

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

**SHARKNINJA, INC.,
SHARKNINJA OPERATING LLC,
SHARKNINJA MANAGEMENT LLC, AND
SHARKNINJA SALES COMPANY**
Petitioners,

v.

DYSON TECHNOLOGY LIMITED,
Patent Owner

Inter Partes Review No.: IPR2024-00993
U.S. Pat. No. 11,044,979

**DECLARATION OF PETER BRESSLER, FIDSA IN SUPPORT OF
PATENT OWNER'S PRELIMINARY RESPONSE**

TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
II. BACKGROUND AND QUALIFICATIONS.....	2
III. DOCUMENTS AND OTHER MATERIALS RELIED UPON.....	5
IV. PETITIONERS' GROUNDS FOR CHALLENGE	5
V. RELEVANT PATENT LAW AND LEGAL STANDARDS.....	6
A. Date of Invention.....	6
B. Anticipation	6
C. Obviousness.....	6
D. Standard of Proof.....	11
VI. LEVEL OF ORDINARY SKILL IN THE ART	11
VII. OVERVIEW OF THE '979 PATENT.....	12
VIII. CLAIM CONSTRUCTION.....	19
IX. OVERVIEW OF THE ALLEGED PRIOR ART	19
A. Saito (EX1004).....	19
B. Lindsey (EX1005)	22
C. Schepisi (EX1006)	29
D. Nicolas (EX1007).....	30
E. Shoemaker (EX1009).....	31
X. PETITIONERS HAVE NOT ESTABLISHED A REASONABLE LIKELIHOOD THAT ANY CHALLENGED CLAIM IS UNPATENTABLE	32
A. The Saito-Lindsey Combination Does Not Teach or Suggest Claim Limitations [1f] and [17f].....	32
1. The Combination Of Saito/Lindsey Does Not Render Limitations [1f] and [17f] Obvious.....	33

2.	My Experiment Confirms That Lindsey’s Vanes Do Not Encourage Hair To Automatically Wrap Around The Cylindrical Portion Of The Attachment.....	40
3.	Petitioners’ Saito/Lindsey “Model” Is A False Representation Of The Saito/Lindsey Combination That Would Not Have Been Obvious	44
4.	No Claim Limitation is Inherent.....	65
B.	Secondary Considerations Weigh in Favor of Non-Obviousness of the Challenged Claims	66
1.	Commercial Success	71
2.	Industry Praise.....	77
3.	Copying.....	81
4.	Long-felt, but unmet need (Failure of Others).....	82
5.	Unexpected results	85
6.	Initial skepticism by experts	86
XI.	CONCLUSION	87

EXHIBIT LIST

Exhibit No.	Description
EX2001	Expert Declaration of Peter Bressler, FIDSA
EX2002	Claim Chart for Airwrap HS01
EX2003	Claim Chart for Airwrap HS01 (Tapered Barrel)
EX2004	Claim Chart for Airwrap HS05
EX2005	Claim Chart for Airwrap HS05 (Tapered Barrel)
EX2006	Claim Chart for SharkNinja FlexStyle
EX2007	Claim Chart for SharkNinja FlexStyle (Tapered Barrel)
EX2008	Complaint, <i>SharkNinja Operating LLC v. Dyson, Inc.</i> , No. 1:23-cv-11277-ADB (D. Mass. June 6, 2023), ECF No. 1
EX2009	“Dyson Airwrap Styles Your Hair With No Heat” Video (accessed: https://www.youtube.com/watch?app=desktop&v=Ek7jXCQLDig)
EX2010	Portions of May 15, 2024 Tweedie Deposition (De-Designated Portions)
EX2011	Portions of May 30, 2024 Marra Deposition (De-Designated Portions)
EX2012	Portions of Appellant Brief, <i>Dyson Tech. Ltd. v. SharkNinja France et al</i> , Cour d’appel [CA] [regional court of appeal] Paris, Chambre 1, Apr. 4, 2024, 23/16419 (Fr.).]
EX2013	Video from Expert Opinion from Nullity Action regarding Chinese Patent Application No.: 201520158687.1
EX2014	“Future Of Beauty Awards,” Elle Magazine (accessed: https://www.elle.com/beauty/a41957789/future-of-beauty-awards-2022/)
EX2015	“Inside The Success Of Dyson Hair—And Its Decision To Redesign The Bestselling Airwrap Tool,” Forbes, June 11, 2022 (accessed:

Declaration of Peter Bressler, FIDSA
U.S. Patent No. 11,044,979

Exhibit No.	Description
	https://www.forbes.com/sites/gabbyshacknai/2022/06/11/inside-the-success-of-dyson-hair-and-its-decision-to-redesign-the-bestselling-airwrap-tool/)
EX2016	DYSON_0130760-786 – ELLE’s 2019 Future of Beauty Awards
EX2017	DYSON_0129925-943 – ELLE Future of Beauty Winner 2022
EX2018	DYSON_0130828-830 – One-Step Glam
EX2019	DYSON_0130831-914 – The 100 greatest innovations of 2019
EX2020	<i>Dyson Tech. Ltd. v. SharkNinja Europe Ltd.</i> , EWHC (Pat) Claim No. HP-2023-000027, Amended Reply to Defence to Counterclaim
EX2021	Shark’s Supplemental Response to Dyson’s Interrogatory No. 20 (5/20/2024
EX2022	“The Science Behind Dyson's New Airwrap Hair Styling Tool Is Super Intense,” Bustle, October 15, 2018 (accessed: https://www.bustle.com/p/how-does-the-dyson-airwrap-work-this-innovative-piece-of-tech-will-make-hair-styling-absolute-breeze-12262887)
EX2023	“Dyson AirWrap And The Coanda Effect That Provides A Barrel Of Curls,” Women Love Tech, November 28, 2018 (accessed: https://womenlovetech.com/dyson-airwrap-coanda-effect/)
EX2024	DYSON_0130105-121 – Introducing Cosmo’s First-Ever Hair Awards
EX2025	DYSON_0037352-356 – Dyson Just Launched 6 New Airwrap Styler Attachments
EX2026	“The Dyson Airwrap's Secret Sauce Is Jet Engine Tech,” Mashable, May 19, 2022 (accessed: https://mashable.com/article/dyson-airwrap-coanda-effect-review)
EX2027	“The Dyson Airwrap: Because Bad Hair Days are So Last Season,” Vogue Arabia, September 18, 2023 (accessed: https://en.vogue.me/beauty/dyson-airwrap-coanda-effect-tools-results/#:~:text=With)
EX2028	Image of FlexStyle Packaging

Exhibit No.	Description
EX2029	Image of FlexStyle Packaging
EX2030	Image of Lindsey Commercial Embodiment
EX2031	Image of Modified Lindsey Commercial Embodiment
EX2032	Video of Lindsey Commercial Embodiment
EX2033	Video of Modified Lindsey Commercial Embodiment
EX2034	Image of Lindsey Commercial Embodiment
EX2035	Image of Lindsey Commercial Embodiment
EX2036	HD400 Series Shark FlexStyle™ Air Drying & Styling System Style Guide (accessed: https://support.sharkclean.com/hc/en-us/article_attachments/8830005972764)
EX2037	“Dyson Airwrap vs. Shark Flexstyle: We put these top-tier multi-stylers to the test,” CNN, April 24, 2023 (accessed: https://www.cnn.com/cnn-underscored/reviews/shark-flexstyle-vs-dyson-airwrap)
EX2038	“I Finally Know How to Style My Hair Thanks to the Shark FlexStyle,” Marie Claire, March 2024 (accessed: https://www.marieclaire.com/beauty/shark-flexstyle-review/)
EX2039	DYSON_0037202-266 – Best of Beauty 2020
EX2040	“The 20 Best Beauty Splurges of 2021,” Allure, September 15, 2021 (accessed: https://www.allure.com/gallery/best-of-beauty-luxury-beauty-product-winners)
EX2041	DYSON_0037267-302 – The 20 Best Beauty Splurges of 2021
EX2042	DYSON_0037591-620 – <i>Allure</i> Best of Beauty Awards 2023: Luxury & Splurges

Declaration of Peter Bressler, FIDSA
U.S. Patent No. 11,044,979

Exhibit No.	Description
EX2043	DYSON_0130105-121 – Introducing Cosmo’s First-Ever Hair Awards
EX2044	DYSON_0130030-059 – Summer Beauty Awards 2022
EX2045	DYSON_0129693-710 – The High-Tech Beauty Tools We Geeked Out Over This Year – and Think You Will, Too
EX2046	DYSON_0129892-924 – Good Housekeeping’s 2019 Beauty Awards
EX2047	DYSON_0129954-971 – Women’s Health Beauty Awards 2019: Meet the Winners
EX2048	DYSON_0130270-296 – Introducing The Women’s Health 2021 Healthy Hair Awards Winners
EX2049	DYSON_0037448-530 – Glamour Beauty Power List 2020
EX2050	DYSON_0130131-164 – The 2020 Esquire Gadget Awards
EX2051	DYSON_0130730-734 – The 2021 Gloss Angeles Awards Ceremony
EX2052	DYSON_0129972-994 – The Harper’s Bazaar Best of Beauty Awards 2022 Winners
EX2053	DYSON_0129833-848 - 2022 Hair Awards: The Best Products of the Year
EX2054	DYSON_0129805-819 - Hair Awards: The 31 Best Hair Products of 2023
EX2055	“#ELLEReals: All The Products That Won At ELLE Beauty Awards 2022,” Elle, November 15, 2022 (accessed: https://elle.in/elle-beauty-awards-2022-product-winners/)
EX2056	DYSON_0130019-029 – TheBeauLife Beauty Awards 2022
EX2057	DYSON_0130434-461 – Unveiling the Winners of the Tatler Beauty Awards 2022

Declaration of Peter Bressler, FIDSA
U.S. Patent No. 11,044,979

Exhibit No.	Description
EX2058	DYSON_0130602-633 – The 27 Best Hair Styling Products and Tools of 2022
EX2059	DYSON_0130324-355 – Best in Black Beauty Awards 2023: Hair
EX2060	DYSON_0129944-945 – Best Beauty Tools & Devices
EX2061	DYSON_0129644-665 – The Stylist Best Beauty Awards 2023: Haircare Winners
EX2062	DYSON_0129711-717 – Cosmetic Executive Women (CEW) Honors the Best in Beauty
EX2063	DYSON_0129782-793 – Bustle, 16 Makeup Hair & Skin Care Gifts That Will Thrill Your Favorite Beauty Lover
EX2064	DYSON_0129799-804 – The Best Hair Hot Tools
EX2065	DYSON_0130010-018 – Canstar Blue’s Innovation Excellence Awards 2024
EX2066	DYSON_0129824-832 – 2 Best Beauty Devices of 2023 Tried and Tested
EX2067	“Sharper Image Revel Hair 6-in-1 Multi-Styler,” Sharper Image website (accessed: https://www.sharperimage.com/view/product/Sharper+Image+Revel+Hair+6-in-1+Multi-Styler/209383)
EX2068	Disclosure of Amy Johnson
EX2069	Refurbished first-generation Dyson Airwrap™ styler Complete (Nickel/Fuchsai) (accessed: https://www.dyson.com/outlet/refurbished-hair-stylers/airwrap/complete/nickel-fuchsia)
EX2070	“Hair Styler Soft Curls for Wavy Hair with the Shark FlexStyle™ .95” Auto-Wrap Curlers” Video (accessed: https://www.youtube.com/watch?v=kMKtGb2wWrk)

Declaration of Peter Bressler, FIDSA
U.S. Patent No. 11,044,979

Exhibit No.	Description
EX2071	“How to Use the Shark Flexstyle – Shark Flexstyle Review” Video by Stacy Rody (accessed: https://youtu.be/aSmaPyE4HQQ)
EX2072	“Hair Styler Soft Curls for Straight Hair (Shark FlexStyle™) Video (accessed: https://www.youtube.com/watch?v=rurcIIhIvmo)
EX2073	“How to create voluminous curls with the Dyson Airwrap™ styler” Video (accessed: https://www.youtube.com/watch?v=5IBhaI2JeEo)
EX2074	“Dyson Airwrap™ Tutorial: A guide on how to get started with your Dyson Airwrap™ multi-styler” Video (accessed: https://www.youtube.com/watch?v=5Auip2Nyp8A)
EX2075	“Winner of an Allure Best of Beauty Award 2023, Dyson Airwrap™ multi-styler and dryer Complete Long Nickel/Copper” (accessed: https://www.dyson.com/hair-care/hair-stylers/airwrap/complete-long-nickel-copper)
EX2076	“Dyson Airwrap™ multi-styler and dryer Complete Long Nickel/Copper” (accessed: https://www.dyson.com/hair-care/hair-stylers/airwrap)
EX2077	Portions of September 5, 2024 Carl Meinhart, Ph.D. Deposition (De-Designated Portions)

I. INTRODUCTION

I, Peter Bressler, FIDSA (Fellow of the Industrial Designers Society of America), declare as follows:

1. My name is Peter Bressler. I have been asked by Patent Owner Dyson Technology Limited (“Dyson” or “PO”) to provide my expert opinions in support of its patent owner preliminary response to the Petition for *Inter Partes* Review (“Petition”) of US 11,044,979 (“the ’979 patent”) (EX1001), filed by SharkNinja, Inc., et al. (collectively, “Petitioners” or “SharkNinja”)

2. This declaration reflects my expert conclusions after reviewing the evidence discussed herein.

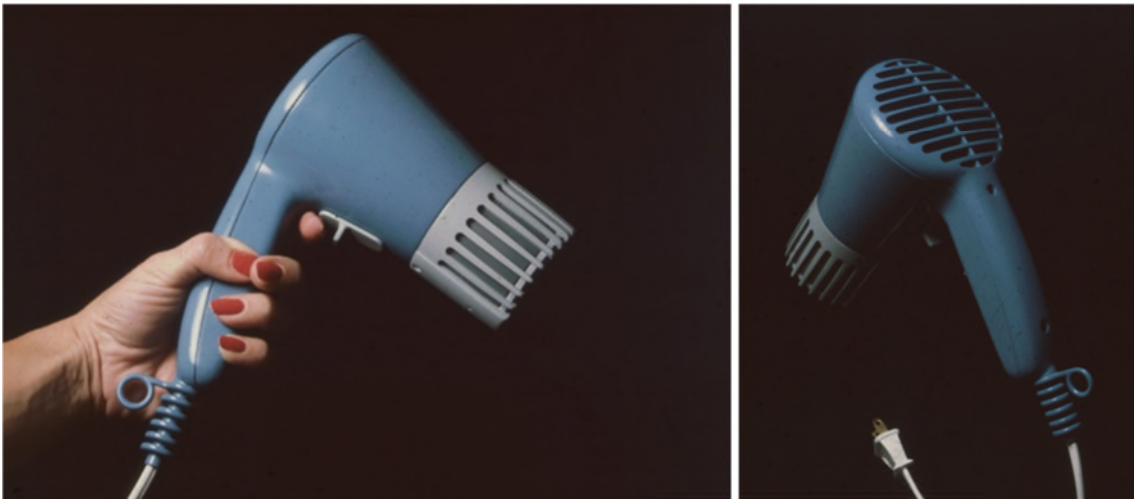
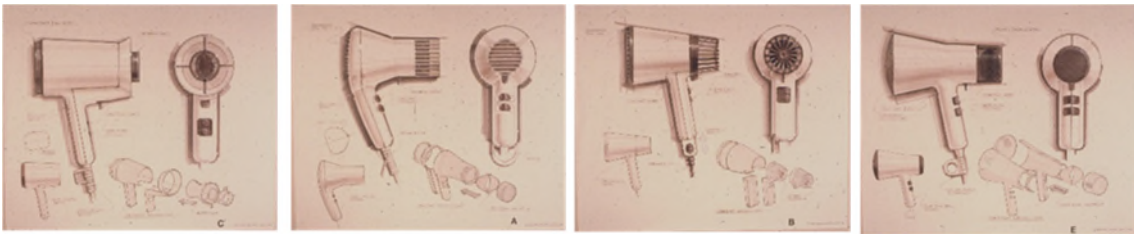
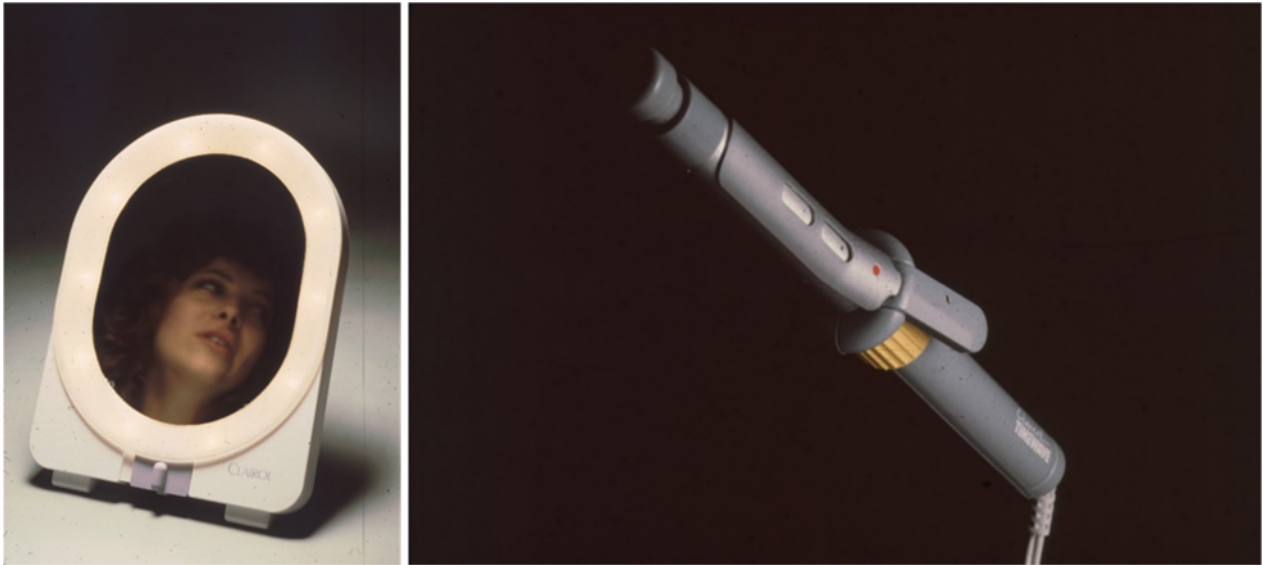
3. Petitioners have alleged that claims 1-32 of the ’979 patent (the “challenged claims”) are unpatentable over various combinations of prior art set forth in Grounds 1-5 of the Petition. Petition at 4. But upon full review of the evidence, Petitioners have not shown that any challenged claim is unpatentable/invalid for the reasons discussed below.

4. I am being compensated for my time at my standard hourly rate. This compensation is not contingent upon my performance, the outcome of this matter, or any issues involved in or related to this matter.

II. BACKGROUND AND QUALIFICATIONS

5. As a degreed Industrial Designer and founder of Bresslergroup, a product design and development firm in Philadelphia, PA, I have provided product design and development expertise to over 600 national and international clients, on over 3,000 projects for over 50 years. As mentioned in my CV, attached as **Exhibit A**, I have received over 70 product design and engineering awards, as well as other accolades for my work. I am listed as an inventor or co-inventor of roughly 80 design and utility patents. A significant portion of my work prior to March 20, 2014, was involved in the design of consumer personal care products including projects for Zenith Products Corp., Scott Paper, Schick Wilkinson Sword, I Cosmetics, ACE Comb, Bioelectronics, Applicia, KAZ, Inc. and Clairol Inc.

6. My work with Clairol was most relevant to this matter. For Clairol, we designed makeup mirrors, curling irons and variable flow hairdryers. A few samples of that work are represented below.



7. In addition, I am a co-inventor on utility patent US4636613A for a “Combination dryer and iron” attached below.

United States Patent [19]
de la Morandiere et al.

[11] **Patent Number:** 4,636,613

[45] **Date of Patent:** Jan. 13, 1987

[54] **COMBINATION DRYER AND IRON**

[75] **Inventors:** Anne J. de la Morandiere, 200 East 72nd St., Apt. 3E, New York, N.Y. 10021; Peter W. Bressler, Philadelphia, Pa.; Peter D. Byar, Willingboro, N.J.; Edward A. Spector, Philadelphia, Pa.

[73] **Assignee:** Anne J. de la Morandiere, New York, N.Y.

[21] **Appl. No.:** 721,619

[22] **Filed:** Apr. 10, 1985

[51] **Int. Cl.⁴** H05B 1/00; D06F 75/00; A45D 20/12; F24H 3/04

[52] **U.S. Cl.** 219/249; 34/91; 34/97; 34/243 R; 38/75; 38/82; 38/88; 219/254; 219/361; 219/367; 219/368; 219/370; 219/373; 219/474

[58] **Field of Search** 219/245, 249, 254, 373, 219/361, 472-474, 367-370; 38/69, 74, 75, 82, 84, 88, 90, 93; 34/90, 91, 96, 97, 243 R

[56] **References Cited**

U.S. PATENT DOCUMENTS

975,936	11/1910	Charles .	
1,018,576	2/1912	Madsden .	
1,293,010	2/1919	Bloch .	
1,466,139	8/1923	Michie .	
1,789,869	1/1931	Herrmann .	
1,831,742	11/1931	Homer .	
1,862,912	6/1932	Sologaistoa .	
1,892,792	1/1933	Thompson .	
1,998,313	4/1935	Fingerhart et al. .	
1,998,776	4/1935	Collins .	
2,186,930	1/1940	Scharf .	
2,320,013	5/1943	Scharf	38/89
2,362,590	11/1944	Smith	38/89
2,362,591	11/1944	Smith	38/75
2,373,345	4/1945	Scharf	38/89
2,479,429	8/1949	Swenson	38/79
2,501,683	3/1950	Landon .	
2,624,832	1/1953	Moyer .	
2,639,520	5/1953	Anderson et al.	38/75
2,727,322	12/1955	Swenson	38/90
2,786,287	3/1957	Swann	38/77
2,811,794	11/1957	De Angelis	38/90

2,827,060	3/1958	Marty	219/373 X
3,064,360	11/1962	Sholin	34/91
3,157,475	11/1964	Stainbrook	38/91
3,258,578	6/1966	Ferris	719/273

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

48-21008	6/1973	Japan	219/245
54-40218	11/1979	Japan	219/245
56-80207	7/1981	Japan	219/245
56-153307	11/1981	Japan	219/245
56-153306	11/1981	Japan	219/245

OTHER PUBLICATIONS

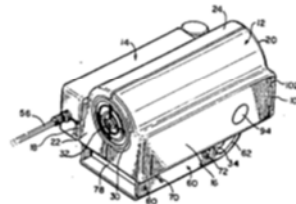
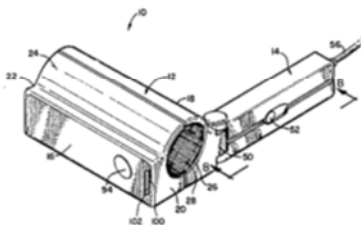
Mademoiselle Magazine, Mar. 1985, p. 32.
Enticements Limited Catalogue, Holiday 1984 issue, p. 8.

