

PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

**IN THE MATTER OF CERTAIN OIL
VAPORIZING DEVICES, COMPONENTS
THEREOF, AND PRODUCTS CONTAINING
THE SAME**

Inv. No. 337-TA-1392

**INITIAL DETERMINATION ON VIOLATION OF SECTION 337 AND
RECOMMENDED DETERMINATION ON REMEDY AND BOND**

Administrative Law Judge Bryan F. Moore

(March 6, 2025)

Appearances:

For Complainant PAX Labs Inc.

Lyle Vander Schaaf, Esq.; Mark Supko, Esq.; Kathryn L. Clune, Esq.; Hefeng Su, Esq.; and Kassidy Schmitz, Esq. of Crowell & Moring LLP from Washington, DC

Judy K. He, Esq. and Elissa N. Tenenbaum, Esq. of Crowell & Moring LLP from Chicago, IL

Joanna Fuller, Esq. of Crowell & Moring LLP from Irvine, CA

For Respondents STIIIZY IP LLC f/k/a STIIIZY, LLC and STIIIZY Inc. d/b/a Shryne Group Inc.:

Stephen R. Smith, Esq.; Matthew Ritter, Esq.; DeAnna Allen, Esq.; Phillip Morton, Esq.; and Cole G. Merritt, Esq. of Cooley LLP from Washington, DC

For Respondents ALD (Hong Kong) Holdings Limited and ALD Group Limited:

P. Andrew Riley, Esq.; Laurence M. Sandell, Esq.; Lei Mei, Esq.; Robert Hall, Esq.; and Jiwei Zhang, Esq. of Mei & Mark LLP from Washington, DC

TABLE OF CONTENTS

I.	INTRODUCTION	1
A.	Procedural History	1
B.	The Parties	2
1.	Complainant Pax Labs, Inc.	2
2.	Respondents.....	2
a)	The ALD Respondents.....	2
i)	ALD Group Limited	2
ii)	ALD (Hong Kong) Holdings Limited.....	2
b)	The STIIIZY Respondents.....	2
i)	STIIIZY Inc. d/b/a Shryne Group Inc.....	2
ii)	STIIIZY IP LLC f/k/a STIIIZY LLC.....	3
C.	The Technology at Issue	3
D.	The Products at Issue	3
1.	The Accused Products	3
2.	The Domestic Industry Products	4
E.	The Asserted Patents	5
1.	Claim Construction.....	6
2.	Person of Ordinary Skill in the Art.....	7
II.	PRELIMINARY ISSUES	7
A.	Statutory Authority.....	7
B.	Importation.....	8
C.	Ownership	9
III.	LEGAL PRINCIPLES	9
A.	Infringement.....	9
1.	Direct Infringement	10
a)	Literal Infringement	10
b)	Doctrine of Equivalents	10
2.	Indirect Infringement.....	11
a)	Induced Infringement.....	11
b)	Contributory Infringement.....	12

B. Validity	12
1. 35 U.S.C. § 102 (Anticipation).....	12
2. 35 U.S.C. § 103 (Obviousness)	13
3. 35 U.S.C. § 112, ¶ 1 (Written Description)	14
C. Domestic Industry	15
IV. U.S. PATENT NO. 11,369,756	16
A. Overview.....	16
B. Direct Infringement.....	17
1. STIIIZY-LIHL	18
a) Claim 1.....	18
i) Limitations 756.1.pre – 756.1.g.....	18
ii) Limitation 756.1.h.....	18
iii) Limitations 756.1.i – 756.1.l.....	22
iv) Conclusion	22
2. STIIIZY-1G(C).....	22
a) Claim 1.....	22
b) Claim 10.....	22
3. STIIIZY-ORIG-1	23
a) Claim 1.....	23
b) Claim 5.....	23
c) Claim 10.....	24
4. The STIIIZY Redesigned Products	24
C. Indirect Infringement	26
D. Technical Prong of the Domestic Industry Requirement	27
E. Validity	28
1. Anticipation	28
a) Alarcon.....	28
i) Claim 1.....	28
(1) Limitation 756.1.g.....	29
(2) Limitation 756.1.h.....	33
(3) Conclusion	36
ii) Claim 5.....	36

2. Obviousness.....	36
a) Alarcon in view of Daryani.....	36
i) Claim 1.....	36
ii) Claim 5.....	39
b) Alarcon in view of Daryani and Xiang.....	39
c) Alarcon in view of Xiang.....	40
d) Secondary Considerations.....	41
3. Written Description	41
V. U.S. PATENT NO. 11,766,527	45
A. Overview.....	45
B. Infringement.....	49
1. STIIIZY-LIIL	49
a) Claim 1.....	49
i) Limitations 527.1.pre – 527.1.e	49
ii) Limitation 527.1.f.....	50
iii) Limitations 527.1.g – 527.1.i.iv.....	50
iv) Conclusion	50
b) Claim 18.....	50
c) Claim 22.....	50
2. STIIIZY- AIO	51
a) Claim 1.....	51
i) Limitations 527.1.pre – 527.1.e	51
ii) Limitation 527.1.f.....	51
iii) Limitations 527.1.g – 527.1.i.iv.....	53
iv) Conclusion	53
3. STIIIZY-1G(C).....	53
a) Claim 1.....	53
b) Claim 10.....	54
c) Claim 18.....	54
d) Claim 22.....	54
4. STIIIZY-ORIG-1G	55
a) Claim 1.....	55

b) Claim 5.....	55
c) Claim 10.....	55
d) Claim 11.....	56
e) Claim 17.....	56
f) Claim 18.....	57
g) Claim 22.....	57
5. ROVE Products	57
a) Claim 1.....	57
b) Claim 5.....	58
c) Claim 10.....	58
d) Claim 11.....	58
e) Claim 17.....	59
6. FLARE Products	59
a) Claim 1.....	59
b) Claim 5.....	60
7. The STIIIZY Redesigned Products	60
C. Indirect Infringement	60
D. Technical Prong of the Domestic Industry Requirement.....	60
E. Validity.....	61
1. Obviousness.....	62
a) Alarcon in view of Zhou and Tucker	62
i) Claims 1, 11, and 18.....	62
ii) Claims 5 and 22	64
b) Alarcon in view of Zhou, Tucker, and Xiang	64
c) Alarcon in view of Zhou, Tucker, and Daryani	65
d) Secondary Considerations.....	65
2. Written Description	65
VI. U.S. PATENT NO. 11,369,757	66
A. Overview.....	66
B. Infringement.....	68
1. STIIIZY-LIIL	69
a) Claim 1.....	69

PUBLIC VERSION

i) Limitations 757.1.pre – 757.1.f.iii	69
ii) Limitation 757.1.g.....	69
iii) Limitations 757.1.h – 757.1.j.....	69
iv) Conclusion	69
2. STIIIZY-1G(C).....	69
a) Claim 1	69
b) Claim 13.....	70
3. STIIIZY-ORIG-1G	70
a) Claim 1	70
b) Claim 13.....	70
c) Claim 15.....	71
d) Claim 20.....	71
4. The STIIIZY Redesigned Products	72
C. Indirect Infringement	72
D. Technical Prong of the Domestic Industry Requirement.....	72
E. Validity.....	73
1. Anticipation	73
a) Alarcon.....	73
i) Claim 1	73
ii) Claim 15.....	74
2. Obviousness.....	74
a) Alarcon in view of Daryani.....	74
b) Alarcon in view of Xiang.....	74
c) Alarcon in view of Daryani and Xiang	74
d) Tucker in view of Alarcon	75
e) Tucker in view of Alarcon and Daryani.....	75
f) Tucker in view of Alarcon and Xiang.....	76
g) Tucker in view of Alarcon, Daryani, and Xiang	76
h) Secondary Considerations.....	77
3. Written Description	77

VII. U.S. PATENT NO. 11,759,580	77
A. Overview.....	77
B. Infringement.....	80
1. STIIZY-LIIL	82
a) Claim 1.....	82
i) Limitations 580.1.pre – 5801.e	82
ii) Limitation 580.1.f.....	82
iii) Limitations 580.1.g – 580.1.h.....	82
iv) Conclusion	82
2. STIIZY-AIO	82
a) Claim 1.....	82
i) Limitations 580.1.pre – 580.1.e	82
ii) Limitation 580.1.f.....	83
iii) Limitations 580.1.g – 580.1.h.....	83
iv) Conclusion	83
3. STIIZY-1G(C).....	83
a) Claim 1.....	83
b) Claim 7.....	83
4. STIIZY-ORIG-1G	84
a) Claim 1.....	84
b) Claim 6.....	84
c) Claim 7.....	85
d) Claim 8.....	85
e) Claim 10.....	85
5. FLARE Products	86
a) Claim 1.....	86
6. ROVE Products	86
a) Claim 1.....	86
i) Limitations 580.1.pre – 580.1.g.iii.....	86
ii) Limitation 580.1.g.iv.....	86
iii) Limitation 580.1.g.v.....	88
iv) Limitations 580.1.g.vi – 580.1.h.....	90

v) Conclusion	90
b) Claim 6.....	90
c) Claim 7.....	91
d) Claim 8.....	91
e) Claim 10.....	91
7. The Redesigned Products	92
a) STIIIZY-1G-REDESIGN(C)	92
i) Claim 1.....	92
(1) Limitations 580.1.pre – 580.1.g.iii	92
(2) Limitation 580.1.g.iv.....	92
(3) Limitations 580.1.g.v – 580.1.h	95
(4) Conclusion	96
ii) Claim 7.....	96
b) STIIIZY-ORIG-1G-REDESIGN.....	96
i) Claim 1.....	96
(1) Limitations 580.1.pre – 580.1.g.iii	96
(2) Limitation 580.1.g.iv	96
(3) Limitations 580.1.g.v – 580.1.h	97
(4) Conclusion	97
ii) Claim 6.....	97
iii) Claim 7.....	97
iv) Claim 8.....	98
v) Claim 10.....	98
c) STIIIZY-AIO-REDESIGN	98
i) Claim 1	98
(1) Limitations 580.1.pre – 580.1.e	98
(2) Limitation 580.1.f	99
(3) Limitations 580.1.g – 580.1.g.iii.....	99
(4) Limitations 580.1.g.iv	99
(5) Limitations 580.1.g.v – 580.1.h	99
(6) Conclusion	99
d) ROVE-REDESIGNS	100

i) Claim 1	100
(1) Limitations 580.1.pre – 580.1.g.iii	100
(2) Limitation 580.1.g.iv	100
(3) Limitation 580.1.g.v	100
(4) Limitations 580.1.g.vi – 580.1.h	100
(5) Conclusion	101
ii) Claim 6.....	101
iii) Claim 7.....	101
iv) Claim 8.....	101
v) Claim 10.....	101
e) FLARE-REDESIGNS.....	102
i) Claim 1	102
(1) Limitations 580.1.pre – 580.1.g.iii	102
(2) Limitation 580.1.g.iv	102
(3) Limitations 580.1.g.v – 580.1.h	103
(4) Conclusion	103
C. Indirect Infringement	103
D. Technical Prong of the Domestic Industry Requirement	104
E. Validity	104
1. Anticipation	105
a) Alarcon.....	105
i) Claims 1 and 8	105
ii) Claim 6.....	105
b) Tucker	105
i) Claim 1	105
ii) Claim 6.....	107
iii) Claim 8.....	108
2. Obviousness.....	108
a) Alarcon in view of Xiang.....	108
b) Tucker in view of Xiang	108
c) Secondary Considerations.....	109
3. Written Description	109

PUBLIC VERSION

VIII. ECONOMIC PRONG OF THE DOMESTIC INDUSTRY REQUIREMENT	109
IX. CONCLUSIONS OF LAW	111
X. RECOMMENDED DETERMINATION ON REMEDY AND BOND	113
A. Limited Exclusion Order.....	113
B. Cease and Desist Orders	114
1. The ALD Respondents	114
2. The STIIIZY Respondents	115
C. Bond.....	116
XI. INITIAL DETERMINATION	117
XII. ORDER.....	118

LIST OF ABBREVIATIONS

The following abbreviations may be used in this Initial Determination:

CDX	Complainant's demonstrative exhibit
CPX	Complainant's physical exhibit
CX	Complainant's exhibit
CIB	Complainant's initial post-hearing brief
CRB	Complainant's reply post-hearing brief
CPHB	Complainant's pre-hearing brief
Dep.	Deposition
JX	Joint Exhibit
RDX	Respondents' demonstrative exhibit
RPX	Respondents' physical exhibit
RX	Respondents' exhibit
RIB	Respondents' initial post-hearing brief
RRB	Respondents' reply post-hearing brief
RPHB	Respondents' pre-hearing brief
Tr.	Transcript
RUCL	Respondents' Undisputed Claim Limitations
CUCL	Complainant's Amended List of Undisputed Claim Limitations

PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

In the Matter of

**CERTAIN OIL VAPORIZING DEVICES,
COMPONENTS THEREOF, AND
PRODUCTS CONTAINING THE SAME**

Inv. No. 337-TA-1392

**INITIAL DETERMINATION ON VIOLATION OF SECTION 337 AND
RECOMMENDED DETERMINATION ON REMEDY AND BOND**

Administrative Law Judge Bryan F. Moore

(March 6, 2025)

Pursuant to the Notice of Investigation, this is the final initial determination in the matter of *Certain Oil Vaporizing Devices, Components Thereof, and Products Containing the Same*, Investigation No. 337-TA-1392.

For the reasons stated herein, I have determined that no violation of section 337 of the Tariff Act of 1930, as amended, has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain oil vaporizing devices, components thereof, and products containing the same with respect to U.S. Patent Nos. 11,369,756; 11,369,757; 11,766,527; and 11,759,580.

I. INTRODUCTION

A. Procedural History

The Commission instituted the present investigation on March 6, 2024, based on a complaint filed by Complainant PAX Labs Inc. (“PAX”). 89 *Fed. Reg.* 16,025-26 (Mar. 6, 2024). The complaint, as supplemented, alleges violations of section 337 by the importation into the United States, sale for importation, or the sale in the United States after importation of certain oil vaporizing devices, components thereof, and products containing the same that infringe one or more of the asserted claims of U.S. Patent Nos. 11,369,756 (the “’756 patent”); 11,369,757 (the “’757 patent”); 11,766,527 (the “’527 patent”); and 11,759,580 (the “’580 patent”) (collectively, the “Asserted Patents”). *Id.* The complaint further alleges that a domestic industry exists. *Id.* The notice of institution named two groups of respondents: (1) STIIIZY IP LLC f/k/a STIIIZY, LLC and STIIIZY, Inc. d/b/a Shryne Group Inc. (collectively, “STIIIZY”); and (2) ALD Group Limited and ALD (Hong Kong) Holdings Limited (collectively, “ALD”) (together, “Respondents”). *Id.* The Office of Unfair Import Investigations is not a party to this investigation.

A *Markman* hearing was held on June 25, 2024. *See* EDIS Doc. ID 824458. A *Markman* order issued on August 30, 2024, construing certain claim terms. Order No. 19.

Over the course of the proceeding, PAX withdrew several of its patent infringement allegations. Specifically, on July 11, 2024, I granted a motion by PAX to terminate claims 4 and 21 of the ’527 patent. Order No. 11, *unreviewed*, Comm’n Notice (July 30, 2024). I also granted a motion for partial termination of the investigation with respect to claims 2-3, 6-9, and 11-17 of the ’756 patent; claims 3-8, 10-12, 14, and 17-19 of the ’757 patent; claims 2-3, 6-9, 12-16, 19-20, 24-25, and 27-29 of the ’527 patent; and claims 2-5, 9, 12-15, and 19 of the ’580 patent. Order No. 20, *unreviewed*, Comm’n Notice (Oct. 7, 2024).

An evidentiary hearing was held from October 21, 2024, to October 23, 2024.

After the hearing, claims 2, 9, and 16 of the '757 patent; claims 23, 26, and 30 of the '527 patent; and claims 11, 16-18, and 20 of the '580 patent were terminated from the investigation. Order No. 32, *unreviewed*, Comm'n Notice (Dec. 10, 2024).

B. The Parties

1. Complainant Pax Labs, Inc.

PAX is a corporation organized under the laws of the State of Delaware, having its principal place of business at 660 Alabama St., Second Floor, San Francisco, CA 94110. EDIS Doc. ID 812857 ("Compl.") at ¶ 9. PAX designs and develops vaporizing technology, including vaporizing hardware and software products. *Id.*

2. Respondents

a) The ALD Respondents

i) ALD Group Limited

ALD Group Limited is a Chinese corporation located in Shenzhen, China. RIB at 2.

ii) ALD (Hong Kong) Holdings Limited

ALD (Hong Kong) Holdings Limited is a Hong Kong corporation located in Hong Kong. *Id.* ALD HK wholly owns ALD Group Limited. Compl., ¶ 5.

b) The STIIIZY Respondents

i) STIIIZY Inc. d/b/a Shryne Group Inc.

On March 14, 2023, Shryne Group Inc. was merged into STIIIZY Inc., with the surviving corporation being STIIIZY Inc. *Id.* at ¶ 16. STIIIZY Inc. is a Delaware corporation with its principal place of business in Los Angeles, CA. RIB at 2. It is the parent of STIIIZY IP LLC. *Id.* at ¶ 17.

ii) STIIIZY IP LLC f/k/a STIIIZY LLC

In March 2023, STIIIZY LLC changed its name to STIIIZY IP LLC. JX-0144C at 23. STIIIZY IP LLC f/k/a STIIIZY LLC is a California corporation located in Los Angeles, CA. RIB at 2.

C. The Technology at Issue

The technology at issue relates to vaporizer cartridges, vaporizer bodies, and vaporizers. CIB at 3; RIB at 2.

D. The Products at Issue

The plain language description of the accused products or category of accused products is “vaporizing devices capable of vaporizing oils, components thereof and products containing the same’ where the components of a vaporizing device are ‘a mouthpiece, a cartridge body, an atomizer, a distal member, a bottom cover, a vaporizer body including a cartridge receiver,’ as well as a ‘battery,’ and where products containing the same are cartridge and battery components ‘sold in combination with a power charging device in which the [cartridge] or battery would each be one component of the downstream product.’” 89 *Fed. Reg.* 16,025.

1. The Accused Products

PAX accuses numerous vaporizer and vaporizer cartridge products of infringing the Asserted Patents. CIB at 4-8. According to PAX, “[t]he accused cartridges all have substantially the same components (e.g., mouthpiece, cartridge body, atomizer/heater, bottom cover), and they all function in substantially the same way.” *Id.* at 4. Likewise, the accused vaporizers all include substantially the same components (e.g., vaporizer cartridge, vaporizer body, battery), and they all function in substantially the same way. *Id.* at 5.

PUBLIC VERSION

The Accused Products set forth below are product categories, most of which have numerous variants that “differ only in ways that are immaterial to infringement, such as differences in oil flavor or cosmetic appearance.” *Id.*

Accused Products	Asserted Patents			
	'756 Patent	'757 Patent	'527 Patent	'580 Patent
STIIIZY-1G(C) [JPX-0010]	✓	✓	✓	✓
STIIIZY-05G(C) [JPX-0011]	✓	✓	✓	✓
STIIIZY-ORIG-1G [JPX-0012 + JPX-0010]	✓	✓	✓	✓
STIIIZY-ORIG-05G [JPX-0012 + JPX-0011]	✓	✓	✓	✓
STIIIZY-BIIIG-1G [JPX-0013 + JPX-0010]	✓	✓	✓	✓
STIIIZY-BIIIG-05G [JPX-0013 + JPX-0011]	✓	✓	✓	✓
STIIIZY-LIIL [JPX-0014]	✓	✓	✓	✓
STIIIZY-AIO [JPX-0015]			✓	✓
FLARE(C) [JPX-0002]			✓	✓
FLARE(V) [JPX-0001 + JPX-0002]			✓	✓
ROVE(C) [JPX-0005]			✓	✓
ROVE(V) [JPX-0004 + JPX-0005]			✓	✓
STIIIZY-1G-REDESIGN(C) [JPX-0008]				✓
STIIIZY-05G-REDESIGN(C) [JPX-0009]				✓
STIIIZY-ORIG-1G-REDESIGN [JPX-0012 + JPX-0008]				✓
STIIIZY-ORIG-05G-REDESIGN [JPX-0012 + JPX-0009]				✓
STIIIZY-BIIIG-1G-REDESIGN [JPX-0013 + JPX-0008]				✓
STIIIZY-BIIIG-05G-REDESIGN [JPX-0013 + JPX-0009]				✓
STIIIZY-AIO-REDESIGN [JPX-0007]				✓
FLARE-REDESIGN(C) [JPX-0003]				✓
FLARE-REDESIGN(V) [JPX-0001 + JPX-0003]				✓
ROVE-REDESIGN(C) [JPX-0006]				✓
ROVE-REDESIGN(V) [JPX-0004 + JPX-0006]				✓

2. The Domestic Industry Products

PAX relies on the following products to establish the existence of a domestic industry:

DI Products	Asserted Patents			
	'756 Patent	'757 Patent	'527 Patent	'580 Patent
ERA-05G(C) [CPX-0009]	✓	✓	✓	✓
ERA-1G(C) [CPX-0008]	✓		✓	
ERA-ORIG-05G [CPX-0001 + CPX-0009]	✓	✓	✓	✓
ERA-ORIG-1G [CPX-0001 + CPX-0008]	✓		✓	
ERA-PRO-05G [CPX-0002 + CPX-0009]	✓	✓	✓	✓
ERA-PRO-1G [CPX-0002 + CPX-0008]	✓		✓	
ERA-LIFE-05G [CPX-0003 + CPX-0009]	✓	✓	✓	✓
ERA-LIFE-1G [CPX-0003 + CPX-0008]	✓		✓	
ERA-GO-05G [CPX-0004 + CPX-0009]	✓	✓	✓	✓
ERA-GO-1G [CPX-0004 + CPX-0008]	✓		✓	

Id. at 8. PAX explains: “In the DI Products, an Era vaporizer is formed by inserting an Era cartridge into an Era battery. The Era cartridges include the ERA-05G(C) and ERA-1G(C). The Era batteries include the ERA-ORIG(B), ERA-PRO(B), ERA-LIFE(B), and ERA-GO(B). Any Era battery can be combined with any Era cartridge to form an Era vaporizer.” *Id.*

As with the Accused Products, the DI Products listed above are product categories, with some having numerous variants that “differ only in ways that are immaterial to practicing the Asserted Patents.” *Id.* at 9; *see also* EDIS Doc. ID 825968 (Joint Statement Identifying Accused Prods.).

E. The Asserted Patents

The Asserted Patents are all entitled “Leak-Resistant Vaporizer Device” and name the same six inventors: Nicholas Jay Hatton, Steven Christensen, Esteban Leon Duque, Ariel Atkins, James Monsees, and Adam Bowen. JX-0001–JX-0004. The Asserted Patents are generally directed to “leak-resistant vaporizer cartridges and apparatuses adapted for use with oil-based vaporizable materials including Cannabis oils.” *See, e.g.*, JX-0001 at Abstract. They share a common specification and were issued from continuation applications of App. No. 15/396,584, filed

December 31, 2016, which issued as U.S. Patent No. 11,660,403 (“the ’403 patent”). JX-0001–JX-0004. The Asserted Patents and the ’403 patent all claim priority to Provisional App. No. 62/398,494, filed on Sept. 22, 2016. *Id.*

The asserted claims are apparatus claims focusing on the mechanical aspects of vaporizing devices. An exemplary vaporizer cartridge is shown in Figure 3B of the ’756 patent and is reproduced below.

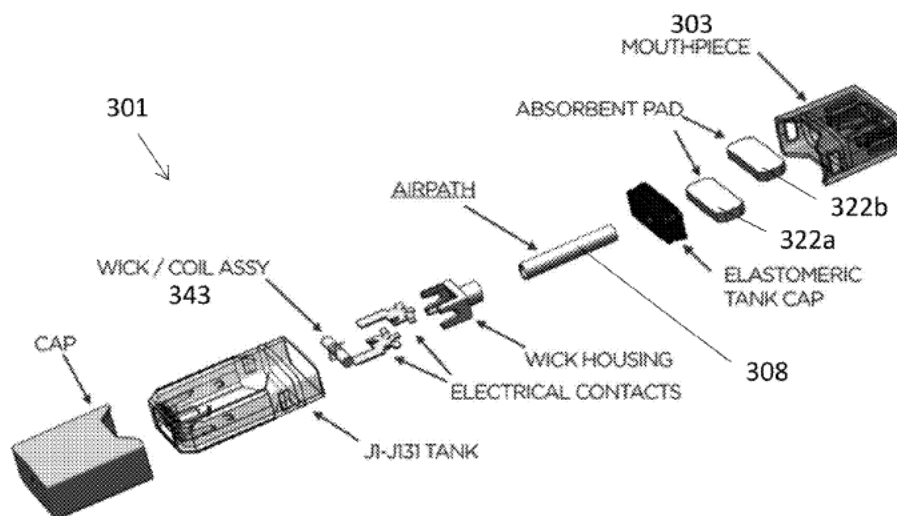


FIG. 3B

JX-0001 at Fig. 3B.

1. Claim Construction

During the *Markman* phase, the parties agreed to the construction of the following claim terms:

Claim Term	Parties' Agreed Construction
"air opening"/ "air openings"	Plain and ordinary meaning: An opening allowing air to pass
"pad"	A piece of absorbent material

Claim Term	Parties' Agreed Construction
"A housing opening configured to receive at least [a/the] portion of the heater"	Plain and ordinary meaning: A housing opening configured to receive at least [a/the] portion of the heater

Order No. 19 at 26. In the *Markman* order, I construed the following terms:

Claim Term	Parties' Agreed Construction
"bottom cover"	Plain and ordinary meaning: A structure covering a bottom of a component
"bottom portion"	Plain and ordinary meaning
"heater"	Plain and ordinary meaning
"housing opening into which at least a portion of the atomizer passes into the housing piece"	Plain and ordinary meaning

Id. at 28, 32, 34, 39.

2. Person of Ordinary Skill in the Art

I previously determined that a person of ordinary skill in the art with respect to the Asserted Patents would have a bachelor's degree in electrical and/or mechanical engineering or a related scientific discipline and at least a year of practical experience in mechanical engineering or a similar industry. *Id.* at 25. I further found that a higher level of education may substitute for a lesser amount of experience, and vice versa. *Id.*

II. PRELIMINARY ISSUES

A. Statutory Authority

The Commission has statutory authority¹ to investigate an alleged violation of section 337(a)(1)(A) by named respondents when such respondents have allegedly used unfair methods of

¹ Prior Commissions decisions have referred to terms such as "subject matter jurisdiction," "personal jurisdiction," and/or "in rem jurisdiction." *Certain Liquid Transfer Devices with an Integral Vial Adapter*, Inv. No. 337-TA-1362, Comm'n Op. at 9 (July 26, 2024). Although the Commission has used such terms in the past as a shorthand for statutory authority, the Commission

competition and unfair acts in the importation of articles into the United States, the threat or effect of which is to destroy or substantially injure a domestic industry in the United States or prevent the establishment of an industry in the United States. 19 U.S.C. § 1337(a)(1)(A). Here, PAX's complaint states that Respondents violated section 337 by importing the Accused Products by reason of infringement of certain claims of the Asserted Patents. Compl., ¶¶ 48-49. The Commission thus has statutory authority to conduct this investigation.

Both PAX and Respondents have actively participated in this investigation. Neither has contested the Commission's statutory authority. CIB at 9; RIB at 3. I find that the Commission has statutory authority over PAX and Respondents in accordance with the Commission's governing statutes. *See, e.g.*, 19 U.S.C. §§ 1333, 1337(e)-(f).

B. Importation

The statute defines a violation of section 337 as “[t]he importation into the United States, the sale for importation, or the sale within the United States after importation by the owner, importer, or consignee, of articles that . . . infringe a valid and enforceable United States patent.” 19 U.S.C. § 1337(a)(1)(B). Accordingly, “[t]o prevail under section 337, a complainant must prove that a respondent actually imported or sold for [or after] importation the articles at issue.” *Certain Carbon & Alloy Steel Prods.*, Inv. No. 337-TA-1002, Order No. 103 at 33, *unreviewed*, Comm’n Notice (Nov. 1, 2017).

Respondents have stipulated that the Accused Products have been imported into the United States. EDIS Doc. ID 832808 (Joint Stipulation re: Importation and Inventory); *see also* RPHB at

has “endeavor[ed] to realign its terminology with the language of section 337” and has clarified that “it has ‘statutory authority’ to investigate the alleged violation, rather than ‘subject matter jurisdiction,’ ‘personal jurisdiction,’ and/or ‘*in rem* jurisdiction’ under Article III” of the U.S. Constitution. *Id.*

5 (“Respondents do not contest . . . that importation of Respondents’ Accused Products has occurred.”).

