

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.

Case No. IPR2023-01324

U.S. Patent No. 9,414,662

**PATENT OWNER'S RESPONSE
PURSUANT TO 37 C.F.R. § 42.120**

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PATENT OWNER'S EXHIBIT LIST

Exhibit	Description
2001	Declaration of Brianna Lynn Silverstein in Support of Motion for <i>Pro Hac Vice</i> Admission
2002	Declaration of Breigh Nonte Roszelle, Ph.D.

I. INTRODUCTION

Patent Owner Dyson Technology Limited (“Patent Owner”) provides the following response to the Petition filed by SharkNinja, Inc., SharkNinja Operating LLC, SharkNinja Management LLC, and SharkNinja Sales Company (collectively, “Petitioners”) requesting *inter partes* review of claims 26-28 (“the Challenged Claims”) of U.S. Patent No. 9,414,662 (“the ’662 Patent”). For at least the reasons set forth below, Patent Owner requests that the Board confirms patentability of the Challenged Claims.

Petitioners have the burden of showing that each Challenged Claim is unpatentable by a preponderance of the evidence. 35 U.S.C. § 316(e). Petitioners cannot meet that burden as to any of the Challenged Claims. Petitioners ignore that one of ordinary skill in the art would have recognized that the claimed “primary fluid flow path” must be defined by the claimed “inner wall” that extends from the primary fluid inlet, through the handle, and into the hair care appliance. None of Petitioners’ grounds disclose this limitation and that is fatal as to all of the Challenged Claims.

Petitioners’ grounds also fail to show that any of the references disclose the additional limitation of Claim 28.

For at least the reasons set forth below, Petitioners have not shown by a preponderance of the evidence that any Challenged Claim is unpatentable, and the Board should find that none of the Challenged Claims are unpatentable.

II. SUMMARY OF '662 PATENT

The '662 Patent is directed to “a hand held appliance, in particular a hair care appliance such as a hairdryer or hot styling brush.” EX-1001 at 1:11-13; *see also* EX-2002 ¶ 27. The '662 Patent notes that in general, such hand held appliances include motors and fans, though “[t]he motor is susceptible to damage from foreign objects.” EX-1001 at 1:22-27; *see also* EX-2002 ¶ 27.

One way the '662 Patent attempts to protect the internal components from damage is by having two distinct walls of the handle: an inner wall that defines the primary fluid flow path, and an outer wall that is “an external surface of the appliance.” EX-1001 at 1:35-44; *see also* EX-2002 ¶ 28. Having the two distinct walls also allows for a layer of insulation between the walls for further protection and to provide other benefits, such as to reduce the noise of the appliance. EX-1001 at 1:35-49, 12:35-44; EX-2002 ¶ 28.

The two distinct walls for the handle also allows for the inner wall of the handle and the outer wall of the body to be “formed as a single unit.” EX-1001 at 2:10-11; *see also id.* at 11:61-63; EX-2002 ¶ 29. The '662 Patent recognizes that this “has a number of advantages,” including making access to some of the internal

components more difficult and making the product “visually cleaner.” EX-1001 at 2:12-23; *see also* EX-2002 ¶ 29.

As to the structure of the inner wall and outer wall, the ’662 Patent discloses that “inner wall 220 is a duct which surrounds and defines a primary fluid flow path 400 through the hairdryer.” EX-1001 at 12:31-33; *see also* EX-2002 ¶ 30. Further, “it is not essential that the outer wall extends over the entire length of the inner wall [2]20.” EX-1001 at 12:55-56; *see also* EX-2002 ¶ 30.

III. CLAIM CONSTRUCTION

Petitioners state that construction of any claim term is unnecessary for the Board to resolve the controversy. Pet. at 8. However, there is one claim construction issue for the Board to resolve in order to determine patentability of the Challenged Claims. The Board should construe the term “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet into the appliance” to mean “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet, through the handle, and into the appliance.”¹ As discussed

¹ Patent Owner has proposed a different term for construction in this Response than in its Preliminary Response in order to address and resolve the Board’s concerns regarding Patent Owner’s proposed construction of “inner wall” in the Institution Decision. ID at 14-17.

below, this issue is required in order to determine whether the Challenged Claims are unpatentable.

In applying the *Phillips v. AWH Corp.* standard for claim construction, claim terms are generally given their ordinary and customary meaning as would have been understood by a person of ordinary skill in the art at the time of the invention² and in the context of the entire patent disclosure. 415 F.3d 1303, 1312-13 (Fed. Cir. 2005); ID at 13. “[C]laims must be read in view of the specification, of which they are a part.” *Phillips*, 415 F.3d at 1315 (quotation omitted). The specification is usually “dispositive” of claim construction, is the “single best guide to the meaning of a disputed term,” and “is, thus, the primary basis for construing the claims.” *Id.* (quotations omitted). Additionally, “the context of the surrounding words of the claim also must be considered in determining the ordinary and customary meaning of terms in a claim.” *Wasica Fin. GmbH v. Cont’l Auto. Sys., Inc.*, 853 F.3d 1272, 1288 (Fed. Cir. 2017) (internal quotations omitted).

² For the purposes of this Response only, Patent Owner does not contest Petitioners’ definition of a person of ordinary skill in the art. Pet. at 18-19. Patent Owner reserves the right to contest this definition at any other point in this proceeding or in any other proceeding involving the ’662 Patent or any patents regarding a related technology.

Here, both the claim language and the specification support Patent Owner's construction of "inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet into the appliance" as "inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet, through the handle, and into the appliance." EX-2002 ¶ 36. Claim 26 states that the "inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet into the appliance." EX-1001 at 20:6-8; EX-2002 ¶ 37. Petitioners assert that this limitation is met as long as there is a fluid flow path from the outside of the appliance into *any* portion of the appliance, including a fluid flow path that extends through only a portion of the handle. *See, e.g.*, Pet. at 31-34 (citing EX-1003 ¶¶ 80-81) (arguing that the air flow into Jeong's housing 10 and through the motor housing 18, which extends along only a part of the handle, meets this limitation), 55-57 (citing EX-1003 ¶¶ 104-107) (arguing that air flow into Yoshida's housing 1 and through the cylindrical wind tunnel, which extends along only a part of the handle, meets this limitation), 79-81 (citing EX-1003 ¶¶ 144-145) (arguing that flow into and through Jeffs' high pressure air inlet channel 35, which extends along only a part of the handle, meets this limitation). However, this would mean that *any* fluid entering into *any* fluid inlet would create a flow path from outside the appliance into the appliance. EX-2002 ¶ 37. Similarly, if the portion of the appliance in which the air initially enters through the fluid inlet reads on the "the appliance," then *any*

fluid inlet through which fluid enters would create a fluid flow path from outside the appliance into the appliance. EX-2002 ¶ 38. Such a claim interpretation renders the phrase “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet *into the appliance*” meaningless because the fluid inlet itself meets Petitioners’ interpretation that the claimed “inner wall” is met by any wall that provides a fluid flow path from the outside of the appliance into *any* portion of the appliance. EX-2002 ¶ 38. Thus, “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet into the appliance” in Claim 26 must require the claimed “inner wall” to define more than just a fluid flow path from the outside of the appliance into *any* portion of the appliance. EX-2002 ¶ 38.

Additionally, the phrase “into the appliance” must mean some portion of the hair care appliance that is not within the handle. EX-2002 ¶ 39. The handle is one of the elements of the hair care appliance in Claim 26. EX-2002 ¶ 39. However, the phrase “into the appliance” has no meaning if the scope of “into the appliance” includes “into the handle” for the same reasons stated above. EX-2002 ¶ 39.

Otherwise, there is no difference between the scope of the phrase “from a primary fluid inlet” and the scope of the phrase “from a primary fluid inlet into the appliance” because if the handle counts as the claimed “appliance” in this limitation, then once the primary fluid flow extends from a primary fluid inlet it is already in the appliance. EX-2002 ¶ 39. Accordingly, for the phrase “into the

appliance” to have any meaning it must at least require the primary fluid flow path to exit the handle portion of the appliance. EX-2002 ¶ 39. Thus, one of ordinary skill in the art would have understood that the “primary fluid flow path” defined by “the inner wall” recited in Claim 26 must extend from a claimed “primary fluid inlet,” through the claimed “handle,” and “into the appliance.” EX-2002 ¶ 39.

The specification and drawings also support Patent Owner’s construction because they consistently require the “inner wall” to extend the entirety of the handle from the primary fluid inlet to the body of the appliance in order to define “a primary fluid flow path that extends from a primary fluid inlet into the appliance.” EX-2002 ¶ 40. All of the figures illustrating the handle show that inner wall 220 extends the full length of the handle from the primary fluid inlet to the body and forms a duct for the primary fluid flow path from the primary fluid inlet 40 to the body 30. *See* EX-1001 at Figs. 3, 4b, 5, 6, 7; EX-2002 ¶ 40. For example, annotated Figures 3 and 4b below show that the inner wall 220 extends the full length of handle 200 from the primary fluid inlet 40 to body 30. EX-2002 ¶ 40.