Primary Examiner—A. Bartis
Attorney, Agent, or Firm—Panitch Schwarze Jacobs & Nadel

[57] **ABSTRACT**

A combination hair-dryer and garment ironing apparatus includes a housing having an air inlet and a pair of air outlets. A blower and electric heater in the housing create a flow of heated air through the housing. A permanent, non-removable iron assembly is provided on the housing and includes a sole plate disposed in the path of the heated air flow through the housing. The sole plate forms a portion of a wall of the housing and has an exposed generally flat ironing surface. A heated air diverter member within the housing is selectively movable between a first dryer position in which substantially all of the heated air flowing through the housing is diverted from contact with the sole plate and is exhausted through one of the outlets and a second iron position in which a substantial portion of the heated air flow is diverted into contact with at least a portion of the sole plate for impingement heating of the sole plate to an ironing temperature and is exhausted from the other air outlet. The diverter member is retained in either the first or second position. The housing includes a foldable handle having an extended position for use during drying and a folded position for ironing.

10 Claims, 10 Drawing Figures



8. My professional experience and expertise are described in more detail in **Exhibit A**, which is my current CV.

III. DOCUMENTS AND OTHER MATERIALS RELIED UPON

9. In reaching the conclusions set forth in this declaration, I have reviewed the documents cited as Exhibits in the Petition and the Exhibits identified above in the “Exhibits List.”

10. Additionally, I have utilized my own experience and expertise, including the knowledge and capabilities of a person of ordinary skill in the relevant art in the timeframe of the priority date of the '979 patent.

IV. PETITIONERS' GROUNDS FOR CHALLENGE

11. In this declaration, I offer my analysis, opinions and conclusions on the following grounds presented by the Petitioners:

Ground	Claims	Basis
1	1-9 and 12-14	Obviousness over Saito in view of Lindsey
2	10 and 11	Obviousness over Saito in view of Lindsey and Schepisi
3	15 and 16	Obviousness over Saito in view of Lindsey and Nicolas
4	17-25, 27, and 29-32	Obviousness over Saito in view of Lindsey and Shoemaker
5	26 and 28	Obviousness over Saito in view of Lindsey, Schepisi, and Shoemaker

V. RELEVANT PATENT LAW AND LEGAL STANDARDS

A. Date of Invention

12. I have been asked to use the date of the filing of the earliest application to which priority is claimed (*i.e.*, March 20, 2014) as the date of invention for purposes of my analysis.

B. Anticipation

13. I am informed and understand that a patent claim is invalid under 35 U.S.C. §102 if a prior art disclosure teaches every element required by the claim, either expressly or inherently. The identical invention must be shown in as complete detail as is contained in the claim. When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art.

C. Obviousness

14. I am informed and understand that a patent claim is invalid under 35 U.S.C. § 103 if the differences between the invention and the prior art are such that the subject matter as a whole would have been obvious at the time of the invention to a person having ordinary skill in the art to which the subject matter pertains. Obviousness, as has been explained to me, is based on (i) the scope and content of the prior art, (ii) the differences between the prior art and the claim, (iii) the level

of ordinary skill in the art, and (iv) any secondary indicia of non-obviousness (*e.g.*, “secondary considerations” such as commercial success in the market place of the claimed invention), to the extent that they exist.

15. I further understand that obviousness may be demonstrated by showing that it would have been obvious to combine the teachings of one or more than one item of prior art. In determining whether a piece of prior art could have been combined with other prior art or with other information within the knowledge of a person having ordinary skill in the art, the following are examples of approaches and rationales that may be considered:

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

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

16. I further understand that an invention may be obvious if one of ordinary skill in the art, facing a wide range of needs created by developments in the field, would have seen an obvious benefit to the solutions tried by the applicant. When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, it may be obvious to a person of ordinary skill to try the known options. If a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique would have been obvious. I also understand that a determination of obviousness based on teachings from multiple references does not require an actual, physical substitution of elements between the multiple references. Likewise, the test for obviousness is

not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference. Instead, the test is whether a claim is rendered obvious by the teachings of the prior art as a whole.

17. I further understand that a person of ordinary skill in the art is a hypothetical person who is presumed to be aware of all of the relevant art at the time of the invention. The person of ordinary skill may be able to fit together the teachings of multiple patents and/or printed publications employing ordinary creativity and the common sense that familiar items may have uses in another context or beyond their primary purposes.

18. I also understand that when considering the obviousness of a patent claim, one should consider whether a teaching, suggestion, or motivation to combine the references exists so as to avoid impermissibly applying hindsight when combining or modifying the prior art. I understand this test should not be applied rigidly, but that the test can be important to avoid such hindsight.

19. I also understand that one of ordinary skill in the art must have a reasonable expectation of success in combining or modifying prior art references.

20. I also understand that all elements of a claim must be considered in an obviousness analysis.

21. I have also been informed and understand that, as discussed above, certain objective indicia of non-obviousness, which are also referred to as

“secondary considerations,” may be examined to determine whether an invention would have been obvious to a POSITA. I have been informed and understand that objective indicia of non-obviousness may include:

- the commercial success of the invention;
- whether the invention satisfied a long felt need in the industry;
- failure of others to find a solution to the problem at hand;
- unexpected results;
- copying by others;
- skepticism of experts; and
- praise of the invention by others skilled in the art.

22. I have also been informed and understand that there must be a relationship or “nexus” between any secondary considerations and the invention. I understand that the “nexus” is a factually and legally sufficient connection between the evidence of a secondary consideration such as commercial success and the claimed invention, meaning that the commercial success or other secondary consideration is due to the characteristics and qualities of claimed invention rather than other factors.

D. Standard of Proof

23. I understand that the standard to prove unpatentability in an *inter partes* review proceeding is by a preponderance of the evidence, which means more likely than not.

VI. LEVEL OF ORDINARY SKILL IN THE ART

24. I have been asked to adopt the Petitioners' level of a person of ordinary skill in the art ("POSITA"): "a Bachelor's degree or comparable technical degree in Industrial Design or Mechanical Engineering or equivalent work experience, and at least one year's worth of experience in research, design and/or development related to appliances for moving air such as hair dryers (or other comparable industrial design)." Petition at 17-18. In addition, Petitioners state "Additional education could substitute for experience, and vice versa." Petition at 17.

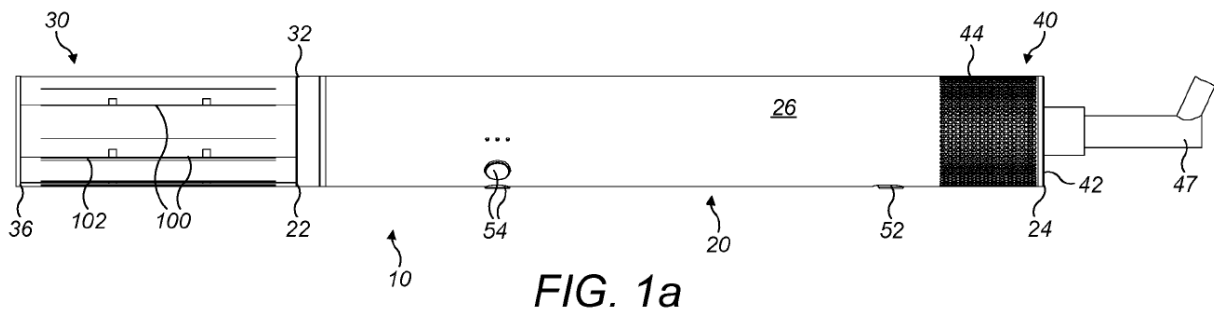
25. I am and was at the time of the earliest filing date at least a person of skill in the relevant art, of a level at least as high as or more than ordinarily skilled persons, and I am able to provide insight and opinions into the understandings of such persons at all relevant times by virtue of my education, training and experience.

26. Moreover, I note that SharkNinja stated in related litigation in France involving the French family member of the '979 patent that the person "has a good

knowledge of general mechanics in relation to the technical field in question,” but no specific preexisting “knowledge of fluid dynamics nor knowledge of the Coanda effect.” EX2012, p. 22.

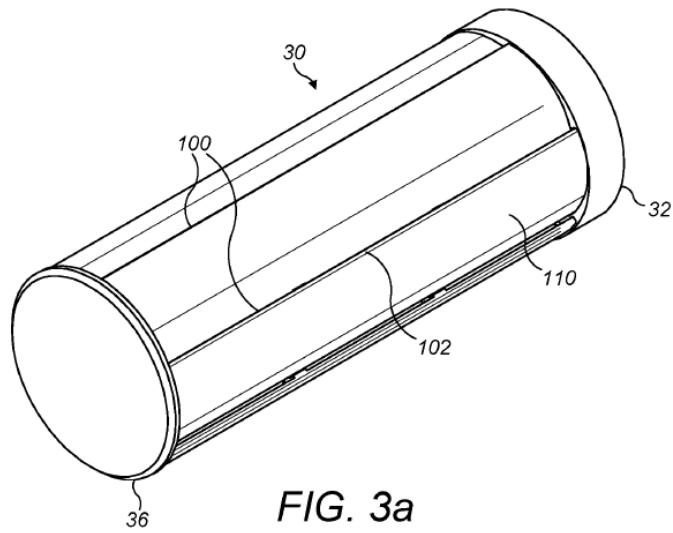
VII. OVERVIEW OF THE '979 PATENT

27. The '979 patent relates generally to “an attachment” for a hand-held appliance, in particular “a hair care appliance such as a hot styling brush.” EX1001, 1:13-15. In one embodiment, the '979 patent discloses “a hot styling brush 10 with a handle 20 and a detachable head or attachment 30.” EX1001, 4:45-48.

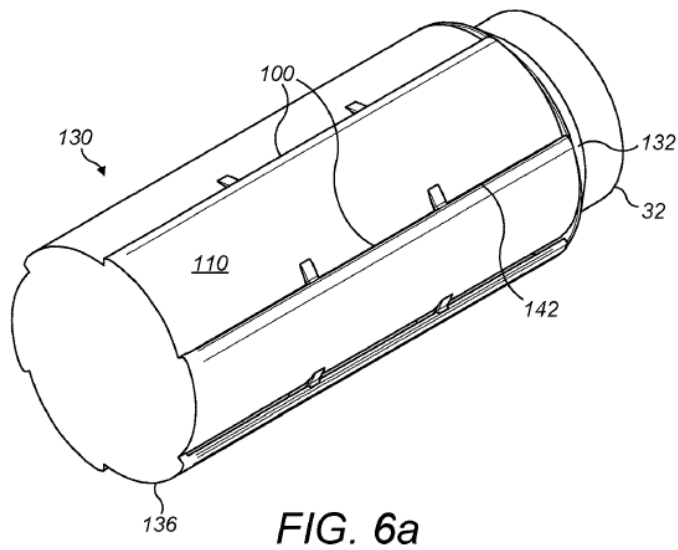


EX1001, FIG. 1a.

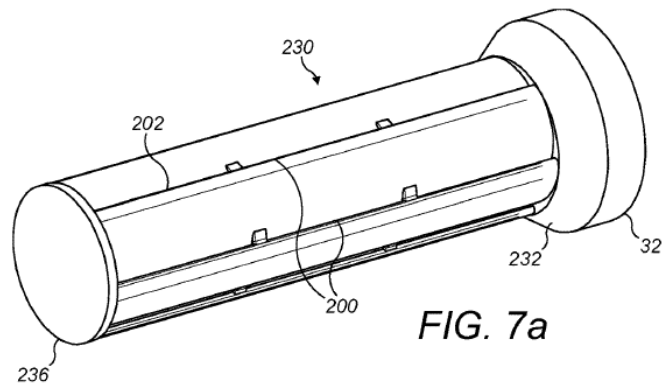
28. Example attachments for the brush 10 include those shown in FIGS. 3a, 6a, 7a, 7b, and 8a (reproduced below):



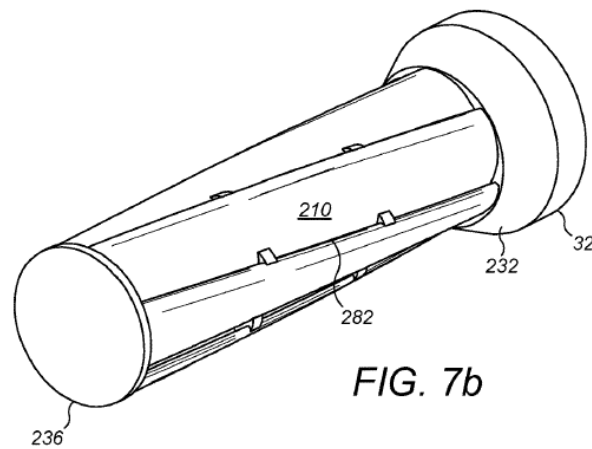
EX1001, FIG. 3a.



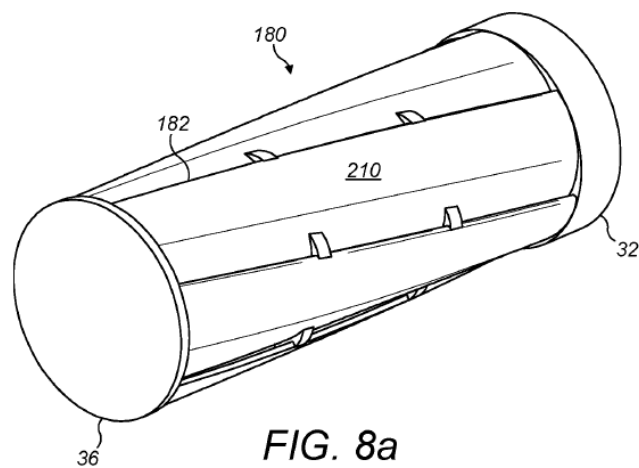
EX1001, FIG. 6a.



EX1001, FIG. 7a.

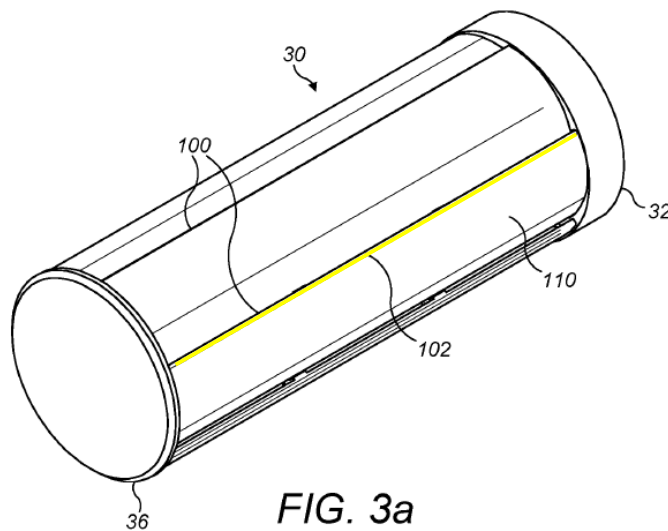


EX1001, FIG. 7b.



EX1001, FIG. 8a.

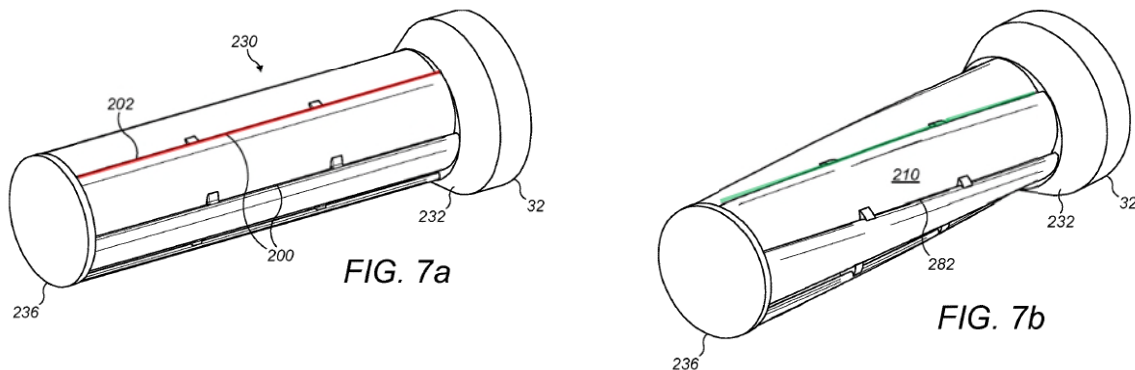
29. The '979 patent describes these attachments as being “essentially cylindrical” or “generally cylindrical.” EX1001, 6:58-60, 11:8-10. The '979 patent explains that the attachment comprises several long slots, an example of which is shown in FIG. 3a (reproduced below, slot 102 highlighted in yellow). Although not shown in FIG. 3a, spacers are” provided to maintain each slot 102 size.” EX1001, 7:24-29.



EX1001, FIG. 3a (highlighting added).

30. The '979 patent also discloses that slots can run along the length of the attachment (also referred to as a “head”), either straight down the sides as shown in red in FIG. 7a or twisted around in a helical fashion as shown in green in FIG. 7b. EX1001, 7:62-64 (“slots 202 for this head extend longitudinally straight

from the first end 32 to the second end 236”), 7:65-67 (“head 280 has slots 282 which curve around the head 280 forming a spiral or helical pattern around the head 230”); FIGS. 7a, 7b:



EX1001, FIGS. 7a, 7b (highlighting added).

31. According to the '979 patent, one of the problems with the prior art was that the bristles that are used in conventional hot styling brushes to hold hair while a user twists his/her wrist to cause the hair held to wrap around the conventional hot styling brush and could entangle hair. EX1001, 7:20-23. This is known to cause many problems. For example, there is user fatigue in twisting the device and discomfort in having to untangle the bristles from his/her hair which can result in mechanical damage to the hair. Mechanical damage is undesirable to the user in terms of hair condition and the look of the end results of using hot styling brushes. The '979 patent provides a solution to this problem by eliminating the bristles and using only air to wrap, dry and style hair.

32. This solution employs a known phenomenon referred to as the Coanda effect to cause hair to automatically wrap around the surface and hold it there to style the hair into curls without bristles, rotational motors, clips, or action by the user's wrist. EX1001, 7:16-29. The Coanda effect is the action in fluid mechanics whereby a flow along a solid surface tends to follow the surface rather than separating from it. The phenomenon causes air, when propelled out of a nozzle/slot, to naturally follow an adjacent surface, pulling the surrounding air along with it.

33. The Coanda Effect is named after Henri Coanda, one of the first persons to describe the phenomenon. Coanda himself disclosed and then patented implementations of the Coanda effect. Mr. Coanda's first patent relating to the Coanda effect issued as U.S. Patent No. 2,052,869 (EX1010). Mr. Coanda also patented a "Lifting Apparatus" implementing the Coanda effect, U.S. Patent No. 3,261,162 (EX1011). These two patents, the '162 and '869 patents, as well as other Coanda effect literature, are invoked by the specification's use of the term "Coanda effect." The Coanda Effect is discussed in the technical literature, for example in G.I. Fekete, Coanda Flow of a Two-Dimensional Wall Jet on the Outside of a Circular Cylinder, McGill University (1963) (EX1025), or J. Dunham, A theory of circulation control by slot-blowing, applied to a circular cylinder, 33 J. Fluid Mech. 495 (1968) (EX1021). But until the '979 patent at issue here, no known

reference discusses any application of the Coanda effect to automatically wrap hair for styling or curling.

34. The '979 patent specification discloses that, as shown in FIG. 5b below, the slots 102/202/282 which extend along the length of the attachment are formed from an overlap 120 formed between adjacent plates 110a, 110b, which have curved outer and inner surfaces 112, 114. EX1001, 7:1-9, FIG. 5b.

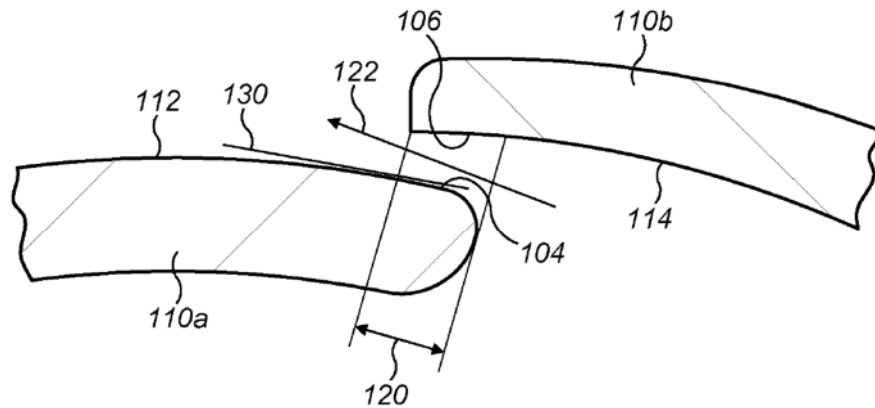


FIG. 5b

35. The fluid 122 flowing out of the slot 102 is attracted to the curved surface of the plate 110 by the Coanda effect, resulting in a **circumferential** (not merely tangential) flow of fluid around the attachment 30. EX1001, 7:9-13. This in turn causes hair that is presented to the attachment 30 to automatically wrap around the surface of the attachment 30 so it is styled into curls. EX1001, 7:13-19. “As air is blown down the length of the hair, wet hair is dried more quickly than

conventionally and as the wrapping process occurs without the use of bristles, the hair can slide off the head 30 once it is dry or styled so there is no tangling.”

