; [0014]; [0030]; [0031]; Figs. 1-3, 5-6.
[1.G] a body including a structure configured to hold a vaporizable liquid;	Liu 783 discloses and/or renders obvious a body including a structure configured to hold a vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0012]; [0016]; [0017]; [0035]; Figs. 5-6.
[1.H] a wicking element provided within the body and at least partially in contact with the vaporizable liquid; and	Liu 783 discloses and/or renders obvious a wicking element provided within the body and at least partially in contact with the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0015]; [0034]; [0035]; Figs. 5-6.

’722 Claim Limitations	Liu 783
[1.I] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	Liu 783 discloses and/or renders obvious a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0015]; [0034]; [0035]; Figs. 5-6.
[1.J] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	Liu 783 discloses and/or renders obvious wherein the wicking element is configured to deliver the vaporizable liquid to the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0015]; [0034]; [0035]; Figs. 5-6.
[1.K] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element.	Liu 783 discloses and/or renders obvious wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0004]; [0014]; [0030]; [0031]; Figs. 1-3.
[3] The vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber.	Liu 783 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0014]; [0031]; Figs. 1-3.
[5] The vaporizer of claim 1, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[7] The vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber.	Liu 783 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber. For example, see the following passages and/or figures, as well as all related disclosures:

’722 Claim Limitations	Liu 783
	Liu 783 at [0031]; [0044]; Figs. 4-5.
[8] The vaporizer of claim 1, wherein at least a portion of the shell is formed of a translucent material.	
[9] The vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element.	Liu 783 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0012]; [0015]; [0034]; Figs. 4-5.
[10.A] A vaporizer comprising:	*See* [1.A].
[10.B] a battery portion comprising:	*See* [1.B].
[10.C] a battery housing segment;	*See* [1.B].
[10.D] a cartomizer receiving segment defining a cartomizer chamber having an insertion end distal from the battery housing segment,	*See* [1.C].
[10.E] the cartomizer chamber further having a base end proximate to the battery housing segment,	*See* [1.C].
[10.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment;	*See* [1.E].
[10.G] a plurality of charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the cartomizer chamber, the insertion end of the cartomizer chamber being at a second end of the battery portion; and	
[10.H] at least one magnet of the battery portion, the at least one magnet of the battery portion in or proximate to the cartomizer chamber; and	Liu 783 discloses and/or renders obvious at least one magnet of the battery portion, the at least one magnet of the battery portion in or proximate to the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0001]; [0005]; [0018]; [0040]; [0041]; Figs. 4-7.

’722 Claim Limitations	Liu 783
[10.I] a cartomizer insertable into the cartomizer chamber at the insertion end, the cartomizer comprising:	*See* [1.F].
[10.J] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[10.K] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].
[10.L] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[10.M] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[10.N] wherein the entire heating element is disposed between the insertion end of the cartomizer chamber and the base end of the cartomizer chamber when the cartomizer is inserted into the cartomizer chamber such that the outer shell protects the heating element; and	*See* [1.H].
[10.O] a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	Liu 783 discloses and/or renders obvious a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0001]; [0005]; [0018]; [0040]; [0041]; Figs. 4-7.
[11] The vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment.	Liu 783 discloses and/or renders obvious the vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0011]; [0019]; [0036]; [0037]; Figs 6-7.
[12] The vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery	Liu 783 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber.

’722 Claim Limitations	Liu 783
electrical contacts in or proximate the cartomizer chamber.	For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0005]; [0007]; [0012]; [0032] Figs. 4-5.
[13] The vaporizer of claim 10, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	*See* [5].
[14] The vaporizer of claim 10, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the cartomizer chamber.	
[15.A] A vaporizer comprising:	*See* [1.A].
[15.B] a battery portion comprising:	*See* [1.B].
[15.C] a plurality of charger electrical contacts disposed at a first end of the battery portion;	
[15.D] a battery housing segment for housing a battery between the first end of the battery portion and a second end of the battery portion;	*See* [1.B], [1.C].
[15.E] a cartomizer receiving segment defining a chamber having an insertion end at the second end of the battery portion and distal from the battery housing segment, the chamber further having a base end proximate to the battery housing segment,	*See* [1.B], [1.C].
[15.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	*See* [1.E].
[15.G] one or more battery electrical contacts in or proximate the chamber of the cartomizer receiving segment; and	*See* [11].
[15.H] a cartomizer insertable into the insertion end of the chamber, the cartomizer comprising:	*See* [1.F].

’722 Claim Limitations	Liu 783
[15.I] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[15.J] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].
[15.K] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[15.L] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[15.M] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element; and	*See* [1.K].
[15.N] one or more cartomizer electrical contacts for connecting with the one or more battery electrical contacts in or proximate the chamber.	*See* [12].
[16] The vaporizer of claim 15, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[17] The vaporizer of claim 15, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the chamber.	
[18] The vaporizer of claim 1, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	*See* [10.H].
[19] The vaporizer of claim 18, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	*See* [10.O].

’722 Claim Limitations	Liu 783
[20] The vaporizer of claim 15, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	*See* [10.H].
[21] The vaporizer of claim 20, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	*See* [10.O].

EXHIBIT D-7

EXHIBIT D-7

Invalidity Claim Chart of U.S. Patent No. 8,528,569 ("Newton 569") against U.S. Patent No. 11,134,722

Newton 569, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 3, 5, 7-9, 10, 11-14, 15, and 16-21 of U.S. Patent No. 11,134,722. Newton 569 was filed on June 28, 2011, and published on September 10, 2012. Newton 569 qualifies as prior art to the '722 Patent under at least AIA 35 U.S.C. § 102(a)(2).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Newton 569. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the Newton 569. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'722 Claim Limitations	Newton 569
[1.A] A vaporizer comprising:	To the extent the preamble is limiting, Newton 569 discloses and/or renders obvious an vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 1:50-56; 3:60-63; 4:5-7; 5:30-35; Figs. 1-5.
[1.B] a battery portion comprising a battery housing segment and a cartomizer receiving segment	Newton 569 discloses and/or renders obvious a battery portion comprising a battery housing segment and a cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:45-51; 5:30-35; 5:39-40; Figs. 1-5.
[1.C] the cartomizer receiving segment defining a chamber having an insertion end distal from the battery	Newton 569 discloses and/or renders obvious a cartomizer receiving segment defining a chamber having an insertion end distal from the battery housing segment and a base end proximate to the battery housing segment.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '722 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

'722 Claim Limitations	Newton 569
housing segment and a base end proximate to the battery housing segment,	For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:45-51; 5:30-35; 5:39-40; Figs. 1-5.
[1.D] the battery portion further comprising a plurality of charger electrical contacts to provide electrical charge to a battery housed in the battery housing segment, the charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the chamber of the cartomizer receiving segment,	
[1.E] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	Newton 569 discloses and/or renders obvious a battery portion comprising a battery housing segment and a cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:45-48; 4:32-35; 5:39-40; Figs. 1-5.
[1.F] a cartomizer insertable into the chamber at the insertion end, the cartomizer comprising:	Newton 569 discloses and/or renders obvious a cartomizer. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 1:51-63; 5:17-29; 6:17-33; 6:34-54; Figs. 4-5, 7.
[1.G] a body including a structure configured to hold a vaporizable liquid;	Newton 569 discloses and/or renders obvious a body including a structure configured to hold a vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 1:58-59; 2:29-36; 3:60-63; 4:54-56; Figs. 4-5, 7.
[1.H] a wicking element provided within the body and at least partially in contact with the vaporizable liquid; and	Newton 569 discloses and/or renders obvious a wicking element provided within the body and at least partially in contact with the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 1:60-63; 2:9-11; 2:22-28; 3:66-4:2; 6:31-34; Figs. 4-5, 7.

'722 Claim Limitations	Newton 569
[1.I] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	Newton 569 discloses and/or renders obvious a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 5:16-18; 5:32-35; 6:18-19; 6:31-33; Figs. 4-5, 7.
[1.J] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	Newton 569 discloses and/or renders obvious wherein the wicking element is configured to deliver the vaporizable liquid to the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 2:8-12; 4:2-4; 6:31-33; Figs. 4-5, 7.
[1.K] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element.	
[3] The vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber.	Newton 569 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:48-51; 5:19-21; 5:30-32; Figs. 4-5, 7.
[5] The vaporizer of claim 1, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[7] The vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber.	Newton 569 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber.. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 1:51-54; 4:9-13; 4:38-40; 8:60-61; Figs. 2, 4, 7.

'722 Claim Limitations	Newton 569
[8] The vaporizer of claim 1, wherein at least a portion of the shell is formed of a translucent material.	Newton 569 discloses and/or renders obvious the vaporizer of claim 1, wherein at least a portion of the shell is formed of a translucent material. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:18-21; 4:22-25; 4:41-44; 5:44-47; Figs. 1, 2, 4.
[9] The vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element.	Newton 569 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 5:30-35; 5:55-59; 6:25-30; 7:8-12; Figs. 6-7.
[10.A] A vaporizer comprising:	*See* [1.A].
[10.B] a battery portion comprising:	*See* [1.B].
[10.C] a battery housing segment;	*See* [1.C].
[10.D] a cartomizer receiving segment defining a cartomizer chamber having an insertion end distal from the battery housing segment,	Newton 569 discloses and/or renders obvious a cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:48-51; 5:19-21; 5:30-32; Figs. 1-5.
[10.E] the cartomizer chamber further having a base end proximate to the battery housing segment,	Newton 569 discloses and/or renders obvious a cartomizer chamber further having a base end proximate to the battery housing segment. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:45-51; 5:30-35; 5:39-40; Figs. 1-5.
[10.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment;	*See* [1.E].
[10.G] a plurality of charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the cartomizer chamber, the insertion end of the	

'722 Claim Limitations	Newton 569
cartomizer chamber being at a second end of the battery portion; and	
[10.H] at least one magnet of the battery portion, the at least one magnet of the battery portion in or proximate to the cartomizer chamber; and	
[10.I] a cartomizer insertable into the cartomizer chamber at the insertion end, the cartomizer comprising:	Newton 569 discloses and/or renders obvious a cartomizer. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 1:51-63; 5:17-29; 6:17-33; 6:34-54; Figs. 4-5, 7.
[10.J] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[10.K] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].
[10.L] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[10.M] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[10.N] wherein the entire heating element is disposed between the insertion end of the cartomizer chamber and the base end of the cartomizer chamber when the cartomizer is inserted into the cartomizer chamber such that the outer shell protects the heating element; and	
[10.O] a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	
[11] The vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment.	Newton 569 discloses and/or renders obvious the vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures:

'722 Claim Limitations	Newton 569
	Newton 569 at 4:48-54; 5:21-25; 5:30-35; Figs. 4-5, 7.
[12] The vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber.	Newton 569 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:48-54; 5:21-25; 5:30-35; Figs. 4-5, 7.
[13] The vaporizer of claim 10, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[14] The vaporizer of claim 10, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the cartomizer chamber.	
[15.A] A vaporizer comprising:	*See* [1.A].
[15.B] a battery portion comprising:	*See* [1.B].
[15.C] a plurality of charger electrical contacts disposed at a first end of the battery portion;	
[15.D] a battery housing segment for housing a battery between the first end of the battery portion and a second end of the battery portion;	*See* [1.B], [1.C].
[15.E] a cartomizer receiving segment defining a chamber having an insertion end at the second end of the battery portion and distal from the battery housing segment, the chamber further having a base end proximate to the battery housing segment,	*See* [1.B].
[15.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	*See* [1.E].

'722 Claim Limitations	Newton 569
[15.G] one or more battery electrical contacts in or proximate the chamber of the cartomizer receiving segment; and	*See* [11].
[15.H] a cartomizer insertable into the insertion end of the chamber, the cartomizer comprising:	Newton 569 discloses and/or renders obvious a cartomizer. *See* [1.F].
[15.I] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[15.J] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].
[15.K] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[15.L] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[15.M] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element; and	
[15.N] one or more cartomizer electrical contacts for connecting with the one or more battery electrical contacts in or proximate the chamber.	*See* [12].
[16] The vaporizer of claim 15, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[17] The vaporizer of claim 15, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the chamber.	
[18] The vaporizer of claim 1, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	

'722 Claim Limitations	Newton 569
[19] The vaporizer of claim 18, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	
[20] The vaporizer of claim 15, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	
[21] The vaporizer of claim 20, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	

EXHIBIT D-8

EXHIBIT D-8

Invalidity Claim Chart of U.S. Patent No. 8,205,622 ("Pan 622") against U.S. Patent No. 11,134,722

Pan 622, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 3, 5, 7-9, 10, 11-14, 15, and 16-21 of U.S. Patent No. 11,134,722. Pan 622 was filed on May 7, 2009, and published on June 26, 2012. Pan 622 qualifies as prior art to the '722 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Pan 622. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'173 Claim Limitations	Pan 622
[1.A] A vaporizer comprising:	To the extent the preamble is limiting, Pan 622 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:16-18; 2:25-28; 2:39-43; 3:21-23; Figs. 6-7.
[1.B] a battery portion comprising a battery housing segment and a cartomizer receiving segment	Pan 622 discloses and/or renders obvious a battery portion comprising a battery housing segment and a cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:25-28; 2:30-35; 2:48-50; 5:29-36; 6:4-9 Figs. 4-5.
[1.C] the cartomizer receiving segment defining a chamber having an insertion end distal from the battery	Pan 622 discloses and/or renders obvious the cartomizer receiving segment defining a chamber having an insertion end distal from the battery housing segment and a base end proximate to the battery housing segment.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '722 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’173 Claim Limitations	Pan 622
housing segment and a base end proximate to the battery housing segment,	For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:48-50; 5:29-36; 6:4-9; Figs. 4-5.
[1.D] the battery portion further comprising a plurality of charger electrical contacts to provide electrical charge to a battery housed in the battery housing segment, the charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the chamber of the cartomizer receiving segment,	
[1.E] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	Pan 622 discloses and/or renders obvious wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:35-38; 5:9-15; 5:21-24; 5:58-62; Figs. 4-5.
[1.F] a cartomizer insertable into the chamber at the insertion end, the cartomizer comprising:	Pan 622 discloses and/or renders obvious a cartomizer insertable into the chamber at the insertion end, the cartomizer comprising. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:48-50; 4:33-45; 4:63-5:7; 6:4-9; Figs 2-3, 6-7.
[1.G] a body including a structure configured to hold a vaporizable liquid;	Pan 622 discloses and/or renders obvious a body including a structure configured to hold a vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:39-43; 4:12-18; 4:35-43; 4:48-53; Figs 2-3.
[1.H] a wicking element provided within the body and at least partially in contact with the vaporizable liquid; and	Pan 622 discloses and/or renders obvious a wicking element provided within the body and at least partially in contact with the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures:

’173 Claim Limitations	Pan 622
	Pan 622 at 2:39-43; 2:57-62; 4:35-43; Figs 2-3, 6-7.
[1.I] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	Pan 622 discloses and/or renders obvious a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:57-60; 4:55-62; 4:63-5:3; 5:62-67; Figs 2-3, 6-7.
[1.J] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	Pan 622 discloses and/or renders obvious wherein the wicking element is configured to deliver the vaporizable liquid to the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:39-43; 2:57-62; 4:35-43; Figs 2-3, 6-7.
[1.K] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element.	Pan 622 discloses and/or renders obvious wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at Fig. 7.
[3] The vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber.	Pan 622 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber.. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:25-30; 6:9-13; Fig. 7.
[5] The vaporizer of claim 1, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[7] The vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber.	Pan 622 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber.

’173 Claim Limitations	Pan 622
	For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:43-45; 2:51-54; 5:6-7; 6:19-24; Figs 2-3.
[8] The vaporizer of claim 1, wherein at least a portion of the shell is formed of a translucent material.	
[9] The vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element.	Pan 622 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element.. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:39-47; 4:33-35; 4:65-5:5; 4:58-61; Figs 2-3.
[10.A] A vaporizer comprising:	*See* [1.A].
[10.B] a battery portion comprising:	*See* [1.B].
[10.C] a battery housing segment;	*See* [1.B].
[10.D] a cartomizer receiving segment defining a cartomizer chamber having an insertion end distal from the battery housing segment,	*See* [1.C].
[10.E] the cartomizer chamber further having a base end proximate to the battery housing segment,	*See* [1.C].
[10.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment;	*See* [1.E].
[10.G] a plurality of charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the cartomizer chamber, the insertion end of the cartomizer chamber being at a second end of the battery portion; and	
[10.H] at least one magnet of the battery portion, the at least one magnet of the battery portion in or proximate to the cartomizer chamber; and	

’173 Claim Limitations	Pan 622
[10.I] a cartomizer insertable into the cartomizer chamber at the insertion end, the cartomizer comprising:	*See* [1.F]
[10.J] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[10.K] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].
[10.L] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[10.M] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[10.N] wherein the entire heating element is disposed between the insertion end of the cartomizer chamber and the base end of the cartomizer chamber when the cartomizer is inserted into the cartomizer chamber such that the outer shell protects the heating element; and	*See* [1.K].
[10.O] a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	
[11] The vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment.	Pan 622 discloses and/or renders obvious the vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:37-38; 4:7-12; 5:29-36; 5:42-45; Figs 4-5.
[12] The vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber.	Pan 622 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures:

’173 Claim Limitations	Pan 622
	Pan 622 at 2:45-47; 4:34-35; 4:63-65; 6:1-10; Figs 2-3.
[13] The vaporizer of claim 10, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[14] The vaporizer of claim 10, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the cartomizer chamber.	
[15.A] A vaporizer comprising:	*See* [1.A].
[15.B] a battery portion comprising:	*See* [1.B].
[15.C] a plurality of charger electrical contacts disposed at a first end of the battery portion;	
[15.D] a battery housing segment for housing a battery between the first end of the battery portion and a second end of the battery portion;	*See* [1.B], [1.C].
[15.E] a cartomizer receiving segment defining a chamber having an insertion end at the second end of the battery portion and distal from the battery housing segment, the chamber further having a base end proximate to the battery housing segment,	*See* [1.B], [1.C].
[15.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	*See* [1.E].
[15.G] one or more battery electrical contacts in or proximate the chamber of the cartomizer receiving segment; and	*See* [11].
[15.H] a cartomizer insertable into the insertion end of the chamber, the cartomizer comprising:	*See* [1.F].
[15.I] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].

’173 Claim Limitations	Pan 622
[15.J] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].
[15.K] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[15.L] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[15.M] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element; and	*See* [1.K].
[15.N] one or more cartomizer electrical contacts for connecting with the one or more battery electrical contacts in or proximate the chamber.	*See* [12].
[16] The vaporizer of claim 15, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[17] The vaporizer of claim 15, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the chamber.	
[18] The vaporizer of claim 1, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	
[19] The vaporizer of claim 18, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	

’173 Claim Limitations	Pan 622
[20] The vaporizer of claim 15, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	
[21] The vaporizer of claim 20, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	

EXHIBIT D-9

EXHIBIT D-9

Invalidity Claim Chart of U.S. Pat. No. 2009/0255534 ("Paterno 534") against U.S. Patent No. 11,134,722

Paterno 534, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 3, 5, 7-9, 10, 11-14, 15, and 16-21 of U.S. Patent No. 11,134,722. Paterno 534 was filed on April 13, 2009, and published on October 15, 2009. Paterno 534 qualifies as prior art to the '722 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Paterno 534. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'722 Claim Limitations	Paterno 534
[1.A] A vaporizer comprising:	To the extent the preamble is limiting, Paterno 534 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0002]; [0007]; [0025]; [0027]; Figs. 1-3, 5.
[1.B] a battery portion comprising a battery housing segment and a cartomizer receiving segment	Paterno 534 discloses and/or renders obvious a battery portion comprising a battery housing segment and a cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0008]; [0027]; [0030]; [0034]; Figs. 5, 8.
[1.C] the cartomizer receiving segment defining a chamber having an insertion end distal from the battery	Paterno 534 discloses and/or renders obvious the cartomizer receiving segment defining a chamber having an insertion end distal from the battery housing segment and a base end proximate to the battery housing segment.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '722 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’722 Claim Limitations	Paterno 534
housing segment and a base end proximate to the battery housing segment,	For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0034]; Figs. 5.
[1.D] the battery portion further comprising a plurality of charger electrical contacts to provide electrical charge to a battery housed in the battery housing segment, the charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the chamber of the cartomizer receiving segment,	Paterno 534 discloses and/or renders obvious the battery portion further comprising a plurality of charger electrical contacts to provide electrical charge to a battery housed in the battery housing segment, the charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the chamber of the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0034]; [0037]; Figs. 5, 8.
[1.E] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	Paterno 534 discloses and/or renders obvious wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0034]; Fig. 5.
[1.F] a cartomizer insertable into the chamber at the insertion end, the cartomizer comprising:	Paterno 534 discloses and/or renders obvious a cartomizer insertable into the chamber at the insertion end. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0024]; [0025]; [0027]; [0034]; [0033]; Figs. 1-5.
[1.G] a body including a structure configured to hold a vaporizable liquid;	Paterno 534 discloses and/or renders obvious a body including a structure configured to hold a vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0007]; [0027]; [0028]; [0029]; [0030]; Figs. 1-5.
[1.H] a wicking element provided within the body and at least partially in contact with the vaporizable liquid; and	Paterno 534 discloses and/or renders obvious a body including a structure configured to hold a vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0007]; [0027]; [0028]; Figs. 1-4.