C. Ownership

Commission Rule 210.12 states in relevant part “[f]or every intellectual property based complaint (regardless of the type of intellectual property involved), [the complaint must] include a showing that at least one complainant is the owner or exclusive licensee of the subject intellectual property.” 19 C.F.R. § 210.12(a)(7); *see also Certain Active Matrix Organic Light-Emitting Diode Display Panels & Modules for Mobile Devices, & Components Thereof*, Inv. No. 337-TA-1351, Comm’n Op. at 14 (May 15, 2024).

The record demonstrates that PAX has ownership of the Asserted Patents. CX-0079–CX-0082 (assignment records for the Asserted Patents); *see also* RPHB at 5 (“Respondents do not contest that PAX owned the Asserted Patents at the time the Complaint was filed.”).

III. LEGAL PRINCIPLES

A. Infringement

In a section 337 investigation, the complainant bears the burden of proving infringement of the asserted patent claims by a preponderance of the evidence. *See Spansion, Inc. v. Int’l Trade Comm’n*, 629 F.3d 1331, 1349 (Fed. Cir. 2010). This standard “requires proving that infringement was more likely than not to have occurred.” *Warner-Lambert Co. v. Teva Pharm. USA, Inc.*, 418 F.3d 1326, 1341 n.15 (Fed. Cir. 2005).

1. Direct Infringement

a) Literal Infringement

“Literal infringement requires the patentee to prove that the accused device contains each limitation of the asserted claim(s). If any claim limitation is absent, there is no literal infringement as a matter of law.” *Bayer AG v. Elan Pharm. Res. Corp.*, 212 F.3d 1241, 1247 (Fed. Cir. 2000). Literal infringement is a question of fact. *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1332 (Fed. Cir. 2008).

b) Doctrine of Equivalents

“[A] product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is ‘equivalence’ between the elements of the accused product or process and the claimed elements of the patented invention.” *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21 (1997). “[T]he proper time for evaluating equivalency . . . is at the time of infringement, not at the time the patent issued.” *Id.* at 37.

“The ‘essential inquiry’ in determining whether there has been infringement under this doctrine is whether ‘the accused product or process contains elements identical or equivalent to each claimed element of the patented invention.’” *Am. Calcar, Inc. v. Am. Honda Motor Co.*, 651 F.3d 1318, 1338 (Fed. Cir. 2011) (quoting *Warner-Jenkinson*, 520 U.S. at 40). An element in the accused device is equivalent to a claim limitation if the only differences between the two are insubstantial to one of ordinary skill in the art. *Wavetronix LLC v. EIS Elec. Integrated Sys.*, 573 F.3d 1343, 1360 (Fed. Cir. 2009); *AquaTex Indus. v. Techniche Sols.*, 419 F.3d 1374, 1382 (Fed. Cir. 2005). In order to assess insubstantiality, a court considers whether an element of the accused product “performs substantially the same function in substantially the same way to obtain the same result” as the patented invention. *Am. Calcar*, 651 F.3d at 1338; *see also Voda v. Cordis Corp.*, 536

F.3d 1311, 1326 (Fed. Cir. 2008). A patentee alleging infringement under the doctrine of equivalents must submit particularized evidence as to equivalence and must explain specifically why the difference between the claimed invention and what the accused product actually does is “insubstantial.” *Am. Calcar*, 651 F.3d at 1338.

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

2. Indirect Infringement

Indirect infringement may be either induced or contributory. Direct infringement must first be established for a claim of indirect infringement to prevail. *BMC Res. v. Paymentech*, 498 F.3d 1373, 1379 (Fed. Cir. 2007).

a) Induced Infringement

Section 271(b) of the Patent Act provides: “Whoever actively induces infringement of a patent shall be liable as an infringer.” 35 U.S.C. §271(b). To establish liability, the patent holder must prove that “once the defendants knew of the patent, they ‘actively and knowingly aid[ed] and abett[ed] another’s direct infringement.’” *DSU Med. Corp. v. JMS Co., Ltd.*, 471 F.3d 1293, 1305 (Fed. Cir. 2006) (*en banc*) (citations omitted). A finding of induced infringement requires “evidence of culpable conduct, directed to encouraging another’s infringement, not merely that the inducer had knowledge of the direct infringer’s activities.” *Id.* at 1306. Although § 271(b) requires knowledge that the induced acts constitute patent infringement, the Supreme Court has held that

liability will also attach when the defendant is willfully blind. *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2068-2069 (2011). The burden is on the complainant to prove that the respondent had the specific intent and took action to induce infringement. *DSU*, 471 F.3d at 1305-06. Intent may be proven by circumstantial evidence. *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1322 (Fed. Cir. 2009).

b) Contributory Infringement

“[T]o prevail on contributory infringement in a Section 337 case, the complainant must show *inter alia*: (1) there is an act of direct infringement in violation of Section 337; (2) the accused device has no substantial non-infringing uses; and (3) the accused infringer imported, sold for importation, or sold after importation within the United States, the accused components that contributed to another’s direct infringement.” *Spansion*, 629 F.3d at 1353 (Fed. Cir. 2010).

B. Validity

A patent is presumed valid. *See* 35 U.S.C. § 282; *Microsoft Corp. v. i4i Ltd. P’ship*, 564 U.S. 91, 95 (2011). A respondent who has raised patent invalidity as an affirmative defense has the burden of overcoming this presumption by clear and convincing evidence. *See Microsoft*, 564 U.S. at 95.

1. 35 U.S.C. § 102 (Anticipation)

Under 35 U.S.C. § 102, a claim is anticipated and therefore invalid when “the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation.” *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000), cert. denied, 532 U.S. 904 (2001). To be considered anticipatory, the prior art reference must be enabling and describe the applicant’s claimed invention sufficiently to have

placed it in possession of a person of ordinary skill in the field of the invention. *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 1346 (Fed. Cir. 2000).

2. 35 U.S.C. § 103 (Obviousness)

Under 35 U.S.C. § 103, a patent may be found invalid as obvious if “the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.” 35 U.S.C. § 103. Because obviousness is determined at the time of invention, rather than the date of application or litigation, “[t]he great challenge of the obviousness judgment is proceeding without any hint of hindsight.” *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1375 (Fed. Cir. 2011) (“*Star II*”).

When a patent is challenged as obvious, the critical inquiry in determining the differences between the claimed invention and the prior art is whether there is a reason to combine the prior art references. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418-21 (2007). The Federal Circuit has since held that “the burden falls on the patent challenger to show by clear and convincing evidence that a person of ordinary skill in the art would have had reason to attempt to make the composition or device, or carry out the claimed process, and would have had a reasonable expectation of success in doing so.” *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1360 (Fed. Cir. 2007) (citations omitted).

Obviousness is a determination of law based on underlying determinations of fact. *Star II*, 655 F.3d at 1374. The factual determinations behind a finding of obviousness include: (1) the scope and content of the prior art, (2) the level of ordinary skill in the art, (3) the differences between the claimed invention and the prior art, and (4) secondary considerations of non-obviousness. *KSR*,

550 U.S. at 399 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966)). These factual determinations are referred to collectively as the “*Graham* factors.” Secondary considerations of non-obviousness include commercial success, long felt but unresolved need, and the failure of others. *Id.* When present, secondary considerations “give light to the circumstances surrounding the origin of the subject matter sought to be patented,” but they are not dispositive on the issue of obviousness. *Geo. M. Martin Co. v. Alliance Mach. Sys. Int’l.*, 618 F.3d 1294, 1304-06 (Fed. Cir. 2010). A court must consider all the evidence from the *Graham* factors before reaching a decision on obviousness. For evidence of secondary considerations to be given substantial weight in the obviousness determination, its proponent must establish a nexus between the evidence and the merits of the claimed invention. *W. Union Co. v. MoneyGram Payment Sys. Inc.*, 626 F.3d 1361, 1372-73 (Fed. Cir. 2010) (citing *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995)).

3. 35 U.S.C. § 112, ¶ 1 (Written Description)

The specification must provide a written description of the claimed invention that “reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (*en banc*). Determining whether the written description requirement has been satisfied “requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art[]” to determine whether the specification “show[s] that the inventor actually invented the invention claimed.” *Id.* Compliance with the written description requirement is a question of fact and “the level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology.” *Id.*

C. Domestic Industry

For a patent-based complaint, a violation of section 337 can be found “only if an industry in the United States, relating to the articles protected by the patent . . . concerned, exists or is in the process of being established.” 19 U.S.C. § 1337(a)(2). The complainant bears the burden of establishing that the domestic industry requirement is satisfied. *John Mezzalingua Assocs., Inc. v. Int’l Trade Comm’n*, 660 F.3d 1322, 1331 (Fed. Cir. 2011). This domestic industry requirement of section 337

is often described as having a “technical prong” and an “economic prong.” *InterDigital Commc’ns, LLC v. Int’l Trade Comm’n*, 707 F.3d 1295, 1298 (Fed. Cir. 2013).

The “technical prong” is satisfied when the complainant in a patent-based section 337 investigation establishes that it is practicing or exploiting the patents at issue. *See* 19 U.S.C. § 1337(a)(2), (3); *Certain Microsphere Adhesives, Processes for Making Same, & Prods. Containing Same, Including Self-stick Repositionable Notes*, Inv. No. 337-TA-366 (“*Microsphere Adhesives*”), USITC Pub. No. 2949, Comm’n Op. at 24 (Jan. 16, 1996). “The test for satisfying the ‘technical prong’ of the industry requirement is essentially [the] same as that for infringement, *i.e.*, a comparison of domestic products to the asserted claims.” *Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1375 (Fed. Cir. 2003). To prevail, the patentee must establish by a preponderance of the evidence that the domestic product practices one or more valid claims of the patent. *See id.*; *Spancion*, 629 F.3d at 1349; *Certain Vision-Based Driver Assistance Sys. Cameras & Components Thereof*, Inv. No. 337-TA-907, Comm’n Op. at 36, USITC Pub. No. 4866 (Feb. 2019). It is sufficient to show that the products practice any claim of that patent, not necessarily a claim of that patent asserted for infringement. *See Certain Male Prophylactic Devices*, Inv. No. 337-TA-546, Comm’n Op. at 38 (Aug. 1, 2007).

The “economic prong” requires, with respect to the products protected by a patent, either: (A) “significant investment in plant and equipment”; (B) “significant employment of labor or capital”; or (C) “substantial investment in [the patent’s] exploitation, including engineering, research and development, or licensing.” 19 U.S.C. § 1337(a)(3)(A)-(C). These activities must be related to the particular patent(s) at issue. *Certain Stringed Musical Instruments & Components Thereof*, Inv. No. 337-TA-586, Comm’n Op. at 13 (May 16, 2008). There is no minimum monetary expenditure required to show that an investment is “substantial” or “significant”; rather, this is a fact-dependent inquiry will depend on the industry in question, the complainant’s relative size, and other factors. *Id.* at 25-26.

IV. U.S. PATENT NO. 11,369,756

A. Overview

The ’756 patent issued on June 28, 2022, and has 17 claims. JX-0001 at cover page. Claims 1, 5, and 10 are asserted in this investigation. CIB at 14. These claims are reproduced below:

Claim	Claim Language
756.1.pre	A vaporizer cartridge comprising:
756.1.a	a cartridge body comprising a proximal body end and a distal body end opposite the proximal body end;
756.1.b	a mouthpiece coupled to the proximal body end, the mouthpiece comprising an outlet;
756.1.c.	a reservoir comprising an internal volume at least partially defined by the cartridge body, the internal volume configured to hold a vaporizable material;
756.1.d	a first reservoir seal;
756.1.e	a second reservoir seal, wherein the first reservoir seal and the second reservoir seal are each configured to cover a corresponding reservoir opening exposing the internal volume of the reservoir;
756.1.f	a first pad positioned within an interior of the mouthpiece;
756.1.g	a second pad positioned within the interior of the mouthpiece;
756.1.h	a bottom cover comprising a bottom portion positioned distally relative to the cartridge body, the bottom portion comprising: a first air opening and a second air opening;
756.1.i	a first cartridge electrical contact configured to contact a first body electrical contact on a vaporizer body;

PUBLIC VERSION

Claim	Claim Language
756.1.j	a second cartridge electrical contact configured to contact a second body electrical contact on the vaporizer body; and
756.1.k	a heater chamber comprising:
756.1.k.i	an atomizer configured to heat the vaporizable material from the reservoir to generate an aerosol;
756.1.k.ii	a housing piece configured to house at least a portion of the atomizer, the housing piece comprising a housing opening into which at least a portion of the atomizer passes into the housing piece; and
756.1.k.iii	an air tube extending from the housing piece, the air tube configured to deliver the aerosol from the atomizer to the mouthpiece;
756.1.l	wherein the first pad and the second pad do not intersect with a central axis of the air tube.
756.5.pre	A vaporizer device, comprising:
756.5.a	the vaporizer cartridge of claim 1; and
756.5.b	the vaporizer body, comprising:
756.b.i	a cartridge receiver configured to insertably receive the vaporizer cartridge, the cartridge receiver comprising:
756.b.ii	the first body electrical contact configured to electrically couple to the first cartridge electrical contact of the vaporizer cartridge;
756.b.iii	the second body electrical contact configured to electrically couple to the second cartridge electrical contact of the vaporizer cartridge;
756.b.iv	an insertion end into which the vaporizer cartridge is inserted; and
756.b.v	a base opposite the insertion end.
756.10.pre	The vaporizer cartridge of claim 1, wherein the bottom portion of the bottom cover comprises:
756.10.a	a first cartridge electrical contact opening through which the first cartridge electrical contact is exposed; and
756.10.b	a second cartridge electrical contact opening through which the second cartridge electrical contact is exposed.

B. Direct Infringement

PAX asserts that the '756 Accused Products identified below infringe the asserted claims of the '756 patent:

'756 Accused Products	Representative Products	Asserted Claims
STIIIZY-1G(C)	STIIIZY-1G(C)	1 and 10
STIIIZY-05G(C)		
STIIIZY-ORIG-1G	STIIIZY-ORIG-1G	1, 5, and 10
STIIIZY-ORIG-05G		
STIIIZY-BIIIG-1G		
STIIIZY-BIIIG-05G		
STIIIZY-LIIL	STIIIZY-LIIL	1

Id.

1. STIIIZY-LIIL

a) Claim 1

i) Limitations 756.1.pre – 756.1.g

Respondents do not dispute that the STIIIZY-LIIL meets these limitations. RUCL at 2. The evidence confirms that these limitations are met. CX-4747C (Kodama) at Q/As 100-101, 104, 107, 111.

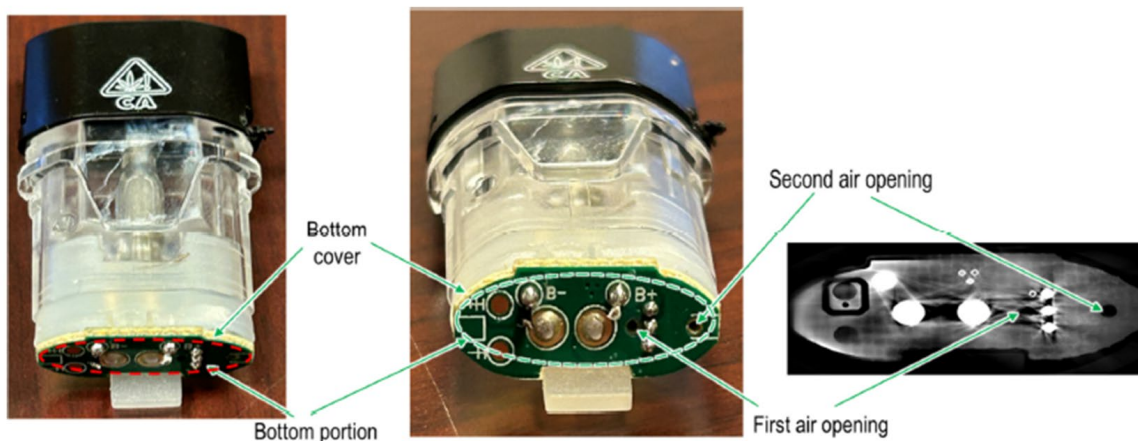
ii) Limitation 756.1.h

Limitation 756.1.h recites “a bottom cover comprising a bottom portion positioned distally relative to the cartridge body, the bottom portion comprising: a first air opening and a second air opening.” JX-0001, cl. 1. The parties’ dispute centers on the claimed “bottom cover.” PAX alleges that this limitation is satisfied by a printed board circuit that is press-fit into the bottom of the cartridge and covers the bottom of the cartridge when that component is fully assembled. CIB at 15-16; CRB at 2-3. Respondents insist the circuit board is not part of the cartridge. RIB at 6-7;

RIB at 2-3. According to Respondents, “[t]he circuit board electrically connects the battery via attached wires, all from within the vaporizer base.”² RIB at 6.

“Bottom cover” has been construed to mean “a structure covering a bottom of a component.” Order No. 19 at 28. Limitations are not read in isolation, however. *See Phillips*, 415 F.3d at 1314 (“[T]he context in which a term is used in the asserted claim can be highly instructive.”) Thus, when read in the context of the claim, the bottom cover does not cover just any component, as Respondents claim. It covers the vaporizer cartridge. *See JX-0001*, cl. 1. As seen in the photos below, the circuit board is a structure covering the bottom of the cartridge component.

STIIIZY LIIL Vaporizer



CDX-0252; *see also* -0 (Kodama) at Q/As 115, 118.

² Respondents point to the specification’s disclosure of control circuits being housed within the vaporizer body for some embodiments. RIB at 6. This reliance is misplaced, however. The Federal Circuit has made clear that “the accused device must be compared to the claims rather than to a preferred or commercial embodiment.” *See Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1347 (Fed. Cir. 2003).

Respondents argue that the circuit board is really part of the vaporizer body.³ This is contradicted by the product's assembly instructions. JX-0414C; *see also* CX-4747C (Kodama) at Q/As 138-140. [REDACTED]

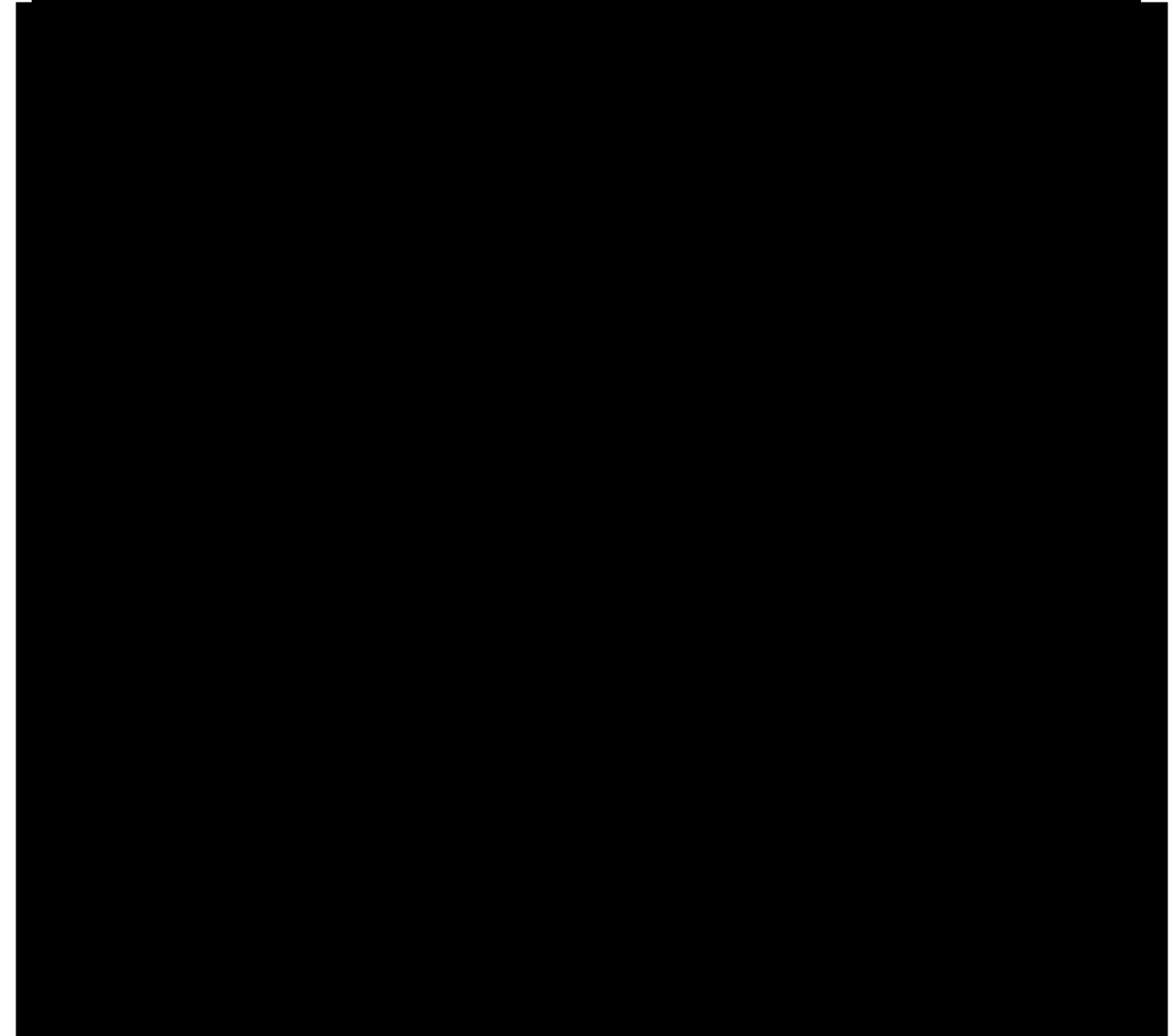
[REDACTED]

[REDACTED]

³ Respondents claim there is also a foam component on part of the bottom of the circuit board which is positioned more distally than the circuit board relative to the cartridge body. RIB at 6. They cite to a photo of a disassembled STIIIZY-LIIIL but that photo does not identify the foam component. *Id.* [REDACTED]

[REDACTED]

Id. at 11.



Id. at 12; *see also* Pecht, Tr. at 201:13-19

[REDACTED]

[REDACTED].

For these reasons, I find that the claimed “bottom cover” is present in the STIIIZY LIIL. The evidence further shows that the STIIIZY LIIL has a “bottom portion positioned distally relative to the cartridge body” (*see* CX-4747C (Kodama) at Q/As 118-119; CDX-0001.0021) and

“a first air opening and a second air opening” (*see* CX-4747C (Kodama) at Q/A 122; CDX-0001.0023).

iii) Limitations 756.1.i – 756.1.l

Respondents do not dispute that the STIIIZY-LIIL meets these limitations. RUCL at 2-3. The evidence establishes that these limitations are met. CX-4747C (Kodama) at Q/As 122, 129, 132.

iv) Conclusion

Accordingly, I find that the STIIIZY-LIIL product infringes claim 1 of the '756 patent.

2. STIIIZY-1G(C)

a) Claim 1

PAX asserts that the STIIIZY-1G(C) infringes claim 1. CIB at 15.

Respondents did not set forth any noninfringement arguments in its briefs and have therefore waived any such argument as to this claim. *See generally* RIB at 5-7; *see also* G.R. 14.2 (“Any contentions that are not set forth in detail in the post-hearing initial brief shall be deemed abandoned or withdrawn.”).

The evidence shows that the STIIIZY-1G(C) satisfies the limitations of claim 1. CX-4747C (Kodama) at Q/As 100-102, 105, 108-109, 112-116, 120, 123-127, 130. Accordingly, I find that the STIIIZY-1G(C) infringes claim 1 of the '756 patent.

b) Claim 10

Claim 10 depends from claim 1, adding “cartridge electrical contact opening” limitations. JX-0001, cl. 10.

PAX asserts the STIIIZY-1G(C) infringes claim 10. CIB at 17.

Respondents did not present any noninfringement arguments in its briefs and have therefore waived any such argument as to this claim. *See generally* RIB at 5-7.

The evidence shows that the STIIIZY-1G(C) satisfies the additional limitations of claim 10. CX-4747C (Kodama) at Q/A 141. Accordingly, I find that the STIIIZY-1G(C) infringes claim 10 of the '756 patent.

3. STIIIZY-ORIG-1

a) Claim 1

PAX asserts the STIIIZY-ORIG-1 infringes claim 1. CIB at 15.

Respondents did not set forth any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 5-7.

The evidence shows that the STIIIZY-ORIG-1 satisfies the limitations of claim 1. CX-4747C (Kodama) at Q/As 100-101, 103, 106, 108, 110, 112-114, 117, 121, 123-124, 128, 131. Accordingly, I find that the STIIIZY-ORIG-1 infringes claim 1 of the '756 patent.

b) Claim 5

Claim 5 is directed to a vaporizer device consisting of the vaporizer cartridge of claim 1 and certain “vaporizer body” limitations. JX-0001, cl. 5.

PAX asserts the STIIIZY-ORIG-1 infringes claim 5. CIB at 16-17.

Respondents did not present any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 5-7.

The evidence shows that the STIIIZY-ORIG-1 satisfies the limitations of claim 5. CX-4747C (Kodama) at Q/As 144-147. Accordingly, I find that the STIIIZY-ORIG-1 infringes claim 5 of the '756 patent.

c) Claim 10

Claim 10 depends from claim 1, adding “cartridge electrical contact opening” limitations. JX-0001, cl. 10.

PAX asserts the STIIIZY-ORIG-1 infringes claim 10. CIB at 17.

Respondents did not present any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 5-7.

The evidence shows that the STIIIZY-ORIG-1 satisfies the additional limitations of claim 10. CX-4747C (Kodama) at Q/A 142. Accordingly, I find that the STIIIZY-ORIG-1 infringes claim 10 of the ’756 patent.

4. The STIIIZY Redesigned Products

Prior to the hearing, Respondents sought adjudication of infringement with respect to its STIIIZY-1G-REDESIGN(C), STIIIZY-ORIG-1G-REDESIGN, and STIIIZY-AIO-REDESIGN (collectively, the “STIIIZY Redesigned Products”).⁴ EDIS Doc. ID 830275 (“MSD”).

Pursuant to the Ground Rules and Order No. 6, Respondents introduced certain redesigned vaporizer products, including the STIIIZY Redesigned Products, into the investigation. MSD at 1. Mr. Kodama did not render an opinion on the alleged infringement of these products for the ’756, ’757, and ’527 patents, despite having expressly considered them in his analysis for the ’580 patent. MSD Exs. A, B-D. Nor did PAX accuse these products of infringing the ’756, ’757, and ’527 patents. EDIS Doc. ID 831359 (“Opp.”). Respondents assert that they are entitled to a finding of

⁴ The STIIIZY-1G-REDESIGN(C) and STIIIZY-05G-REDESIGN(C) are considered the same for the purposes of infringement. EDIS Doc. ID 831438 (Joint Stipulation regarding Representative Prods., Asserted Claims, and Asserted Prior Art References). Likewise, the STIIIZY-ORIG-1G-REDESIGN and STIIIZY-ORIG-05G-REDESIGN are considered the same. *Id.*

noninfringement (MSD at 2), while PAX argues that Respondents seek “an impermissible advisory ruling” (Opp. at 1).

The Commission’s test for determining whether a respondent has met its burden for adjudication of a redesigned product includes four factors: (1) whether the product is within the scope of the investigation; (2) whether it has been imported; (3) whether it is sufficiently fixed in design; and (4) whether it has been sufficiently disclosed by respondent during discovery. *Certain Human Milk Oligosaccharides & Methods of Producing the Same*, Inv. No. 337-TA-1120, Comm’n Op. at 18 (June 8, 2020). Additionally, the Commission has a “policy in favor of adjudicating redesigns to prevent subsequent and potentially burdensome proceedings that could have been resolved in the first instance in the original Commission investigation.” *Id.*

Respondents submit that the Redesigned Products meet all four factors for justiciability. MSD at 4-6. I agree. PAX does not contest the Redesigned Products fall within the scope of the investigation. *See* Opp at 1-3. In fact, PAX has accused these very same products of infringing the ’580 patent. *Id.*; *see also* CIB at 54. PAX also does not dispute the STIIIZY Redesigned Products are sufficiently fixed, have been subject to extensive discovery, and have been imported to warrant adjudication of infringement. *Id.* at 2 (admitting that it has sufficient information to make an infringement determination). And, as the Commission has stated, a complainant cannot ignore evidence of noninfringement but rather must “present evidence of infringement or withdraw its allegations concerning these products.” *Certain Elec. Digital Media Devices & Components Thereof*, Inv. No. 337-TA-796, Comm’n Op. at 104 (Sept. 6, 2013).

