

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HILTI AKTIENGESELLSCHAFT,
Petitioner,

v.

SPECIFIED TECHNOLOGIES INC.,
Patent Owner.

IPR2024-00193
Patent 10,143,868 B2

Before RICHARD H. MARSCHALL, TIMOTHY G. MAJORS, and
MICHAEL A. VALEK, *Administrative Patent Judges*.

MAJORS, *Administrative Patent Judge*.

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

I. INTRODUCTION

Hilti Aktiengesellschaft (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1–6 and 9 of U.S. Patent No. 10,143,868 B2 (Ex. 1001, “the ’868 patent”). Pet. 1–2. Specified Technologies Inc. (“Patent Owner”) filed a Preliminary Response (Paper 7, “Prelim. Resp.”). With authorization, Petitioner and Patent Owner also filed, respectively, a pre-institution reply (Paper 12, “Prelim. Reply”) and sur-reply (Paper 15, “Prelim. Sur-reply”) addressing arguments of Patent Owner about the sufficiency of the Petition, and Patent Owner’s request for discretionary denial.

Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless it is determined that there is a reasonable likelihood that the petitioner will prevail with respect to at least one of the claims challenged in the petition. Considering the parties’ arguments and evidence, for reasons explained below, we conclude that Petitioner shows a reasonable likelihood that it will prevail with respect to at least one of the ’868 patent’s challenged claims. We decline to deny the Petition on a discretionary basis. We institute an *inter partes* review on all challenged claims. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1355 (2018).

Findings and conclusions at this stage are preliminary and based on the current record. Any final decision will be based on a full trial record.

II. BACKGROUND

A. *Real Parties-in-Interest*

Petitioner identifies itself as the real party-in-interest. Pet. 93. Patent Owner identifies itself as the real party-in-interest. Paper 5, 1.

B. Related Matters

The parties identify the following lawsuit involving assertion of the '868 patent: *Hilti Aktiengesellschaft v. Specified Technologies Inc.*, 1:22-cv-01248-CFC (D. Del.); Pet. 93; Paper 5, 1.

Patent Owner also identifies as related IPR2024-00192, a proceeding involving the same parties and challenging U.S. Patent No. 9,157,232. Paper 5, 1–2.

C. The '868 Patent

The '868 patent is titled “Cable Firestopping Apparatus.” Ex. 1001, code (54). The '868 patent issued from U.S. Application No. 15/615,885, filed June 7, 2017, which claims priority to two provisional applications filed January 12, 2017, and June 8, 2016. *Id.* at codes (21), (22), (60).

As background, the '868 patent states, “[i]t is commonplace in the construction and renovation of commercial and residential buildings for the need to pass cables, conduits and the like through construction barriers such as walls, floors and ceilings.” *Id.* at 1:19–22. Providing an “opening” between such barriers, however, is potentially hazardous because “fire can use those opening[s] to pass through the construction barrier” and “spread to adjoining areas of the building.” *Id.* at 1:22–27. Further, the patent explains, “fire barriers are normally located within the openings that are designed to prevent the passage of fire.” *Id.* at 1:27–29.

According to the '868 patent, the “invention generally relates to [an] apparatus for providing a firestop within a construction opening.” *Id.* at 1:10–11. We reproduce below Figure 3 from the '868 patent.

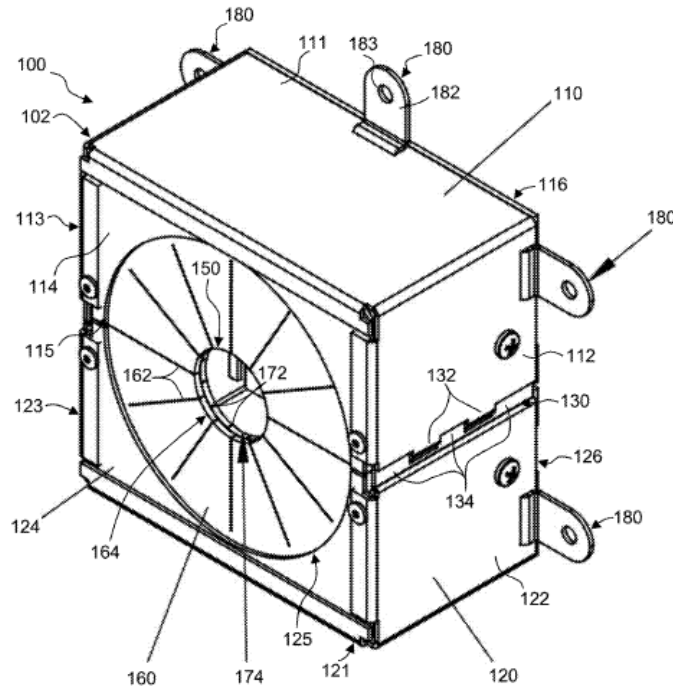


Fig. 3

Ex. 1001, Fig. 3. Figure 3 above is “a front perspective view of an exemplary firestopping apparatus in accordance with an embodiment of the invention.” *Id.* at 2:19–21. The apparatus 100 includes first and second housing members 110 and 120, which are interconnected to one another to define housing 102 having an internal chamber 150. *Id.* at 3:6–11. Although the housing depicted above has a rectangular configuration, the housing “may have any desired configuration with the housing members having corresponding configurations.” *Id.* at 3:11–16.

Figure 3 above depicts several additional features of the exemplary firestopping apparatus. For example, the first housing member 110 includes an end surface 111 and side panels 112, 113, extending between a front panel 114 and a rear panel 116. *Id.* at 3:34–39 (noting that the second housing member includes corresponding end surface 121, side panels 122 and 123, and front and rear panels 124 and 126). As shown, the front panels 114 and 124 include semi-circular openings 115 and 125 such that, when

housing members 110 and 120 are in an assembled state, a front opening 118 (not numbered in Figure 3) is defined in the housing. *Id.* at 3:39–43; *see also id.* at Fig. 12 (labeling front opening 118). This embodiment also includes a pair of “sealing elastomeric membranes” (160, 170) that extend across the front opening 118. *See id.* at 3:50–52, Figs. 3, 10, 12. In addition, as seen in Figure 3, the apparatus includes hinge assembly 130 defined by fingers 132 and 134 of respective side panels 112 and 122, and these fingers define through bores that can accept a pin 136 (through bores and pin not shown). *Id.* at 4:20–29, Fig. 6 (showing pin 136).

Figures 10 and 12 of the '868 patent are reproduced below.