’722 Claim Limitations	Paterno 534
[1.I] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	Paterno 534 discloses and/or renders obvious a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0007]; [0027]; [0028]; [0029]; Figs. 1-5.
[1.J] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	Paterno 534 discloses and/or renders obvious wherein the wicking element is configured to deliver the vaporizable liquid to the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0007]; [0027]; [0028]; Figs. 1-4.
[1.K] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element.	Paterno 534 discloses and/or renders obvious wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0033]; [0034]; Figs. 1, 4-5.
[3] The vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber.	Paterno 534 discloses and/or renders obvious wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0033]; [0034]; Fig. 5.
[5] The vaporizer of claim 1, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[7] The vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber.	Paterno 534 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber. For example, see the following passages and/or figures, as well as all related disclosures:

'722 Claim Limitations	Paterno 534
	Paterno 534 at [0009]; [0033]; [0034]; Fig. 4.
[8] The vaporizer of claim 1, wherein at least a portion of the shell is formed of a translucent material.	
[9] The vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element.	Paterno 534 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0027]; [0028]; [0030]; [0034]; Figs. 1, 3-5.
[10.A] A vaporizer comprising:	*See* [1.A].
[10.B] a battery portion comprising:	*See* [1.B].
[10.C] a battery housing segment;	*See* [1.B].
[10.D] a cartomizer receiving segment defining a cartomizer chamber having an insertion end distal from the battery housing segment,	*See* [1.C].
[10.E] the cartomizer chamber further having a base end proximate to the battery housing segment,	*See* [1.C].
[10.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment;	*See* [1.E].
[10.G] a plurality of charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the cartomizer chamber, the insertion end of the cartomizer chamber being at a second end of the battery portion; and	*See* [1.D].
[10.H] at least one magnet of the battery portion, the at least one magnet of the battery portion in or proximate to the cartomizer chamber; and	
[10.I] a cartomizer insertable into the cartomizer chamber at the insertion end, the cartomizer comprising:	*See* [1.F].

’722 Claim Limitations	Paterno 534
[10.J] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[10.K] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].
[10.L] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[10.M] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[10.N] wherein the entire heating element is disposed between the insertion end of the cartomizer chamber and the base end of the cartomizer chamber when the cartomizer is inserted into the cartomizer chamber such that the outer shell protects the heating element; and	*See* [1.H].
[10.O] a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	
[11] The vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment.	Paterno 534 discloses and/or renders obvious the vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0027]; [0028]; [0030]; [0034]; Figs. 1, 3-5.
[12] The vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber.	Paterno 534 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0027]; [0028]; [0030]; [0034]; Figs. 1, 3-5.

’722 Claim Limitations	Paterno 534
[13] The vaporizer of claim 10, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[14] The vaporizer of claim 10, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the cartomizer chamber.	
[15.A] A vaporizer comprising:	*See* [1.A].
[15.B] a battery portion comprising:	*See* [1.B].
[15.C] a plurality of charger electrical contacts disposed at a first end of the battery portion;	*See* [1.D].
[15.D] a battery housing segment for housing a battery between the first end of the battery portion and a second end of the battery portion;	*See* [1.B], [1.C].
[15.E] a cartomizer receiving segment defining a chamber having an insertion end at the second end of the battery portion and distal from the battery housing segment, the chamber further having a base end proximate to the battery housing segment,	*See* [1.B], [1.C].
[15.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	*See* [1.E].
[15.G] one or more battery electrical contacts in or proximate the chamber of the cartomizer receiving segment; and	*See* [11].
[15.H] a cartomizer insertable into the insertion end of the chamber, the cartomizer comprising:	*See* [1.F].
[15.I] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[15.J] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].

’722 Claim Limitations	Paterno 534
[15.K] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[15.L] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[15.M] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element; and	*See* [1.K].
[15.N] one or more cartomizer electrical contacts for connecting with the one or more battery electrical contacts in or proximate the chamber.	*See* [12].
[16] The vaporizer of claim 15, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[17] The vaporizer of claim 15, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the chamber.	
[18] The vaporizer of claim 1, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	
[19] The vaporizer of claim 18, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	
[20] The vaporizer of claim 15, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	

’722 Claim Limitations	Paterno 534
[21] The vaporizer of claim 20, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	

EXHIBIT D-10

EXHIBIT D-10

Invalidity Claim Chart of U.S. Patent 8,794,231 ("Thorens 231") against U.S. Patent No. 11,134,722

Thorens 231, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 3, 5, 7-9, 10, 11-14, 15, and 16-21 of U.S. Patent No. 11,134,722. Thorens 231 was filed on April 29, 2009, and published on November 5, 2009. Thorens 231 qualifies as prior art to the '722 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Thorens 231. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'722 Claim Limitations	Thorens 231
[1.A] A vaporizer comprising:	To the extent the preamble is limiting, Thorens 231 discloses and/or renders obvious a vaporizer For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 1:14-15; 2:2-5; 4:46-49; Fig. 3.
[1.B] a battery portion comprising a battery housing segment and a cartomizer receiving segment	Thorens 231 discloses and/or renders obvious a battery portion comprising a battery housing segment and a cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 1:51-53; 6:35-37; 6:57-58; 10:16-18; Fig. 1, 3.
[1.C] the cartomizer receiving segment defining a chamber having an insertion end distal from the	Thorens 231 discloses and/or renders obvious the cartomizer receiving segment defining a chamber having an insertion end distal from the battery housing segment and a base end proximate to the battery housing segment.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '722 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

'722 Claim Limitations	Thorens 231
battery housing segment and a base end proximate to the battery housing segment,	For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 5:53-55; 6:57-58; 8:54-57; 10:16-18; Fig. 1, 3.
[1.D] the battery portion further comprising a plurality of charger electrical contacts to provide electrical charge to a battery housed in the battery housing segment, the charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the chamber of the cartomizer receiving segment,	Thorens 231 discloses and/or renders obvious the battery portion further comprising a plurality of charger electrical contacts to provide electrical charge to a battery housed in the battery housing segment, the charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the chamber of the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 1:24-25; 4:14-16; 4:20-21; 7:38-46.
[1.E] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	Thorens 231 discloses and/or renders obvious wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 6:35-37; 6:52-53; 10:16-18; Fig. 1.
[1.F] a cartomizer insertable into the chamber at the insertion end,	Thorens 231 discloses and/or renders obvious a cartomizer insertable into the chamber at the insertion end. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 6:44-47; 6:54-57; 10:16-18; Figs 2-3.
[1.G] the cartomizer comprising: a body including a structure configured to hold a vaporizable liquid;	Thorens 231 discloses and/or renders obvious the cartomizer comprising: a body including a structure configured to hold a vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 6:44-45; 6:61-7:4; 7:25-27; Figs 2-3.
[1.H] a wicking element provided within the body and at least partially in contact with the vaporizable liquid; and	Thorens 231 discloses and/or renders obvious a wicking element provided within the body and at least partially in contact with the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures:

’722 Claim Limitations	Thorens 231
	Thorens 231 at 1:54-57; 4:39-41; 5:6-206:44-50; Figs 2-3.
[1.I] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	Thorens 231 discloses and/or renders obvious a wicking element provided within the body and at least partially in contact with the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 1:54-59; 2:2-5; 3:30-31; 3:33-35; Figs 2-3.
[1.J] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	Thorens 231 discloses and/or renders obvious a wicking element provided within the body and at least partially in contact with the vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 1:54-57; 4:39-41; 6:44-50; 6:61-7:7; Figs 2-3.
[1.K] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element.	Thorens 231 discloses and/or renders obvious wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 5:53-55; 6:57-58; 7:43-47; Fig 3.
[3] The vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber.	Thorens 231 discloses and/or renders obvious wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 5:34-48; 6:57-58; 7:59-60; 8:65-67; Figs. 1, 3.
[5] The vaporizer of claim 1, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[7] The vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece	Thorens 231 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber.

’722 Claim Limitations	Thorens 231
opposite an end of the cartomizer configured for insertion into the chamber.	For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 2:5-9; 6:44-48; 6:63-65; 7:9-11; Fig. 2.
[8] The vaporizer of claim 1, wherein at least a portion of the shell is formed of a translucent material.	Thorens 231 discloses and/or renders obvious the vaporizer of claim 1, wherein at least a portion of the shell is formed of a translucent material. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 4:27-29; 5:21-25; 6:65-67; Fig. 1.
[9] The vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element.	Thorens 231 discloses and/or renders obvious the vaporizer of claim 1, wherein at least a portion of the shell is formed of a translucent material. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 6:35-40; 6:58-60; Fig. 2.
[10.A] A vaporizer comprising:	*See* [1.A].
[10.B] a battery portion comprising:	*See* [1.B].
[10.C] a battery housing segment;	*See* [1.B].
[10.D] a cartomizer receiving segment defining a cartomizer chamber having an insertion end distal from the battery housing segment,	*See* [1.C].
[10.E] the cartomizer chamber further having a base end proximate to the battery housing segment,	*See* [1.C].
[10.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment;	*See* [1.E].
[10.G] a plurality of charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the cartomizer chamber, the insertion end of the cartomizer	*See* [1.D].

’722 Claim Limitations	Thorens 231
chamber being at a second end of the battery portion; and	
[10.H] at least one magnet of the battery portion, the at least one magnet of the battery portion in or proximate to the cartomizer chamber; and	
[10.I] a cartomizer insertable into the cartomizer chamber at the insertion end, the cartomizer comprising:	*See* [1.F].
[10.J] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[10.K] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].
[10.L] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[10.M] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[10.N] wherein the entire heating element is disposed between the insertion end of the cartomizer chamber and the base end of the cartomizer chamber when the cartomizer is inserted into the cartomizer chamber such that the outer shell protects the heating element; and	*See* [1.K].
[10.O] a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	
[11] The vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the	Thorens 231 discloses and/or renders obvious the vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures:

’722 Claim Limitations	Thorens 231
cartomizer chamber of the cartomizer receiving segment.	Thorens 231 at 6:35-40; 6:58-60; 10:25-29; Fig. 1.
[12] The vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber.	Thorens 231 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 6:58-60; 10:25-29; Fig. 2.
[13] The vaporizer of claim 10, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[14] The vaporizer of claim 10, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the cartomizer chamber.	
[15.A] A vaporizer comprising:	*See* [1.A].
[15.B] a battery portion comprising:	*See* [1.B].
[15.C] a plurality of charger electrical contacts disposed at a first end of the battery portion;	*See* [1.D].
[15.D] a battery housing segment for housing a battery between the first end of the battery portion and a second end of the battery portion;	*See* [1.B], [1.C].
[15.E] a cartomizer receiving segment defining a chamber having an insertion end at the second end of the battery portion and distal from the battery housing segment, the chamber further having a base end proximate to the battery housing segment,	*See* [1.B], [1.C].
[15.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	*See* [1.E].

’722 Claim Limitations	Thorens 231
[15.G] one or more battery electrical contacts in or proximate the chamber of the cartomizer receiving segment; and	*See* [11].
[15.H] a cartomizer insertable into the insertion end of the chamber, the cartomizer comprising:	*See* [1.F].
[15.I] a body including a structure configured to hold a vaporizable liquid;	*See* [1.G].
[15.J] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	*See* [1.H].
[15.K] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	*See* [1.I].
[15.L] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	*See* [1.J].
[15.M] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element; and	*See* [1.K].
[15.N] one or more cartomizer electrical contacts for connecting with the one or more battery electrical contacts in or proximate the chamber.	*See* [12].
[16] The vaporizer of claim 15, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[17] The vaporizer of claim 15, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the chamber.	

’722 Claim Limitations	Thorens 231
[18] The vaporizer of claim 1, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	
[19] The vaporizer of claim 18, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	
[20] The vaporizer of claim 15, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	
[21] The vaporizer of claim 20, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	

EXHIBIT D-11

EXHIBIT D-11

Invalidity Claim Chart of U.S. Patent KR20130092251A ("Young 251") against U.S. Patent No. 11,134,722

Young 251, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 3, 5, 7-9, 10, 11-14, 15, and 16-21 of U.S. Patent No. 11,134,722. Young 251 was filed on April 29, 2009, and published on November 5, 2009. Young 251 qualifies as prior art to the '722 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Young 251. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'722 Claim Limitations	Young 251
[1.A] A vaporizer comprising:	
[1.B] a battery portion comprising a battery housing segment and a cartomizer receiving segment	
[1.C] the cartomizer receiving segment defining a chamber having an insertion end distal from the battery housing segment and a base end proximate to the battery housing segment,	
[1.D] the battery portion further comprising a plurality of charger electrical contacts to provide electrical charge to a battery housed in the battery housing segment, the charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the chamber of the cartomizer receiving segment,	

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '722 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

'722 Claim Limitations	Young 251
[1.E] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	
[1.F] a cartomizer insertable into the chamber at the insertion end,	
[1.G] the cartomizer comprising: a body including a structure configured to hold a vaporizable liquid;	
[1.H] a wicking element provided within the body and at least partially in contact with the vaporizable liquid; and	
[1.I] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	
[1.J] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	
[1.K] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element.	
[3] The vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber.	
[5] The vaporizer of claim 1, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[7] The vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber.	
[8] The vaporizer of claim 1, wherein at least a portion of the shell is formed of a translucent material.	

’722 Claim Limitations	Young 251
[9] The vaporizer of claim 1, wherein the cartomizer further comprises electrical circuitry connected with the heating element.	
[10.A] A vaporizer comprising:	
[10.B] a battery portion comprising:	
[10.C] a battery housing segment;	
[10.D] a cartomizer receiving segment defining a cartomizer chamber having an insertion end distal from the battery housing segment,	
[10.E] the cartomizer chamber further having a base end proximate to the battery housing segment,	
[10.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment;	
[10.G] a plurality of charger electrical contacts disposed at a first end of the battery portion opposite the insertion end of the cartomizer chamber, the insertion end of the cartomizer chamber being at a second end of the battery portion; and	
[10.H] at least one magnet of the battery portion, the at least one magnet of the battery portion in or proximate to the cartomizer chamber; and	
[10.I] a cartomizer insertable into the cartomizer chamber at the insertion end, the cartomizer comprising:	
[10.J] a body including a structure configured to hold a vaporizable liquid;	
[10.K] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	
[10.L] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	

'722 Claim Limitations	Young 251
[10.M] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	
[10.N] wherein the entire heating element is disposed between the insertion end of the cartomizer chamber and the base end of the cartomizer chamber when the cartomizer is inserted into the cartomizer chamber such that the outer shell protects the heating element; and	
[10.O] a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	
[11] The vaporizer of claim 10, wherein the battery portion further comprises one or more battery electrical contacts in or proximate the cartomizer chamber of the cartomizer receiving segment.	
[12] The vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber.	
[13] The vaporizer of claim 10, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[14] The vaporizer of claim 10, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the cartomizer chamber.	Young 251 discloses and/or renders obvious a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Young 251 at [0050]; [0052]; [0053]; Figs. 5-6.
[15.A] A vaporizer comprising:	
[15.B] a battery portion comprising:	
[15.C] a plurality of charger electrical contacts disposed at a first end of the battery portion;	

’722 Claim Limitations	Young 251
[15.D] a battery housing segment for housing a battery between the first end of the battery portion and a second end of the battery portion;	
[15.E] a cartomizer receiving segment defining a chamber having an insertion end at the second end of the battery portion and distal from the battery housing segment, the chamber further having a base end proximate to the battery housing segment,	
[15.F] wherein an outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment; and	
[15.G] one or more battery electrical contacts in or proximate the chamber of the cartomizer receiving segment; and	
[15.H] a cartomizer insertable into the insertion end of the chamber, the cartomizer comprising:	
[15.I] a body including a structure configured to hold a vaporizable liquid;	
[15.J] a wicking element provided within the body and at least partially in contact with the vaporizable liquid;	
[15.K] a heating element provided within the body in contact with the wicking element and operable to heat the vaporizable liquid,	
[15.L] wherein the wicking element is configured to deliver the vaporizable liquid to the heating element, and	
[15.M] wherein the entire heating element is disposed between the insertion end of the chamber and the base end of the chamber when the cartomizer is inserted into the chamber such that the outer shell protects the heating element; and	

’722 Claim Limitations	Young 251
[15.N] one or more cartomizer electrical contacts for connecting with the one or more battery electrical contacts in or proximate the chamber.	
[16] The vaporizer of claim 15, wherein the plurality of charger electrical contacts are arranged linearly at the first end of the battery portion.	
[17] The vaporizer of claim 15, further comprising a window on or proximate to the shell, the window permitting viewing of the cartomizer when the cartomizer is inserted into the chamber.	*See* [14].
[18] The vaporizer of claim 1, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	
[19] The vaporizer of claim 18, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	
[20] The vaporizer of claim 15, the battery portion further comprising at least one magnet in or proximate to the chamber of the cartomizer receiving segment.	
[21] The vaporizer of claim 20, the cartomizer further comprising a metal element disposed near a base end of the cartomizer for coupling with the at least one magnet of the battery portion.	

NJOY's Initial Invalidity Contentions in Inv. No. 337-TA-1368

Exhibit E: Invalidity of U.S. Patent No. 11,606,981 Under 35 U.S.C. §§ 102, 103, 112

I. Invalidity of U.S. Patent No. 11,606,981 Under 35 U.S.C. §§ 102, 103

NJOY contends that each of the references set forth below, either alone or in combination with other prior art, invalidates the claims of the '981 Patent under 35 U.S.C. §§ 102, 103:

Prior Art Reference	Date of Publication or Other Prior Art Date	Statutory Provision of Prior Art[1]	Bates Number
US2057353	September 27, 1935	§§ 102(a)(1), (a)(2)	NJOYITC1_00000511
US7717756	July 9, 2009	§§ 102(a)(1), (a)(2)	NJOYITC1_00000571
US8156944	May 16, 2006	§§ 102(a)(1), (a)(2)	NJOYITC1_00000654
US8205622	March 24, 2009	§§ 102(a)(1), (a)(2)	NJOYITC1_00000670
US8528569	June 28, 2011	§§ 102(a)(1), (a)(2)	NJOYITC1_00000715
US8794231	April 30, 2008	§§ 102(a)(1), (a)(2)	NJOYITC1_00000737
US9078473	August 9, 2011	§§ 102(a)(1), (a)(2)	NJOYITC1_00000775
US9155336	June 16, 2012	§ 102(a)(2)	NJOYITC1_00000811
US9386805	July 9, 2012	§ 102(a)(2)	NJOYITC1_00000905
US9408416	August 16, 2012	§§ 102(a)(1), (a)(2)	NJOYITC1_00000926
US9420831	April 3, 2013	§ 102(a)(2)	NJOYITC1_00000947
US9427022	March 12, 2013	§ 102(a)(2)	NJOYITC1_00000959
US9861138	January 31, 2013	§ 102(a)(2)	NJOYITC1_00001115
US11229239	July 19, 2013	§ 102(a)(2)	NJOYITC1_00003046
US20090126745A1	May 15, 2007	§§ 102(a)(1), (a)(2)	NJOYITC1_00001278
US20090255534A1	April 13, 2009	§§ 102(a)(1), (a)(2)	NJOYITC1_00001324

[1] In light of JLI's failure to provide any basis to support its effective filing date and conception contentions with respect to the Asserted Patents, NJOY reserves the right to identify different statutory provisions under which each reference qualifies as prior art.