PAX has willfully chosen not to introduce any evidence of infringement. As such, it has failed to meet its burden to show that the STIIIZY Redesigned Products infringe the ’756 patent. *See Spansion*, 629 F.3d at 1349 (holding that complainant bears the burden of proving infringement

of the asserted patent claims by a preponderance of the evidence); *see also Certain Two-Way Radio Equip. & Sys., Related Software & Components Thereof*, Inv. No. 337-TA-1053, Comm’n Op. at 27 (Dec. 18, 2018) (“[B]ecause Motorola failed to put forward evidence on infringement it did not carry its burden to prove infringement by a preponderance of the evidence it did not carry its burden to prove infringement by a preponderance of the evidence.”).

C. Indirect Infringement

The asserted claims of the ’756 patent include some claims directed to a “vaporizer cartridge” (*e.g.*, claim 1), and other claims directed to a “vaporizer device” that includes a vaporizer cartridge as one of its components (*e.g.*, claim 5). Likewise, some of the Accused Products are vaporizer cartridges and others are vaporizers designed to either work with one of the accused vaporizer cartridges or include a cartridge as an integral component.

With respect to the fully assembled cartridges (whether filled with oil or not), PAX alleges that to the extent Respondents are importing such products into the United States, selling them for importation, and/or selling them within the United States after importation, such activity indirectly infringes—contributorily and by inducement—the asserted “vaporizer device” claims. CIB at 73-74. Similarly, to the extent Respondents are engaging in such activities with regard to unassembled cartridges, such as cartridges without mouthpieces attached prior to being filled with oil, PAX contends that this constitutes indirect infringement—both contributory and induced—of the “vaporizer cartridge” claims. *Id.*

Respondents only contest indirect infringement on the basis that there can be no indirect infringement absent direct infringement. RIB at 136. They present no other arguments. *Id.* Because PAX has proven direct infringement of the asserted claims of the ’756 patent, Respondents’ argument against liability fails.

PAX has introduced substantial evidence to show that Respondents are liable for contributory infringement and that they have induced others to infringe the '756 patent. *See, e.g.*, CX-4747X (Kodama) at Q/As 584-594; JX-0068 at 30:12-20; JX-0009C at 37:3-38:21; JX-0092C at 19:7-10; CX-0054; JX-0116C at 11; CX-1466C; JX-0357C; JX-0079C; JX-0358C; RX-0471C at Q/A 22; CX-1644C–CX-1652; CX-4301C; CX-1422C; CX-1423C; JX-0312C at 84:20-90:16; JX-0016C; JX-0009C at 38:13-39:13, 75:21-80:4; JX-0013C; JX-0014C; JX-0307. This evidence stands un rebutted.

Accordingly, I find that Respondents indirectly infringe claims 1, 5, and 10 of the '756 patent, both contributorily and by inducement.

D. Technical Prong of the Domestic Industry Requirement

PAX asserts that the '756 DI Products identified below practice the certain claim of the '756 patent:

'756 DI Products	Representative Products	Practiced Claims
ERA-05G(C)	ERA-05G(C)	1
ERA-ORIG-05G	ERA-ORIG-05G	1 and 5
ERA-PRO-05G		
ERA-LIFE-05G		
ERA-GO-05G		
ERA-1G(C)	ERA-1G(C)	1
ERA-ORIG-1G	ERA-ORIG-1G	1 and 5
ERA-PRO-1G		
ERA-LIFE-1G		
ERA-GO-1G		

CIB at 80.

Respondents take no position on the technical prong of the domestic industry. RIB at 139. Respondents have therefore waived their right to dispute that PAX satisfies the technical prong of the domestic industry requirement.

The evidence shows that the '756 DI Products practice claims 1 and 5 of the '756 patent. Mr. Kodama explained how the ERA-05G(C), ERA-ORIG-05G, ERA-1G(C), and ERA-ORIG-1G practice the limitations of claim 1. CX-4747C (Kodama) at Q/As 617-656. Mr. Kodama likewise explained how the ERA-ORIG-05G and ERA-ORIG-1G practice the limitations of claim 5. *Id.* at Q/As 657-663.

For these reasons, I find that the technical prong of the domestic industry requirement is satisfied for the '756 patent.

E. Validity

Respondents assert that the '756 patent is invalid because: (1) U.S. 2016/007362 (“Alarcon”) anticipates claims 1 and 5 (RIB at 7-18); (2) Alarcon in view of U.S. 2017/0086498 (“Daryani”) renders claims 1 and 5 obvious (*id.* at 18-23); (3) Alarcon in view of CN 204 888 741 (“Xiang”) renders claim 10 obvious (*id.* at 24-34); (4) Alarcon in view of Daryani and Xiang renders claim 10 obvious (*id.* at 34-35); and (5) there is insufficient written description for the claimed “bottom cover” (*id.* at 35-42).

1. Anticipation

a) Alarcon

i) Claim 1

Respondents assert that Alarcon discloses every limitation of claim 1. RIB at 7-16. PAX disputes that Alarcon discloses a vaporizer cartridge with two pads within the interior of the mouthpiece or a vaporizer cartridge with a “bottom cover.” CIB at 18-22.

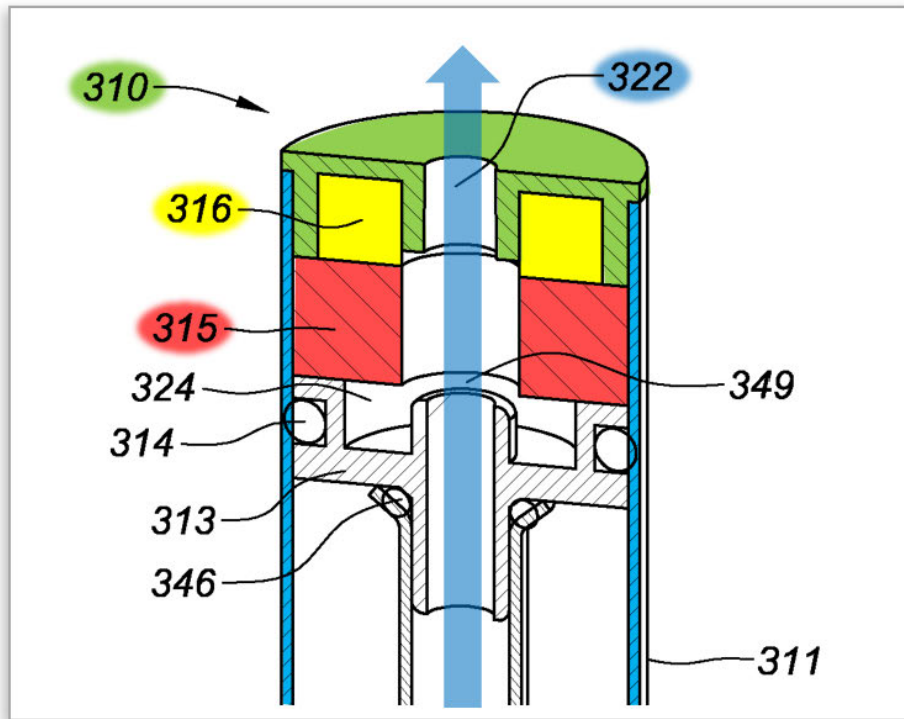
In an anticipation analysis, the dispositive question is whether a skilled artisan would “reasonably understand or infer” from a prior art reference that every claim limitation is disclosed in that single reference. *Akamai Techs., Inc. v. Cable & Wireless Internet Servs., Inc.*, 344 F.3d 1186, 1192 (Fed. Cir. 2003). For the reasons discussed below, I find that Respondents have not shown by clear and convincing evidence that Alarcon discloses either limitation 756.1.g or limitation 756.1.h.

(1) Limitation 756.1.g

Respondents argue that Alarcon discloses “at least a portion of the second pad between portions of the mouthpiece, thereby positioning the second pad within the interior of mouthpiece—or at least suggests the same.” RIB at 9. Respondents’ argument presumes that limitation 756.1.g only requires a portion of the second pad be inside the mouthpiece. This is incorrect, however. The claim language expressly requires the second pad to be “positioned *within the interior* of the mouthpiece.”⁵ JX-0001, cl. 1 (emphasis added). Thus, when considered together with limitation 756.1.f, the claimed invention requires that the vaporizer cartridge have two absorbent pads within the interior of the mouthpiece. *Id.*

The evidence shows that Alarcon discloses one absorbent pad, not two. JX-00021. Figure 10 is illustrative.

⁵ While Respondents contend that “[a] POSITA would not interpret 756.1.g to require the entirety of the second pad to be within the mouthpiece,” they provide no support for this assertion beyond a conclusory statement by Dr. Jackson. RIB at 9; *see also* RX-0473C (Jackson) at Q/A 228).)



Id. at Fig. 10 (annotated). It depicts an embodiment with a mouthpiece 310 (highlighted in green), a first porous material 315 (highlighted in red) and a second porous material (highlighted in yellow). JX-0021 at ¶ [0150]; CX-4750C (Sturges) at Q/A 57. Only second porous material 316 is within the interior of the mouthpiece 310. *Id.* at ¶ [0125] (“[A] second porous material 316 can be placed in an annular groove formed in the mouth piece.”); *see also* CX-4750C (Sturges) at Q/A 58. Dr. Jackson cites to first porous material 315 as satisfying the “second pad” limitation (RX-0473C at Q/A 226), but as the figure above shows, no portion of the first porous material 315 is within the interior of the mouth piece. CX-4750C (Sturges) at Q/A 62. Alarcon itself confirms that “a first porous material 315 can be placed *between* the proximal seal 313 and the mouth piece 310” to absorb condensate before it reaches the mouthpiece. JX-0021 at ¶ [0125] (emphasis added). And, on cross-examination, Dr. Jackson admitted that Alarcon does not disclose any embodiment as having two pads within the mouthpiece.

- Q. Alarcon itself does not describe any of the embodiments that you discuss in your witness statement as having two pads within the interior of the mouthpiece; correct?
- A. He does not describe that, but looking at that, you can see that it goes down, so I would say a POSITA would say that it's within the mouthpiece.
- Q. Alarcon was a POSITA, wasn't he?
- A. Yes.
- Q. He described it as being between the mouthpiece and the proximal seal; right?
- A. Yes. That's how he described it.

Jackson, Tr. at 439:11-24.

Nonetheless, Respondents claim that even if “756.1.g requires the entirety of the second pad to be within the mouthpiece, a POSITA would still understand Alarcon to teach this limitation.” RIB at 10. To support their theory, Respondents rely on an annotated version of FIG. 6.⁶

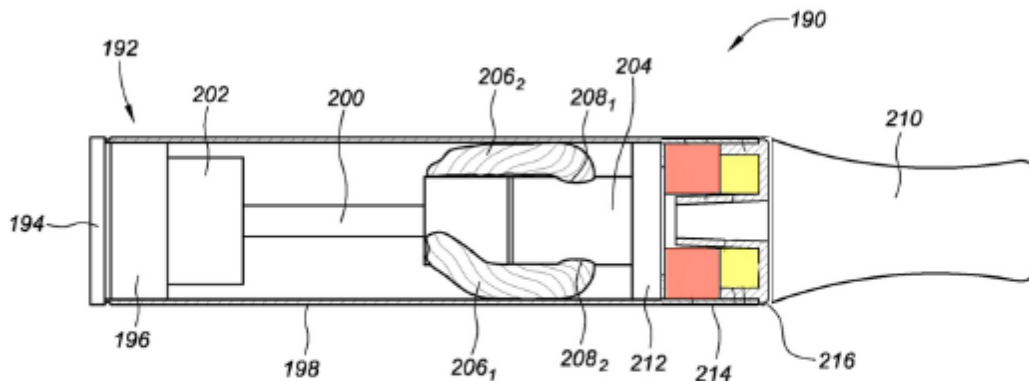


FIG. 6

⁶ “Prior art that must be modified to meet the disputed claim limitation does not anticipate the claim.” *Enplas Display Device Corp. v. Seoul Semiconductor Co., Ltd.*, 909 F.3d 398, 405 (Fed. Cir. 2018); see also *In re Chudik*, 851 F.3d 1365, 1374 (Fed. Cir. 2017).

Id. at 11. In this version, the absorbent material from FIG. 13⁷ has been inserted into the embodiment of FIG. 6. *Id.* (“wherein an annotated excerpt from Fig. 13 is disposed within ‘outer surface 214’ of ‘mouth piece 210.’”). There is no such disclosure in Alarcon. *See generally* JX-

⁷ Figure 13 discloses a mouth piece 310, mouth piece absorbent chamber 384, and secondary annular absorbent chamber 383. JX-0021 at FIG. 13.

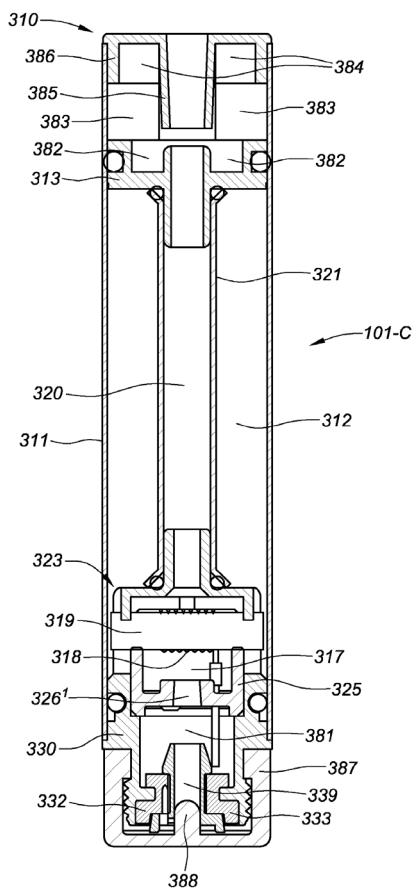


FIG. 13

Dr. Jackson points to the secondary annular absorbent chamber 383 as the second pad limitation. RX-0473C (Jackson) at Q/A 227. However, as Dr. Sturges explained, “the top of the secondary annular chamber 383 abuts the bottom of the mouth piece structure and the first porous material, and it is bounded by the outer tube on one side and by the exterior wall of the mouth piece tube 385 on the other side.” CX-4750 (Sturges) at Q/A 64. “None of that absorbent material is within the interior of the mouth piece.” *Id.* This is consistent with Alarcon’s disclosure that “a secondary annular chamber 383 can be formed *between* the mouth piece 310 and the proximal seal 313.” JX-0021 at ¶ [0150] (emphasis added).

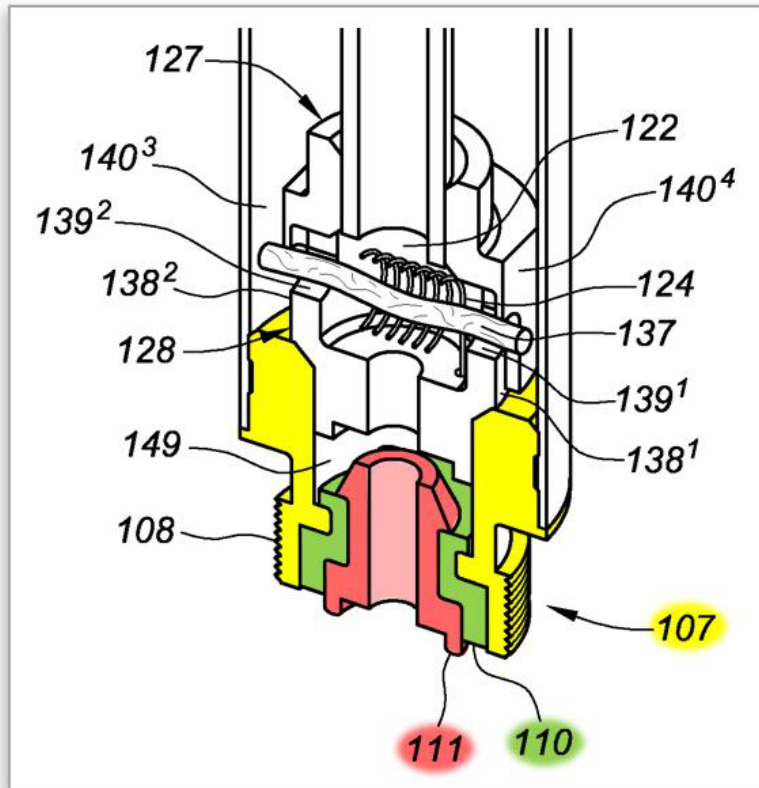
0021. Nor does Dr. Jackson explain how the mouth piece 310, mouth piece absorbent chamber 384, and secondary annular absorbent chamber from FIG. 13 could be combined with the embodiment shown in Figure 6. He merely states: “A POSITA would readily understand how to combine Alarcon’s disclosures in this manner. And, a POSITA would understand Alarcon to teach this.” RX-0473 (Jackson) at Q/A 229. The Federal Circuit has cautioned against accepting such generalized testimony as evidence of invalidity. *Schumer v. Lab’y Computer Sys., Inc.*, 308 F.3d 1304, 1316 (Fed. Cir. 2002) (“[T]o accept . . . generalized testimony as evidence of invalidity is improper”); *see also Aspex Eyewear, Inc. v. Concepts In Optics, Inc.* 111 F. App’x 582, 588 (Fed. Cir. 2004) (“Typically, testimony concerning anticipation must be testimony from one skilled in the art and must identify each claim element, state the witnesses’ interpretation of the claim element, and explain in detail how each claim element is disclosed in the prior art reference. The testimony is insufficient if it is merely conclusory.”).

As such, Respondents have failed to establish by clear and convincing evidence that Alarcon discloses this limitation.

(2) Limitation 756.1.h

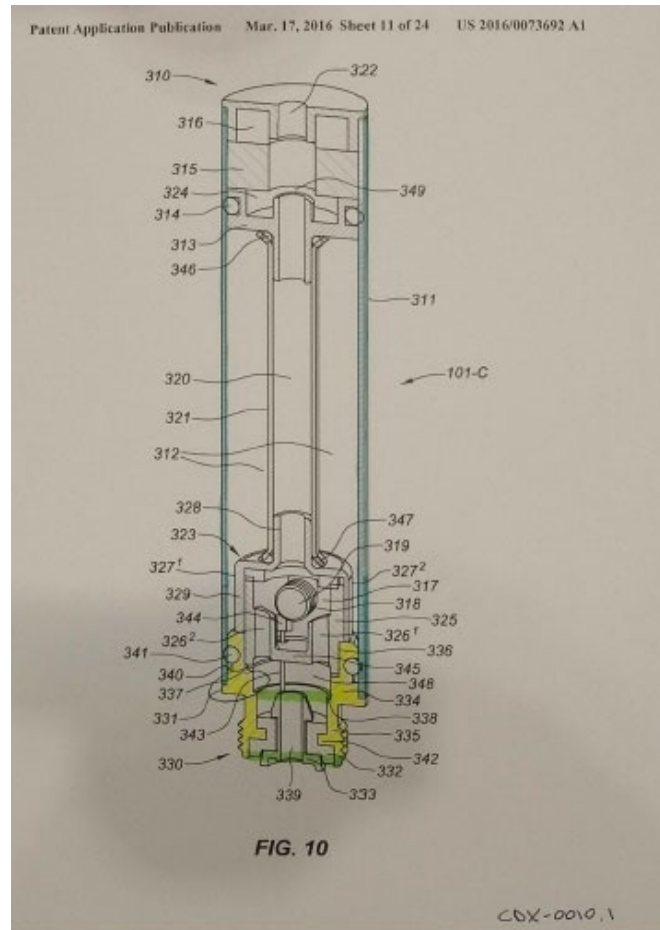
Limitation 756.1.h recites “a bottom cover comprising a bottom portion positioned distally relative to the cartridge body, the bottom portion comprising: a first air opening and a second air opening.” JX-0001, cl. 1. As with infringement, the parties’ dispute focuses on the claimed “bottom cover.” Respondents point to “battery connector 107” / “battery connector 330” as satisfying this element. RIB at 12. PAX contends that the battery connector 107/330 “doesn’t cover the bottom of the cartridge, and is instead completely open at the bottom.” CIB at 20-21.

As shown in Figure 3 from Alarcon below, the battery connector 107 *is* completely open at the bottom.



JX-0021, Fig. 3 (annotated). “That open space is then filled by the insular grommet 110 and center battery connect 111, the latter of which includes a central air hole.” CX-4750C (Sturges) at Q/A 90. On cross-examination, Dr. Jackson admitted that the battery connector is open at the bottom, thereby exposing the cartridge’s internal elements to the environment. Jackson, Tr. at 431:22-432:10 (“Q. Looking just at the battery connector 107 that you identified as the bottom cover, before the centered connector 111 is put in there, before that grommet 110 is put in there, that component is completely open at the bottom; correct? A. At the bottom in the center, that is correct.”), 433:6-8 (“Q. It’s not covering anything in the center of the device, though; right? A. It’s not covering anything in the center, no.”); 434:3-6 (“Q. But it’s not covering the bottom of the atomizer, is it? A. The bottom of the atomizer? No. Not in this case, no.”). He nonetheless maintains that the battery connector satisfies the “bottom cover” limitation because it covers the

bottom edge of the outer tube 311 (highlighted in blue).⁸ *Id.* at 514:22-519:17; *see also* RIB at 12 (arguing that battery connector 107/330 is installed internal to outer tube 105/311 and forms the distalmost outer enclosure of device 101/101-C).



CDX-0010.1. But as discussed above, the claimed “bottom cover” is “a structure covering a bottom of a [vaporizer cartridge].” Because battery connector 107/330 is open at the bottom and does not cover the vaporizer cartridge, I find that Respondents have not established by clear and convincing evidence that Alarcon discloses this limitation.⁹

⁸ This theory was disclosed for the first time on cross-examination.

⁹ Nor does the evidence suggest that a skilled artisan would view the “protruding step 109/311” of battery connector 107/330 to be the claimed “bottom cover.” *See* Sturges, Tr. at 711:23-713:7

(3) Conclusion

Accordingly, I find that Respondents have failed to show that Alarcon anticipates claim 1 of the '756 patent.

ii) Claim 5

Because I found independent claim 1 is not anticipated by Alarcon, dependent claim 5 is also not anticipated by Alarcon. *See, e.g., Home Semiconductor Corp. v. Samsung Elecs. Co.*, 701 F. App'x 1006, 1013 (Fed. Cir. 2017) (finding dependent claim not anticipated because independent claim not anticipated); *Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1296 (Fed. Cir. 2002) (“Because claim 3 is not inherently anticipated, dependent claims 4 and 5 also are not anticipated.”).

2. Obviousness

a) Alarcon in view of Daryani

i) Claim 1

Respondents contend that Alarcon in view of Daryani renders claim 1 obvious. In the foregoing section, I found that Alarcon does not disclose the “bottom cover” limitation (756.1.h). Thus, for Respondents to prevail, Daryani must disclose that limitation. Respondents do not allege that Daryani discloses this limitation. RIB at 18 (relying on Daryani for “two pads”). As such, Respondents have failed to meet their burden to establish that Alarcon and Daryani renders claim 1 obvious.

Respondents have also failed to demonstrate by clear and convincing evidence that a person of ordinary skill in the art would have been motivated to combine the teachings of Alarcon and

(confirming that merely covering the bottom of the outer tube 105/311 would not satisfy the “bottom cover” limitation).

Daryani in the manner claimed. *See P&G v. Teva Pharms. USA, Inc.*, 566 F.3d 989, 994 (Fed. Cir. 2009) (party seeking to invalidate patent must provide clear and convincing evidence of motivation to combine). Daryani is directed to an electronic cigarette that uses replaceable liquid capsules. JX-0228. More specifically, Daryani discloses that the mouthpiece of the electronic cigarette is designed as a cartridge extraction/insertion tool that enables a user to extract a spent capsule and insert a new one without having to touch the capsule, avoiding the user coming into contact with condensation on the surface of the used capsule. *Id.* This is depicted in Figure 1 below:

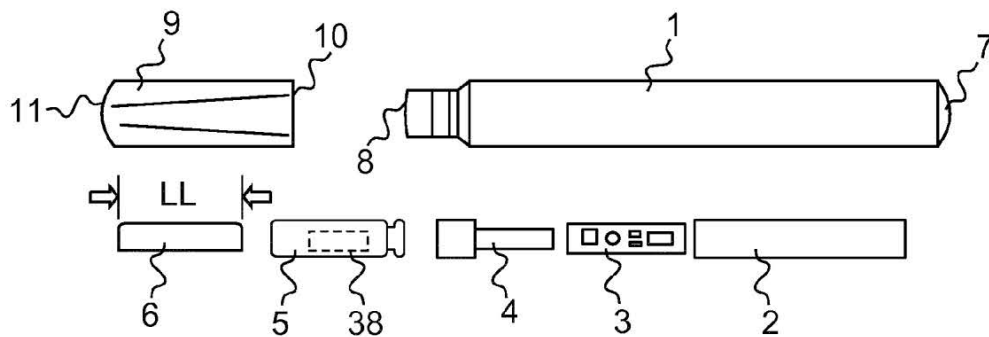


Fig. 1

Id. at FIG. 1. Alarcon, on the other hand, is directed to leakage mitigation technology. JX-0021. As Dr. Sturges explained: “Alarcon discloses what may be described as a more conventional vaporizer arrangement in which the vaporizable liquid is contained in a liquid media storage tank 117 within a cartridge component 101 that also includes a heater coil 124 for vaporizing the liquid. Alarcon appears to contemplate that the liquid media storage tank 117 can be refilled by removing the mouth piece 102 and the proximal seal 121.” CX-4750C (Sturges) at Q/A 76. And, unlike Daryani, Alarcon does not use liquid capsules, replaceable or otherwise. *Id.*; *see also* JX-0021.

Despite these differences, Respondents nevertheless claim that a person of skill would have been motivated to modify the vaporizer device disclosed in Alarcon to incorporate Daryani’s

segmented absorbers.¹⁰ RIB at 18-22. They rely on the testimony of Dr. Jackson to establish this motivation. RX-0473C (Jackson) at Q/A 269. He opined: “[A] POSITA would be motivated to segment the absorbent material of the first pad within the mouthpiece to maintain effective absorption within a flattened mouthpiece, maximize space usage within the mouthpiece, reduce manufacturing costs, and/or the like.” *Id.* These are only conclusory generalizations and do not constitute substantial evidence of a motivation to combine.¹¹ *See, e.g., In re Nuvasive, Inc.*, 842 F.3d 1376, 1382 (Fed. Cir. 2016) (“‘[C]onclusory statements’ alone are insufficient and, instead the finding must be supported by a ‘reasoned explanation’.”). Moreover, Dr. Jackson failed to explain how dividing Alarcon’s “donut-shaped pad that fills a circular groove embedded in the material forming the mouthpiece” into multiple segments would improve its absorption or increase usage of space within the mouthpiece. *See* RX-0473C (Jackson) at Q/A 226; CX-4750C (Sturges) at Q/A 78. And Daryani itself teaches that manufacturing would be easier and less expensive if the absorbent material is not segmented. JX-0228 at ¶ [0017] (“The absorber 14 may also be provided as a circumferential element, for ease of manufacturing, especially if the absorber is in the form of a unitary element.”).

¹⁰ Dr. Sturges also testified that a person of skill would not have been motivated to combine these references because Alarcon relies on an open central air tube that is unobstructed, while Daryani teaches a vapor path that is obstructed, by both the liquid capsule 6 and the absorber 14. CX-4750C (Sturges) at Q/A 82. Thus, in Dr. Sturges’ opinion, a person of skill looking to improve Alarcon “would have bypassed Daryani.” *Id.*

¹¹ “[A]n obviousness determination requires finding that a person of ordinary skill in the art would have had a reasonable expectation of success.” *See Elekta Ltd. v. Zap Surgical Sys., Inc.*, 81 F.4th 1368, 1375-1368 (Fed. Cir. 2023). Respondents claim that “incorporating Daryani’s pads into Alarcon’s mouthpiece is nothing more than simple substitution of known prior art features to yield predictable results.” RIB at 22. This is not sufficient for Respondents to meet their burden nor is it sufficient under my Ground Rules.