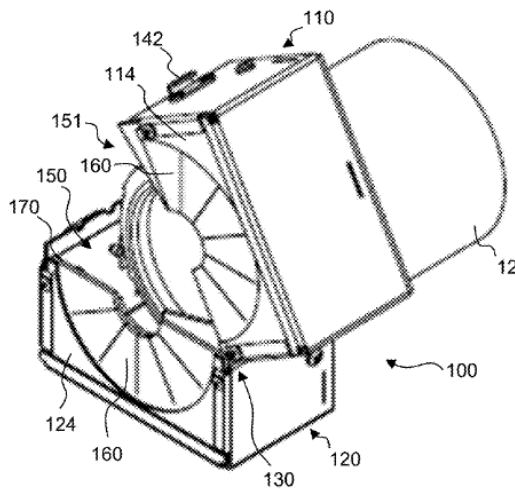


Fig. 10

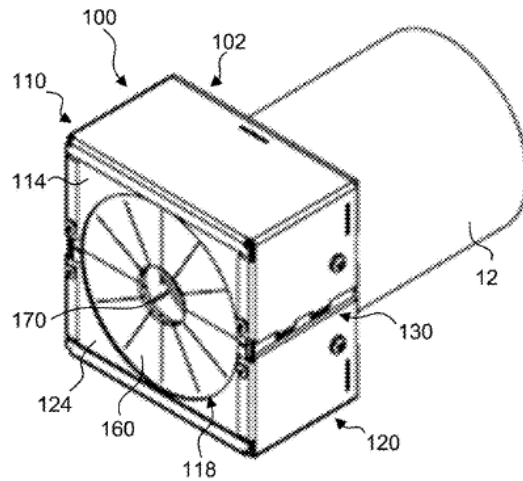


Fig. 12

Id. at Figs. 10, 12. Figures 10 and 12 are front perspective views of the exemplary firestopping apparatus showing, respectively, the apparatus in an open configuration and assembled (or closed) configuration about sleeve 12. *Id.* at 4:50–5:12. As the '868 patent explains, in Figure 10, the first housing member 110 is pivoted relative to the second housing member 120 to define a passage 151 into the internal chamber 150 and to accept sleeve 12. *Id.* at 4:50–61. In the assembled configuration shown in Figure 12, the first

housing member 110 is pivoted relative to the second housing member 120 to close the housing members about sleeve 12. *Id.* at 4:62–5:18 (explaining that, as assembled, cables/conduits may extend through the sleeve 12 and front opening 118, and be surrounded by sealing membranes 160, 170).

The '868 patent explains that embodiments of the apparatus also include intumescent firestopping materials in the internal chamber. *Id.* at 3:17–21; *see also id.* at Figs. 8, 9 (showing intumescent materials 152, 154 in internal chamber 150). Intumescent materials expand rapidly in response to fire and heat for sealing about any cables or conduits extending through the apparatus. *Id.* at 3:17–28 (noting intumescent materials include, for example, a polymeric foam and expandable graphite component).

D. Illustrative Claims

Claims 1–6 and 9 are challenged in the Petition. Claim 1 reads:

1. [1 pre] A firestopping apparatus comprising:
 - [1a] a housing having a wall surface extending between opposed front and rear panels with an inner chamber defined therein,
 - [1b] the front panel defining a front opening therethrough and the rear panel defining a rear opening therethrough,
 - [1c] the housing including first and second housing members which are completely detachable from one another
 - [1d] and moveable relative to one another between an assembled condition wherein the first and second housing members are interconnected and the wall surface is substantially continuous about the internal chamber, and an open condition wherein at least a portion of the first and second housing members are spaced from one another such that at least a portion of the wall surface is noncontiguous to define an opening into the internal chamber; and
 - [1e] intumescent material positioned within the internal chamber.

Ex. 1001, 6:54–7:4 (revised for formatting and to include brackets for the claim limitations in the manner addressed by Petitioner); Pet. viii.

Claims 2–6 depend directly or indirectly from claim 1 and add various sub-features to the claimed apparatus. Claims 3, 4, and 5, for example, add that the housing members are “pivotally connected” to each other along a wall surface (claim 3), “a hinge” is defined along a wall surface between the housing members (claim 4), and the housing members are completely detachable from one another “via the hinge” (claim 5). *Id.* at 7:8–18.

Claim 9 is an independent claim. *Id.* at 7:28–45. It recites a firestopping apparatus similar to claim 1 but, unlike claim 1, does not require a rear panel or that the first and second housing members can be “completely detachable” from one another. *Id.* Claim 9 also requires “a sealing member [that] extends across at least a portion of the front opening,” which is not a recitation in claim 1. *Id.*; *see also* Pet. x (identifying the “sealing member” limitation with the bracket [9e]).

E. Prior Art and Asserted Grounds

Petitioner asserts that claims 1–6 and 9 are unpatentable based on the following grounds:

Grounds	Claims Challenged	35 U.S.C. § ¹	References/Basis
1A	1–6, 9	103	Ramorino, ² Feil, ³ Rigollet ⁴

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284, 285–88 (2011), revised 35 U.S.C. §§ 102, 103 effective March 16, 2013. We apply the AIA versions of §§ 102 and 103 based on an assumed (and otherwise uncontested) priority date of June 8, 2016. Pet. 2.

² Ramorino et al., WO 2013/160776 A1, publ. Oct. 31, 2013 (Ex. 1004 (“Ramorino”)).

³ Feil et al., US 8,739,482 B1, issued June 3, 2014 (Ex. 1005 (“Feil”)).

⁴ Rigollet et al., GB 2490598 B, publ. Oct. 2, 2013 (Ex. 1013 (“Rigollet”)).

Grounds	Claims Challenged	35 U.S.C. § ¹	References/Basis
1B	1–6, 9	103	Ramorino, Feil, Rigollet, 3M ⁵
2	9	103	Feil

Petitioner relies on testimony from Milosh Puchovsky in support of its challenges. Ex. 1003 (Puchovsky Decl.).

III. EXERCISE OF DISCRETION

Institution of an *inter partes* review is discretionary. *See* 35 U.S.C. § 314(a) (authorizing institution of an *inter partes* review under particular circumstances, but not requiring institution under any circumstances); *Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 273 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”); *SAS*, 138 S. Ct. at 1356 (“[Section] 314(a) invests the Director with discretion on the question whether to institute review” (emphasis omitted)).

Patent Owner contends that we should exercise our discretion to deny the Petition under 35 U.S.C. § 314(a) in view of the parallel district court litigation (*supra* Section II.B.) and, in support, Patent Owner argues that the “majority” of the *Fintiv* factors favor discretionary denial. Prelim. Resp. 20–26 (citing *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 5–6 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”)).