Prior Art Reference	Date of Publication or Other Prior Art Date	Statutory Provision of Prior Art[1]	Bates Number
US20100031968A1	July 24, 2009	§§ 102(a)(1), (a)(2)	NJOYITC1_00001354
US20120285475A1	May 23, 2012	§§ 102(a)(1), (a)(2)	NJOYITC1_00001389
US20130319438A1	June 5, 2012	§ 102(a)(2)	NJOYITC1_00001564
US20140150783A1	December 5, 2012	§ 102(a)(2)	NJOYITC1_00001583
US20140190502A1	September 27, 2012	§ 102(a)(2)	NJOYITC1_00003059
US20140224267A1	February 12, 2013	§ 102(a)(2)	NJOYITC1_00001630
US20160345631A1	July 19, 2005	§ 102(a)(2)	NJOYITC1_00001860
KR200457694Y1	October 1, 2009	§ 102(a)(1)	NJOYITC1_00000422
KR200453424Y1	May 2, 2011	§ 102(a)(1)	NJOYITC1_00000384
KR20130092251A	August 20, 2013	§ 102(a)(1)	NJOYITC1_00002933
CN202697716U	January 30, 2013	§ 102(a)(1)	NJOYITC1_00002795
CN202919037U	May 8, 2013	§ 102(a)(1)	NJOYITC1_00002901, NJOYITC1_00002912
CN203015840U	January 4, 2013	§ 102(a)(1)	NJOYITC1_00000174
CN203058295U	January 23, 2013	§ 102(a)(1)	NJOYITC1_00000179
CN203182014U	March 14, 2013	§ 102(a)(1)	NJOYITC1_00000235
Universal Serial Bus Cables and Connectors Class Document, Revision 2.0, August 2007, available at https://www.usb.org/sites/default/files/CabConn20.pdf	August 2007	§ 102(a)(1)	NJOYITC1_00002998

Additionally, the following prior art systems either alone or in combination with other prior art, invalidate the claims of the '981 Patent under 35 U.S.C. §§ 102, 103. The identification of these prior art systems is based on NJOY's investigation to date, is ongoing, and will be supplemented in due course.

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
21st Century Smoke	No later than August 2008	§102(a)(1)
Intellicig	No later than September 2008	§102(a)(1)
The Safe Cig	No later than December 2008	§102(a)(1)
Green Smoke	No later than December 2008	§102(a)(1)
SmokeTip	No later than May 2009	§102(a)(1)
Fuma	No later than August 2009	§102(a)(1)
Blu Starter Kit	No later than October 2009	§102(a)(1)
Vapor Corp. Smoke 51	No later than November 2009	§102(a)(1)
Boge Technology LEO Pod System	No later than June 2010	§102(a)(1)
ePuffer Magnum Uno D2	No later than 2011	§102(a)(1)
ePuffer Phantom T1	No later than 2012	§102(a)(1)
VMR V2 e-cig	No later than 2012	§102(a)(1)
Vinirette Aurora Pod	No later than January 2012	§102(a)(1)
Innokin iTaste VV	No later than June 2012	§102(a)(1)
iWand	No later than June 2012	§102(a)(1)
JWell Ivary V2 Pod	No later than July 2012	§102(a)(1)

[2] In light of JLI's failure to provide any basis to support its effective filing date and conception contentions with respect to the Asserted Patents, NJOY reserves the right to identify different statutory provisions under which each reference qualifies as prior art.

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
KangerTech T2 Ego Clearomizer	No later than November 2012	§102(a)(1)
Boge Technology EGO Passthrough CE4 EGOKIT	No later than December 2012	§102(a)(1)
Smart Evolution Trading Puff Avatar 1 Pod System	No later than December 2012	§102(a)(1)
Smart Evolution Trading Puff Avatar 2 Pod System	No later than December 2012	§102(a)(1)
Smart Evolution Trading Puff Quantum	No later than 2013	§102(a)(1)
KangerTech iPh-8	No later than March 2013	§102(a)(1)
KangerTech eVod	No later than April 2013	§102(a)(1)
JWELL Inova 1.0	No later than June 2013	§102(a)(1)
Ijoy SS-ITop Pod System	No later than July 2013	§102(a)(1)
VUSE Solo	No later than July 2013	§102(a)(1)
Apollo eGo-vv	No later than August 2013	§102(a)(1)
Bedford Slims	No later than August 2013	§102(a)(1)
Breathe Fresh eCigs	No later than August 2013	§102(a)(1)
Bull Smoke Automatic	No later than August 2013	§102(a)(1)
Bull Smoke Manual	No later than August 2013	§102(a)(1)
Cigarti	No later than August 2013	§102(a)(1)
Cigavette Premier	No later than August 2013	§102(a)(1)
Crown 7	No later than August 2013	§102(a)(1)
Duopro	No later than August 2013	§102(a)(1)
E-Lites	No later than August 2013	§102(a)(1)
Eluma	No later than August 2013	§102(a)(1)
Eon Smoke	No later than August 2013	§102(a)(1)

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
ePuffer Colibri	No later than August 2013	§102(a)(1)
eSmoke	No later than August 2013	§102(a)(1)
Eversmoke	No later than August 2013	§102(a)(1)
Fifty-One Trio	No later than August 2013	§102(a)(1)
Firebrand Millennium	No later than August 2013	§102(a)(1)
Frii	No later than August 2013	§102(a)(1)
Green Nicotine	No later than August 2013	§102(a)(1)
Halo G6	No later than August 2013	§102(a)(1)
J510L	No later than August 2013	§102(a)(1)
Logic Power Series	No later than August 2013	§102(a)(1)
Luci	No later than August 2013	§102(a)(1)
Metro Platinum	No later than August 2013	§102(a)(1)
Modern Vapor Sidesho	No later than August 2013	§102(a)(1)
New Day	No later than August 2013	§102(a)(1)
Nirvana Eco	No later than August 2013	§102(a)(1)
Ozone Smoke	No later than August 2013	§102(a)(1)
Premium	No later than August 2013	§102(a)(1)
Prosmoke	No later than August 2013	§102(a)(1)
Pure	No later than August 2013	§102(a)(1)
Revolver G2	No later than August 2013	§102(a)(1)
Seminole	No later than August 2013	§102(a)(1)
Smokeless Delite Premo Cartomizer	No later than August 2013	§102(a)(1)

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
Smokeless Delite Premo Cartridge	No later than August 2013	§102(a)(1)
Smokesation	No later than August 2013	§102(a)(1)
SmokeTip	No later than August 2013	§102(a)(1)
South Beach Smoke	No later than August 2013	§102(a)(1)
Ultra	No later than August 2013	§102(a)(1)
Vapage	No later than August 2013	§102(a)(1)
Victory	No later than August 2013	§102(a)(1)
White Cloud Cirrus 3	No later than August 2013	§102(a)(1)
Joyetech eGo-C	No later than August 2013	§102(a)(1)
Joytech eVic	No later than August 2013	§102(a)(1)
Joytech eCab	No later than August 2013	§102(a)(1)
Joytech eRoll	No later than August 2013	§102(a)(1)
Jocor Enterprises Lavatube	No later than August 2013	§102(a)(1)
Jocor Enterprises Magma	No later than August 2013	§102(a)(1)
Bloog	No later than August 2013	§102(a)(1)
Da Vinci	No later than August 2013	§102(a)(1)
EGO 1100 Dual Coil	No later than August 2013	§102(a)(1)
Elite Variable Voltage e-Cigarette	No later than August 2013	§102(a)(1)
Firebrand Diablo Falcon Elite	No later than August 2013	§102(a)(1)
Panda eGo Ismoka	No later than August 2013	§102(a)(1)
Panda Evolve	No later than August 2013	§102(a)(1)
Premium EGO	No later than August 2013	§102(a)(1)

Prior Art System	Date of Public Availability or Use	Statutory Provision of Prior Art[2]
Smokeless Delite Ego-T	No later than August 2013	§102(a)(1)
SmokeTech S.I.D. Variable Volage eCig	No later than August 2013	§102(a)(1)
Vapor King	No later than August 2013	§102(a)(1)
Vapor King Storm 2.0	No later than August 2013	§102(a)(1)
Vgo	No later than August 2013	§102(a)(1)
Winder Noval XL	No later than August 2013	§102(a)(1)
Vapor4Life WOW EGO	No later than August 2013	§102(a)(1)
Vapor4Life Zeus	No later than August 2013	§102(a)(1)
Zerocig Georgie	No later than August 2013	§102(a)(1)
Joye 510	No later than August 2013	§102(a)(1)
Joyetech Elips-C	No later than September 2013	§102(a)(1)

Each of the prior art identified in Exhibits E1-E14 of NJOY's initial invalidity contentions either anticipates one or more of the claims of the '981 Patent and/or renders obvious one or more of the claims of the '981 Patent when viewed in combination with other prior art references. NJOY reserves the right to contend that each of the anticipatory references renders the claims obvious either in view of the reference alone or in combination with other references. The identification of any patent or patent application should be deemed an identification of any counterpart patent, application, or associated product; the identification of any article or publication should be deemed a disclosure of any substantially similar article if published in some other form, or of any patent or patent application whole, as understood by a POSA. For example, a reference to a figure should be deemed to refer to the text describing the figure and vice versa.

In addition to the anticipatory references described in these invalidity contentions, the claims of the ’981 Patent are invalid based on obviousness under 35 U.S.C. § 103. In general, a claimed invention is unpatentable if the differences between it 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.” 35 U.S.C. § 103(a); *Graham v. John Deere Co.*, 383 U.S. 1, 13-14 (1966).

Each prior art reference described in Exhibits E1-E14, either alone or in combination with other prior art, renders the claims of the ’981 Patent invalid as obvious. In particular, each prior art reference may be combined with (1) information known to persons skilled in the art at the time of the alleged invention, (2) any of the other anticipatory prior art references, and/or (3) any of the additional prior art identified herein and in the charts attached hereto. In addition to the art set forth above, NJOY incorporates by reference each and every prior art reference of record in the prosecution of the ’981 Patent, including the statements made therein by the applicant, as well as the prior art discussed in the specification.

In view of the Supreme Court’s *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 127 S.Ct. 1727, 1739 (2007) (“*KSR*”) decision, the USPTO issued a set of Examination Guidelines. *See* Examination Guidelines for Determining Obviousness Under 35 U.S.C. § 103 in view of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, 72 Fed. Reg. 57, 526 (Oct. 10, 2007). Those rationales include:

- Combining prior art elements according to known methods to yield predictable results;
- Simple substitution of one known element for another to obtain predictable results;

- Use of a known technique to improve similar devices (methods, or products) in the same way;
- Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- "Obvious to try" – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;
- Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

Id. at 57, 529. These rationales are consistent with the Supreme Court's emphasis in *KSR* that "the results of ordinary innovation" from the perspective of a person of ordinary skill are not patentable, and further that "[a] person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR*, 550 U.S. at 421. NJOY contends that one or more of these rationales apply in considering the obviousness of the claims of the '981 Patent.

As the Supreme Court emphasized in *KSR*, issued patent claims may be determined to be invalid as obvious even without a teaching, suggestion, or motivation to combine particular references. *Id.* at 419 ("The 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."). Nevertheless, a person of skill in the art would have been motivated to combine each of the identified references with the others

identified with respect to the claims of the ’981 Patent. NJOY contends that one of ordinary skill in the art, at the time the alleged inventions of the ’981 Patent were made, would have been motivated to combine the references disclosed herein in such a way to reach the alleged inventions. The teaching, suggestion, or motivation to combine these references, although not required, is found, explicitly or implicitly, in one or more of at least the following: the knowledge or common sense of one of ordinary skill in the art; the prior art references themselves and/or the prior art as a whole, including interrelated teachings of multiple prior art references; the common fields of technology of the references; the subject matter acknowledged as prior art in the ’981 Patent; the nature of the problem to be solved and the existence of similar improvements in similar applications; design incentives and other market forces, including the advantages of creating a superior and more desirable product and the effects of demands known to the design community or present in the marketplace; the ability to implement the alleged invention as a predictable variation of the prior art; improvements in similar devices; any needs or problems known in the fields addressed by the ’981 Patent; the teachings in the references directed to solving the problems that the ’981 Patent allegedly directed to solving; and the number of identified, predictable solutions to the problems addressed by these patents. In addition, the simultaneous (and/or prior) inventions described above (and elsewhere in these contentions) are evidence that motivation to combine the concepts described in the various prior art references did, in fact, exist, and they were, in fact, combined.

These references identify and address many of the same technical issues and suggest similar solutions to those issues. Moreover, many of these references cross-reference and discuss one another, further illustrating the close technical relationship among this group of references. Accordingly, the teachings of the individual prior art references and alleged inventions, combined

with the industry knowledge of a person of ordinary skill in the art at the time of the alleged invention of the ’981 Patent, would render obvious the claims of the ’981 Patent for at least the reasons described herein and in the incorporated exhibits. A person of ordinary skill at the time of the alleged inventions had reason to combine or modify one or more of the listed references in light of the knowledge of a person of ordinary skill in the art at the time of the alleged invention and information in the prior art cited herein. Thus, these references would logically have been combined pursuant to 35 U.S.C. § 103, and there was abundant motivation to combine such references at the time of the purported inventions of the ’981 Patent.

The prior art references set forth in Exhibits E1-E14 clearly demonstrate that each of the limitations of the claims of the ’981 Patent was known in the art. A person of ordinary skill would have been motivated to combine these known elements to arrive at the asserted claims of the ’981 Patent. Furthermore, a person of ordinary skill in the art at the time of the alleged invention would have had a reasonable expectation of success when combining the listed references and the known elements because the proposed combinations would have been well within the level of ordinary skill in the art. Indeed, the proposed combinations would have been merely the application of a known technique or component with a known system in the same field of endeavor. And, when combined, each element merely performs the same predictable functions as it does separately without significantly altering or hindering the functions performed by the other elements.

Exemplary motivations are set forth below:

Chamber defined by the outer shell

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a chamber defined by the outer shell of the battery portion, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a chamber defined by the outer shell of the battery portion in an electronic vaporizer device. A POSA would have been motivated to use a chamber defined by the outer shell of the battery portion, such as those disclosed in Han 944, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use a chamber defined by the outer shell of the battery portion because of the numerous benefits this configuration provides. First, this design enhances safety by adding another layer of protection between the cartomizer and the adult consumer's hand, thereby preventing potential burns. Second, this configuration protects components of the cartomizer from potential damage due to accidental drops or impacts. Third, this configuration allows for a more compact and streamlined design, increasing aesthetics and portability. Fourth, this configuration provides a more secure connection between the cartomizer and the chamber, ensuring more consistent electrical connections, and reducing the risk of potential malfunctions due to loose electrical connections. Having the cartomizer more securely surrounded

by the chamber ensures a more stable electrical connection thereby leading to consistent power delivery and vapor production.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239, with the cartomizer receiving segment having a chamber taught by, for example, Han 944, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231. A POSA would have known that the cartomizer receiving segment having a chamber disclosed in, for example, Han 944, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231 could be added to Galloway 239 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Galloway 239, for example, with Han 944, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Galloway 239 with Han 944, Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231.

A portion of the cartomizer body comprises a translucent material

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a portion of the cartomizer body comprises a translucent material, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use translucent materials to construct electric vaporizers. A POSA would have been motivated to include a translucent material on a portion of the cartomizer, such as those disclosed in Levin 022, Liu 336, Newton 569, and Thorens 231, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results

obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to apply these transparent materials to the cartomizer to allow viewing of the fluid vaporizable substance, such as shown in Levin 022, Liu 336, Newton 569, and Thorens 231. For example, Thorens 231 discloses a translucent cartomizer body comprised of glass or plastic. This configuration ensures that the adult consumer can see the amount of fluid available at any time, thus enhancing convenience of use. A transparent portion of the shell can also add a unique aesthetic design to the device. This design also can improve safety, by allowing the adult consumer to visually inspect the cartridge for any issues that may affect the operation of the device.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239, Han 944, Liu 502, Liu 783, or Pan 622, with the translucent cartomizer configurations taught by Levin 022, Liu 336, Newton 569, and Thorens 231. A POSA would have known that with the translucent cartomizer configurations taught by, for example, Levin 022, Liu 336, Newton 569, and Thorens 231 could be added to any of the identified references to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining, for example, Galloway 239, Han 944, Liu 502, Liu 783, or

Pan 622 with Levin 022, Liu 336, Newton 569, and/or Thorens 231 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Galloway 239, Han 944, Liu 502, Liu 783, or Pan 622 with Levin 022, Liu 336, Newton 569, and/or Thorens 231.

Volume within the cartomizer is positioned in the chamber

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose that the volume within the cartomizer is positioned in the chamber once inserted, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to have the volume within the cartomizer is positioned in the chamber once inserted, such as the configurations disclosed in Liu 502, Liu 783, Pan 622, Paterno 534, and/or Thorens 231 based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA at the time of the alleged invention would have been motivated to configure the device to position the volume within the cartomizer in the chamber once inserted because this configuration has several advantages. For example, this configuration increases the stability of the

cartomizer when inserted into the chamber section of the battery portion. Further, adding another layer of material between the liquid and the adult consumer decreases the likelihood of contact between the adult consumer and the liquid, which can be a safety concern.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239, Han 944, Levin 022, Liu 336, and Newton 569, with the cartomizer and chamber configuration taught by Liu 502, Liu 783, Pan 622, Paterno 534, and Thorens 231. A POSA would have known that the cartomizer and chamber configuration disclosed by, for example, Liu 502, Liu 783, Pan 622, Paterno 534, and Thorens 231 could be added to Galloway 239, Han 944, Levin 022, Liu 336 or Newton 569 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining, for example, Galloway 239, Han 944, Levin 022, Liu 336 and Newton 569 with Liu 502, Liu 783, Pan 622, Paterno 534, and Thorens 231 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Galloway 239, Han 944, Levin 022, Liu 336 and Newton 569 with Liu 502, Liu 783, Pan 622, Paterno 534, and Thorens 231.

An inhalation tube

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose an inhalation tube in fluid communication with the heating element and the wicking element, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to include an inhalation tube in fluid communication with the heating element and the wicking element. A POSA also would have been motivated to combine any of the references identified above with

Galloway 239, Levin 022, Liu 502, Liu 783, Newton 569, and/or Paterno 534 based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to include an inhalation tube in fluid communication with the heating element and the wicking element because this configuration provides several benefits. For example, A POSA would have known that this design ensures a direct path of vapor to the adult consumer. This design ensures that the adult consumer has the highest quality of vapor possible from a given vaporizer, but also prevents buildup of condensation elsewhere in the device. Thus, a POSA would have been motivated to have an inhalation tube in fluid communication with the heating element and the wicking element, such as those disclosed in Galloway 239, Levin 022, Liu 502, Liu 783, Newton 569, and/or Paterno 534.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Han 944, Liu 336, Pan 622, or Thorens 231 with the air inlet passage design taught by Galloway 239, Levin 022, Liu 502, Liu 783, Newton 569, and Paterno 534. A POSA would have known that the inhalation tube design disclosed by Galloway 239, Levin 022, Liu 502, Liu 783, Newton 569, and

Paterno 534 could be added to Han 944, Liu 336, Pan 622, or Thorens 231 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining Han 944, Liu 336, Pan 622, and Thorens 231 with Galloway 239, Levin 022, Liu 502, Liu 783, Newton 569, and/or Paterno 534 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Han 944, Liu 336, Pan 622, and Thorens 231 with Galloway 239, Levin 022, Liu 502, Liu 783, Newton 569, and/or Paterno 534.

Metallic structure for securing the cartomizer to the magnets in the chamber

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a metallic structure for securing the cartomizer to the magnets in the chamber, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a metal element for coupling with magnet of the battery portion in an electronic vaporizer device. A POSA would have been motivated to use a metal element for coupling with magnet of the battery portion, such as those disclosed in Levin 022, Liu 502, and/or Liu 783, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use a metal element for coupling with a magnet of the battery portion because of the numerous benefits this configuration provides. First, this design simplifies the process of attaching and detaching cartomizer, allowing adult consumer to easily insert cartridges into the device. Second, magnetic connections between the cartomizer and the battery portion reduces wear and tear that can occur with other attachment means such as screw threads. Third, having a metal element on the cartomizer that connects to the magnets in the battery portion is more cost. Fourth, this design increases the safety of the device, since an accidental drop may allow for the cartomizer to detach and reduce the risk of damage to the battery portion or the cartomizer.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239, Han 344, Pan 622, Paterno 534, and Thorens 231, with the metal element for coupling with magnet of the battery portion taught by Levin 022, Liu 502, and/or Liu 783. A POSA would have known that the metal element for coupling with magnet of the battery portion disclosed in, for example, Levin 022, Liu 502, and/or Liu 783 could be added to Galloway 239, Han 344, Pan 622, Paterno 534, and Thorens 231 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining, for example, Galloway 239, Han 344, Pan 622, Paterno 534, and Thorens 231 with Levin 022, Liu 502, and/or Liu 783 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine, for example, Galloway 239, Han 344, Pan 622, Paterno 534, and Thorens 231 with Levin 022, Liu 502, and/or Liu 783.