For these reasons, I find that Respondents have not established that Alarcon and Daryani render obvious claim 1 of the '756 patent.

ii) Claim 5

Because claim 5 depends from claim 1, it also is not rendered obvious by the combination of Alarcon and Daryani. *Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 520 F.3d 1358, 1365 (Fed. Cir. 2008) (claims cannot be obvious if they depend from a nonobvious claim).

b) Alarcon in view of Daryani and Xiang

Respondents assert that to the extent Alarcon does not expressly teach two pads in the mouthpiece, Alarcon in view of Daryani and Xiang renders claim 10 obvious. RIB at 34.

Claim 10 depends from claim 1. In the preceding section, I found that Respondents failed to show by clear and convincing evidence that Alarcon and Daryani renders claim 1 obvious. As such, Alarcon and Daryani do not render claim 10 obvious. Nor does the addition of Xiang remedy the deficiencies discussed above. Xiang does not disclose absorbent pads within the interior of the mouthpiece nor have Respondents set forth any arguments to that effect. JX-0185. Respondents only cite Xiang for its alleged teaching of a “bottom cover” that includes “a second cartridge electrical contact opening through which the second cartridge electrical contact is exposed.” RIB at 33-35.

Even if the references disclosed all the limitations of the asserted claims, which they do not, Respondents still need to show that a person of skill in the art would combine the references to arrive at the claimed invention. They write: “A POSITA would be motivated to combine the teachings of Alarcon with Daryani and Xiang for the reasons discussed above with respect to the

combination of Alarcon with Daryani and Alarcon and Xiang.” RIB at 35. Respondents’ single sentence is not sufficient under my Ground Rules and is therefore waived.¹²

Additionally, Respondents failed to address why a person of ordinary skill would combine these *specific* references. RIB at 35. Respondents merely cross-reference arguments for other combinations (*i.e.*, Alarcon + Daryani and Alarcon + Xiang). *Id.* My Ground Rules require that each unique combination of prior references relied upon be addressed in detail, including a motivation to combine said references. *See* G.R. 14.2. This is because “[r]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR*, 550 U.S. at 418 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Accordingly, I find that Respondents have not met their burden to show that Alarcon in view of Daryani and Xiang renders obvious claim 10 of the ’756 patent

c) Alarcon in view of Xiang

Respondents assert that Alarcon in view of Xiang renders claim 10 of the ’756 patent obvious. RIB at 24-34. Respondents explain that one of skill “would look to Xiang when seeking

¹² I find Dr. Jackson’s testimony to be similarly deficient. RX-0473C (Jackson) at Q/A 277. Beyond conclusory statements, he did not meaningfully address why one of skill would combine these references. For example, he opined that “a POSITA would look to Xiang when seeking to improve in Alarcon’s device” because “it was well-known and commonplace in the art to incorporate two cartridge electrical contact openings into the bottom portion of the bottom cover a cartridge.” *Id.* He further stated that: “Using a second cartridge electrical contact opening through which the second cartridge electrical contact is exposed was a known solution that a POSITA would have used on Alarcon with predictable results.” *Id.* His reasoning seems to imply that a person of skill would have understood that these references *could be* combined. But as the Federal Circuit has stated: “It does not suffice to simply be known. A reason for combining must be exist.” *Virtek Vision Int’l ULC v. Assembly Guidance Sys., Inc.*, 97 F.4th 882, 888 (Fed. Cir. 2024); *see also Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (“[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated* to make the combinations or modifications of prior art to arrive at the claimed invention.”).

to improve Alarcon's device for numerous reasons, including that both are cartridge-based vaporizer references in the same field of endeavor that a POSITA would consider and glean teachings from when improving on any prior art vaporizer." *Id.* at 28.

As explained above, I found that Alarcon does not disclose a vaporizer with two pads in the mouthpiece. *See* Section IV.E.1.a.i.1. I also found that Alarcon does not disclose the claimed "bottom cover." *Id.* Respondents do not allege that Xiang discloses these limitations. RIB at 29-34 (relying only on Xiang for the disclosure of first and second cartridge electrical contact openings). Nor have they set forth any arguments as to how a person of ordinary skill would modify Alarcon with Xiang to fulfill these missing limitations. *Id.* As such, Respondents have failed to meet their burden to establish that Alarcon in view of Xiang renders claim 10 of the '756 patent obvious.

d) Secondary Considerations

Secondary considerations of nonobviousness may rebut a *prima facie* case of obviousness. *Merck Sharp & Dohme Corp. v. Hospira, Inc.*, 874 F.3d 724, 733 (Fed. Cir. 2017) ("[once it is established] a *prima facie* case [of obviousness is shown] we turn to [a party's] attempt to rebut this *prima facie* case with secondary considerations of nonobviousness.") (quoting *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1327 (Fed. Cir. 2008)). Here, where Respondents have not made out a *prima facie* case of obviousness, there is no showing to rebut. Accordingly, I need not consider any secondary considerations of nonobviousness.

3. Written Description

The term "a bottom cover comprising a bottom portion positioned distally relative to the cartridge body, the bottom cover comprising: a first air opening" or its equivalent is present in every asserted independent claim of the '756 patent. JX-0001, cls. 1, 5, 10. Respondents argue:

“[T]he common disclosure—including the specification text, the figures, and other patent documents purported to be incorporated by reference—never discloses a bottom cover positioned distally to the cartridge body, as claimed.” RIB at 36. Thus, according to Respondents, all claims of the ’756 patent are invalid for lack of written description with respect to this claim term. *Id.* PAX contends that the ’756 specification confirms that the inventors were in possession of the claimed invention at the time the original patent application was filed. CIB at 29.

A patent is presumed to have adequate written description. *Novartis*, 38 F.4th at 1019. Respondents must overcome this presumption with clear and convincing evidence. *Ariad*, 598 F.3d at 1354-1355.

Respondents argue that the patent shows “the entirety of ‘bottom cover piece 691’ is embedded within ‘tank 441’ such that no aspect of ‘bottom cover piece 691 (e.g., a “bottom portion”)’ is ‘positioned distally relative to’ ‘tank 441.’” RIB at 36. Thus, according to Respondents, the bottom cover must be external to or “part of the outer enclosure” of the cartridge body.¹³ *Id.* at 40, 42. During the *Markman* proceedings, Respondents also advocated for a construction that limited the bottom cover to being an external cover. Order No. 19 at 26-28. I was not persuaded by Respondents’ arguments there nor am I persuaded by their arguments here.¹⁴

Contrary to Respondents’ contention, the specification sufficiently describes a “bottom cover comprising a bottom portion positioned distally relative to the cartridge body,” such that it

¹³ At trial, Dr. Jackson confirmed that he interpreted “positioned distally relative to the cartridge body” to require that the bottom cover be “external to the cartridge body.” Jackson, Tr. at 555:24-556:9, 558:1-7.

¹⁴ Conclusory expert witness testimony (like Dr. Jackson’s) and attorney argument alone are not sufficient to show that claims lack a written description by clear and convincing evidence.

meets the requirements of § 112.¹⁵ The Federal Circuit has analogized such a disclosure as “mark[ing] trails by making blaze marks on . . . trees’ to ‘find[] one’s way through the woods’ of a specification such that a skilled artisan would be able to follow that trail and understand what the inventors had invented.” *Quake v. Lo*, 928 F.3d 1365, 1374 (Fed. Cir. 2019 (quoting *In re Ruschig*, 379 F.2d 990, 994–95 (C.C.P.A. 1967))). The applicants did just that. For example, the embodiment in Figure 6D shows a vaporizer cartridge that includes a “bottom cover” positioned distally to the cartridge body.¹⁶

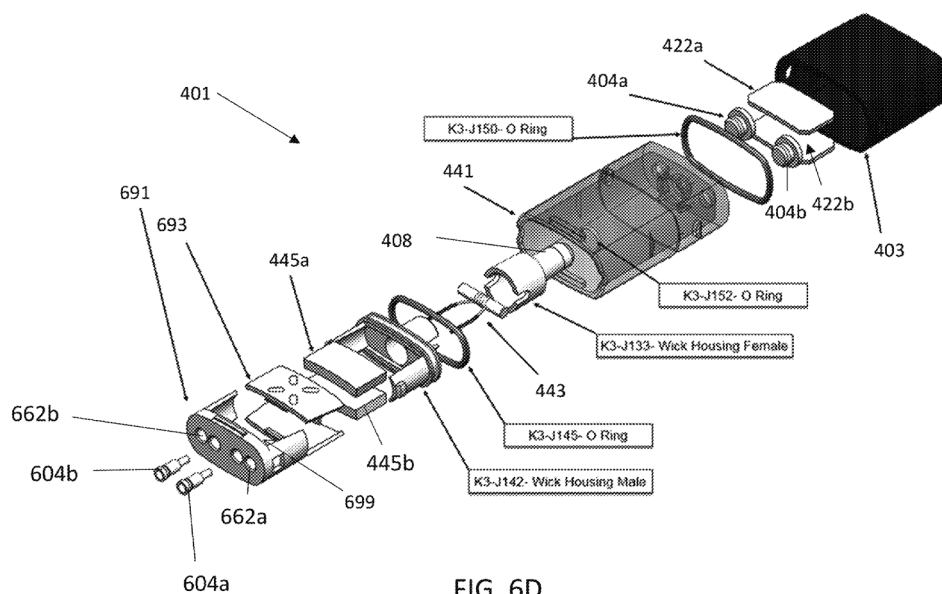
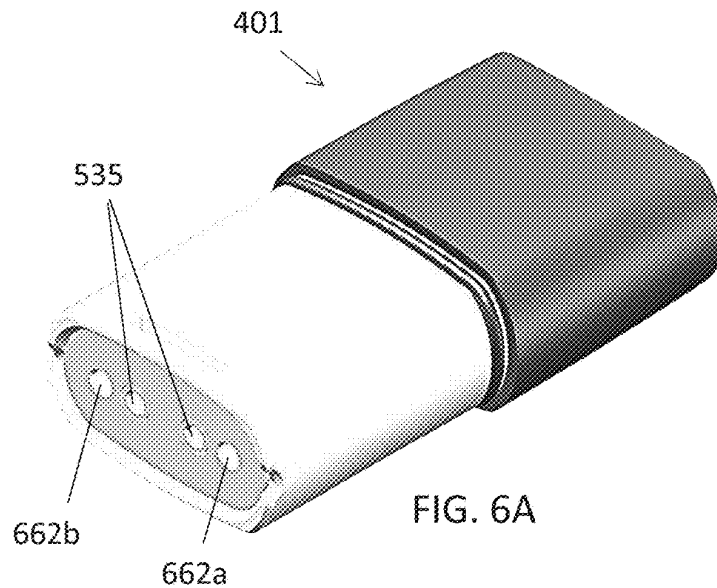


FIG. 6D

¹⁵ When read in the context of the claim, the term “positioned distally relative to the cartridge body” simply means that the bottom cover is positioned towards the end of the cartridge furthest from the mouthpiece. JX-0001, cl. 1; *see also* CX-4750C (Sturges) at Q/A 305.

¹⁶ As the Federal Circuit has stated, an applicant “may employ ‘such descriptive means as words, structures, figures, diagrams, formulas, etc., that fully set forth the claimed invention.” *In re Skvorecz*, 580F.3d 1262, 1269 (Fed. Cir. 2002).

JX-0001, FIG. 6D The specification explains that the “bottom cover piece 691” is located “[a]t the distal end of the cartridge.” *Id.* at 20:58-63. Figure 6A depicts an assembled cartridge with “bottom cover piece 691” at the distal end of the cartridge, just as claimed.



Id. at FIG. 6A. Yet another example is seen in FIG. 10A, with the “bottom portion” being the bottom surface of the “bottom 1019.”

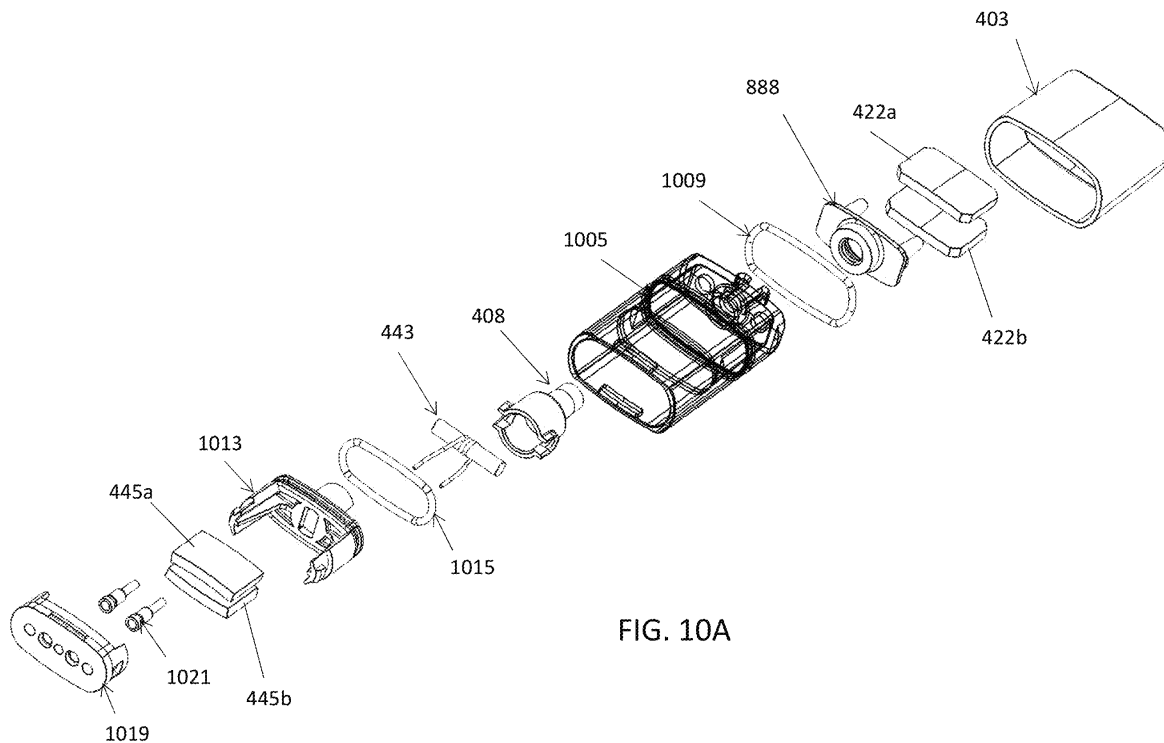


FIG. 10A

Id. at FIG. 10A; *see also id.* at 10:30 (“FIG. 7E is a bottom view” of a cartridge), 13:50-51 (“The piece forming the bottom of the cartridge 1019 ...”). Dr. Sturges confirmed that based on these disclosures, “a POSITA would have no trouble understanding what the ‘bottom cover’ limitations of the claims is referring to.” CX-4750 (Sturges) at Q/A 307; *see also id.* at Q/As 306-310.

For the above reasons, I find that Respondents have not shown by clear and convincing evidence that the asserted claims of the ’756 patent are invalid under 35 U.S.C. § 112.

V. U.S. PATENT NO. 11,766,527

A. Overview

The ’527 patent issued on September 26, 2023, and has 30 claims. JX-0004 at cover page. Claims 1, 5, 10-11, 17-18, and 22 are asserted in this investigation. CIB at 32. These claims are reproduced below:

PUBLIC VERSION

Claim	Claim Language
527.1.pre	A vaporizer cartridge comprising:
527.1.a	a cartridge body comprising a proximal body end and a distal body end opposite the proximal body end;
527.1.b	a mouthpiece coupled to the proximal body end, wherein the mouthpiece comprises an outlet;
527.1.c	a reservoir comprising an internal volume at least partially defined by the cartridge body, wherein the internal volume is configured to hold a vaporizable material;
527.1.d	a first reservoir seal configured to cover a first reservoir opening exposing the internal volume of the reservoir;
527.1.e	a second reservoir seal configured to cover a second reservoir opening exposing the internal volume of the reservoir, wherein the first reservoir seal and the second reservoir seal are positioned within an interior of the mouthpiece;
527.1.f	a bottom cover comprising a bottom portion positioned distally relative to the cartridge body, wherein the bottom portion comprises at least a first air opening;
527.1.g	a first cartridge electrical contact configured to contact a first body electrical contact on a vaporizer body;
527.1.h	a second cartridge electrical contact configured to contact a second body electrical contact on the vaporizer body; and
527.1.i	a vaporization chamber comprising:
527.1.i.i	a heating element configured to heat the vaporizable material from the reservoir to generate an aerosol
527.1.i.ii	a wicking material comprising ceramic;
527.1.i.iii	a housing piece configured to house at least a portion of the wicking material, wherein the housing piece comprises a housing opening into which at least the portion of the wicking material passes into the housing piece; and
527.1.i.iv	an air tube configured to deliver the aerosol to the mouthpiece.
527.5.pre	A vaporizer device, comprising:
527.5.a	the vaporizer cartridge of claim 1; and
527.5.b	the vaporizer body, comprising:
527.5.b.i	a cartridge receiver configured to insertably receive the vaporizer cartridge, wherein the cartridge receiver comprises:
527.5.b.i.a	the first body electrical contact configured to electrically couple to the first cartridge electrical contact of the vaporizer cartridge;
527.5.b.i.b	the second body electrical contact configured to electrically couple to the second cartridge electrical contact of the vaporizer cartridge;
527.5.b.i.c	an insertion end into which the vaporizer cartridge is inserted; and
527.5.b.i.d	a base opposite the insertion end.
527.10.pre	The vaporizer cartridge of claim 1, wherein the bottom cover comprises a bottom portion, and wherein the bottom portion comprises:

PUBLIC VERSION

Claim	Claim Language
527.10.a	the first air opening;
527.10.b	a second air opening;
527.10.c	a first cartridge electrical contact opening through which the first cartridge electrical contact is exposed; and
527.10.d	a second cartridge electrical contact opening through which the second cartridge electrical contact is exposed.
527.11.pre	A vaporizer device, comprising:
527.11.a	a vaporizer cartridge comprising:
527.11.a.i	a cartridge body comprising a proximal body end and a distal body end opposite the proximal body end;
527.11.a.ii	a mouthpiece coupled to the proximal body end, wherein the mouthpiece comprises an outlet;
527.11.a.iii	a reservoir comprising an internal volume at least partially defined by the cartridge body, wherein the internal volume is configured to hold a vaporizable material;
527.11.a.iv	a first reservoir seal configured to cover a first reservoir opening exposing the internal volume of the reservoir;
527.11.a.v	a second reservoir seal configured to cover a second reservoir opening exposing the internal volume of the reservoir, wherein the first reservoir seal and the second reservoir seal are positioned within an interior of the mouthpiece;
527.11.a.vi	a bottom cover comprising a bottom portion positioned distally relative to the cartridge body, wherein the bottom portion comprises at least a first air opening;
527.11.a.vii	a first cartridge electrical contact configured to contact a first body electrical contact on a vaporizer body;
527.11.a.viii	a second cartridge electrical contact configured to contact a second body electrical contact on the vaporizer body; and
527.11.a.ix	a vaporization chamber comprising:
527.11.a.ix.a	a heating element configured to heat the vaporizable material from the reservoir to generate an aerosol;
527.11.a.ix.b	a wicking material comprising a ceramic;
527.11.a.ix.c	a housing piece configured to house at least a portion of the wicking material, wherein the housing piece comprises a housing opening into which at least the portion of the wicking material passes into the housing piece; and
527.11.a.ix.d	an air tube configured to deliver the aerosol to the mouthpiece; and
527.11.b	a vaporizer body, comprising:
527.11.b.i	a cartridge receiver configured to insertably receive the vaporizer cartridge,
527.11.b.ii	wherein the cartridge receiver comprises:
527.11.b.ii.a	a first body electrical contact configured to electrically couple to the first cartridge electrical contact of the vaporizer cartridge;
527.11.b.ii.b	a second body electrical contact configured to electrically couple to the second cartridge electrical contact of the vaporizer cartridge;

PUBLIC VERSION

Claim	Claim Language
527.11.b.ii.c	an insertion end into which the vaporizer cartridge is inserted; and
527.11.b.ii.d	a base opposite the insertion end;
527.11.b.iii	a pressure sensor configured to detect a change in pressure, causing activation of the vaporizer device; and
527.11.b.iv	a channel extending between the base of the cartridge receiver and the pressure sensor.
527.17.pre	The vaporizer device of claim 11, wherein the bottom cover comprises a bottom portion, and wherein the bottom portion comprises
527.17.a	the first air opening;
527.17.b	a second air opening;
527.17.c	a first cartridge electrical contact opening through which the first cartridge electrical contact is exposed; an
527.17.d	a second cartridge electrical contact opening through which the second cartridge electrical contact is exposed.
527.18.pre	A vaporizer cartridge comprising:
527.18.a	a cartridge body comprising a proximal body end and a distal body end opposite the proximal body end;
527.18.b	a mouthpiece coupled to the proximal body end, wherein the mouthpiece comprises an outlet;
527.18.c	a reservoir comprising an internal volume at least partially defined by the cartridge body, wherein the internal volume is configured to cover a first reservoir;
527.18.d	a first reservoir seal configured to cover a first reservoir opening exposing the internal volume of the reservoir;
527.18.e	a second reservoir seal configured to cover a second reservoir opening exposing the internal volume of the reservoir, wherein the first reservoir seal and the second reservoir seal are positioned within an interior of the mouthpiece;
527.18.f	at least one pad positioned within an interior of the mouthpiece;
527.18.g	a bottom cover comprising a bottom portion positioned distally relative to the cartridge body, wherein the bottom portion comprises at least a first air opening;
527.18.h	a first cartridge electrical contact configured to contact a first body electrical contact on a vaporizer body;
527.18.i	a second cartridge electrical contact configured to contact a second body electrical contact on the vaporizer body; and
527.18.j	a vaporization chamber comprising:
527.18.j.i	a heating element configured to heat the vaporizable material from the reservoir to generate an aerosol;
517.18.j.ii	a wicking material comprising ceramic;

Claim	Claim Language
527.18.j.iii	a housing piece configured to house at least a portion of the wicking material, wherein the housing piece comprises a housing opening into which at least the portion of the wicking material passes into the housing piece; and
527.18.j.iv	an air tube configured to deliver the aerosol to the mouthpiece.
527.22	The vaporizer cartridge of claim 18, wherein the at least one pad includes two pads.

B. Infringement

PAX asserts that the '527 Accused Products identified below infringe the asserted claims of the '527 patent:

'527 Accused Products	Representative Products	Asserted Claims
STIIIZY-1G(C)	STIIIZY-1G(C)	1, 10, 18, and 22
STIIIZY-05G(C)		
STIIIZY-ORIG-1G	STIIIZY-ORIG-1G	1, 5, 10-11, 17-18, and 22
STIIIZY-ORIG-05G		
STIIIZY-BIIIG-1G		
STIIIZY-BIIIG-05G		
STIIIZY-LIIL	STIIIZY-LIIL	1, 18, and 22
STIIIZY-AIO	STIIIZY-AIO	1
ROVE(C)	ROVE(C)	1 and 10
ROVE(V)	ROVE(V)	1, 5, 10-11, and 17
FLARE(C)	FLARE(C)	1
FLARE(V)	FLARE(V)	1 and 5

Id.

1. STIIIZY-LIIL

a) Claim 1

i) Limitations 527.1.pre – 527.1.e

Respondents do not dispute that the STIIIZY-LIIL meets these limitations. RUCL at 5-6.

The evidence confirms that these limitations are met. CX-4747C (Kodama) at Q/As 151, 154, 162.

ii) Limitation 527.1.f

The parties rely on the arguments presented for the “bottom cover” limitation in the ’756 patent for this limitation. CIB at 33; RIB at 43-44. Thus, for the reasons discussed in Section IV.B.1.a.ii, the evidence shows that this limitation is met. *See also* CX-4747C (Kodama) at Q/As 172-173.

iii) Limitations 527.1.g – 527.1.i.iv

Respondents do not dispute that the STIIIZY-LIIL meets these limitations. RUCL at 6. The evidence establishes that these limitations are met. CX-4747C (Kodama) at Q/As 182, 196-198.

iv) Conclusion

Accordingly, I find that the STIIIZY-LIIL infringes claim 1 of the ’527 patent.

b) Claim 18

Claim 18 is identical to claim 1 but adds a “pad” limitation (527.18.f). JX-0004, cl. 18. Respondents do not dispute limitation 527.18.f (RUCL at 8) and the evidence shows this limitation is met. CX-4747 (Kodama) at Q/As 216-219, 223. I therefore find that the STIIIZY-LIIL infringes claim 18 of the ’527 patent.

c) Claim 22

Claim 22 depends from claim 18, adding that “the at least one pad includes two pads.” JX-0004, cl. 22. Respondents do not dispute the STIIIZY-LIIL meets the additional limitation of claim 22 and the evidence confirms this limitation is met. RUCL at 8; CX-4747C (Kodama) at Q/A 227. I therefore find that the STIIIZY-LIIL infringes claim 22 of the ’527 patent.

2. STIIIZY-AIO

a) Claim 1

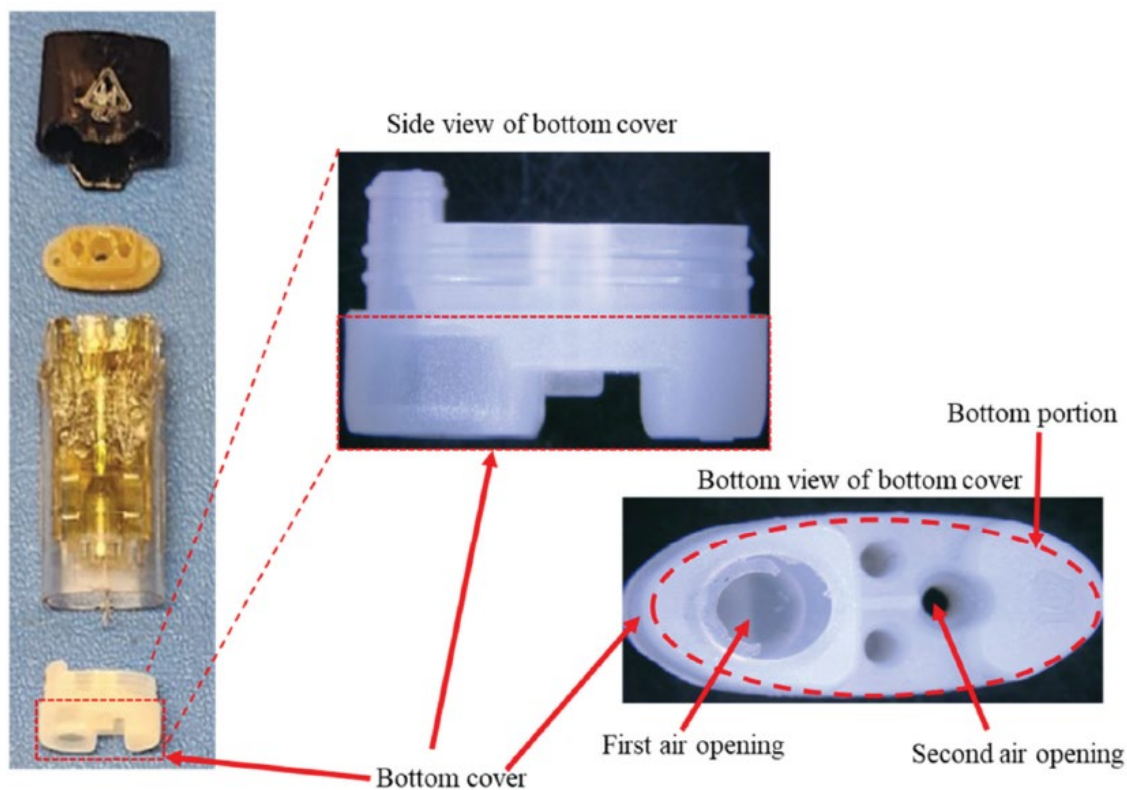
i) Limitations 527.1.pre – 527.1.e

Respondents do not dispute that the STIIIZY-AIO meets these limitations. RUCL at 5-6. The evidence confirms that these limitations are met. CX-4747C (Kodama) at Q/As 151, 155, 163.