⁵ 3M Fire Protection Products, copyright 2013 (Ex. 1006 (“3M”)). Petitioner supports its position that 3M was published before June 8, 2016, and, thus, is prior art to the ’868 patent with testimony from Michael Dorfman (Ex. 1016) and Sebastian Simon (Ex. 1019).

In deciding whether to discretionarily deny institution in view of a co-pending lawsuit involving the challenged patent, the Board considers six non-exclusive factors set forth in *Fintiv*. *Fintiv*, Paper 11 at 6. The Director of the USPTO has, however, clarified the Board’s application of the *Fintiv* factors according to an “Interim Procedure” established June 21, 2022. Interim Procedure For Discretionary Denials In AIA Post-Grant Proceedings With Parallel District Court Litigation, issued June 21, 2022 (“Interim Procedure”).⁶ The Interim Procedure explains that, “[c]onsistent with *Sotera Wireless, Inc.*, the PTAB will not discretionarily deny institution in view of parallel district court litigation where a petitioner presents a stipulation not to pursue in a parallel proceeding the same grounds or any grounds that could have reasonably been raised before the PTAB.” Interim Procedure 2–3 (internal footnote omitted) (citing *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020) (precedential as to § II.A) (“*Sotera*”). The Interim Procedure also indicates that a *Sotera*-type stipulation “mitigates concerns of potentially conflicting decisions and duplicative efforts between the district court and the PTAB . . . [and] allows the PTAB to review grounds that the parallel district court litigation will not resolve.” *Id.* at 7–8.

Petitioner has made a *Sotera* stipulation here. Pet. 92–93 (citing Ex. 1021 (stipulation)). Citing the Director’s Interim Procedure, Petitioner stipulates that “[i]f the Patent Trial and Appeal Board (the ‘PTAB’) institutes the ’868 Patent Petition, then [Petitioner] will not pursue, in this

⁶ Available at https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf

[district] Court, the grounds included in the '868 Patent Petition or any other ground that could have reasonably been raised before the PTAB.” Ex. 1021, 1–2. Patent Owner’s Preliminary Response cites the *Fintiv* factors but addresses neither the Interim Procedure nor Petitioner’s stipulation. *See generally* Prelim. Resp. 20–26.

The Interim Procedure binds this panel. Interim Procedure 3, 9 (describing as “binding agency guidance” that “applies to all proceedings pending before the Office” absent contrary notice). In view of Petitioner’s *Sotera* stipulation, applying the Interim Procedure ends the inquiry—discretionary denial due to parallel litigation is not an option. *Id.* at 7 (“[T]he PTAB **will not** discretionarily deny institution of an IPR . . . in view of parallel district court litigation” where petitioner makes a *Sotera* stipulation) (emphasis added).

Patent Owner, for the first time in sur-reply, mentions Petitioner’s stipulation. Prelim. Sur-reply 8. Patent Owner argues that, despite the stipulation, “Petitioner has asserted various prior art products in District Court that will duplicate the efforts of the parties even if this IPR is instituted.” *Id.* (citing an entry on the court’s docket of “non-public infringement contentions”).

Patent Owner’s sur-reply argument does not change the result. Patent Owner offers no explanation why it did not earlier address the stipulation, which was submitted with the Petition.⁷ The “contentions” cited by Patent

⁷ Patent Owner also cites the Board’s decision in *Samsung Electronics Co., Ltd. v. Mojo Mobility Inc.*, IPR2023-01094, Paper 11, 10–13, 29 (PTAB Feb. 9, 2024). Prelim. Sur-reply 8. That decision is inapposite because the stipulation in that case was not of the *Sotera*-type. *Samsung*, IPR2023-01094, Paper 11 at 11–13 (explaining that petitioner’s original and revised

Owner are not evidence of record. And, as it relates to *Sotera* stipulations, the Interim Procedure makes no exception for parallel litigation where duplicative “product” prior art is asserted (even accepting Patent Owner’s unsupported characterization of such art), which art cannot be asserted as a basis of unpatentability in an IPR. 35 U.S.C. § 311(b) (limiting prior art to patents and printed publications).

For the above reasons, we do not deny the Petition on the basis of discretion under § 314(a).

IV. ANALYSIS

A. *Legal Standards*

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3)).

A claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the relevant art. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) secondary considerations (i.e., objective indicia) of nonobviousness

stipulations were “narrower” than “the Sotera stipulation approved in the Guidance Memo [(i.e., Interim Procedure)]”).

when presented.⁸ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). “An obviousness determination [also] requires finding both that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.” *CRFD Rsch., Inc. v. Matal*, 876 F.3d 1330, 1340 (Fed. Cir. 2017) (internal quotation marks and citation omitted).

B. Level of Ordinary Skill in the Art

In determining the level of skill in the art, we consider the problems encountered in the art, the art’s solutions to those problems, the rapidity with which innovations are made, the sophistication of the technology, and the educational level of active workers in the field. *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986).

Petitioner proposes that the person of ordinary skill in the art (“POSA”) as of June 8, 2016, “would have had at least a bachelor’s degree in mechanical engineering, civil engineering, fire protection engineering, applied science or a related field, with three to five years’ experience in building construction, fire safety, or the firestopping field.” Pet. 5 (citing Ex. 1003 ¶¶ 8–9). Petitioner contends that “[a]dditional graduate education could substitute for professional experience, or significant experience in the field could substitute for formal education.” *Id.*

⁸ The parties do not, at this stage, present substantive argument on secondary considerations. Pet. 89 (noting that Patent Owner has asserted commercial success, for example, in related court proceedings but with “no attempt to establish the requisite nexus”); *see generally* Prelim. Resp. (no argument or evidence in support of secondary considerations).

Patent Owner does not propose an alternate definition of the POSA's qualifications or contest Petitioner's definition. *See generally* Prelim. Resp.

For this Decision, we apply Petitioner's proposed POSA level, which appears to be consistent with the level of skill shown in the prior art of record. *See Daiichi Sankyo Co. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007).

C. Claim Construction

In *inter partes* review, we construe claims using the same claim construction standard used to construe claims in a civil action before the courts under 35 U.S.C. § 282(b), including construing claims' language in accordance with its ordinary and customary meaning as understood by the POSA, in view of the patent's specification and considering the patent's prosecution history. 37 C.F.R. § 42.100(b). We need only construe terms that are in controversy and only to the extent needed to resolve the controversy. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019); *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (holding claim construction is for "resolution of disputed meanings").

Petitioner contends that its challenge in the Petition "applies the plain and ordinary meaning of the claim terms." Pet. 4. Petitioner further states that, in the related district court litigation, the parties disagree on the meaning of some claim terms. *Id.*⁹ And, Petitioner notes, where appropriate Petitioner addresses such disagreement in the context of its comparison of specific claim elements to the asserted prior art. *Id.* at 4 n.1.