Friction fit between cartomizer and chamber

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a friction fit or suction fit between the cartomizer and chamber, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a friction fit between the cartomizer and chamber in an electronic vaporizer device. A POSA would have been motivated to use a friction fit between the cartomizer and chamber, such as those disclosed in Paterno 534 and/or Thorens 231, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use a friction fit between the cartomizer and chamber because of the numerous benefits this configuration provides. First, this design simplifies the design and increases the adult consumer experience by allowing adult consumers to quickly switch between different cartridges. Second, friction fit designs simplify the overall construction of the device and reduce the manufacturing complexity. Third, friction fits can ensure a consistent and solid connection between the cartridge and the device, which is important for effective vapor production and device performance.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239, Han 344, Liu 502, Liu 783, and Pan 622, with the friction fit between the cartomizer and chamber taught by Paterno 534 and/or Thorens 231. A POSA would have known that the friction fit between the cartomizer and chamber disclosed in, for example, Paterno 534 and/or Thorens 231 could be added to Galloway 239, Han 344, Liu 502, Liu 783, and Pan 622 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining, for example, Galloway 239, Han 344, Liu 502, Liu 783, and Pan 622 with Paterno 534 and/or Thorens 231 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Galloway 239, Han 344, Liu 502, Liu 783, and Pan 622 with Paterno 534 and/or Thorens 231.

Window in the outer shell

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a window in the outer shell that aligns with the translucent portion of the cartomizer body, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to include a window in the outer shell that aligns with the translucent portion of the cartomizer body in an electronic vaporizer device. A POSA would have been motivated to include a window in the outer shell that aligns with the translucent portion of the cartomizer body, such as those disclosed in Liu 336, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known

element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to include a window in the outer shell that aligns with the translucent portion of the cartomizer body because of the numerous benefits this configuration provides. A POSA would have known that having an outer shell with a window that aligns with the translucent portion of the cartomizer body would advantageously allow adult consumers to easily see the level of e-liquid remaining in the cartridge, thereby letting the adult consumer more easily know when it is time to refill or replace the cartridge. A window in the outer shell that aligns with the translucent portion of the cartomizer body can also add a unique aesthetic design to the device. This design also can improve safety, by allowing the adult consumer to visually inspect the cartridge for any issues that may affect the operation of the device.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239, Han 344, Liu 502, Liu 783, Pan 622, Paterno 534, Thorens 231, with a window in the outer shell that aligns with the translucent portion of the cartomizer body taught by, for example, Liu 336 and Young 251,. A POSA would have known that the window on or proximate to the shell permitting viewing of the cartomizer disclosed in, for example, Liu 336 and Young 251, could be added to Galloway 239, Han 344, Liu 502, Liu 783, Pan 622, Paterno 534, Thorens 231 to produce a functional device because the references are directed to the same field, electronic

vaporizers that heat a vaporizable liquid. Combining, for example, Galloway 239, Han 344, Liu 502, Liu 783, Pan 622, Paterno 534, Thorens 231 with Liu 336 and Young 251, is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Galloway 239, Han 344, Liu 502, Liu 783, Pan 622, Paterno 534, Thorens 231 with Liu 336 and Young 251,.

Common outer shell

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a common outer shell shared by the battery housing segment and the cartomizer receiving segment, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a common outer shell in an electronic vaporizer device. A POSA would have been motivated to use a common outer shell, such as those disclosed in Han 944, Liu 502, Pan 622, Paterno 534, and/or Thorens 231, based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to include a common outer shell shared by the battery housing segment and the cartomizer receiving segment because of the numerous benefits this

configuration provides. First, a common outer shell provides better protection since there are fewer exposed parts or seams that could be damaged and/or fail. Second, a common outer shell simplifies the construction of the device and therefore reduces the manufacturing complexity and cost. Third, having a common outer shell reduces the risk that contaminants, moisture, or dust can enter the device.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239 and Liu 783, with the common outer shell taught by Han 944, Liu 502, Pan 622, Paterno 534, and/or Thorens 231. A POSA would have known that the common outer shell disclosed in, for example, Han 944, Liu 502, Pan 622, Paterno 534, and/or Thorens 231 could be added to Galloway 239 and Liu 783 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining, for example, Galloway 239 and Liu 783 with Han 944, Liu 502, Pan 622, Paterno 534, and/or Thorens 231 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine, for example, Galloway 239 and Liu 783 with Han 944, Liu 502, Pan 622, Paterno 534, and/or Thorens 231.

Rechargeable battery

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose a rechargeable battery, it would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, it was well known and common to use a rechargeable battery in an electronic cigarette. A POSA also would have been motivated to use a rechargeable battery, such as those disclosed in Galloway 239, Han 944, Levin 022, Liu 336, Pan 622, Paterno 534, and Thorens 231, based on the nature of the problem being solved; the express, implied and

inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have been motivated to use a rechargeable battery because they have several advantages. For example, compared to conventional, disposable batteries, rechargeable batteries save adult consumers money and provide a simplified experience. With a device powered by a conventional, disposable battery, each and every time their electronic cigarette loses power, adult consumers must purchase a new, expensive battery, then deal with the hassle of disassembling their device to replace the old battery. With a device powered by a rechargeable battery, adult consumers simply plug in the device to recharge the battery. Moreover, a POSA would recognize that in Galloway 239, Han 944, Levin 022, Liu 336, Pan 622, Paterno 534, and Thorens 231's well-known rechargeable batteries could be used in any of the references identified above to reduce electronic waste, which is an industry-wide concern for electronics manufacturers. For example, each time a conventional, disposable battery is depleted, it is thrown in the garbage and ends up in a landfill. At best, the battery is recycled; it must be shipped to a recycling facility, and when it arrives, it undergoes processing to salvage a fraction of the materials contained therein. When a rechargeable battery is depleted, it is simply recharged.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Liu 502, Liu 783, or Newton 569, with the rechargeable battery design taught by Galloway 239, Han 944, Levin 022, Liu 336. Pan 622, Paterno 534, and Thorens 231. A POSA would have known that the rechargeable battery design disclosed by, for example, Galloway 239, Han 944, Levin 022, Liu 336. Pan 622, Paterno 534, and Thorens 231 could be added to Liu 502, Liu 783, or Newton 569 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining, for example, Liu 502, Liu 783, and Newton 569 with Galloway 239, Han 944, Levin 022, Liu 336. Pan 622, Paterno 534, and/or Thorens 231 is a predictable use of electronic vaporizer components according to their established functions. Accordingly, it would have been routine for a POSA to combine Liu 502, Liu 783, and Newton 569 with Galloway 239, Han 944, Levin 022, Liu 336. Pan 622, Paterno 534, and/or Thorens 231.

Coplanar battery electrical contacts

To the extent Complainants contend that any of the prior art identified above do not expressly or inherently disclose coplanar battery electrical contacts, the limitation would have been obvious in light of the prior art and background knowledge possessed by a person of ordinary skill in the art.

At the time of the alleged invention, a POSA also would have been motivated to combine any of the references identified above with Paterno 534 based on the nature of the problem being solved; the express, implied and inherent teachings of the prior art; the knowledge of POSAs; the predictable results obtained in combining the different elements of the prior art; the predictable results obtained in simple substitution of one known element for another; the use of a known technique to improve similar devices, methods, or products in the same way; the predictable results obtained in applying a known technique to a known device, method, or product ready for

improvement; the finite number of identified predictable solutions that had a reasonable expectation of success; and known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

A POSA would have recognized that it was well known to make the battery electrical contacts coplanar, such as the ones disclosed in Paterno 534. A POSA would have been motivated to have coplanar battery electrical contacts because this configuration provides several benefits. For example, A POSA would have known that this design minimizes the risk of dirt or debris buildup that occurs around contacts that protrude at different lengths. Further, this configuration takes up the least space within a device, ensuring maximum portability. Coplanar electric contacts also ensure that any lateral motion of the cartomizer within the chamber does not wear down a protruding battery electrical contact, lengthening the life of the device.

A POSA would have had a reasonable expectation of success modifying any of the prior art identified above that Complainants may contend do not disclose this limitation, such as Galloway 239, Han 944, Levin 022, Liu 336, Liu 502, Liu 783, Newton 569, Pan 622, or Thorens 231, with the coplanar electrical battery contact design taught by, for example, Paterno 534, Thorens 231, Zhang 716, Fu 037, and Yeom 424. A POSA would have known that the coplanar battery electrical contact design disclosed by, for example, Paterno 534, Thorens 231, Zhang 716, Fu 037, and Yeom 424 could be added to Galloway 239, Han 944, Levin 022, Liu 336, Liu 502, Liu 783, Newton 569, Pan 622, or Thorens 231 to produce a functional device because the references are directed to the same field, electronic vaporizers that heat a vaporizable liquid. Combining, for example, Paterno 534, Thorens 231, Zhang 716, Fu 037, and Yeom 424, with Galloway 239, Han 944, Levin 022, Liu 336, Liu 502, Liu 783, Newton 569, Pan 622, and/or Thorens 231 is a predictable use of electronic vaporizer components according to their established

functions. Accordingly, it would have been routine for a POSA to combine Paterno 534, Thorens 231, Zhang 716, Fu 037, and Yeom 424 with Galloway 239, Han 944, Levin 022, Liu 336, Liu 502, Liu 783, Newton 569, Pan 622, and/or Thorens 231.

II. Invalidity of U.S. Patent No. 11,606,981 Under 35 U.S.C. § 112

A. Lack of Written Description

All asserted claims of the '981 Patent are also invalid for failure to meet the written description requirement of 35 U.S.C. § 112. To satisfy the written description requirement, the specification must reasonably convey to those skilled in the art that the inventor had possession of the claimed subject matter. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). To demonstrate possession, the inventor must provide enough description in the specification to demonstrate that s/he actually invented what has been claimed. *Centocor Ortho Biotech, Inc. v. Abbott Labs.*, 636 F.3d 1341, 1348 (Fed. Cir. 2011). Doing so "serves the fundamental patent purpose of making known what has been invented, including any variations and alternatives contemplated by the inventor." *Space Sys./Loral, Inc. v. Lockheed Martin Corp.*, 405 F.3d 985, 987 (Fed. Cir. 2005). Moreover, "[a]dequate description of the invention guards against the inventor's overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation." *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1561, 19 U.S.P.Q.2d 1111 (Fed. Cir. 1991). "While the written description requirement does not require that the specification recite the claimed invention in any particular way, pointing to an 'amalgam of disclosures' from which an artisan could have created the claimed invention does not satisfy this requirement." *Flash-Control, LLC v. Intel Corp.*, No. 2020-2141, 2021 WL 2944592, at *3 (Fed. Cir. July 14, 2021) (citing *Novozymes A/S v. DuPont Nutrition Biosciences APS*, 723 F.3d 1336, 1349 (Fed. Cir. 2013)). Instead, determining whether

a claim has adequate written description support requires analyzing "each claim … as an integrated whole rather than as a collection of independent limitations." *Novozymes*, 723 F.3d at 1349.

To the extent Complainants contend that "wicking element" in the asserted claims encompasses a porous ceramic block, the asserted claims are invalid for lack of written description support. The '981 Patent only describes a wick that comprises long bundle, twist or braid of fibers. *See* '981 Patent at 9:61-10:5, Figs. 1, 4, 12, and 15. A POSA reviewing these disclosures would not have understood that the inventors were in possession of an electronic cigarette that used a porous ceramic block.

To the extent Complainants contend that "mouthpiece" in the asserted claims encompasses a "mouthpiece" for a cartridge that is not separate from the cartomizer "body" for holding the vaporizable liquid, the asserted claims are invalid for lack of written description support. The '981 Patent consistently and only describes cartridges that have a mouthpiece that is a distinct component from the cartridge body. *See, e.g.*, '981 Patent at 9:61-10:5 ("a mouthpiece 220 provided on body 208"). Indeed, the '981 Patent's mouthpiece is intended to be separate in order to fill the cartomizer body with liquid. *Id.* at 10:21-26. A mouthpiece separate and distinct from the cartomizer body is key to the '981 Patent's cartridge design. A POSA reviewing these disclosures would not have understood that the inventors were in possession of an electronic cigarette cartridge whereby the mouthpiece is not separate and distinct from the cartomizer body.

B. Indefiniteness

All asserted claims of the '722 Patent are also invalid because they are not sufficiently definite as required under 35 U.S.C. § 112. To be valid, a "patent's claims, viewed in light of the specification and prosecution history, [must] inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014). A "patent must be precise enough to afford clear notice of what is claimed, thereby

appris[ing] the public of what is still open to them." *Id.* at 909 (internal quotations and citaitons omitted). Otherwise there would be "[a] zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims." *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236 (1942).

In order for a means-plus-function limitation to satisfy this definiteness requirement, "the corresponding structure(s) of a means-plus-function limitation must be disclosed in the written description in such a manner that one skilled in the art will know and understand what structure corresponds to the means limitation." *Amtel Corp. v. Information Storage Devices, Inc.*, 198 F.3d 1374, 1382 (Fed. Cir. 1999).

The asserted claims are invalid as being indefinite, because they each recite a means-plus-function limitation without disclosing the corresponding structure for that limitation. For example, each of the asserted claims recites "heating element," which should be construed according to 35 U.S.C. § 112(f). A POSA would not have been understood the term "heating element" to have a sufficiently definite meaning as the name for structure. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015). Rather, the term "heating element" recites a function (heating a vaporizable fluid) without reciting sufficient structure for performing function. *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000). The '981 Patent specification also does not recite any structure for heating a vaporizable fluid. *See* '981 Patent at 9:61-10:5. Therefore, the asserted claims, which each recite the "heating element," are invalid as indefinite.

EXHIBIT E-1

EXHIBIT E-1

Invalidity Claim Chart of U.S. Pat. No. 11,229,239 ("Galloway 239") against U.S. Patent No. 11,606,981

Galloway 239, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 5, 6, 8, 9, 10, 11, 13, 14-16, 17, and 18 of U.S. Patent No. 11,606,981. Galloway 239 was filed on July 19, 2013, and published on January 22, 2015. Galloway 239 qualifies as prior art to the '981 Patent under at least AIA 35 U.S.C. § 102(a)(2).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Galloway 239. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'981 Claim Limitations	Galloway 239
[1.A] A vaporizer device comprising:	To the extent the preamble is limiting, Galloway 239 discloses and/or renders obvious an vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 4:4-7; 4:15-23; 8:27-30; Figs. 1-2.
[1.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	Galloway 239 discloses and/or renders obvious a battery portion having an outer shell and a chamber defined by the outer shell. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 4:66-5:6; 6:26-32; 6:41-44; 10:14-19; Figs. 1-2.
[1.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	Galloway 239 discloses and/or renders obvious a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '981 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’981 Claim Limitations	Galloway 239
	For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 3:6-8; 6:16-23; 6:65-7:3; 7:9-15; 8:30-33; 9:10-17; Figs. 1-2.
[1.D] a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance,	Galloway 239 discloses and/or renders obvious wherein a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 5:16-33; 7:9-12; 7:51-53; 7:58-59; Figs. 1-2.
[1.E] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance,	
[1.F] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	Galloway 239 discloses and/or renders obvious a cartomizer body configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 4:66-5:6; 6:26-32; 6:41-44; 10:14-19; Figs. 1-2.
[1.G] a heating element and a wicking element within the cartomizer body;	Galloway 239 discloses and/or renders obvious a heating element and a wicking element within the cartomizer body. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 3:4-12; 5:17-26; 7:9-12; 7:56-66; 12:33-37; Figs 1-2.
[1.H] an inhalation tube in fluid communication with the heating element and the wicking element;	Galloway 239 discloses and/or renders obvious an inhalation tube in fluid communication with the heating element and the wicking element. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 6:65-7:3; 8:33-40; Figs 1-2.
[1.I] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	Galloway 239 discloses and/or renders obvious a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube.

’981 Claim Limitations	Galloway 239
	For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 6:65-7:3; 8:8:30-33; 9:10-17; Figs. 1-2.
[1.J] a plurality of cartomizer electrical contacts on an exterior of the insertion end,	Galloway 239 discloses and/or renders obvious a plurality of cartomizer electrical contacts on an exterior of the insertion end. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 6:54-60; 7:13-15; 7:34-41; 12:45-49; Fig. 2.
[1.K] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	Galloway 239 discloses and/or renders obvious wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 6:54-60; 7:13-15; 7:34-41; 12:45-49; Fig. 2.
[2] The cartomizer of claim 1, wherein the translucent material comprises glass or plastic.	
[5] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a cartomizer metallic surface configured to be attracted to at least one magnet in or proximate to the chamber.	Galloway 239 discloses and/or renders obvious the cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a cartomizer metallic surface configured to be attracted to at least one magnet in or proximate to the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 6:20-23; Fig. 2.
[6] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure.	Galloway 239 discloses and/or renders obvious the cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 6:20-23; 6:54-60; Figs. 1-2.

’981 Claim Limitations	Galloway 239
[8] The cartomizer of claim 1, wherein the plurality of cartomizer electrical contacts is further configured to at least partially compress the plurality of battery electrical contacts when the cartomizer body is inserted into the chamber.	
[9.A] A vaporizer device comprising:	*See* [1.A].
[9.B] a cartomizer comprising,	*See* [1.C].
[9.C] a cartomizer body configured to hold a fluid vaporizable substance,	*See* [1.D].
[9.D] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance;	
[9.E] a heating element and a wicking element within the cartomizer body; and	*See* [1.G].
[9.F] a plurality of cartomizer electrical contacts on an exterior of the insertion end; and	*See* [1.J].
[9.G] a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion; and	Galloway 239 discloses and/or renders obvious a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 4:66-5:6; 6:26-32; 6:41-44; 10:14-19; Figs. 1-2.
[9.H] a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion,	Galloway 239 discloses and/or renders obvious a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 4:66-5:6; 6:26-32; 6:41-44; 10:14-19; Figs. 1-2.
[9.I] wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer	

’981 Claim Limitations	Galloway 239
body aligns with the window when the cartomizer body is inserted into the chamber.	
[10] The vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment.	Galloway 239 discloses and/or renders obvious the vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 4:51-53; 4:66-5:6; 6:41-45; Figs. 1-2.
[11] The vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment.	Galloway 239 discloses and/or renders obvious a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 4:66-5:6; 6:26-32.
[13.A] A vaporizer device comprising:	*See* [1.A].
[13.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	*See* [1.B].
[13.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	*See* [1.C].
[13.D] a cartomizer body having a volume defined therein, the volume configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].
[13.E] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	
[13.G] a heating element within the cartomizer body;	*See* [1.G].
[13.H] cartomizer electrical contacts operable to direct current to the heating element, wherein the cartomizer	*See* [1.J].

’981 Claim Limitations	Galloway 239
electrical contacts are on an exterior of the cartomizer body; and	
[13.I] a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance;	Galloway 239 discloses and/or renders obvious a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 3:8-12; 7:9-12; 7:56-64; 12:33-37; Figs. 1-2.
[13.J] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[13.K] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube.	*See* [1.I].
[14] The cartomizer of claim 13, wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance.	
[15] The cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine.	Galloway 239 discloses and/or renders obvious the cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 2:13-16; 3:64-67; 5:26-29.
[16] The cartomizer of claim 13, wherein cartomizer electrical contacts are positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	*See* [1.K].
[17.A] A vaporizer device comprising:	*See* [1.A].
[17.B] a cartomizer comprising:	*See* [1.C].

’981 Claim Limitations	Galloway 239
[17.C] a cartomizer body configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].
[17.D] wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device,	Galloway 239 discloses and/or renders obvious a cartomizer body that is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 4:66-5:6; 6:26-32; 6:41-44; 10:14-19; Figs. 1-2.
[17.E] a heating element within the cartomizer body,	*See* [1.G].
[17.F] cartomizer electrical contacts operable to direct current to the heating element, and	*See* [1.J].
[17.G] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	*See* [1.I].
[17.H] a battery portion, the battery portion having a first end and a second end, the battery portion comprising:	*See* [9.G].
[17.I] a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion,	
[17.J] a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery,	Galloway 239 discloses and/or renders obvious a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery. For example, see the following passages and/or figures, as well as all related disclosures: Galloway 239 at 4:66-5:6; 6:26-32; 6:41-44; 10:14-19; Figs. 1-2.
[17.K] battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the	

’981 Claim Limitations	Galloway 239
cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar, and	
[17.L] an outer shell forming at least part of the chamber, wherein a window is formed in the outer shell to permit viewing of the cartomizer body when the cartomizer body is received into the chamber.	
[18.A] The vaporizer device of claim 9, wherein the cartomizer has a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer further comprises,	*See* [1.C].
[18.B] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[18.C] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube;	*See* [1.I].
[18.D] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	*See* [1.J]-[1.K].