EX1001, 7:20-23. There is also the implicit benefit that the user does not unfurl the curl during the process of detangling, resulting in better style retention.

VIII. CLAIM CONSTRUCTION

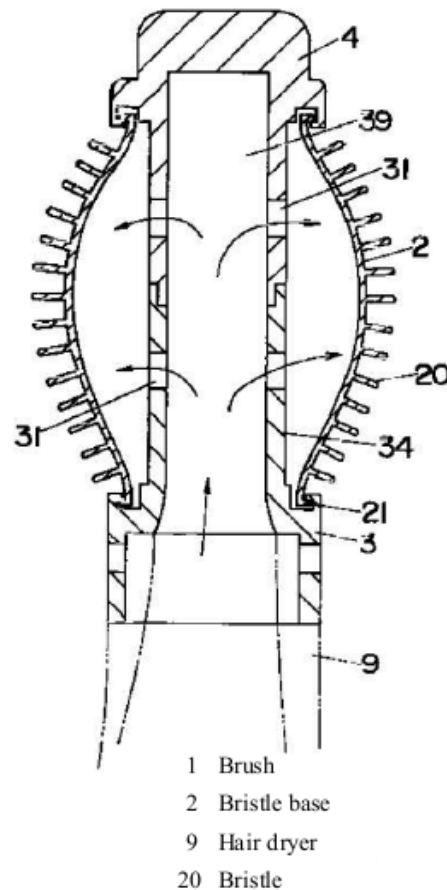
36. I have been asked to and have applied the plain and ordinary meaning that a POSITA would have understood for all claim terms.

IX. OVERVIEW OF THE ALLEGED PRIOR ART

A. Saito (EX1004)

37. Saito discloses “a hair dryer with an attached brush in which a brush 1 that comprises a bristle base 2 from a surface of which numerous bristles 20 protrude is connected to a blowing port of a hair dryer body 9 and air or steam is blown out from the hair dryer body 9 via discharge ports 24 formed in the bristle base 2 of the brush 1.” EX1004, Abstract.¹

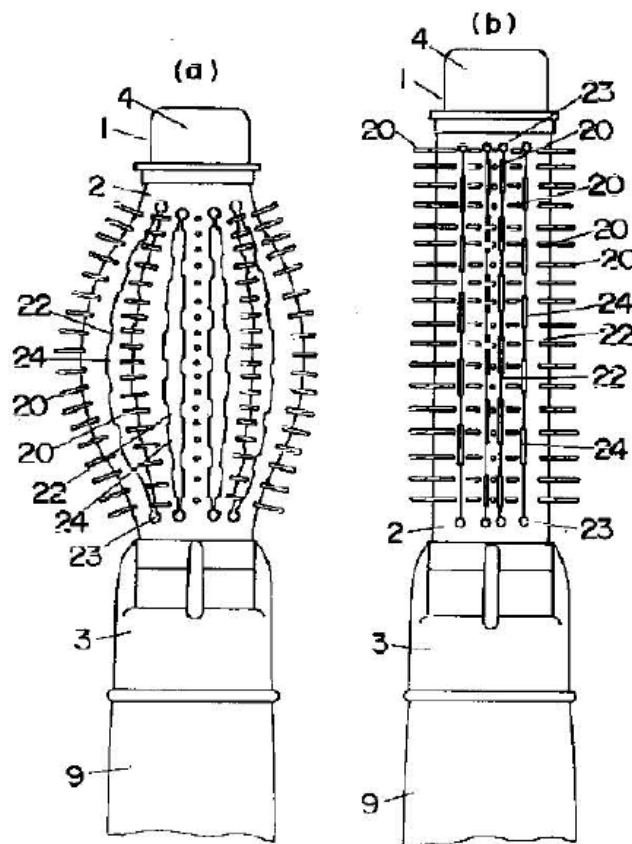
¹ All citations to Saito refer to the English translation that begins on page 10 of EX1004.



EX1004, p. 10.

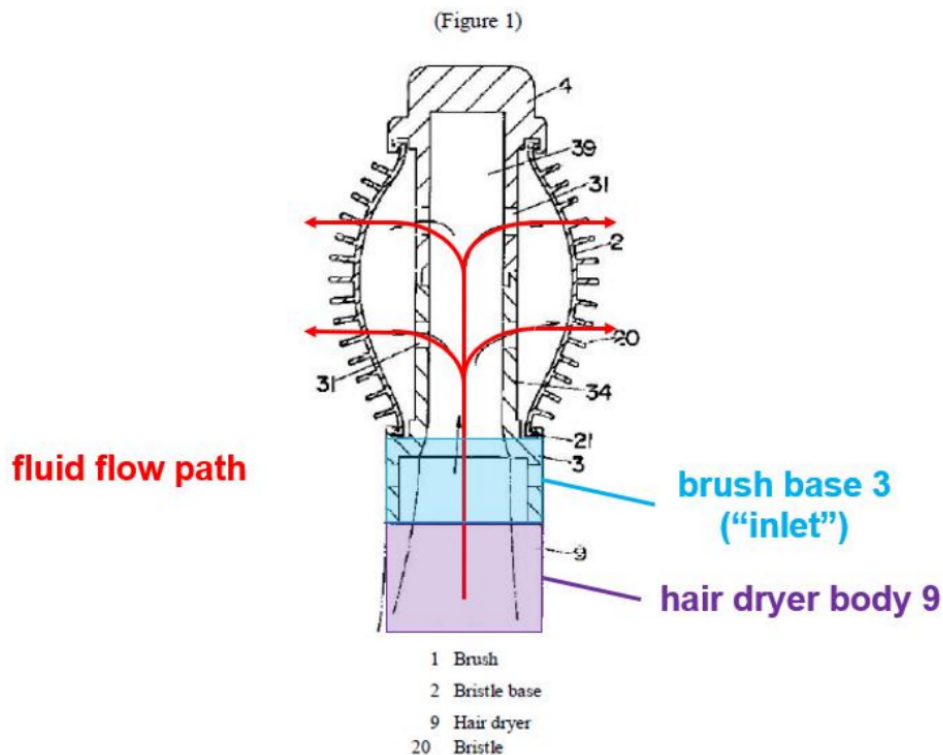
38. Saito is relied upon by the Petitioners for the bristle base 2's purported ability to switch from a compressed shape (shown in FIG. 5(a)) to a "simple cylindrical shape" (shown in FIG. 5(b)). EX1004, ¶¶17-18 ("By changing the distance between the brush bases 3, 4 as described above to cause the middle of the bristle base 2 to bulge outward, the cross-section of this brush 1 in an axial direction can be made to form a circular arc, not a simple cylindrical shape");

(Figure 5)



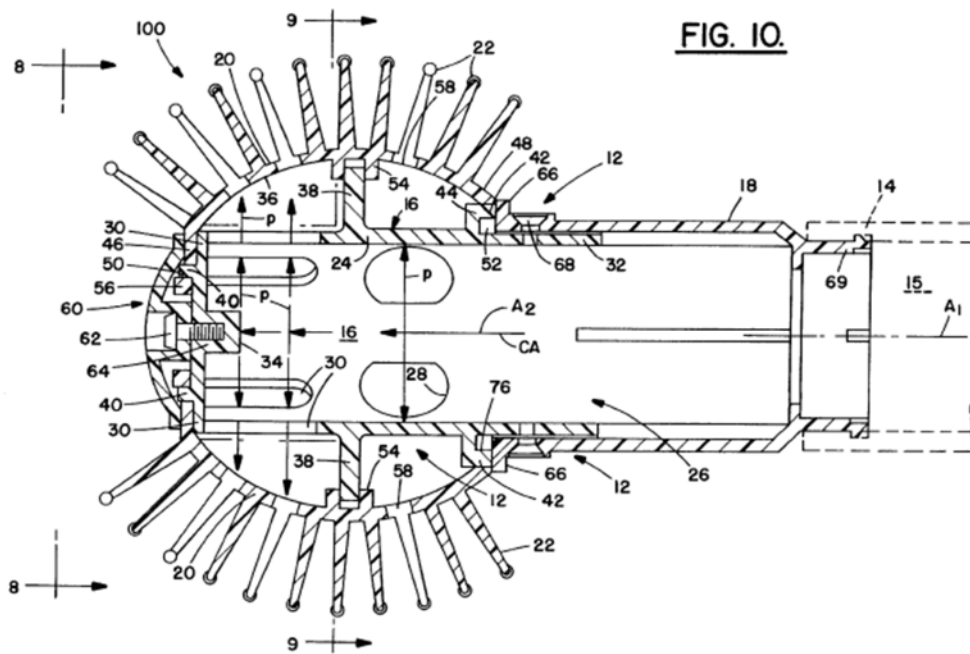
39. I note that *every* illustrated embodiment of Saito includes bristles and a bristle base, including the embodiment shown in FIGS. 5(a)-5(b) relied upon by the Petitioners. EX1004, FIGS. 1-15. Petitioners and their expert admit that Saito teaches the wrong air flow to read on the challenged claims. *See, e.g.*, Petition, p. 26 (“Saito discloses a cylindrical attachment for a hair dryer that has slot-shaped outlets which discharge hot air or steam in an outwardly radial direction from the center of the attachment.”); EX1003, ¶90 (“Saito’s flow path is radial, outwardly

from the attachment.”). *See also*, Petition, 36. No circumferential flow is described or claimed. Moreover, Saito makes no mention of the Coanda effect or whether its device has flow paths that encourage circumferential flow and/or the automatic wrapping of hair around the hair dryer attachment.



B. Lindsey (EX1005)

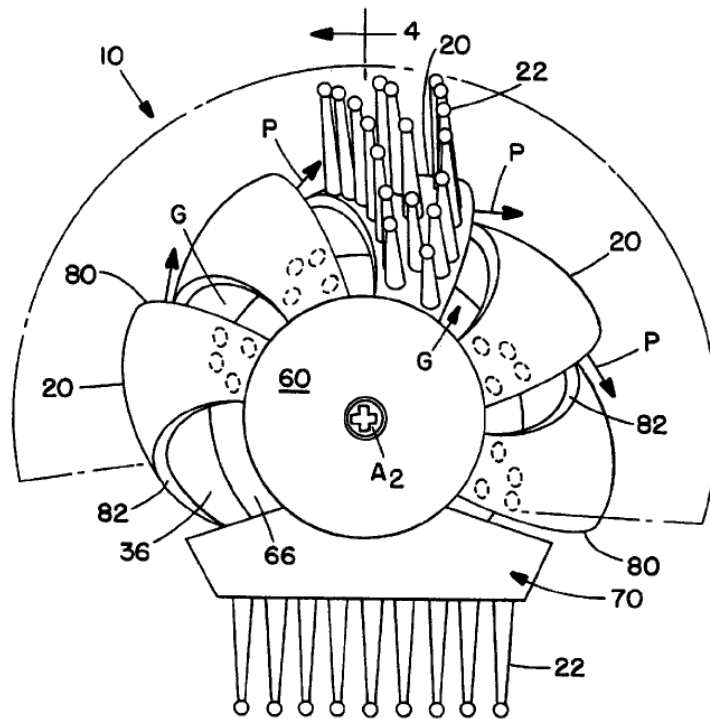
40. Lindsey discloses a hair styler 10 comprising a “hair styler 10 [coupled] to an outlet 14 of a hair blower 15.” EX1005, 5:10-17; FIG. 10.



EX1005, FIG. 4.

41. According to Lindsey, a core 16 is connected to the outlet 14 by a sleeve 18. EX1005, 5:18-20. “Hair styler 10 is also comprised of deflector means associated with, preferably part of, the coupler means, for deflecting the air that flows through the coupler means, particularly through core 16, into plural flow paths, generally designated P, exterior of hair styler 10.” EX1005, 5:20-24; FIG. 1:

FIG. I.



42. The below diagrams taken from the Petition (p. 44) illustrate tangential and other flow paths disclosed in Lindsey:

FIG. 9.

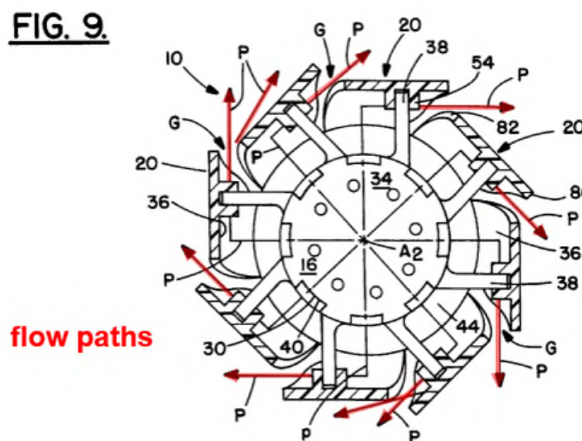
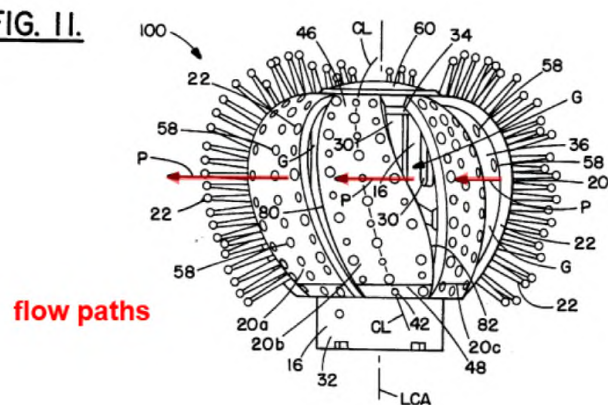


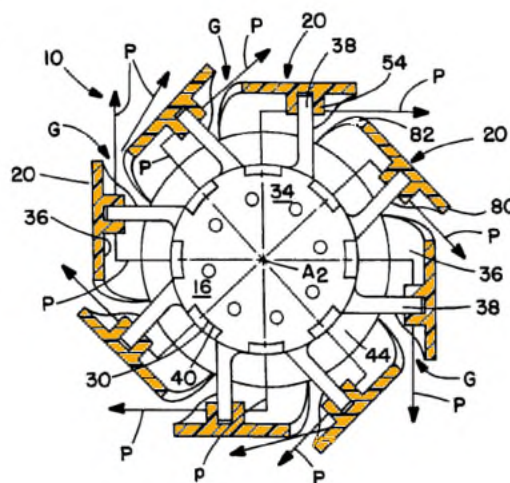
FIG. II.



43. As discussed in the Petition, “Figure 9 illustrates ‘**plural flow paths P**’ which are approximately transverse or perpendicular to central axis CA of core internal chamber 26, [and] manifest in different angular directions entirely about

central axis CA.” Petition, p. 21. Lindsey’s vanes 20 are responsible for these flow paths. Petition, 21-22. Lindsey discloses that the vanes 20 include bristles, referred to as prongs 22. “Vanes 20 are disposed generally along the length of core 16 and have a plurality of elongated members, such as prongs 22, formed on and/or extending outwardly therefrom, for manipulating, e.g. styling hair.” EX1005, 5:34-37. “Flow paths P are deflected from one vane over an adjacent vane, and preferably through prongs 22 of the adjacent vane.” EX1005, 5:40-41. Like Saito, every illustrated embodiment within Lindsey requires the vanes to have bristles/prongs 22 for manipulating hair (the bristles/prongs 22 are not shown in some figures “for simplification”). EX1005, 5:37-41. As shown below, Lindsey’s vanes 20 are flat in the direction of flow paths P. Neither Saito nor Lindsey provide overlapping flow exits or curved surfaces that enable circumferential flow

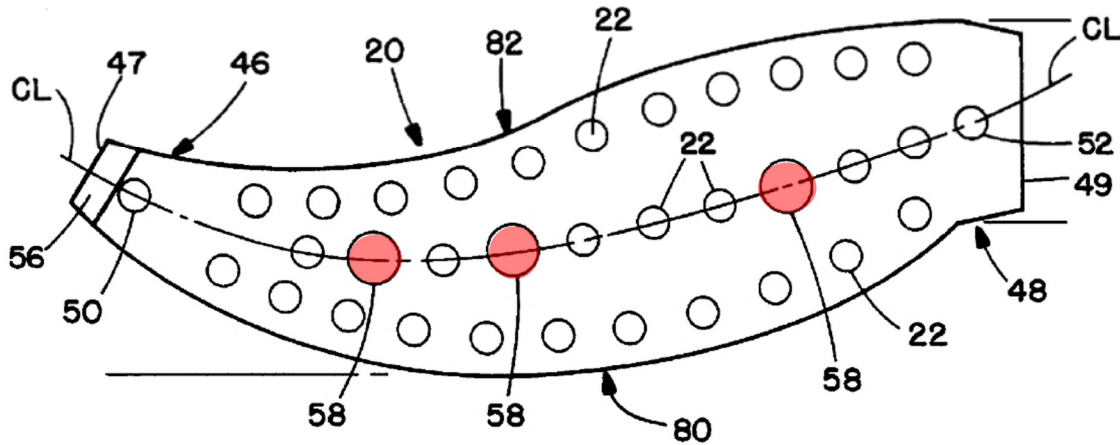
FIG. 9.



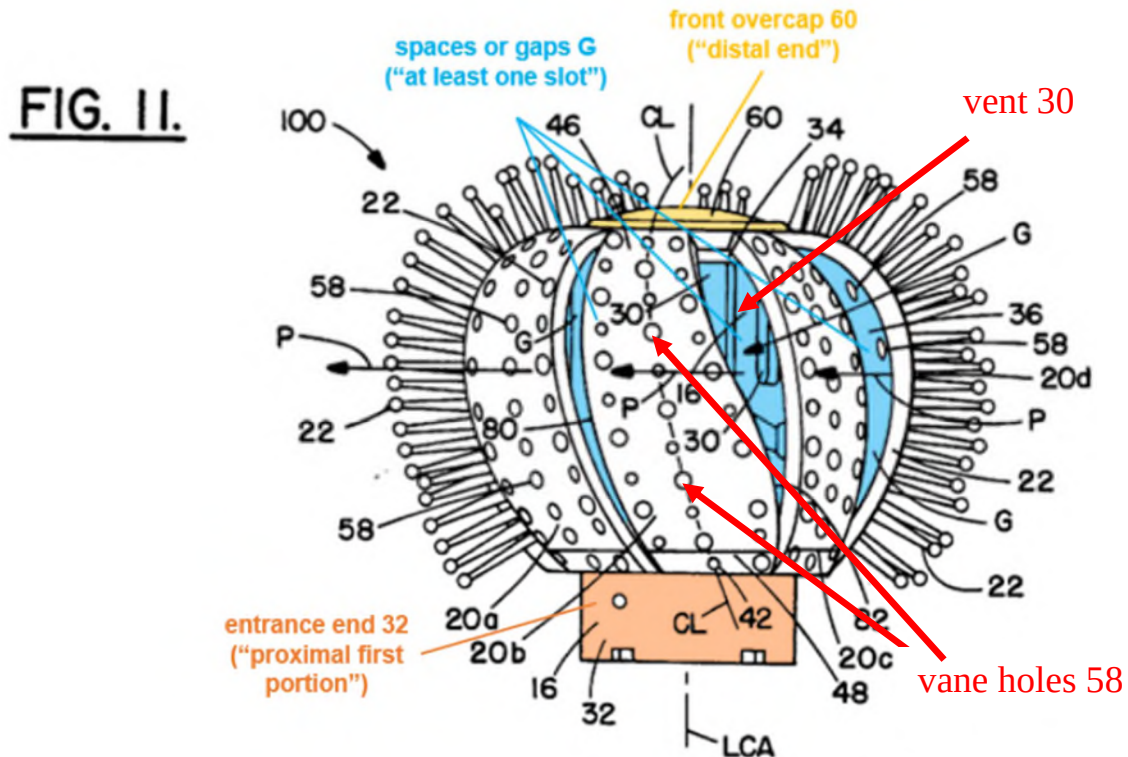
EX1005, FIG. 9.

44. One of Lindsey's vanes 20 is shown in FIG. 5 below.

FIG. 5.



45. The vane 20 has a curved centerline CL and curved leading and trailing side edges 80, 82 that generally follow the curved centerline CL. EX1005, 5:57-67. The vane 20 has holes 58 (highlighted in red) formed therein among the prongs 22 for the discharge of air. EX1005, 6:54-56. As seen in FIG. 5, a width of the vane 20 in the direction perpendicular to the centerline CL varies at different point along the centerline CL. As a result, gaps or slots G formed between adjacent vanes 20 have varying widths and radial extents as shown in blue in FIG. 11 below (taken from Petition at 38). EX1005, 8:47-54.



46. Lindsey discloses that the gaps G and the holes 58 provide a radial airflow in addition to the tangential air flow discussed above. “Some of the air which exits vents 28, 30 [in the core 16] is discharged from the hair styler 100 directly through gaps G, and a lesser amount of the exiting air is discharged through the vane holes 58.” EX1005, 8:60-63. As seen in Fig. 11 above, a substantial portion of the vent 30 is directly aligned with the gap G shown in blue, which facilitates this radial air flow. All of Lindsey’s vanes support radial airflow and do not create, but rather in fact prevent circumferential airflow.

47. Lindsey discloses that vanes 20 provide a large hot air exhaust area that is “approximately 40% wider than the open area provided” by a conventional ball-type brush, and that the variable width gaps along with other features of the vanes 20 result in flow paths of having “continually varying and spiraling radii” such that “discharged hot air is spun out from the central portion of the vanes in a turbulent manner.” EX1005, 42-53. Turbulent airflow is uncontrolled and therefore contrary to the needs of circumferential flow.

48. Lindsey further explains the importance of these wider gaps in discharging air quickly and efficiently from the hair styler: 10.