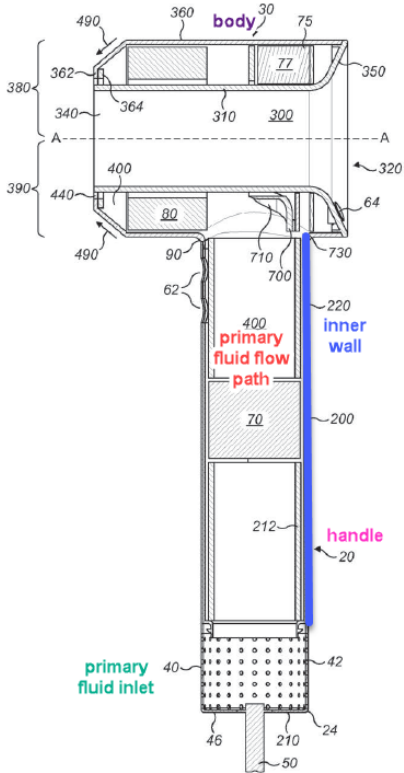
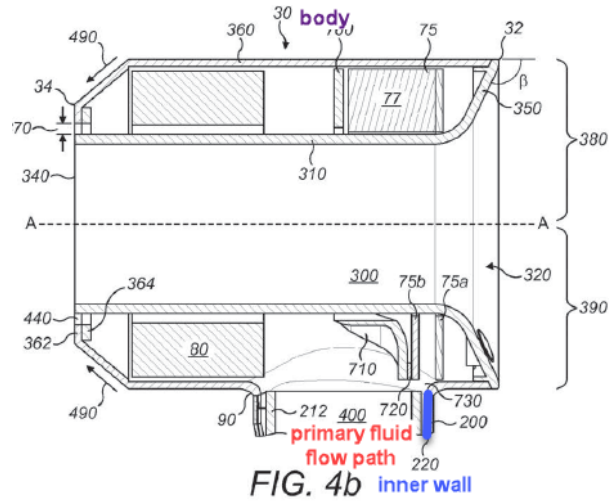


FIG. 3

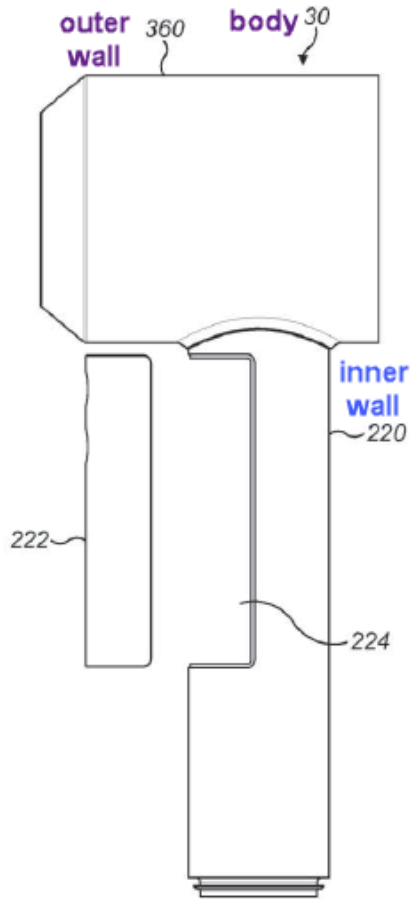
EX-1001 Fig. 3 (annotated)



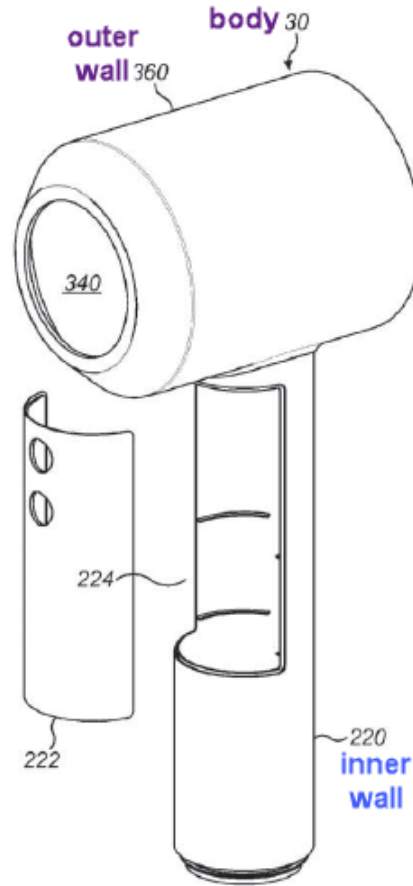
EX-1001 Fig. 4b (annotated)

The specification also discloses, “[t]he inner wall 220 is a duct which surrounds and defines a primary fluid flow path 400 *through* the hairdryer.” EX-1001 at 12:31-33 (emphasis added). This indicates that the claimed primary fluid flow path must pass through the inner wall in the entirety of the handle, which is consistent with Patent Owner’s construction. EX-2002 ¶ 41.

Additionally, the specification discloses that the outer wall 360 of the body 30 and the inner wall 220 of the handle 20 is a single piece. EX-1001 at 11:49-51, 11:61-63; EX-2002 ¶ 42. This is illustrated by Figures 5 and 6 as annotated below:



EX-1001 Fig. 5 (annotated)



EX-1001 Fig. 6 (annotated)

The specification further discloses that the outer wall 200 of the handle 20 does not have to extend over the entire length of the inner wall 220 implying that inner wall 220 must extend the full length of the handle from the primary fluid inlet 40 to body 30. EX-1001 at 12:54-65; EX-2002 ¶ 43.

Patent Owner acknowledges, as set forth in the Institution Decision, that unlike the embodiments discussed above, Claim 26 does not require the length of the inner wall to extend to the body. ID at 16-17. By specifying that the claimed “inner wall” defines a primary fluid flow path that extends from a primary fluid inlet *into the appliance*, rather than *into the body*, the scope of Claim 26 does not

preclude another element from defining some part of the “primary fluid flow path” between the handle and the body. EX-2002 ¶ 44. However, by specifying that the claimed “inner wall” of the handle, as opposed to the claimed “outer wall” of the handle, defines the primary fluid flow path from a primary fluid inlet into the appliance, Claim 26 does preclude a handle in which the inner wall fails to define the entirety of the primary fluid flow path within the handle. EX-2002 ¶ 44.

Thus, a person of ordinary skill in the art at the time of the invention reading the claim language and the specification would have interpreted “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet into the appliance” to mean “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet, through the handle, and into the appliance.” EX-2002 ¶ 45.

IV. SPECIFIC GROUNDS OF ALLEGED UNPATENTABILITY

Petitioners have not met their burden of showing by a preponderance of the evidence that any of the Challenged Claims are unpatentable. None of the art to which Petitioners cite show the claimed “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet into the appliance.” Petitioners also fail to show that the art meets the additional limitations of the dependent claims. Thus, Petitioners have not met their burden of showing by a preponderance of the evidence that the Challenged Claims are anticipated and/or

obvious, and the Board should find that none of the Challenged Claims are unpatentable.

A. GROUND 1: U.S. Patent Application Publication No. US 2013/0111777 (“Jeong”) does not anticipate the Challenged Claims

Ground 1 should fail because Jeong fails to disclose the claimed “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet into the appliance” that is recited in all of the Challenged Claims. Ground 1 also fails as to Claim 28 for the additional reason that Jeong fails to disclose that “the primary fluid flow in the body is substantially orthogonal to the primary fluid flow in the handle.” Thus, Petitioners have not met their burden of showing that the Challenged Claims are unpatentable under Ground 1.

1. Jeong does not disclose the claimed “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet into the appliance” present in all Challenged Claims

Jeong fails to disclose the claimed “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet into the appliance,” that is the “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet, through the handle, and into the appliance.” Petitioners assert that Jeong’s discharge nozzle 30 is the claimed “body” and that Jeong’s housing 10 is the claimed “handle.” Pet. at 24-25; EX-1003 ¶ 70.

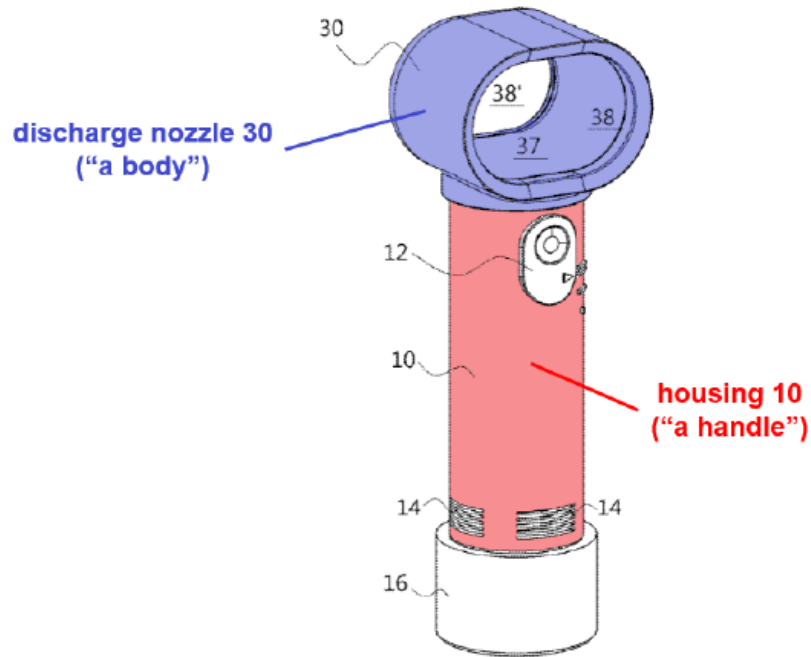


FIG. 1

Pet. at 25; EX-1003 ¶ 70

Petitioners then assert that Jeong's housing 10 is the claimed "outer wall," Jeong's motor housing 18 is the claimed "inner wall," and Jeong's plurality of inflow slots 14 are the claimed "primary fluid inlet." Pet. at 27-29, 31; EX-1003 ¶ 77.