⁹ *See* Ex. 1007 (Patent Owner's Opening Claim Construction Brief); Ex. 1024 (Joint Claim Construction Brief); Ex. 2002 (Appendix A to Joint Claim Construction Chart).

Patent Owner does not propose any particular claim construction for any of the challenged claims at this time. *See generally* Prelim. Resp.

Patent Owner does, however, argue that “Petitioner has not been forthcoming with the Board about its claim construction positions” because “Petitioner has failed to provide constructions for the claim terms it believes require construction” as reflected in Petitioner’s proposed constructions before the district court. *Id.* at 7–9. Patent Owner identifies three claim terms/phrases in claims 1 and/or 9 where Petitioner proposed to the court a construction that modified the language of the terms/phrases as written. *Id.* at 8–9 (including a table of terms, highlighting the modifications) (citing Ex. 2002, 20–23)). For example, for the phrase “moveable relative to one another” recited in claims 1 and 9, Patent Owner notes that Petitioner proposed the district court construe as “moveable in a defined relationship to one another.” *Id.* at 8 (alteration in original, with underlining used to replace Patent Owner’s highlighting). According to Patent Owner, this shows that “Petitioner **does not** believe the plain and ordinary meaning should be given to the claim terms” and, because Petitioner did not compare the claims and prior art using its proffered district court constructions, the Petition is “defective.” *Id.* at 8–10 (citing 37 C.F.R. §§ 42.104(b)(3)–(4)).

For at least two reasons, Patent Owner’s argument does not persuade us that the Petition is defective. We explain below.

First, Patent Owner’s argument presupposes the Board’s rules and precedents require that a petition be based on the identically-worded claim construction proposed by a petitioner in parallel district court proceedings. They do not. Rule 104(b)(3) requires that the petition indicate “[h]ow the challenged claim is to be construed.” 37 C.F.R. § 42.104(b)(3). Petitioner has done that here with respect to the claim terms flagged by Patent Owner

by advancing a claim construction based on the claim terms as written without further embellishment or modification. *Samsung Elecs. Co., Ltd v. Collect, LLC*, IPR2020-00476, Paper 14 at 12 (PTAB July 31, 2020) (“It is not a requirement of 37 C.F.R. 104(b)(3) that for every term for which Petitioner has proposed an express construction in related court litigation, Petitioner must propose the same construction in the Petition.”). Moreover, it is not uncommon for petitioners to seek *inter partes* review asking that a patent owner’s interpretation of claim terms be applied, even where a petitioner advances a differently-worded or even inconsistent claim construction before the courts. *See, e.g., id.* (noting that petitioner proposed “narrower” constructions in related litigation compared to unmodified “plain and ordinary meaning” constructions sought in the petition); *Novartis Pharms. Corp. v. Regents of the University of Michigan*, IPR2023-01346, Paper 8 at 14 (PTAB Mar. 13, 2024) (instituting review where petitioner applied patent owner’s interpretation of “co-crystal,” which interpretation petitioner disputed in parallel litigation).¹⁰

¹⁰ We recognize that such an approach is not universally accepted by all the Board’s judges. The dissent in *Novartis*, for example, would have denied institution under 37 C.F.R. § 104(b)(3) because petitioner’s challenge was solely based on a claim construction with which petitioner disagreed and petitioner advocated for “a clearly narrower” construction with the court. IPR2023-01346, Paper 8 at 2 (Fitzpatrick J., dissenting). Nor do we suggest the tack of arguing different claim constructions is free of possible pitfalls. *See, e.g., 10X Genomics, Inc. v. President and Fellows of Harvard College*, IPR2023-01299, Paper 15 at 7–13 (PTAB Mar. 7, 2024) (denying institution based on Rule 104(b)(3) where petitioner argued to the Board that § 112(f) (means-plus-function) construction did not apply while arguing to (and persuading) the district court that § 112(f) construction did apply).

Second, the Board only needs to construe claim terms *to the extent needed* to resolve the controversy. *Realtime Data*, 912 F.3d at 1375. Patent Owner identifies no substantive issue in dispute that turns on the construction of the three claim terms/phrases in question. Patent Owner does not propose any express claim construction for those terms—or any others—at this time. And Patent Owner does not argue that those terms are missing in Petitioner’s combination of asserted art under any claim interpretation.¹¹ There is simply no evidence here to suggest the additional gloss Petitioner added to its proposed district court constructions makes the asserted prior art any more or less mappable to the claims. Accordingly, it is not clear why the Board would need to construe those terms beyond their language as written to resolve the unpatentability dispute before us.

Moreover, that Petitioner’s proposed district court construction adds verbiage to the claim language as written does not, as Patent Owner suggests, equate to Petitioner rejecting the claims’ plain and ordinary meaning. Prelim. Resp. 8. As noted by Petitioner, Patent Owner may

¹¹ There is, for example, no apparent dispute at this stage that Petitioner’s combination of art teaches or suggests the claimed “moveable relative to one another” recitation under any plausible interpretation. Indeed, the asserted art discloses housing members that open and close about a hinge and fixed axis very much like the ’868 patent’s preferred embodiments. *See, e.g.*, Ex. 1004, 12:25–13:4; Ex. 1005, Fig. 9; Ex. 1001, Figs. 10, 12. The Petition forecasts a dispute about the scope of the claim term “panel” but Patent Owner has not, in its preliminary response, proposed a claim construction for that term or explained why the term does not read on structures that are either physically distinct from or integral to other portions of the housing, as argued by Petitioner. *See* Pet. 48–53. We address the “panel” issue in more detail below when comparing the claims and prior art. Patent Owner may present argument on such questions if it chooses in its Patent Owner Response during trial.

“disagree[] with Petitioner’s articulation of the plain meaning” in the papers before the court, “but that does not mean that the Petition did not apply the plain meaning as understood by Petitioner.” Prelim. Reply 1–2.