The turbinate arrangement of the vanes, their features and disposition, and the rounded or ball-shape of the hair styler which cooperate to evacuate air quickly and efficiently from the interior of the hair styler are significant because the operating temperatures of hot air hair blowers and hair styler attachments are close to the temperature limits of many non-metal materials which might be used for the hair styler. If the air is not rapidly and efficiently exhausted, the excessive build up of pressurized heated air in the internal chamber could rapidly overheat and tend to melt or soften such materials of the hair styler. Also, for hair stylers made of non-metal or metal materials, the excessive

build up of air pressure in the internal chamber would resist incoming air and the fan in the hair blower, and could rapidly overheat the hair blower.

EX1005, 9:57-10:4.

49. Lindsey, like Saito, makes no mention of the Coanda effect or whether its device has flow paths that encourage circumferential flow and/or the automatic wrapping of hair around the hair dryer attachment.

C. Schepisi (EX1006)

50. Schepisi is relied upon by the Petitioners as allegedly teaching a blow dryer having a “‘fully deflecting mode’ where air flow is directed to the ‘alighted² holes 6 and 7 of the inner and outer cylinders 4, 5,’ which results in ‘air be[ing] discharged through the surface of the barrel 3’” and that “the barrel of the blow dryer ‘can include a mesh-type screen’ that ‘can be positioned cylindrically within the barrel.’” Petition, pp. 68-69.

² I note that this appears to be a typographical error and most likely should be “aligned.” See EX1006, 5:40–45.

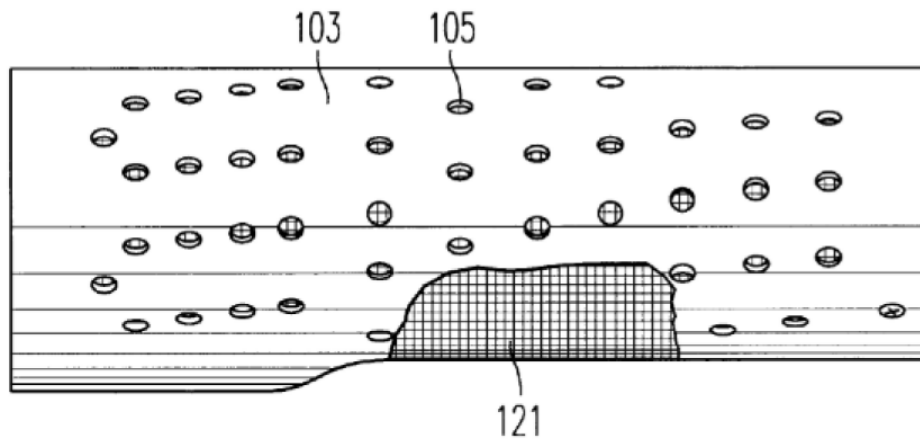


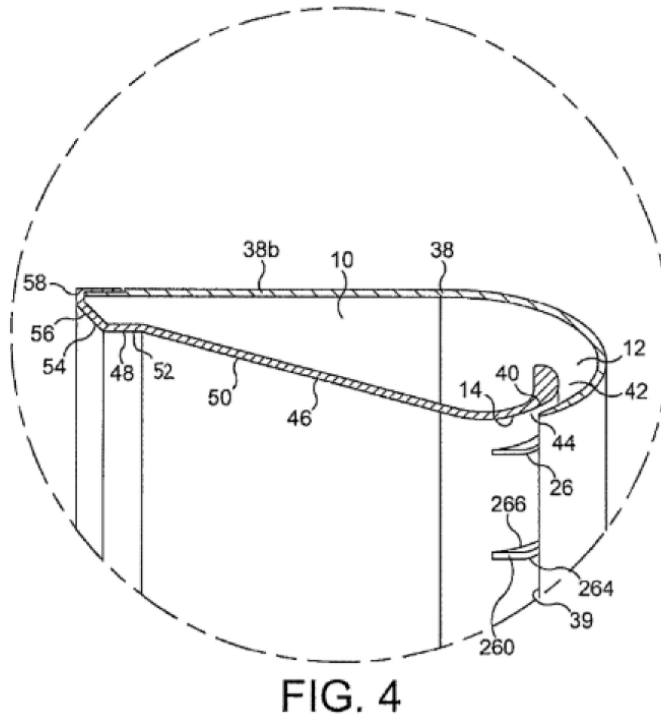
FIG. 23

EX1006, FIG. 23.

51. Schepisi is not relied upon to show any teachings of independent claims 1 or 17.

D. Nicolas (EX1007)

52. Nicolas is relied upon by the Petitioners as allegedly teaching a “fan assembly” where “spacers are preferably arranged to maintain a set distance between the facing surfaces of the nozzle,” “the spacers are mounted on, preferably integral with, one of the facing surfaces of the nozzle,” and are “arranged to contact the other one of the facing surfaces.” Petition, pp. 73-74.

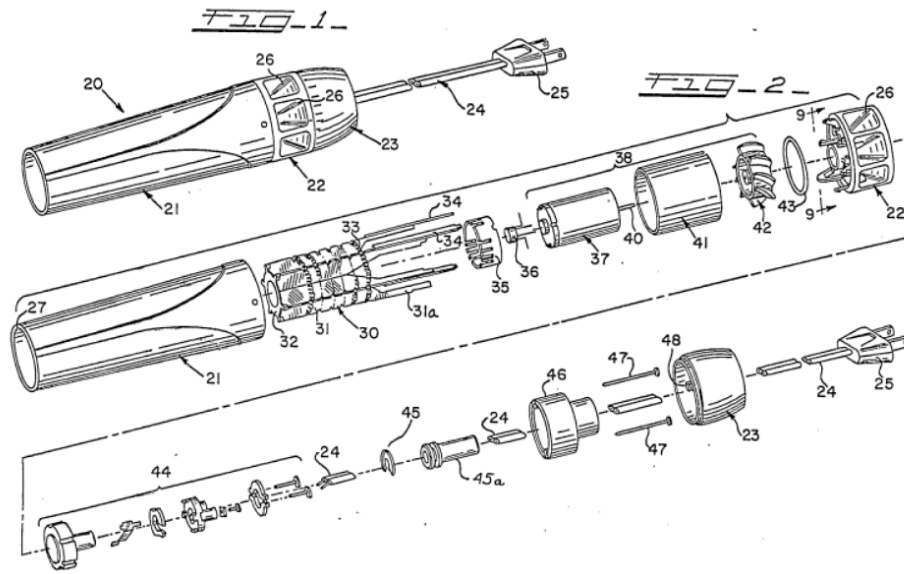


EX1007, FIG. 4.

53. Nicolas is not relied upon to show any teachings of independent claims 1 or 17.

E. Shoemaker (EX1009)

54. Shoemaker is relied upon by the Petitioners as teaching a “hand-held hair dryer or styler [that] is of tubular shape and is not provided with the normal handle grip” and that “styling attachments” may be “releasably connected to the air outlet housing 27 to adapt the appliance for various combing and brushing operations in connection with the styling and drying of a user’s hair.” Petition, pp. 79-80.



EX1009, FIG. 1.

55. Other than disclosing a “hand-held hair styling appliance,” as alleged in the Petition at 81, 83-84, Shoemaker is not relied upon to show any teachings of independent claims 1 or 17.

**X. PETITIONERS HAVE NOT ESTABLISHED A REASONABLE
LIKELIHOOD THAT ANY CHALLENGED CLAIM IS UNPATENTABLE**

A. The Saito-Lindsey Combination Does Not Teach or Suggest Claim Limitations [1f] and [17f]

56. Limitation [1f] requires that “[the outlet] is configured to direct fluid flow emitted from the outlet tangentially along and around the external surface of the substantially contiguous wall to form a circumferential fluid flow around the cylindrical second portion of the attachment that encourages hair to automatically wrap around the cylindrical second portion.” EX1001, 11:22-29, Petition, p. 42.

Limitation [17f] recites similar language. EX1001, 12:20-27; Petition, p. 97. For the reasons discussed below, these limitations are not disclosed in either Saito or Lindsey, and are not obvious over the combination of these references.

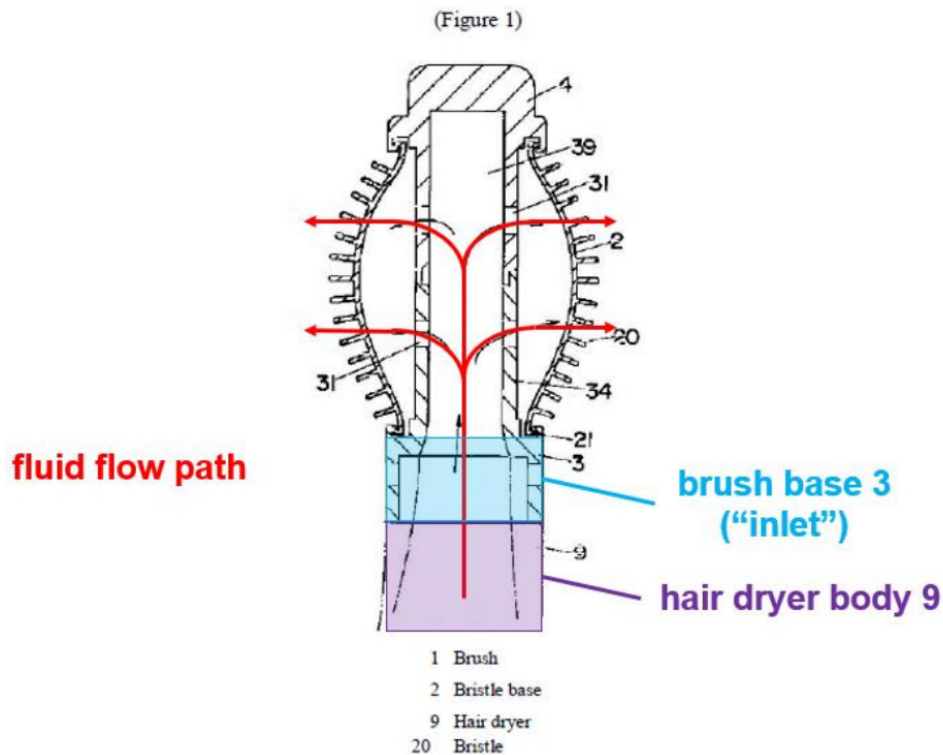
1. The Combination Of Saito/Lindsey Does Not Render Limitations [1f] and [17f] Obvious

57. For the reasons discussed below Petitioners failed to show that limitations [1f] and [17f] are rendered obvious by the combined teachings of Saito and Lindsey, as understood by a POSITA. As such, Petitioners have failed to demonstrate that these limitations, and thus every challenged claim, are obvious.

a. Neither Saito Nor Lindsey Discloses the “Circumferential Fluid Flow” of Limitations [1f] and [17f]

58. Limitations [1f] and [17f] require the formation of “a circumferential fluid flow” around the attachment. EX1001, 11:27-28 and 12:25-26. Neither Saito nor Lindsey disclose a circumferential fluid flow.

59. The Petition and Dr. Nosenchuk admit that Saito discloses a radial outward fluid flow rather than a circumferential fluid flow. Petition at 43 (referring to “Saito’s radial airflow”); EX1003, ¶90 (“Saito’s flow path is radial, outwardly from the attachment.”). Consistent with these admissions, the Petition shows Saito’s fluid flow as radially outward:

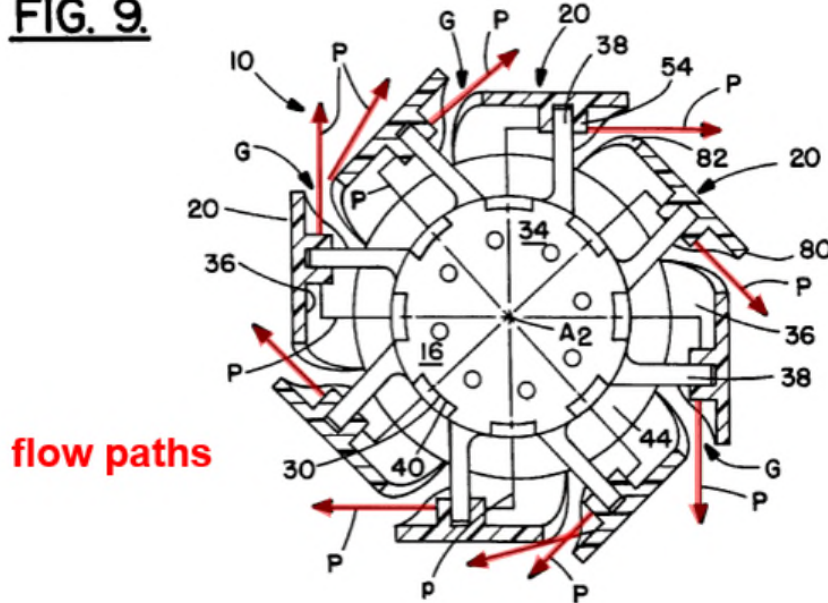


Petition at 36.

60. Thus, Petitioners admit that Saito does not disclose the “circumferential fluid flow” of limitations [1f] and [17f].

61. Lindsey also fails to disclose the required “circumferential fluid flow.” Lindsey never uses the word “circumferential” or any variant thereof to describe a fluid flow, and never mentions the Coanda effect. Lindsey does describe some tangential, *but not circumferential*, flow paths P highlighted in red as shown in FIG. 9:

FIG. 9.



62. However, these *tangential* flow paths P are shown as flowing away from the central longitudinal axis A_2 in FIG. 9 above and *are not circumferential*.³ Moreover, the cross-sections of Lindsey's vanes 20 are flat rather than curved, and thus would not form, and would not have been expected by a POSITA to form, the required circumferential fluid flow that would result from a curved overlapping exterior surface. This is particularly true when one considers that Lindsey further discloses radial flow paths, which would disrupt any circumferential flow that might result from only the tangential flow paths focused on by Petitioners and Dr. Nosenchuk. Indeed, neither the Petition nor Dr. Nosenchuk explain how a

³ This image appears to be an attempt by Lindsey to show a 3-dimensional representation of the cross section of the device and its airflow. There is no circumferential airflow nor is there any flow attracted to the surface of the vanes.

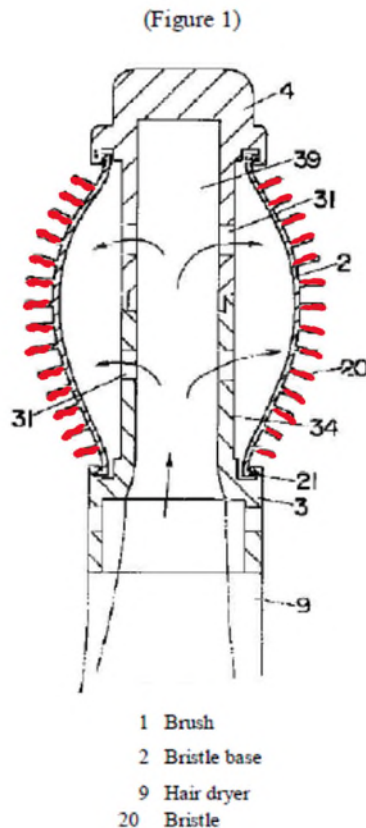
tangential fluid flow from the flat surfaces of Lindsey's vanes 20 could result in the "circumferential fluid flow" required by limitations [1f] and [17f]. The flat surfaces of Lindsey's vanes 20 is consistent with the absence of any discussion in Lindsey of a circumferential fluid flow or the Coanda effect.

63. Given that neither Saito nor Lindsey disclose a "circumferential fluid flow," it follows that their combination would not have this feature. As will be discussed in further detail below, the Petition and Dr. Nosenchuk have effectively conceded that the combination of Saito and Lindsey would not result in a "circumferential fluid flow" because their "model" of the combination of Saito and Lindsey required *multiple* modifications that were neither taught nor suggested in either Saito or Lindsey – only some of which were acknowledged – in order to realize a circumferential fluid flow. The multiple modifications alluded to are clearly the result of hindsight reconstruction in view of the '979 patent. It is my understanding from counsel that this is improper.

b. Neither Saito Nor Lindsey Disclose Automatic Hair Wrapping As Required by Limitations [1f] and [17f]

64. Even if the proposed combination of Saito and Lindsey would result in a circumferential fluid flow (it would not for the reasons I discussed above), it would not automatically wrap hair as required by limitations [1f] and [17f] due to the presence of bristles or prongs.

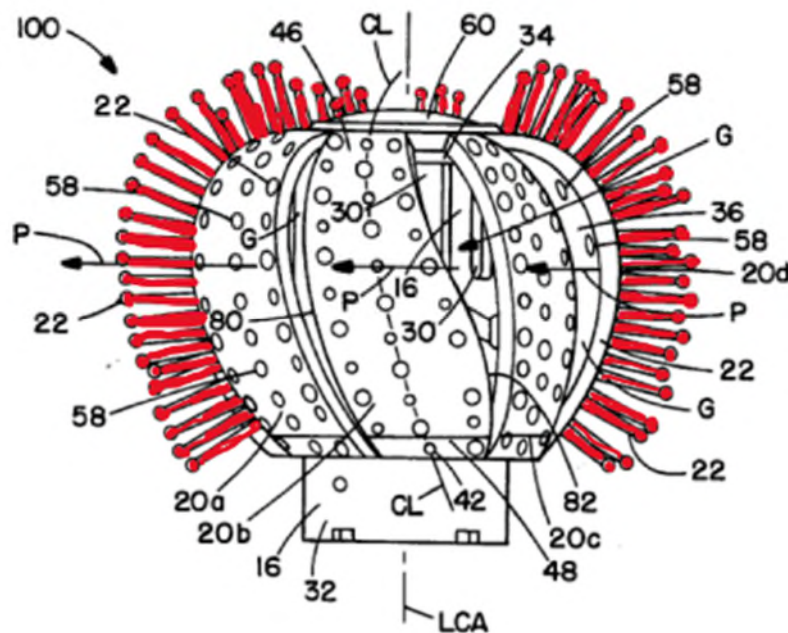
65. As noted above, *every* illustrated embodiment of Saito includes bristles and a bristle base, including the embodiment shown in FIG. 1 (reproduced below with bristles annotated in red) relied upon by the Petitioners in their invalidity analysis of [1f] and [17f].



EX1004, FIG. 1.

66. Similarly, Lindsey includes bristles in the form of prongs 22. “Vanes 20 are disposed generally along the length of core 16 and have a plurality of elongated members, such as prongs 22, formed on and/or extending outwardly

therefrom, for manipulating, e.g. styling hair.” EX1005, 5:34-37. “Flow paths P are deflected from one vane over an adjacent vane, and preferably through prongs 22 of the adjacent vane.” EX1005, 5:40-41. Like Saito, *every* illustrated embodiment within Lindsey requires the vanes to have prongs (although I note that some of Lindsey’s figures do not show the prongs 22 “for simplification”). EX1005, 5:37-41. One example is shown in FIG. 11 below with the bristles/prongs 22 highlighted in red:



67. Because all embodiments of both Saito and Lindsey include bristles, their combination would also include bristles. However, a POSITA would have understood that the presence of bristles would *prevent* the circumferential airflow that enables the automatic wrapping of hair. For hair to wrap automatically as in

limitations [1f] and [17f], the hair must become entrained in the circumferential fluid flow, but the bristles would prevent this entrainment. Moreover, if a user were to place his/her hair between the bristles so that it does come into contact with a circumferential fluid flow (assuming for argument that such a circumferential fluid flow were present in the combination of Saito/Lindsey combination), the bristles would function to hold that hair in place, thereby preventing the hair from automatically wrapping around the attachment, as well as interrupting the circumferential fluid flow.

68. For the reasons discussed above, limitations [1f] and [17f] are not found in either Saito or Lindsey. Accordingly, even if a POSITA were to combine Saito and Lindsey, limitations [1f] and [17f] would not be present in that combination and that a POSITA would have no reasonable expectation of successfully realizing limitations [1f] and [17f] by combining these references.

2. My Experiment Confirms That Lindsey's Vanes Do Not Encourage Hair to Automatically Wrap Around the Cylindrical Portion of the Attachment

69. In order to support and further illustrate my conclusions above, I performed two experiments with the commercial embodiment of Lindsey⁴ – one with its prongs and one without:



EX2030; EX2031.

⁴ Conair Hot Air Round Combo Styling Brush CD180 is a commercial embodiment of Lindsey. For example, I have not identified any material, relevant structural differences between Lindsey and the Conair Hot Air Round Combo Styling Brush. I note that the Lindsey reference is assigned to Conair, and the Hot Air Round Combo Styling Brush CD180 was a Conair product.

70. As can be seen from the video marked as EX2032, I personally tested and observed how the commercial embodiment of Lindsey fails to perform or encourage any type of hair wrapping. As shown in the video marked as EX2033, I obtained the exact same results when I used the modified version of Lindsey, which had its bristles removed to focus only on the effect of the Lindsey's vanes. A side-by-side comparison of the two devices in operation is shown below:



EX2032 at 0:25; EX2033 at 0:25.

71. I tested different orientations of the modified bristleless device (with the tip of the brush facing towards the hair versus the side of the brush facing towards the hair) with different sections of hair (towards the top, center, and end of the hair). In all instances, the Lindsey commercial embodiment was unable to perform or encourage any type of hair wrapping. EX2033. Instead, I personally observed how the modified, bristleless Lindsey commercial embodiment's outlet actually tends to blow hair away from the device, as might be expected from a tangential or turbulent flow.