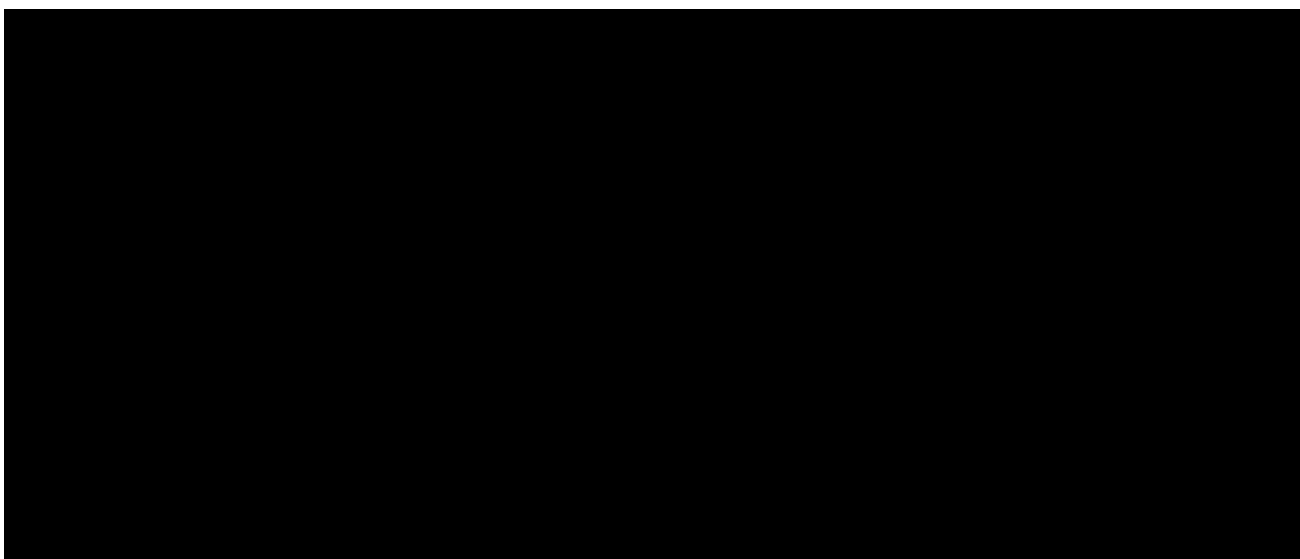
ii) Limitation 527.1.f

Limitation 527.1.f recites “a bottom cover comprising a bottom portion positioned distally relative to the cartridge body, wherein the bottom portion comprises at least a first air opening.” JX-0004, cl. 1. The parties’ dispute centers on the “bottom cover” language, just as it did for the nearly identical limitation in the ’756 patent. Respondents present two arguments for why this limitation is not met, neither of which I find persuasive. RIB at 44-47; RRB at 18-19.

First, Respondents argue that PAX “improperly accuses the same physical component in different devices of meeting different and distinct claim limitations.” RIB at 44. According to Respondents, PAX points to the “silicone base” for the STIIIZY-AIO. *Id.* at 44-45. However, despite that same component being in the STIIIZY-1G(C), Respondents claim PAX pointed to an entirely different component as the bottom cover. *Id.* This argument ignores the fact that these are two different products with different assembly instructions. In the STIIIZY-AIO, the silicone base is the lowermost component of the vaporizer cartridge, whereas in the STIIIZY-1G(C), the circuit board covers the silicone base and thus is the lowermost component of the cartridge. CX-4747C (Kodama) at Q/As 174-175. As shown below, nothing covers the silicone base in the STIIIZY AIO product.



CDX-0001.0048. The STIIIZY-AIO assembly instructions provide further confirmation. They explain that the cartridge component includes a translucent “silicone base” that is inserted into the bottom of the cartridge. JX-0415C at 12-13. The base covers the bottom of the cartridge body except for two air openings and two electrical contact openings. *Id.*



Id.; see also CX-4747C (Kodama) at Q/As 174-175.

Respondents next argue that “Complainant’s alleged ‘bottom cover’ is entirely internal, like an internal partition rather than a cover.” RIB at 46-47. This argument has already been rejected – both during the *Markman* and above (*see* Section IV.E.3). Respondents also suggest that “[a] POSITA would know that there is no need for a cover since the cartridge is built into the vaporizer and is not a removable or replaceable component; that is, the cartridge is fully enclosed in the vaporizer device and does not require a cover.” RIB at 47. But their own expert acknowledged that if the silicone base did not close off the bottom of the cartridge, leaked oil could drip into the electronics in the vaporizer base. Pecht, Tr. at 218:20-219:4.

For these reasons, I find the evidence to establish that this limitation is met.

iii) Limitations 527.1.g – 527.1.i.iv

Respondents do not dispute that the STIIIZY-AIO meets these limitations. RUCL at 6. The evidence confirms that these limitations are met. CX-4747C (Kodama) at Q/As 183, 199-201.

iv) Conclusion

Accordingly, I find that the STIIIZY-AIO infringes claim 1 of the ’527 patent.

3. STIIIZY-1G(C)

a) Claim 1

PAX asserts the STIIIZY-1G(C) infringes claim 1. CIB at 33.

Respondents did not set forth any noninfringement arguments in its briefs and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the STIIIZY-1G(C) satisfies the limitations of claim 1. CX-4747C (Kodama) at Q/As 151-152, 160, 169-170, 180, 189-194. Accordingly, I find that the STIIIZY-1G(C) infringes claim 1 of the ’527 patent.

b) Claim 10

Claim 10 depends from claim 1, adding “bottom cover” limitations. JX-0004, cl. 5.

PAX asserts that the STIIIZY-1G(C) infringes claim 10. CIB at 35.

Respondents did not present any noninfringement arguments in its briefs and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the STIIIZY-1G(C) satisfies the additional limitations of claim 10. CX-4747C (Kodama) at Q/A 211. I therefore find that the STIIIZY-1G(C) infringes claim 10 of the ’527 patent.

c) Claim 18

Claim 18 is identical to claim 1 but adds a “pad” limitation. JX-0004, cl. 18.

PAX asserts that the STIIIZY-1G(C) infringes claim 18. CIB at 36.

Respondents did not present any noninfringement arguments in its briefs and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the STIIIZY-1G(C) satisfies the limitations of claim 18. CX-4747C (Kodama) at Q/As 216-219, 221. Accordingly, I find that the STIIIZY-1G(C) infringes claim 18 of the ’527 patent.

d) Claim 22

Claim 22 depends from claim 18, adding that “the at least one pad includes two pads.” JX-0004, cl. 22.

PAX asserts that the STIIIZY-1G(C) infringes claim 22. CIB at 37.

Respondents did not present any noninfringement arguments in its briefs and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the STIIIZY-1G(C) satisfies the additional limitations of claim 22. CX-4747C (Kodama) at Q/A 225. I therefore find that the STIIIZY-1G(C) infringes claim 22 of the '527 patent.

4. STIIIZY-ORIG-1G

a) Claim 1

PAX asserts the STIIIZY-ORIG-1G infringes claim 1. CIB at 33.

Respondents did not set forth any noninfringement arguments in its briefs and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the STIIIZY-ORIG-1G satisfies the limitations of claim 1. CX-4747C (Kodama) at Q/As 151, 153, 161, 171, 181, 195. Accordingly, I find that the STIIIZY-ORIG-1G infringes claim 1 of the '527 patent.

b) Claim 5

Claim 5 is directed to a vaporizer device consisting of the vaporizer cartridge of claim 1 and certain “vaporizer body” limitations. JX-0004, cl. 5.

PAX asserts the STIIIZY-ORIG-1G infringes claim 5. CIB at 35.

Respondents did not present any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the STIIIZY-ORIG-1G satisfies the limitations of claim 5. CX-4747C (Kodama) at Q/As 229-230, 233, 236. I therefore find that the STIIIZY-ORIG-1G infringes claim 5 of the '527 patent.

c) Claim 10

Claim 10 depends from claim 1, adding “bottom cover” limitations. JX-0004, cl. 10.

PAX asserts that the STIIIZY-ORIG-1G infringes claim 10. CIB at 35.

Respondents did not present any noninfringement arguments in its briefs and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the STIIIZY-ORIG-1G satisfies the additional limitations of claim 10. CX-4747C (Kodama) at Q/A 212. Accordingly, I find that the STIIIZY-ORIG-1G infringes claim 10 of the '527 patent.

d) Claim 11

Claim 11 includes the limitations of claim 5, plus additional “pressure sensor” and “channel” limitations. JX-0004, cl. 11.

PAX asserts the STIIIZY-ORIG-1G infringes claim 11. CIB at 35-36.

Respondents did not present any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the STIIIZY-ORIG-1G satisfies the limitations of claim 11. CX-4747C (Kodama) at Q/As 241-244. I therefore find that the STIIIZY-ORIG-1G infringes claim 11 of the '527 patent.

e) Claim 17

Claim 17 depends from claim 11, adding the same “bottom cover” limitations recited in claim 10. JX-0004, cl. 17.

PAX asserts that the STIIIZY-ORIG-1G infringes claim 10. CIB at 36.

Respondents did not present any noninfringement arguments in its briefs and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the STIIIZY-ORIG-1G satisfies the additional limitations of claim 17. CX-4747C (Kodama) at Q/As 247. Accordingly, I find that the STIIIZY-ORIG-1G infringes claim 17 of the '527 patent.

f) Claim 18

Claim 18 is identical to claim 1 but adds a “pad” limitation. JX-0004, cl. 18.

PAX asserts that the STIIIZY-ORIG-1G infringes claim 18. CIB at 36.

Respondents did not present any noninfringement arguments in its briefs and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the STIIIZY-ORIG-1G satisfies the limitations of claim 18. CX-4747C (Kodama) at Q/As 216-219, 222. I therefore find that the STIIIZY-ORIG-1G infringes claim 18 of the ’527 patent.

g) Claim 22

Claim 22 depends from claim 18, adding that “the at least one pad includes two pads.” JX-0004, cl. 22.

PAX asserts that the STIIIZY-ORIG-1G infringes claim 22. CIB at 37.

Respondents did not present any noninfringement arguments in its briefs and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the STIIIZY-ORIG-1G satisfies the additional limitations of claim 22. CX-4747C (Kodama) at Q/A 226. Accordingly, I find that the STIIIZY-ORIG-1G infringes claim 22 of the ’527 patent.

5. ROVE Products

a) Claim 1

PAX asserts that the ROVE(C) and ROVE(V) infringe claim 1. CIB at 33.

Respondents did not set forth any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the ROVE(C) and ROVE(V) satisfy the limitations of claim 1. CX-4747C (Kodama) at Q/As 151, 156-157, 164-165, 176-177, 184-185, 202-205. Accordingly, I find that the ROVE(C) and ROVE(V) infringe claim 1 of the '527 patent.

b) Claim 5

Claim 5 is directed to a vaporizer device consisting of the vaporizer cartridge of claim 1 and certain “vaporizer body” limitations. JX-0004, cl. 5.

PAX asserts the ROVE(V) infringes claim 5. CIB at 35.

Respondents did not present any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the ROVE(V) satisfies the limitations of claim 5. CX-4747C (Kodama) at Q/As 229, 231, 234, 237. I therefore find that the ROVE(V) infringes claim 5 of the '527 patent.

c) Claim 10

Claim 10 depends from claim 1, adding “bottom cover” limitations. JX-0004, cl. 10.

PAX asserts that the ROVE(C) and ROVE(V) infringe claim 10. CIB at 35.

Respondents did not present any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the ROVE(C) and ROVE(V) satisfy the additional limitations of claim 10. CX-4747C (Kodama) at Q/As 213-214. Accordingly, I find that the ROVE(C) and ROVE(V) infringe claim 10 of the '527 patent.

d) Claim 11

Claim 11 includes the limitations of claim 5, plus additional “pressure sensor” and “channel” limitations. JX-0004, cl. 11.

PAX asserts the ROVE(V) infringes claim 11. CIB at 35-36.

Respondents did not present any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the ROVE(V) satisfies the limitations of claim 11. CX-4747C (Kodama) at Q/As 241-243, 245. Accordingly, I find that the ROVE(V) infringes claim 11 of the '527 patent.

e) Claim 17

Claim 17 depends from claim 11, adding the same “bottom cover” limitations recited in claim 10. JX-0004, cl. 17.

PAX asserts that the ROVE(V) infringe claim 10. CIB at 36.

Respondents did not present any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the ROVE(V) satisfies the additional limitations of claim 17. CX-4747C (Kodama) at Q/A 248. I therefore find that the ROVE(V) infringes claim 17 of the '527 patent.

6. FLARE Products

a) Claim 1

PAX asserts that the FLARE(C) and FLARE(V) infringe claim 1. CIB at 33.

Respondents did not set forth any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the FLARE(C) and FLARE(V) satisfy the limitations of claim 1. CX-4747C (Kodama) at Q/As 151, 158-159, 166-167, 178-179, 186-187, 206-209. Accordingly, I find that the FLARE(C) and FLARE(V) infringe claim 1 of the '527 patent.

b) Claim 5

Claim 5 is directed to a vaporizer device consisting of the vaporizer cartridge of claim 1 and certain “vaporizer body” limitations. JX-0004, cl. 5.

PAX asserts the FLARE(V) infringes claim 5. CIB at 35.

Respondents did not present any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 43-47.

The evidence shows that the FLARE(V) satisfies the limitations of claim 5. CX-4747C (Kodama) at Q/As 229, 232, 235, 238. I therefore find that the FLARE(V) infringes claim 5 of the ’527 patent.

7. The STIIIZY Redesigned Products

PAX has not introduced any evidence of infringement. As such, it has failed to meet its burden to show that the STIIIZY Redesigned Products infringe the ’527 patent. *See Spansion*, 629 F.3d at 1349 (holding that complainant bears the burden of proving infringement of the asserted patent claims by a preponderance of the evidence).

C. Indirect Infringement

The asserted claims of the ’527 patent raise substantially the same issues as the asserted claims of the ’756 patent. PAX relies on the same un rebutted evidence as presented for the ’756 patent. Thus, for the reasons set forth in Section IV.C, PAX has established that Respondents indirectly infringe claims 1, 5, 10-11, 17-18, and 22 of the ’527 patent, both contributorily and by inducement.

D. Technical Prong of the Domestic Industry Requirement

PAX asserts that the ’527 DI Products identified below practice certain claims of the ’527 patent:

'527 DI Products	Representative Products	Practiced Claims
ERA-05G(C)	ERA-05G(C)	1 and 18
ERA-ORIG-05G	ERA-ORIG-05G	1, 5, 11, and 18
ERA-PRO-05G		
ERA-LIFE-05G		
ERA-GO-05G		
ERA-1G(C)	ERA-1G(C)	1 and 18
ERA-ORIG-1G	ERA-ORIG-1G	1, 5, 11, and 18
ERA-PRO-1G		
ERA-LIFE-1G		
ERA-GO-1G		

CIB at 81.

Respondents take no position on the technical prong of the domestic industry. RIB at 139. As such, Respondents have waived their right to dispute that PAX satisfies the technical prong of the domestic industry requirement.

The evidence shows that the '527 DI Products practice claims 1, 5, 11, and 18 of the '527 patent. Mr. Kodama explained how the ERA-05G(C), ERA-ORIG-05G, ERA-1G(C), and ERA-ORIG-1G practice the limitations of claims 1 and 18. CX-4747C (Kodama) at Q/As 666-699. Mr. Kodama also provided un rebutted testimony on how the ERA-ORIG-05G and ERA-ORIG-1G practice the limitations of claims 5 and 11. *Id.* at Q/As 700-709.

For these reasons, I find that the technical prong of the domestic industry requirement is satisfied for the '527 patent.

E. Validity

Respondents assert that the '527 patent is invalid because: (1) Alarcon in view of U.S. 2015/0034104 ("Zhou") and U.S. 2013/0192615 ("Tucker") renders claims 1, 5, 11, 18, and 22

obvious claims 1 and 5 (RIB at 47-61); (2) Alarcon in view of Zhou, Tucker, and Xiang renders claims 10 and 17 obvious (*id.* at 61-62); (3) Alarcon in view of Zhou, Tucker, and Daryani renders claim 22 obvious (*id.* at 62-63); and (4) there is insufficient written description for the claimed “bottom cover” (*id.* at 63).

1. Obviousness

a) Alarcon in view of Zhou and Tucker

i) Claims 1, 11, and 18

Respondents assert that claims 1, 11, and 18 are rendered obvious by the combination of Alarcon, Zhou and Tucker. RIB at 47. Respondents rely on Alarcon for most of the limitations, including the same “bottom cover” limitation found in claim 1 of the ’756 patent. *Id.* at 52-56. Respondents cite Zhou only for its disclosure of two reservoir seals in the mouthpiece and Tucker for its disclosure of ceramic heating elements. *Id.* at 53-55.

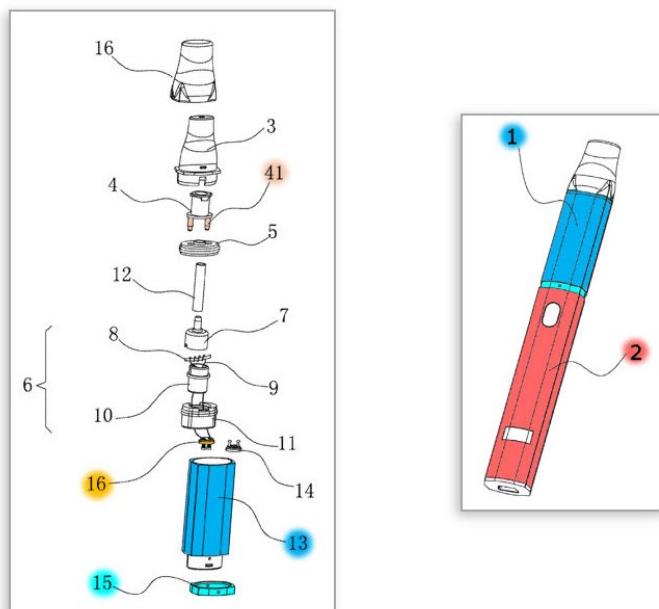
As explained above, I found that Alarcon does not disclose the claimed “bottom cover.” *See* Section IV.E.1.a.i.2. Respondents do not allege that either Zhou or Tucker teaches this limitation. RIB at 52-56. Nor have they set forth any arguments as to how a person of skill would modify Alarcon with Zhou and Tucker to supply the missing claim limitation. *Id.* at 50-52. Without such a showing, Respondents cannot meet their burden to establish that Alarcon in view of Zhou and Tucker renders claim 1, 11, or 18 of the ’527 patent obvious.

Nor can Respondents establish that one of skill would be motivated to combine Alarcon, Zhou and Tucker.¹⁷ Respondents once more rely on the testimony of Dr. Jackson for this showing.

¹⁷ Dr. Jackson’s addition of Tucker relies on the combination of Alarcon with Zhou. RX-0473C (Jackson) at Q/As 645-646.

Dr. Jackson argues that “[a] POSITA would have been motivated to convert a threaded-connection vaporizer like Alarcon into a slot-in vaporizer like that described in Zhou due to “user convenience” and the risks of “fatigue failures and alignment issues.”¹⁸ RX-0473C (Jackson) at Q/A 645. Dr. Jackson provides no support for his opinion beyond his own assertions. *Acoustic Tech, Inc. v. Itron Networked Sols., Inc.*, 949 F.3d 1366, 1375 (Fed. Cir. 2020) (explaining that conclusory expert testimony and attorney argument cannot constitute substantial evidence of a motivation to combine”). For example, he failed to identify anything in Alarcon’s arrangement such that a skilled artisan would look to Zhou to make the suggested change. CX-4750C (Sturges)

¹⁸ Notably, Dr. Jackson does not rely on Zhou for its connection method in his obviousness opinion. He only cites to Zhou for the “reservoir seal” limitations, which are separate and distinct from the slot-in connection Dr. Jackson relies on for motivation to combine. RX-0473C (Jackson) at Q/As 657-659. As shown below, the “first reservoir seal” and “second reservoir seal” (*i.e.*, “sealing cylinders 41”) are internal components of Zhou’s atomizer shell 13 (Figure 2 at left), whereas Zhou’s “slot-in” connection connects the atomizer 1 with the battery assembly 2 (Figure 1 at right). JX-0220 at FIGS. 1, 2.



CDX-0004.33. As Dr. Sturges explained: “Because these aspects are wholly unrelated functionally and positionally, any motivation to adopt the connection mechanism of Zhou has no reasonable bearing on whether a POSITA would also adopt the reservoir seals of Zhou.” CX-4750C (Sturges) at Q/A 175.

at Q/A 174. *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1373 (Fed. Cir. 2008) (“[K]nowledge of a problem and motivation to solve it are entirely different from motivation to combine particular references to reach the particular claimed [device].”). His analysis also ignores the fact that “combining Alarcon and Zhou’s connection does not involve simply changing the way in which the cartridge and battery components engage one another, but instead also requires completely changing the power scheme of the device.” *Id.*

For these reasons, I find that Respondents have not established that Alarcon, Zhou, and Tucker renders obvious claims 1, 11, and 18 of the ’527 patent.

ii) Claims 5 and 22

Because claim 5 and claim 22 depend from independent claims 1 and 18 respectively, they too are not rendered obvious by the combination of Alarcon, Zhou, and Tucker.

b) Alarcon in view of Zhou, Tucker, and Xiang

Respondents allege that Alarcon in view of Zhou, Tucker, and Xiang render claims 10 and 17 obvious. RIB at 61. The record evidence is insufficient to make such a determination. Respondents’ arguments on motivation to combine and a reasonable expectation of success consist of two sentences. For example, Respondents write: “A POSITA would be motivated to combine the teachings of Alarcon with those of Zhou and Tucker and would be motivated to further combine with Xiang.” *Id.* To explain how these references could be combined, Respondents merely state: “The teachings of Alarcon and the teachings of Zhou, Tucker, and Xiang could be combined by a POSITA at the time of the purported invention in a predictably way to, predictably, arrive at the purported invention.” *Id.* These types of conclusory arguments constitute waiver under my Ground Rules.

Accordingly, Respondents have not met their burden to show that Alarcon in view of Zhou, Tucker, and Xiang renders claims 10 and 17 of the '527 patent obvious.

c) Alarcon in view of Zhou, Tucker, and Daryani

Respondents assert that Alarcon in view of Zhou, Tucker, and Daryani renders claim 22 obvious. RIB at 62. Again, Respondents offer only two sentences on the issues of motivation to combine and a reasonable expectation of success. *Id.* at 62-63. Respondents also failed to address why a person of skill would be motivated to combine these particular references to achieve the claimed invention. *Id.* (cross-referencing arguments for different combinations – Alarcon+Zhou+Tucker and Alarcon+Daryani). This is not sufficient under my Ground Rules. Accordingly, these arguments are waived.

As such, Respondents have failed to meet their burden to establish that Alarcon, Zhou, Tucker, and Darynai render claim 10 of the '527 patent obvious.

d) Secondary Considerations

Secondary considerations of nonobviousness may rebut a prima facie case of obviousness. Here, where Respondents have not made out a prima facie case of obviousness, there is no showing to rebut. Accordingly, I need not consider any secondary considerations of nonobviousness.

2. Written Description

Respondents assert that every asserted claim of the '527 patent is invalid for non-compliance with the written description requirement. RIB at 63. They rely on their § 112 analysis for the '756 patent in support. *Id.* Thus, for the same reasons discussed in Section IV.E.3 above, Respondents have not shown by clear and convincing evidence that the asserted claims of the '527 patent are invalid under 35 U.S.C. § 112.

VI. U.S. PATENT NO. 11,369,757

A. Overview

The '757 patent issued on June 28, 2022, and has 20 claims. JX-0002 at cover page. Claims 1, 13, 15, and 20 are asserted in this investigation. CIB at 43. These claims are reproduced below:

Claim	Claim Language
757.1.pre	A vaporizer cartridge comprising:
757.1.a	a cartridge body comprising a proximal body end and a distal body end opposite the proximal body end;
757.1.b.	a mouthpiece coupled to the proximal body end, the mouthpiece comprising an outlet;
757.1.c	a reservoir configured to hold a vaporizable material;
757.1.d	a first pad positioned within an interior of the mouthpiece;
757.1.e	a second pad positioned within the interior of the mouthpiece;
757.1.f	a heater chamber comprising:
757.1.f.i	a heater configured to heat the vaporizable material from the reservoir to generate an aerosol;
757.1.f.ii	a housing piece configured to house at least a portion of the heater, the housing piece comprising a housing opening configured to receive at least a portion of the heater;
757.1.f.iii	an air tube extending from the housing piece;
757.1.g	a bottom cover comprising a bottom portion positioned distally relative to the cartridge body, the bottom portion comprising: a first air opening and a second air opening; and
757.1.h	a distal member positioned at least partially within the cartridge body between the housing piece and the bottom cover, the distal member comprising:
757.1.h.i	a proximal side;
757.1.h.ii	a distal side opposite the proximal side;
757.1.h.iii	a lateral side extending between the proximal side and the distal side; and
757.1.h.iv	at least one recessed surface positioned on the lateral side;
757.1.i	wherein an air chamber is formed between the distal member and the bottom portion of the bottom cover; and
757.1.j	wherein the first air opening and the second air opening of the bottom portion allow air to pass into the air chamber.
757.13.pre	The vaporizer cartridge of claim 1, wherein the bottom portion of the bottom cover comprises:
757.13.a	a first cartridge electrical contact of the vaporizer cartridge is exposed; and
757.13.b	a second cartridge electrical contact opening through which a second cartridge electrical contact of the vaporizer cartridge is exposed.
757.15.pre	A vaporizer device comprising:

PUBLIC VERSION

Claim	Claim Language
757.15.a	a vaporizer cartridge, comprising:
757.15.a.i	a cartridge body comprising a proximal body end and a distal body end opposite the proximal body end;
757.15.a.ii	a mouthpiece coupled to the proximal body end, the mouthpiece comprising an outlet;
757.15.a.iii	a reservoir configured to hold a vaporizable material;
757.15.a.iv	a first pad positioned within an interior of the mouthpiece;
757.15.a.v	a second pad positioned within the interior of the mouthpiece;
757.15.a.vi	a heater chamber comprising:
757.15.a.vi.a	a heater configured to heat the vaporizable material from the reservoir to generate an aerosol;
757.15.a.vi.b	a housing piece configured to house at least a portion of the heater, the housing piece configured to receive at least a portion of the heater;
757.15.a.vi.c	an air tube extending from the housing piece.
757.15.a.vii	a bottom cover comprising a bottom portion positioned distally relative to the cartridge body, the bottom portion comprising: a first air opening and a second air opening;
757.15.a.viii	a distal member positioned at least partially within the cartridge body between the housing piece and the bottom cover, the distal member comprising:
757.15.a.viii.a	a proximal side;
757.15.a.viii.b	a distal side opposite the proximal side;
757.15.a.viii.c	a lateral side extending between the proximal side and the distal side; and
757.15.a.viii.d	at least one recessed surface positioned on the lateral side;
757.15.a.ix	wherein an air chamber is formed between the distal member and the bottom portion of the bottom cover; and
757.15.a.x	wherein the first air opening and the second air opening of the bottom portion allow air to pass into the air chamber;
757.15.a.xi	a first cartridge electrical contact; and
757.15.a.xii	a second cartridge electrical contact; and
757.15.b	a vaporizer body, comprising:
757.15.b.i	a cartridge receiver configured to insertably receive the vaporizer cartridge, the cartridge receiver comprising:
757.15.b.i.a	a first body electrical contact configured to electrically couple to the first cartridge electrical contact of the vaporizer cartridge;
757.15.b.i.b	a second body electrical contact configured to electrically couple to the second cartridge electrical contact of the vaporizer cartridge;
757.15.b.i.c	an insertion end into which the vaporizer cartridge is inserted; and
757.15.b.i.d	a base opposite the insertion end; and
757.15.b.ii	one or more LEDs, wherein the vaporizer device is configured to cause the one or more LEDs to illuminate during the generation of the aerosol by the heater of the vaporizer cartridge.

Claim	Claim Language
757.20.pre	The vaporizer device of claim 15, wherein the bottom portion of the bottom cover comprises: electrical contact opening and the second cartridge electrical contact opening;
757.20.a	a first cartridge electrical contact opening through which the first cartridge electrical contact of the vaporizer cartridge is exposed;
757.20.b	a second cartridge electrical contact opening through which the second cartridge electrical contact of the vaporizer cartridge is exposed; and
757.20.c	a region positioned between the first cartridge
757.20.d	wherein the bottom cover comprises exactly two air openings, the air openings comprising the first air opening and the second air opening; and
757.20.e	wherein the first air opening and the second air opening are not positioned within the region.

B. Infringement

PAX asserts that the '757 Accused Products identified below infringe the asserted claims of the '757 patent:

'757 Accused Products	Representative Products	Asserted Claims
STIIIZY-1G(C)	STIIIZY-1G(C)	1 and 13
STIIIZY-05G(C)		
STIIIZY-ORIG-1G	STIIIZY-ORIG-1G	1,13, 15, and 20
STIIIZY-ORIG-05G		
STIIIZY-BIIIG-1G		
STIIIZY-BIIIG-05G		
STIIIZY-LIIL	STIIIZY-LIIL	1

Id.

