

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AROMA360, LLC,
Petitioner,

v.

AIR ESSSENTIALS, INC.,
Patent Owner.

IPR2025-00706
Patent 10,583,449 B1

Before MITCHELL G. WEATHERLY, ERIC C. JESCHKE, and
RICHARD H. MARSCHALL, *Administrative Patent Judges*.

JESCHKE, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. BACKGROUND

Petitioner Aroma360, LLC filed a Petition to institute *inter partes* review of claims 1, 4, and 7–10 of U.S. Patent No. 10,583,449 B1 (Ex. 1001, “the challenged patent”). Paper 2 (“Pet.”). Patent Owner Air Essentials, Inc. timely filed a Preliminary Response. Paper 7 (“Prelim. Resp.”).

Under the current Interim Process, decisions on whether to institute post-grant review are bifurcated between (1) discretionary considerations and (2) merits and other non-discretionary considerations. *See* Memorandum from Coke Morgan Stewart to All PTAB Judges (Mar. 26, 2025), *available at* <https://www.uspto.gov/sites/default/files/documents/InterimProcesses-PTABWorkloadMgmt-20250326.pdf> (“Interim Process Memo”) at 1. Patent Owner filed a brief addressing discretionary denial. Paper 6. After reviewing that briefing, the Director declined to deny *inter partes* review based on discretionary considerations and referred the proceeding to this panel. Paper 8.

The Board has authority to determine whether to institute *inter partes* review. *See* 35 U.S.C. § 314; 37 C.F.R. § 42.4(a) (2024) (“The Board institutes the trial on behalf of the Director.”). *Inter partes* review may not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314. Upon consideration of the evidence and arguments in the record, for the reasons below, we determine that the information presented shows a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims. We thus institute *inter partes* review on all challenged claims on all asserted grounds. *See SAS Inst. Inc. v. Iancu*, 584

U.S. 357, 362–63, 369–70 (2018); 37 C.F.R. § 42.108(a) (“When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”).

A. Related Proceedings

The parties identify a proceeding in the U.S. District Court for the Southern District of Florida involving the challenged patent: *Air Esscentials, Inc. v. Aroma360, LLC*, No. 1:24-cv-20594-KMW (S.D. Fla.), filed February 15, 2024 (“the Florida Litigation”). Pet. 1; Paper 4 (Patent Owner’s Mandatory Notice) at 2. The Florida Litigation also involves U.S. Patent No. 9,527,094 B1 (“the ’094 patent”) and U.S. Patent No. 10,092,918 B1 (“the ’918 patent”). The Florida Litigation was stayed on April 8, 2025. See Paper 5.

Petitioner also filed petitions for *inter partes* review of claims 7–9 and 11 of the ’094 patent in IPR2025-00705 and (2) claims 1 and 3–8 of the ’918 patent in IPR2025-00707. Concurrent with this Decision, the Board institutes *inter partes* review in IPR2025-00705 and IPR2025-00707.

B. The Challenged Patent

The challenged patent “relates generally to the field of dispersion of various fluids including, but not limited to, fragrant oils, essential oils, odor neutralizers, disinfectants, e.g., triethylene glycol, air sanitizers, and the like, into a generally enclosed airspace.” Ex. 1001, 1:7–11. According to the challenged patent, “there is a need for a fluid dispersion assembly that is designed to significantly reduce the amount of noise generated during operation” and to operate “quietly while generating a fluid dispersion in air having a uniform particle size distribution, such that dosing of an airspace

with a particular liquid . . . can be predicted within acceptable limits.” *Id.* at 1:35–43.

Figure 2 is reproduced below:

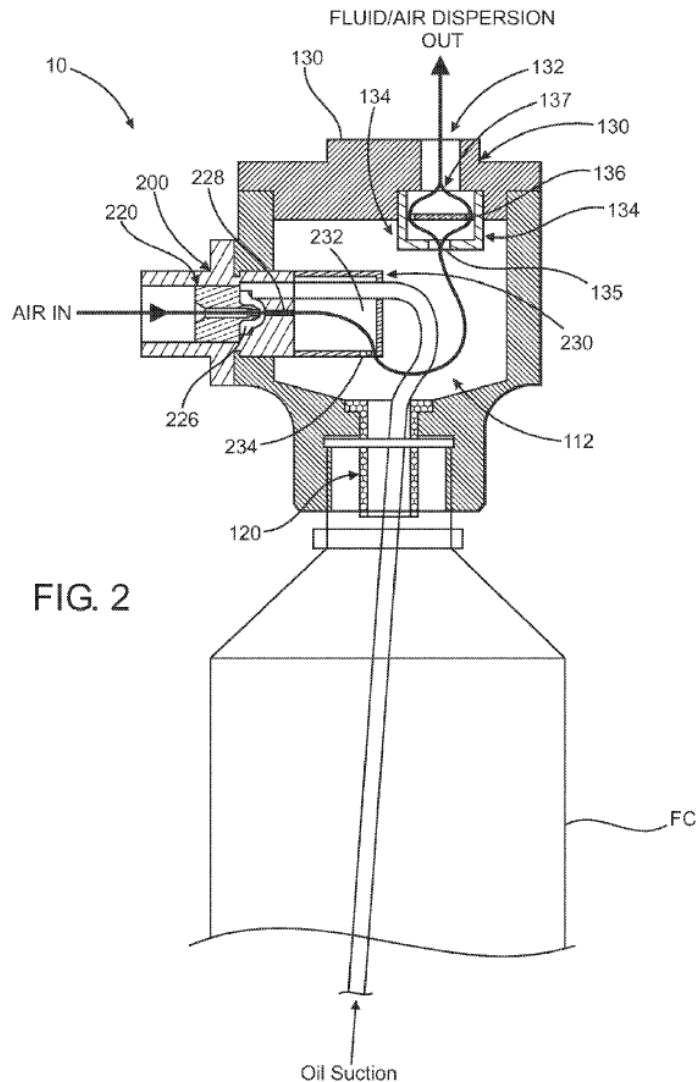


Figure 2 depicts a cross-sectional elevation view of a fluid dispersion assembly 10, powered by a compressed air source. Ex. 1001, 2:53–56, 3:9–12. An unnumbered diffusion unit “at least partially defines a diffusion chamber 112, and in at least one embodiment, the diffusion chamber 112 is

substantially enclosed within [the] diffusion unit.” *Id.* at 3:32–36.¹

Discharge port 132 “provides a point of release of the fluid dispersion from the diffusion chamber 112 into the airspace surrounding the fluid dispersion assembly 10.” *Id.* at 3:63–67.

Depicted diffusion assembly 200 “comprises an air inlet 210 and an atomizer assembly 220.” Ex. 1001, 5:15–16. Atomizer assembly 220, in turn, “comprises an atomizer air inlet channel 222, a mixing chamber 226, and an atomizer exhaust channel 228.” *Id.* at 5:17–19.

C. The Challenged Claims

Petitioner challenges claims 1, 4, and 7–10, of which claims 1 and 7 are independent. Claim 4 depends from claim 1; claims 8–10 depend from claim 7. Independent claim 1 is reproduced below, reformatted from the version provided in the challenged patent and with bracketed labels added to identify each clause:

1. [1PRE] A fluid dispersion assembly operatively engages a container of an operative fluid and a compressed air source and generates and discharges a fluid dispersion into a surrounding airspace, said fluid dispersion assembly comprising:

[1A] a diffusion unit at least partially defining an enclosed diffusion chamber,

[1B] a discharge port disposed in fluid communication between said diffusion chamber and the surrounding airspace,

[1C] a diffusion assembly disposed in an operative engagement with said diffusion unit,

[1D] wherein said diffusion assembly comprises an atomizer assembly, said atomizer assembly comprising an

¹ In this Decision, we omit emphasis on reference numerals in quotations from the challenged patent and prior art references.

atomizer air inlet channel, a fluid inlet, a mixing chamber, and an atomizer exhaust aperture, and

[1E] said atomizer air inlet channel interconnected to the compressed air source and

[1F] said fluid inlet disposed in fluid communication with the operative fluid in the container,

[1G] the compressed air and the operative fluid mix together in said mixing chamber to form the fluid dispersion.

Ex. 1001, 15:24–45.²

D. Asserted Grounds of Unpatentability

Petitioner challenges claims 1, 4, and 7–10 on the following grounds:

Claim(s) Challenged	35 U.S.C. § ³	Reference(s)/Basis
1, 4, 7–10	103(a)	Sevy ⁴
1, 4, 7–10	103(a)	Sevy, Gao ⁵

² We adopt and apply below Petitioner’s labels for the elements of the challenged claims. *See* Pet. (Appendix – Claim Limitation Listing).

³ The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. §§ 102, 103 that became effective on March 16, 2013. Pub. L. No. 112-29, §§ 3(b)–3(c), 3(n)(1), 125 Stat. 284, 285–87, 293 (2011). Because there is no dispute that the challenged claims have an effective filing date before March 16, 2013, we apply the pre-AIA versions of these statutes. We would reach the same outcome, however, under the AIA versions.

⁴ United States Published Patent Application US 2010/0084484 A1, published April 8, 2010 (Ex. 1009, “Sevy”).