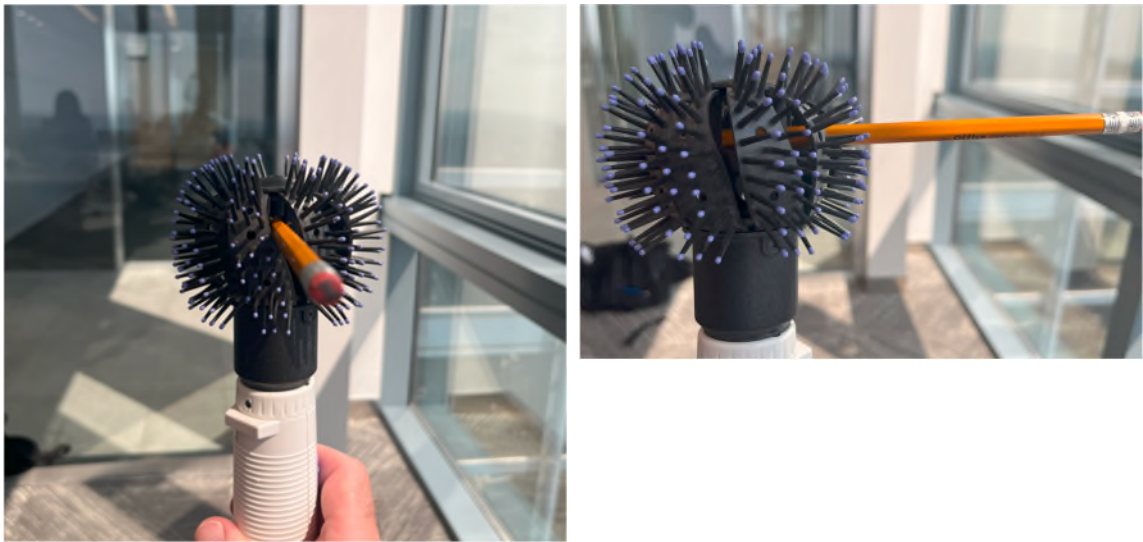
72. I tested the different orientations on the original, unmodified Lindsey commercial embodiment and made the same observations. EX2032.

73. Both experiments demonstrated that Lindsey does not have an outlet "configured to direct fluid flow emitted from the outlet tangentially along and around the external surface of the substantially contiguous wall to form a circumferential fluid flow around the cylindrical second portion of the attachment that encourages hair to automatically wrap around the cylindrical second portion," as required by the challenged claims. That is, the claim required three things, all of which are missing from Lindsey.

74. Specifically, and as shown in the videos:

- Lindsey is not “configured to” direct fluid flow emitted from the outlet tangentially along and around the external surface of the substantially contiguous wall
- Lindsey does not create a circumferential fluid flow around the cylindrical second portion of the attachment
- Lindsey does not encourage hair to automatically wrap around the cylindrical second portion

75. Instead, the Lindsey air flow takes **multiple** different paths including radial flow paths as illustrated in the photos below by the pencil inserted into a gap between vanes and into the vent 30 discussed above in connection with the annotated version of Fig. 11 (shown above in my summary of Lindsey). The result is an air flow that actually push hair away from the attachment. I illustrate this in the below images, with the pencil showing airflow:



EX2034; EX2035.

76. This is consistent with the actual teachings of Lindsey as discussed in the next section. As such, Lindsey cannot and does not render limitations [1f] and [17f] obvious – even if it were combined with Saito.

3. Petitioners’ Saito/Lindsey “Model” Is A False Representation Of The Saito/Lindsey Combination That Would Not Have Been Obvious

77. The Petition and Dr. Nosenchuk assert that it would have been obvious to a POSITA “to use an array of vanes, as taught by Lindsey, to comprise Saito’s bristle base to provide the tangential air flow resulting from the turbinate arrangement of vanes.” Petition at 22; EX1003, ¶88. However, as is apparent from the following discussion, the combination of Saito and Lindsey relied on by Petitioners and Dr. Nosenchuk involve far more than simply replacing Saito’s bristle base with Lindsey’s vanes. To support the obviousness challenge based on

Saito and Lindsey, Petitioners and Dr. Nosenchuk conjured up a “model” of what the combination would look like to result in something that would satisfy limitations [1f] and [17f]. That “model” includes no less than **eight** additional changes, only two of which were acknowledged by Dr. Nosenchuk.

78. Dr. Nosenchuk’s additional changes were not obvious because they are directly contrary to some of the express teachings in Saito and Lindsey and modify the principle of operation of those devices. Instead, these changes were the product of hindsight, which is borne out because the result of these changes is a “model” that looks like the embodiment shown in Fig. 7b of the ’979 patent rather than anything shown in Saito or Lindsey. Accordingly, Dr. Nosenchuk’s model does not establish obviousness of limitations [1f] and [17f]. The “model,” however, may in fact confirm the functionality of the ’979 invention.

a. Petitioners’ Saito/Lindsey “Model” Include Multiple Changes That are Not Found in Saito or Lindsey

79. The “model” and the accessories used to run the experiment performed by Dr. Nosenchuk to allege the obviousness of limitations [1f] and [17f] in view of the Saito/Lindsey combination is shown below:



Petition, p. 46.

80. The Petition also refers to videos showing the operation of the “model” when used with a Shark FlexStyle blower and a sample of human hair.

Petition, p. 47. Still images from these videos are shown below.

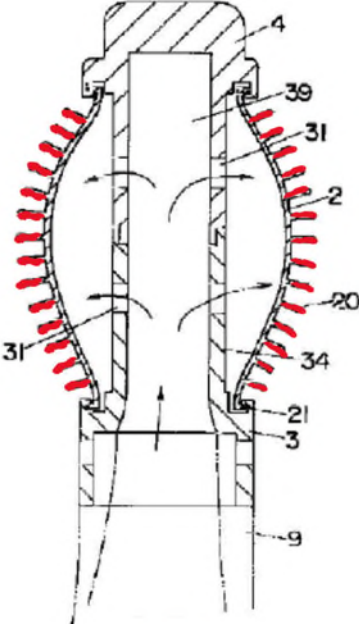
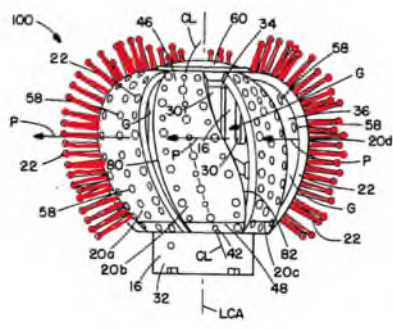


Petition, p. 47.

81. Dr. Nosenchuk's "model" is significantly different from what is taught in Saito and Lindsey. In fact, there are eight (8) differences in the model, including:

i. No Bristles

82. There are no bristles or prongs in the "model" despite the fact that both Saito (bristles 20) and Lindsey (prongs 22) explicitly teach, require and disclose them as part of their inventions. Saito's bristles 20 and Lindsey's prongs 22 are highlighted in red in the below table:

Saito (FIG. 1)	Lindsey (FIG. 11)	Petitioners' Model
(Figure 1)  1 Brush 2 Bristle base 9 Hair dryer 20 Bristle		

83. This is a significant alteration of the Saito/Lindsey combination as the presence of bristles/prongs would prevent the automatic wrapping of hair around the hair dryer attachment as discussed above. I believe that this omission was intentional because SharkNinja is fully aware that the commercial embodiment of the Lindsey patent, which includes prongs, does *not* “encourage hair to

automatically wrap around” the hair dryer’s attachment. *See* EX2013. A still image from that video is reproduced below:

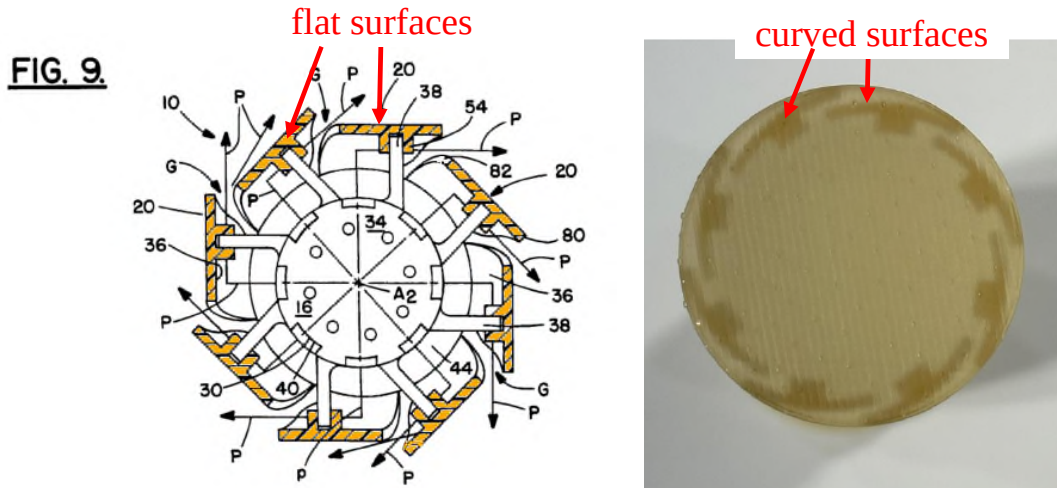


EX2013 at 0:00:34.

ii. Vanes Curved in the Latitudinal Direction

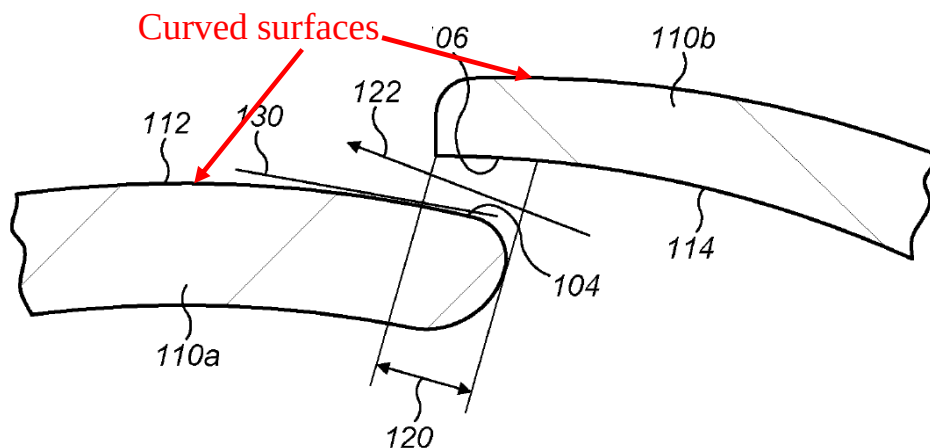
84. Dr. Nosenchuk acknowledged making “two minor modifications” to his “model.” EX1003, ¶133. The first of these acknowledged modifications was that the flat latitudinal cross-section of Lindsey’s vanes shown in Lindsey’s FIG. 9 were modified to “a slightly curved surface” as shown below.⁵ EX1003, ¶¶133-134.

⁵ Dr. Nosenchuk describes this curved surface as a “longitudinally curved surface.” EX1003, ¶134. This is a misnomer. A longitudinally curved surface refers to a surface that is curved along the longitudinal axis of the device. A more accurate term for this curved surface is a latitudinally curved surface, which is used herein.



EX1001, FIG. 9; EX1003, ¶107 (“Model Distal End”).

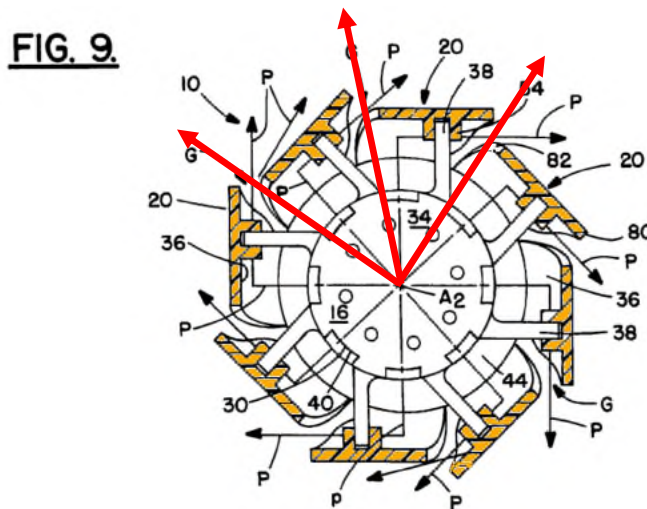
85. This change is taken directly from FIG. 5b of the '979 patent, which similarly shows overlapping plates 110 with curved inner and outer surfaces 114, 112:



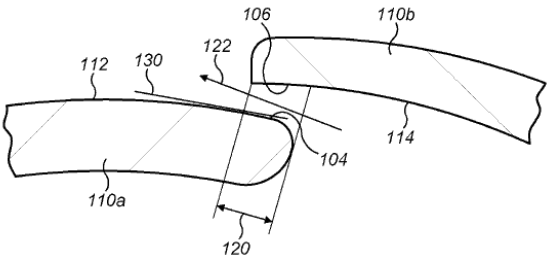
86. This too is a significant change because, as discussed above, the circumferential fluid flow required by limitations [1f] and [17f] is not possible without such curved surfaces.

iii. Vanes Extended and Radial Gaps Between Vanes Eliminated

87. The second of Dr. Nosenchuk's acknowledged "two minor modifications" is that "the edges of the vanes were slightly extended in order to decrease the width of the gaps/slots formed between each vane." EX1003, ¶133. Contrary to Dr. Nosenchuk's description, this no "minor" modification because it completely *eliminated* the variable gaps that exist between Lindsey's vanes 20 in the radial direction. These gaps in the radial direction are indicated by the red arrows in the annotated version of FIG. 9 below.



88. In contrast, Dr. Nosenchuk's model has no radial gaps.

'979 Patent (FIG. 5b)	Petitioners' Model
	

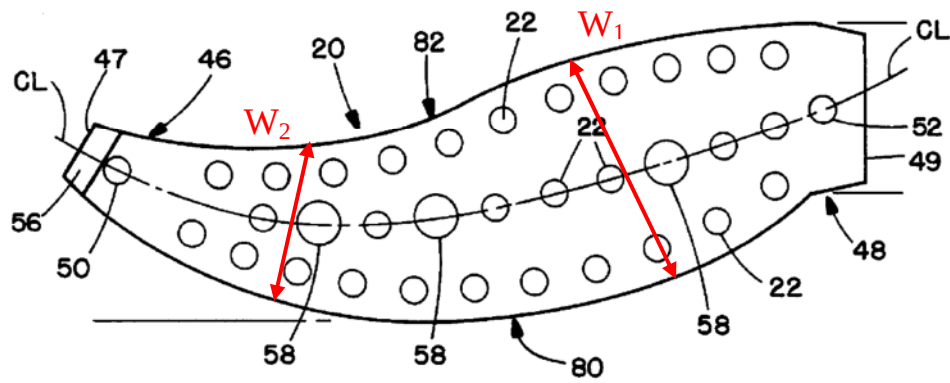
89. This change too was taken directly from FIG. 5b of the '979 patent, which similarly has curved overlapping plates 110 that leave no gaps in the radial direction. EX1001, FIG. 5b; EX1003, ¶107 (“Model Distal End”). This change was likely necessary for Dr. Nosenchuk to get his model to “work” to produce the circumferential fluid flow required by limitations [1f] and [17f] because those gaps produce a radially outward air flow that would disrupt any circumferential air flow that might form in their absence and instead form a turbulent air flow as disclosed in Lindsey.

iv. Variable Width Vanes Made Constant Width

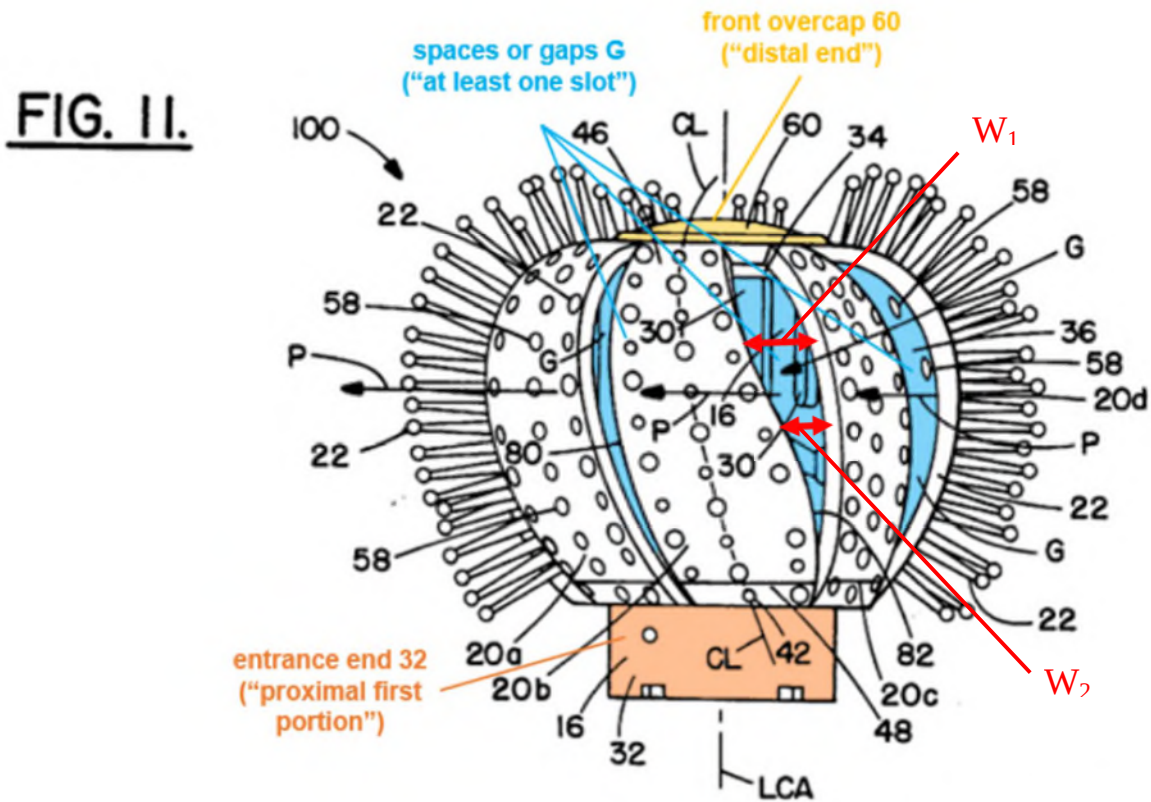
v. Variable Width Gaps Between Vanes Made Constant Width

90. Although Dr. Nosenchuk did not acknowledge doing so, he made several other changes in his “model” combination of Saito/Lindsey. Two of these unacknowledged changes involve the width of Lindsey’s vanes 20 and the width of the gaps between those vanes. Lindsey discloses vanes 20 with variable widths such as W_1 and W_2 as shown in FIG. 5 below.

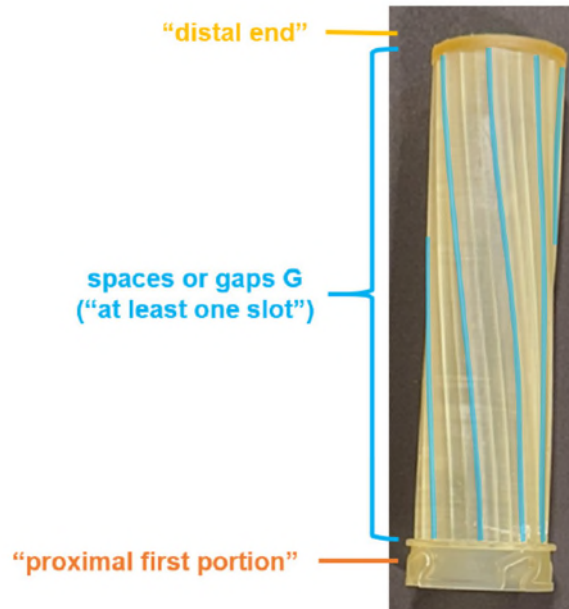
FIG. 5.



91. Lindsey’s variable width vanes 20 to form gaps having variable widths such as W_1 and W_2 as shown in FIG. 11:



92. In contrast to Lindsey's variable width vanes 20 and variable width gaps between those vanes, Dr. Nosenchuk's "model" has vanes of equal widths and gaps between vanes which are of equal widths (in addition to not being in the radial direction as discussed above). EX1003, ¶119.



EX1003, ¶119.

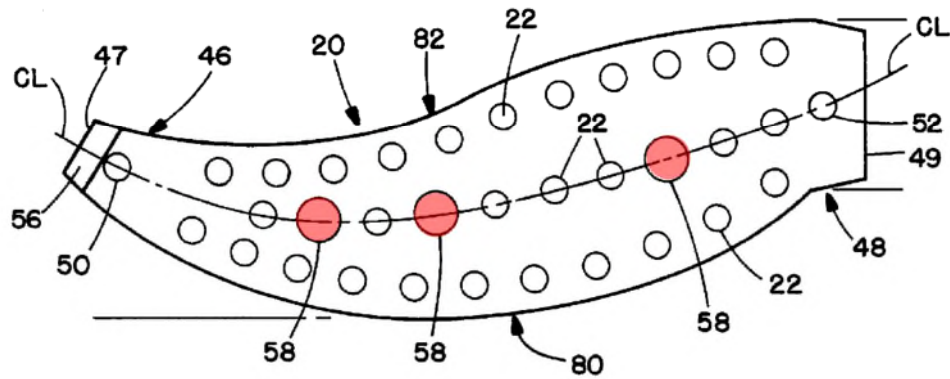
93. I note that Dr. Nosenchuk offered no explanation or justification for these changes. In particular, Dr. Nosenchuk failed to explain why a POSITA would have made (or would have been motivated to make) these changes, or from where such motivation might have come, except via hindsight.

vi. Elimination of Holes in Vanes

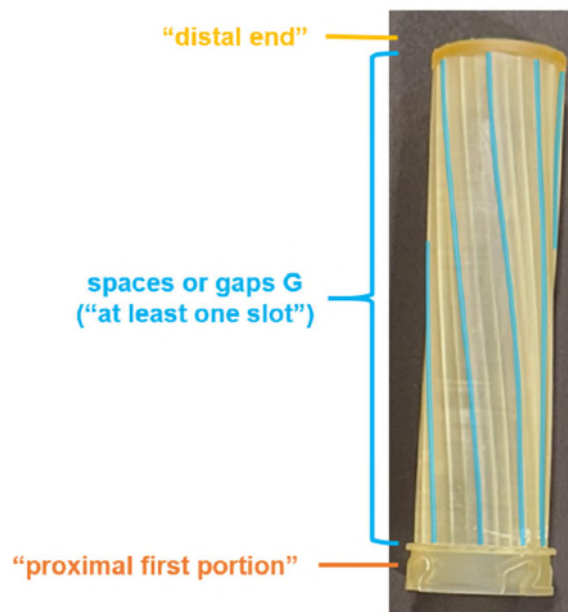
94. There was yet another unacknowledged change made to Lindsey's vanes. Lindsey's vanes 20 each included multiple holes 58 as shown in FIG. 5. As discussed above, Lindsey explains that these holes 58 function to discharge air.