EXHIBIT E-2

EXHIBIT E-2

Invalidity Claim Chart of U.S. Patent 8,156,944 ("Han 944") against U.S. Patent No. 11,606,981

Han 944, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 5, 6, 8, 9, 10, 11, 13, 14-16, 17, and 18 of U.S. Patent No. 11,606,981. Han 944 was filed on May 15, 2007, and published on April 16, 2009. Han 944 qualifies as prior art to the '981 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Han 944. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'981 Claim Limitations	Han 944
[1.A] A vaporizer device comprising:	To the extent the preamble is limiting, Han 944 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:55-60; 2:33-34; 2:60-67; Figs.5-6.
[1.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	Han 944 discloses and/or renders obvious a battery portion having an outer shell and a chamber defined by the outer shell. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:64-2:3; 5:43-46; 6:49-55; Figs. 1-2.
[1.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	Han 944 discloses and/or renders obvious a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '981 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’981 Claim Limitations	Han 944
	For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:67-2:1; 3:13-20; 5:38-46; 6:66-7:2; 8:26-29; Figs. 1-2, 4.
[1.D] a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance,	Han 944 discloses and/or renders obvious a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 3:13-15; 3:51-55; 6:58-61; Figs. 3-4.
[1.E] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance,	
[1.F] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	Han 944 discloses and/or renders obvious wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:67-2:1; 2:42-43; 3:13-20; 5:38-46; Figs. 1-2.
[1.G] a heating element and a wicking element within the cartomizer body;	Han 944 discloses and/or renders obvious a heating element and a wicking element within the cartomizer body. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 2:33-34; 2:35-48; 3:1-6; 6:30-34; 7:25-29; 7:43-47; 8:50-54; Figs. 5, 7, 14.
[1.H] an inhalation tube in fluid communication with the heating element and the wicking element;	Han 944 an inhalation tube in fluid communication with the heating element and the wicking element. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 2:35-38; 6:13-21; 8:43-47; Figs. 5-8, 14-16.
[1.I] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	Han 944 discloses and/or renders obvious a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube.

’981 Claim Limitations	Han 944
	For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 6:66-7:2; 8:26-29; Figs. 1-2, 4.
[1.J] a plurality of cartomizer electrical contacts on an exterior of the insertion end,	
[1.K] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	
[2] The cartomizer of claim 1, wherein the translucent material comprises glass or plastic.	
[5] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a cartomizer metallic surface configured to be attracted to at least one magnet in or proximate to the chamber.	
[6] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure.	Han 944 discloses and/or renders obvious the cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 2:1-3; 5:45-46; Figs. 1-2.
[8] The cartomizer of claim 1, wherein the plurality of cartomizer electrical contacts is further configured to at least partially compress the plurality of battery electrical contacts when the cartomizer body is inserted into the chamber.	
[9.A] A vaporizer device comprising:	*See* [1.A].
[9.B] a cartomizer comprising,	*See* [1.C].
[9.C] a cartomizer body configured to hold a fluid vaporizable substance,	*See* [1.D].

’981 Claim Limitations	Han 944
[9.D] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance;	
[9.E] a heating element and a wicking element within the cartomizer body; and	*See* [1.G].
[9.F] a plurality of cartomizer electrical contacts on an exterior of the insertion end; and	
[9.G] a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion; and	Han 944 discloses and/or renders obvious a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:61-63; 2:4-9; 4:1-5; Figs. 1-2.
[9.H] a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion,	Han 944 discloses and/or renders obvious a battery portion having an outer shell and a chamber defined by the outer shell. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:64-2:3; 5:43-46; 6:49-55; Figs. 1-2.
[9.I] wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer body aligns with the window when the cartomizer body is inserted into the chamber.	
[10] The vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment.	Han 944 discloses and/or renders obvious the vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:64-2:3; 5:43-46; 6:49-55; Figs. 1-2.
[11] The vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment.	Han 944 discloses and/or renders obvious the vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment.

’981 Claim Limitations	Han 944
	For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 2:10-13; 2:18-20; 3:43-46; 4:1-5.
[13.A] A vaporizer device comprising:	*See* [1.A].
[13.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	*See* [1.B].
[13.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	*See* [1.C].
[13.D] a cartomizer body having a volume defined therein, the volume configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].
[13.E] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	*See* [1.F].
[13.G] a heating element within the cartomizer body;	*See* [1.G].
[13.H] cartomizer electrical contacts operable to direct current to the heating element, wherein the cartomizer electrical contacts are on an exterior of the cartomizer body; and	
[13.I] a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance;	Han 944 discloses and/or renders obvious a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 2:55-57; 2:60-67; 6:30-34; 7:4-8; Figs. 5-8.
[13.J] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[13.K] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube.	*See* [1.I].

’981 Claim Limitations	Han 944
[14] The cartomizer of claim 13, wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance.	
[15] The cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine.	Han 944 discloses and/or renders obvious the cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 1:5-7; 3:51-55; 3:63-66; 4:15-17.
[16] The cartomizer of claim 13, wherein cartomizer electrical contacts are positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	
[17.A] A vaporizer device comprising:	*See* [1.A].
[17.B] a cartomizer comprising:	*See* [1.C].
[17.C] a cartomizer body configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].
[17.D] wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device,	*See* [1.F].
[17.E] a heating element within the cartomizer body,	*See* [1.G].
[17.F] cartomizer electrical contacts operable to direct current to the heating element, and	
[17.G] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	*See* [1.I].
[17.H] a battery portion, the battery portion having a first end and a second end, the battery portion comprising:	*See* [9.G].

’981 Claim Limitations	Han 944
[17.I] a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion,	Han 944 discloses and/or renders obvious a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:64-2:3; 5:43-46; 6:49-55; Figs. 1-2.
[17.J] a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery,	Han 944 discloses and/or renders obvious a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery. For example, see the following passages and/or figures, as well as all related disclosures: Han 944 at 1:64-2:3; 2:10-13; 5:43-46; 6:49-55; Figs. 1-2.
[17.K] battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar, and	
[17.L] an outer shell forming at least part of the chamber, wherein a window is formed in the outer shell to permit viewing of the cartomizer body when the cartomizer body is received into the chamber.	
[18.A] The vaporizer device of claim 9, wherein the cartomizer has a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer further comprises,	*See* [1.C].
[18.B] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[18.C] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube;	*See* [1.I].

’981 Claim Limitations	Han 944
[18.D] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	

EXHIBIT E-3

EXHIBIT E-3

Invalidity Claim Chart of U.S. Pat. No. 9,427,022 ("Levin 022") against U.S. Patent No. 11,606,981

Levin 022, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 5, 6, 8, 9, 10, 11, 13, 14-16, 17, and 18 of U.S. Patent No. 11,606,981. Levin 022 was filed on March 12, 2013, and published on November 14, 2013. Levin 022 qualifies as prior art to the '981 Patent under at least AIA 35 U.S.C. § 102(a)(2).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Levin 022. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'981 Claim Limitations	Levin 022
[1.A] A vaporizer device comprising:	To the extent the preamble is limiting, Levin 022 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 1:14-17; 2:31-33; 2:34-50; Fig. 1-2.
[1.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	Levin 022 discloses and/or renders obvious a battery portion having an outer shell and a chamber defined by the outer shell. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 8:35-39; 10:31-38; 11:4-14; 22:5-23; 24:23-25; Fig. 1-3.
[1.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	Levin 022 discloses and/or renders obvious a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '981 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’981 Claim Limitations	Levin 022
	For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 19:39-41; 21:10-20; 22:7-9; Figs. 1-3.
[1.D] a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance,	Levin 022 discloses and/or renders obvious a body including a structure configured to hold a vaporizable liquid. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 4:6-17; 21:20-29; 23:3-10; Figs. 2, 11.
[1.E] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance,	
[1.F] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	
[1.G] a heating element and a wicking element within the cartomizer body;	Levin 022 discloses and/or renders obvious a heating element within the cartomizer body. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 2:42-50; 14:49-64; 15:21-37; 23:22-26; Fig. 3.
[1.H] an inhalation tube in fluid communication with the heating element and the wicking element;	Levin 022 discloses and/or renders obvious an inhalation tube in fluid communication with the heating element and the wicking element. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 2:34-54; 21:20-26; 23:3-14; 27:31-34; Fig. 3.
[1.I] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	Levin 022 discloses and/or renders obvious a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube. For example, see the following passages and/or figures, as well as all related disclosures:

’981 Claim Limitations	Levin 022
	Levin 022 at 19:39-41; 21:10-26; 22:7-9; Figs. 1-3.
[1.J] a plurality of cartomizer electrical contacts on an exterior of the insertion end,	
[1.K] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	
[2] The cartomizer of claim 1, wherein the translucent material comprises glass or plastic.	
[5] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a cartomizer metallic surface configured to be attracted to at least one magnet in or proximate to the chamber.	Levin 022 discloses and/or renders obvious The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a cartomizer metallic surface configured to be attracted to at least one magnet in or proximate to the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 3:64-4:2; 19:63-67; 20:48-51; 25:16-22; Figs 3, 9.
[6] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure.	Levin 022 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer is configured to be retained in the chamber by friction between the cartomizer and the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 22:17-19; 24:52-59; Fig 3.
[8] The cartomizer of claim 1, wherein the plurality of cartomizer electrical contacts is further configured to at least partially compress the plurality of battery electrical contacts when the cartomizer body is inserted into the chamber.	
[9.A] A vaporizer device comprising:	*See* [1.A].
[9.B] a cartomizer comprising,	*See* [1.C].
[9.C] a cartomizer body configured to hold a fluid vaporizable substance,	*See* [1.D].

’981 Claim Limitations	Levin 022
[9.D] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance;	
[9.E] a heating element and a wicking element within the cartomizer body; and	*See* [1.G].
[9.F] a plurality of cartomizer electrical contacts on an exterior of the insertion end; and	
[9.G] a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion; and	Levin 022 discloses and/or renders obvious a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 8:35-39; 10:31-38; 11:4-14; 22:5-23; 24:23-25; Fig. 1-3.
[9.H] a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion,	
[9.I] wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer body aligns with the window when the cartomizer body is inserted into the chamber.	
[10] The vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment.	Levin 022 discloses and/or renders obvious the vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 10:31-38; 11:4-14; Figs. 1-3.
[11] The vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment.	Levin 022 discloses and/or renders obvious the vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment. For example, see the following passages and/or figures, as well as all related disclosures:

’981 Claim Limitations	Levin 022
	Levin 022 at 8:66-9:2; 13:65-14:3; 14:23-26; 23:41-45.
[13.A] A vaporizer device comprising:	*See* [1.A].
[13.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	*See* [1.B].
[13.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	*See* [1.C].
[13.D] a cartomizer body having a volume defined therein, the volume configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].
[13.E] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	
[13.G] a heating element within the cartomizer body;	*See* [1.G].
[13.H] cartomizer electrical contacts operable to direct current to the heating element, wherein the cartomizer electrical contacts are on an exterior of the cartomizer body; and	
[13.I] a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance;	
[13.J] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[13.K] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube.	*See* [1.I].
[14] The cartomizer of claim 13, wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance.	
[15] The cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine.	Levin 022 discloses and/or renders obvious the cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine.

’981 Claim Limitations	Levin 022
	For example, see the following passages and/or figures, as well as all related disclosures: Levin 022 at 21:26-32.
[16] The cartomizer of claim 13, wherein cartomizer electrical contacts are positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	
[17.A] A vaporizer device comprising:	*See* [1.A].
[17.B] a cartomizer comprising:	*See* [1.C].
[17.C] a cartomizer body configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].
[17.D] wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device,	
[17.E] a heating element within the cartomizer body,	*See* [1.G].
[17.F] cartomizer electrical contacts operable to direct current to the heating element, and	*See* [1.J].
[17.G] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	*See* [1.I].
[17.H] a battery portion, the battery portion having a first end and a second end, the battery portion comprising:	*See* [9.G].
[17.I] a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion,	
[17.J] a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery,	Levin 022 discloses and/or renders obvious a battery portion having an outer shell and a chamber defined by the outer shell. For example, see the following passages and/or figures, as well as all related disclosures:

’981 Claim Limitations	Levin 022
	Levin 022 at 8:35-39; 10:31-38; 11:4-14; 22:5-23; 24:23-25; Fig. 1-3.
[17.K] battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar, and	
[17.L] an outer shell forming at least part of the chamber, wherein a window is formed in the outer shell to permit viewing of the cartomizer body when the cartomizer body is received into the chamber.	
[18.A] The vaporizer device of claim 9, wherein the cartomizer has a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer further comprises,	*See* [1.C].
[18.B] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[18.C] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube;	*See* [1.I].
[18.D] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	

EXHIBIT E-4

EXHIBIT E-4

Invalidity Claim Chart of U.S. 9,155,336 ("Liu 336") against U.S. Patent No. 11,606,981

Liu 336, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 5, 6, 8, 9, 10, 11, 13, 14-16, 17, and 18 of U.S. Patent No. 11,606,981. Liu 336 was filed on June 16, 2012, and published on December 19, 2013. Liu 336 qualifies as prior art to the '981 Patent under at least AIA 35 U.S.C. § 102(a)(2).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Liu 336. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'981 Claim Limitations	Liu 336
[1.A] A vaporizer device comprising:	To the extent the preamble is limiting, Liu 336 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 1:42-45; 2:58-61; 4:64-66; 16:24-25; Figs. 1-2.
[1.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	Liu 336 discloses and/or renders obvious a battery portion having an outer shell and a chamber defined by the outer shell. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 4:52-57; 8:16-21; 8:33-37; Fig. 8.
[1.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	Liu 336 discloses and/or renders obvious a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '981 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’981 Claim Limitations	Liu 336
	For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 2:3-6; 4:52-54; 4:63-5:1; 5:5:1-3; 8:4-15; Fig. 3.
[1.D] a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance,	Liu 336 discloses and/or renders obvious a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 2:32-40; 2:53-57; 4:63-66; 7:54-8:3; Fig. 3.
[1.E] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance,	Liu 336 discloses and/or renders obvious the vaporizer of claim 1, wherein the cartomizer further comprises a mouthpiece opposite an end of the cartomizer configured for insertion into the chamber.. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 1:66-2:2; 5:15-21; 7:57-58; Fig. 3.
[1.F] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	
[1.G] a heating element and a wicking element within the cartomizer body;	Liu 336 discloses and/or renders obvious a heating element and a wicking element within the cartomizer body. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 2:58-61; 3:5-9; 4:64-66; 6:7-9; 6:14-15; Fig. 3.
[1.H] an inhalation tube in fluid communication with the heating element and the wicking element;	
[1.I] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	Liu 336 discloses and/or renders obvious a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 3:52-54; 4:63-5:1; 5:5:1-3; 8:4-15; Figs. 3, 7.

’981 Claim Limitations	Liu 336
[1.J] a plurality of cartomizer electrical contacts on an exterior of the insertion end,	Liu 336 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 5:24-30; 5:36-39; 5:65-6:2; Figs. 3, 5, 6.
[1.K] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	Liu 336 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 5:24-30; 5:36-39; 5:65-6:2; Figs. 3, 5, 6.
[2] The cartomizer of claim 1, wherein the translucent material comprises glass or plastic.	Liu 336 discloses and/or renders obvious the cartomizer of claim 1, wherein the translucent material comprises glass or plastic. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 5:17-217:55-57.
[5] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a cartomizer metallic surface configured to be attracted to at least one magnet in or proximate to the chamber.	
[6] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure.	Liu 336 discloses and/or renders obvious the cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 3:18-27; 4:55-57; 5:56-58; Fig. 2.

’981 Claim Limitations	Liu 336
[8] The cartomizer of claim 1, wherein the plurality of cartomizer electrical contacts is further configured to at least partially compress the plurality of battery electrical contacts when the cartomizer body is inserted into the chamber.	
[9.A] A vaporizer device comprising:	*See* [1.A].
[9.B] a cartomizer comprising,	*See* [1.C].
[9.C] a cartomizer body configured to hold a fluid vaporizable substance,	*See* [1.D].
[9.D] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance;	*See* [1.E].
[9.E] a heating element and a wicking element within the cartomizer body; and	*See* [1.G].
[9.F] a plurality of cartomizer electrical contacts on an exterior of the insertion end; and	*See* [1.J].
[9.G] a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion; and	Liu 336 discloses and/or renders obvious battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 4:52-57; 8:16-21; 8:33-37; Fig. 8.
[9.H] a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion,	
[9.I] wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer body aligns with the window when the cartomizer body is inserted into the chamber.	Liu 336 discloses and/or renders obvious wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer body aligns with the window when the cartomizer body is inserted into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 1:66-2:2; 5:15-21; 7:57-58.

’981 Claim Limitations	Liu 336
[10] The vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment.	Liu 336 discloses and/or renders obvious the vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 8:16-21; 8:23-25; 8:59-61; Fig. 8.
[11] The vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment.	Liu 336 discloses and/or renders obvious the vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 10:42-44; 10:49-57; 11:12-15; 11:27-31.
[13.A] A vaporizer device comprising:	*See* [1.A].
[13.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	*See* [1.B].
[13.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	*See* [1.C].
[13.D] a cartomizer body having a volume defined therein, the volume configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].
[13.E] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	
[13.G] a heating element within the cartomizer body;	*See* [1.G].
[13.H] cartomizer electrical contacts operable to direct current to the heating element, wherein the cartomizer electrical contacts are on an exterior of the cartomizer body; and	*See* [1.J].

’981 Claim Limitations	Liu 336
[13.I] a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance;	Liu 336 discloses and/or renders obvious a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 2:58-61; 3:5-9; 6:7-9; 6:14-15; Fig. 3.
[13.J] an inhalation tube in fluid communication with the heating element and the wicking element; and	
[13.K] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube.	*See* [1.I].
[14] The cartomizer of claim 13, wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance.	*See* [1.E].
[15] The cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine.	Liu 336 discloses and/or renders obvious the cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 2:34-40; 4:4:66; 5:64-65; 6:5-6; Fig. 3.
[16] The cartomizer of claim 13, wherein cartomizer electrical contacts are positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	*See* [1.J].
[17.A] A vaporizer device comprising:	*See* [1.A].
[17.B] a cartomizer comprising:	*See* [1.C].
[17.C] a cartomizer body configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].

’981 Claim Limitations	Liu 336
[17.D] wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device,	
[17.E] a heating element within the cartomizer body,	*See* [1.G].
[17.F] cartomizer electrical contacts operable to direct current to the heating element, and	*See* [1.J].
[17.G] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	*See* [1.I].
[17.H] a battery portion, the battery portion having a first end and a second end, the battery portion comprising:	*See* [9.G].
[17.I] a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion,	
[17.J] a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery,	Liu 336 a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery. For example, see the following passages and/or figures, as well as all related disclosures: Liu 336 at 4:52-57; 8:16-21; 8:33-37; Fig. 8.
[17.K] battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar, and	
[17.L] an outer shell forming at least part of the chamber, wherein a window is formed in the outer shell to permit viewing of the cartomizer body when the cartomizer body is received into the chamber.	*See* [9.I].
[18.A] The vaporizer device of claim 9, wherein the cartomizer has a mouthpiece end and an insertion end	*See* [1.C].

’981 Claim Limitations	Liu 336
disposed opposite the mouthpiece end, the cartomizer further comprises,	
[18.B] an inhalation tube in fluid communication with the heating element and the wicking element; and	
[18.C] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube;	*See* [1.I].
[18.D] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	*See* [1.J]-[1.K].