1. STIIIZY-LIHL

a) Claim 1

i) Limitations 757.1.pre – 757.1.f.iii

Respondents do not dispute that the STIIIZY-LIHL meets these limitations. RUCL at 3-4. The evidence confirms that these limitations are met. CX-4747C (Kodama) at Q/As 264, 267, 271, 278.

ii) Limitation 757.1.g

The parties rely on the arguments they presented for the “bottom cover” limitation in the ’756 patent for this limitation. CIB at 44; RIB at 64.

Thus, for the reasons discussed in Section IV.B.1.a.ii, the evidence shows that this limitation is met. *See* CX-4747C (Kodama) at Q/As 282-283.

iii) Limitations 757.1.h – 757.1.j

Respondents do not dispute that the STIIIZY-LIHL meets these limitations RUCL at 4. The evidence establishes that these limitations are met. CX-4747C (Kodama) at Q/As 286, 289, 292.

iv) Conclusion

Accordingly, I find that the STIIIZY-LIHL infringes claim 1 of the ’757 patent.

2. STIIIZY-1G(C)

a) Claim 1

PAX asserts the STIIIZY-1G(C) infringes claim 1. CIB at 44.

Respondents did not set forth any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 63-64.

The evidence shows that the STIIIZY-1G(C) satisfies the limitations of claim 1. CX-4747C (Kodama) at Q/A 264-265, 269, 272-276, 279, 284, 287, 290, 293. Accordingly, I find that the STIIIZY-1G(C) infringes claim 1 of the '757 patent.

b) Claim 13

Claim 13 depends from claim 1, adding “cartridge electrical contact opening” limitations. JX-0002, cl. 13.

PAX asserts that the STIIIZY-1G(C) infringes claim 13. CIB at 44-45.

Respondents did not present any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 63-64.

The evidence shows that the STIIIZY-1G(C) satisfies the additional limitations of claim 13. CX-4747C (Kodama) at Q/A 303. I therefore find that the STIIIZY-1G(C) infringes claim 13 of the '757 patent.

3. STIIIZY-ORIG-1G

a) Claim 1

PAX asserts that the STIIIZY-ORIG-1G infringes claim 1. CIB at 44.

Respondents did not set forth any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 63-64.

The evidence shows that the STIIIZY-ORIG-1G satisfies the limitations of claim 1. CX-4747C (Kodama) at Q/As 264, 266, 270, 277, 281, 285, 288, 291, 294. Accordingly, I find that the STIIIZY-ORIG-1G infringes claim 1 of the '757 patent.

b) Claim 13

Claim 13 depends from claim 1, adding “cartridge electrical contact opening” limitations. JX-0002, cl. 13.

PAX asserts that the STIIIZY-ORIG-1G infringes claim 13. CIB at 44-45.

Respondents did not present any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 63-64.

The evidence shows that the STIIIZY-ORIG-1G satisfies the additional limitations of claim 13. CX-4747C (Kodama) at Q/A 304. I therefore find that the STIIIZY-ORIG-1G infringes claim 13 of the '757 patent.

c) Claim 15

PAX asserts that the STIIIZY-ORIG-1G infringes claim 15. CIB at 45.

Respondents did not set forth any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 63-64.

The evidence shows that the STIIIZY-ORIG-1G satisfies the limitations of claim 15. CX-4747C (Kodama) at Q/As 311-315. Accordingly, I find that the STIIIZY-ORIG-1G infringes claim 15 of the '757 patent.

d) Claim 20

Claim 20 depends from claim 15, adding that the vaporizer device includes a bottom cover having the same cartridge electrical contact openings as claim 13. JX-0002, cl. 20. Claim 20 further adds “region” limitations. *Id.*

PAX asserts that the STIIIZY-ORIG-1G infringes claim 20. CIB at 45.

Respondents did not present any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 63-64.

The evidence shows that the STIIIZY-ORIG-1G satisfies the additional limitations of claim 20. CX-4747C (Kodama) at Q/As 319-320. I therefore find that the STIIIZY-ORIG-1G infringes claim 20 of the '757 patent.

4. The STIIIZY Redesigned Products

PAX does not introduce any evidence of infringement. As such, it has failed to meet its burden to show that the STIIIZY Redesigned Products infringe the '757 patent. *See Spansion*, 629 F.3d at 1349 (holding that complainant bears the burden of proving infringement of the asserted patent claims by a preponderance of the evidence).

C. Indirect Infringement

The asserted claims of the '757 patent raise substantially the same issues as the asserted claims of the '756 patent. PAX relies on the same unrebutted evidence as presented for the '756 patent. Thus, for the reasons set forth in Section IV.C, I find that PAX has established that Respondents indirectly infringe claims 1, 13, 15, and 20 of the '757 patent, both contributorily and by inducement.

D. Technical Prong of the Domestic Industry Requirement

PAX asserts that the '757 DI Products identified below practice certain claims of the '757 patent:

'757 DI Products	Representative Products	Practiced Claims
ERA-05G(C)	ERA-05G(C)	1
ERA-ORIG-05G	ERA-ORIG-05G	1 and 15
ERA-PRO-05G		
ERA-LIFE-05G		
ERA-GO-05G		

CIB at 82.

Respondents take no position on the technical prong of the domestic industry. RIB at 139. As such, Respondents have waived their right to dispute that PAX satisfies the technical prong of the domestic industry requirement.

The evidence shows that '757 DI Products practice claims 1 and 15 of the '757 patent. Mr. Kodama explained how the ERA-05G(C) and ERA-ORIG-05G products practice every limitation of claim 1. CX-4747C (Kodama) at Q/As 716-737. Mr. Kodama also provided un rebutted testimony on how the ERA-ORIG-05G meets every limitation of claim 15. *Id.* at Q/As 738-746.

For these reasons, I find that the technical prong of the domestic industry requirement is satisfied for the '757 patent.

E. Validity

Respondents assert that the '757 patent is invalid because: (1) Alarcon anticipates claims 1 and 15 (RIB at 64-70); (2) Alarcon in view of Daryani renders claims 1 and 15 obvious (*id.* at 70); (3) Alarcon in view of Xiang renders claims 13 and 20 obvious (*id.* at 70-72); (4) Alarcon in view of Daryani and Xiang renders claims 13 and 20 obvious (*id.* at 72-73); (4) Tucker in view of Alarcon renders claims 1 and 15 obvious (*id.* at 73-86); (5) Tucker in view of Alarcon and Daryani renders claims 1 and 15 obvious (*id.* at 87); (6) Tucker in view of Alarcon and Xiang renders claims 13 and 20 obvious (*id.* at 87-90); (7) Tucker in view of Alarcon, Daryani, and Xiang renders claims 13 and 20 obvious (*id.* at 91); and (8) there is insufficient written description for “a bottom cover comprising a bottom portion positioned distally relative to the cartridge body, the bottom cover comprising: a first air opening” (*id.* at 91).

1. Anticipation

a) Alarcon

i) Claim 1

Respondents assert that Alarcon anticipates claim 1 for the same reasons as claim 1 of the '756 patent. RIB at 64-67. Thus, for the same reasons set forth in Section IV.E.1.a, I find that Alarcon does not disclose limitations 757.1.e (“second pad”) and 757.1.g (“bottom cover”).

Accordingly, Alarcon does not anticipate claim 1 of the '757 patent.

ii) Claim 15

Claim 15 includes the same “second pad” and “bottom cover” limitations as claim 1. JX-0002, cl. 15. Because Alarcon does not disclose these limitations (*see* Section IV.E.1.a), Alarcon does not anticipate claim 15 of the '757 patent.

2. Obviousness

a) Alarcon in view of Daryani

Respondents assert that Alarcon and Daryani render claims 1 and 15 obvious for the same reasons as claim 1 of the '756 patent. RIB at 7. Thus, for the same reasons set forth in Section IV.E.2.a, Respondents have failed to meet their burden to establish that Alarcon in view of Daryani renders claims 1 and 15 of the '757 patent obvious.

b) Alarcon in view of Xiang

Respondents contend that a “POSITA would be motivated to combine Alarcon with Xiang for the same reasons discussed above with respect to 756.10.” RIB at 71. Thus, for the same reasons set forth in Section IV.E.2.c, Respondents have failed to meet their burden to establish that Alarcon in view of Xiang renders claims 13 and 20 of the '757 patent obvious.

c) Alarcon in view of Daryani and Xiang

Respondents assert that “a POSITA would be motivated to combine Alarcon with Daryani and Xiang for the same reasons discussed above with respect to 756.10.” RIB at 73. Thus, for the same reasons set forth in Section IV.E.2.b, Respondents have failed to meet their burden to establish that Alarcon in view of Daryani and Xiang renders claims 13 and 20 of the '757 patent obvious.

d) Tucker in view of Alarcon

Respondents assert that Tucker and Alarcon render claims 1 and 15 obvious. RIB at 73-87. According to Respondents, “a person of skill in the art would look to Alarcon to improve Tucker’s device for numerous reasons, including that both are cartridge-based vaporizer references in the same field of endeavor and that a POSITA would consider and glean teachings from when improving on any prior art vaporizer.” *Id.* at 73. While PAX did not address this combination in its initial brief (*see generally* CIB at 50-52) and have therefore waived any such arguments, Respondents still bear the burden of proof. *See Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1360 (Fed. Cir. 2012) (“At all times, the burden is on the defendant to establish by clear and convincing evidence that the patent is obvious.”).

Respondents only rely on Alarcon for the second pad in the mouthpiece. RIB at 77. But, as discussed *infra*, Respondents have not established that Tucker discloses the “bottom cover” and “distal member” limitations. *See* Section VII.E.1.b. Without any such disclosure, Respondents cannot show by clear and convincing evidence that Tucker in view of Alarcon renders claims 1 and 15 of the ’757 patent obvious.

e) Tucker in view of Alarcon and Daryani

Respondents assert that Tucker in view of Alarcon and Daryani renders claims 1 and 15 obvious. RIB at 87. Once again, Respondents only offer conclusory arguments.¹⁹ *Id.* at 87. And the conclusory arguments they do offer relate to different combinations—*i.e.*, Tucker+Alarcon and Alarcon+Daryani. *Id.* As I previously explained, this constitutes waiver under my Ground Rules.

Respondents have therefore not met their burden to establish that the combination of Tucker, Alarcon, and Daryani renders claims 1 and 15 of the ’757 patent obvious.

¹⁹ The entirety of their argument is less than one page. *See* RIB at 87.

f) Tucker in view of Alarcon and Xiang

Respondents assert that the combination of Tucker, Alarcon, and Xiang renders claims 13 and 20 obvious. RIB at 87. Respondents again failed to provide any explanation as to how or why these references would be combined to produce the claimed invention. For example, on the issue of motivation to combine, they merely state: “A POSITA would be motivated to combine the teachings of Tucker with those of Alarcon and Xiang for the reasons discussed above with respect to the combinations of Tucker with Alarcon and Alarcon with Xiang.” *Id.* at 87-88. Their argument on a reasonable expectation of success is similarly lacking. They write: “The teachings of Tucker and the teachings of Alarcon and Xiang could be combined by a POSITA at the time of the purported invention in a predictable way to, predictably, arrive at the purported invention.” *Id.* at 88. Respondents have therefore waived these arguments.

As such, Respondents have failed to meet their burden to establish that Tucker in view of Alarcon and Xiang renders claims 13 and 20 of the '757 patent obvious.

g) Tucker in view of Alarcon, Daryani, and Xiang

Respondents assert that Tucker in view of Alarcon, Daryani, and Xiang renders claims 13 and 20 obvious. RIB at 91. Respondents' analysis for this combination suffers from the same flaws as Tucker in view of Xiang and Tucker in view of Alarcon and Xiang. Once more, they only offer conclusory arguments. And instead of explaining why a person of skill would combine these four references, Respondents cross-reference arguments for different combinations. *Id.* at 91. Not only is this deficient under my Ground Rules but it also falls far short of the clear and convincing standard.

Accordingly, Respondents have not met their burden to establish that the combination of Tucker, Alarcon, Daryani, and Xiang renders claims 13 and 20 of the '757 patent obvious.

h) Secondary Considerations

Secondary considerations of nonobviousness may rebut a prima facie case of obviousness. Here, where BOE has not made out a prima facie case of obviousness, there is no showing to rebut. Accordingly, I need not consider any secondary considerations of nonobviousness.

3. Written Description

Respondents assert that every asserted claim of the '757 patent is invalid for non-compliance with the written description requirement. RIB at 91. They rely on their § 112 analysis for the '756 patent in support. *Id.* For the same reasons discussed in Section IV.E.3 above, Respondents have not shown by clear and convincing evidence that the asserted claims of the '757 patent are invalid under 35 U.S.C. § 112.

VII. U.S. PATENT NO. 11,759,580

A. Overview

The '580 patent issued on September 19, 2023, and has 20 claims. JX-0003 at cover page. Claims 1, 6-8, and 10 are asserted in this investigation. CIB at 54. These claims are reproduced below:

Claim	Claim Language
580.1.pre	A vaporizer cartridge comprising:
580.1.a	a cartridge body comprising a proximal body end and a distal body end opposite the proximal body end;
580.1.b	a mouthpiece coupled to the proximal body end, where the mouthpiece comprises an outlet;
580.1.c	a reservoir configured to hold a vaporizable material;
580.1.d	a vaporization chamber comprising:
580.1.d.i	a heater configured to heat the vaporizable material from the reservoir to generate an aerosol;
580.1.d.ii	a housing piece configured to house at least a portion of the heater, wherein the housing piece comprises a housing opening configured to receive at least the portion of the heater; and
580.1.d.iii	an air tube extending from the housing piece, wherein the air tube is configured to deliver the aerosol from the heater to the mouthpiece;
580.1.e	an extension wire extending from the heater;

PUBLIC VERSION

Claim	Claim Language
580.1.f	a bottom cover comprising a bottom portion, wherein the bottom portion comprises at least one air opening; and
580.1.g	a distal member positioned at least partially within the cartridge body between the housing piece and the bottom portion of the bottom cover, wherein the distal member comprises:
580.1.g.i	a proximal side;
580.1.g.ii	a distal side opposite the proximal side;
580.1.g.iii	a lateral side extending between the proximal side and the distal side; and
580.1.g.iv	an extension feature having a cylindrical shape, wherein the extension feature extends from the proximal side of the distal member, and
580.1.g.v	wherein the extension feature comprises an opening extending therethrough that allows air to pass through the distal member;
580.1.g.vi	wherein at least a portion of the distal member comprises a perimeter that has a first shape corresponding to a second shape of an inner surface of the cartridge body; and
580.1.g.vii	wherein at least a portion of the extension wire extends at least partially through the distal member;
580.1.h	wherein an air chamber is formed between the distal member and the bottom portion of the bottom cover.
580.6.pre	A vaporizer device, comprising:
580.6.a	the vaporizer cartridge of claim 1;
580.6.b	a vaporizer body, comprising:
580.6.b.i	a cartridge receiver configured to insertably receive the vaporizer cartridge, wherein the cartridge receiver comprises:
580.6.b.i.a	a body electrical contact;
580.6.b.i.b	an insertion end into which the vaporizer cartridge is inserted; and
580.6.b.i.c	a base opposite the insertion end;
580.6.c	a sensor configured to detect a draw on the mouthpiece, causing activation of the heater;
580.6.d	a channel extending from the base of the cartridge receiver to the sensor; and
580.6.e	one or more LEDs, wherein the vaporizer device is configured to cause the one or more LEDs to illuminate during the generation of the aerosol by the heater of the vaporizer cartridge.
580.7.pre	The vaporizer cartridge of claim 1, wherein the bottom portion of the bottom cover comprises:
580.7.a	a first cartridge electrical contact opening through which a first cartridge electrical contact of the vaporizer cartridge is exposed; and
580.7.b	a second cartridge electrical contact opening through which a second cartridge electrical contact of the vaporizer cartridge is exposed.
580.8.pre	A vaporizer device comprising:
580.8.a	a vaporizer cartridge, comprising:

PUBLIC VERSION

Claim	Claim Language
580.8.a.i	a cartridge body comprising a proximal body end and a distal body end opposite the proximal body end;
580.8.a.ii	a mouthpiece coupled to the proximal body end, wherein the mouthpiece comprises an outlet;
580.8.a.iii	a reservoir configured to hold a vaporizable material;
580.8.a.iv	a vaporization chamber comprising:
580.8.a.iv.a	a heater configured to heat the vaporizable material from the reservoir to generate an aerosol;
580.8.a.iv.b	a housing piece configured to house at least a portion of the heater, wherein the housing piece comprises a housing opening configured to receive at least the portion of the heater; and
580.8.a.iv.c	an air tube extending from the housing piece, wherein the air tube is configured to deliver the aerosol from the heater to the mouthpiece;
580.8.a.v	an extension wire extending from the heater;
580.8.a.vi	a bottom cover comprising a bottom portion, wherein the bottom portion comprises at least one air opening;
580.8.a.vii	at least one cartridge electrical contact; and
580.8.a.viii	a distal member positioned at least partially within the cartridge body between the housing piece and the bottom portion of the bottom cover, wherein the distal member comprises:
580.8.a.viii.a	a proximal side;
580.8.a.viii.b	a distal side opposite the proximal side;
580.8.a.viii.c	a lateral side extending between the proximal side and the distal side; and
580.8.a.viii.d	an extension feature having a cylindrical shape, wherein the extension feature extends from the proximal side of the distal member, and
580.8.a.viii.e	wherein the extension feature comprises an opening extending therethrough that allows air to pass through the distal member;
580.8.a.viii.f	wherein at least a portion of the distal member comprises a perimeter that has a first shape corresponding to a second shape of an inner surface of the cartridge body; and
580.8.a.viii.g	wherein at least a portion of the extension wire extends at least partially through the distal member;
580.8.a.ix	wherein an air chamber is formed between the distal member and the bottom portion of the bottom cover; and
580.8.b	a vaporizer body, comprising:
580.8.b.i	a cartridge receiver configured to insertably receive the vaporizer cartridge, wherein the cartridge receiver comprises:
580.8.b.i.a	at least one body electrical contact configured to electrically couple to the at least one cartridge electrical contact of the vaporizer cartridge;
580.8.b.i.b	an insertion end into which the vaporizer cartridge is inserted; and
580.8.b.i.c	a base opposite the insertion end;
580.8.b.ii	a sensor configured to detect a draw on the mouthpiece, causing activation of the heater; and
580.8.b.iii	a channel extending from the base of the cartridge receiver to the sensor.

PUBLIC VERSION

Claim	Claim Language
580.10.pre	The vaporizer device of claim 8, wherein the bottom portion of the bottom cover comprises:
580.10.a	a first cartridge electrical contact opening through which the first cartridge electrical contact of the vaporizer cartridge is exposed;
580.10.b	a second cartridge electrical contact opening through which the second cartridge electrical contact of the vaporizer cartridge is exposed; and
580.10.c	a region positioned between the first cartridge electrical contact opening and the second cartridge electrical contact opening,
580.10.d	wherein the bottom cover comprises exactly two air openings, and
580.10.e	wherein the air openings are not positioned within the region.

B. Infringement

PAX asserts that the '580 Accused Products identified below infringe the asserted claims of the '580 patent:

PUBLIC VERSION

'580 Accused Products	Representative Products	Asserted Claims
STIIIZY-1G(C)	STIIIZY-1G(C)	1 and 7
STIIIZY-05G(C)		
STIIIZY-ORIG-1G	STIIIZY-ORIG-1G	1, 6-8, and 10
STIIIZY-ORIG-05G		
STIIIZY-BIIIG-1G		
STIIIZY-BIIIG-05G		
STIIIZY-LIIL	STIIIZY-LIIL	1
STIIIZY-AIO	STIIIZY-AIO	1
ROVE(C)	ROVE(C)	1 and 7
ROVE(V)	ROVE(V)	1, 6-8, and 10
FLARE(C)	FLARE(C)	1
FLARE(V)	FLARE(V)	1
STIIIZY-1G-REDESIGN(C)	STIIIZY-1G-REDESIGN(C)	1 and 7
STIIIZY-05G-REDESIGN(C)		
STIIIZY-ORIG-1G-REDESIGN	STIIIZY-ORIG-1G-REDESIGN	1, 6-8, and 10
STIIIZY-ORIG-05G-REDESIGN		
STIIIZY-BIIIG-1G-REDESIGN		
STIIIZY-BIIIG-05G-REDESIGN		
STIIIZY-AIO-REDESIGN	STIIIZY-AIO-REDESIGN	1
ROVE-REDESIGN(C)	ROVE-REDESIGN(C)	1 and 7
ROVE-REDESIGN(V)	ROVE-REDESIGN(V)	1, 6-8, and 10
FLARE-REDESIGN(C)	FLARE-REDESIGN(C)	1
FLARE-REDESIGN(V)	FLARE-REDESIGN(V)	1

Id.

1. STIIIZY-LIHL

a) Claim 1

i) Limitations 580.1.pre – 580.1.e

Respondents do not dispute that the STIIIZY-LIHL meets these limitations. RUCL at 8-9. The evidence confirms that these limitation are met. CX-4747C (Kodama) at Q/As 326-327, 330, 343-345, 349.

ii) Limitation 580.1.f

The parties rely on the arguments they presented for the “bottom cover” limitation in the ’756 patent for this limitation. CIB at 55; RIB at 92-93.

Thus, for the reasons discussed in Section IV.B.1.a.ii, the evidence shows that this limitation is met. *See* CX-4747C (Kodama) at Q/A 365-366.

iii) Limitations 580.1.g – 580.1.h

Respondents do not dispute that the STIIIZY-LIHL meets these limitations. RUCL at 9. The evidence establishes that these limitations are met. CX-4747C (Kodama) at Q/As 381, 396, 411, 430, 445, 460, 475.

iv) Conclusion

Accordingly, I find that the STIIIZY-LIHL infringes claim 1 of the ’580 patent.

2. STIIIZY-AIO

a) Claim 1

i) Limitations 580.1.pre – 580.1.e

Respondents do not dispute that the STIIIZY-AIO meets these limitations. RUCL at 8-9. The evidence confirms that these limitations are met. CX-4747C (Kodama) at Q/As 326-327, 333, 352.

ii) Limitation 580.1.f

The parties rely on their arguments for the “bottom cover” limitation in the ’527 patent for this limitation. CIB at 55; RIB at 93.

Thus, for the reasons discussed in Section V.B.1.a.ii, the evidence shows that this limitation is met. *See* CX-4747C (Kodama) at Q/A 369.

iii) Limitations 580.1.g – 580.1.h

Respondents do not dispute that this the STIIIZY-AIO meets these limitations. RUCL at 9. The evidence establishes that these limitations are met. CX-4747C (Kodama) at Q/As 384, 399, 415, 433, 448, 463, 478.

iv) Conclusion

Accordingly, I find that the STIIIZY-AIO infringes claim 1 of the ’580 patent.

3. STIIIZY-1G(C)

a) Claim 1

PAX asserts that the STIIIZY-1G(C) infringes claim 1. CIB at 55.

Respondents did not set forth any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 92-119.

The evidence shows that the STIIIZY-1G(C) satisfies the limitations of claim 1. CX-4747C (Kodama) at Q/As 326-328, 346-347, 362-363, 379, 394, 409, 428, 443, 458, 473. Accordingly, I find that the STIIIZY-1G(C) infringes claim 1 of the ’580 patent.

b) Claim 7

Claim 7 depends from claim 1, adding the “exposed through” limitations. JX-0003, cl. 7.

PAX asserts that the STIIIZY-1G(C) infringes claim 7. CIB at 67.

Respondents did not present any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 92-119.

The evidence shows that the STIIIZY-1G(C) satisfies the additional limitations of claim 7. CX-4747C (Kodama) at Q/A 498. Accordingly, I find that the STIIIZY-1G(C) infringes claim 7 of the '580 patent.

4. STIIIZY-ORIG-1G

a) Claim 1

PAX asserts the STIIIZY-ORIG-1G infringes claim 1. CIB at 55.

Respondents did not set forth any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 92-119.

The evidence shows that the STIIIZY-ORIG-1G satisfies the limitations of claim 1. CX-4747C (Kodama) at Q/As 326-327, 329, 348, 364, 380, 395, 410, 429, 444, 459, 474. Accordingly, I find that the STIIIZY-ORIG-1G infringes claim 1 of the '580 patent.

b) Claim 6

Claim 6 is directed to a vaporizer device consisting of the vaporizer cartridge of claim 1 and “vaporizer body” limitations. JX-0003, cl. 6.

PAX asserts the STIIIZY-ORIG-1G infringes claim 6. CIB at 67.

Respondents did not set forth any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 92-119.

The evidence shows that the STIIIZY-ORIG-1G satisfies the limitations of claim 6. CX-4747C (Kodama) at Q/As 523-524, 528, 532, 536, 540. Accordingly, I find that the STIIIZY-ORIG-1G infringes claim 6 of the '580 patent.

c) Claim 7

Claim 7 depends from claim 1, adding the “exposed through” limitations. JX-0003, cl. 7.

PAX asserts that the STIIIZY-ORIG-1G infringes claim 7. CIB at 67.

Respondents did not present any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 92-119.

The evidence shows that the STIIIZY-ORIG-1G satisfies the additional limitations of claim 7. CX-4747C (Kodama) at Q/A 499. Accordingly, I find that the STIIIZY-ORIG-1G infringes claim 7 of the ’580 patent.

d) Claim 8

PAX asserts that the STIIIZY-ORIG-1G infringes claim 8. CIB at 67-68.

Respondents did not set forth any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 92-119.

The evidence shows that the STIIIZY-ORIG-1G satisfies the limitations of claim 8. CX-4747C (Kodama) at Q/As 549-550, 554-555. Accordingly, I find that the STIIIZY-ORIG-1G infringes claim 8 of the ’580 patent.

e) Claim 10

Claim 10 depends from claim 8, adding the “exposed through” limitations. JX-0003, cl. 8.

PAX asserts that the STIIIZY-ORIG-1G infringes claim 10. CIB at 68.

Respondents did not present any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 92-119.

The evidence shows that the STIIIZY-ORIG-1G satisfies the additional limitations of claim 10. CX-4747C (Kodama) at Q/A 561, 565. Accordingly, I find that the STIIIZY-ORIG-1G infringes claim 10 of the ’580 patent.

5. FLARE Products

a) Claim 1

PAX asserts that the FLARE(C) and FLARE(V) infringe claim 1. CIB at 55.

Respondents did not set forth any noninfringement arguments and have therefore waived any such argument as to this claim. *See generally* RIB at 92-119.

The evidence shows that the FLARE(C) and FLARE(V) satisfy the limitations of claim 1. CX-4747C (Kodama) at Q/As 326-327, 334-335, 353-354, 370-371, 385-386, 400-402, 416-417, 434-435, 449-450, 464-465, 479-480. Accordingly, I find that the FLARE(C) and FLARE(V) infringe claim 1 of the '580 patent.