EX1005, 6:54-56 and FIG. 5. These holes 58 together with the radial gaps between vanes function to provide a radial flow from Lindsey's attachment 10 as discussed above in the overview of Lindsey.

FIG. 5.



95. Dr. Nosenchuk's "model" eliminated Lindsey's air distribution holes 58 in the vanes 20:



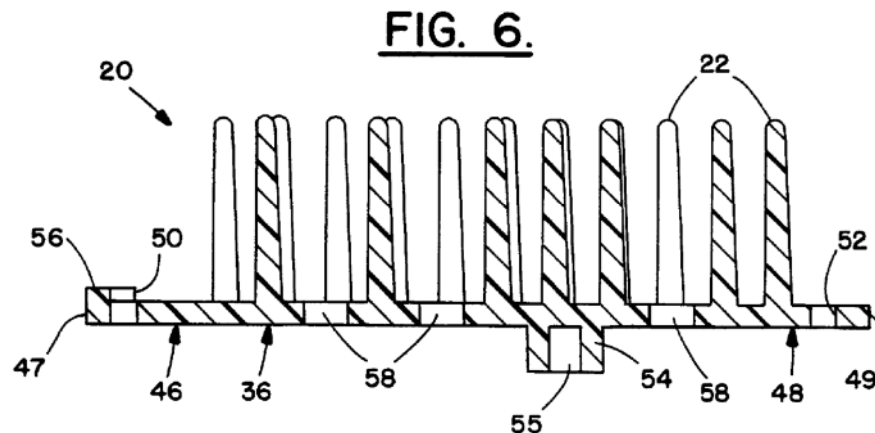
EX1003, ¶119.

96. Dr. Nosenchuk again offered no explanation for this change. In particular, Dr. Nosenchuk failed to explain why a POSITA would have made (or

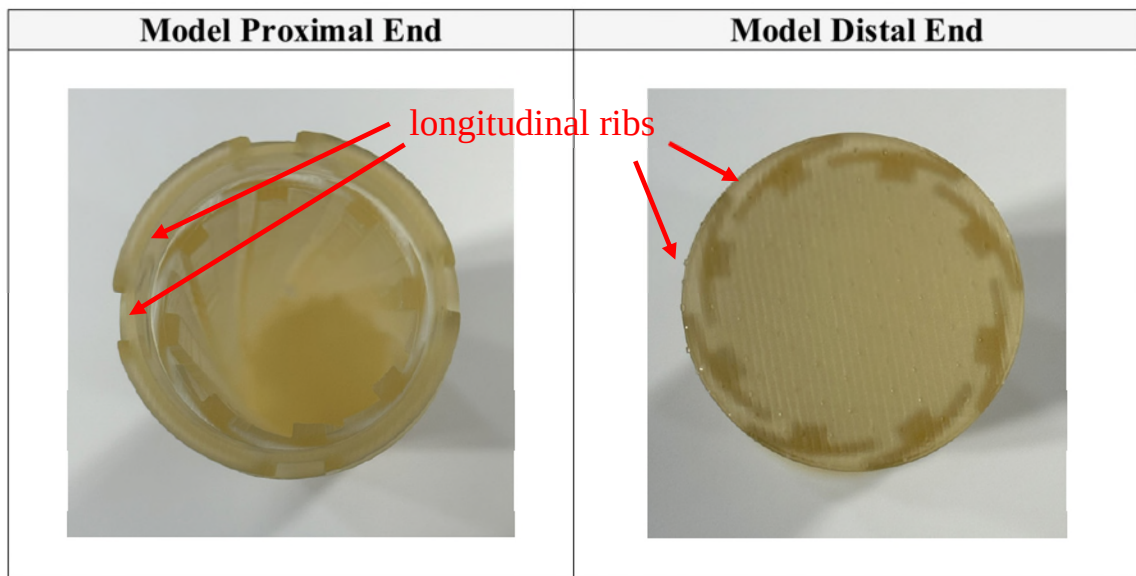
would have been motivated to make) this change, or from where such motivation would have come.

vii. Addition of Longitudinal Rib to Vanes

97. There was still another unacknowledged change made to Lindsey's vanes. The interior surface 36 Lindsey's vanes 20 is generally flat with the exception of a socket 55 as shown in Fig. 6 below,

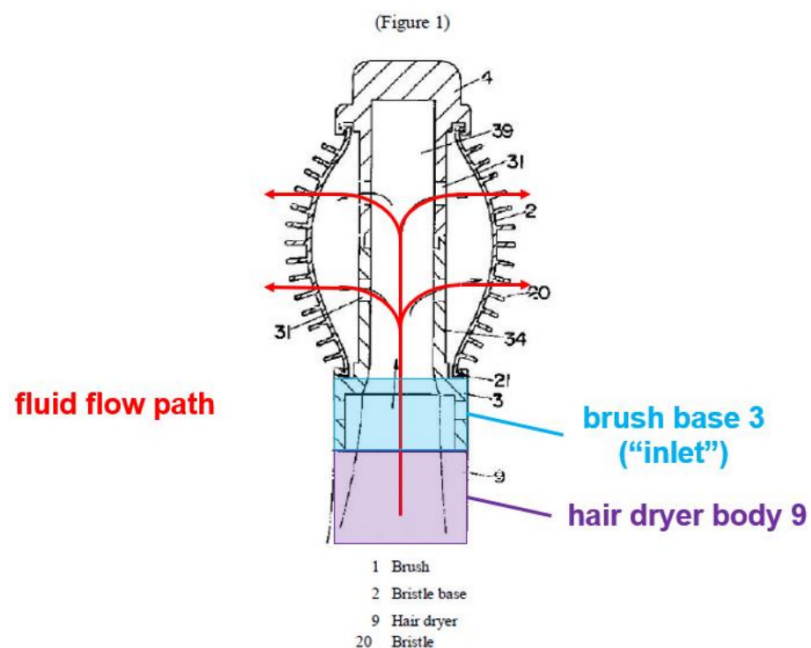


98. In contrast, the interior surface of the vanes in Dr. Nosenchuk's "model" includes a longitudinal rib as shown in annotated photos of "model". EX1003, ¶132. Dr. Nosenchuk again offered no explanation for the addition of this longitudinal rib.



viii. Elimination of Central Distribution Plenum

99. Both Saito and Lindsey include a central air distribution plenum with a plurality of discharge openings. Saito discloses that hot air through a central tube 34 and is discharged via a plurality of opening 31 as shown in FIG. 1:



EX1004, ¶[0013] and FIG. 1; Petition at 36.

100. Lindsey similarly discloses that hot air flows from an outlet 14 to a sleeve 18 that is connected to a core 16 having discharge openings 28 and 30. The flow path “p” out of these discharge openings 28, 30 is substantially perpendicular to the central longitudinal axis as indicated by the red arrow annotations in FIG. 10.

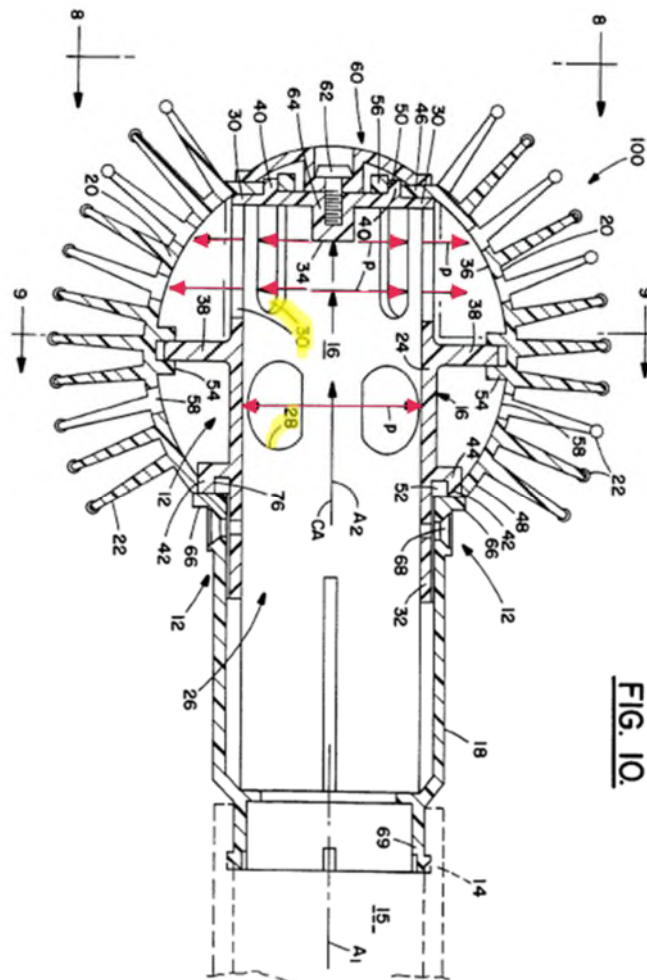
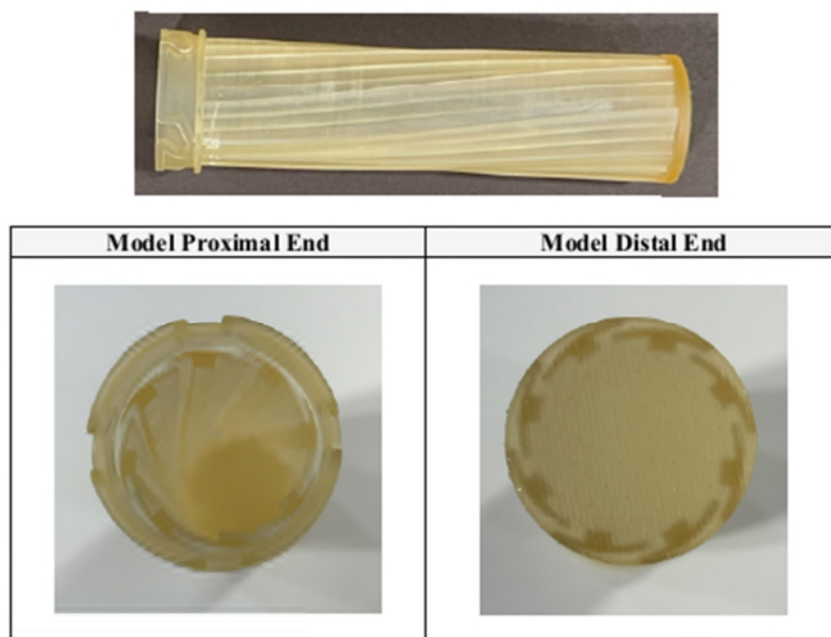


FIG. 10.

EX1005, 5:18-20 and FIG. 10.

101. As noted above in the overview of Lindsey, a significant portion of the discharge openings 30 are aligned with the radial gaps G to produce a radially outward air flow. In contrast, as far as I can discern and as admitted by Petitioners litigation technical expert, there is no central distribution plenum in Dr. Nosenchuk's model. EX2077, 157:15-159:9.



EX1003, ¶117.

102. I note that once again Dr. Nosenchuk offered no explanation for this change. In particular, Dr. Nosenchuk failed to explain why a POSITA would have made (or would have been motivated to make) this change, or from where such motivation would have come. Moreover, at no point does Dr. Nosenchuk indicate why his “model” is cylindrical where both Saito and Lindsey are designed to

operate in a bulbous state. EX2077, 157:15-159:4 (Petitioners' litigation expert admitting that the "model" has a "constant diameter, or roughly constant diameter" and would "buckle" "if you push on opposite ends" of the attachment to compress it).

b. The Petition Fails to Establish Motivation for the Multiple Changes to the Saito/Lindsey "Model"

103. I have been informed and understand that when determining whether an invention would have been obvious to a POSITA, the Board must determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.

104. I have been informed and understand that when a primary reference "teaches away" from the suggested modification, there is no motivation to combine.

105. The Petition and Dr. Nosenchuk fail to establish motivation for the eight changes made to their "model" of the Saito/Lindsey combination to achieve the circumferential fluid flow and automatic hair wrapping required by limitations [1f] and [17f], neither of which is disclosed in either Saito or Lindsey. First, while Dr. Nosenchuk alleged motivation for the two of his acknowledged modifications, he provided no motivation for the six additional unacknowledged modifications as discussed above.

106. Moreover, there are at least two additional separate and independent additional reasons why the Petition and Dr. Nosenchuk have failed to establish motivations for the eight modifications made to the Saito/Lindsey “model.”

107. First, the changes made to Saito and Lindsey change the principles of operation of both Saito and Lindsey. As discussed above, Saito’s device operates with a radially outward fluid flow, which is very different from the circumferential fluid flow required by limitations [1f] and [17f].

108. Lindsey’s air flow is also substantially different from the circumferential fluid flow required by limitations [1f] and [17f]. Lindsey discloses that *some* of the air supplied to the core 16 that exits through the vents 28, 30 in a radial direction is deflected by the vanes 20 and discharged in tangential directions, while some other portions of that air are discharged directly through the gaps G and the vane holes 58 in radially outward directions. EX1005, 7:63-67 and 8:60-64. The result of these different air flow directions, and of the gaps of varying widths between vanes, is air that flows in multiple directions including radial and tangential in “a turbulent manner.”⁶ EX1005, 9:47-57. As acknowledged by Dr. Nosenchuk (in EX1003, ¶92), air flowing in a “turbulent manner” provides “additional lift and volume to hair” and is one of Lindsey’s “main feature[s].” See

⁶ Although “turbulent” and “turbinate” appear to be similar words, they are two different concepts.

also EX1005, 10:33-38. This benefit would be lost if Lindsey's turbulent air flow were to be replaced by a circumferential flow that was smooth enough to entrain hair to cause it to automatically wrap.

109. In light of these teachings in Lindsey and the foregoing considerations, a POSITA would not have been motivated to modify Lindsey's principle of operation to substitute the circumferential fluid flow required by limitations [1f] and [17f] for Lindsey's multi-directional air flow in a "turbulent manner" that is one of its "main features."

110. Second, one of the two modifications that Petitioners and Dr. Nosenchuk do acknowledge making to the Saito/Lindsey "model" are directly contrary to the teachings of Lindsey. Dr. Nosenchuk modified Lindsey by extending the vanes "in order to decrease the width of the gaps/slots formed between each vane." EX1003, ¶133. Decreasing the width of the gaps formed between Lindsey's vanes 20 results in increased air speed through the gaps and may have been (likely was) necessary to achieve a circumferential flow in Dr. Nosenchuk's "model."

111. However, decreasing the width of the gaps between Lindsey's vanes 20 also decreases the total volume of air through the "model." Decreasing the volume of the air flow through the model is directly contrary to Lindsey's teaching that these gaps are to provide a "large hot air exhaust area, approximately 40%

wider than the open area that would be provided, for example, by a conventional hand-held, ball-type brush or comb device.” EX1005, 9:42-47. I note that one of Lindsey’s objectives is to exhaust hot air rapidly and efficiently from the interior of the hair styler. EX1005, 9:36-38. Lindsey explains that this is important because the “operating temperatures of hot air hair blowers and hair styler attachments are close to the temperature limits of many non-metal materials which might be used in the hair styler” and “[i]f the air is not rapidly and efficiently exhausted, the excessive build up of pressurized air in the internal chamber could rapidly overheat and tend to melt or soften such materials.” EX1005, 9:61-67. Still further, “for hair stylers made of non-metal or metal materials, the excessive buildup of air pressure in the internal chamber would resist incoming air and the fan in the hair blower and could rapidly overheat the hair blower.” EX1005, 10:1-4. These teachings in Lindsey directly contradict and teach away from modifying Lindsey to narrow the gaps between vanes as Dr. Nosenchuk did in his “model.”

112. Dr. Nosenchuk provided no analysis of these issues concerning the temperature problems that Lindsey teaches could result by narrowing the gaps between Lindsey’s vanes. Moreover, Dr. Nosenchuck provides no information about the material used to create his “model” or whether that material can withstand the heat generated by a typical hair styler for any period of time while being flexible enough to allow reconfiguration between cylindrical and bulbous

shapes which Dr. Nosenchuk identifies in his declaration as the reason for combining Saito and Lindsey. EX1003, ¶89. In any event, the failure of the Petition and Dr. Nosenchuk's to address any of these issues is the second additional, independent reason why motivation to make the eight modifications included into the "model" has not been shown.

113. It would appear that the changes made to Saito and Lindsey to provide the functionality of Claims 1-17 were made from hindsight review of the '979 patent itself rather than obviousness and should be considered in that light.

4. No Claim Limitation is Inherent

114. In arguing that limitation [1f] and therefore [17f] are disclosed, Petitioners argue that "the Examiner correctly (and repeatedly) indicated, where a prior art apparatus is identical or substantially identical in structure, claimed properties or functional characteristics are presume to be inherent." Petition, pp. 47-48. Petition, 57. Petitioners conclude that "[b]ecause the modified Saito configuration using Lindsey's vanes has all of the structural features of the claims, the function of that structure to cause circumferential airflow to encourage hair to automatically wrap around the cylindrical portion of the attachment would have also been inherently present in that structure described in the claims." Petition, pp. 47-48. Petitioners make similar statements for claims 1-16 (during prosecution), Petition, p. 16, and claim 3 (for Ground 1) and 19 (Ground 4).

115. Petitioners’ support for these inherency arguments is the holding from *In re Best*. Petition, 47. I have been informed and understand that, as Petitioners note, *In re Best* only applies when the prior art apparatus “is identical or substantially identical in structure” to the challenged claims’ structure. But as shown above, the combination of Saito with Lindsey would result in an attachment with manifest and significant differences including but not limited to bristles or prongs, varying width gaps between vanes, and radial and tangential flow paths, while the challenged claims do not have this structure. As such, it is my understanding that *In re Best* is inapplicable as the prior art attachment is not identical or substantially identical in structure to the challenged claims’ attachment. Thus, Petitioners inherency arguments are incorrect.

B. Secondary Considerations Weigh in Favor of Non-Obviousness of the Challenged Claims

116. The legal principles related to objective indicia of non-obviousness (also referred to as secondary considerations) are set forth above.

117. In addition, I have been informed and understand that the Board uses a two-step analysis in evaluating nexus between the claimed invention and the evidence of secondary considerations. I understand that this is known as the “Fox Factory” test. In the first step, the Board considers whether the patent owner has demonstrated that its products are coextensive (or nearly coextensive) with the

challenged claims, resulting in a rebuttable presumption of nexus. If not, I understand that the patent owner is still afforded an opportunity to prove nexus by showing that the evidence of secondary considerations is the direct result of the unique characteristics of the claimed invention.

Fox Factory Step 1

118. In the present case, the evidence establishes that Dyson's commercial Airwrap product (including models HS01 and HS05) is "coextensive (or nearly coextensive)" with the challenged claims. It is my understanding from counsel and the source materials cited in this section that Petitioners were well aware of this and Dyson's evidence from current and prior litigations throughout the world. Moreover, Petitioners' FlexStyle Auto-Wrap Curler (hereinafter the "FlexStyle") is also "coextensive (or nearly coextensive)" with the challenged claims. It is also my understanding from counsel and the source materials cited in this section that Petitioners were well aware of this too. As shown in EX2002-EX2007, Dyson's Airwrap reads on and practice each and every limitation of challenged claims 1-3, 14-15, 17-19, and 30-31, and Petitioners' FlexStyle reads on and practice each and every limitation of challenged claims 1-3, 5, 8, 9, 12-15, 17-19, 21, 24, 25, 27 and 29-31, and in fact are essentially the claimed invention as required by step 1 of the Fox Factory test. That is, they contain, among other things, the attachment recited in claims 1-3 and 14-15 (airwrap) and 1-3, 5, 8, 9, 12-15 (FlexStyle) and the

handheld appliance and attachment of claims 17-19 and 30-31 (airwrap) and 17-19, 21, 24, 25, 27 and 29-31 (FlexStyle).

119. A significant feature of the challenged claims is present in both the Airwrap and FlexStyle -- an outlet “configured to direct fluid flow emitted from the outlet tangentially along and around the external surface of the substantially contiguous wall to form a circumferential fluid flow around the cylindrical second portion of the attachment that encourages hair to automatically wrap around the cylindrical second portion.” All other features of challenged claims 1-3, 14-15, 17-19, and 30-31 are present in the Airwrap and all other features of challenged claims 1-3, 5, 8, 9, 12-15, 17-19, 21, 24, 25, 27 and 29-31 are present in the FlexStyle. Additionally, there are no critical, unclaimed features in either the Airwrap or FlexStyle.

120. As such, Dyson is entitled to the rebuttable presumption of nexus between the following secondary consideration evidence, based on Dyson’s Airwrap and Petitioners’ FlexStyle, and the challenged claims.

121. Despite having knowledge of the secondary consideration evidence identified below, Petitioners assert that “[t]here are no secondary considerations of non-obviousness tied to the Challenged Claims.” Petition, p. 89. Petitioners have simply ignored and hidden this well-known evidence from the Board and from their own expert, Dr. Nosenchuk, who has testified repeatedly that he is unaware of

any secondary consideration evidence brought forward by Dyson. *See, e.g.,*

EX1003, ¶253:

- “I am not aware of any secondary considerations of non-obviousness raised by Dyson with respect to the Challenged Claims of the ’979 patent.”
- “I am not aware of any showing of a long-felt but unmet need satisfied by the ’979 patent.”
- “I likewise am not aware of any evidence relating to the other ‘secondary’ or ‘objective’ considerations listed above.”

122. Regarding commercial success, Dr. Nosenchuck admits to being aware that the “AirWrap has had some degree of commercial success,” but inexplicably chose to ignore it:

- “I am not aware of any commercial success of any styling brush that is due to their practicing of the Challenged Claims of the ’979 patent. Although it appears to me that the Dyson AirWrap has had some degree of commercial success, *I have not quantified that success, nor have I performed an element-by-element analysis of the claims of the ’979 patent against the Dyson AirWrap product* such that I could conclude that any commercial success is due to the practicing of the Challenged Claims by the Dyson AirWrap.” (emphasis added).