⁵ Chinese National Intellectual Property Administration Utility Model Patent CN 201832737, published May 18, 2011 (Ex. 1012 (Chinese version) and Ex. 1013 (certified translation), “Gao”).

Claim(s) Challenged	35 U.S.C. § ³	Reference(s)/Basis
1, 4, 7–10	103(a)	Goubet ⁶
1, 4, 7–10	103(a)	Goubet, Kaiser ⁷
1, 4, 7–10	102(b)	Gao

Petitioner supports its challenges with a declaration from Dr. Christopher White. Ex. 1002 (“White Decl.”).

II. DISCUSSION

A. The Level of Ordinary Skill in the Art

The level of ordinary skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). The person of ordinary skill in the art is a hypothetical person presumed to have known the relevant prior art. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). In determining the level of ordinary skill in the art, we may consider certain factors, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *Id.* (internal quotation marks and citation omitted).

Petitioner contends, with accompanying declaration testimony, that a person having ordinary skill in the art would have had either:

⁶ French Patent and Trademark Office Publication FR 2 886 160, published December 1, 2006 (Ex. 1015 (French version) and Ex. 1016 (English translation), “Goubet”).

⁷ Sebastian Kaiser et al., *The Electrospray and Combustion at the Mesoscale*, 51 J. Mass Spectrom. Soc. Jpn. 42 (2003) (Ex. 1014, “Kaiser”).

(1) a bachelor's degree in mechanical engineering, aerospace engineering, chemical engineering, or a similar engineering field, with at least two years of work experience in fluid dynamics or fluid systems engineering; or (2) a master's degree in mechanical engineering, aerospace engineering, chemical engineering, or a similar engineering field, with at least one year of work experience in fluid dynamics or fluid systems engineering.

Pet. 12 (citing White Decl. ¶¶ 36–44).

Patent Owner does not dispute Petitioner's proposed definition of the level of ordinary skill in the art, which appears generally consistent with the record at this stage of the proceeding, including the prior art. *See GPAC Inc.*, 57 F.3d at 1579. We remove the phrase “at least” in both listed options, however, as that phrase adds ambiguity. Patent Owner does not argue at this stage of the proceedings that Petitioner's proposal for the level of ordinary skill leads to an improper understanding of how a skilled artisan would understand either the challenged patent or the prior art. For purposes of this Decision, we adopt the definition of the level of ordinary skill in the art proposed by Petitioner, as revised above.

B. Claim Construction

In *inter partes* reviews, the Board interprets claim language using the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b), as described in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). *See* 37 C.F.R. § 42.100(b). Under that standard, we generally give claim terms their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art at the time of the invention, in light of the language of the claims, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1313–14. Although extrinsic evidence, when available, may also be useful when construing claim terms

under this standard, extrinsic evidence should be considered in the context of the intrinsic evidence. *See id.* at 1317–19.

Neither Petitioner nor Patent Owner propose explicit constructions for any claim terms. Pet. 12–13; *see generally* Prelim. Resp. At this stage of the proceeding and based on the current record, we need not construe explicitly any claim terms because doing so would not change the outcome of the analysis below. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

C. Asserted Obviousness of Claims 1, 4, and 7–10 Based on Sevy

Petitioner asserts that claims 1, 4, and 7–10 of the challenged patent would have been obvious based on Sevy. Pet. 3–4, 20–37. Patent Owner provides arguments addressing this asserted ground. Prelim. Resp. 3–7. We first summarize aspects of the relied-upon prior art.

1. Overview of Sevy

Sevy relates to “atomizers and, more particularly, to novel systems and methods for integrating air supplies, reservoirs and atomizers into an integrated system.” Ex. 1009 ¶ 2. Sevy discloses that “it would be an advance in the art to provide an atomizer that provides a better atomization or a smaller mean or average size of droplet in the distribution of atomized droplets compared with prior art devices capable of atomizing.” *Id.* ¶ 9.

Figure 1 of Sevy is reproduced below:

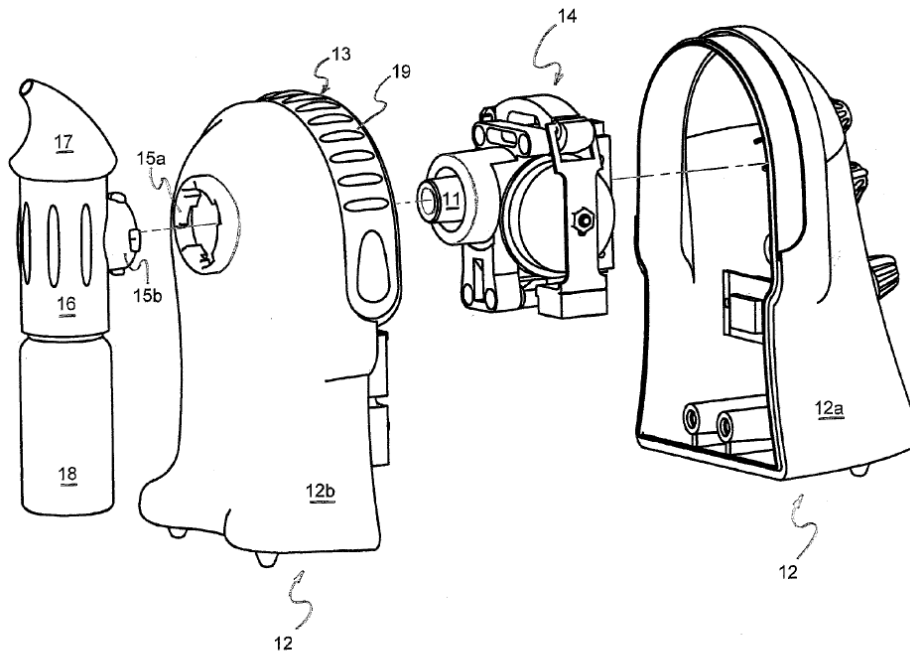


Figure 1 is an exploded view of an integrated atomizer apparatus. Ex. 1009 ¶ 31. The depicted embodiment includes housing 12, pump 14 (with outlet 11 from pump 14), atomizer 16, director 17, and reservoir 18. *Id.* ¶ 41. Sevy discloses that “[a]ir from the pump 14 drives atomization in the atomizer 16 to discharge atomized liquids out the director 17” with the liquids “drawn by the atomizer 16 from the reservoir 18.” *Id.*

Figure 9 is reproduced below:

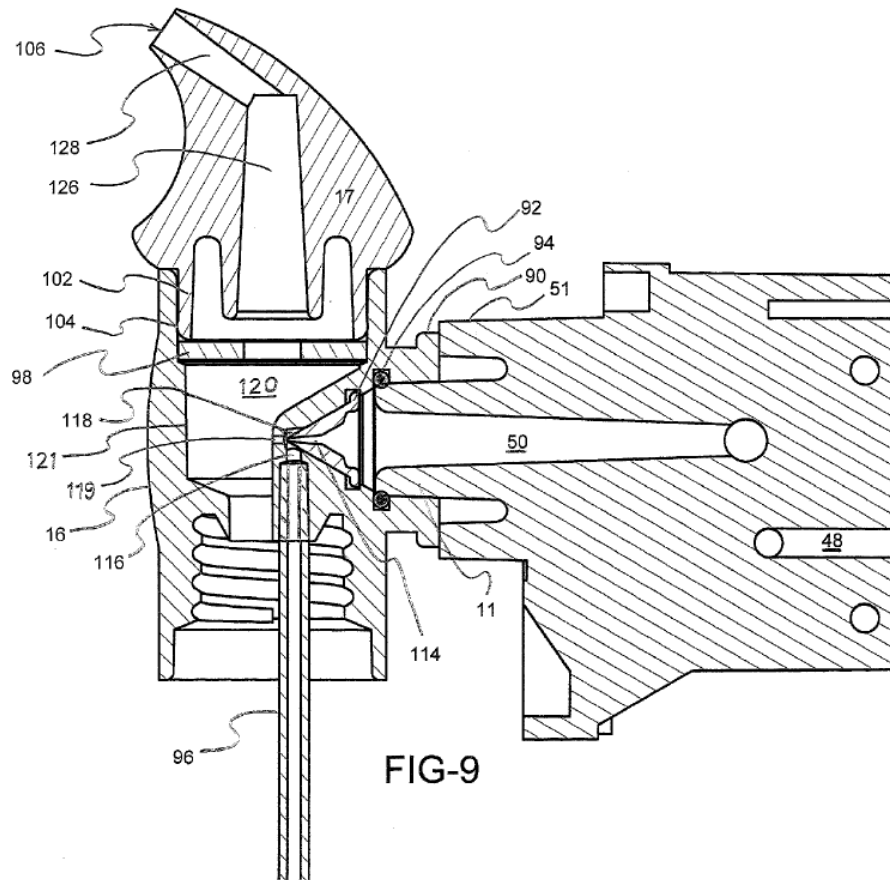


Figure 9 is a “detailed cross-sectional, side elevation view of the pump body and the atomizer body.” Ex. 1009 ¶ 39. In this embodiment, nozzle 92 encloses channel 114 leading from passage 50 to orifice 118 and exit orifice 119 permits discharge of fluids, including air from orifice 118 and liquid from siphon tube 96. *Id.* ¶¶ 79–80. Sevy discloses that the “entire mixture of air and droplets passes through the exit orifice 119 toward the separator 120, and particularly toward the wall 121 thereof.” *Id.* ¶ 82.