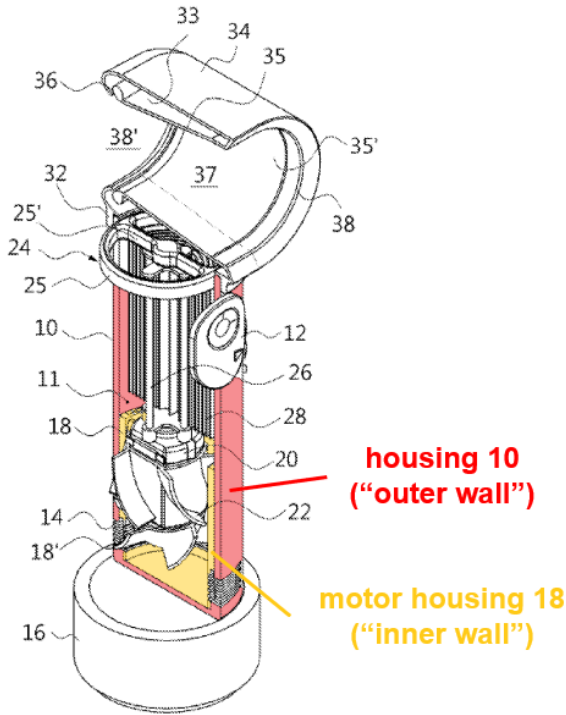


FIG. 2

Pet. at 28; EX-1003 ¶ 77

motor housing 18
("inner wall")

housing 10
("outer wall")

motor housing 18
("inner wall")

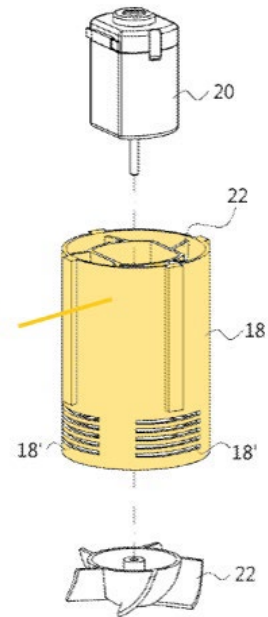


FIG. 3

Pet. at 29; EX-1003 ¶ 77

However, Petitioners' and Dr. Nosenchuck's own illustrations show that Jeong's motor housing 18 does not extend from the plurality of inflow slots 14 through the handle to the discharge nozzle 30 or to an exit from the handle. EX-2002 ¶ 51.

Instead, Jeong's motor housing 18 that Petitioners and Dr. Nosenchuck assert is the claimed "inner wall" only extends from the plurality of inflow slots 14 about half-way up housing 10, which Petitioners and Dr. Nosenchuck assert is the claimed "handle," and does not exit the handle into the appliance as required by the Challenged Claims. EX-2002 ¶ 51. By contrast, in Jeong, the primary fluid flow path through the handle to the appliance is defined by housing 10, which Petitioners and Dr. Nosenchuck allege correspond to the outer wall, not the motor

housing 18, which Petitioners and Dr. Nosenchusk allege correspond to the inner wall. EX-2002 ¶ 51. Thus, Jeong fails to disclose the claimed “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet into the appliance” and Ground 1 fails on that basis alone.

2. Jeong does not disclose the additional limitation of Claim 28

Jeong also fails to disclose that “the primary fluid flow in the body is substantially orthogonal to the primary fluid flow in the handle” as recited in Claim 28. EX-2002 ¶ 53. Petitioners assert that Jeong’s primary fluid flow path is the airflow path that flows through housing 10 and motor housing 18, to discharge slit 36, and then to discharge hole 38. Pet. at 46-48 (citing EX-1003 ¶¶ 90-92). Petitioners then state, without any basis, that the airflow changes by approximately 90 degrees. *Id.* at 46-48 (citing EX-1003 ¶¶ 91-92).

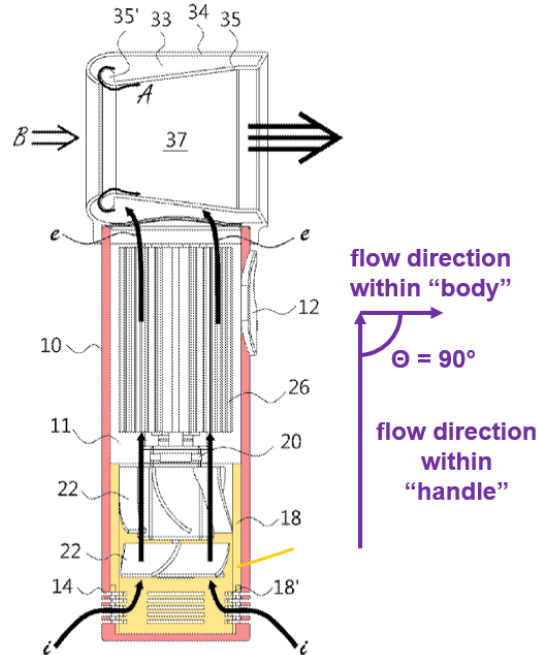


FIG. 5

Pet. at 47; EX-1003 ¶ 91

Petitioners’ analysis lacks any explanation as to the direction of the primary fluid flow path *in the body*, which is fatal given that Claim 28 requires that “the *primary fluid flow in the body* is substantially orthogonal to the *primary fluid flow in the handle*.” EX-1001 at 20:16-18 (emphasis added); EX-2002 ¶ 55.

Claim 26, on which Claim 28 depends, recites “wherein the primary fluid flow path from the primary fluid inlet to a primary fluid outlet from the body is non linear.” The ’662 Patent describes two different fluid flows. Ex-2002 ¶ 56. An example of the claimed “primary fluid flow” illustrated below in red as it enters through the primary inlet 40 through fluid flow path 400 and exits at the primary fluid outlet 440 in the body. EX-1001 at 10:24-34; EX-2002 ¶ 56. The ’662 Patent also discloses a secondary fluid flow illustrated below in blue that flows

exclusively within the body through fluid flow path 300 extending from fluid inlet 320 to fluid outlet 340. EX-1001 at 10:40-45, 50-25; EX-2002 ¶ 56.

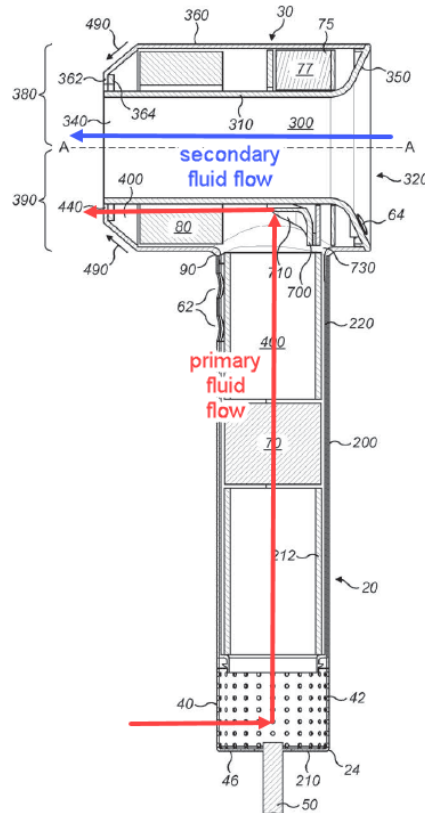


FIG. 3

EX-1001 Fig. 3 (annotated)

Thus, the primary fluid flow and the secondary fluid flow are two different flow paths that may merge at their respective outlets. EX-1001 at 10:59-63; EX-2002 ¶ 57. However, only the primary fluid flow is recited in the Challenged Claims, and it is that flow that in the body must be orthogonal to the flow in the handle. EX-1001 at 20:16-18; EX-2002 ¶ 55.

Similarly, as illustrated in Figures 2 and 5, Jeong discloses two separate fluid flows. EX-2002 ¶ 58. Jeong discloses a fluid flow from inflow slot 14 and

inner inflow slot 18' as illustrated by arrow i through the handle to discharge slit 36 as shown by arrow A. EX-1004 ¶¶ [0052]-[0055], Fig. 5; EX-2002 ¶ 58. Jeong also discloses a second fluid flow that never flows through the handle represented by arrow B that flows from secondary inflow hole 38' through central passage part 37 and discharged through discharge hole 38. EX-1004 ¶¶ [0055]-[0056]³, Figs. 2, 5; EX-2002 ¶ 58. The air from the two fluid flows may be mixed in central passage part 37 and be discharged together through discharge hole 38. EX-1004 ¶ [0056]; EX-2002 ¶ 58.