EXHIBIT E-5

EXHIBIT E-5

Invalidity Claim Chart of U.S. Pat. Pub. 2014/0190502 ("Liu 502") against U.S. Patent No. 11,606,981

Liu 502, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 5, 6, 8, 9, 10, 11, 13, 14-16, 17, and 18 of U.S. Patent No. 11,606,981. Liu 502 was filed on September 27, 2012, and published on July 10, 2014. Liu 502 qualifies as prior art to the '981 Patent under at least AIA 35 U.S.C. § 102(a)(2).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Liu 502. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'981 Claim Limitations	Liu 502
[1.A] A vaporizer device comprising:	To the extent the preamble is limiting, Liu 502 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 [0003]; [0004]; [0033]; [0037]; Figs. 1-3.
[1.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	Liu 502 discloses and/or renders obvious a battery portion having an outer shell and a chamber defined by the outer shell. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0004]; [0013]; [0016]; [0028]; [0040]; [0041]; Fig. 4.
[1.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	Liu 502 discloses and/or renders obvious a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '981 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’981 Claim Limitations	Liu 502
	For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0029]; [0034]; [0036]; Fig. 3.
[1.D] a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance,	Liu 502 discloses and/or renders obvious a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0016]; [0029]; [0033]; [0034]; [0036]; Fig. 3.
[1.E] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance,	
[1.F] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	
[1.G] a heating element and a wicking element within the cartomizer body;	Liu 502 discloses and/or renders obvious a heating element and a wicking element within the cartomizer body. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0032]; [0033]; [0034]; [0037]; [0038]; Fig. 3.
[1.H] an inhalation tube in fluid communication with the heating element and the wicking element;	Liu 502 discloses and/or renders obvious an inhalation tube in fluid communication with the heating element and the wicking element. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0029]; [0031]; [0032]; [0034]; [0037]; Fig. 3.
[1.I] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	Liu 502 discloses and/or renders obvious a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube. For example, see the following passages and/or figures, as well as all related disclosures:

’981 Claim Limitations	Liu 502
	Liu 502 at [0029]; [0034]; [0036]; Fig. 3.
[1.J] a plurality of cartomizer electrical contacts on an exterior of the insertion end,	Liu 502 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0004]; [0016]; [0030]; [0031]; Figs. 2-3.
[1.K] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	Liu 502 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0016]; [0033]; [0043]; [0044]; Figs. 2, 4-6.
[2] The cartomizer of claim 1, wherein the translucent material comprises glass or plastic.	
[5] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a cartomizer metallic surface configured to be attracted to at least one magnet in or proximate to the chamber.	Liu 502 discloses and/or renders obvious the cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a cartomizer metallic surface configured to be attracted to at least one magnet in or proximate to the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0004]; [0010]; [0041]; [0042]; [0046]; Fig. 3; Fig. 7.
[6] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure.	Liu 502 discloses and/or renders obvious the cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0014]; [0028]; [0047]; Fig. 2.

’981 Claim Limitations	Liu 502
[8] The cartomizer of claim 1, wherein the plurality of cartomizer electrical contacts is further configured to at least partially compress the plurality of battery electrical contacts when the cartomizer body is inserted into the chamber.	
[9.A] A vaporizer device comprising:	*See* [1.A].
[9.B] a cartomizer comprising,	*See* [1.C].
[9.C] a cartomizer body configured to hold a fluid vaporizable substance,	*See* [1.D].
[9.D] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance;	
[9.E] a heating element and a wicking element within the cartomizer body; and	*See* [1.G].
[9.F] a plurality of cartomizer electrical contacts on an exterior of the insertion end; and	*See* [1.J].
[9.G] a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion; and	Liu 502 discloses and/or renders obvious battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0004]; [0016]; [0040]; Fig. 4.
[9.H] a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion,	Liu 502 discloses and/or renders obvious a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0004]; [0013]; [0016]; [0028]; [0040]; [0041]; Fig. 4.
[9.I] wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer body aligns with the window when the cartomizer body is inserted into the chamber.	

’981 Claim Limitations	Liu 502
[10] The vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment.	Liu 502 discloses and/or renders obvious the vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0004]; [0016]; [0040]; Fig. 4.
[11] The vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment.	Liu 502 discloses and/or renders obvious the vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0004]; [0016]; [0040]; Fig. 4.
[13.A] A vaporizer device comprising:	*See* [1.A].
[13.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	*See* [1.B].
[13.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	*See* [1.C].
[13.D] a cartomizer body having a volume defined therein, the volume configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].
[13.E] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	
[13.G] a heating element within the cartomizer body;	*See* [1.G].
[13.H] cartomizer electrical contacts operable to direct current to the heating element, wherein the cartomizer electrical contacts are on an exterior of the cartomizer body; and	*See* [1.J].
[13.I] a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance;	Liu 502 discloses and/or renders obvious a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance.

’981 Claim Limitations	Liu 502
	For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0033]; [0034]; [0037]; [0038]; Fig. 3.
[13.J] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[13.K] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube.	*See* [1.I].
[14] The cartomizer of claim 13, wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance.	*See* [1.E].
[15] The cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine.	Liu 502 discloses and/or renders obvious the cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0016]; [0029]; [0033]; [0038].
[16] The cartomizer of claim 13, wherein cartomizer electrical contacts are positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	*See* [1.J].
[17.A] A vaporizer device comprising:	*See* [1.A].
[17.B] a cartomizer comprising:	*See* [1.C].
[17.C] a cartomizer body configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].
[17.D] wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device,	Liu 502 discloses and/or renders obvious the cartomizer of claim 13 wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0004]; [0013]; [0040]; [0041]; [0042]; [0046]; Fig. 2, Fig. 3; Fig. 7.
[17.E] a heating element within the cartomizer body,	*See* [1.G].

’981 Claim Limitations	Liu 502
[17.F] cartomizer electrical contacts operable to direct current to the heating element, and	*See* [1.J].
[17.G] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	*See* [1.I].
[17.H] a battery portion, the battery portion having a first end and a second end, the battery portion comprising:	*See* [9.G].
[17.I] a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion,	Liu 502 discloses and/or renders obvious a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0004]; [0013]; [0014]; [0040]; [0041]; [0042]; [0046]; Fig. 2, Fig. 4; Fig. 8.
[17.J] a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery,	Liu 502 a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery. For example, see the following passages and/or figures, as well as all related disclosures: Liu 502 at [0004]; [0016]; [0040]; Fig. 4.
[17.K] battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar, and	
[17.L] an outer shell forming at least part of the chamber, wherein a window is formed in the outer shell to permit viewing of the cartomizer body when the cartomizer body is received into the chamber.	
[18.A] The vaporizer device of claim 9, wherein the cartomizer has a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer further comprises,	*See* [1.C].

’981 Claim Limitations	Liu 502
[18.B] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[18.C] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube;	*See* [1.I].
[18.D] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	*See* [1.J]-[1.K].

EXHIBIT E-6

EXHIBIT E-6

Invalidity Claim Chart of U.S. Pat. Pub. 2014/0190783 ("Liu 783") against U.S. Patent No. 11,606,981

Liu 783, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 5, 6, 8, 9, 10, 11, 13, 14-16, 17, and 18 of U.S. Patent No. 11,606,981. Liu 783 was filed on September 27, 2012, and published on July 10, 2014. Liu 783 qualifies as prior art to the '981 Patent under at least AIA 35 U.S.C. § 102(a)(2).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Liu 783. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the reference. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'981 Claim Limitations	Liu 783
[1.A] A vaporizer device comprising:	To the extent the preamble is limiting, Liu 783 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 [0003]; [0004]; [0033]; [0037]; Figs. 1-3.
[1.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	Liu 783 discloses and/or renders obvious a battery portion having an outer shell and a chamber defined by the outer shell. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0004]; [0013]; [0016]; [0028]; [0040]; [0041]; Fig. 4.
[1.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	Liu 783 discloses and/or renders obvious a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '981 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’981 Claim Limitations	Liu 783
	For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0004]; [0014]; [0030]; [0031]; [0043]; Figs. 3, 7-8.
[1.D] a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance,	Liu 783 discloses and/or renders obvious a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0012]; [0016]; [0017]; [0035]; Figs. 5-6.
[1.E] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance,	
[1.F] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	Liu 783 discloses and/or renders obvious wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0004]; [0014]; [0030]; [0031]; Figs. 1-3, 5-6.
[1.G] a heating element and a wicking element within the cartomizer body;	Liu 783 discloses and/or renders obvious a heating element and a wicking element within the cartomizer body. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0015]; [0034]; [0035]; Figs. 5-6.
[1.H] an inhalation tube in fluid communication with the heating element and the wicking element;	Liu 783 discloses and/or renders obvious an inhalation tube in fluid communication with the heating element and the wicking element. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0012]; [0013]; [0014]; [0031]; [0033]; Fig. 3, Fig. 5.

’981 Claim Limitations	Liu 783
[1.I] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	Liu 783 discloses and/or renders obvious a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0031]; [0044]; Figs. 4-5.
[1.J] a plurality of cartomizer electrical contacts on an exterior of the insertion end,	Liu 783 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0005]; [0007]; [0012]; [0032] Figs. 4-5.
[1.K] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	Liu 783 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0011]; [0019]; [0036]; [0037]; Figs 6-7.
[2] The cartomizer of claim 1, wherein the translucent material comprises glass or plastic.	
[5] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a cartomizer metallic surface configured to be attracted to at least one magnet in or proximate to the chamber.	Liu 783 discloses and/or renders obvious the cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a cartomizer metallic surface configured to be attracted to at least one magnet in or proximate to the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0001]; [0005]; [0018]; [0040]; [0041]; Figs. 4-7.
[6] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in	Liu 783 discloses and/or renders obvious the cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure.

’981 Claim Limitations	Liu 783
the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure.	For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0014]; [0031]; Figs. 1-3.
[8] The cartomizer of claim 1, wherein the plurality of cartomizer electrical contacts is further configured to at least partially compress the plurality of battery electrical contacts when the cartomizer body is inserted into the chamber.	
[9.A] A vaporizer device comprising:	*See* [1.A].
[9.B] a cartomizer comprising,	*See* [1.C].
[9.C] a cartomizer body configured to hold a fluid vaporizable substance,	*See* [1.D].
[9.D] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance;	
[9.E] a heating element and a wicking element within the cartomizer body; and	*See* [1.G].
[9.F] a plurality of cartomizer electrical contacts on an exterior of the insertion end; and	*See* [1.J].
[9.G] a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion; and	Liu 783 discloses and/or renders obvious battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0004]; [0014]; [0030]; [0043]; Figs. 3, 7-8.
[9.H] a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion,	Liu 783 discloses and/or renders obvious a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0004]; [0014]; [0030]; [0031]; Figs. 3, 7.

’981 Claim Limitations	Liu 783
[9.I] wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer body aligns with the window when the cartomizer body is inserted into the chamber.	
[10] The vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment.	Liu 783 discloses and/or renders obvious the vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0004]; [0016]; [0040]; Fig. 4.
[11] The vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment.	Liu 783 discloses and/or renders obvious the vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0009]; [0036]; [0037]; [0043]; Figs. 3, 7-8.
[13.A] A vaporizer device comprising:	*See* [1.A].
[13.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	*See* [1.B].
[13.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	*See* [1.C].
[13.D] a cartomizer body having a volume defined therein, the volume configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].
[13.E] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	*See* [1.F]
[13.G] a heating element within the cartomizer body;	*See* [1.G].
[13.H] cartomizer electrical contacts operable to direct current to the heating element, wherein the cartomizer	*See* [1.J].

’981 Claim Limitations	Liu 783
electrical contacts are on an exterior of the cartomizer body; and	
[13.I] a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance;	Liu 783 discloses and/or renders obvious a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0015]; [0034]; [0035]; Figs. 5-6.
[13.J] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[13.K] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube.	*See* [1.I].
[14] The cartomizer of claim 13, wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance.	*See* [1.E].
[15] The cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine.	Liu 783 discloses and/or renders obvious the cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0002]; [0016]; [0017]; [0019].
[16] The cartomizer of claim 13, wherein cartomizer electrical contacts are positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	*See* [1.J].
[17.A] A vaporizer device comprising:	*See* [1.A].
[17.B] a cartomizer comprising:	*See* [1.C].
[17.C] a cartomizer body configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].

’981 Claim Limitations	Liu 783
[17.D] wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device,	Liu 783 discloses and/or renders obvious the cartomizer of claim 13 wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0004]; [0014]; [0030]; [0031]; Figs. 1-3, 5-6.
[17.E] a heating element within the cartomizer body,	*See* [1.G].
[17.F] cartomizer electrical contacts operable to direct current to the heating element, and	*See* [1.J].
[17.G] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	*See* [1.I].
[17.H] a battery portion, the battery portion having a first end and a second end, the battery portion comprising:	*See* [9.G].
[17.I] a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion,	Liu 783 discloses and/or renders obvious a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0004]; [0014]; [0019]; [0030]; [0031]; Figs. 3, 7.
[17.J] a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery,	Liu 783 a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery. For example, see the following passages and/or figures, as well as all related disclosures: Liu 783 at [0004]; [0014]; [0030]; [0043]; Figs. 3, 7-8.
[17.K] battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar, and	

’981 Claim Limitations	Liu 783
[17.L] an outer shell forming at least part of the chamber, wherein a window is formed in the outer shell to permit viewing of the cartomizer body when the cartomizer body is received into the chamber.	
[18.A] The vaporizer device of claim 9, wherein the cartomizer has a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer further comprises,	*See* [1.C].
[18.B] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[18.C] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube;	*See* [1.I].
[18.D] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	*See* [1.J]-[1.K].

EXHIBIT E-7

EXHIBIT E-7

Invalidity Claim Chart of U.S. Patent No. 8,528,569 ("Newton 569") against U.S. Patent No. 11,606,981

Newton 569, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 5, 6, 8, 9, 10, 11, 13, 14-16, 17, and 18 of U.S. Patent No. 11,606,981. Newton 569 was filed on June 28, 2011, and published on September 10, 2012. Newton 569 qualifies as prior art to the '981 Patent under at least AIA 35 U.S.C. § 102(a)(2).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Newton 569. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the Newton 569. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'981 Claim Limitations	Newton 569
[1.A] A vaporizer device comprising:	To the extent the preamble is limiting, Newton 569 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 1:50-56; 3:60-63; 4:5-7; 5:30-35; Figs. 1-5.
[1.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	Newton 569 discloses and/or renders obvious a battery portion having an outer shell and a chamber defined by the outer shell. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:45-51; 5:30-35; 5:39-40; Figs. 1-5.
[1.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	Newton 569 discloses and/or renders obvious a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '981 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’981 Claim Limitations	Newton 569
	For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 1:51-54; 4:9-13; 4:38-40; 8:60-61; Figs. 2, 4, 7.
[1.D] a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance,	Newton 569 discloses and/or renders obvious a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 1:58-59; 2:29-36; 3:60-63; 4:54-56; Figs. 4-5, 7.
[1.E] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance,	Newton 569 discloses and/or renders obvious wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures Newton 569 at 4:22-25; Figs. 1, 2, 3.
[1.F] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	Newton 569 discloses and/or renders obvious wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:45-51; 5:30-35; 5:39-40; Figs. 1-5.
[1.G] a heating element and a wicking element within the cartomizer body;	Newton 569 discloses and/or renders obvious a heating element and a wicking element within the cartomizer body. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 2:8-12; 4:2-4; 5:16-18; 5:32-35; 6:18-19; 6:31-33; Figs. 4-5, 7.
[1.H] an inhalation tube in fluid communication with the heating element and the wicking element;	Newton 569 discloses and/or renders obvious an inhalation tube in fluid communication with the heating element and the wicking element.

’981 Claim Limitations	Newton 569
	For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 2:4-7; 5:7-12; 5:17-29; 6:25-33. Figs. 4-5, Fig. 7.
[1.I] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	Newton 569 discloses and/or renders obvious a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 1:51-54; 4:9-13; 4:38-40; 5:17-29; 8:60-61; Figs. 2, 4, 7.
[1.J] a plurality of cartomizer electrical contacts on an exterior of the insertion end,	Newton 569 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:48-54; 5:21-25; 5:30-35; Figs. 4-5, 7.
[1.K] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	Newton 569 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:48-54; 5:21-25; 5:30-35; Figs. 4-5, 7.
[2] The cartomizer of claim 1, wherein the translucent material comprises glass or plastic.	Newton 569 discloses and/or renders obvious the cartomizer of claim 1, wherein the translucent material comprises glass or plastic For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:18-21; 4:22-25; 4:41-44; 5:44-47; Figs. 1, 2, 4.
[5] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a cartomizer	

’981 Claim Limitations	Newton 569
metallic surface configured to be attracted to at least one magnet in or proximate to the chamber.	
[6] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure.	Newton 569 discloses and/or renders obvious the cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:48-51; 5:19-21; 5:30-32; Figs. 4-5, 7.
[8] The cartomizer of claim 1, wherein the plurality of cartomizer electrical contacts is further configured to at least partially compress the plurality of battery electrical contacts when the cartomizer body is inserted into the chamber.	
[9.A] A vaporizer device comprising:	*See* [1.A].
[9.B] a cartomizer comprising,	*See* [1.C].
[9.C] a cartomizer body configured to hold a fluid vaporizable substance,	*See* [1.D].
[9.D] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance;	*See* [1.E]
[9.E] a heating element and a wicking element within the cartomizer body; and	*See* [1.G].
[9.F] a plurality of cartomizer electrical contacts on an exterior of the insertion end; and	*See* [1.J].
[9.G] a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion; and	Newton 569 discloses and/or renders obvious battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:45-51; 5:30-35; 5:39-40; Figs. 1-5.

’981 Claim Limitations	Newton 569
[9.H] a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion,	Newton 569 discloses and/or renders obvious a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:45-51; 5:30-35; 5:39-40; Figs. 1-5.
[9.I] wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer body aligns with the window when the cartomizer body is inserted into the chamber.	Newton 569 discloses and/or renders obvious wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer body aligns with the window when the cartomizer body is inserted into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:18-21; 4:22-25; 4:41-44; 5:44-47; Figs. 1, 2, 4.
[10] The vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment.	Newton 569 discloses and/or renders obvious the vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:45-48; 4:32-35; 5:39-40; Figs. 1-5.
[11] The vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment.	Newton 569 discloses and/or renders obvious the vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 5:30-47; 5:48-60; Figs. 4-6.
[13.A] A vaporizer device comprising:	*See* [1.A].
[13.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	*See* [1.B].

’981 Claim Limitations	Newton 569
[13.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	*See* [1.C].
[13.D] a cartomizer body having a volume defined therein, the volume configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].
[13.E] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	*See* [1.F]
[13.G] a heating element within the cartomizer body;	*See* [1.G].
[13.H] cartomizer electrical contacts operable to direct current to the heating element, wherein the cartomizer electrical contacts are on an exterior of the cartomizer body; and	*See* [1.J].
[13.I] a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance;	Newton 569 discloses and/or renders obvious a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 1:60-63; 2:9-11; 2:22-28; 3:66-4:2; 6:31-34; Figs. 4-5, 7.
[13.J] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[13.K] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube.	*See* [1.I].
[14] The cartomizer of claim 13, wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance.	*See* [1.E].
[15] The cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine.	Newton 569 discloses and/or renders obvious the cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine.

’981 Claim Limitations	Newton 569
	For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 1:14-21.
[16] The cartomizer of claim 13, wherein cartomizer electrical contacts are positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	*See* [1.J].
[17.A] A vaporizer device comprising:	*See* [1.A].
[17.B] a cartomizer comprising:	*See* [1.C].
[17.C] a cartomizer body configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].
[17.D] wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device,	Newton 569 discloses and/or renders obvious the cartomizer of claim 13 wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 1:51-63; 5:17-29; 6:17-33; 6:34-54; Figs. 4-5, 7.
[17.E] a heating element within the cartomizer body,	*See* [1.G].
[17.F] cartomizer electrical contacts operable to direct current to the heating element, and	*See* [1.J].
[17.G] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	*See* [1.I].
[17.H] a battery portion, the battery portion having a first end and a second end, the battery portion comprising:	*See* [9.G].
[17.I] a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion,	Newton 569 discloses and/or renders obvious a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:45-51; 5:30-35; 5:39-40; Figs. 1-5.

’981 Claim Limitations	Newton 569
[17.J] a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery,	Newton 569 a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:45-51; 5:30-35; 5:39-40; Figs. 1-5.
[17.K] battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar, and	
[17.L] an outer shell forming at least part of the chamber, wherein a window is formed in the outer shell to permit viewing of the cartomizer body when the cartomizer body is received into the chamber.	Newton 569 discloses and/or renders obvious an outer shell forming at least part of the chamber, wherein a window is formed in the outer shell to permit viewing of the cartomizer body when the cartomizer body is received into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Newton 569 at 4:18-21; 4:22-25; 4:41-44; 5:44-47; Figs. 1, 2, 4.
[18.A] The vaporizer device of claim 9, wherein the cartomizer has a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer further comprises,	*See* [1.C].
[18.B] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[18.C] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube;	*See* [1.I].
[18.D] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	*See* [1.J]-[1.K].