Patent Owner, in its pre-institution sur-reply, maintains that Petitioner has been deceptive with its claim construction positions, and argues that Petitioner’s pre-institution reply raises untimely arguments about how the art meets the claims under the “previously undisclosed construction.” Prelim. Sur-reply 1–4. We do not agree. Petitioner has not impermissibly changed theories or supplemented the evidentiary record compared to that set forth in the Petition. To the extent Petitioner addressed its proposed district court constructions in the authorized reply, this was plainly responsive to Patent Owner’s arguments and only highlights that there is no material difference between Petitioner’s claim construction positions and no genuine dispute at this stage that requires further construction of the three terms in question in this proceeding.¹² Prelim. Reply 4 (“PO does not dispute that Petitioner, in

¹² Patent Owner’s criticism that the pre-institution reply improperly cross-cites “other” limitations is also misplaced. Prelim. Sur-reply 2–4. For example, Patent Owner notes an “addition” to “Limitation 9d” in the proposed district court construction, for which “Petitioner cites *only* to arguments related to Limitations 1d and 9c” in the reply. *Id.* at 3–4; Prelim. Resp. 9 (the “addition” being a capability of the housing’s opening to be positioned about a cable/conduit before the housing members are returned to an assembled (closed) position). Contrary to Patent Owner’s argument, the “addition” **does not** relate to limitation [9d], which concerns “intumescent material.” *See, e.g.*, Pet. x, 69–70. The “addition” appears toward the end of what Petitioner labeled limitation [9c] in the Petition, so Petitioner’s citation to argument about limitation [9c] in the reply makes sense. Prelim. Reply 3–4 (citing Pet. 69, 86)). That the preliminary reply may have also noted argument for claim 1’s limitation [1d] is also unsurprising given the relevant overlap in subject matter recited in independent claims 1 and 9.

fact, applied the plain meaning of the terms in its obviousness analysis, choosing instead to focus on a misplaced procedural argument.”).

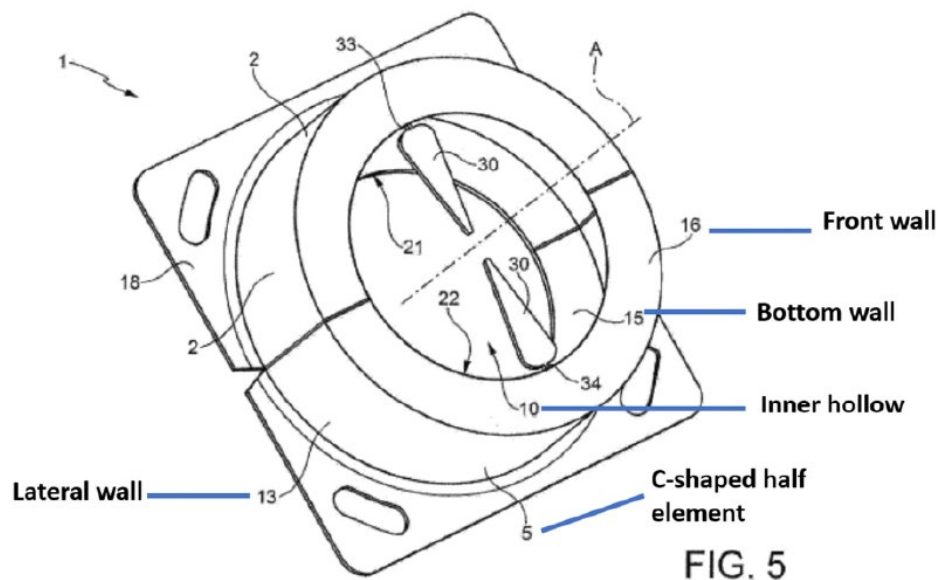
For the reasons above, we decline to find a defect in the Petition under 37 C.F.R. §§ 42.104(b)(3)–(4) that would justify denial of institution.

D. Asserted References

Assuming, as Petitioner does, a priority date for the ’868 patent’s challenged claims that is no earlier than June 8, 2016 (the earliest filing date for an application in the patent’s listed priority chain), each of the references below is prior art. Pet. 2; Ex. 1001, code (60). Patent Owner does not contest the prior-art status of these references.

1. Ramorino (Ex. 1004)

Ramorino is an international patent application that published October 31, 2013, and Ramorino describes an “intumescent material fire stop device.” Ex. 1004, codes (43), (57), Abstr. An annotated version of Ramorino’s Figure 5 is reproduced below.



Ex. 1004, Fig. 5 (with Petitioner’s annotations (Pet. 23)). Figure 5 is a perspective view of a fire stop device 1, with annotations (blue lines)

pointing to certain features of the device. *Id.* As shown above, the device includes, *inter alia*, body 2 comprising lateral wall 13, bottom wall 15, and front wall 16, forming inner hollow 10 within body 2. *Id.*; *see also id.* at 13:9–20. Ramorino discloses that the body 2 includes “a plurality of foldable locking lamellar elements 30 (two or more)” that “project[] from the front wall 16 into the hollow 10.” *Id.* at 14:20–24 (referring also to the lamellar elements 20 as “fins”).

In addition, as shown in Figure 5 above, the body 2 is formed with two opposed substantially “C-shaped half-annular elements 5.” *Id.* at 12:25–29. Ramorino discloses that the C-shaped half-annular elements may be “hinged to each other by way of a hinge, or a specific mechanical folding system . . . allowing the elements 5 to rotate about an axis parallel to the axis A, and being provided with hooking members . . . opposite to the hinge . . . to close the body 2 about the axis A.” *Id.* at 12:29–13:4; *see also id.* at Fig. 1 (showing hinge 6 and hooking members 7).

Ramorino further discloses that the fire stop device may comprise an intumescent material. *Id.* at 12:15–19. More specifically, Ramorino discloses that body 2 includes “an expandable element 3, made of at least one intumescent material and positioned in the support body.” *Id.*; *see also id.* at 16:20–25 (describing, as an example, expandable element 3 as comprising two annular adjacent sleeves 36, 37, extending around axis A and made of different intumescent materials with different heat resistances and/or expanding power), Fig. 6 (showing intumescent sleeves 36, 37, within device body 2 that is disposed in wall W surrounding pipe T).

2. *Feil (Ex. 1005)*

Feil is a US patent that issued June 3, 2014. Ex. 1005, code (45). Feil describes a “firestopping apparatus including a sleeve with at least first and

second airflow-blocking elements,” where those elements may comprise resiliently compressible bodies slidably movable along a long axis of the sleeve. *Id.* at Abstr.

An annotated version of Feil’s Figure 3 is reproduced below.