³ In paragraphs [0055] and [0056], Jeong mistakenly refers to the secondary inflow hole as 38, the central part passage as 32, and the discharge hole as 39. However, as identified elsewhere in Jeong and consistent with the figures, the secondary inflow hole is actually 38', the central passage part is actually 37, and the discharge hole is actually 38. EX-1004 ¶¶ [0045]-[0046], [0051], Figs. 2, 5; EX-2002 ¶ 58.

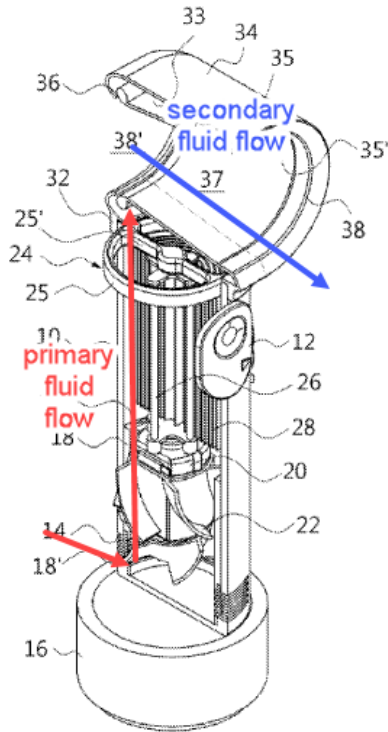


FIG. 2

EX-1004 Fig. 2 (annotated)

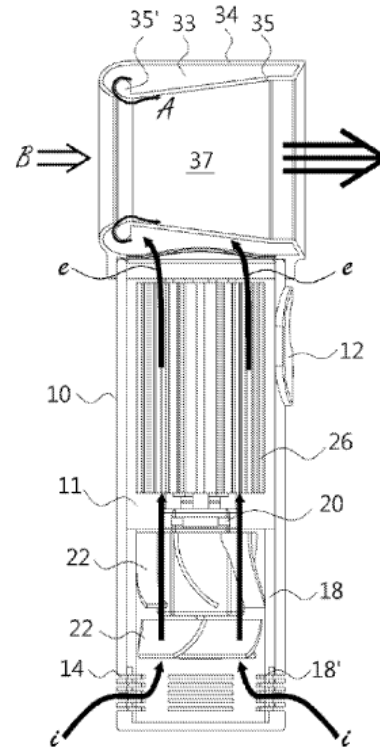


FIG. 5

EX-1004 Fig. 5

Accordingly, in both the '662 Patent and Jeong, the features allegedly corresponding to the claimed “primary fluid outlet” is where the fluid flow that flows through the handle, a requirement of the claimed “primary fluid flow,” is discharged, as opposed to the outlet that includes the fluid flow that never flows through the handle. EX-2002 ¶ 59.

Petitioners and Dr. Nosenchuck erroneously allege that the claimed “primary fluid flow in the body” goes through discharge slit 36 to discharge hole 38. Pet. at 46-47; EX-1003 ¶ 91; ID at 31. Petitioners and Dr. Nosenchuck then allege that it is this flow in central passage 37 that is substantially orthogonal to the claimed

“primary fluid flow in the handle,” disclosing the additional limitation of Claim 28.

Pet. at 46-58; EX-1003 ¶¶ 90-93; ID at 31.

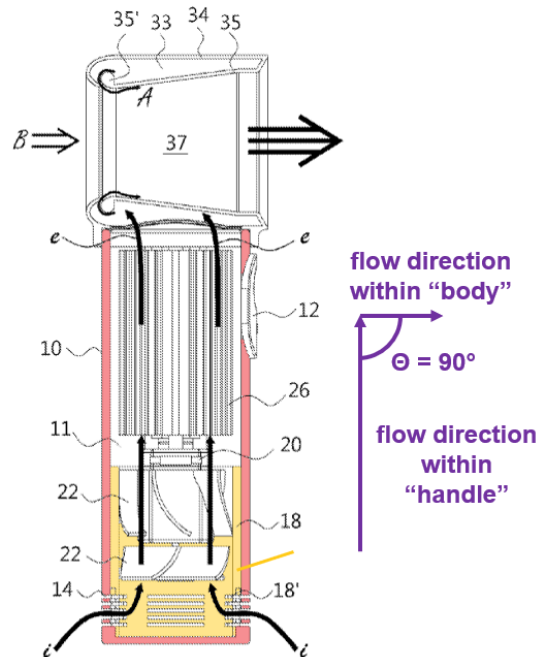
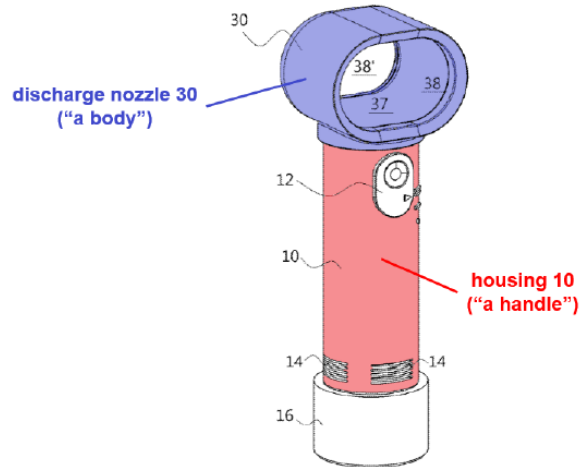


FIG. 5

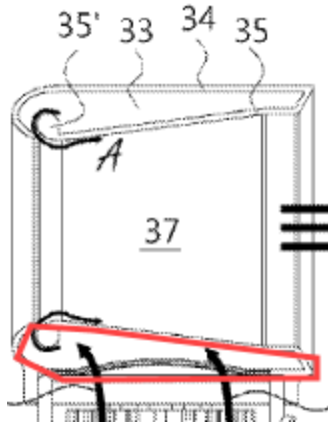
Pet. at 47; EX-1003 ¶ 91

Petitioners’ and Dr. Nosenchuck’s arguments fail for two reasons. *First*, Petitioners and Dr. Nosenchuk have not shown that the fluid flow “in the body” is orthogonal to the fluid flow in the handle, as required by Claim 28. EX-2002 ¶ 61. As discussed above, it appears that Petitioners and Dr. Nosenchuk are asserting that the fluid flow in central passage 37 is the claimed flow “in the body,” though neither specifies exactly what fluid flow they are asserting is the claimed flow. Pet. at 46-47; EX-1003 ¶¶ 90-92. However, by Petitioners’ and Dr. Nosenchuck’s own admissions, central passage 37 is not part of the claimed “body,” as illustrated below. EX-2002 ¶ 61.



Pet. at 25; EX-1003 ¶ 70

Second, even if the Board finds that the flow in central passage 37 is “in the body,” Petitioners’ and Dr. Nosenchuck’s allegations still fail because they have not shown that the fluid flow in central passage 37 is the claimed “primary fluid flow.” EX-2002 ¶ 62. As described above, the claimed “primary fluid outlet” equates to discharge slit 36 in Jeong, *i.e.*, where the fluid flow that flowed through the handle exits the body. EX-2002 ¶ 62. As outlined in red below, the claimed “primary fluid flow” in Jeong flows from the handle into the body and flows around the annular space between the inner wall 35 and outer wall 34 of discharge nozzle 30 (the claimed “body”) before exiting through discharge slit 36. EX-1004 Fig. 5; EX-2002 ¶ 63.



EX-1004 Fig. 5 (excerpted and annotated)

There is no disclosure that the annular space between the inner wall 35 and outer wall 34 is configured to redirect the claimed “primary fluid flow” from housing 10 (alleged claimed “handle”) in a direction substantially perpendicular to the flow within housing 10 before exiting through discharge slit 36 (the claimed “primary fluid outlet from the body”). EX-2002 ¶ 64. Thus, Jeong fails to disclose the additional limitation of Claim 28 reciting “wherein the primary fluid flow in the body is substantially orthogonal to the primary fluid flow in the handle.” EX-2002 ¶ 65. As such, Petitioners have not met their burden of showing by a preponderance of the evidence that Claim 28 is unpatentable under Ground 1.