123. Dr. Nosenchuk chose not to evaluate this evidence of commercial success known to him despite having been informed that objective evidence of non-obviousness including commercial success is one of the four factors included in the framework for evaluating obviousness. EX1003, ¶24-25.

Fox Factory Step 2

124. Should Petitioners attempt to rebut the above established presumption of nexus, the evidence also establishes why finding nexus is appropriate under step 2 of the Fox Factory test –i.e., the evidence of secondary considerations is the direct result of the unique characteristics of the claimed invention.

125. A unique characteristic of the challenged claims is the attachment's outlet "configured to direct fluid flow emitted from the outlet tangentially along and around the external surface of the substantially contiguous wall to form a circumferential fluid flow around the cylindrical second portion of the attachment that encourages hair to automatically wrap around the cylindrical second portion." This configuration produces the Coanda effect, which encourages the automatic hair wrapping recited in the claims. Benefits of this airflow include reducing heat damage and mechanical damage to the user's hair, allowing hair to be dried and curled at the same time, and allowing one hand operation of the device. See e.g., EX2011, 50:23-51:14. The evidence discussed below documents that these benefits are attributable to the Airwrap and FlexStyle's generation and use of the Coanda

effect to generate a circumferential fluid flow that encourages automatic hair wrapping.

1. Commercial Success

126. The following evidence establishes that the Airwrap and FlexStyle have both been commercially successful and that their success is tied to limitations [1f] and [17f] of the challenged claims. For starters, **Petitioners'** Senior Vice President, Anthony Marra, has testified and admitted that Dyson's Airwrap has been commercially successful and praised by the industry:

20	Q. Do you agree that the Dyson Airwrap
21	was a commercial success?
22	ATTORNEY BUROKER: Objection.
23	Foundation and outside the scope.
24	A. I do believe the Airwrap has been

1	successful.
---	-------------

93

2 Q. Did the Dyson Airwrap receive the
3 same kind of industry praise when it was
4 introduced?
5 ATTORNEY BUROKER: Objection.
6 Outside the scope and vague.
7 A. I believe it has received praise.

4 Q. And that is also true of the Dyson
5 Airwrap. When the Dyson Airwrap was
6 introduced, it also went viral, using your
7 definition. Right?
8 A. I don't recall exactly at the time
9 when it launched, but it could have.
10 Q. You don't have any reason to think
11 that it didn't, do you?
12 A. I have no reason to think that it
13 didn't.
14 Q. Did the Dyson Airwrap, to your
15 knowledge, receive any praise from others?
16 ATTORNEY BUROKER: Objection.
17 Outside the scope and foundation.
18 A. You are asking about the Airwrap?
19 BY ATTORNEY STEADMAN:
20 Q. Yes.
21 A. Did it receive praise?
22 Q. Yes.
23 A. Yes, it has received praise.

EX2011, 92:20-93:1; 106:2-7; 107:4-23.

127. Further evidence of the commercial success of Dyson's Airwrap is that it ***"sold out almost immediately,"*** EX2014, "and within a few weeks, had a waitlist of more than 130,000 people." EX2015. Three years after its release, "the Airwrap had over 100,000 people still waiting for their chance to buy one and four sold every minute." EX2015.

128. Robert Tweedie, Dyson’s Design Manager, stated that Dyson’s Airwrap “was a game changer.” EX2010, p. 247. He explained that the industry praise came “down to the technology which we’ve laid claim to in this Patent.” EX2010, p. 247.

129. The commercial success of Dyson’s Airwrap is also shown in part by its widespread acclaim and numerous industry accolades, some of which are listed below and in the “Industry Praise” section discussed below:

- The Airwrap was recognized as an “innovator” by Elle Magazine, from which it won a Future of Beauty Award in in 2019 and 2022. EX2016, DYSON_0130774; EX2017, DYSON_0129937.
- The Airwrap was named one of Time Magazine’s Best Inventions of 2019. EX2018, DYSON_0130828.
- The Airwrap was also recognized as one of the Greatest Innovations of 2019 by Popular Science Magazine. EX2019, DYSON_0130858-860.

130. Petitioners have already admitted that their FlexStyle has been commercially successful in a United Kingdom proceeding involving a foreign counterpart patent to the ’979 patent:

- “[t]he existence and success of Defendant’s [FlexStyle] Products is admitted.” EX2020, 3(g)(i).

- Shark “does not dispute that the Dyson Airwrap or SharkNinja FlexStyle were commercially successful products.” EX2021.

131. The success of the Airwrap and FlexStyle is attributable to their use of the technology of limitations [1f] and [17f] of the challenged claims (i.e., its ability to direct fluid flow emitted from the outlet tangentially along and around the external surface of the substantially contiguous wall to form a circumferential fluid flow around the cylindrical second portion of the attachment that encourages hair to automatically wrap around the cylindrical second portion”, as a result of its use of the Coanda effect). As a result, both products achieve and advertise creating curls and waves without heat damage to the hair:

- *Bustle* reported the Airwrap uses “innovative technology” and that “Dyson engineers focused on using the Coanda effect for the Airwrap.” EX2022. The article stated that “[t]o style hair with air instead of excessive heat, Dyson’s experts designed a barrel that would encourage the Coanda effect to occur.” EX2022.
- *Women Love Tech* stated the Airwrap “is only made possible because of a physical phenomenon known as the Coanda effect...The sheer ingenuity of the way in which it works is beyond fabulous.” EX2023. The article also reported that by “[t]aking advantage of this [Coanda

effect] Dyson's team of aerodynamicists create a way to style hair using only air combined with heat." EX2023.

- A 2019 *Cosmopolitan Hair Awards* article stated that the "ventilated wand uses the force of air to wrap hair around the barrel before heating it," where the result was indicated to be the "perfect non-fried curl." EX2024, DYSON_0130114.
- *Allure* said its "obsession with the Airwrap" stems from the use of the Coanda effect and that the "air from the tool sucks your hair to spiral around the barrel, creating curls without having to use a ton of heat." EX2025, DYSON_0037354.
- *Mashable* stated that the Airwrap enables hair to be styled "without damaging extreme heat" and that its "eight attachments" are "what sets this pricey hair appliance apart from its competitors – the promise of preserved hair health while still creating the bouncy curl or sleek style of your dreams. It's all thanks to something called the Coanda effect." EX2026. The review concluded that "on the cost effectiveness scale" the Airwrap was "five out of five" and "worth it." EX2026, at about 18 min and 18 seconds.
- *Vogue Arabia* stated that the Airwrap's "revolutionary design built on the Coanda effect — a specific form of airflow that goes around the

barrel to style hair without damage — it allows users to curl, smooth, and dry hair simultaneously, saving precious minutes in your daily routine — and lots of space in your suitcase.” EX2027.

- promotional materials for the Airwrap emphasize the “coanda to curl” technology and describe it as a “continuous flow of air forms around the barrel, attracting hair to its surface, creating voluminous curls and waves without extreme heat.” EX2069.
- Petitioners’ promotional materials also emphasize that the technology enables drying and styling hair at the same time: “Uses air power to automatically wrap hair around the barrel, from ends to roots” to “Style & dry at the same time.” EX2036, p. 3.
- FlexStyle packaging touts “Style while you dry with no heat damage,” as well as the “Coanda Technology” which “Wraps. Curls. Sets. Automatically.” EX2028; EX2029.
- FlexStyle packaging also highlights how easy the technology makes styling hair: “Watch the magic happen when you place hair near the curlers. Automatic wrapping, setting, and curling, for easy, luscious looks” and “Hassle-free curls in seconds.” EX2029.

132. As can be seen, FlexStyle’s own promotion and packaging highlights the use of the Coanda effect. Moreover, independent, third-party sources have highlighted the Airwrap and FlexStyle’s use of the Coanda effect. For example:

- *CNN* reviewed the Airwrap and FlexStyle and reported that the “Coanda effect curlers are what make these hair tools magic,” and recognized that both products’ curlers “feature this technology.” EX2037.
- *Marie Claire* reported the FlexStyle is “Shark’s answer to a traditional curling iron, but with a high-tech upgrade” and that they use “Coanda technology...What this means: Strands easily wrap around the barrel, creating bouncy curls.” EX2038.

133. Thus, there is a clear nexus between the commercial success of the Airwrap and its use of the technology covered by the challenged claims. Likewise, there is also a clear nexus between the commercial success of the FlexStyle and its use of the technology covered by the covered by limitations [1f] and [17f] of the challenged claims.

2. Industry Praise

134. As discussed above, Dyson’s Airwrap and Petitioners’ FlexStyle are commercially successful and received extensive, viral industry praise for technology related to the challenged claims (not repeated in this section). The

following is evidence of additional praise received by Dyson's Airwrap, which are also tied to limitations [1f] and [17f] of the challenged claims:

- The Airwrap received Allure's Best of Beauty Award in 2020, 2021, and 2022. EX2039, DYSON_0037253; EX2040.
- The Airwrap won Allure's Best of Beauty Splurges in 2021. EX2041, DYSON_0037269.
- The Airwrap was awarded the Allure Best of Beauty Luxury & Splurges in 2023. EX2042, DYSON_0037600.
- The Airwrap won a Cosmopolitan Hair Award in 2019. EX2043, DYSON_0130114.
- The Airwrap won a Cosmopolitan Summer Beauty Award in 2022. EX2044, DYSON_0130056.
- The Airwrap won a Power Your Pretty Award from POPSUGAR Beauty in 2019. EX2045, DYSON_0129697-698.
- The Airwrap won a Good Housekeeping Beauty Award in 2019. EX2046, DYSON_0129918.
- The Airwrap won a Women's Health Beauty Award in 2019. EX2047, DYSON_0129958.

- The Airwrap won a Women’s Health 2021 Healthy Hair Award.
EX2048, DYSON_0130275.
- The Airwrap was included in the Glamour Beauty Power List in 2020.
EX2049, DYSON_0037511.
- The Airwrap won an Esquire Gadget Award in 2020. . EX2050,
DYSON_0130144.
- The Gloss Angeles Beauty Awards recognized the Airwrap, three
differently sized Airwrap Barrels, and the Airwrap Small Volumizing
Brush in 2021. EX2051, DYSON_0130732-733.
- The Airwrap won a Harper’s Bazaar Best of Beauty Award in 2022
and a Harper’s Bazaar Hair Award in 2022 and 2023. EX2052,
DYSON_0129989; EX2053, DYSON_0129844-845; EX2054,
DYSON_0129815-816.
- The Airwrap was recognized as a Hair Care Winner by Elle’s Beauty
Awards In 2022. EX2055.
- The Airwrap won a BeauLife Beauty Award in 2022 EX2056,
DYSON_0130025.
- The Airwrap won a Tatler Magazine Beauty Award in 2022. EX2057,
DYSON_0130454.

- The Airwrap was included in Self Magazine's Best Hair Styling Products and Tools of 2022. EX2058, DYSON_0130609-610.
- The Airwrap won a Best in Black Beauty Awards from Essence Magazine in 2023. EX2059, DYSON_0130326.
- The Airwrap won a Best Beauty Tool & Device Award from Beauty Insider in 2023. EX2060, DYSON_0129945.
- The Dyson Airwrap won a Stylist Best Beauty Award in 2023. EX2061, DYSON_0129660-661.
- The Airwrap won a Best in Beauty Award from Cosmetic Executive Women in 2023. EX2062, DYSON_0129714.
- The Airwrap won a Bustle Most Wanted Holiday Award in 2023. EX2063, DYSON_0129785-786.
- The Airwrap won a Newbeauty Beauty Award in 2023. EX2064, DYSON_0129803.
- The Airwrap won an Innovation Excellence Award from Canstar Blue in 2023. EX2065, DYSON_0130015.
- The Airwrap was recognized as one of the top 4 beauty devices of 2023 by HerWorld magazine. EX2066, DYSON_0129828-830.

135. Reading the reasons for these awards, a POSITA would have understood that they are tied to the Airwrap's generation and use of the Coanda effect to automatically wrap hair as recited in limitations [1f] and [17f]. For example, the Cosmo Hair award states that "the perfect non-fried curl" is obtained because of Airwrap "uses the force of air to wrap hair around the barrel before heating it." EX2043, DYSON_0130114. Popsugar stated that the Dyson Airwrap was a "revolutionary invention" and a "game changer" because it's "technology, which the brand calls the Coanda effect, allows users to both style and dry their hair in one step without heat damage." EX2045, DYSON_0129697-698. Glamour stated the Airwrap's "engineering feat is the Coanda effect, [which] uses a super speed air stream to whip hair round the barrel and create every type of curl..." EX2049, DYSON_0037511.

136. This establishes a nexus between the industry praise of the Airwrap and its use of the technology covered by limitations [1f] and [17f] of the challenged claims.

3. Copying

137. Other companies have recognized the success of Dyson's Airwrap and Petitioners' FlexStyle and have launched products that advertise the use of the Coanda effect to automatically wrap hair around a barrel to curl the hair. For

example, the Sharper Image Revel Hair 6-in-1 Multi-Styler claims to use the Coanda effect and is sold with two 1.25” “Airflow Curlers.” See EX2067.

138. A POSITA would have understood that the above identified products copied the challenged claims’ structure and method of generation and use of the Coanda effect, meaning that there is a nexus between the copying by others and the technology covered by the challenged claims.

4. Long-felt, but unmet need (Failure of Others)

139. Consumers had options for at-home curling and styling tools before the introduction of Dyson’s Airwrap, but as shown below, and further explained by Amy Johnson, Dyson’s Global Head of Education for the Beauty Division, each had distinct limitations and disadvantages, including risk of injury to the user, which were not addressed until Dyson’s Airwrap was introduced into the market.

140. “‘Typical hot tools’ for hair styling include any tool that gets hot.” EX2068, ¶26. Some of these tools “work at extreme temperatures” that “creates an increased risk of burning the hair or skin” and increases the risk of injury to the user. EX2068, ¶26.

141. “Tongs and curling irons, for example, use high heat to style and curl hair.” EX2068, ¶27. The “use of high heat directly on human hair can damage or even burn the hair. Hot appliances can also burn skin on hands, neck, face, ears, or scalp.” EX2068, ¶27. Additionally, a “typical curling iron’s clip also makes it hard

to slip the styled hair off the end of the device without unwinding the hair, which can lead to limitations on the type or shape of the style and curl.” EX2068, ¶27.

142. “Other typical ‘wet to hot’ tools just blow air out in any direction; and they can still get very hot. Because the air is not controlled or aligned with the hair, the user gets more frizz, and may have difficulty in getting the right style.” EX2068, ¶28. “There are many kinds of hot air brushes that fall into this category,” all of which “rely on bristles to hold and curl hair.” EX2068, ¶29. “Bristles can break or damage hair by pulling” and “also make it hard or impossible to slip the styled hair off the end of the device without unwinding the hair, which can lead to limitations on the type or shape of the style and curl.” EX2068, ¶29. Most of these hot air brushes “also rely on high heat, having the same disadvantages of heat damage to hair as mentioned above.” EX2068, ¶29. “These devices also require the user to rotate the brush, which can be hard on the wrist and difficult to achieve.” EX2068, ¶29.

143. Using a hair dryer and brush to style or curl hair “has the same disadvantages as hot air brushes.” EX2068, ¶30. “In addition, it can be difficult for the user to hold and manipulate both a brush and a hair dryer, particularly behind the head.” EX2068, ¶30.

144. “[M]otorized brushes and devices have been introduced over the years” and “rely on a mechanism to rotate the brush head.” EX2068, [Disclosure of

Amy Johnson]. ¶31. However, “these devices have the disadvantage that the rotating part can get caught on the user’s hair, tangling the hair or even tangling into the hair, causing pain and damage” to the hair. EX2068, ¶31.

145. The tools discussed in the foregoing paragraphs, available before the Dyson’s Airwrap and its use of the Coanda effect, failed to meet consumers’ needs in the marketplace. EX2068, ¶33. “Users had long experienced an unmet need for a styler and curler that could be used by the user at home, outside of a salon, without bristles, without any kind of rotating mechanism, without high heat that would style and curl hair effectively and without damage from bristles and high heat. These needs had persisted for decades” as many “other manufacturers had tried and failed to meet these needs.” EX2068, ¶¶33-34.

146. Dyson met consumers’ needs with the release of the Airwrap, a commercial embodiment of the ’979 patent claims as shown EX2002-EX2005; EX2068, ¶¶40-45. Specifically, Dyson’s Airwrap products “are a unique combination of benefits to the user: less heat damage, no bristles, automatic wrapping, slide-off styling all the way to the top of the hair, and no mechanical damage—all in one package.” EX2068, ¶45. As such, there is a nexus between the solution to the long felt, unmet needs in the industry, and the technology covered by the challenged claims.

5. Unexpected results

147. Robert Tweedie, Dyson's Design Manager, testified that "it was known to the outside world that we'd invested time, effort and money in developing an automatically wrapping device for wrapping hair." EX2010, p. 244. A few years before the Airwrap launched, however, even Dyson's employees were skeptical that the Airwrap would be a success. EX2010, 16-18. Mr. Tweedie testified that Dyson "was doing something unexpected, because it was a very different concept of the existing competitors we had to explain...how it was working." EX2010, 16.

148. Mr. Tweedie, testified that "there was a lot of development from the first initial working device." EX2010, p. 96. Dyson had to "work in a way which would provide that unmet need, the sort of unexpected offering which we created for the consumer, which at that moment in time, those devices weren't providing." EX2010, p. 96. When considering just the Airwrap curling attachments, Mr. Tweedie stated that to develop a final commercially- successful and manufacturable product, Dyson had to consider different hair types, different levels of moisture content in hair, the amount of hair, the type of motor which impacts flow and pressure, the heater element, restrictions of all the other components in the device, and tapered or not tapered barrels. EX2010, pp. 95-96, 103.

149. Dyson did not anticipate the Airwrap's viral success in the marketplace. EX2068, ¶¶49-50. "Consumers and stylists were taken by surprise at the ease of use," among other benefits, of the Airwrap, and how it "could dry, style and curl hair without the use of bristles or high heat, could minimize heat damage, and could make styling faster, easier and more convenient." EX2068, ¶¶49-50. The benefits of the claims of the '979 patent provided these unexpected results.

150. A POSITA would have understood that the unexpected results were achieved by the Airwrap's creation and use of the Coanda effect, meaning that there is a nexus between the unexpected results and the technology covered by the challenged claims.

6. Initial skepticism by experts

151. "At first, stylists and other experts in the market (as well as consumers) were skeptical of Airwrap's Coanda curlers." EX2068, ¶49. Many required education on how they worked, and how to effectively use them, as it was a novel approach. EX2068, ¶49. Ms. Johnson explains that prior to actual use, "[i]t was difficult for stylists and customers to understand how Airwrap Coanda curlers could dry, style and curl hair without the use of bristles or high heat, could minimize heat damage, and could make styling faster, easier and more convenient." EX2068, ¶49.

minimize heat damage, and could make styling faster, easier and more convenient.” EX2068, ¶49.

153. This skepticism is directly related to the Airwrap’s creation and use of the Coanda effect, meaning that there is a nexus between the skepticism and the technology covered by the challenged claims.

XI. CONCLUSION

154. Petitioners have not shown that any challenged claim of the ’979 patent is invalid for the reasons discussed above.

155. I hereby declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct, and that all statements made of my own knowledge are true and that all statements made on information and belief are believed to be true. I understand that willful false statements are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code.

9/9/2024
Date


Peter Bressler, FIDSA

EXHIBIT A

Peter W. Bressler, FIDSA

PBressler, LLC, Product Design Consultant & IP Expert Witness
Founder, Bresslergroup, Inc.
Adjunct Associate Professor, University of Pennsylvania
Fellow Member of the Industrial Designers Society of America (IDSA)

Personal Information Date of Birth: June 24, 1946
Marital Status: Widowed

Education B.F.A. Industrial Design
Rhode Island School of Design, Providence R.I., 1968
Graduate Research in Design for Disabilities
Rhode Island School of Design, Providence R.I., 1969-70
Certification, Synectics Group Creativity Process, Philadelphia, PA 1972
Certification: Design Patent Expert Witness Seminar, IDSA, 2008
CLE: Design Patents: Modernizing an Old Property Interest, Suffolk University Law
School, Boston, MA. 11/2013
Completed Courses, SolidWorks Fundamentals, April, 2018

Employment

2022 to present	Adjunct Associate Professor, Product Design Dept., Drexel University
2012 to present	Product Design Consultant / Intellectual Property Expert Witness T/A PBressler, LLC
2006 to 2020	Adjunct Associate Professor, Integrated Product Design Program, University of Pennsylvania.
2012 to 2015	Founder, Bresslergroup, Inc. (1970)
2010 to 2011	Contracted Innovation Process consultant to the Delaware Valley Industrial Resource Center
1998 to 2011	Founder and Board Chair, Solar Roofing Systems, Inc. T/A SRS Energy
2009 to 2012	Board Chair, Bresslergroup, Inc.
1988 to 2009	Principal and CEO, Bresslergroup, Inc. A 22-person design research, strategic product planning, industrial design, product development and engineering consulting firm. Noted by <i>Businessweek</i> magazine as "one of the top award-winning firms".
1972 to 1988	Principal and President, Designs for Medicine, Inc. T/A Peter Bressler Design Associates... 5 to 12-person User research, Product Development, Packaging & Graphic design consulting firm
1973 to 1974	Contracted consultant to the Franklin Institute Research Laboratories Founded "Center for the Enhancement of the Capabilities of the Handicapped"
1970	Founded Designs for Medicine, Inc.

Teaching Experience

2021 to present Adjunct Associate Professor, Product Design Department, Drexel University, teaching Professional Practice, Design Research & Product Design Studio.
2006 to 2020 Adjunct Associate Professor, Integrated Product Design Program, University of Pennsylvania, teaching Ergonomics, Industrial Design & Integrated Product Design
Fall 2005 Adjunct Associate Professor, Ergonomics 1332, Philadelphia University, Philadelphia, PA
PA Fall 2001 Visiting Lecturer, Business Practices, University of the Arts, Philadelphia, PA
Spring 2000 Adjunct Associate Professor, Ergonomics DES 164, Lehigh University, Bethlehem, PA
PA Fall 1983 Visiting Lecturer, Industrial Design, Rhode Island School of Design, Providence, R.I.
Spring 1972 Instructor, Industrial Design Structures, Philadelphia College of Art, Philadelphia, PA.
PA. 1971-72 Instructor, ID Prototype Shop, Philadelphia College of Art, Philadelphia, PA.