6. ROVE Products

a) Claim 1

i) Limitations 580.1.pre – 580.1.g.iii

Respondents do not dispute that the ROVE(C) and ROVE(V) meet these limitations. RUCL at 8-9. The evidence confirms that these limitations are met. CX-4747C (Kodama) at Q/As 326-327, 331-332, 350-351.

ii) Limitation 580.1.g.iv

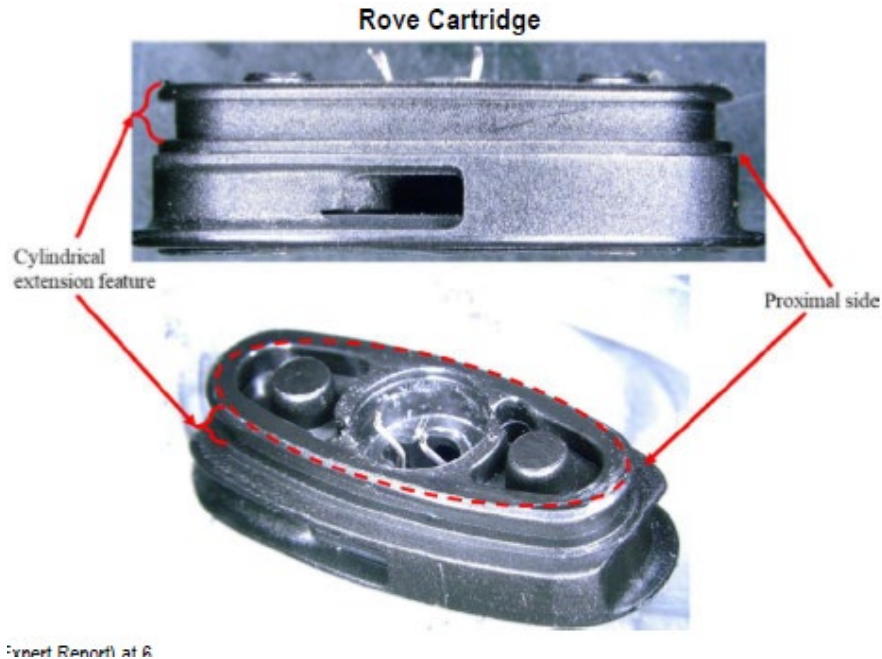
Limitation 580.1.g.iv recites “an extension feature having a cylindrical shape, wherein the extension feature extends from the proximal side of the distal member.” JX-0003, cl. 1. PAX contends that the ROVE (C) and ROVE (V) practice this limitation. CIB at 64-67. Respondents argue that “the alleged extension feature is an integral part of the distal member and is only externally shaped differently because it is press-fitted to the cartridge chamber.” RIB at 94. Thus, according to Respondents, it cannot satisfy this limitation “because there is nothing significantly

different from the proximal to the distal [*sic*] side of the distal [*sic*] member, with respect to airflow.” *Id.*

I find Respondents’ argument unavailing. First, nothing in the claim language requires that the “extension feature” be distinct from the “distal member” from which it extends. JX-0003, cl. 1. Similarly, the claim language does not preclude an extension feature that is relatively uniform from the proximal to distal side or stated differently, that extends from the proximal side to the distal side. *Id.*; *see also* CX-4747C (Kodama) at Q/A 489 (“[T]he claim neither defines the dimensions of the extension feature nor requires any difference between the extension feature and the portion from the proximal side to the distal side.”). Respondents further claim that “it does not at all resemble the ‘extension feature’ in the patent, the alleged “extension feature” in other Accused Products, and the purported ‘extension feature’ in the ERA products.” RIB at 95; *see also* RX-04747C (Pecht) at Q/A 124 (arguing same). While this may be true, it is not relevant to the infringement analysis. It is axiomatic that the accused device be compared to the claims, not a domestic industry product, a preferred embodiment, or another accused product. *Wavetronix LLC v. EIS Elec. Integrated Sys.*, 573 F.3d 1343, 1354 (Fed. Cir. 2009) (“Infringement analysis involves a two-step process: the court first determines the meaning of disputed claim terms and then compares the accused device to the claims as construed.”)

Turning now to the Accused Products, I find that the ROVE(C) and ROVE(V) meet this limitation. As Mr. Kodama explained, in the accused ROVE products, the extension feature extends from the proximal side and has a cylindrical shape.²⁰ CX-4747C (Kodama) at Q/As 412-414, 488-489. This is illustrated in the photos below.

²⁰ Dr. Pecht conceded that there is a difference in the size of the extension feature in the ROVE (C) and ROVE (V) relative to the lower portion of the distal member from which it extends. Pecht,



CDX-0001.0159 (marking a cross-section of the cylindrical shape with dashes); *see also* CX-4747C (Kodama) at Q/A 413 (“[A] POSITA would understand that a cylinder can have either a circular or ovoid cross-section.”).

I therefore find that this limitation is satisfied.

iii) Limitation 580.1.g.v

Limitation 580.1.g.v recites “wherein the extension feature comprises an opening extending therethrough that allows air to pass through the distal member.” JX-0003, cl. 1.

PAX asserts that this limitation is met, while Respondents insist it is not. The record contains conflicting opinions from people of skill. Mr. Kodama testified that the air flows into the holes at the bottom of the distal member, up through the structure, and out the openings in the interior of the extension feature. CX-4747C (Kodama) at Q/A 431. This is allegedly shown in CDX-0001.0168:

Tr. at 272:2-7. “The size difference results in formation of a ledge between [the distal member and the extension feature], on which the lower edge of the cartridge body rests.” CIB at 66.

'580 Patent, Claim 1

[1GV] wherein the extension feature comprises an opening extending therethrough that allows air to pass through the distal member

Rove Cartridge

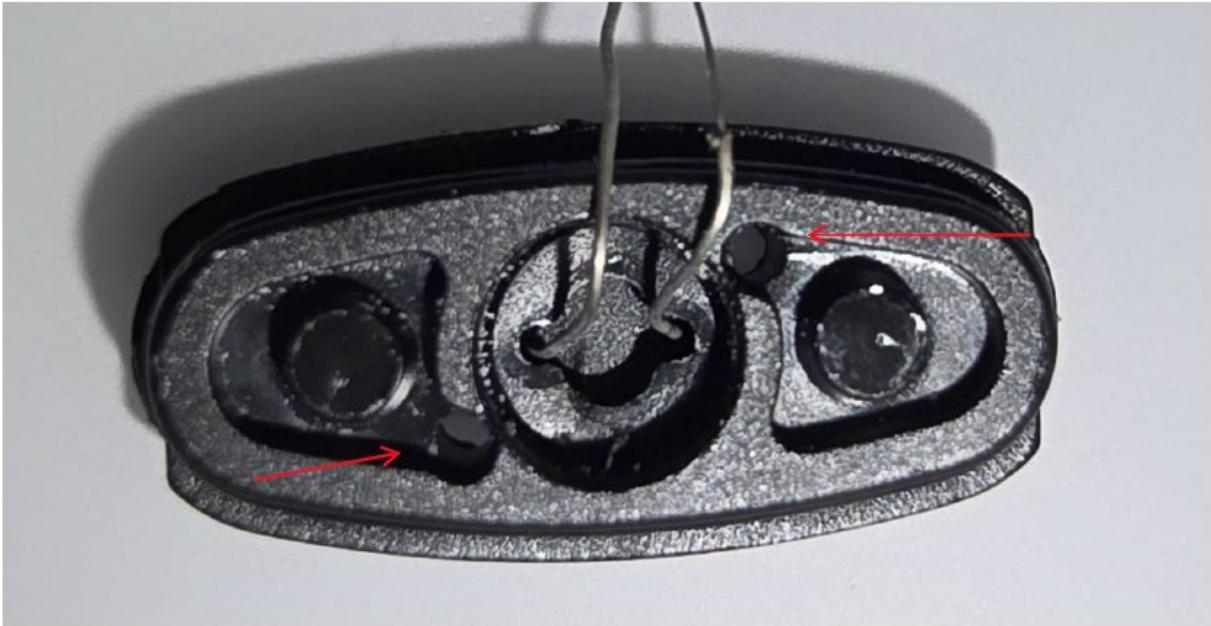
CDX-0293 (Exhibit 50 to Kodama's Expert Report) at 7

PAK

CDX-0001.0168

Dr. Pecht, on the other hand, testified that “the openings, which allow air flow, are holes that are not part of the alleged extension feature and do not rise above the surface of the alleged distal member.” RX-0474C (Pecht) at Q/A 126.

The claim language requires the extension feature to comprise an opening through which air flows. Dr. Kodama identified those openings as C and D in the above image. CX-4747C (Kodama) at Q/A 431. However, on closer inspection, those openings do not pass through the “extension feature.”



RDX-0006 at 12; RX-0474C (Pecht) at Q/A 125 (“there are no air holes that pass through the purported ‘extension’ feature”). I therefore find that PAX has not met its burden to show that this limitation is present in either the ROVE(C) or ROVE(V).

iv) Limitations 580.1.g.vi – 580.1.h

Respondents do not dispute that the ROVE(C) and ROVE(V) meet these limitations. RUCL at 9. The evidence establishes that these limitations are met. CX-4747C (Kodama) at Q/As 446-447, 461-462, 476-477.

v) Conclusion

Accordingly, for the reasons set forth above, the ROVE(C) and ROVE(V) do not infringe claim 1 of the ’580 patent.

b) Claim 6

Claim 6 is directed to a vaporizer device comprised of the vaporizer cartridge of claim 1 and “vaporizer body” limitations. JX-0003, cl. 6. In the preceding section, I found the ROVE(V)

to not infringe claim 1 of the '580 patent. Consequently, the ROVE(V) does not infringe claim 6 of the '580 patent.

c) Claim 7

Claim 7 depends from claim 1. JX-0003, cl. 7. Since this claim depends from the independent claim addressed above, it cannot be infringed. As such, the ROVE(V) does not infringe claim 7 of the '580 patent. *See Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1328-29 n.5 (Fed. Cir. 2008) (“A conclusion of noninfringement as to the independent claims requires a conclusion of noninfringement as to the dependent claims.”)

d) Claim 8

Claim 8 includes the same “wherein the extension feature comprises an opening extending therethrough that allows air to pass through the distal member” limitation as claim 1. JX-0003, cl. 8. As explained above, the ROVE(V) does not satisfy this limitation. For those same reasons, the ROVE(V) does not infringe claim 8 of the '580 patent.

e) Claim 10

Claim 10 depends from claim 8. JX-0003, cl. 10. Since this claim depends from the independent claim addressed above, it cannot be infringed. As such, the ROVE(V) does not infringe claim 10 of the '580 patent.

7. The Redesigned Products

a) STIIIZY-1G-REDESIGN(C)

i) Claim 1

(1) Limitations 580.1.pre – 580.1.g.iii

Respondents do not dispute that the STIIIZY-1G-REDESIGN(C) meets these limitations. RUCL at 8-9. The evidence confirms that these limitations are met. CX-4747C (Kodama) at Q/As 326-327, 336, 355, 372, 387, 402.

(2) Limitation 580.1.g.iv

Limitation 580.1.g.iv recites “an extension feature having a cylindrical shape, wherein the extension feature extends from the proximal side of the distal member.” JX-0003, cl. 1. PAX contends that “the triangular-shaped extension feature performs the same function in substantially the same way to achieve the same result as the claimed cylindrically-shape extension feature.”²¹,²² CIB at 56-60. Respondents object on two grounds. First, they contend that PAX’s equivalence arguments “read out structural limitations that were expressly included by the patentee during prosecution.”²³, ²⁴ RIB at 102-103. Next, Respondents argue that “the differences between a

²¹ PAX does not contend that this limitation is met literally. CIB at 56.

²² In the STIIIZY Redesigned Products, the size of the air tube in the silicone base (*i.e.*, distal member) of the vaporizer cartridge was increased and its shape was changed from cylindrical to triangular. RX-0474C (Pecht) at Q/As 135-139; Pecht, Tr. at 267:4-8.

²³ Respondents seem to suggest that prosecution history estoppel could bar application of the doctrine of equivalents. However, Respondents never raise such a defense in their briefs. *See generally* RIB at 102-109.

²⁴ Respondents make a similar argument with respect to Mr. Kodama’s analysis. RIB at 104-105. They claim that under his equivalence analysis, the shape of the claimed “extension feature” “does not matter” and that “any shape” would satisfy the element so long as air can pass through the distal member. *Id.* This is a mischaracterization of Mr. Kodama’s testimony. Mr. Kodama did not state that any shape would meet the “extension feature” limitation. Kodama, Tr. at 121:18-123:19. Rather, when asked by Respondents’ counsel whether it was possible for the extension feature to

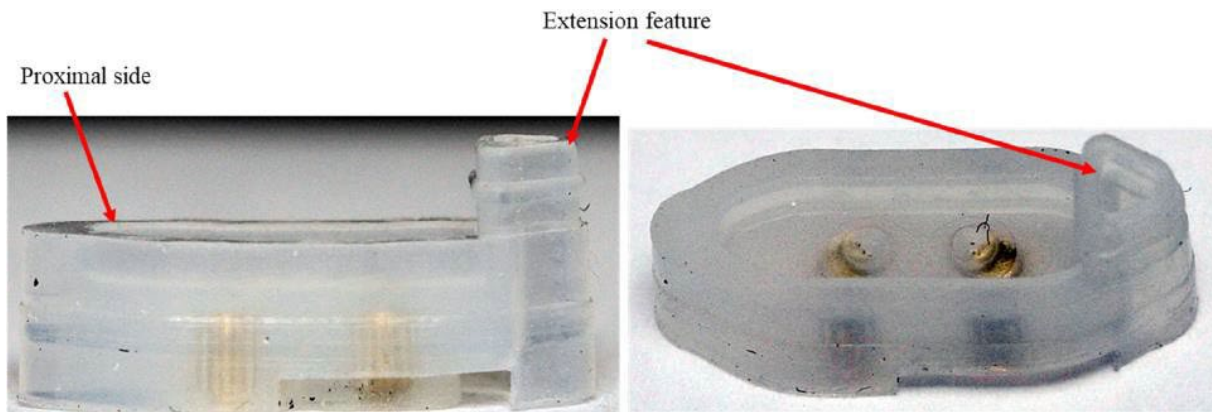
cylindrical and a triangular shape in the context of the patent are substantial, as can be seen at least through the advantages of one over the other.” *Id.* at 106-109.

“The doctrine of equivalents allows [a] patentee to claim those insubstantial alterations that were not captured in drafting the original patent claim but which could be created through trivial changes.” *Festo Corp. v. Shoketsu Kogyo Kabushiki Co.*, 535 U.S. 722, 733 (2002). It demands a “limitation specific” analysis that asks “whether a substitute element matches the function, way, and result of the claimed element.” *VLSI*, 87 F.4th at 1342 (quoting *Warner-Jenkinson*, 520 U.S. at 40).

Here, the patent’s disclosure is “dispositive of the function.” *Intendis GMBH v. Glenmark Pharm. Inc., USA*, 822 F.3d 1355, 1362 (Fed. Cir. 2016). That function is to allow air to pass through the distal member towards the mouthpiece of the vaporizer cartridge. JX-0003 at 34:65-35:3. This was confirmed by Mr. Kodama, who testified that the extension feature in the claimed invention “defines a portion of an airpath between the bottom cover and the mouthpieces such that it allows the air from the bottom cover to pass through the distal member via the opening and flow to the mouthpiece.” CX-4747C (Kodama) at Q/A 419. Dr. Pecht likewise agreed that the function of the extension feature is to allow air to pass through the distal member. Pecht, Tr. at 224:14-17.

have other cross-sectional shapes, like a diamond or square, Mr. Kodama agreed that those were possibilities *if* the air tube “serves the same function using the same – basically the same way.” *Id.* Counsel did not question him about tubes with non-uniform shapes that *could* have a material impact on how air passes through the tube. CRB at 28-29. Moreover, “[v]itiation’ is not an exception to the doctrine of equivalents, but instead a legal determination that ‘the evidence is such that no reasonable jury could determine two elements to be equivalent.” *Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1356 (Fed. Cir. 2012). Here, the record does not support such a finding. Rather, the evidence demonstrates that the alleged equivalent is a tube with a consistent cross-section along its length that allows air to pass, just like the claimed “extension feature,” except with a different shape.

In the STIIIZY-1G-REDESIGN(C), the extension feature protrudes from the proximal side of the distal member and includes an opening.



CDX-0001.0162. There is an airpath from the bottom cover to the mouthpiece, and the distal member is disposed between the bottom cover and the mouthpiece. CX-4747C (Kodama) at Q/A 419. Thus, just like the cylindrical extension feature in the '580 patent, the triangular extension feature defines a portion of the airpath such that it allows the air from the bottom cover to pass through the distal member and flow to the mouthpiece. *Id.* Dr. Kodama further testified that a person of skill would view the differences as insubstantial. *Id.* “Quite simply, air flows through the triangular tube when a user draws on the mouthpiece, just [like] it does with a cylindrical tube.” CIB at 57.

Respondents’ noninfringement arguments are premised on an incorrect application of the doctrine of equivalents.²⁵ They tout certain “advantages” of the triangular shape over a cylindrical shape. RIB at 106-109. Specifically, Respondents claim that [REDACTED]

²⁵ Dr. Pecht’s analysis suffers from the same flaws. RX-0474C (Pecht) at Q/As 136-142; Pecht, Tr. at 221:222:22, 224:24-225:6, 225:20-24.

[REDACTED]

[REDACTED]

[REDACTED] *Id.* These purported advantages are irrelevant. “It is the limitations and functions of the invention described in the claims, not the elements or functions of the accused device, which establish the reference point for the doctrine of equivalents analysis.” *Insta-Foam Prods., Inc. v. Universal Foam Sys., Inc.*, 906 F.2d 698, 702 (Fed. Cir. 1990). Nor is it any function that element could perform in the abstract. *Intendis GMBH*, 822 F.3d at 1362 (“[T]he proper analysis focuses on the claimed element’s function in the claimed composition, not a function that element could perform in the abstract divorced from the claimed composition.”). As explained above, the only relevant function of the claimed extension feature is to allow air to pass through the distal member.²⁷ The redesigned extension feature therefore performs the same function as the claimed cylindrical extension feature, in the same way, to achieve the same result.²⁸

For these reasons, I find the evidence to establish legal equivalency of the triangular-shaped extension feature.

(3) Limitations 580.1.g.v – 580.1.h

Respondents do not dispute that the STIIIZY-1G-REDESIGN/C) meets these limitations. RUCL at 9. The evidence establishes that these limitations are met. CX-4747C (Kodama) at Q/As 436, 451, 466, 481.

²⁶ [REDACTED]

²⁷ The claim makes no reference to pressure sensing, durability, or thickness of the wall of the extension feature. JX-0003, cl. 1; Pecht, Tr. at 224:18-23, 227:2-12. Likewise, nothing in the claim suggests that the shape of the extension feature was to prevent clogging. *Id.*

²⁸ Respondents cannot avoid infringement by changing the shape of the claimed extension feature while retaining its essential functionality.

(4) Conclusion

Accordingly, I find that the STIIIZY-1G-REDESIGN(C) infringes claim 1 of the '580 patent.

ii) Claim 7

Claim 7 depends from claim 1, adding the “exposed through” limitations. JX-0003, cl. 7.

PAX asserts that the evidence shows this claim is met. CIB at 67. Although Respondents contend that this claim is not met for the same reasons as claim 1 (RIB at 109), they do not dispute that the additional limitations are present in the STIIIZY-1G-REDESIGN(C). RUCL at 9-10.

The evidence shows that the additional limitation of claim 7 is met. CX-4747 (Kodama) at Q/A 502. Accordingly, I find that the STIIIZY-1G-REDESIGN(C) infringes claim 7 of the '580 patent.

b) STIIIZY-ORIG-1G-REDESIGN

i) Claim 1

(1) Limitations 580.1.pre – 580.1.g.iii

Respondents do not dispute that the STIIIZY-ORIG-1G-REDESIGN meets these limitations. RUCL at 8-9. The evidence confirms that these limitations are met. CX-4747C (Kodama) at Q/As 326-327, 337, 356, 373, 388, 403.

(2) Limitation 580.1.g.iv

The parties raise the same arguments here as they did for the STIIIZY-1G-REDESIGN(C). CIB at 56-60; RIB at 109-110.

Thus, for the reasons discussed in Section VII.B.7.a.i.2, the evidence shows that this limitation is met. *See* CX-4747C (Kodama) at Q/A 420.

(3) Limitations 580.1.g.v – 580.1.h

Respondents do not dispute that the STIIIZY-ORIG-1G-REDESIGN meets these limitations. RUCL at 9. The evidence establishes that these limitations are met. CX-4747C (Kodama) at Q/A 437, 452, 467, 482.

(4) Conclusion

Accordingly, I find that the STIIIZY-ORIG-1G-REDESIGN infringes claim 1 of the '580 patent.

ii) Claim 6

Claim 6 is directed to a vaporizer device comprised of the vaporizer cartridge of claim 1 and “vaporizer body” limitations. JX-0003, cl. 6.

Respondents argue that this claim is not met for the same reasons as claim 1. RIB at 110. However, they do not dispute that the “vaporizer body” limitations are present in the STIIIZY-ORIG-1G-REDESIGN. *Id.*; *see also* RUCL at 9.

The evidence shows that the “vaporizer body” limitations are met. CX-4747 (Kodama) at Q/A 502. Accordingly, I find that the STIIIZY-ORIG-1G-REDESIGN infringes claim 6 of the '580 patent.

iii) Claim 7

Claim 7 depends from claim 1, adding the “exposed through” limitations. JX-0003, cl. 7.

Respondents argue that this claim is not met for the same reasons as claim 1. RIB at 110. However, they do not dispute that the additional limitations are present in the STIIIZY-ORIG-1G-REDESIGN. *Id.*; *see also* RUCL at 9-10.

The evidence confirms that the additional limitations are met. CX-4747 (Kodama) at Q/A 503. I therefore find that the STIIIZY-ORIG-1G-REDESIGN infringes claim 7 of the '580 patent.

iv) Claim 8

PAX asserts that the evidence shows this claim is met. CIB at 67-68.

Respondents state that “[they] rely on the same reasoning as discussed in claim 1 to show that claim 8 is not infringed.” RIB at 110. They do not dispute the other limitations of the claim. *Id.*; *see also* RUCL at 10 (not disputing 580.8.a.vii or 580.8.b.i.a).

The evidence shows that the STIIIZY-ORIG-1G-REDESIGN practices the limitations of this claim. CX-4747C (Kodama) at Q/As 549, 552, 557.

v) Claim 10

Claim 10 depends from claim 8, adding the “exposed through” limitations. JX-0003, cl. 10.

Respondents argue that “[c]laim 10 depends ultimately from claim 8 and does not infringe for the same reasons.” RIB at 110. However, they do not dispute that the STIIIZY-ORIG-1G-REDESIGN meets the additional limitations. *Id.*; *see also* RUCL at 11.

The evidence confirms the “exposed through” limitations are met. CX-4747C (Kodama) at Q/As 563, 567. I therefore find that the STIIIZY-ORIG-1G-REDESIGN infringes claim 10 of the ’580 patent.

c) STIIIZY-AIO-REDESIGN

i) Claim 1

(1) Limitations 580.1.pre – 580.1.e

Respondents do not dispute that the STIIIZY-AIO-REDESIGN meets these limitations. RUCL at 8-9. The evidence confirms that these limitations are met. CX-4747C (Kodama) at Q/As 326-327, 340, 359.

(2) Limitation 580.1.f

The parties rely on their arguments for the “bottom cover” limitation in the ’527 patent for this limitation. CIB at 61; RIB at 93, 116.

Thus, for the reasons discussed in Section V.B.1.a.ii., the evidence shows that this limitation is met. *See* CX-4747C (Kodama) at Q/A 376.

(3) Limitations 580.1.g – 580.1.g.iii

Respondents do not dispute that the STIIIZY-AIO-REDESIGN meets these limitations. RUCL at 9. The evidence establishes that these limitations are met. CX-4747C (Kodama) at Q/As 391, 406.

(4) Limitations 580.1.g.iv

The parties rely on the same arguments they presented for the STIIIZY-1G-REDESIGN(C). CIB at 61; RIB at 116-117.

Thus, for the reason set forth in Section VII.B.7.a.i.2, the evidence shows that this limitation is met. *See* CX-4747C (Kodama) at Q/As 423-424.

(5) Limitations 580.1.g.v – 580.1.h

Respondents do not dispute that the STIIIZY-AIO-REDESIGN meets these limitations. RUCL at 9. The evidence shows that these limitations are met. CX-4747C (Kodama) at Q/As 440, 455, 470, 485.

(6) Conclusion

Accordingly, I find that the STIIIZY-AIO-REDESIGN infringes claim 1 of the ’580 patent.

d) ROVE-REDESIGNS

i) Claim 1

(1) Limitations 580.1.pre – 580.1.g.iii

Respondents do not dispute that the ROVE-REDESIGN(C) and ROVE-REDESIGN(V) meet these limitations. RUCL at 8-9. The evidence confirms that these limitations are met. CX-4747C (Kodama) at Q/As 326-327, 338-339, 357-358, 374-375, 389-390, 404-405.

(2) Limitation 580.1.g.iv

The parties' arguments are the same as those presented for the ROVE(C) and ROVE(V). CIB at 64-67; RIB at 111-116.

Thus, for the reasons set forth in Section VII.B.7.d.i.2, I find that the ROVE-REDESIGN(C) and ROVE-REDESIGN(V) meet this limitation. *See* CX-4747C (Kodama) at Q/As 420-421.

(3) Limitation 580.1.g.v

The parties' arguments are the same as those presented for the ROVE(C) and ROVE(V). CIB at 64-67; RIB at 111-116.

Thus, for the reasons set forth in Section VII.B.7.d.i.3, I find that PAX has not established that the ROVE-REDESIGN(C) and ROVE-REDESIGN(V) satisfy this limitation.

(4) Limitations 580.1.g.vi – 580.1.h

Respondents do not dispute that the ROVE-REDESIGN(C) and ROVE-REDESIGN(V) meet these limitations. RUCL at 9. The evidence establishes that these limitations are met. CX-4747C (Kodama) at Q/As 453-454, 461-462, 468-469, 483-484.

(5) Conclusion

Accordingly, I find that the ROVE-REDESIGN(C) and ROVE-REDESIGN(V) do not infringe claim 1 of the '580 patent.

ii) Claim 6

Claim 6 is directed to a vaporizer device comprised of the vaporizer cartridge of claim 1 and “vaporizer body” limitations. JX-0003, cl. 6. I found above that the ROVE-REDESIGN(V) does not to infringe claim 1 of the '580 patent. Consequently, the ROVE-REDESIGN(V) does not infringe claim 6 of the '580 patent.

iii) Claim 7

Claim 7 depends from claim 1, adding the “exposed through” limitations. JX-0003, cl. 7. Since this claim depends from the independent claim addressed above, it cannot be infringed. As such, the ROVE-REDESIGN(C) and ROVE-REDESIGN(V) do not infringe claim 7 of the '580 patent.

iv) Claim 8

Claim 8 includes the same “wherein the extension feature comprises an opening extending therethrough that allows air to pass through the distal member” limitation as claim 1. JX-0003, cl. 8. As explained above, the ROVE-REDESIGN(V) does not satisfy this limitation. *See* Section VII.B.7.d.1.3. I therefore find that the ROVE-REDESIGN(V) does not infringe claim 8 of the '580 patent.

v) Claim 10

Claim 10 depends from claim 8, adding the “exposed through” limitations. JX-0003, cl. 10. Since this claim depends from the independent claim addressed above, it cannot be infringed. As such, the ROVE-REDESIGN(V) does not infringe claim 10 of the '580 patent.

e) FLARE-REDESIGNS

i) Claim 1

(1) Limitations 580.1.pre – 580.1.g.iii

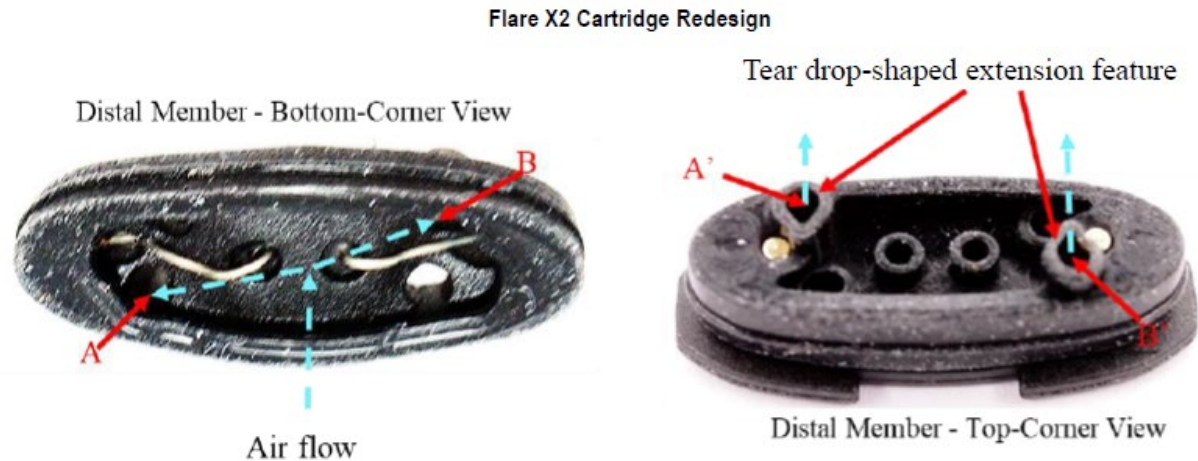
Respondents do not dispute that the FLARE-REDESIGNS(C and V) meet these limitations. RUCL at 8-9. The evidence confirms that these limitations are met. CX-4747C (Kodama) at Q/As 326-327, 341-342, 360-361, 377-378, 392-393, 407-408.