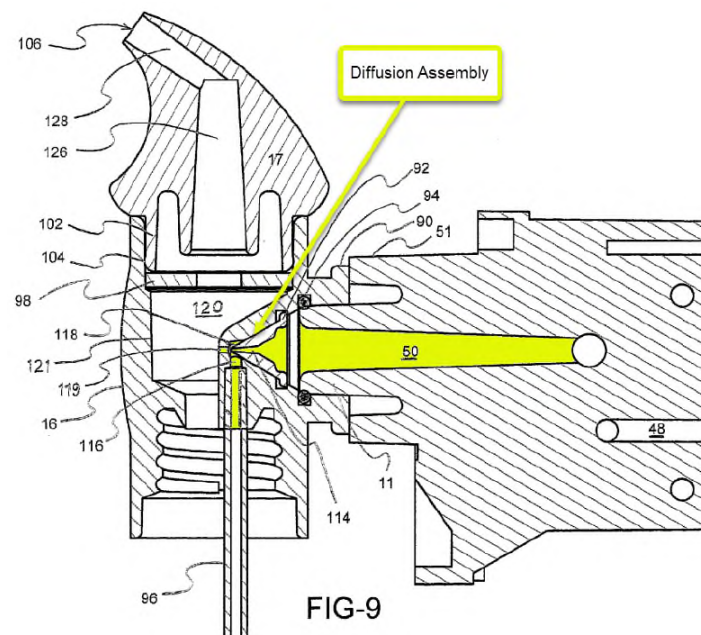
2. Independent Claim 1

For independent claim 1, Petitioner contends that Sevy discloses or suggests each limitation. Pet. 20–31. Patent Owner argues that Sevy lacks

clauses 1C and 1D and the “fluid dispersion” limitation in clause 1G. *See* Prelim. Resp. 3–6. We address each of Patent Owner’s arguments.

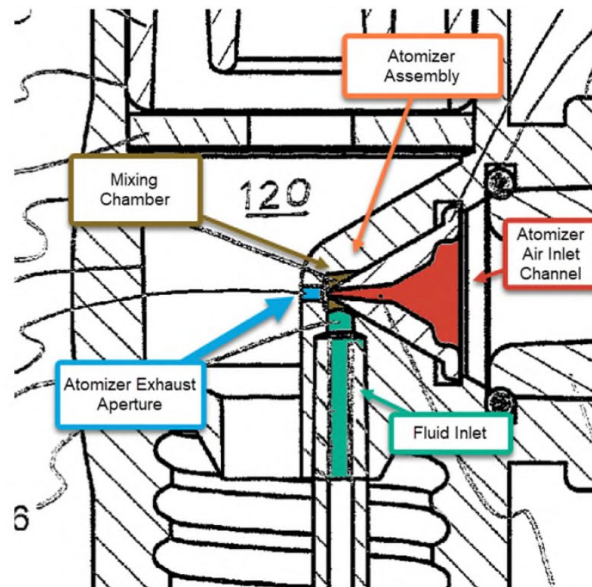
a. Clauses 1C and 1D

Clause 1C recites “a diffusion assembly disposed in an operative engagement with said diffusion unit” and clause 1D recites, in part, “wherein said diffusion assembly comprises an atomizer assembly.” Ex. 1001, 15:33–36. As the “diffusion assembly” in Sevy, Petitioner identifies “the combination of the air inlet (*e.g.*, passage 50) and the atomizer assembly that atomizes the liquid,” as shown in yellow shading in the annotated version of Figure 9 of Sevy below:



Pet. 25–26 (citing White Decl. ¶¶ 146–148). In the annotated version of Figure 9 here, Petitioner added a text box and yellow shading identifying a “Diffusion Assembly.” *Id.*

As the “atomizer assembly,” Petitioner identifies certain structures in the annotated partial image of Figure 9 of Sevy below:



Pet. 28; *see also* Pet. 28–29 (citing White Decl. ¶¶ 149–159) (identifying the structures of the “atomizer assembly”). In the annotated partial image of Figure 9 here, Petitioner added (1) a text box and red shading identifying an “Atomizer Air Inlet Channel,” (2) a text box and teal shading identifying a “Fluid Inlet,” (3) a text box and blue shading identifying an “Atomizer Exhaust Aperture,” (4) a text box and brown shading identifying a “Mixing Chamber,” and (5) a text box identifying an “Atomizer Assembly.” Pet. 28.

Patent Owner argues that the identified features in Sevy are not the “claimed integrated diffusion and atomizer assemblies” because Sevy, “[b]y contrast . . . produces a spray of non-uniform droplets and explicitly requires downstream separation.” Prelim. Resp. 4. In support, Patent Owner contends that “Sevy acknowledges that ‘droplets that cannot move with the air flow, typically because they have too large a size and mass, will strike the walls of the opening 100 or the separator plate 98’ and that Sevy “further

describes airflow that ‘recapture[s] and return[s] most [of] the droplets above [certain] sizes back into the reservoir.’” *Id.* (alterations by Patent Owner) (quoting Ex. 1009 ¶¶ 69, 74). According to Patent Owner, “[t]he need for such post-formation correction^[8] demonstrates that Sevy’s components do not correspond to the claimed integrated diffusion and atomizer assemblies that generate a fluid dispersion within the diffusion chamber before discharge.” *Id.*

On the current record, this argument does not identify a deficiency in Petitioner’s position as to clauses 1C and 1D. Patent Owner implies that the structures recited in clauses 1C and 1D require functionality recited *elsewhere* in the claim—namely, forming a “fluid dispersion” (Prelim. Resp. 4)—but Patent Owner does not adequately present evidence supporting this implied claim construction. *See In re Self*, 671 F.2d 1344, 1348 (CCPA 1982) (rejecting arguments “not based on limitations appearing in the claims”). Instead, Patent Owner cites to the entirety of claim 1 in support of these implied functional requirements. *See* Prelim. Resp. 4. Stated differently, Patent Owner has not adequately explained why *any particular* component (or collection of components) must perform the function of forming the “fluid dispersion” recited in clause 1G. Moreover, even assuming as correct Patent Owner’s assertion that Sevy “requires downstream separation,” Patent Owner has not explained why such a

⁸ In its Preliminary Response, Patent Owner appears to use different terms for the same concept: “downstream separation”; “post-formation correction”; and “post-atomization correction.” *See, e.g.*, Prelim. Resp. 3 (“downstream separation”), 4 (“post-formation correction”), 5–6 (“post-atomization correction”). In any response, Patent Owner should clarify the scope of these terms.

requirement would fall outside of the scope of claim 1. *See Elbit Sys. of Am., LLC v. Thales Visionix, Inc.*, 881 F.3d 1354, 1359 (Fed. Cir. 2018) (“‘[A]ttorney argument is not evidence’ and cannot rebut other admitted evidence.” (quoting *Icon Health & Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1043 (Fed. Cir. 2017))).

On the current record, we determine that Petitioner has made a sufficient showing that Sevy discloses or suggests the structures recited in clauses 1C and 1D.

b. The “Fluid Dispersion” Limitation

Clause 1G recites “the compressed air and the operative fluid mix together in said mixing chamber to form the *fluid dispersion*.” Ex. 1001, 15:43–45 (emphasis added). Patent Owner argues that “Sevy explicitly acknowledges that its atomized spray contains oversized droplets requiring downstream separation” whereas the claimed invention “result[s] in a structure that generates a fluid dispersion within the diffusion chamber, without post-atomization correction.” Prelim. Resp. 5–6 (citing Ex. 1009 ¶¶ 69–70; Ex. 1001, 15:53–57).

As an initial matter, Patent Owner does not explain why, in the context of an argument ostensibly addressing *independent claim 1*, Patent Owner relies on recitations in *dependent claim 4*. Compare Prelim. Resp. 3–6 (presenting this argument addressing claims 1 and 7), *with id.* at 5–6 (citing claim 4 at Ex. 1001, 15:53–57 in support of this argument).

Turning back to the argument that Sevy does not disclose a “fluid dispersion” (Prelim. Resp. 5), we note that the parties have stipulated in the stayed Florida Litigation that the “fluid dispersion” in clause 1G means a “mixture of an operative fluid in air comprising a plurality of *substantially*

uniform droplets (having substantially the same diameter) of the operative fluid dispersed throughout the air.” *See* Ex. 1018, Exhibit A (emphasis added).

In the discussion of clause 1G for this ground, however, Petitioner states that Patent Owner construes “fluid dispersion” “differently depending on whether the ‘fluid dispersion’ is within the ‘mixing chamber’ or whether the ‘fluid dispersion’ is within the ‘diffusion chamber.’” Pet. 30 (citing Ex. 1018, Exhibit B). According to Petitioner, “when the term fluid dispersion is claimed as being *within* the mixing chamber, as is the case in limitation 1[G], [Patent Owner] construes the term to mean atomized droplets, but the atomized droplets need not include ‘a plurality of substantially uniform droplets.’” Pet. 31. With that, Petitioner argues that Sevy satisfies the limitation at issue because “Sevy teaches that within the mixing chamber (*e.g.*, cavity 116), the operative fluid is atomized by compressed air.” *Id.* (citing White Decl. ¶¶ 164–168).