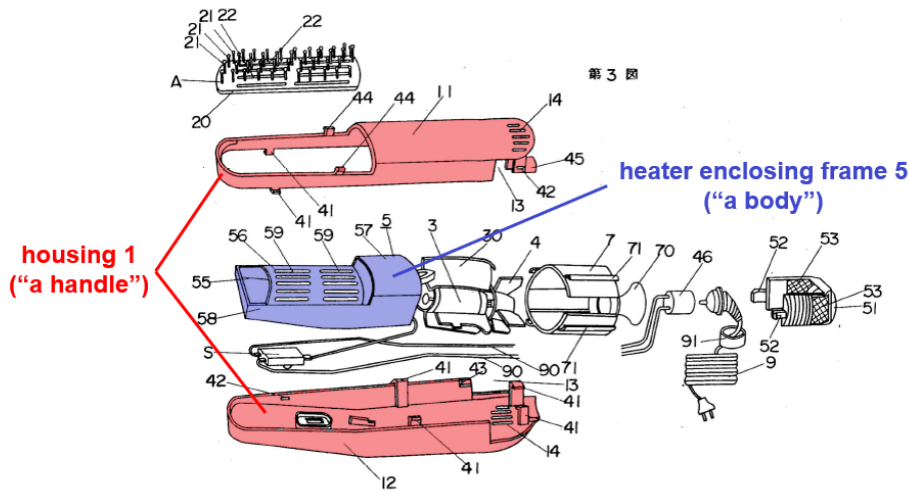
B. GROUND 2: Japanese Patent Application Publication No. JP S 60-249907 (“Yoshida”) does not anticipate the Challenged Claims

Similar to Ground 1, Ground 2 fails because Yoshida fails to disclose the claimed “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet into the appliance” that is required for all of the Challenged Claims. In addition, Ground 2 fails as to Claim 27 and Claim 28 because Yoshida

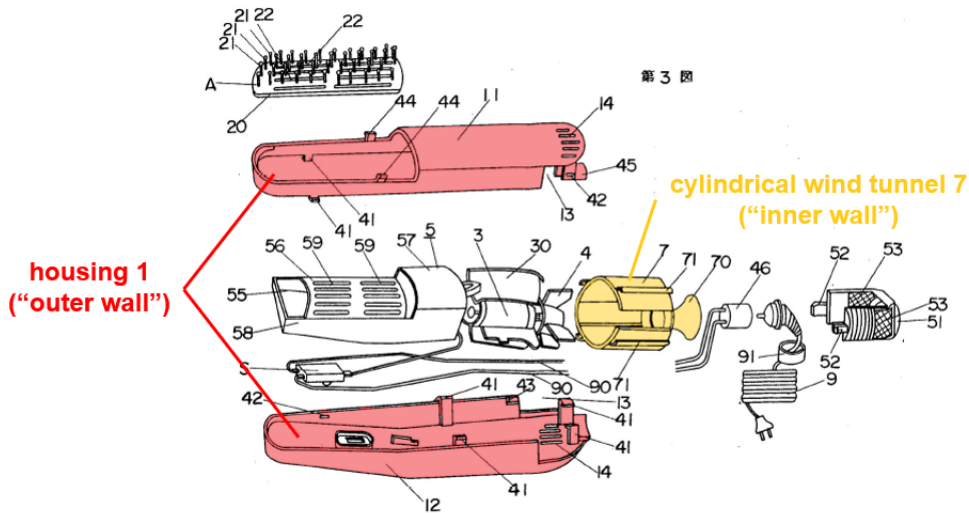
fails to disclose either of the additional limitations of those dependent claims that recite “the primary fluid flows within the handle in a first direction and within the body in a second direction” and “the primary fluid flow in the body is substantially orthogonal to the primary fluid flow in the handle,” respectively.

1. Yoshida does not disclose the claimed “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet into the appliance” present in all Challenged Claims

Yoshida fails to disclose the claimed “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet into the appliance,” that is “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet, through the handle, and into the appliance.” Petitioners assert that Yoshida’s housing 1 is the claimed “handle,” Yoshida’s heater enclosing frame 5 is the claimed “body,” and that Yoshida’s cylindrical wind tunnel 7 is the claimed “inner wall.” Pet. at 50-51 (citing EX-1003 ¶¶ 96-98), 56-57 (citing EX-1003 ¶¶ 105-107).



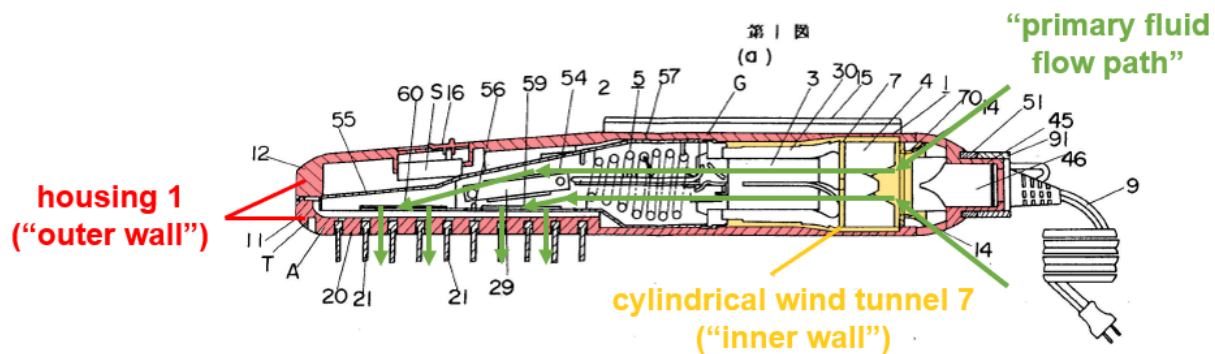
Pet. at 51; EX-1003 ¶ 97



Pet. at 56; EX-1003 ¶ 105

Petitioners then assert that the claimed “primary fluid flow path” originates at Yoshida’s suction ports 13 and 14, which Petitioners assert are the claimed “primary fluid inlet,” travels through Yoshida’s cylindrical wind tunnel 7 (asserted claimed “inner wall”) through Yoshida’s heater enclosing frame 5 (asserted claimed “body”), and exits through outlet 59, which Petitioners assert is the

claimed “primary fluid outlet from the body.” Pet. at 60-62 (citing EX-1003 ¶¶ 110-111).



Pet. at 62; EX-1003 ¶ 111

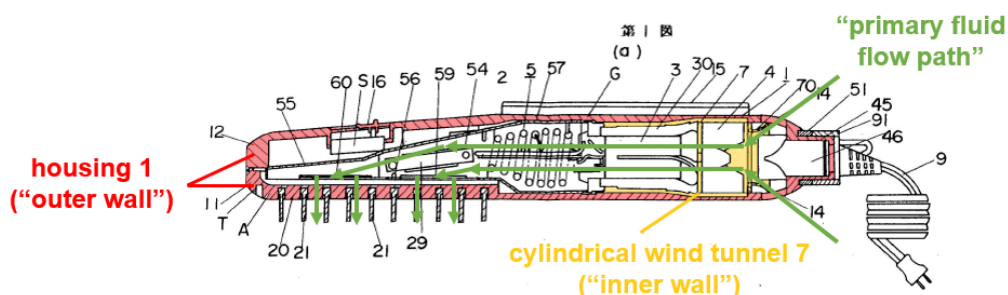
However, Petitioners’ own illustrations show that Yoshida’s cylindrical wind tunnel 7 does not extend from the suction ports 13 and 14 through the housing 1 (the alleged claimed “handle”) to discharge ports 59, which are the outlets from housing 1. EX-2002 ¶ 70. Because discharge ports 59 are the outlets for both housing 1 and heater enclosing frame 5, the cylindrical wind tunnel 7 does not define a primary fluid flow path that extends from a primary fluid inlet, through the handle, and into the appliance. EX-2002 ¶ 70. Instead, Yoshida’s cylindrical wind tunnel 7 that Petitioners and Dr. Nosenchuck assert is the claimed “inner wall” extends from the suction ports 13 and 14 only about half-way up housing 1, which Petitioners and Dr. Nosenchuck assert is the claimed “handle.” EX-2002 ¶ 70. Thus, Petitioners have not shown by a preponderance of the evidence that Yoshida discloses the claimed “inner wall . . . defines a primary fluid flow path that extends

from a primary fluid inlet into the appliance” and Ground 2 fails on that basis alone. EX-2002 ¶ 71.

2. Yoshida does not disclose the additional limitations of Claims 27 and 28

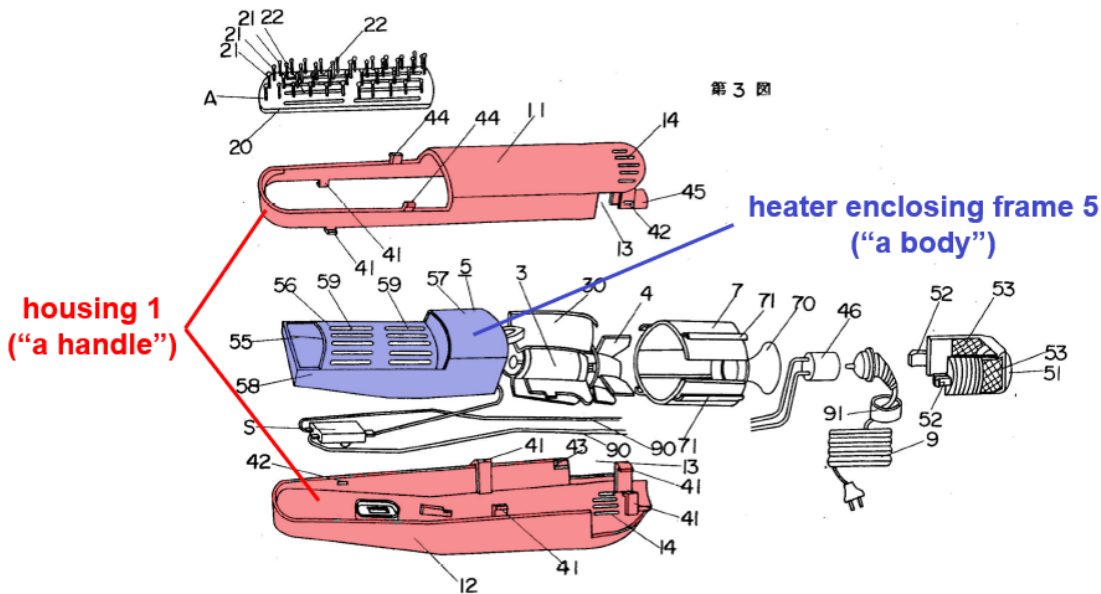
Petitioners also fail to show by a preponderance of the evidence that Yoshida discloses that “the primary fluid flows within the handle in a first direction and within the body in a second direction,” as required by Claim 27, or that “the primary fluid flow in the body is substantially orthogonal to the primary fluid flow in the handle,” as required by Claim 28.