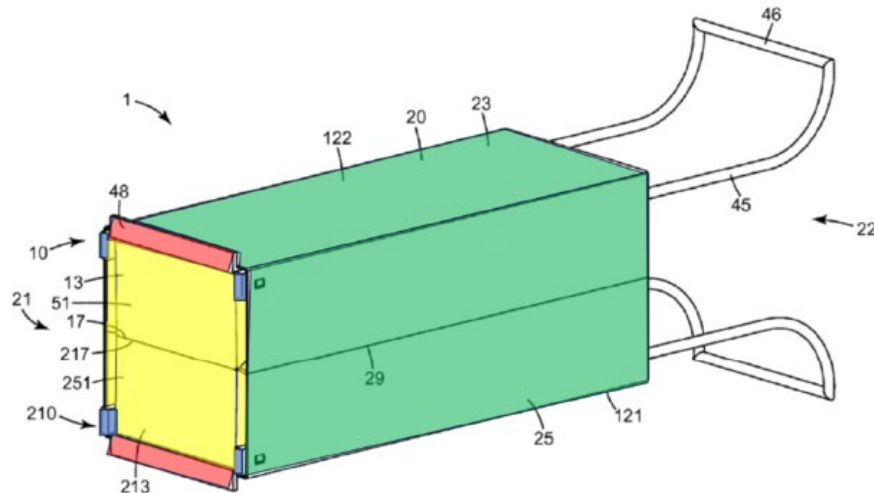


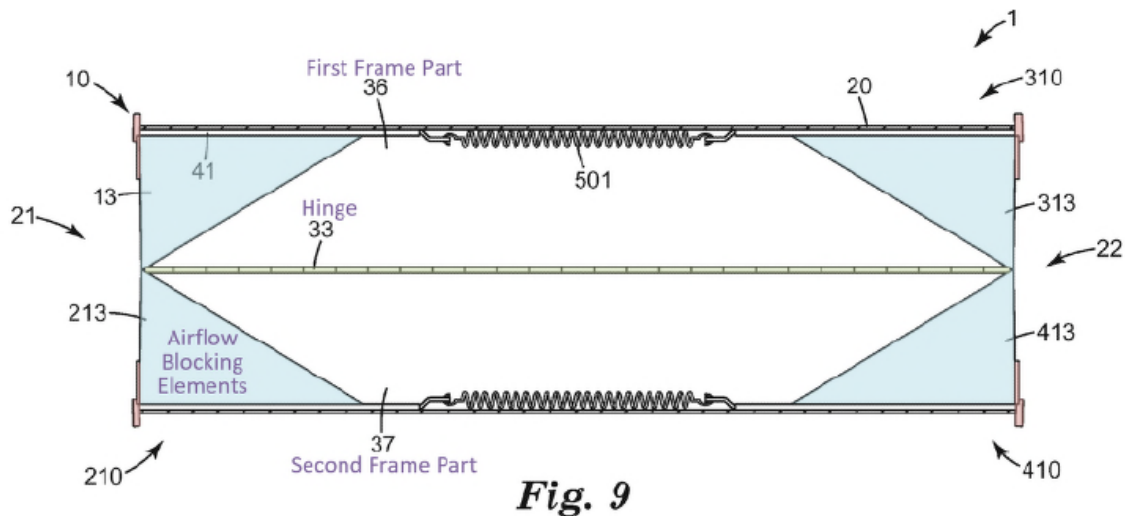
Fig. 3

Ex. 1005, Fig. 3 (with Petitioner’s annotations (Pet. 30)). Figure 3 above is a front-perspective view of an exemplary firestopping apparatus of Feil. *Id.* at 1:35–37. Figure 3 shows apparatus 1 comprising an elongated, rectangular open-ended sleeve 20 (colored green) with sidewalls (e.g., 23, 25) and having first (21) and second (22) open ends. *Id.* at 3:46–4:3. Feil discloses that the sleeve, when used in a wall opening, may include one or more “tubes” passing through the sleeve’s interior space. *Id.* at 12:42–61, 15:7–15 (disclosing that a term “tube” encompasses, e.g., pipes, cables, or conduits; disclosing that the sleeve may have a cross-sectional shape other than rectangular, such as circular); *see id.* at Fig. 1 (showing tube 90).

The apparatus shown in Figure 3 above also includes first (13) and second (213) resiliently compressible bodies (colored yellow) disposed within first open end 21. *Id.* at 3:46–4:3; *see also id.* at 5:17–33 (describing further details about the resiliently compressible material, e.g., that it may

comprise an elastomeric foam). Figure 3 shows airflow blocking elements 10, 210 (colored blue) and airflow shield 48 (colored red). *Id.* at 10:23–28. Feil teaches that the airflow blocking elements are slidably movable along the long-axis of the sleeve to allow the airflow blocking elements and resiliently compressible bodies to open away from, and close toward, each other. *Id.* at 3:17–4:3, Fig. 4 (showing the apparatus in an open position). Feil also discloses that a firestop material (not shown in Fig. 3) may be provided along an inside surface of the sleeve. *Id.* at 2:45–52 (describing as an “intumescent” heat-activated material).

An annotated version of Feil’s Figure 9 is reproduced below.



Id. at Fig. 9 (with Petitioner’s annotations (Pet. 32)). Figure 9 above is a side plan view in cutaway of an exemplary firestopping apparatus. *Id.* at 1:49–50. As annotated, Figure 9 shows first frame part 36 and second frame part 37 of the sleeve 20, which parts are “hingedly connected by hinge 33.” *Id.* at 13:8–18 (noting the hinge may be oriented along the sleeve’s long axis so that parts 36 and 37 can be opened and closed relative to each other in “clamshell style”).

Further, with respect to the hinged connection, Feil discloses that “[a]ny suitable hinged connection may be used, whether such a connection allows the hingedly connected sleeve parts to be disconnected from each other or not.” *Id.* at 13:19–21. According to Feil:

It will be appreciated that hinged designs and/or multi-piece designs of the sleeve 20 may be advantageous in at least some circumstances. That is, if a sleeve is to be used e.g. in the firestopping of a newly created opening in a wall (e.g., that does not contain tubing already inserted therethrough), sleeve 20 may be placed in the opening as is (that is, with a hinged sleeve in its closed position, or with a multi-piece sleeve in its assembled condition). If [the sleeve is] to be used in firestopping an opening that already contains tubing inserted therethrough, it may be necessary to open and/or at least partially disassemble sleeve 20 in order to position the tubing within sleeve 20. Thus, a sleeve may be provided with a hinged connection so that it can be momentarily opened for insertion of tubing thereinto and then reclosed clamshell-style to reform sleeve 20. Similarly, sleeve pieces may be disassembled from each other for insertion of tubing, and then reassembled to each other to reform sleeve 20.