In this proceeding, Petitioner presents its initial case based on the stipulated construction of “fluid dispersion” as a “mixture of operative fluid in air comprising a plurality of substantially uniform droplets (having substantially the same diameter) of the operative fluid dispersed throughout the air.” Pet. 11 (citing Ex. 1018, Exhibit A) (discussing this stipulation). Given that clause 1G *expressly* requires forming a “fluid dispersion,” it is unclear, at this stage, how *another* recitation in the same clause (here relating to the “mixing chamber”) could require reading the “fluid dispersion” to *not* comprise “a plurality of substantially uniform droplets.” The parties should consider addressing this issue in further briefing at trial as appropriate.

c. Conclusion as to Claim 1

Because the Petition shows a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims based on at least one of the asserted grounds (*see* §§ II.C.3; II.E.3; II.G.1.b), we include claim 1 in the context of this ground in the instituted *inter partes* review. *See SAS*, 584 U.S. at 362–63, 369–70; 37 C.F.R. § 42.108(a).

3. Independent Claim 7

For independent claim 7, Petitioner contends that Sevy discloses or suggests each limitation. Pet. 36. To support its arguments, Petitioner relies on the arguments made as to clauses 1PRE through 1D of independent claim 1. *Id.* Patent Owner relies on the same arguments discussed above as to independent claim 1. *See* Prelim. Resp. 3–6.

As discussed above, on the current record, we determine that Petitioner has made a sufficient showing that Sevy discloses or suggests clauses 1C and 1D, which parallel clauses 7C and 7D. *See* § II.C.2.a. The “fluid dispersion” limitation in independent claim 1 is not recited in independent claim 7.

Patent Owner does not offer any arguments specifically addressing the remaining limitations of claim 7. *See* Prelim. Resp. 3–6. We have reviewed these aspects of Petitioner’s contentions, and we determine that the Petition provides a sufficient showing, at this stage of the proceeding, that Sevy satisfies each limitation.

For the reasons above, we determine, based on the current record, that the Petition shows a reasonable likelihood that Petitioner would prevail in demonstrating that claim 7 would have been obvious based on Sevy.

4. Dependent Claim 8

For dependent claim 8, Petitioner contends that Sevy discloses or suggests each limitation. Pet. 36. Patent Owner argues that Petitioner has failed to demonstrate that Sevy discloses or suggests the “fluid dispersion” limitation in clause 8C, which parallels clause 1G discussed above. *See* Prelim. Resp. 6–7.

As discussed above, on the current record, we reach no conclusion as to whether Petitioner has made a sufficient showing as to the “fluid dispersion” limitation in clause 1G (*see* § II.C.2.b) and we similarly reach no conclusion as to clause 8C.

Because the Petition shows a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims based on at least one of the asserted grounds (*see* §§ II.C.3; II.E.3; II.G.1.b), we include claim 8 in the context of this ground in the instituted *inter partes* review. *See SAS*, 584 U.S. at 362–63, 369–70; 37 C.F.R. § 42.108(a).

5. Claims 4, 9, and 10

For claim 4 (which depends from claim 1) and claims 9 and 10 (which depend from claim 7), Petitioner contends that Sevy discloses or suggests each limitation. Pet. 31–37. Patent Owner does not present any arguments specifically addressing claims 4, 9, and 10 in the context of this ground. *See* Prelim. Resp. 3–7. We include claims 4, 9, and 10 in the context of this ground in the instituted *inter partes* review. *See SAS*, 584 U.S. at 362–63, 369–70; 37 C.F.R. § 42.108(a).

D. Asserted Obviousness of Claims 1, 4, and 7–10 Based on Sevy and Gao

Petitioner asserts that claims 1, 4, and 7–10 of the challenged patent would have been obvious based on Sevy and Gao. Pet. 3–4, 38–42. Patent

Owner provides arguments addressing this asserted ground. Prelim. Resp. 7–11. We first summarize aspects of the relied-upon prior art.

1. Overview of Gao

In this asserted ground, Petitioner relies on Gao, in addition to Sevy (summarized above (*see* § II.C.1)). Gao discloses “an atomizer used for atomizing essence or essential oil.” Ex. 1013 at 5 (¶ 1).

Figures 1 and 2 of Gao are reproduced below:

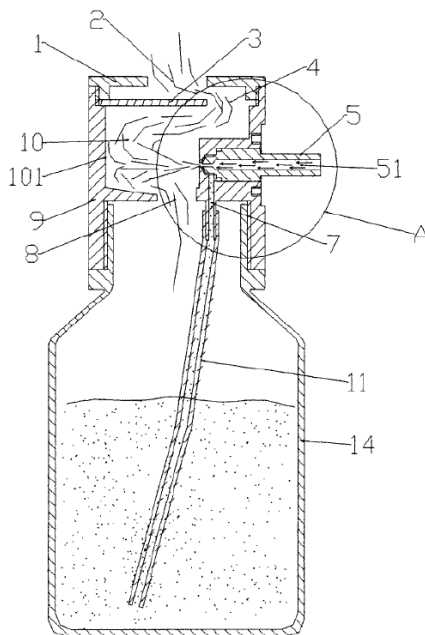


FIG. 1

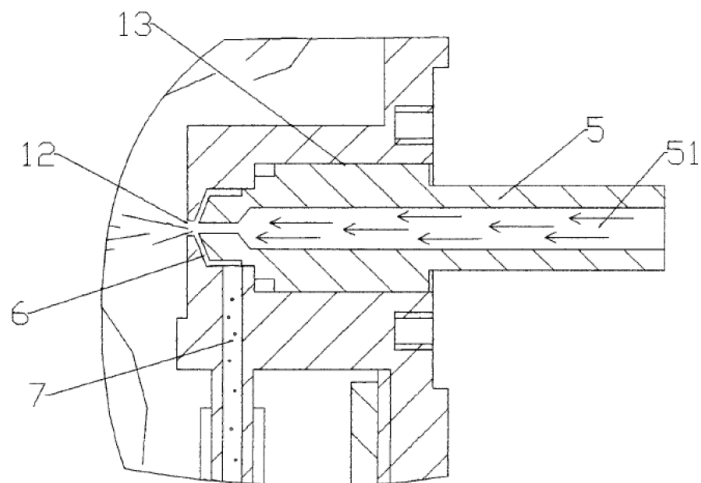


FIG. 2

Figure 1 depicts “the structure of an atomizer for atomizing essence or essential oil.” Ex. 1013 at 7 (¶ 16). Figure 2 depicts an enlarged schematic of “A” in Figure 1. *Id.* (¶ 17). The depicted atomizer includes liquid pipeline 7, which brings stored liquid up via hose 11 to combine with gas from gas flow nozzle 5 in atomizing cavity 6. *See id.* at 8 (¶ 19), 8–9 (¶ 25). The gas-liquid mixture is then ejected through gas flow spray hole 12 into inner wall 101, where “the liquid is atomized into micron-sized fine particles.” *Id.* at 8–9 (¶ 25). Gao discloses that “[t]he smallest particles will

float in the air, and drift out through the through hole 4 and the atomizing gas outlet 2 with the rising gas flow to be converted into gas through heat exchange with the air.” *Id.* at 9 (¶ 25).

2. Independent Claims 1 and 7

For independent claims 1 and 7, Petitioner contends that the proposed combination of Sevy and Gao discloses each limitation. Pet. 38–42. Patent Owner (1) argues that the combination does not satisfy the “fluid dispersion” limitation in clause 1G and (2) argues that the combination does not satisfy the “atomizer exhaust aperture” limitation in claims 1 and 7. *See* Prelim. Resp. 7–11. We address in turn each of these arguments.

a. The “Fluid Dispersion” Limitation of Independent Claim 1

Clause 1G recites “the compressed air and the operative fluid mix together in said mixing chamber to form the *fluid dispersion*.” Ex. 1001, 15:43–45 (emphasis added). Patent Owner argues that “Sevy produces a heterogeneous spray of droplets with a wide size distribution, requiring downstream correction” and that “Sevy’s reliance on a downstream separator plate 98 to remove oversized droplets further demonstrates that the atomizer and diffusion chamber are not configured to produce the claimed fluid dispersion.” Prelim. Resp. 8, 9; *see id.* at 7–10 (entire argument).