Expert Witness Experience

26 cases
30 reports
15 depositions
8 court testimonies

GLACIER, LLC

Child's Hanging Obstacle Course, Consultation, Expert Report.

PANASONIC CORPORATION v. GETAC, INC.,

Case No. 8:19-CV-01118, United States District Court for the Central District of California, (Multiple firms) Consultation, Multiple reports and rebuttals, Multiple Depositions, and trial testimony. Jury awarded \$17M in Client's favor

HUNTER v. LUMINEX

Case No. 18-cv-344 in District Court for the Western District of Wisconsin (Baker, Donaldson, Bearman, Caldwell & Berkowitz, PC / Memphis, Tennessee) (Consultation, Declaration) Case settled in client's favor.

COHEN et al. v. COSTCO et l.

Case No. 17CV316277 Superior Court of California, County of Santa Clara (Boccardo Law Firm, San Jose, California) Consultation, Expert Report, Deposition. Case settled pretrial in client's favor.

HONEYWELL INTERNATIONAL V. RESEARCH PRODUCTS CORPORATION

Case No. 3:17-cv-00723-wmc in the United States District Court of Wisconsin, (Foley & Lardner, LLC, Madison, WI) (Consultation, expert Invalidity & Non-Infringement reports) Case settled pretrial in client's favor.

KREMERMANN v. OPEN SOURCE STEEL, LLC

Case No. C17-953-BAT in United States District Court, W.D. Washington, Seattle, (Sussman Godfrey, LLP, CA) (Consultation) Case settled

BODUM USA, INC. V. A TOP NEW CASTINGS, INC.

Case No. 1:16-cv-02916 in The United States District Court for the Northern District of Illinois, Eastern Division. (Akerman, LLP. Chicago) (Consultation, expert report, rebuttal report, deposition and Testimony). Judge found for Plaintiff

HINRICHS & ASSOCIATES; and PENTAGRAM DESIGN, INC.(Plaintiffs) v. vs.
BEATS ELECTRONICS, LLC; A DRE YOUNG PIK/AL DR. DRE, an individual; JIMMY IOVINE, an individual; STEVEN LAMAR, an individual; JIBE AUDIO, LLC; and DOES 1 through 30, inclusive (Defendants) Case No. BC 533089 in the Superior Court of the State of California, County of Los Angeles. (Sussman Godfrey, LLP, CA) (Consultation, Declarations, Expert Report, Summary Judgement, Appealed, Remanded in client's favor, Jury verdict in client's favor.

SPORT DIMENSION, INC. V. THE COLEMAN COMPANY, INC.
Civil Action No. 2:14-cv-00438-BRO-MRW in the United States District Court Central District of California- Western Division (Husch Blackwell, St. Louis, MO) (Consultation, Expert Report and Deposition, testimony excluded, Summary Judgement, appealed and remanded on Appeal/ case settled in client's favor)

THOMAS & BETTS INTERNATIONAL, LLC AND THOMAS & BETTS CORPORATION VS. BURNDY LLC, HUBBELL INC., 3M COMPANY AND ZHEJIANG SHANGYU CITY FENGFAN ELECTRICAL FITTINGS CO., LTD.
Civil Action no. 2:14-cv-02296-JPM-tmp in the United States District Court for the Western District of Tennessee (Steptoe & Johnson LLP, Washington, DC) (Consultation & Expert Report / Case settled in client's favor)

FUTURE MOTION, INC., VS. CHANGZHOU FIRST INTERNATIONAL TRADE CO, LTD.
Civil Action No. 2:16-cv-00013-MMD-CWH in the United States District Court for the District of Nevada (Merchant & Gould, PC, Madison, WI) (Consultation and Expert Report / Complaint dropped)

LARRY G JUNKER V. MEDICAL COMPONENTS INC. et al
Civil Action No. 13-4606 in the United States District Court for the Eastern District of Pennsylvania. (Mason & Petrucci) (Consultation, Expert Report, Deposition & Testimony) Found for the Plaintiff

NOKIA V. HTC
International Trade Commission, Washington, DC / Investigation No.337-TA-885 matter of Certain Portable Electronic Communications Devices, Including Mobile Phones and Components Thereof. (Finnegan, Henderson, Farabow, Garrett & Dunner, LLP.) (Consultation only)

IMRE BATORI AND PROGRESS PROFILES SPA V. SCHLUTER SYSTEMS L.P. v. IMRE BATORI, PROGRESS PROFILES SPA, and PROGRESS PROFILES AMERICA INC.
Civil Action No. 1:15-cv-00144 CMH-IDD in the United States District Court, Eastern District of Virginia, Alexandria Division (LEE SHEIKH MEGLEY & HAAN, Chicago, IL) (Consultation and Expert Report / cases settled in client's favor)

BOSE CORPORATION V. ABLE PLANET INCORPORATED
Civil Action No. 11-01435
(Wilmer- Hale, Boston, MA) Consulting Expert ...consultation / resolution unknown

VOLTSTAR TECHNOLOGIES, INC. F/K/A HORIZON TECHNOLOGIES, INC. V. AMAZON.COM, INC.,
Case: 1:13 -cv- 05570 in the United States District Court for the Northern District of Illinois, Eastern Division (Jenner & Block, Chicago, Ill.) (Consultation and Expert Report / Summary Judgment in client's favor)

- SEED COMPANY LTD and SHGERU TAMAI v. WILLIAM F. WESTERMAN, ET AL
Case No. 1:08-CV-00355-RJL in United States District Court for The District of Columbia (London & Mead, Washington DC) (Consultation, Expert Report & Rebuttal Expert Report)
- APPLE, Inc. v SAMSUNG Electronics Co., LTD, Case No. 11-cv-01846-LHK, United States District Court of Northern California, San Jose Division (Morrison Foerster San Francisco, Ca.) (Expert Reports, Depositions, Testimonies) Jury awarded \$1.4B in client's favor.
- APPLE, Inc. v SAMSUNG Electronics Co., LTD, International Trade Commission, Washington, DC / Investigation No. 337-TA-796 matter of Certain Electronic Digital Media Devices, before the Honorable Thomas B. Pender. (2012 for Morrison Foerster, Washington DC) (Expert Reports, Deposition, Testimony) Judgement in client's favor.
- HAMILTON BEACH BRANDS, INC. V SUNBEAM PRODUCTS, INC., D/B/A JARDEN CONSUMER SOLUTIONS, Civil Action No. 11-cv-22345, United States District Court for the Eastern District of Virginia, Richmond Division (Panitch, Schwartz & Belasario, Philadelphia, PA) (Expert Report, Deposition, Trial Testimony)
- BLANCO V TOTS IN MIND ET AL (2009) (Scherffius, Ballard, Still & Ayres, Atlanta, GA.) (Expert Research and Report)
- ATLAS EQUIPMENT CO. LLC V. WEIR SLURRY GROUP, INC., ET AL. (2008) (Perkins-Coie, Seattle, Washington) (Expert Report)
- AJ INTERMEDIATE HOLDINGS LLC; AND AJ ACQUISITION 1 LLC D/B/A NATIONAL PAINTBALL SUPPLY V. PROCAPS L. P., ET AL, Civil Action No 1:07-00192, JHR-AMDM, United States District Court of New Jersey (2007) (Volpe- Koenig, Philadelphia, PA) (Expert Report)
- SYMBOL TECHNOLOGIES, INC. V. METROLOGIC INSTRUMENTS, INC., Civil Action No. 2:05cv509, LED, United States District. Court of Pa., Eastern District (2007) (Deposition)
- BECTION, DICKINSON AND COMPANY V. TYCO HEALTHCARE GROUP LP, Civil Action No. 02-1694 - GMS United States District Court of Delaware (2004) (Wilmer Hale, Washington, DC, Deposition and Testimony (Jury found in client's favor)

Awards and Recognitions

- 2017 Nominated for the Cooper Hewitt National Design Award in Product Design
- 2015 Recognized by IDSA as one of the top 50 Industrial Designers of the past 50 years
- 2010 Industrial Designers Society of America Personal Recognition Award for Lifetime Achievement
- 2008 IDSA Industrial Design Excellence Awards, Silver
- 2007 Appliance Manufacturer's EID Award, 1 Gold 2006
IDSA Industrial Design Excellence Award, Gold
Appliance Manufacturer's EID Award, 3 Gold
- 2005 R&D Magazine R&D100 Award, Gold
Consumer Electronics Association Award
- 2004 IDSA Industrial Design Excellence Award, Bronze
- 2003 Appliance Manufacturers' Award
- 2002 Good Design Awards

- 2001 IDSA Industrial Design Excellence Award. Bronze
Good Design Award
Good Design Award
- 2000 IF Hanover Award
- 2000 Appliance Magazine Award
Consumer Electronics Show Innovations Award 1999
IDSA Industrial Design Excellence Awards, Bronze
- 1998 Product Design and Development Gold Award
Consumer Electronics Show Innovations Award
- 1997 ID Magazine Design Distinction Award
- 1996 IDSA Industrial Design Excellence Awards, Gold
Consumer Electronics Show Innovations Award
- 1995 G-Mark, Japan
- 1994 IF Award Hanover Fair, Germany
- 1994 IDSA Industrial Design Excellence Awards, Gold
- 1994 IDSA Industrial Design Excellence Awards, Bronze
- 1994 G-Mark, Japan
- 1993 Consumer Electronics Design Engineering Award, M Series Speakers, Polk Audio
AudioVideo International Grand Prix, M3 Speaker, Polk Audio
- 1991 IDSA Industrial Design Excellence Awards, Gold
- 1991 ID Magazine Design Review, Honorable Mention
- 1991 IDSA Industrial Design Excellence Awards, Bronze
- 1990 ID Magazine Design Review, Honorable Mention
- 1989 Certificate of Excellence, American Institute of Graphic Artists
- 1988 ID Magazine Design Review
2 Selections
3 Honorable Mentions
IDSA Industrial Design Excellence Awards Recognition
Retailer's Choice Award of Distinction
The Krupps International Design Competition, Honorable Mention
Desi Award for Packaging
- 1987 IDSA Excellence awards, Recognition 1986 ID Magazine Designers Choice Award
- 1985 IDSA Industrial Design Excellence Awards, Recognition
3 products selected for exhibition in The United States Information Agency Traveling Exhibit for
Eastern Europe, "Design America"
Worldesign '85 Certificate of Gratitude
- 1984 Products selected for "the Process of Design Exhibit", The Katonah museum
- 1982 "DESI" award for packaging design
Package Design Council Award of Excellence 1981 Package Design Council Award of Excellence
- 1979 DESI" award for packaging design
- 1976 ID Magazine Annual Design Review Award
- 1974 ID Magazine Annual Design Review Award
- 1973 American Iron and Steel Institute Design in Steel" Award for Scientific and Medical Equipment
Citation in Engineering for Scientific and Medical Equipment
- 1971 Ventures in Design Award
- 1968 Alcoa and Industrial Designers Society of America Merit Awards

Publications, Juries and Lectures

- 2016 Invited Presenter & Panelist, SPE Design in Plastics Conference
- 2015 Invited Presenter, United States Patent and Trademark Office, Design Day.

- 2014 Invited Panel Facilitator, Greater Philadelphia Manufacturing Summit, Track 1, Innovation: Creating New Value, Products, Processes & Markets
- 2014 Invited Opening Speaker, Wharton Education Design Studio; Design Thinking Intensive.
- 2014 Invited Speaker, Eastman Design Educators Luncheon, IDSA International Conf., Austin, TX
- 2013 Invited Juror, CES Innovation Award 2014
- 2013 Invited Juror, IDEA Brazil Awards, Objeto Brasil, Sao Paulo, Brazil
- 2013 Wharton Small Business Development Center, "Innovation in Small Business"
- 2012 Invited Speaker, United States Patent and Trademark Office, DesignDay.
- 2012 Invited Speaker, Industrial Designers Society of America NED Conference 20 Invited Speaker, Delaware Valley Industrial Resource Center
- 2009 Invited Speaker, Industrial Design Evolution, From Visual to Visceral to Virtual, Project Fusion Conference. Miami, FL
- 2009 Invited Speaker, Entrepreneur's Panel, Wharton Energy Conference, Philadelphia, PA 2008 Invited Speaker, Sustain 08, Chicago, "SRS Energy, Sustainability in Roofing Products 2008 Invited Speaker, Villanova University, "Doing Well by Doing Good".
- 2008 Invited Speaker, IDSA Spotlight Webinar, Residual Income, the Holy Grail 2007 University of Pennsylvania 20/20 lecture series
- Juror, CES Innovation Award
- 2005 Juror, CES Innovation Award Juror, Dyson awards
- Juror, P&G Innovations Award 2005
- Juror, CES Innovation Award
- Invited Speaker, National Conference of the Industrial Designers Society of America, Wash DC
- Invited Speaker, the Green Conference, Boston, Massachusetts
- 2004 Juror, National Housewares Association innovations Awards
- 2003 Invited Speaker, Product Development Management Association, Philadelphia, PA
- 2001 Invited speaker, Paper presentation, Designing for Global Products, Rockwell Global Learning Fair: A Passport to Asia-Pacific, Cleveland, Ohio
- 2001 Invited Speaker, the Housewares Manufacturer's Association meeting, Chicago, Illinois 1999 Invited Speaker, the Housewares Manufacturer's Association meeting, Chicago, Illinois 1998 Invited Speaker, Industrial Designers Society of America Southern District Conference, St Augustine, FL
- 1998 Invited Speaker, The Housewares Manufacturer's Association meeting, Chicago, Illinois 1998 Invited Speaker, Temple University Association of Retired Professionals, Philadelphia, PA 1997 Invited Speaker, The Housewares Manufacturer's Association meeting, Chicago, Illinois
- 1996 Invited Juror, Innovative Use of Materials Award, Philadelphia Furniture Show, Philadelphia, PA
- 1995 Jury Chair, Industrial Designers Society of America's Industrial Design Excellence Awards program
- 1993 Invited Speaker, Quality in Design Workshop, National Academy of Sciences, Washington, DC
- 1993 Invited Juror, Industrial Designers Society of America's Industrial Design Excellence Awards program
- 1992 Invited Speaker, 14th Annual Design Interaction, Auburn University, Alabama 1992 Invited Speaker, The World Class Product Design Conference, Lehigh University, Bethlehem, PA ("The Emergence of Industrial Design")
- 1991 Invited Speaker, EEC Design conference, Toulon, France ("Designing the Product Development Team")
- 1991 Invited Speaker, Taidi' 91 Conference, Taipei, Taiwan ("The product design process")
- 1990 Invited Speaker, IDSA Annual Conference, Santa Barbara, California ("Designing the Product Development Team")
- Invited Speaker, Design forum '90, Taipei, Taiwan ("The product's role in corporate identity")
- Invited Speaker, Benjamin Franklin Technology Seminar Series ("How to evaluate and contract

- Industrial Design services")
- 1989 Invited Juror, The Krupps International Design Competition
Invited Speaker, The International Congress of Societies of Industrial Design, Nagoya, Japan
("Design excellence in a socio/cultural context")
- 1988 Invited Juror ID Magazine Design Review
- 1987 Invited Consultant and Lecturer (2 weeks) to The Peoples Republic of China, Tianjin, China
("Consumer electronics in western markets")
- 1986 Invited presenter to Yugoslavia for the "Design America" Exhibit by the United States Information
Agency ("Design Consulting in the USA")
- 1985 Invited presenter at the International Congress of Industrial Designers International Conference,
Washington, DC ("The concurrent design process")
- 1982 Invited Juror, Industrial Designers Society of America's Industrial Design Excellence Awards
program
- 1975 Invited Juror, ID Magazine 1975 Design Review
- 1974 Invited participant of the National Academy of Sciences, National Research Council's 1st
Workshop on Mobility for Spinal-cord Impaired People
Invited presentation of a Paper, "The Development of The Standup Wheelchair", to the American
Society of Mechanical Engineers
- 1971 "The Standup Wheelchair" Published in Industrial Design, Interiors and Fortune
Magazines; also AP and UP releases
- 1969 Publication of "The Standup Wheelchair" in Design News, Industrial Design and other professional
journals

Associations / Affiliations

- 2017 Member, IPO, Inventor's professional organization
- 2016 Invited Guest Editor, Innovation Journal, professional journal of IDSA
- 2015 Member IDSA Intellectual Property Section, Co-chair Design IP Committee
- 2015 Member IDSA Nominations Committee
- 2011 Secretary / Treasurer, Industrial Designers Society of America
- 2007 Academy of Presidents, Industrial Designers Society of America
- 2005 Chair of the 2005 Design Gallery, IDSA National Conference in Washington, DC
- 2004 IDSA Academy of President's
- 1999 North East District Vice President, IDSA, two-year term
- 1995 1996 National Conference Committee, IDSA
- 1994 National Special Awards Committee, IDSA
- 1993 Industrial Design Excellence Awards Program, Chair
- 1992 Awarded Fellowship, Industrial Designers Society of America
- 1991 Chair of the Board, Industrial Designers Society of America, 2-year term President, The
Worldesign Foundation, 2-year term
- 1989 President, Industrial Designers Society of America, 2-year term Executive Vice President, The
Worldesign Foundation, 2-year term
- 1987 Executive Vice President, Industrial Designers Society of America IDSA Planning Committee,
Chair
- 1985 Secretary/Treasurer, Industrial Designers Society of America, 2-year term
- 1984 Developer and Chair, Design Excellence Gallery, Worldesign '85
- 1984 Management & Planning Committee, ICSID Worldesign '85 (meeting of the International
Congress of Societies of Industrial Design)
- 1981 National Vice President, Board of Directors, Industrial Designers Society of America, 2-year term
- 1979 Director, National Board of Directors, Industrial Designers Society of America, 2 year term

- 1977 Co-chair, National Committee for development of a professional field definition and entry level professional qualifications
- 1976 IDSA Annual Conference Chair
- 1973 to 1977 Co-founder and chapter Chair of The Philadelphia Chapter, Industrial Designers Society of America

Patents (authorship or co-authorship)

1	7018344	Retractable needle shielding device
2	7000988	Lift chair
3	D511203	Hose coupling
4	6926700	Needle assembly
5	6925716	Shaving apparatus
6	6881202	Needle assembly
7	D501673	Hose coupling
8	6651890	Combination hand-held and counter-top Omni directional scanner
9	D479405	Shark tooth shaped suede shoe brush
10	6553882	Pencil sharpener with integral receptacle
11	D471409	Ice cream scoop
12	D469789	Table saw
13	6412738	Portable stenographic machine stand
14	D455666	Streamlined pressure gauge
15	D450257	Pressure gauge
16	6257492	Combination hand-held and counter-top Omni-directional scanner
17	6241091	Decorative container for storing plunger
18	6206600	Combination toothbrush and toothpaste dispenser
19	D427200	Stand for a hand held optical scanner
20	D409931	Compact tire pressure gauge
21	5904806	Tape dispensing applicator and replaceable tape cartridge
22	D409509	Deluxe tire pressure gauge
23	D408806	Optical scanner
24	D408532	Hand held optical scanner
25	5830779	Method of making photovoltaic module
26	D399121	Slide latch
27	5735999	Applicator

28	D385881	Home health care terminal
29	5670014	Tape dispensing applicator and replaceable tape cartridge
30	5590495	Solar roofing system
31	5558232	Apparatus for sorting documents
32	5518576	Applicator
33	5466223	Needle assembly having single-handedly activatable needle barrier
34	D361785	Tape applicator
35	D351839	Speaker
36	D351388	Combined speaker and integral stand
37	5348544	Single-handedly actuatable safety shield for needles
38	D343782	Sealed lever latch
39	5248286	Aerobic climbing step/bench
40	5118096	Aerobic climbing step/bench
41	5116044	Aerobic climbing step/bench
42	5096186	Aerobic climbing step/bench
43	D324165	Flexible draw latch
44	D320950	Combined transmitter buoy and bracket therefor
45	D319799	Transmitter buoy
46	D319407	Transmitter buoy
47	D313761	Actuator plate for temperature control valve
48	D313719	Bathroom cabinet
49	4981453	Emergency transmitter buoy and bracket assembly
50	D303044	Lighted mirror
51	4856811	Device for transporting ski equipment
52	4636613	Combination dryer and iron
53	D285200	Handset telephone unit
54	D285197	Handset telephone unit
55	D278831	Paper and document handling and counting apparatus

56	D274520	Paper and document handling apparatus
57	D267553	Engine analyzer
58	D265482	Telescope
59	D262442	Engine analyzer
60	4269312	Apparatus for inflating a deflated tire
61	4255640	Door mounted oven controls
62	4129278	Tripod
63	D247854	Telescope
64	6918891	Safety device
65	D253598	Telescope mount
66	D253238	Telescope cradle
67	D253113	Telescope
68	D313761	Actuator Plate for Temperature Control Valve
69	4553711	Modular Holder for Paper Rolls
70	CA1138939	Door Mounted Microwave Oven Controls
71	3839751	Modular Therapy Pool Construction
72	3589769	The Standup Wheelchair

As a Design Consultant for over 45 years, Bressler has provided product design and development services to the following selected partial list of regional, national, and international Clients:

Applica
Becton Dickinson
Black & Decker
Bose Corporation
Clairol Inc.
DeWalt
Dentsply International, Inc.
E.I. DuPont de Nemours Co.
Edmund Scientific
Energizer
Gridless Power, Inc.
Honeywell
Honeywell Controls
IBM R&D
Kidsmart
Leeds & Northrup
Litton, Microwave Division
Litton, Specialty Products Division

Motorola, Inc.
Metrologic
Moore Process Control (Siemens)
Polk Audio
RCA, Broadcast Division
Scott Paper Company
Scott/ Tyco Safety Division
Schick Wilkinson Sword
Siemens Automotive
Siemens Medical
Southco Inc.
Solar Roofing Systems, Inc.
Thomson Consumer Electronics
Teleflex
Trojan Yachts
Vidar Corporation
Zenith Products Corp.