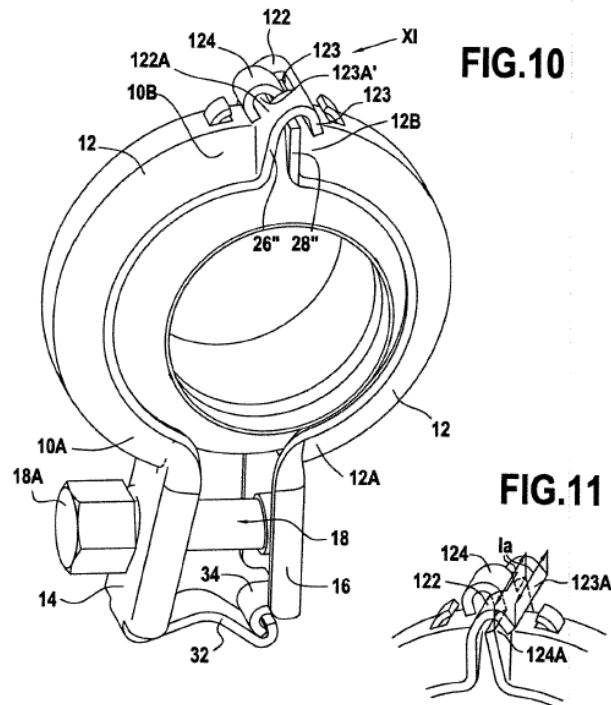
Id. at 13:63–14:12.

3. *Rigollet (Ex. 1013)*

Rigollet is a United Kingdom patent describing a hinged clamping collar, which patent published October 2, 2013. Ex. 1013, 1, 8.¹³ Rigollet discloses a clamping collar made up of two half-shells. *Id.* at 8. The half-shells have a first end that includes a tightening tab, and a second end to permit the half-shells to cooperate with each other via a hinge. *Id.*

¹³ In citing Rigollet, we use the page numbering added to the exhibit copy.

Figures 10 and 11 of Rigollet are reproduced below.



Ex. 1013, Figs. 10, 11. Figure 10 is a perspective view of a clamping collar, and Figure 11 is a fragmentary view of the hinge features looking along arrow XI near the top of Figure 10. Figure 10 shows two half-shells 10,¹⁴ 12 of the clamping collar, and shank 18A and bolt 18 extending between tightening tabs 14, 16 at one end (10A, 12A) of the half-shells. *Id.* at 21. At the second end (10B, 12B) of the collar's half-shells, a hinge is provided comprising a first hook 122 and second hook 124 that cooperate to form the hinge. *Id.* (explaining that second hook 124 passes through a hooking window 123 of first hook 122), Figs. 10, 11.

¹⁴ It appears that, in Figure 10, the half-shell on the left is mislabeled as feature "12" (the same number used for the right half-shell) and should be feature "10." *See, e.g.,* Ex. 1013, Fig. 9.

4. *3M (Ex. 1006)*

3M is a brochure related to “3M™ Fire Barrier Pass-Through Devices.” Ex. 1006, 1. Petitioner submits un rebutted testimony that 3M was published and publicly available prior to June 8, 2016. *See, e.g.*, Ex. 1019 ¶¶ 2–3.

3M describes “a device for firestopping structures where electrical, data and communication cables or plumbing pipes pass through fire-rated floors and walls.” Ex. 1006, 2. According to 3M, the devices “use a fixed intumescent material (expands with heat) which works in conjunction with a foam plug and optional mounting brackets.” *Id.* 3M describes devices in different housing shapes and sizes (e.g., 2-inch round or 4-inch square sizes) and corresponding replacement foam plugs for those devices. *Id.*

E. Ground 1A: Obviousness over Ramorino, Feil, and Rigollet

Petitioner argues that claims 1–6 and 9 would have been obvious over Ramorino, Feil, and Rigollet. Pet. 42–72. Patent Owner opposes, arguing that Petitioner’s contentions lack particularity. Prelim. Resp. 10–20 (arguing the Petitioner’s argument and evidence is conclusory and insufficient); Prelim. Sur-reply 5–8.¹⁵ We discuss below.

1. *Claim 1*

a) *Petitioner’s Contentions*

Petitioner argues, citing supporting evidence in the prior art and Mr. Puchovsky’s declaration, that the combination of Ramorino, Feil, and Rigollet teaches or suggests all of claim 1’s limitations. Pet. 42, 46–58

¹⁵ Patent Owner’s contentions about the Petition’s alleged defects concerning claim construction and Rule 104(b)(3)–(4) are addressed above. *See supra* Section IV.C.

(citing, e.g., Ex. 1004, 12:28–13:4, 16:23–24, Figs. 1, 5, 6; Ex. 1005, 13:63–14:12; Ex. 1003 ¶¶ 85–101). As we discuss below, Petitioner contends that Ramorino discloses all of claim 1’s limitations but does not explicitly disclose that its hinged housing members are “completely detachable” as recited in limitation [1c]—a feature that, Petitioner contends, is disclosed with the hinges of Feil and Rigollet and would have been obvious to use in Ramorino’s design. *Id.*; *see also id.* at 42–46 (discussing reasons to combine the asserted art’s teachings and predictability of the combination).

The following summarizes Petitioner’s argument about Ramorino disclosing claim 1’s preamble and limitations [1a], [1b], [1d], and [1e]. Petitioner contends that Ramorino discloses claim 1’s preamble [1pre] if the preamble is limiting. Pet. 46 (citing Ex. 1004, cover (fire stop device); Ex. 1003 ¶ 85). Petitioner contends that Ramorino discloses limitation [1a], including a housing (body 2) with a wall surface (lateral wall 13) between front and rear panels (front wall 16 and bottom wall 15) and forming an inner chamber (hollow 10) in the housing, as shown in Ramorino’s Figure 5. *Id.* at 47–53 (citing, e.g., Ex. 1004, Fig. 5 (annotated); Ex. 1003 ¶ 87). Further, with respect to the term “panel,” Petitioner contends a POSA “would understand that this [term’s] plain meaning includes panels that are physically distinct from and/or integrally connected to the housing.” *Id.* at 48–53. In support, Petitioner cites the ’868 patent Specification (Ex. 1001, 3:34–49, Figs. 6–7), the testimony of Mr. Puchovsky (Ex. 1003 ¶¶ 88–94), and Patent Owner’s admissions about its own products being covered by the ’868 patent’s claims (Ex. 1008, 11; Ex. 1009, 1 (annotated (Pet. 53) to show

“integral” panels)).¹⁶ Pet. 48–53. Petitioner contends that Ramorino discloses front and rear panels that define an opening through the panels, meeting limitation [1b]. *Id.* at 53–54 (citing Ex. 1004, 14:12–19; Ex. 1003 ¶ 95). Petitioner contends Ramorino discloses limitation [1d] by teaching that Ramorino’s C-shaped half-annular elements of the housing’s body can be opened and closed relative to each other about a fixed axis using a hinge. *Id.* at 55–57 (citing Ex. 1004, Fig. 1, 12:28–13:4, 17:28–30 (disclosing assembly around a pipe through a wall or floor); Ex. 1003 ¶¶ 99–100)). And, Petitioner contends that Ramorino describes intumescent material in the interior of the housing body, meeting limitation [1e]. Pet. 58 (citing Ex. 1004, 16:20–24, Fig. 6 (intumescent sleeves 36, 37); Ex. 1003 ¶ 101).