In the context of this ground, Petitioner states that “Sevy does not explicitly disclose that its atomizer generates and discharges ‘substantially uniform droplets’” and Petitioner relies on Gao for this aspect of the “fluid dispersion” limitation, including Gao’s teachings that its “mist can be controlled below 3 microns.” Pet. 38 (citing Ex. 1013 ¶¶ 7, 25); *see also* Pet. 38–42 (discussing the proposed modification of Sevy based on Gao “to improve dispersion and to increase droplet uniformity, thereby improving

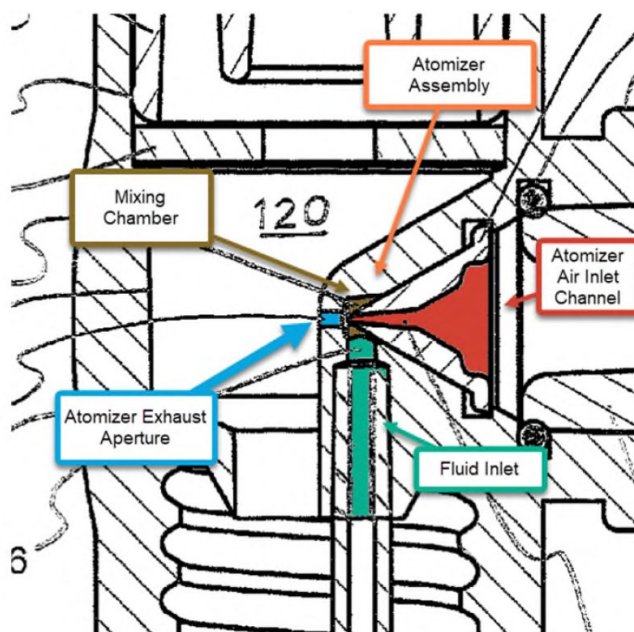
the droplet’s aroma properties”). On the current record, Patent Owner’s argument does not identify a deficiency in Petitioner’s position because Petitioner relies on Gao, not Sevy, for the limitation at issue. *See Bradium Techs. LLC v. Iancu*, 923 F.3d 1032, 1050 (Fed. Cir. 2019) (“A finding of obviousness, however, cannot be overcome ‘by attacking references individually where the rejection is based upon the teachings of a combination of references.’” (quoting *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986))).

b. The “Atomizer Exhaust Aperture” Limitations

Clauses 1D and 7D each recite “wherein said diffusion assembly comprises an atomizer assembly, said atomizer assembly comprising an atomizer air inlet channel, a fluid inlet, a mixing chamber, and *an atomizer exhaust aperture*.” Ex. 1001, 15:35–39, 16:11–15 (emphasis added).

Patent Owner argues that Gao does not “disclose or suggest the specific structural configuration set forth in independent claims 1 and 7 of the [challenged] patent—namely, an atomizer exhaust aperture.” Prelim. Resp. 10; *see also id.* at 10–11.

For this ground, Petitioner does not rely on Gao—but rather, Sevy—to address the “atomizer exhaust aperture” limitations. Specifically, Petitioner provides the following annotated partial image of Figure 9 of Sevy to explain its position as to the limitation at issue:



Pet. 28. In the annotated partial image of Figure 9 here, Petitioner added (1) a text box and red shading identifying an “Atomizer Air Inlet Channel,” (2) a text box and teal shading identifying a “Fluid Inlet,” (3) a text box and blue shading identifying an “Atomizer Exhaust Aperture,” (4) a text box and brown shading identifying a “Mixing Chamber,” and (5) a text box identifying an “Atomizer Assembly.” Pet. 28. And as made clear in the discussion of the combination of Sevy and Gao, Petitioner only relies on Gao as to the “fluid dispersion” limitation in clause 1G. *See* Pet. 38–42. Thus, on the current record, this argument does not identify a deficiency in Petitioner’s position. *See Bradium Techs. LLC*, 923 F.3d at 1050.

c. Conclusion for Claims 1 and 7

Because the Petition shows a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims based on at least one of the asserted grounds (*see* §§ II.C.3; II.E.3; II.G.1.b), we include claims 1 and 7 in the context of this ground in the instituted *inter partes* review. *See SAS*, 584 U.S. at 362–63, 369–70; 37 C.F.R. § 42.108(a).

3. Claims 4 and 8–10

For claim 4 (which depends from claim 1) and claims 8–10 (all of which depend from claim 7), Petitioner contends that Sevy discloses or suggests each limitation. Pet. 38–42. Patent Owner does not present any arguments specifically addressing claims 4 and 8–10 in the context of this ground. *See* Prelim. Resp. 7–11. We include claims 4 and 8–10 in the context of this ground in the instituted *inter partes* review. *See SAS*, 584 U.S. at 362–63, 369–70; 37 C.F.R. § 42.108(a).

E. Asserted Obviousness of Claims 1, 4, and 7–10 Based on Goubet

Petitioner asserts that claims 1, 4, and 7–10 of the challenged patent would have been obvious based on Goubet. Pet. 3–4, 42–58. Patent Owner provides arguments addressing this asserted ground. Prelim. Resp. 11–15. We first summarize aspects of the relied-upon prior art.

1. Overview of Goubet

Goubet discloses “an essential oil diffuser.” Ex. 1016, 1:1.

Figure 1 of Goubet is reproduced below:

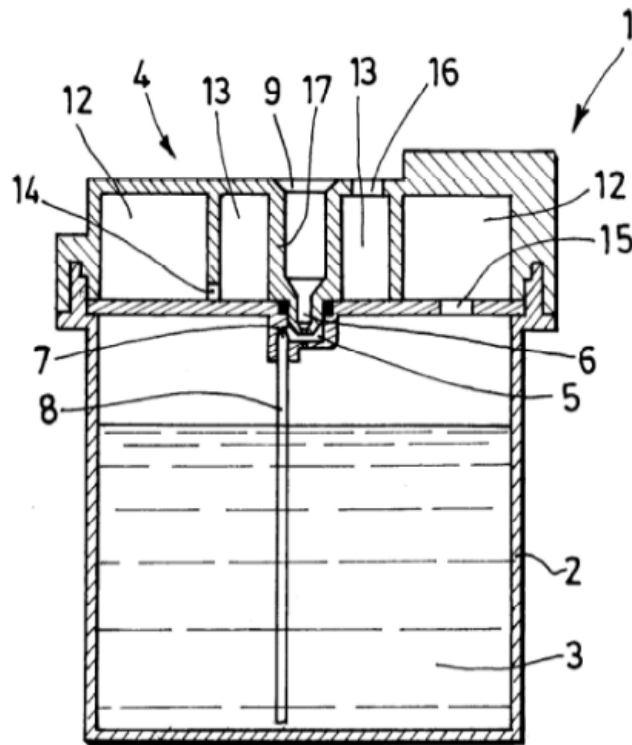


FIG.1

Figure 1 is “a cross-sectional view of a diffuser.” Ex. 1016, 3:18. Depicted oil diffuser 1 includes oil reservoir 2 (with oil 3), diffuser head 4, and diffusion chamber 5 (within which oil droplets are produced). *See id.* at 3:24–26, 3:30–31. Diffuser head 4 includes outer enclosure 12 and inner enclosure 13, “communicating with each other via a passage 14, said two enclosures and said passage forming at least one baffle.” *Id.* at 4:3–6. “[O]uter chamber 12 communicates with the inside of the reservoir 2 via a droplet flow inlet 15” and “inner chamber 13 comprises an outlet 16 for the microdroplets to the ambient air.” *Id.* at 4:7–12.

Figures 2 and 3 are reproduced below:

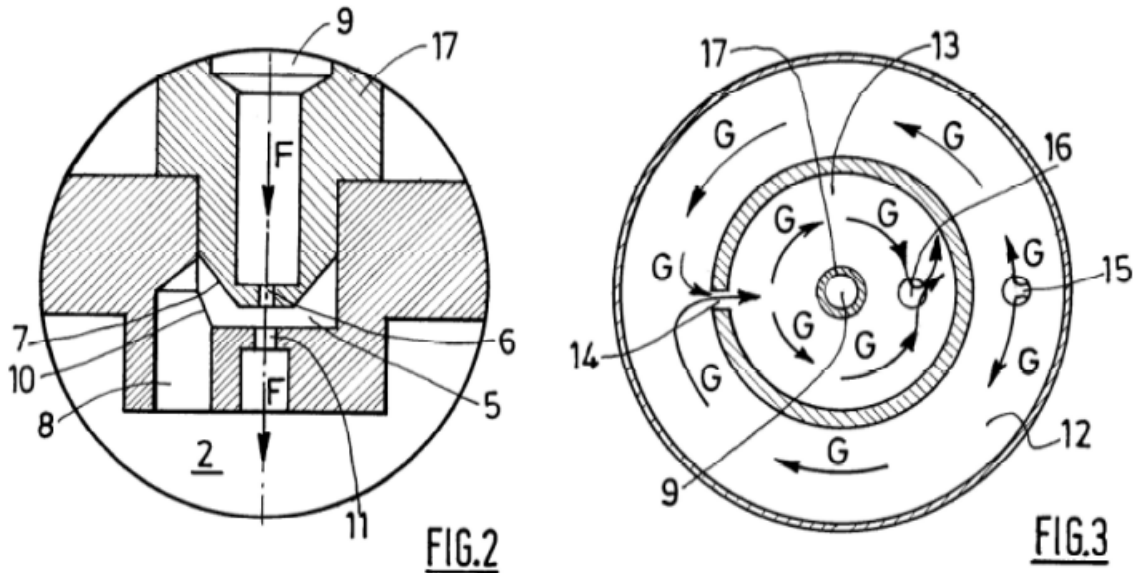


Figure 2 depicts a partial view of a diffuser head and Figure 3 is a simplified diagram showing the path of the droplets in the concentric chambers of the diffuser. *See* Ex. 1016, 3:19–23. As shown in Figure 2, diffusion chamber 5 includes compressed air inlet 6, venturi cone 7, oil inlet 10, which expels oil from dip tube 10 into chamber 5. *See id.* at 3:31–4:2. In operation, compressed air travels from inlet air channel 9 through air inlet 6 into diffusion chamber 5, in which “[a]ir and essential oil and mixed” and “a flow of oil droplets is created.” *Id.* at 4:15–22. The flow of oil droplets then travels through outlet 11, inside reservoir 2, towards inlet 15, and into outer enclosure 12. *Id.* at 4:23–28. The droplets then follow the path indicated by arrows G in Figure 3, through passage 14, entering inner enclosure 13 before exiting outlet 16 to the ambient air. *Id.* at 4:28–5:7.