EXHIBIT E-8

EXHIBIT E-8

Invalidity Claim Chart of U.S. Patent No. 8,205,622 ("Pan 622") against U.S. Patent No. 11,606,981

Pan 622, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 5, 6, 8, 9, 10, 11, 13, 14-16, 17, and 18 of U.S. Patent No. 11,606,981. Pan 622 was filed on May 7, 2009, and published on June 26, 2012. Pan 622 qualifies as prior art to the '981 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Pan 622. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the Pan 622. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'981 Claim Limitations	Pan 622
[1.A] A vaporizer device comprising:	To the extent the preamble is limiting, Pan 622 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:16-18; 2:25-28; 2:39-43; 3:21-23; Figs. 6-7.
[1.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	Pan 622 discloses and/or renders obvious a battery portion having an outer shell and a chamber defined by the outer shell. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:25-28; 2:30-35; 2:48-50; 5:29-36; 6:4-9 Figs. 4-5.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '981 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’981 Claim Limitations	Pan 622
[1.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	Pan 622 discloses and/or renders obvious a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:43-50; 2:51-54; 4:33-45; 4:63-5:7; 5:6-7; 6:4-24; Figs 2-3, 6-7.
[1.D] a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance,	Pan 622 discloses and/or renders obvious a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:39-43; 4:12-18; 4:35-43; 4:48-53; Figs 2-3.
[1.E] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance,	Pan 622 discloses and/or renders obvious wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:39-43; 4:12-18; 4:35-43; 4:48-53; Figs 2-3.
[1.F] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	Pan 622 discloses and/or renders obvious wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:48-50; 4:45-51; 5:29-40; 6:4-9; Figs. 1-5.
[1.G] a heating element and a wicking element within the cartomizer body;	Pan 622 discloses and/or renders obvious a heating element and a wicking element within the cartomizer body. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:39-43; 2:57-62; 4:12-18; 4:35-43; 4:48-53; Figs 2-3, 6-7.
[1.H] an inhalation tube in fluid communication with the heating element and the wicking element;	Pan 622 discloses and/or renders obvious an inhalation tube in fluid communication with the heating element and the wicking element.

’981 Claim Limitations	Pan 622
	For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 4:43-46; 6:26-38, Fig. 3.
[1.I] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	Pan 622 discloses and/or renders obvious a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:43-45; 2:51-54; 5:6-7; 6:19-24; Figs 2-3.
[1.J] a plurality of cartomizer electrical contacts on an exterior of the insertion end,	Pan 622 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:45-47; 4:34-35; 4:63-65; 6:1-10; Figs 2-3.
[1.K] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	Pan 622 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:37-38; 4:7-12; 5:29-36; 5:42-45; Figs 4-5.
[2] The cartomizer of claim 1, wherein the translucent material comprises glass or plastic.	
[5] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a cartomizer metallic surface configured to be attracted to at least one magnet in or proximate to the chamber.	

’981 Claim Limitations	Pan 622
[6] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure.	Pan 622 discloses and/or renders obvious the cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:25-30; 6:9-13; Fig. 7.
[8] The cartomizer of claim 1, wherein the plurality of cartomizer electrical contacts is further configured to at least partially compress the plurality of battery electrical contacts when the cartomizer body is inserted into the chamber.	
[9.A] A vaporizer device comprising:	*See* [1.A].
[9.B] a cartomizer comprising,	*See* [1.C].
[9.C] a cartomizer body configured to hold a fluid vaporizable substance,	*See* [1.D].
[9.D] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance;	*See* [1.E]
[9.E] a heating element and a wicking element within the cartomizer body; and	*See* [1.G].
[9.F] a plurality of cartomizer electrical contacts on an exterior of the insertion end; and	*See* [1.J].
[9.G] a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion; and	Pan 622 discloses and/or renders obvious battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:25-28; 2:30-35; 2:48-50; 5:29-36; 6:4-9 Figs. 4-5.
[9.H] a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer	Pan 622 discloses and/or renders obvious a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion.

’981 Claim Limitations	Pan 622
receiving segment comprising a chamber defined by an outer shell of the battery portion,	For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:48-50; 5:29-36; 6:4-9; Figs. 4-5.
[9.I] wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer body aligns with the window when the cartomizer body is inserted into the chamber.	
[10] The vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment.	Pan 622 discloses and/or renders obvious the vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:35-38; 5:9-15; 5:21-24; 5:58-62; Figs. 4-5.
[11] The vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment.	Pan 622 discloses and/or renders obvious the vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:32-35; 5:25-28.
[13.A] A vaporizer device comprising:	*See* [1.A].
[13.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	*See* [1.B].
[13.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	*See* [1.C].
[13.D] a cartomizer body having a volume defined therein, the volume configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].
[13.E] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the	*See* [1.F]

’981 Claim Limitations	Pan 622
volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	
[13.G] a heating element within the cartomizer body;	*See* [1.G].
[13.H] cartomizer electrical contacts operable to direct current to the heating element, wherein the cartomizer electrical contacts are on an exterior of the cartomizer body; and	*See* [1.J].
[13.I] a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance;	Pan 622 discloses and/or renders obvious a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 1:60-63; 2:9-11; 2:22-28; 3:66-4:2; 6:31-34; Figs. 4-5, 7.
[13.J] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[13.K] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube.	*See* [1.I].
[14] The cartomizer of claim 13, wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance.	
[15] The cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine.	Pan 622 discloses and/or renders obvious the cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 1:8-57; 2:4-12
[16] The cartomizer of claim 13, wherein cartomizer electrical contacts are positioned to contact a plurality of battery electrical contacts at a base end of the	*See* [1.J].

’981 Claim Limitations	Pan 622
chamber when the cartomizer body is inserted into the chamber.	
[17.A] A vaporizer device comprising:	*See* [1.A].
[17.B] a cartomizer comprising:	*See* [1.C].
[17.C] a cartomizer body configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].
[17.D] wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device,	Pan 622 discloses and/or renders obvious the cartomizer of claim 13 wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 1:51-63; 5:17-29; 6:17-33; 6:34-54; Figs. 4-5, 7.
[17.E] a heating element within the cartomizer body,	*See* [1.G].
[17.F] cartomizer electrical contacts operable to direct current to the heating element, and	*See* [1.J].
[17.G] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	*See* [1.I].
[17.H] a battery portion, the battery portion having a first end and a second end, the battery portion comprising:	*See* [9.G].
[17.I] a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion,	Pan 622 discloses and/or renders obvious a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:48-50; 5:29-36; 6:4-9; Figs. 4-5.
[17.J] a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end	Pan 622 a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery.

’981 Claim Limitations	Pan 622
of the battery portion, the battery segment comprising a battery,	For example, see the following passages and/or figures, as well as all related disclosures: Pan 622 at 2:25-28; 2:30-35; 2:48-50; 5:29-36; 6:4-9 Figs. 4-5.
[17.K] battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar, and	
[17.L] an outer shell forming at least part of the chamber, wherein a window is formed in the outer shell to permit viewing of the cartomizer body when the cartomizer body is received into the chamber.	
[18.A] The vaporizer device of claim 9, wherein the cartomizer has a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer further comprises,	*See* [1.C].
[18.B] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[18.C] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube;	*See* [1.I].
[18.D] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	*See* [1.J]-[1.K].

EXHIBIT E-9

EXHIBIT E-9

Invalidity Claim Chart of U.S. Pat. App. 2009/0255534 ("Paterno 534") against U.S. Patent No. 11,606,981

Paterno 534, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 5, 6, 8, 9, 10, 11, 13, 14-16, 17, and 18 of U.S. Patent No. 11,606,981. Paterno 534 was filed on April 13, 2009, and published on October 15, 2009. Paterno 534 qualifies as prior art to the '981 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Paterno 534. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the Paterno 534. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'981 Claim Limitations	Paterno 534
[1.A] A vaporizer device comprising:	To the extent the preamble is limiting, Paterno 534 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0002]; [0007]; [0025]; [0027]; Figs. 1-3, 5.
[1.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	Paterno 534 discloses and/or renders obvious a battery portion having an outer shell and a chamber defined by the outer shell. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0008]; [0027]; [0030]; [0034]; Figs. 5, 8.
[1.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	Paterno 534 discloses and/or renders obvious a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '981 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’981 Claim Limitations	Paterno 534
	For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0009]; [0024]; [0025]; [0027]; [0033]; [0034]; Figs. 1-5.
[1.D] a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance,	Paterno 534 discloses and/or renders obvious a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0007]; [0027]; [0028]; [0029]; [0030]; Figs. 1-5.
[1.E] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance,	
[1.F] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	Paterno 534 discloses and/or renders obvious wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0024]; [0025]; [0027]; [0034]; [0033]; Figs. 1-5.
[1.G] a heating element and a wicking element within the cartomizer body;	Paterno 534 discloses and/or renders obvious a heating element and a wicking element within the cartomizer body. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0007]; [0027]; [0028]; [0029] Figs. 1-5.
[1.H] an inhalation tube in fluid communication with the heating element and the wicking element;	Paterno 534 discloses and/or renders obvious an inhalation tube in fluid communication with the heating element and the wicking element. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0033], Fig. 5.

’981 Claim Limitations	Paterno 534
[1.I] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	Paterno 534 discloses and/or renders obvious a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0009]; [0033]; [0034]; Fig. 4.
[1.J] a plurality of cartomizer electrical contacts on an exterior of the insertion end,	Paterno 534 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0027]; [0028]; [0030]; [0034]; Figs. 1, 3-5.
[1.K] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	Paterno 534 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0027]; [0028]; [0030]; [0034]; Figs. 1, 3-5.
[2] The cartomizer of claim 1, wherein the translucent material comprises glass or plastic.	
[5] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a cartomizer metallic surface configured to be attracted to at least one magnet in or proximate to the chamber.	
[6] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure.	Paterno 534 discloses and/or renders obvious the cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure. For example, see the following passages and/or figures, as well as all related disclosures:

’981 Claim Limitations	Paterno 534
	Paterno 534 at [0033]; [0034]; Fig. 5.
[8] The cartomizer of claim 1, wherein the plurality of cartomizer electrical contacts is further configured to at least partially compress the plurality of battery electrical contacts when the cartomizer body is inserted into the chamber.	
[9.A] A vaporizer device comprising:	*See* [1.A].
[9.B] a cartomizer comprising,	*See* [1.C].
[9.C] a cartomizer body configured to hold a fluid vaporizable substance,	*See* [1.D].
[9.D] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance;	*See* [1.E]
[9.E] a heating element and a wicking element within the cartomizer body; and	*See* [1.G].
[9.F] a plurality of cartomizer electrical contacts on an exterior of the insertion end; and	*See* [1.J].
[9.G] a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion; and	Paterno 534 discloses and/or renders obvious battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0008]; [0027]; [0030]; [0034]; Figs. 5, 8.
[9.H] a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion,	Paterno 534 discloses and/or renders obvious a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0034]; Figs. 5.
[9.I] wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer body aligns	

’981 Claim Limitations	Paterno 534
with the window when the cartomizer body is inserted into the chamber.	
[10] The vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment.	Paterno 534 discloses and/or renders obvious the vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0034]; Fig. 5
[11] The vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment.	Paterno 534 discloses and/or renders obvious the vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0023]; [0037]; Fig. 9
[13.A] A vaporizer device comprising:	*See* [1.A].
[13.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	*See* [1.B].
[13.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	*See* [1.C].
[13.D] a cartomizer body having a volume defined therein, the volume configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].
[13.E] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	*See* [1.F]
[13.G] a heating element within the cartomizer body;	*See* [1.G].
[13.H] cartomizer electrical contacts operable to direct current to the heating element, wherein the cartomizer electrical contacts are on an exterior of the cartomizer body; and	*See* [1.J].

’981 Claim Limitations	Paterno 534
[13.I] a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance;	Paterno 534 discloses and/or renders obvious a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0007]; [0027]; [0028]; Figs. 1-4.
[13.J] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[13.K] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube.	*See* [1.I].
[14] The cartomizer of claim 13, wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance.	
[15] The cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine.	Paterno 534 discloses and/or renders obvious the cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0004].
[16] The cartomizer of claim 13, wherein cartomizer electrical contacts are positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	*See* [1.J].
[17.A] A vaporizer device comprising:	*See* [1.A].
[17.B] a cartomizer comprising:	*See* [1.C].
[17.C] a cartomizer body configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].

’981 Claim Limitations	Paterno 534
[17.D] wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device,	Paterno 534 discloses and/or renders obvious the cartomizer of claim 13 wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0024]; [0025]; [0027]; [0034]; [0033]; Figs. 1-5.
[17.E] a heating element within the cartomizer body,	*See* [1.G].
[17.F] cartomizer electrical contacts operable to direct current to the heating element, and	*See* [1.J].
[17.G] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	*See* [1.I].
[17.H] a battery portion, the battery portion having a first end and a second end, the battery portion comprising:	*See* [9.G].
[17.I] a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion,	Paterno 534 discloses and/or renders obvious a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0034]; Figs. 5.
[17.J] a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery,	Paterno 534 discloses and/or renders obvious a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery. For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0008]; [0027]; [0030]; [0034]; Figs. 5, 8.
[17.K] battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar, and	Paterno 534 discloses and/or renders obvious battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar.

’981 Claim Limitations	Paterno 534
	For example, see the following passages and/or figures, as well as all related disclosures: Paterno 534 at [0024]; [0027]; [0030]; [0034]; Figs. 3, 5.
[17.L] an outer shell forming at least part of the chamber, wherein a window is formed in the outer shell to permit viewing of the cartomizer body when the cartomizer body is received into the chamber.	
[18.A] The vaporizer device of claim 9, wherein the cartomizer has a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer further comprises,	*See* [1.C].
[18.B] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[18.C] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube;	*See* [1.I].
[18.D] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	*See* [1.J]-[1.K].

EXHIBIT E-10

EXHIBIT E-10

Invalidity Claim Chart of U.S. Patent 8,794,231 ("Thorens 231") against U.S. Patent No. 11,606,981

Thorens 231, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 5, 6, 8, 9, 10, 11, 13, 14-16, 17, and 18 of U.S. Patent No. 11,606,981. Thorens 231 was filed on April 29, 2009, and published on November 5, 2009. Thorens 231 qualifies as prior art to the '981 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Thorens 231. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the Thorens 231. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'981 Claim Limitations	Thorens 231
[1.A] A vaporizer device comprising:	To the extent the preamble is limiting, Thorens 231 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 1:14-15; 2:2-5; 4:46-49; Fig. 3.
[1.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	Thorens 231 discloses and/or renders obvious a battery portion having an outer shell and a chamber defined by the outer shell. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 1:51-53; 5:53-55; 6:35-37; 6:57-58; 8:54-57; 10:16-18; Fig. 1, 3.
[1.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	Thorens 231 discloses and/or renders obvious a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising.

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '981 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’981 Claim Limitations	Thorens 231
	For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 2:5-9; 6:44-47; 6:54-57; 7:9-11; 10:16-18; Figs 2-3.
[1.D] a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance,	Thorens 231 discloses and/or renders obvious a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 6:44-45; 6:61-7:4; 7:25-27; Figs 2-3.
[1.E] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance,	Thorens 231 discloses and/or renders obvious wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 7:33-37; 9:23-24; 10:14-15; 10:43-44.
[1.F] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	Thorens 231 discloses and/or renders obvious wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 5:53-55; 6:44-47; 6:54-58; 8:54-57; 10:16-18; Figs. 1-3.
[1.G] a heating element and a wicking element within the cartomizer body;	Thorens 231 discloses and/or renders obvious a heating element and a wicking element within the cartomizer body. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 1:54-59; 2:2-5; 3:30-31; 3:33-35; 4:39-41; 5:6-20; 6:44-50; Figs 2-3.
[1.H] an inhalation tube in fluid communication with the heating element and the wicking element;	Thorens 231 discloses and/or renders obvious an inhalation tube in fluid communication with the heating element and the wicking element.

’981 Claim Limitations	Thorens 231
	For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 6:42-47; 7:7-12; Figs. 2-3.
[1.I] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	Thorens 231 discloses and/or renders obvious a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 2:5-9; 6:44-48; 6:63-65; 7:9-11; Fig. 2.
[1.J] a plurality of cartomizer electrical contacts on an exterior of the insertion end,	Thorens 231 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 6:58-60; 10:25-29; Fig. 2.
[1.K] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	Thorens 231 discloses and/or renders obvious the vaporizer of claim 10, wherein the cartomizer further comprises one or more cartomizer electrical contacts for connecting with one or more battery electrical contacts in or proximate the cartomizer chamber. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 6:35-40; 6:58-60; 10:25-29; Fig. 1.
[2] The cartomizer of claim 1, wherein the translucent material comprises glass or plastic.	Thorens 231 discloses and/or renders obvious the cartomizer of claim 1, wherein the translucent material comprises glass or plastic. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 7:33-37; 9:23-24; 10:14-15; 10:43-44.
[5] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure	

’981 Claim Limitations	Thorens 231
comprises a cartomizer metallic surface configured to be attracted to at least one magnet in or proximate to the chamber.	
[6] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure.	Thorens 231 discloses and/or renders obvious the cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 5:34-48; 6:57-58; 7:59-60; 8:65-67; Figs. 1, 3.
[8] The cartomizer of claim 1, wherein the plurality of cartomizer electrical contacts is further configured to at least partially compress the plurality of battery electrical contacts when the cartomizer body is inserted into the chamber.	
[9.A] A vaporizer device comprising:	*See* [1.A].
[9.B] a cartomizer comprising,	*See* [1.C].
[9.C] a cartomizer body configured to hold a fluid vaporizable substance,	*See* [1.D].
[9.D] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance;	*See* [1.E]
[9.E] a heating element and a wicking element within the cartomizer body; and	*See* [1.G].
[9.F] a plurality of cartomizer electrical contacts on an exterior of the insertion end; and	*See* [1.J].
[9.G] a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion; and	Thorens 231 discloses and/or renders obvious battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 1:51-53; 6:35-37; 6:57-58; 10:16-18; Fig. 1, 3.

’981 Claim Limitations	Thorens 231
[9.H] a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion,	Thorens 231 discloses and/or renders obvious a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 5:53-55; 6:57-58; 8:54-57; 10:16-18; Fig. 1, 3.
[9.I] wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer body aligns with the window when the cartomizer body is inserted into the chamber.	Thorens 231 discloses and/or renders obvious wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer body aligns with the window when the cartomizer body is inserted into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 4:27-29; 5:21-25; 6:65-67; Fig. 1.
[10] The vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment.	Thorens 231 discloses and/or renders obvious the vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 5:53-55; 6:57-58; 7:43-47; Fig 3.
[11] The vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment.	Thorens 231 discloses and/or renders obvious the vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 4:15-21.
[13.A] A vaporizer device comprising:	*See* [1.A].
[13.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	*See* [1.B].
[13.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	*See* [1.C].

’981 Claim Limitations	Thorens 231
[13.D] a cartomizer body having a volume defined therein, the volume configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].
[13.E] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	*See* [1.F]
[13.G] a heating element within the cartomizer body;	*See* [1.G].
[13.H] cartomizer electrical contacts operable to direct current to the heating element, wherein the cartomizer electrical contacts are on an exterior of the cartomizer body; and	*See* [1.J].
[13.I] a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance;	Thorens 231 discloses and/or renders obvious a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 1:54-59; 2:2-5; 3:30-31; 3:33-35; Figs 2-3.
[13.J] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[13.K] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube.	*See* [1.I].
[14] The cartomizer of claim 13, wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance.	*See* [1.E]
[15] The cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine.	Thorens 231 discloses and/or renders obvious the cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine. For example, see the following passages and/or figures, as well as all related disclosures:

’981 Claim Limitations	Thorens 231
	Thorens 231 at [0004].
[16] The cartomizer of claim 13, wherein cartomizer electrical contacts are positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	*See* [1.J].
[17.A] A vaporizer device comprising:	*See* [1.A].
[17.B] a cartomizer comprising:	*See* [1.C].
[17.C] a cartomizer body configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	*See* [1.D].
[17.D] wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device,	Thorens 231 discloses and/or renders obvious the cartomizer of claim 13 wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 6:44-47; 6:54-57; 10:16-18; Figs 2-3.
[17.E] a heating element within the cartomizer body,	*See* [1.G].
[17.F] cartomizer electrical contacts operable to direct current to the heating element, and	*See* [1.J].
[17.G] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	*See* [1.I].
[17.H] a battery portion, the battery portion having a first end and a second end, the battery portion comprising:	*See* [9.G].
[17.I] a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion,	Thorens 231 discloses and/or renders obvious a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion. For example, see the following passages and/or figures, as well as all related disclosures:

’981 Claim Limitations	Thorens 231
	Thorens 231 at 5:53-55; 6:57-58; 8:54-57; 10:16-18; Fig. 1, 3.
[17.J] a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery,	Thorens 231 discloses and/or renders obvious a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 1:51-53; 6:35-37; 6:57-58; 10:16-18; Fig. 1, 3.
[17.K] battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar, and	Thorens 231 discloses and/or renders obvious battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar. For example, see the following passages and/or figures, as well as all related disclosures: Thorens 231 at 6:34-41; 6:54-60; Fig. 1.
[17.L] an outer shell forming at least part of the chamber, wherein a window is formed in the outer shell to permit viewing of the cartomizer body when the cartomizer body is received into the chamber.	*See* [9.I]
[18.A] The vaporizer device of claim 9, wherein the cartomizer has a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer further comprises,	*See* [1.C].
[18.B] an inhalation tube in fluid communication with the heating element and the wicking element; and	*See* [1.H].
[18.C] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube;	*See* [1.I].
[18.D] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery	*See* [1.J]-[1.K].