Petitioners and Dr. Nosenchuck assert that the claimed “primary fluid flow path” originates at Yoshida’s suction ports 13 and 14, which Petitioners and Dr. Nosenchuck assert are the claimed “primary fluid inlet,” travels through Yoshida’s cylindrical wind tunnel 7 (asserted claimed “inner wall”) and through Yoshida’s heater enclosing frame 5 (asserted claimed “body”), and exits through outlet 59, which Petitioners and Dr. Nosenchuck assert is the claimed “primary fluid outlet from the body.” Pet. at 60-62; EX-1003 ¶ 111.



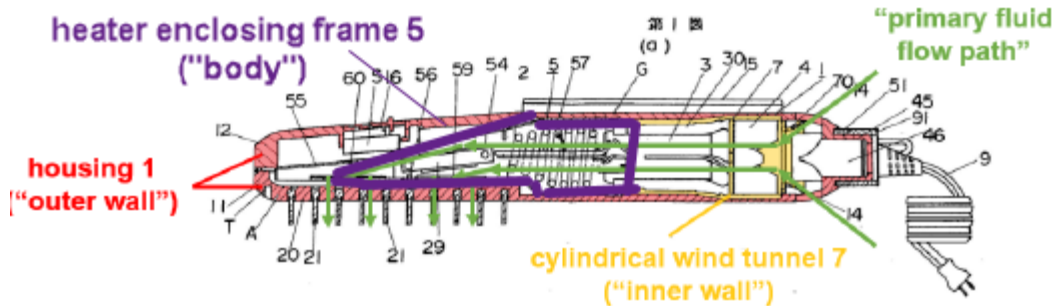
Pet. at 62; EX-1003 ¶ 111

However, Petitioners and Dr. Nosenchuck also assert that Yoshida’s housing 1 is the claimed “handle” and that Yoshida’s heater enclosing frame 5 is the claimed “body.” Pet. at 50-51, EX-1003 ¶ 97. As illustrated below, the alleged “handle” encompasses the alleged “body.” EX-2002 ¶ 74.



Pet. at 51; EX-1003 ¶ 97

As illustrated by the purple lines below outlining the heater enclosing frame 5, which Petitioners and Dr. Nosenchuck assert is the claimed “body,” the asserted claimed “handle” encompasses the asserted claimed “body” and the asserted claimed “primary fluid flow” that occurs in the asserted claimed “body” also necessarily occurs in the asserted claimed “handle” (which Petitioners and Dr. Nosenchuck also assert is the claimed “outer wall”). EX-2002 ¶ 75.



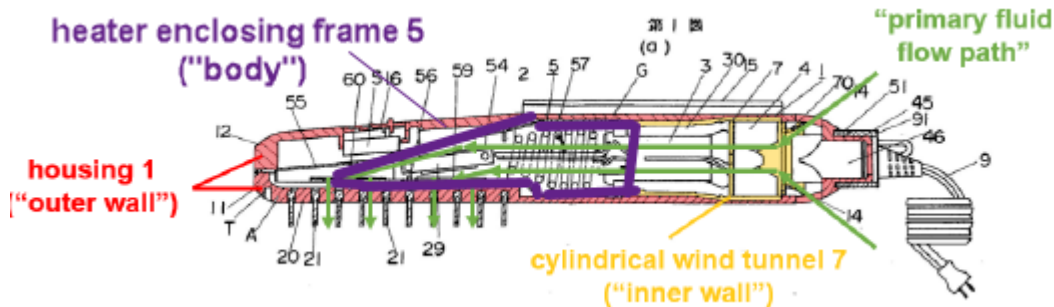
Pet. at 62; EX-1003 ¶ 111 (further annotated)

Further, as illustrated above, Petitioners and Dr. Nosenchuck admit that the primary fluid flow that occurs in housing 1 (asserted claimed “handle” and “outer wall”) prior to entering the heater enclosing frame 5 (asserted claimed “body”) is in the same direction as the direction of the asserted claimed “primary fluid flow” entering the heater enclosing frame 5. EX-2002 ¶ 76; *see also* Pet. at 62-63 (Petitioners asserting that the only change in direction in the primary fluid flow occurs in the asserted claimed “body”); EX-1003 ¶ 112 (same). However, because the asserted claimed “primary fluid flow” in the asserted claimed “body” is coextensive with that in the asserted claimed “handle,” any fluid flow in the asserted claimed “body” also occurs in the asserted claimed “handle. EX-2002 ¶ 76. Additionally, the fluid flow that occurs exclusively in the asserted claimed “handle” is in the same direction (*i.e.*, substantially parallel) as the asserted claimed “primary fluid flow” that occurs in the asserted claimed “body.” Thus, Petitioners and Dr. Nosenchuck have not shown a “second direction” of fluid flow within the asserted claimed “body” from the flow within the asserted claimed

“handle” or how the fluid flow in the asserted claimed “body” can be substantially orthogonal to the fluid flow in the asserted claimed “handle” when the fluid flow in the asserted claimed “body” is the same fluid flow as found in the asserted claimed “handle.” EX-2002 ¶ 76. Thus, Yoshida fails to disclose “the primary fluid flows within the handle in a first direction and within the body in a second direction,” as required by Claim 27, or that “the primary fluid flow in the body is substantially orthogonal to the primary fluid flow in the handle,” as required by Claim 28. EX-2002 ¶ 77.

Further, as to Claim 28, Petitioners have also failed to meet their burden of showing by a preponderance of the evidence that Yoshida discloses that “the primary fluid flow in the body is substantially orthogonal to the primary fluid flow in the handle” because they have not shown that the fluid flow *in the body* is substantially orthogonal to that in the handle. As discussed above, Petitioners and Dr. Nosenchuck assert that the claimed “primary fluid flow path” originates at Yoshida’s suction ports 13 and 14, which Petitioners and Dr. Nosenchuck assert are the claimed “primary fluid inlet,” travels through Yoshida’s cylindrical wind tunnel 7 (asserted claimed “inner wall”) and Yoshida’s heater enclosing frame 5 (asserted claimed “body”), and exits through discharge ports 59, which Petitioners assert are the claimed “primary fluid outlet from the body.” Pet. at 60-62; EX-1003 ¶¶ 105-106; EX-2002 ¶ 79. Notably, Petitioners and Dr. Nosenchuck only

allege that the claimed “primary fluid flow path” (annotated in green below by Petitioners and Dr. Nosenchuck) changes by 90 degrees once it *exits* through Yoshida’s discharge ports 59, which is after it exits heater enclosing frame 5 (asserted claimed “body”). EX-2002 ¶ 79.



Pet. at 62; EX-1003 ¶ 107 (further annotated)

Additionally, the frame enclosing the body includes a sharp change in the cross-sectional area perpendicular to the fluid path prior to the fluid’s exit through discharge ports 59. EX-2002 ¶ 80. As noted by Dr. Nosenchuck, Yoshida explains that “the air flowing into the housing 1 from the suction ports 13 and 14” is “guided by the partition plate 55 of the heater enclosing frame 5.” EX-1003 ¶ 112. This disregards the abrupt change in cross-sectional area prior to the angled wall of frame 5, which would increase the velocity of the fluid, especially near the wall containing the discharge ports 59. EX-2002 ¶ 80. This, combined with the fact that the angle from frame 5 is very slight, indicates that most of the flow would remain in the same direction through the “body” of the device and would not substantially change direction until it exits discharge ports 59. EX-2002 ¶ 80.

Thus, at most, Petitioners and Dr. Nosenchuck have alleged that the fluid flow of the air *exiting* the asserted claimed “body” is substantially orthogonal to the fluid flow in housing 1 (asserted claimed “handle”). EX-2002 ¶ 81. However, Petitioners have not shown that the fluid flow *in the body* is substantially orthogonal to the fluid flow in the claimed handle, as required by Claim 28. EX-2002 ¶ 81. In fact, as shown by the green lines annotated by Petitioners and Dr. Nosenchuck in the illustration above, the asserted claimed “primary fluid flow” in Yoshida never turns approximately 90 degrees until it exits the hair dryer through discharge ports 59. EX-2002 ¶ 81. Thus, for this additional reason, Petitioners have not met their burden of showing by a preponderance of the evidence that Yoshida discloses “the primary fluid flow in the body is substantially orthogonal to the primary fluid flow in the handle,” as required by Claim 28. EX-2002 ¶ 82.