2. Independent Claim 1

For independent claim 1, Petitioner contends that Goubet discloses or suggests each limitation. Pet. 42–55. Patent Owner argues that Goubet

lacks clauses 1C and 1D and the “fluid dispersion” limitation in clause 1G.
See Prelim. Resp. 11–15. We address each of these arguments.

a. Clauses 1C and 1D

Clause 1C recites “a diffusion assembly disposed in an operative engagement with said diffusion unit” and clause 1D recites “wherein said diffusion assembly comprises an atomizer assembly, said atomizer assembly comprising an atomizer air inlet channel, a fluid inlet, a mixing chamber, and an atomizer exhaust aperture.” Ex. 1001, 15:33–39. Petitioner provides these annotated versions of figures of Goubet to explain its positions as to these clauses:

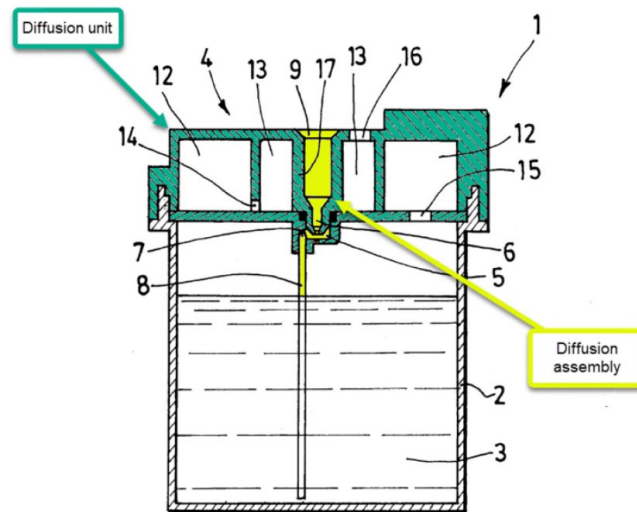
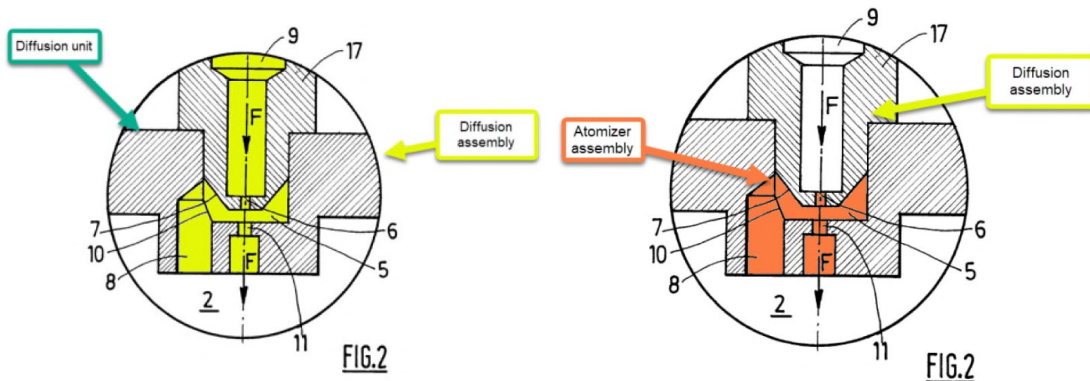
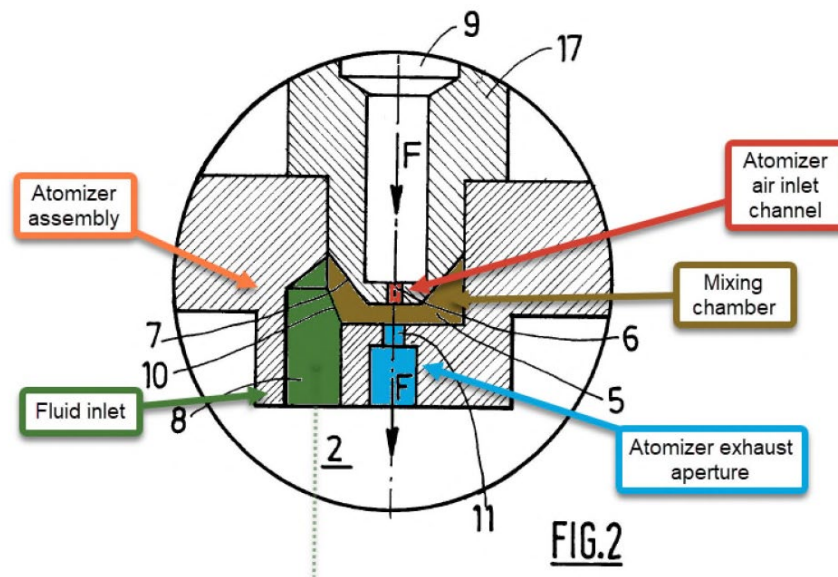


FIG. 1



Pet. 50–52; *see also* Pet. 49–52 (citing White Decl. ¶¶ 214–225) (entire discussion). In the annotated version of Figure 1 of Goubet above, Petitioner added (1) a text box and teal shading identifying a “Diffusion unit” and (2) a text box and yellow shading identifying a “Diffusion assembly.” Pet. 50. In the annotated version of Figure 2 at left above, Petitioner added (1) a text box identifying a “Diffusion unit” and (2) a text box and yellow shading identifying a “Diffusion assembly.” Pet. 51. In the annotated version of Figure 2 at right above, Petitioner added (1) a text box identifying a “Diffusion assembly” and (2) a text box and orange shading identifying an “Atomizer assembly.” Pet. 52.

Petitioner also provides another annotated version of Figure 2 of Goubet identifying additional structures in clause 1D:



Pet. 53. In the annotated version of Figure 2 above, Petitioner added (1) a text box identifying an “Atomizer assembly,” (2) a text box and red shading identifying an “Atomizer air inlet channel,” (3) a text box and brown shading identifying a “Mixing chamber,” (4) a text box and blue shading

identifying an “Atomizer exhaust aperture,” and (5) a text box and green shading identifying a “Fluid inlet.” *Id.*

Patent Owner contends that the identified structures in Goubet do not meet “the requirements of a diffusion assembly and atomizer assembly disposed in operative engagement” and that Petitioner’s positions “misrepresent[] both Goubet’s structure and function.” Prelim. Resp. 12. According to Patent Owner, the challenged patent “requires an atomizer assembly disposed in operative engagement with the diffusion chamber, with defined components—atomizer air inlet, fluid inlet, mixing chamber, and atomizer exhaust aperture—configured to generate a fluid dispersion within the diffusion chamber.” *Id.* at 13 (citing Ex. 1001, claims 1 and 7).

On the current record, this argument does not identify a deficiency in Petitioner’s position as to the clauses 1C and 1D. Patent Owner implies that the structures recited in clauses 1C and 1D require functionality recited *elsewhere* in the claim—namely, forming a “fluid dispersion” (Prelim. Resp. 13)—but Patent Owner does not adequately present evidence supporting this implied claim construction. *See In re Self*, 671 F.2d at 1348. Instead, Patent Owner cites to the entirety of claim 1 in support of these implied functional requirements. *See* Prelim. Resp. 13. At this stage of the proceeding, Patent Owner has not adequately explained why *any particular* component (or collection of components) must perform the function of forming the “fluid dispersion” recited in clause 1G.

On the current record, we determine that Petitioner has made a sufficient showing that Goubet discloses or suggests the structures recited in clauses 1C and 1D.

b. The “Fluid Dispersion” Limitation

Clause 1G recites “the compressed air and the operative fluid mix together in said mixing chamber to form the *fluid dispersion*.” Ex. 1001, 15:43–45 (emphasis added). Patent Owner asserts that Goubet’s teachings “reflect[] a passive, downstream correction that contrasts sharply with the claimed inventions active formation of the fluid dispersion within the diffusion chamber.” Prelim. Resp. 14; *see also id.* at 15 (arguing that claim 1 requires “an atomizer assembly integrated within the diffusion chamber to actively produce a properly conditioned fluid dispersion”).

As discussed above, for this ground (like all grounds in this proceeding), Petitioner proposes to construe “fluid dispersion” to require “atomized droplets,” which need not include “a plurality of substantially uniform droplets.” Pet. 31, 54–55. For this ground, Petitioner contends that Goubet describes clause 1G under that construction by creating an “atomized mist.” Pet. 53–54.