(2) Limitation 580.1.g.iv

PAX asserts that this limitation is met under the doctrine of equivalents. CIB at 62-64; CRB at 33-34. Respondents argue that the differences between a cylindrical shape and a teardrop shape are substantial, citing the testimony by their expert. RIB at 118-119 (citing RX-0474C (Pecht) at Q/As 168-169, 170, 173). However, Dr. Pecht's testimony is wholly conclusory. *See, e.g.,* RX-0474C at Q/A 173.

As discussed above relative to the STIIIZY Redesigns, the only relevant function of the extension feature is to allow air to pass through the distal member.²⁹ *See* Section VII.B.7.a.i.2. Here, the teardrop-shaped extension feature performs the same function in substantially the same way to achieve the same result as the claimed cylindrical shape extension feature. *See* CX-4747C (Kodama) at Q/A 426. Dr. Kodama explained that just like the claimed invention, the extension feature in the FLARE redesigns “defines a portion of an airpath between the bottom cover and mouthpiece such that it allows the air from the bottom cover to pass through the distal member via the opening and flow to the mouthpiece.” *Id.*

²⁹ Also, like the STIIIZY redesigns, no testing was done to measure the extent to which airflow through the silicon base changed. Zhang, Tr. at 303:24-304:3. Thus, there is no evidence in the record to substantiate Respondents' claim that the teardrop shape “improves the efficiency of airflow and reduce[s] the loss of air pressure of the airflow.” RIB at 119.



CDX-0001.0174. He further opined that a person of skill would view the differences as insubstantial because “air can pass through the distal member via both the tear-drop shaped extension feature and the cylindrical extension feature.” CX-4747C (Kodama) at Q/A 426.

I therefore find that this limitation is met under the doctrine of equivalents.

(3) Limitations 580.1.g.v – 580.1.h

Respondents do not dispute that the FLARE-REDESIGNS(C and V) meet these limitations. RUCL at 9. The evidence establishes that these limitations are met. CX-4747C (Kodama) at Q/As 441-442, 456-457, 471-472, 486-487.

(4) Conclusion

Accordingly, the FLARE-REDESIGNS(C and V) infringe claim 1 of the '580 patent.

C. Indirect Infringement

The asserted claims of the '580 patent raise substantially the same issues as the asserted claims of the '756 patent. PAX relies on the same unrebutted evidence as presented for the '756 patent. Thus, for the reasons set forth in Section IV.C, Respondents indirectly infringe claims 1, 6-8, and 10 of the '580 patent, both contributorily and by inducement.

D. Technical Prong of the Domestic Industry Requirement

PAX asserts that the '580 DI Products identified below practice certain claims of the '580 patent:

'580 DI Products	Representative Products	Practiced Claims
ERA-05G(C)	ERA-05G(C)	1
ERA-ORIG-05G	ERA-ORIG-05G	1, 6, and 8
ERA-PRO-05G		
ERA-LIFE-05G		
ERA-GO-05G		

CIB at 83.

Respondents take no position on the technical prong of the domestic industry. RIB at 139. As such, Respondents have waived their right to dispute that PAX satisfies the technical prong of the domestic industry requirement.

The evidence shows that the '580 DI Products practice claims 1, 6, and 8 of the '580 patent. Mr. Kodama explained how the ERA-05G(C) and ERA-ORIG-05G products practice the limitations of claim 1. CX-4747C (Kodama) at Q/As 748-772. Mr. Kodama also explained how the ERA-ORIG-05G product practices every limitation of claims 6 and 8. *Id.* at Q/As 742-746, 748-772, 775-785.

For these reasons, I find that the technical prong of the domestic industry requirement is satisfied for the '580 patent.

E. Validity

Respondents assert that the '580 patent is invalid because: (1) Alarcon anticipates claims 1, 6, and 8 (RIB at 119-126); (2) Tucker anticipates claims 1, 6, and 8 (*id.* at 126-132); (3) Alarcon in view of Xiang renders claims 7 and 10 obvious (*id.* at 132-134); (4) Tucker in view of Xiang

renders claims 7 and 10 obvious (*id.* at 134-136); and (5) there is insufficient written description for “a bottom cover comprising a bottom portion positioned distally relative to the cartridge body, the bottom cover comprising: a first air opening” (*id.* at 136).

1. Anticipation

a) Alarcon

i) Claims 1 and 8

Claims 1 and 8 of the ’580 patent include the same “bottom cover” limitation as claim 1 of the ’756 patent. Respondents contend that this limitation is met “for the same reasons as 756.1.h.” RIB at 120. I have already addressed the Alarcon reference in Section IV.E.1.a; those findings control here as well. Accordingly, Respondents have not established that Alarcon anticipates either claim 1 or claim 8 of the ’580 patent.

ii) Claim 6

Because I found independent claim 1 is not anticipated by Alarcon, dependent claim 6 is also not anticipated by Alarcon.

b) Tucker

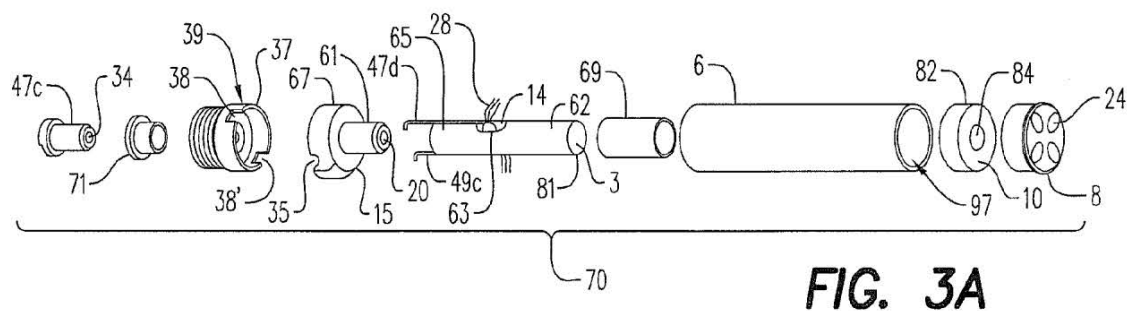
i) Claim 1

Respondents submit that Tucker discloses every limitation of claim 1. RIB at 126-129. PAX disputes that the electronic cigarette disclosed in Tucker includes a cartridge that satisfies either the “bottom cover” or the “distal member” limitations. CIB at 70-71.

“Typically, testimony concerning anticipation must be testimony from one skilled in the art and must identify each claim element, state the witnesses’ interpretation of the claim element, and explain *in detail* how each claim element is disclosed in the prior art reference.” *Whitserve, LLC v. Comput. Packages, Inc.*, 694 F.3d 10, 24 (Fed. Cir. 2012) (emphasis added). Respondents cite

to Dr. Jackson's testimony for the "bottom cover" and "distal member" limitations. RIB at 127. For the "bottom cover" limitation, he opined: "As may be observed in FIGS. 1&2 (excerpted below) and 15 (below), cathode connector piece 37 is installed internal to 'outer tube (or casing) 6' and forms the distalmost outer enclosure of 'first section 70'." RX-0473C (Jackson) at Q/As 519, 1397. And for the "distal member" limitation, he opined: "Tucker (JX-0214) discloses the claimed distal member as, for example, 'gasket 15.'" *Id.* at Q/A 527. He then cites to two images, with little explanation. *Id.* The clear and convincing standard requires more than simply accepting an expert's word, however. *See, e.g., Ecolochem*, 227 F.3d at 1372 (Fed. Cir. 2000) ("Broad conclusory statements regarding the teaching of [] references, standing alone, are not 'evidence.'").

Moreover, the evidence demonstrates that the cathode connector piece 37 does not cover the bottom of the vaporizer device, as required by the claim. The cathode connector piece is the threaded connector at the end of cartridge portion 70 furthest from the mouthpiece. JX-0214; *see also* CX-4750C (Sturges) at Q/A 150. This is illustrated in Figures 3A and 15 of Tucker, which are reproduced below:



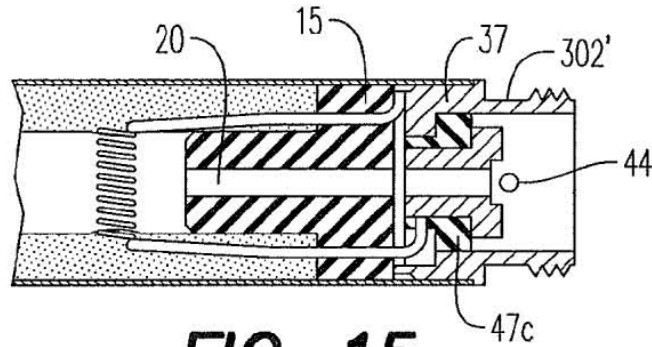


FIG. 15

Id. at FIGS. 3A, 15. As can be seen in these figures, “[t]he cathode connector piece 37 is completely open at the bottom, to allow insertion of a grommet-like structure 71 into which an anode post 47c is inserted.” CX-4750C (Sturges) at Q/A 151. Quite simply, the cathode connector piece 37 does not cover anything, just like the structure Dr. Jackson relied on in Alarcon. *See* Jackson, Tr. at 518:7-521:4 (“Q. Now, the – at the threaded portion – at the bottom of the threaded portion of the cathode connector piece 37, I’m going to highlight in green the area between that, that’s going to be open, correct? A. Yes.”). Dr. Sturges also testified that a person of skill would not view gasket 15 as a recess because “the diameter doesn’t expand back out at any point.” CX-4750C (Sturges) at Q/A 158; *see id.* at Q/A 159 (providing additional critique of Dr. Jackson’s “distal member” analysis).

Accordingly, Respondents have failed to establish by clear and convincing evidence that Tucker anticipates claim 1 of the ’580 patent.

ii) Claim 6

Because I found independent claim 1 not anticipated by Tucker, dependent claim 6 is also not anticipated by Tucker.

iii) Claim 8

Claim 8 recites the same “bottom cover” and “distal member” limitations as claim 1. JX-0003, cl. 8. Because I found that Tucker does not disclose these limitations, Tucker does not anticipate claim 8 of the ’580 patent.

2. Obviousness

a) Alarcon in view of Xiang

Respondents assert that “a POSITA would be motivated to combine Alarcon and Xiang for the same reasons discussed above with respect to 756.10.” RIB at 133. Thus, for the same reasons set forth in Section IV.E.2.c, Respondents have failed to meet their burden to establish that Alarcon in view of Xiang renders claims 7 and 10 of the ’580 patent obvious.

b) Tucker in view of Xiang

Respondents assert that Tucker in view of Xiang renders claims 7 and 10 obvious. RIB at 134. They write: “A POSITA would be motivated to combine Tucker and Xiang for substantially the same reasons discussed above with respect to 757.13 and 757.20.” *Id.*

I have already determined that Tucker does not disclose the claimed “bottom cover” or “distal member.” *See* Section VII.E.1.b. Respondents do not rely on Xiang for these limitations, nor have they set forth any arguments as to how a person of ordinary skill would modify Tucker with Xiang to supply the missing limitations. *See* RIB at 88-90, 135-136. As a result, Respondents have failed to meet their burden to establish that the combination of Tucker and Xiang renders claims 7 and 10 of the ’580 patent obvious.

c) Secondary Considerations

Secondary considerations of nonobviousness may rebut a prima facie case of obviousness. Here, where BOE has not made out a prima facie case of obviousness, there is no showing to rebut. Accordingly, I need not consider any secondary considerations of nonobviousness.

3. Written Description

Respondents assert that every asserted claim of the '580 patent is invalid for non-compliance with the written description requirement. RIB at 136. They rely on their § 112 analysis for the '756 patent in support. *Id.* For the same reasons discussed in Section IV.E.3 above, Respondents have not shown by clear and convincing evidence that the asserted claims of the '580 patent are invalid under 35 U.S.C. § 112.

VIII. ECONOMIC PRONG OF THE DOMESTIC INDUSTRY REQUIREMENT

PAX alleges that a domestic industry exists under 19 U.S.C. § 1337(a)(3)(A) and (B). CIB at 90-102; CRB at 45-48. Respondents submit that PAX cannot satisfy the economic prong because “PAX’s alleged investments occurred before PAX owned the asserted patents, PAX failed to show a domestic industry existed on the date it filed its complaint, PAX failed to show a domestic industry by patent, PAX presented unreliable data, and PAX presented only activities of a mere importer.” RIB at 140.

PAX relies on investments from 2021 to 2023 to prove the existence of a domestic industry. CIB at 87 (“relying on its most recent three years of relevant investments”); CX-4748C (Putnam) at Q/A 46; CX-4745C (Patag) at Q/A 68. Many of these investments occurred before the Asserted Patents issued. *See* JX-0001 (issued June 28, 2022); JX-0002 (issued June 28, 2022); JX-0003 (issued Sept. 26, 2023); JX-0004 (issued Sept. 19, 2023). Respondents argue that any investments

made prior to issuance of the Asserted Patents are not cognizable under sub prongs (A) and (B). RIB at 141; RRB at 56. PAX believes this contention is “incorrect.” CRB at 39 n.11.

I addressed this same issue in another investigation. There, the complainant sought to count certain expenses that occurred prior to issuance of the asserted patent for subparts (A) and (B). I found that “19 U.S.C. § 1337(a)(3) requires the Commission consider investments in ‘articles protected by the *patent*’” and declined to consider pre-issuance expenses as they relate to these subsections.^{30, 31} *Certain Compact Wallets & Components Thereof*, 337-TA-1355, Final ID at 69 (Mar. 15, 2024) (“*Compact Wallets*”). This is because, under a plain reading of the statute, there are no articles protected by the patent before issuance. Thus, consistent with that holding, I find PAX’s pre-issuance investments to not be cognizable under subparagraphs (A) and (B) of section 337(a)(3).

“[A] complainant must, as a threshold matter, provide the Commission with sufficient evidence to show that its domestic investment as to the articles protected by [the] patent[s] [are]

³⁰ While pre-issuance investments in research and development can be considered under subsection (C), no Commission opinion has squarely addressed whether they can be considered for purposes of a domestic industry under 19 U.S.C. § 1337(a)(3)(A) and (B). However, the Commission has stated that it generally “would only examine whether [a complainant’s] ‘investment in plant and equipment’ or ‘employment of labor or capital’ relates to protected articles.” *Certain Integrated Circuit Chips & Prods. Containing Same*, Inv. No. 337-TA-859, Comm’n Op. at 48 (Aug. 11, 2014); *see also Certain Ground Fault Circuit Interrupters & Prods. Containing Same*, Inv. No. 337-TA-739, Comm’n Op. at 78 (June 8, 2012) (interpreting prongs (A) and (B) to concern “investments in plant and labor and capital with respect to the **articles protected by the patent**”) (emphasis added).

³¹ On review, the Commission requested the parties brief this very issue but ultimately, the Commission took “no position” on the finding that pre-issuance investments are not cognizable under subsections (A) and (B). *See Compact Wallets*, Comm’n Op. at 14 (July 29, 2024); *see also* EDIS Doc. ID 821724 at 3 (requesting briefing on, *inter alia*, “the basis for considering investments prior to the issuance of a patent (pre-issuance investments) for purposes of a domestic industry under 19 U.S.C. § 1337(a)(3)(A) and (B).”)

significant.” *Zircon Corp. v. Int’l Trade Comm’n*, 101 F.4th 817, 822 (Fed. Cir. 2024). Here, has PAX failed to provide a basis by which to apportion or reduce its investments to only post-patent expenditures. *See generally* CX-4748C (Putnam); CX-4745C (Patag). Its overinclusive allocations preclude a “meaningful consideration of the relevant investments under section 337.” *Certain Replacement Auto. Lamps*, Inv. No. 337-TA-1291, Comm’n Op. at 27 (Mar. 7, 2024). As such, I am precluded from evaluating the significance of PAX’s investments.

For this reason, I find that PAX has not met its burden to show that the economic prong of the domestic industry requirement is satisfied.

IX. CONCLUSIONS OF LAW

1. Commission Rule 210.12(a)(7) has been satisfied.
2. The importation or sale requirement of section 337 has been satisfied.
3. PAX is the owner of U.S. Patent Nos. 11,369,756; 11,369,757; 11,766,527; and 11,759,580.
4. The STIIIZY-LIIL infringes claim 1 of U.S. Patent No. 11,369,756; claims 1, 18, and 22 of U.S. Patent No. 11,766,527; claim 1 of U.S. Patent No. 11,369,757; and claim 1 of U.S. Patent No. 11,759,580.
5. The STIIIZY-1(G)(C) infringes claims 1 and 10 of U.S. Patent No. 11,369,756; claims 1, 10, 18, and 22 of U.S. Patent No. 11,766,527; claims 1 and 13 of U.S. Patent No. 11,369,757; and claims 1 and 7 of U.S. Patent No. 11,759,580.
6. The STIIIZY-ORIG-1 infringes claims 1, 5, and 10 of U.S. Patent No. 11,369,756; claims 1, 5, 10, 11, 17, 18, and 22 of U.S. Patent No. 11,766,527; claims 1, 13, 15, and 20 of U.S. Patent No. 11,369,757; and claims 1, 6-8, and 10 of U.S. Patent No. 11,759,580.
7. The STIIIZY-AIO infringes claim 1 of U.S. Patent No. 11,766,527 and claim 1 of U.S. Patent No. 11,759,580.
8. The FLARE(C) infringes claim 1 of U.S. Patent No. 11,766,527 and claim 1 of U.S. Patent No. 11,759,580.
9. The FLARE(V) infringes claims 1 and 5 of U.S. Patent No. 11,766,527 and claim 1 of U.S. Patent No. 11,759,580.
10. The ROVE(C) infringes claims 1 and 10 of U.S. Patent No. 11,766,527.

PUBLIC VERSION

11. The ROVE(C) does not infringe U.S. Patent No. 11,759,580.
12. The ROVE(V) infringes claims 1, 5, 10, 11, and 17 of U.S. Patent No. 11,766,527.
13. The ROVE(V) does not infringe U.S. Patent No. 11,759,580.
14. The STIIIZY-1G-REDESIGN(C) infringes claims 1 and 7 of U.S. Patent No. 11,759,580.
15. The STIIIZY-ORIG-1G-RESIGNS infringes claims 1, 6-8, and 10 of U.S. Patent No. 11,759,580.
16. The STIIIZ-AIO-REDESIGN infringes claim 1 of U.S. Patent No. 11,759,580.
17. The FLARE-REDESIGNS infringe claim 1 of U.S. Patent No. 11,759,580.
18. The ROVE-REDESIGNS do not infringe U.S. Patent No. 11,759,580.
19. The STIIIZY Redesigned Products do not infringe U.S. Patent Nos. 11,369,756; 11,369,757; and 11,766,527.
20. Respondents induced infringement of the asserted claims of U.S. Patent Nos. 11,369,756; 11,369,757; 11,766,527; and 11,759,580.
21. Respondents contributorily infringe the asserted claims of U.S. Patent Nos. 11,369,756; 11,369,757; 11,766,527; and 11,759,580.
22. The technical prong of the domestic industry requirement for U.S. Patent Nos. 11,369,756; 11,369,757; 11,766,527; and 11,759,580 has been satisfied.
23. Claims 1 and 5 of U.S. Patent No. 11,369,756 are not invalid under 35 U.S.C § 102 for anticipation.
24. Claims 1 and 15 of U.S. Patent No. 11,369,757 are not invalid under 35 U.S.C § 102 for anticipation.
25. Claims 1, 6, and 8 of U.S. Patent No. 11,759,580 are not invalid under 35 U.S.C § 102 for anticipation.
26. Claims 1, 5 and 10 of U.S. Patent No. 11,369,756 are not invalid under 35 U.S.C § 103 for obviousness.
27. Claims 1, 5, 11, 18, and 22 of U.S. Patent No. 11,766,527 are not invalid under 35 U.S.C § 103 for obviousness.
28. Claims 1, 13, 15, and 20 of U.S. Patent No. 11,369,757 are not invalid under 35 U.S.C § 103 for obviousness.

29. Claims 7 and 10 of U.S. Patent No. 11,759,580 are not invalid under 35 U.S.C § 103 for obviousness.
30. The asserted claims of U.S. Patent Nos. 11,369,756; 11,369,757; 11,766,527; and 11,759,580 are not invalid under 35 U.S.C § 112, ¶ 1 for lack of written description.
31. The economic prong of the domestic industry requirements has not been satisfied with respect to the Asserted Patents.

X. RECOMMENDED DETERMINATION ON REMEDY AND BOND

The Commission's Rules provide that the administrative law judge shall issue a recommended determination concerning the appropriate remedy in the event the Commission finds a violation of section 337 and the amount of bond to be posted by respondents during Presidential review of any Commission remedies. *See* 19 C.F.R. § 210.42(a)(1)(ii).

A. Limited Exclusion Order

The Commission has broad discretion in selecting the form, scope, and extent of the remedy in a section 337 proceeding. *Viscofan, S.A. v. U.S. Int'l Trade Comm'n*, 787 F.2d 544, 548 (Fed. Cir. 1986). A limited exclusion order directed to a respondent's infringing products is among the remedies that the Commission may impose. *See* 19 U.S.C. § 1337(d).

PAX seeks a limited exclusion order that covers "any Accused Product found to infringe that is manufactured by (or on behalf of) or imported by (or on behalf of) any named Respondent." CIB at 113. PAX explains that this remedy should prohibit a third party from importing the Accused Products found to infringe, including but not limited to the Flare X2 and Rove Diamond Series products, "because they are manufactured by (or on behalf of) ALD for purposes of selling them in the U.S." *Id.*

Respondents submit that if a violation is found, the appropriate remedy is limited exclusion order for only those Accused Products found to infringe the Asserted Patents. RIB at 146. To the

extent any of the Redesigned Products are not found to infringe, Respondents request there be an express carve out or certification provision for those products as their non-infringing nature is not readily apparent.³² *Id.*

Because there has been no violation of section 337, I recommend the Commission not issue a limited exclusion order. Should the Commission determine that a violation has occurred, I recommend entry of a limited exclusion order against the Accused Products found to infringe.

B. Cease and Desist Orders

Section 337(f)(1) provides that the Commission may issue cease and desist orders (“CDOs”) to respondents found to be in violation. *See* 19 U.S.C. § 1337(f)(1).

1. The ALD Respondents

PAX argues that CDOs are warranted against ALD because it has significant domestic operations. CIB at 114-116. Respondents claim that ALD “maintains no facilities or offices in the United States other than a rented place where the salespeople can stay when they are on business trip.” *Id.* (citing RX-0471C (Zhang) at Q/As 28-29).

“Under Commission precedent, the Commission generally does not issue CDOs directed at foreign respondents . . . that do not maintain inventories of the accused products in the U.S. or conduct domestic operations because of the difficulty in enforcing such an order.” *Certain Powered Cover Plates*, Inv. No. 337-TA-1124, Comm’n Op. at 27-28 (July 10, 2020); *see also Certain Road Constr. Machines & Components Thereof*, Inv. No. 337-TA-1088, Comm’n Op. at 52-53 (July 15, 2019) (declining to issue cease and desist order against foreign respondents where

³² The inclusion of these provisions is now standard. *Certain Footwear Prods.*, Inv. No. 337-TA-936, Comm’n Op. (Remand) at 112 (Sept. 24, 2020).

evidence only showed commercially significant inventory and domestic operations by domestic respondent).

The ALD Respondents do not have significant U.S. operations that could undercut the remedy provided by a limited exclusion order. They maintain no facilities or offices in the United States other than a rented place where salespeople can stay when they are on a business trip. RX-0471C (Zhang) at Q/As 28-29. Further, PAX's claims that ALD "invests substantially in domestic operations" by "sending employees to the United States per 'a very detailed schedule'" and by maintaining a website "targeted to U.S. customers" is not borne out by the evidence. First, Mr. Yu testified that to the best of his recollection, ALD representatives attended only two trade shows in the United States in 2024. JX-0068C (Yu Dep.) at 128:10-19. Second, when asked whether ALD's website is targeted at U.S. customers, Mr. Yu stated that it is "targeting all the English – English-language speaker country, I think, not only US." *Id.* at 155:23-156:14.

I find that PAX has not demonstrated the need for a CDO directed to the ALD Respondents.

2. The STIIIZY Respondents

PAX argues that CDOs are appropriate due to the STIIIZY Respondents' significant commercial inventory of the Accused Products, as well as their commercial operations in the United States. CIB at 116-117.

Respondents do not appear to contest that if a violation is found, a CDO should issue against the STIIIZY Respondents. RIB at 147 (only disputing CDO against ALD); *see also* RPHB at 250 (same).

STIIIZY has stipulated that it maintains inventories of the STIIIZY Accused Products in the United States through [REDACTED]³³ EDIS Doc. ID 834066 at 4. [REDACTED] keeps approximately [REDACTED] of inventory at any given time, which supports a finding that the inventory is significant. *See id.* at 5; *see also* JX-0357C; CX-1466C. STIIIZY also has [REDACTED]. *Id.*; *see also* JX-0145C at 4-7. The record supports a finding that if STIIIZY were to sell its domestic inventory of Accused Products, it would undercut the relief provided by a limited exclusion order. *See Certain Microfluidic Devices*, Inv. No. 337-TA-1068, Comm’n Op. at 27 (Jan. 10, 2020). I therefore recommend that CDOs issue against the STIIIZY Respondents if the Commission concludes there has been a violation of section 337.

C. Bond

Pursuant to section 337(j)(3), the administrative law judge and the Commission must determine the amount of bond to be required of a respondent, during the 60-day Presidential review period following the issuance of permanent relief, should the Commission determine to issue a remedy. The purpose of the bond is to protect the complainant from any injury. 19 U.S.C. § 1337(j)(3); 19 C.F.R. §§ 210.42(a)(1)(ii), 210.50(a)(3).

When reliable price information is available, the Commission has often set the bond by eliminating the differential in sales prices between the domestic product and the imported, infringing product. *Microsphere Adhesives*, Comm’n Op. at 24. In other cases, the Commission has turned to alternative approaches, especially when the level of a reasonable royalty rate could

³³ The Commission has stated that a stipulation by a party that it has a commercially significant inventory of the accused products “is a sufficient basis upon which to issue” a cease and desist order to that party. *Certain Tobacco Heating Articles & Components Thereof*, Inv. No. 337-TA-1199, Comm’n Op. at 51 (Oct. 19, 2021).

be ascertained. *See Certain Integrated Circuit Telecomm. Chips & Prods. Containing Same, Including Dialing Apparatus*, Inv. No. 337-TA-337, Comm'n Op. at 41-43, USITC Pub. No. 2670 (1995). A 100% bond has been required when no effective alternative existed. *Certain Flash Memory Circuits & Prods. Containing Same*, Inv. No. 337-TA-382, USITC Pub. No. 3046, Comm'n Op. at 26-27 (July 1997) (a 100% bond imposed when price comparison was not practical because the parties sold products at different levels of commerce, and the proposed royalty rate appeared to be *de minimis* and without adequate support in the record).

The parties agree that if a violation is found, a 100% bond rate is appropriate. CIB at 117-118; RIB at 147. It is therefore my recommendation that the Commission set bond at 100% during the Presidential review period.

XI. INITIAL DETERMINATION

For the reasons set forth above, it is my Initial Determination that no violation of section 337 of the Tariff Act, as amended, has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain oil vaporizing devices, components thereof, and products containing the same with respect to U.S. Patent Nos. 11,369,756; 11,369,757; 11,766,527; and 11,759,580.

I hereby certify to the Commission this Initial Determination and the Recommended Determination.

The Secretary shall serve the confidential version of this Initial Determination upon counsel who are signatories to the Protective Order (Order No. 1) issued in this investigation. A public version will be issued later.

Pursuant to 19 C.F.R. § 210.42(h), this Initial Determination shall become the determination of the Commission unless a party files a petition for review pursuant to 19 C.F.R. §

210.43(a) or the Commission, pursuant to 19 C.F.R. § 210.44, orders on its own motion a review of the Initial Determination or certain issues therein.

XII. ORDER

Within seven days of the date of this document, the parties shall jointly submit a single proposed public version with any proposed redactions indicated in red. If the parties submit excessive redactions, they may be required to provide declarations from individuals with personal knowledge, justifying each proposed redaction and specifically explaining why the information sought to be redacted meets the definition for confidential business information set forth in 19 C.F.R. § 201.6(a). To the extent possible, the proposed redactions should be made electronically, in a single PDF file using the “Redact Tool” within Adobe Acrobat. The proposed redactions should be submitted as “marked” but not yet “applied.” The proposed redactions should be submitted via email to Moore337@usitc.gov and not filed on EDIS.


Bryan F. Moore
Administrative Law Judge