C. GROUNDS 3-5: U.S. Patent No. 5,407,135 (“Jeffs”) does not anticipate the Challenged Claims and neither Jeffs in view of Jeong nor Yoshida rendered obvious the Challenged Claims

Petitioners fail to meet their burden of showing by a preponderance of the evidence that Jeffs discloses all of the limitations of the Challenged Claims.⁴

Petitioners cannot show that Jeffs discloses the claimed “inner wall . . . defines a

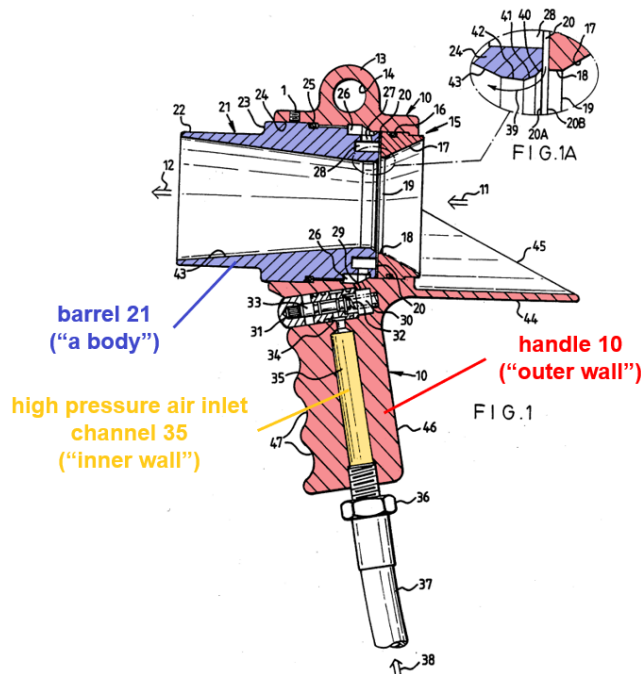
⁴ Jeffs’ failure to disclose these limitations is also fatal to Grounds 4 and 5 because Petitioners rely solely on Jeffs’ disclosures for those limitations in Grounds 4 and 5.

primary fluid flow path that extends from a primary fluid inlet into the appliance,” as required by all the Challenged Claims. Petitioners further fail to show that Jeffs discloses “the primary fluid flow in the body is substantially orthogonal to the primary fluid flow in the handle,” as required by Claim 28. Thus, the Challenged Claims are not unpatentable under Grounds 3-5.⁵

1. Jeffs does not disclose all of the limitations recited in the Challenged Claims

Petitioners fail to show by a preponderance of the evidence that Jeffs discloses all of the limitations recited in the Challenged Claims for two distinct reasons. *First*, neither Petitioners nor Dr. Nosenchuck show that Jeffs includes both an “outer wall” and a distinct “inner wall” as recited in Claim 26. Petitioners and Dr. Nosenchuk assert that Jeffs’ handle 10 is the claimed “outer wall” and high pressure air inlet channel 35 within handle 10 is the claimed “inner wall.” Pet. at 76-78; EX-1003 ¶¶ 138-141.

⁵ Patent Owner still maintains that the preamble to Claim 26 is limiting and Jeffs does not disclose the claimed “hair care appliance” for at least the reasons presented in its Preliminary Response. Patent Owner reserves the right to argue as such in any other proceeding involving the ’662 Patent or any patents regarding a related technology or claim language.



Pet. at 77; EX-1003 ¶ 139

However, Petitioners and Dr. Nosenchuck have not shown that Jeffs' high pressure air inlet channel 35 forms a separate wall that is distinct from handle 10. EX-2002 ¶ 85.

The '662 Patent is clear that the claimed "inner wall" includes a wall that is distinct from the claimed "outer wall." EX-2002 ¶ 86. For example, the specification notes that the handle 20 has both an outer wall 200 and an inner wall 220, and that "inner wall 220 is *a duct* which surrounds and defines a primary fluid flow path 400 through the hairdryer." EX-1001 at 12:30-33 (emphasis added); *see also* EX-2002 ¶ 86. This is confirmed by Claim 26 itself, which also requires a distinct inner wall and outer wall and that the inner wall "defines a primary fluid flow path." EX-1001 at 20:5-8; *see also* EX-2002 ¶ 86.

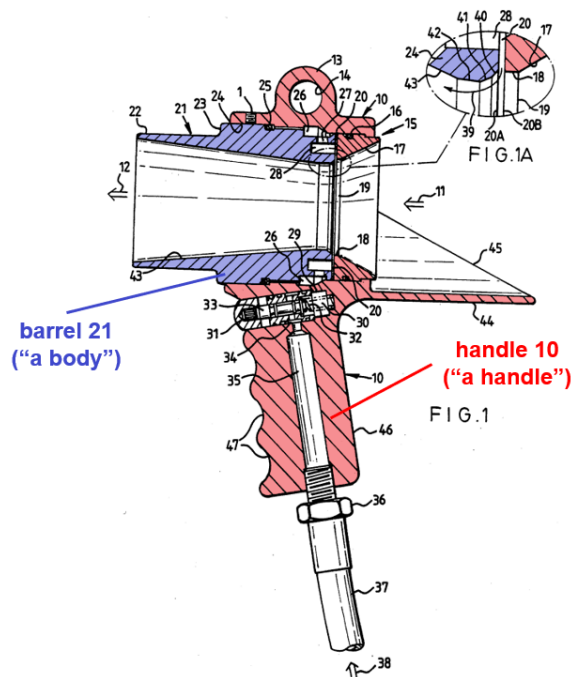
Jeffs does not provide any description of high pressure air inlet channel 35 indicating that it is comprised of a wall separate and distinct from handle 10. EX-2002 ¶ 87. Instead, high pressure air inlet channel 35 appears to be merely a hollow portion of handle 10 such that only a single wall is formed with an inner surface forming the high pressure air inlet channel 35 and the outer surface forming the portion of the handle gripped by the user. EX-2002 ¶ 87. Further, Petitioners' and Dr. Nosenchuck's only justification for their assertion that high pressure air inlet channel 35 is the claimed "inner wall" is merely because the channel is "disposed within the handle 10," Pet. at 77-78; EX-1003 ¶ 141, while ignoring whether high pressure air inlet channel 35 is merely a hollow portion of the handle 10. EX-2002 ¶ 87. Thus, Petitioners have not met their burden of showing by a preponderance of the evidence that Jeffs discloses the claimed "inner wall" distinct from the claimed "outer wall," and Ground 3-5 fail on that basis alone.⁶ EX-2002 ¶ 88.

Second, similar to Grounds 1 and 2, Petitioners have not met their burden of showing by a preponderance of the evidence that Jeffs discloses the claimed "inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet

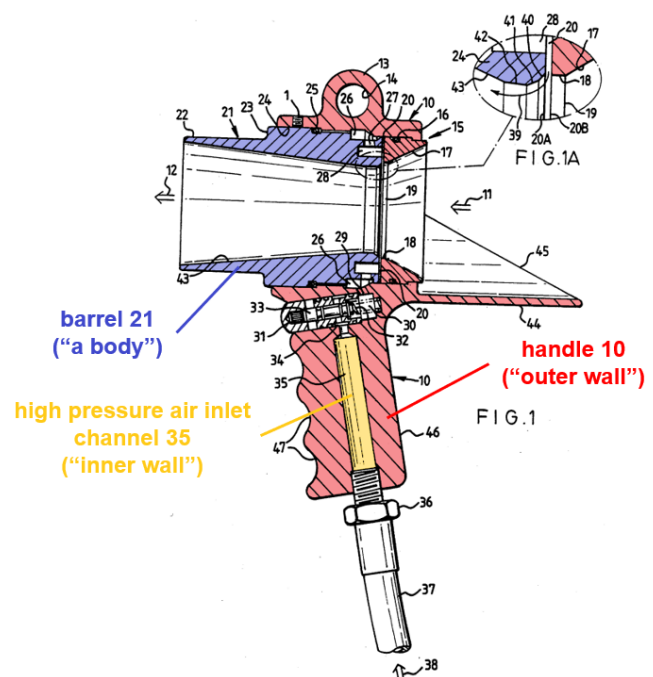
⁶ This argument is not dependent upon Patent Owner's construction of "inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet into the appliance" and can prevail even if that construction is not adopted.

into the appliance,” that is “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet, through the handle, and into the appliance.”

Petitioners and Dr. Nosenchuck assert that Jeffs’ handle 10 is the claimed “handle,” Jeffs’ barrel 21 is the claimed “body,” and Jeffs’ high pressure air inlet channel 35 is the claimed “inner wall.” Pet. at 74-78; EX-1003 ¶¶ 134-141.