For the same reasons discussed as to the ground based on Sevy alone (*see* § II.C.2.b), given that clause 1G *expressly* requires forming a “fluid dispersion,” it is unclear, at this stage, how *another* recitation in the same clause (here relating to the “mixing chamber”) could require reading the “fluid dispersion” to *not* comprise “a plurality of substantially uniform droplets.” The parties should consider addressing this issue in further briefing at trial as appropriate.

c. Conclusion as to Claim 1

Because the Petition shows a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims based on at least one of the asserted grounds (*see* §§ II.C.3; II.E.3; II.G.1.b), we

include claim 1 in the context of this ground in the instituted *inter partes* review. *See SAS*, 584 U.S. at 362–63, 369–70; 37 C.F.R. § 42.108(a).

3. *Independent Claim 7*

For independent claim 7, Petitioner contends that Goubet discloses or suggests each limitation. Pet. 57. To support its arguments, Petitioner relies on the arguments made as to clauses 1PRE through 1D of independent claim 1. *Id.* Patent Owner relies on the same arguments discussed above as to independent claim 1. *See Prelim. Resp.* 11–15.

As discussed above, on the current record, we determine that Petitioner has made a sufficient showing that Goubet discloses or suggests clauses 1C and 1D, which parallel clauses 7C and 7D. *See* § II.E.2.a. The “fluid dispersion” limitation in independent claim 1 is not recited in independent claim 7.

Patent Owner does not offer any arguments specifically addressing the remaining limitations of claim 7. *See Prelim. Resp.* 11–15. We have reviewed these aspects of Petitioner’s contentions, and we determine that the Petition provides a sufficient showing, at this stage of the proceeding, that Goubet satisfies each limitation.

For the reasons above, we determine, based on the current record, that the Petition shows a reasonable likelihood that Petitioner would prevail in demonstrating that claim 7 would have been obvious based on Goubet.

4. *Dependent Claim 8*

For dependent claim 8, Petitioner contends that Goubet discloses or suggests each limitation. Pet. 57–58. Patent Owner argues that Petitioner has failed to demonstrate that Goubet discloses or suggests the “fluid

dispersion” limitation in clause 8C, which parallels clause 1G discussed above. *See* Prelim. Resp. 14–15 (discussing claim 8).

As discussed above, on the current record, we reach no conclusion as to whether Petitioner has made a sufficient showing as to the “fluid dispersion” limitation in clause 1G (*see* § II.E.2.b) and we similarly reach no conclusion as to clause 8C.

Because the Petition shows a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims based on at least one of the asserted grounds (*see* §§ II.C.3; II.E.3; II.G.1.b), we include claim 8 in the context of this ground in the instituted *inter partes* review. *See SAS*, 584 U.S. at 362–63, 369–70; 37 C.F.R. § 42.108(a).

5. Claims 4, 9, and 10

For claim 4 (which depends from claim 1) and claims 9 and 10 (which depend from claim 7), Petitioner contends that Goubet discloses or suggests each limitation. Pet. 55–57, 58. Patent Owner does not present any arguments specifically addressing claims 4, 9, and 10 in the context of this ground. *See* Prelim. Resp. 11–15. We include claims 4, 9, and 10 in the context of this ground in the instituted *inter partes* review. *See SAS*, 584 U.S. at 362–63, 369–70; 37 C.F.R. § 42.108(a).

F. Asserted Obviousness of Claims 1, 4, and 7–10 Based on Goubet and Kaiser

Petitioner asserts that claims 1, 4, and 7–10 of the challenged patent would have been obvious based on Goubet and Kaiser. Pet. 3–4, 58–60. Patent Owner provides arguments addressing this asserted ground. Prelim. Resp. 15–22. We first summarize aspects of the relied-upon prior art.

1. Overview of Kaiser

In this asserted ground, Petitioner relies on Kaiser, in addition to Goubet (summarized above (*see* § II.E.1)). Kaiser generally relates to combustor design for power generation. *See* Ex. 1014 at 42. Kaiser discloses that “[c]ritical to uniform evaporation and burning is a good control of the size distribution of the resulting aerosol.” *Id.* at 43.

2. Independent Claims 1 and 7

For independent claims 1 and 7, Petitioner contends that the proposed combination of Goubet and Kaiser discloses each limitation. Pet. 58–60. Patent Owner (1) argues that the combination lacks clauses 1C/7C and 1D/7D, (2) argues that the combination does not satisfy the “fluid dispersion” limitation in clause 1G, and (3) challenges the articulated reasons to combine Goubet and Kaiser as proposed. *See* Prelim. Resp. 15–22. We address in turn each of Patent Owner’s arguments.

a. Clauses 1C/7C and 1D/7D

Clauses 1C and 7C each recite “a diffusion assembly disposed in an operative engagement with said diffusion unit” and clauses 1D and 7D each recite “wherein said diffusion assembly comprises an atomizer assembly, said atomizer assembly comprising an atomizer air inlet channel, a fluid inlet, a mixing chamber, and an atomizer exhaust aperture.” Ex. 1001, 15:33–39, 16:9–15.

For these clauses in the context of this ground, Petitioner relies on its positions presented in the prior ground based on Goubet alone. *See* Pet. 60 (citing Pet. 42–55, 57; White Decl. ¶¶ 205–228) (“Limitations 1[A]–1[G] and 7[A]–7[E] are taught by Goubet for the reasons previously provided in

Ground 3 as such limitations are wholly unrelated to the discharge of ‘fluid dispersion.’”).

Patent Owner repackages its arguments challenging Petitioner’s showing as to these same clauses for the ground based on Goubet alone. *Compare* Prelim. Resp. 11–14, *with id.* at 18–19.

For the same reasons discussed above (*see* §§ II.E.2.a, II.E.3), on the current record, we determine that Petitioner has made a sufficient showing that Goubet discloses or suggests the structures recited in clauses 1C/7C and 1D/7D.

b. The “Fluid Dispersion” Limitation in Claim 1

Clause 1G recites “the compressed air and the operative fluid mix together in said mixing chamber to form the *fluid dispersion*.” Ex. 1001, 15:43–45 (emphasis added). For this ground, Petitioner argues that, if Goubet does not teach the “fluid dispersion” limitation, one of ordinary skill in the art would have combined Goubet and Kaiser as proposed to satisfy that limitation. *See* Pet. 58–60 (citing White Decl. ¶¶ 246–257).

Patent Owner repackages its arguments challenging Petitioner’s showing as to “fluid dispersion” limitation in clause 1G for the ground based on Goubet alone, with Patent Owner not addressing Kaiser substantively. *Compare* Prelim. Resp. 14–15, *with id.* at 15–18.

As discussed above, for this ground (like all grounds in this proceeding), Petitioner proposes to construe “fluid dispersion” to require “atomized droplets,” which need not include “a plurality of substantially uniform droplets.” Pet. 31, 58–60. For the same reasons discussed as to the ground based on Sevy alone (*see* § II.C.2.b), given that clause 1G *expressly* requires forming a “fluid dispersion,” it is unclear, at this stage, how *another*

recitation in the same clause (here relating to the “mixing chamber”) could require reading the “fluid dispersion” to *not* comprise “a plurality of substantially uniform droplets.” The parties should consider addressing this issue in further briefing at trial as appropriate.

c. The Motivation to Combine Goubet and Kaiser

Petitioner first contends that “Kaiser demonstrates that it was well known in the field at the time of the invention that droplets of greater uniformity result in uniform droplet evaporation.” Pet. 59 (citing Ex. 1014 at 43 (“Critical to uniform evaporation and burning is a good control of the size distribution of the resulting aerosol”)). Petitioner states that, if Goubet does not does not teach a “fluid dispersion,” one of ordinary skill in the art “would have been motivated to modify Goubet to include additional enclosures to further reduce the size (diameter) of the droplets for the reasons discussed” in the ground based on Goubet alone. *Id.* According to Petitioner, one of ordinary skill in the art “would have been motivated to add the additional enclosures in view of Kaiser’s teaching that uniform droplets result in uniform evaporation, which, in turn, would improve the smoothness (*i.e.*, less harsh) of the aroma generated as the oil droplets evaporate in the surrounding airspace.” *Id.* Petitioner asserts that the proposed combination would have not required undue experimentation and that one of ordinary skill in the art would have had a reasonable expectation of success. *See* Pet. 59–60 (citing White Decl. ¶¶ 246–257).

Patent Owner argues that one of ordinary skill in the art “would not have been motivated to combine Goubet and Kaiser because the references are directed to fundamentally different problems in distinct technical domains—namely, scent dispersion in consumer enclosures versus

combustion dynamics in mesoscale power generation.” Prelim. Resp. 20–21; *see also id.* at 19–22 (entire argument).

At this stage of the proceeding, the record on the analogous art issue is incomplete. Petitioner seems to take the position that Kaiser is in the same “field” (Pet. 59), but Petitioner does not fully address the issue of analogous art. Although Petitioner was not required to anticipate this argument with its initial filing (*see Sanofi-Aventis Deutschland GmbH v. Mylan Pharma., Inc.*, 66 F.4th 1373, 1379 (Fed. Cir. 2023)), Petitioner may wish to address this issue as appropriate in future briefing. We will consider the full record on this issue, if necessary, as part of our analysis in any final written decision.