’981 Claim Limitations	Thorens 231
electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	

EXHIBIT E-11

EXHIBIT E-11

Invalidity Claim Chart of CN202697716U ("Zhang 716") against U.S. Patent No. 11,606,981

Zhang 716, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 5, 6, 8, 9, 10, 11, 13, 14-16, 17, and 18 of U.S. Patent No. 11,606,981. Zhang 716 was filed on August 6, 2012, and published on January 30, 2013. Zhang 716 qualifies as prior art to the '981 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Zhang 716. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the Zhang 716. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'981 Claim Limitations	Zhang 716
[1.A] A vaporizer device comprising:	
[1.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	
[1.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	
[1.D] a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance,	
[1.E] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance,	
[1.F] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is	

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '981 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’981 Claim Limitations	Zhang 716
positioned in the chamber when the cartomizer body is inserted into the chamber;	
[1.G] a heating element and a wicking element within the cartomizer body;	
[1.H] an inhalation tube in fluid communication with the heating element and the wicking element;	
[1.I] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	
[1.J] a plurality of cartomizer electrical contacts on an exterior of the insertion end,	
[1.K] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	
[2] The cartomizer of claim 1, wherein the translucent material comprises glass or plastic.	
[5] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a cartomizer metallic surface configured to be attracted to at least one magnet in or proximate to the chamber.	
[6] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure.	
[8] The cartomizer of claim 1, wherein the plurality of cartomizer electrical contacts is further configured to at least partially compress the plurality of battery electrical contacts when the cartomizer body is inserted into the chamber.	
[9.A] A vaporizer device comprising:	
[9.B] a cartomizer comprising,	

’981 Claim Limitations	Zhang 716
[9.C] a cartomizer body configured to hold a fluid vaporizable substance,	
[9.D] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance;	
[9.E] a heating element and a wicking element within the cartomizer body; and	
[9.F] a plurality of cartomizer electrical contacts on an exterior of the insertion end; and	
[9.G] a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion; and	
[9.H] a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion,	
[9.I] wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer body aligns with the window when the cartomizer body is inserted into the chamber.	
[10] The vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment.	
[11] The vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment.	
[13.A] A vaporizer device comprising:	
[13.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	
[13.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	

’981 Claim Limitations	Zhang 716
[13.D] a cartomizer body having a volume defined therein, the volume configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	
[13.E] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	
[13.G] a heating element within the cartomizer body;	
[13.H] cartomizer electrical contacts operable to direct current to the heating element, wherein the cartomizer electrical contacts are on an exterior of the cartomizer body; and	
[13.I] a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance;	
[13.J] an inhalation tube in fluid communication with the heating element and the wicking element; and	
[13.K] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube.	
[14] The cartomizer of claim 13, wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance.	
[15] The cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine.	
[16] The cartomizer of claim 13, wherein cartomizer electrical contacts are positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	
[17.A] A vaporizer device comprising:	To the extent the preamble is limiting, Zhang 716 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Zhang 716 at [0003]; [0005]; [0016]; Figs. 1-4.
[17.B] a cartomizer comprising:	

’981 Claim Limitations	Zhang 716
[17.C] a cartomizer body configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	
[17.D] wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device,	
[17.E] a heating element within the cartomizer body,	
[17.F] cartomizer electrical contacts operable to direct current to the heating element, and	
[17.G] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	
[17.H] a battery portion, the battery portion having a first end and a second end, the battery portion comprising:	Zhang 716 discloses a battery portion, the battery portion having a first end and a second end. For example, see the following passages and/or figures, as well as all related disclosures: Zhang 716 at [0005]; [0017]; Fig. 2.
[17.I] a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion,	
[17.J] a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery,	
[17.K] battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar, and	Zhang 716 discloses and/or renders obvious battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar. For example, see the following passages and/or figures, as well as all related disclosures: Zhang 716 at [0006]; [0017]; Figs. 2, 4.
[17.L] an outer shell forming at least part of the chamber, wherein a window is formed in the outer shell to permit viewing	

’981 Claim Limitations	Zhang 716
of the cartomizer body when the cartomizer body is received into the chamber.	
[18.A] The vaporizer device of claim 9, wherein the cartomizer has a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer further comprises,	
[18.B] an inhalation tube in fluid communication with the heating element and the wicking element; and	
[18.C] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube;	
[18.D] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	

EXHIBIT E-12

EXHIBIT E-12

Invalidity Claim Chart of CN202919037U ("Fu 037") against U.S. Patent No. 11,606,981

Fu 037, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 5, 6, 8, 9, 10, 11, 13, 14-16, 17, and 18 of U.S. Patent No. 11,606,981. Fu 037 was filed on October 16, 2012, and published on May 08, 2013. Fu 037 qualifies as prior art to the '981 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Fu 037. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in the Fu 037. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'981 Claim Limitations	Fu 037
[1.A] A vaporizer device comprising:	
[1.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	
[1.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	
[1.D] a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance,	
[1.E] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance,	
[1.F] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '981 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’981 Claim Limitations	Fu 037
[1.G] a heating element and a wicking element within the cartomizer body;	
[1.H] an inhalation tube in fluid communication with the heating element and the wicking element;	
[1.I] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	
[1.J] a plurality of cartomizer electrical contacts on an exterior of the insertion end,	
[1.K] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	
[2] The cartomizer of claim 1, wherein the translucent material comprises glass or plastic.	
[5] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a cartomizer metallic surface configured to be attracted to at least one magnet in or proximate to the chamber.	
[6] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure.	
[8] The cartomizer of claim 1, wherein the plurality of cartomizer electrical contacts is further configured to at least partially compress the plurality of battery electrical contacts when the cartomizer body is inserted into the chamber.	
[9.A] A vaporizer device comprising:	
[9.B] a cartomizer comprising,	
[9.C] a cartomizer body configured to hold a fluid vaporizable substance,	

’981 Claim Limitations	Fu 037
[9.D] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance;	
[9.E] a heating element and a wicking element within the cartomizer body; and	
[9.F] a plurality of cartomizer electrical contacts on an exterior of the insertion end; and	
[9.G] a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion; and	
[9.H] a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion,	
[9.I] wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer body aligns with the window when the cartomizer body is inserted into the chamber.	
[10] The vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment.	
[11] The vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment.	
[13.A] A vaporizer device comprising:	
[13.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	
[13.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	
[13.D] a cartomizer body having a volume defined therein, the volume configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	
[13.E] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in	

’981 Claim Limitations	Fu 037
the chamber when the cartomizer body is inserted into the chamber;	
[13.G] a heating element within the cartomizer body;	
[13.H] cartomizer electrical contacts operable to direct current to the heating element, wherein the cartomizer electrical contacts are on an exterior of the cartomizer body; and	
[13.I] a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance;	
[13.J] an inhalation tube in fluid communication with the heating element and the wicking element; and	
[13.K] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube.	
[14] The cartomizer of claim 13, wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance.	
[15] The cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine.	
[16] The cartomizer of claim 13, wherein cartomizer electrical contacts are positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	
[17.A] A vaporizer device comprising:	To the extent the preamble is limiting, Fu 037 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Fu 037 at [0001]; [0006]; [0016]; Figs. 1-2.
[17.B] a cartomizer comprising:	
[17.C] a cartomizer body configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	
[17.D] wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device,	

’981 Claim Limitations	Fu 037
[17.E] a heating element within the cartomizer body,	
[17.F] cartomizer electrical contacts operable to direct current to the heating element, and	
[17.G] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	
[17.H] a battery portion, the battery portion having a first end and a second end, the battery portion comprising:	Fu 037 discloses a battery portion, the battery portion having a first end and a second end. For example, see the following passages and/or figures, as well as all related disclosures: Fu 037 at [0006]; [0016]; Figs. 1-2.
[17.I] a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion,	
[17.J] a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery,	
[17.K] battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar, and	Fu 037 discloses and/or renders obvious battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar. For example, see the following passages and/or figures, as well as all related disclosures: Fu 037 at [0006]; [0016]; [0017]; Figs. 1-2.
[17.L] an outer shell forming at least part of the chamber, wherein a window is formed in the outer shell to permit viewing of the cartomizer body when the cartomizer body is received into the chamber.	
[18.A] The vaporizer device of claim 9, wherein the cartomizer has a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer further comprises,	

’981 Claim Limitations	Fu 037
[18.B] an inhalation tube in fluid communication with the heating element and the wicking element; and	
[18.C] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube;	
[18.D] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	

EXHIBIT E-13

EXHIBIT E-13

Invalidity Claim Chart of KR200453424 ("Yeom 424") against U.S. Patent No. 11,606,981

Yeom 424, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 5, 6, 8, 9, 10, 11, 13, 14-16, 17, and 18 of U.S. Patent No. 11,606,981. Yeom 424 was filed on November 8, 2010, and published on May 2, 2011. Yeom 424 qualifies as prior art to the '981 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Yeom 424. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in Yeom 424. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'981 Claim Limitations	Yeom 424
[1.A] A vaporizer device comprising:	
[1.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	
[1.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	
[1.D] a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance,	
[1.E] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance,	
[1.F] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '981 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’981 Claim Limitations	Yeom 424
[1.G] a heating element and a wicking element within the cartomizer body;	
[1.H] an inhalation tube in fluid communication with the heating element and the wicking element;	
[1.I] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	
[1.J] a plurality of cartomizer electrical contacts on an exterior of the insertion end,	
[1.K] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	
[2] The cartomizer of claim 1, wherein the translucent material comprises glass or plastic.	
[5] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a cartomizer metallic surface configured to be attracted to at least one magnet in or proximate to the chamber.	
[6] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure.	
[8] The cartomizer of claim 1, wherein the plurality of cartomizer electrical contacts is further configured to at least partially compress the plurality of battery electrical contacts when the cartomizer body is inserted into the chamber.	
[9.A] A vaporizer device comprising:	
[9.B] a cartomizer comprising,	
[9.C] a cartomizer body configured to hold a fluid vaporizable substance,	

’981 Claim Limitations	Yeom 424
[9.D] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance;	
[9.E] a heating element and a wicking element within the cartomizer body; and	
[9.F] a plurality of cartomizer electrical contacts on an exterior of the insertion end; and	
[9.G] a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion; and	
[9.H] a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion,	
[9.I] wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer body aligns with the window when the cartomizer body is inserted into the chamber.	
[10] The vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment.	
[11] The vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment.	
[13.A] A vaporizer device comprising:	
[13.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	
[13.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	
[13.D] a cartomizer body having a volume defined therein, the volume configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	
[13.E] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in	

’981 Claim Limitations	Yeom 424
the chamber when the cartomizer body is inserted into the chamber;	
[13.G] a heating element within the cartomizer body;	
[13.H] cartomizer electrical contacts operable to direct current to the heating element, wherein the cartomizer electrical contacts are on an exterior of the cartomizer body; and	
[13.I] a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance;	
[13.J] an inhalation tube in fluid communication with the heating element and the wicking element; and	
[13.K] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube.	
[14] The cartomizer of claim 13, wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance.	
[15] The cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine.	
[16] The cartomizer of claim 13, wherein cartomizer electrical contacts are positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	
[17.A] A vaporizer device comprising:	To the extent the preamble is limiting, Yeom 424 discloses and/or renders obvious a vaporizer. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0001]; [0006]; [0013]; Figs. 1-4.
[17.B] a cartomizer comprising:	
[17.C] a cartomizer body configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	
[17.D] wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device,	

’981 Claim Limitations	Yeom 424
[17.E] a heating element within the cartomizer body,	
[17.F] cartomizer electrical contacts operable to direct current to the heating element, and	
[17.G] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	
[17.H] a battery portion, the battery portion having a first end and a second end, the battery portion comprising:	Yeom 424 discloses a battery portion, the battery portion having a first end and a second end. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0006]; [0010]; [0013]; Figs. 1-2.
[17.I] a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion,	
[17.J] a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery,	
[17.K] battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar, and	Yeom 424 discloses and/or renders obvious battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar. For example, see the following passages and/or figures, as well as all related disclosures: Yeom 424 at [0030]; [0034]; [0057]; Figs. 2-3.
[17.L] an outer shell forming at least part of the chamber, wherein a window is formed in the outer shell to permit viewing of the cartomizer body when the cartomizer body is received into the chamber.	
[18.A] The vaporizer device of claim 9, wherein the cartomizer has a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer further comprises,	

’981 Claim Limitations	Yeom 424
[18.B] an inhalation tube in fluid communication with the heating element and the wicking element; and	
[18.C] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube;	
[18.D] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	

EXHIBIT E-14

EXHIBIT E-14

Invalidity Claim Chart of KR20130092251A ("Young 251") against U.S. Patent No. 11,606,981

Young 251, alone or in view of the references identified in Respondents' Invalidity Contention cover document, anticipates and/or renders obvious claims 1, 2, 5, 6, 8, 9, 10, 11, 13, 14-16, 17, and 18 of U.S. Patent No. 11,606,981. Young 251 was filed on February 10, 2012, and published on August 20, 2013. Young 251 qualifies as prior art to the '981 Patent under at least AIA 35 U.S.C. § 102(a)(1).

The chart below identifies examples of where each element of each Asserted Claim is shown, at least under Complainants' apparent claim constructions and/or interpretations, by Young 251. Citations to particular excerpts are by way of example only, and are not exhaustive of the evidentiary support found in Young 251. Moreover, to the extent that any secondary references are cited herein, the proposed combinations are not exhaustive nor are the theories of invalidity described herein.[1]

'981 Claim Limitations	Young 251
[1.A] A vaporizer device comprising:	
[1.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	
[1.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	
[1.D] a cartomizer body having a volume defined therein, the volume configured to hold a fluid vaporizable substance,	
[1.E] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance,	
[1.F] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is	

[1] Respondents' Invalidity Contentions are not an admission that the Accused Product infringes the Asserted Claims of the '981 Patent. To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Respondents are not proposing any such constructions as proper constructions of those terms or phrases. Those positions are not intended to and do not necessarily reflect Respondents' interpretation of the true and proper scope of Complainants' claims, and Respondents reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

’981 Claim Limitations	Young 251
positioned in the chamber when the cartomizer body is inserted into the chamber;	
[1.G] a heating element and a wicking element within the cartomizer body;	
[1.H] an inhalation tube in fluid communication with the heating element and the wicking element;	
[1.I] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	
[1.J] a plurality of cartomizer electrical contacts on an exterior of the insertion end,	
[1.K] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	
[2] The cartomizer of claim 1, wherein the translucent material comprises glass or plastic.	
[5] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a cartomizer metallic surface configured to be attracted to at least one magnet in or proximate to the chamber.	
[6] The cartomizer of claim 1, wherein the cartomizer further comprises a structure that secures the cartomizer in the chamber, and wherein the structure comprises a friction fit or a suction fit using a pressurized structure.	
[8] The cartomizer of claim 1, wherein the plurality of cartomizer electrical contacts is further configured to at least partially compress the plurality of battery electrical contacts when the cartomizer body is inserted into the chamber.	
[9.A] A vaporizer device comprising:	
[9.B] a cartomizer comprising,	

’981 Claim Limitations	Young 251
[9.C] a cartomizer body configured to hold a fluid vaporizable substance,	
[9.D] wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance;	
[9.E] a heating element and a wicking element within the cartomizer body; and	
[9.F] a plurality of cartomizer electrical contacts on an exterior of the insertion end; and	
[9.G] a battery portion, the battery portion having a first end and a second end and comprising: a battery housing segment proximate the first end of the battery portion; and	
[9.H] a cartomizer receiving segment proximate the second end of the battery portion, the cartomizer receiving segment comprising a chamber defined by an outer shell of the battery portion,	
[9.I] wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer body aligns with the window when the cartomizer body is inserted into the chamber.	Young 251 discloses and/or renders obvious wherein a window is provided in the outer shell, and wherein the translucent portion of the cartomizer body aligns with the window when the cartomizer body is inserted into the chamber. For example, see the following passages and/or figures, as well as all related disclosures: Young 251 at [0050]; [0052]; [0053]; Figs. 5-6.
[10] The vaporizer device of claim 9, wherein outer shell is commonly shared by the battery housing segment and the cartomizer receiving segment.	
[11] The vaporizer device of claim 9, further comprising a rechargeable battery in the battery housing segment.	
[13.A] A vaporizer device comprising:	
[13.B] a battery portion having an outer shell and a chamber defined by the outer shell; and	

’981 Claim Limitations	Young 251
[13.C] a cartomizer having a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer comprising:	
[13.D] a cartomizer body having a volume defined therein, the volume configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	
[13.E] wherein the cartomizer body is configured for insertion into the chamber such that at least part of the volume is positioned in the chamber when the cartomizer body is inserted into the chamber;	
[13.G] a heating element within the cartomizer body;	
[13.H] cartomizer electrical contacts operable to direct current to the heating element, wherein the cartomizer electrical contacts are on an exterior of the cartomizer body; and	
[13.I] a wicking element inside the cartomizer body, the wicking element configured to absorb the vaporizable substance;	
[13.J] an inhalation tube in fluid communication with the heating element and the wicking element; and	
[13.K] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube.	
[14] The cartomizer of claim 13, wherein at least a portion of the cartomizer body comprises a translucent material configured to allow viewing of the fluid vaporizable substance.	
[15] The cartomizer of claim 13, wherein the vaporizable substance comprises a liquid comprising nicotine.	
[16] The cartomizer of claim 13, wherein cartomizer electrical contacts are positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	

’981 Claim Limitations	Young 251
[17.A] A vaporizer device comprising:	
[17.B] a cartomizer comprising:	
[17.C] a cartomizer body configured to hold a vaporizable substance, wherein the vaporizable substance is in a fluid state,	
[17.D] wherein the cartomizer body is configured for insertion into a chamber defined by an outer shell of a battery portion of a vaporizer device,	
[17.E] a heating element within the cartomizer body,	
[17.F] cartomizer electrical contacts operable to direct current to the heating element, and	
[17.G] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube; and	
[17.H] a battery portion, the battery portion having a first end and a second end, the battery portion comprising:	
[17.I] a chamber of a cartomizer receiving segment, the chamber configured for receiving the cartomizer body, the cartomizer electrical contacts, and the heating element through an opening at a distal insertion end of the battery portion,	
[17.J] a battery segment disposed between the cartomizer receiving segment and a battery end of the battery portion opposite from the distal insertion end of the battery portion, the battery segment comprising a battery,	
[17.K] battery electrical contacts for completing a circuit with the cartomizer electrical contacts when the cartomizer electrical contacts are received into the chamber, the battery electrical contacts being coplanar, and	
[17.L] an outer shell forming at least part of the chamber, wherein a window is formed in the outer shell to permit viewing of the cartomizer body when the cartomizer body is received into the chamber.	*See* [9.I].

’981 Claim Limitations	Young 251
[18.A] The vaporizer device of claim 9, wherein the cartomizer has a mouthpiece end and an insertion end disposed opposite the mouthpiece end, the cartomizer further comprises,	
[18.B] an inhalation tube in fluid communication with the heating element and the wicking element; and	
[18.C] a mouthpiece at or proximate to the mouthpiece end, the mouthpiece in fluid communication with the inhalation tube;	
[18.D] wherein the plurality of cartomizer electrical contacts is positioned to contact a plurality of battery electrical contacts at a base end of the chamber when the cartomizer body is inserted into the chamber.	