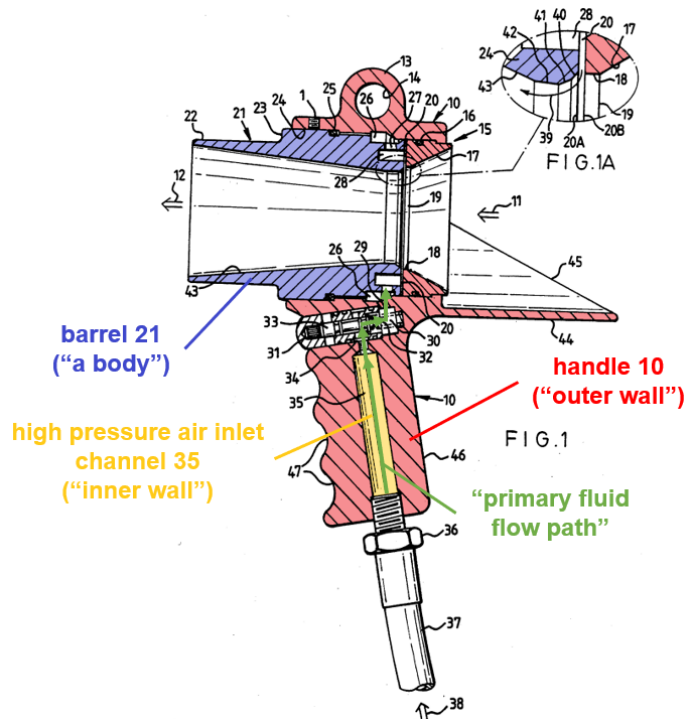


Pet. at 75; EX-1003 ¶ 135



Pet. at 77; EX-1003 ¶ 139

Petitioners and Dr. Nosenchuck further assert that Jeffs’ union 36 is the claimed “primary fluid inlet.” Pet. at 79-81; EX-1003 ¶¶ 144-145.



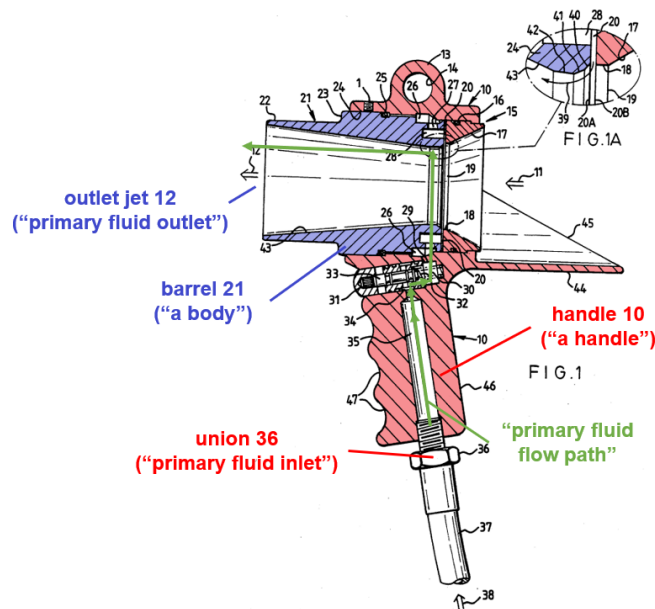
Pet. at 81; EX-1003 ¶ 145

However, Petitioners’ and Dr. Nosenchuck’s own illustrations show that Jeffs’ high pressure air inlet channel 35 (the asserted claimed “inner wall”) does not extend from union 36 (the asserted claimed “primary fluid inlet”) through handle 10 (the asserted claimed “handle”). EX-2002 ¶ 92. Instead, Jeffs’ high pressure air inlet channel 35 that Petitioners assert is the claimed “inner wall” only extends from union 36 about half-way up handle 10, which Petitioners assert is the claimed “handle.” EX-2002 ¶ 92. Thus, Petitioners have not shown that Jeffs discloses the claimed “inner wall . . . defines a primary fluid flow path that extends from a primary fluid inlet into the appliance” and Grounds 3-5 also fail on that basis alone. EX-2002 ¶ 93.

2. Jeffs does not disclose the additional limitation of Claim 28

Petitioners have also not met their burden of showing by a preponderance of the evidence that Jeffs discloses “the primary fluid flow in the body is substantially orthogonal to the primary fluid flow in the handle,” as required by Claim 28.

Petitioners and Dr. Nosenchuck assert that the claimed “primary fluid flow path” begins at union 36 (asserted claimed “primary fluid inlet”), travels through high pressure air inlet channel 35 (asserted claimed “inner wall”) through valve assembly 30, 32, 33 to barrel 21 (asserted claimed “body”) and exits through inlet 20 to outlet jet 12 (asserted claimed “primary fluid outlet”). Pet. at 83-87; EX-1003 ¶¶ 148-154. Petitioners and Dr. Nosenchuck assert that outlet jet 12 flows at a right angle from inlet 20 and that this causes the asserted claimed “primary fluid flow in the body” to be substantially orthogonal to the asserted claimed “primary fluid flow in the handle,” as required by Claim 28. Pet. at 89-90; EX-1003 ¶¶ 158-59.



Pet. at 90; EX-1003 ¶ 152

Petitioners' and Dr. Nosenchuck's argument fails for two reasons. **First**,
Petitioners and Dr. Nosenchuck do not show that the air in outlet jet 12 that they
allege is the claimed primary fluid flow that is orthogonal to the primary fluid flow
in the handle is ***“in the body”*** as required by Claim 28. EX-2002 ¶ 97. As
illustrated above, Petitioners and Dr. Nosenchuck allege that barrel 21 (colored in
purple) is the claimed “body” and that the green arrow is the claimed “primary
fluid flow path.” Pet. at 89-90; EX-1003 ¶¶ 157-159. However, as illustrated,
Petitioners' and Dr. Nosenchuck's asserted “primary fluid flow path” turns at 90
degrees ***after*** it leaves barrel 21 (asserted claimed “body”) and enters the throat of
the barrel, which Petitioners and Dr. Nosenchuck do not contend is part of the
claimed “body.” EX-2002 ¶ 97. Thus, Petitioners have not met their burden of
showing by a preponderance of the evidence that the “primary fluid flow ***in the***

body is substantially orthogonal to the primary fluid flow in the handle,” as required by Claim 28. EX-2002 ¶ 98.

Second, even if the alleged claimed “primary fluid flow path” that changes approximately 90 degrees is considered to be “*in* the body,” Petitioners still have failed to show by a preponderance of the evidence that “the primary fluid flow in the body is substantially orthogonal to the primary fluid flow in the handle,” as required by Claim 28 because, air inlet 20 is after fluid flow left handle 10. EX-2002 ¶ 99. Thus, fluid flow in air inlet 20 is in the body and thus does not provide any teaching related to fluid flow in handle. EX-2002 ¶ 99. As shown in the Figure above from page 90 of the Petition, Petitioners and Dr. Nosenchuck indicate that barrel chambers 26 and 28 are in the body. EX-2002 ¶ 99. Thus, the fluid flow leaves handle 10 when entering barrel chamber 26, which is before the fluid enters air inlet 20. EX-2002 ¶ 99. Further, as illustrated below by the dark purple annotations, Petitioners’ and Dr. Nosenchuck’s asserted claimed “primary fluid flow in the handle” is not perpendicular to the air flow in inlet 20. EX-2002 ¶ 99. In Jeffs, the fluid flows within the handle 10 by passing through channel 35 and a valve assembly 30, 32, 33 until it exits the handle through channel 29 to barrel chambers 26 and 28, which are not in handle 10. EX-1006 at 4:17-34; *see also* EX-2002 ¶ 100. Petitioners and Dr. Nosenchuck do not provide any explanation for why the green arrow correctly represents fluid flow from inner chamber 30

Thus, within the “primary fluid flow path” asserted by Petitioners and Dr. Nosenchuck, there is no point when the primary fluid flow in the handle is at a 90-degree angle, or substantially orthogonal, to the primary fluid flow in the body.

EX-2002 ¶ 1001.

For these reasons, Petitioners have not met their burden of showing by a preponderance of the evidence that Jeffs discloses Claim 28. EX-2002 ¶ 102.

Because Petitioners only rely upon the disclosure of Jeffs to meet this limitation, Pet. at 89-90, Grounds 3-5 fail.

V. CONCLUSION

For the foregoing reasons, the Challenged Claims should be found not unpatentable.

Respectfully submitted,

Faegre Drinker Biddle & Reath LLP

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Date: May 22, 2024

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), counsel for Patent Owner certifies that this document complies with the type-volume limitations of 37 C.F.R. § 42.24(b).

According to Microsoft Office Word's word count, this document contains approximately 7,102 words, including any statement of material facts to be admitted or denied in support, and excluding the table of contents, table of authorities, exhibit list, certificate of service or word count, or appendix of exhibits or claim listing.

Date: May 22, 2024

/Christopher P. Bruenjes/
Christopher P. Bruenjes

Case No. IPR2023-01324

U.S. Patent No. 9,414,662

CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing **PATENT OWNER'S RESPONSE PURSUANT TO 37 C.F.R. § 42.120** was served upon Petitioners by email on May 22, 2024:

GDC-SharkNinjaIPRD@gibsondunn.com

Date: May 22, 2024

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