On the current record and in view of our decision to institute based on other grounds, we reach no conclusion as to whether Petitioner has made a sufficient showing that one of ordinary skill in the art would have combined Goubet and Kaiser as proposed.

d. Conclusion for Claims 1 and 7

Because the Petition shows a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims based on at least one of the asserted grounds (*see* §§ II.C.3; II.E.3; II.G.1.b), we include claims 1 and 7 in the context of this ground in the instituted *inter partes* review. *See SAS*, 584 U.S. at 362–63, 369–70; 37 C.F.R. § 42.108(a).

3. Claims 4 and 8–10

For claim 4 (which depends from claim 1) and claims 8–10 (all of which depend from claim 7), Petitioner contends that Sevy discloses or suggests each limitation. Pet. 58–60. Patent Owner does not present any arguments specifically addressing claims 4 and 8–10 in the context of this ground. *See* Prelim. Resp. 15–22. We include claims 4 and 8–10 in the

context of this ground in the instituted *inter partes* review. *See SAS*, 584 U.S. at 362–63, 369–70; 37 C.F.R. § 42.108(a).

G. Asserted Anticipation of Claims 1, 4, and 7–10 by Gao

Petitioner asserts that claims 1, 4, and 7–10 of the challenged patent are anticipated by Gao. Pet. 3–4, 60–73. Patent Owner provides arguments addressing this asserted ground. Prelim. Resp. 22–27. In this asserted ground, Petitioner relies on Gao (summarized above (*see* § II.D.1)).

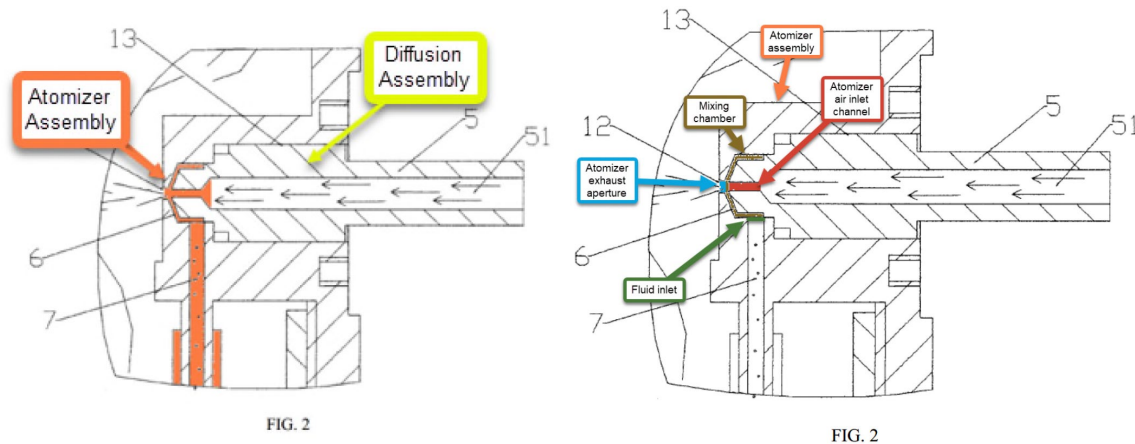
1. Independent Claims 1 and 7

For claims 1 and 7, Petitioner contends that Gao discloses each limitation. Pet. 60–73. To support its arguments, Petitioner identifies certain passages in Gao and explains the significance of each passage with respect to the corresponding claim limitation. *Id.* Patent Owner argues that Gao lacks clauses 1D and 7D. *See* Prelim. Resp. 22–27.

We have reviewed Petitioner’s contentions with respect to claims 1 and 7, and for the reasons below, we determine that the Petition shows a reasonable likelihood that Petitioner would prevail in demonstrating that claims 1 and 7 are anticipated by Gao. We address in turn each of Patent Owner’s arguments.

a. Clauses 1D and 7D

Clauses 1D and 7D each recite “wherein said diffusion assembly comprises an atomizer assembly, said atomizer assembly comprising an atomizer air inlet channel, a fluid inlet, a mixing chamber, and an atomizer exhaust aperture.” Ex. 1001, 15:33–39, 16:9–15. Petitioner provides these annotated versions of Figure 2 of Gao to explain its positions as to the clauses:



Pet. 70, 69; *see also* Pet. 68–70 (citing White Decl. ¶¶ 277–282) (entire discussion), Pet. 72 (relying on the same for clause 7D). In the annotated version of Figure 2 at left above, Petitioner added (1) a text box and orange shading identifying an “Atomizer assembly” and (2) a text box identifying a “Diffusion assembly.” Pet. 70. In the annotated version of Figure 2 on the right above, Petitioner added (1) a text box identifying an “Atomizer assembly,” (2) a text box and red shading identifying an “Atomizer air inlet channel,” (3) a text box and brown shading identifying a “Mixing chamber,” (4) a text box and blue shading identifying an “Atomizer exhaust aperture,” and (5) a text box and green shading identifying a “Fluid inlet.” Pet. 69.

Patent Owner argues that Gao does not disclose or suggest an “atomizer exhaust aperture” as recited in clause 1D and 7D. *See* Prelim. Resp. 22–25, 26–27 (for claim 7, relying on the same argument presented as to claim 1). Specifically, Patent Owner argues, as to the identified “atomizer exhaust aperture,” that “Gao is entirely silent on a structure other than a plain opening in parallel orientation to airflow that allows a fluid or fluid dispersion to eject from a ‘mixing chamber.’” *Id.* at 24. According to Patent Owner, “[t]he atomizer exhaust aperture (reference numeral 228”) is clearly shown in Figure 6 to be at a distinct orientation in relation to the path of

airflow that allows from the creation of a fluid or fluid dispersion.” *Id.* Patent Owner quotes a large passage from the challenged patent allegedly defining “critical structural distinctions” as to the recited “atomizer exhaust aperture.” *Id.* (quoting Ex. 1001, 10:31–48).

On the current record, this argument does not identify a deficiency in Petitioner’s position as to the clauses 1D and 7D. As an initial matter, the passage from column 10 of the challenged patent quoted by Patent Owner does not use the term “fluid dispersion,” let alone disclose the “atomizer exhaust aperture” forming the “fluid dispersion.” *See* Ex. 1001, 10:31–48, *quoted at* Prelim. Resp. 24. Moreover, even if the quoted passage did disclose the “atomizer exhaust aperture” forming a “fluid dispersion,” “it is the *claims*, not the written description, which define the scope of the patent right.” *Laitram Corp. v. NEC Corp.*, 163 F.3d 1342, 1347 (Fed. Cir. 1998). At this stage of the proceeding, Patent Owner has not adequately presented evidence supporting its claim construction position that the “atomizer exhaust aperture” *must* perform the function of forming the “fluid dispersion” recited in clause 1G. *See In re Self*, 671 F.2d at 1348.

We are also not persuaded to limit the “atomizer exhaust aperture” to the “distinct orientation” shown in Figure 6 of the challenged patent, as argued by Patent Owner. Prelim. Resp. 24; *see Anchor Wall Sys., Inc. v. Rockwood Retaining Walls, Inc.*, 340 F.3d 1298, 1306–07 (Fed. Cir. 2003) (stating that “the mere fact that the patent drawings depict a particular embodiment of the patent does not operate to limit the claims to that specific configuration”).

On the current record, we determine that Petitioner has made a sufficient showing that Gao discloses the structures recited in clauses 1D and 7D, including the “atomizer exhaust aperture.”

b. Conclusion for Claims 1 and 7

Patent Owner does not offer any arguments specifically addressing the remaining limitations of claims 1 and 7. *See* Prelim. Resp. 22–27. We have reviewed Petitioner’s contentions with respect to the remaining limitations of claims 1 and 7, and we determine that the Petition provides a sufficient showing, at this stage of the proceeding, that Gao discloses each limitation.

For the reasons above, we determine, based on the current record, that the Petition shows a reasonable likelihood that Petitioner would prevail in demonstrating that claims 1 and 7 are anticipated by Gao.

2. Claims 4 and 8–10

For claim 4 (which depends from claim 1) and claims 8–10 (which depend from claim 7), Petitioner contends that Gao discloses each limitation. Pet. 71–73. Patent Owner does not present any arguments specifically addressing claims 4 and 8–10 in the context of this ground. *See* Prelim. Resp. 25–27 (relying only on the arguments addressing independent claims 1 and 7). We include claims 4 and 8–10 in the context of this ground in the instituted *inter partes* review. *See SAS*, 584 U.S. at 362–63, 369–70; 37 C.F.R. § 42.108(a).

III. CONCLUSION

For the reasons above, we determine that the Petition shows a reasonable likelihood that Petitioner would prevail with respect to at least one of challenged claims 1, 4, and 7–10 of the challenged patent. At this stage of the proceeding, no final determination has yet been made with

regard to the patentability of any of the challenged claims or any underlying factual or legal issues, including the construction of claim terms. The final determination will be based on the record as developed during the *inter partes* review.

IV. ORDER

Accordingly, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), *inter partes* review is hereby instituted as to claims 1, 4, and 7–10 of the challenged patent on all asserted grounds and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, *inter partes* review shall commence on the entry date of this Decision, with notice hereby given of the institution of a trial.

IPR2025-00706
Patent 10,583,449 B1

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