Petitioner contends that “Ramorino discloses each element of independent claim 1 except that it does not *expressly* state that its two housing members are detachable” as recited in limitation [1c]. Pet. 42, 54 (noting that “Ramorino does not expressly disclose that the hinge or mechanical folding system allows for complete detachability of the two C-shaped elements,” but asserting that would have been “an obvious design choice”).

According to Petitioner, Feil expressly describes a similar hinged firestopping device and the benefits of having a completely detachable sleeve (i.e., housing) assembly. *Id.* at 54–55 (citing Ex. 1005, 13:63–14:12; Ex. 1003 ¶ 97); *see also id.* at 32–34 (discussing Feil’s disclosure of tabs (e.g., “interlocking teeth”) along a seam/edge of the sleeve, and a hinged

¹⁶ Petitioner’s challenge under Ground 1B addresses an “alternative” interpretation where “panels” would require a component that is “physically distinct” from other portions of the housing. Pet. 49 (citing an “alternative” interpretation by Patent Owner at the district court), 72–80 (Ground 1B).

device that allows complete detachability of the sleeve parts); Ex. 1005, 13:37–50, 13:63–14:12; Ex. 1003 ¶¶ 62–63. Based on Feil’s teachings, Petitioner contends a skilled artisan also would have looked to Rigollet’s “detachable hinged arrangement” for use with Ramorino’s C-shaped members to allow both pivoting and detachability of those members. *Id.* at 55 (citing Ex. 1003 ¶ 98); *see also id.* at 35–36 (discussing “hooked hinge arrangement” of Rigollet (Ex. 1013, Fig. 10); Ex. 1003 ¶¶ 65–67 (testifying this hooked hinge “allow[s] the two clamshell pieces to pivot relative to one another, [and] the hinge allows the two clamshell pieces to be separated”)).

Petitioner argues the POSA would have been motivated to combine the teachings of Ramorino, Feil, and Rigollet with a reasonable expectation of success in arriving at the subject matter of claim 1. Pet. 42–46 (citing Ex. 1003 ¶¶ 77–84). Petitioner contends a POSA “would have found it obvious to implement a hinge that would allow the two C-shaped members of Ramorino to pivot relative to each other (as already expressly taught in Ramorino) while at the same time being completely detachable from each other in view of Feil’s disclosure of such a hinged connection.” *Id.* at 43. Petitioner contends that, as contemplated in Feil, a POSA would be motivated to use a hinge that permits detachability of the housing members because it would provide advantages “for retrofitting applications.” *Id.* A “retrofit application involves a situation where there is a preexisting conduit to be fire stopped with a collar” and, Mr. Puchovsky testifies, “in that situation, it would be advantageous to completely separate the two housing members so that each housing member can be separately placed around a conduit prior to closing the device.” Ex. 1003 ¶ 79 (explaining that, absent detachability, there may be “insufficient clearance” due to existing ceilings or walls to rotate the device around its axis while the housing members

remain connected); Ex. 1005, 13:63–14:12 (describing advantages of disassembling the firestopping sleeve (e.g., to firestop an opening that already contains inserted tubing)).

Moreover, Petitioner argues, Feil discloses that “[a]ny suitable design” may be used for the housing’s mateable parts, including designs with a plurality of tabs (e.g., like “interlocking teeth”). Pet. 43–44; Ex. 1005, 13:43–48. Mr. Puchovsky testifies that a POSA “would understand the ‘interlocking teeth’ of Feil to refer to the type of simple hinge of Rigollet” because “Rigollet’s hook system discloses the same concept as ‘interlocking teeth.’” Ex. 1003 ¶ 80 (citing Ex. 1005, 13:43–48). According to Mr. Puchovsky, beyond the benefits for retrofitting applications (noted above), a POSA “would be motivated to implement the hinged mechanism of Rigollet in Ramorino because doing so would save money relative to a separate hinge component.” *Id.* ¶ 81 (testifying that Rigollet’s “integrated hooking mechanism” avoids costs of separate hinge components and involves “a more straightforward manufacturing process because there is no need to separately affix a hinge”).

Additionally, Petitioner argues that combining the art’s cited teachings “merely involves combining prior art elements according to known methods to yield predictable results.” Pet. 45. Petitioner contends that both Ramorino and Feil address the “same firestopping problem” and that Feil discloses that its housing may be constructed with a circular cross-section like Ramorino. *Id.* (citing Ex. 1005, 15:7–11). And, Petitioner contends, “[t]he detachable hinged arrangement of Feil is readily adaptable to the hinged clamshell device of Ramorino, as one of a limited number of commonly available methods to assemble/disassemble a housing.” *Id.* (citing Ex. 1003 ¶ 82 (testifying about the similarity of purpose and design

between Ramorino and Feil, and the applicability of Rigollet’s clamshell pipe clamp to such firestopping designs)).

Petitioner further contends that using a hinge mechanism that allows for complete detachability “would be an obvious design choice among an extremely finite number of design choices.” Pet. 45–46 (citing Ex. 1003 ¶ 83). As Mr. Puchovsky explains, “Feil and Rigollet disclose that such arrangements [(i.e., detachable hinge designs)] were known” and a POSA “would identify one of two design choices”—hinge designs that *do not allow* for complete detachability and hinge designs that *do allow* for complete detachability. Ex. 1003 ¶ 83 (also citing background art (¶¶ 71–76) describing hinged pipe collar designs).

Lastly, Petitioner contends that a POSA would reasonably expect success in combining the asserted art. Pet. 46. In particular, Petitioner highlights the “mechanical” and “predictable” nature of the components and the claimed subject matter as a whole. *Id.* (citing Ex. 1003 ¶ 84 (testifying that all the components are well known, predictable, and combinable with no more than ordinary skill such that “nothing unpredictable . . . would result from the combination”)).

b) Analysis

The following is our analysis of Petitioner’s contentions on claim 1, which analysis also addresses Patent Owner’s counterarguments.

On the present record, we find that Petitioner has met its burden and established a reasonable likelihood that the subject matter of claim 1 would have been obvious. Petitioner has shown that Ramorino discloses claim 1’s preamble and limitations [1a], [1b], [1d], and [1e] based on Petitioner’s reasoning and evidence summarized above, and Patent Owner submits no evidence to the contrary.

Although Patent Owner does not expressly argue that either of limitations [1a] or [1b] is missing in Ramorino or the other asserted art, Patent Owner questions the sufficiency of Mr. Puchovsky's interpretation of the term "panel," which appears in both limitations (e.g., "front panel"). Prelim. Resp. 16. According to Patent Owner, "Mr. Puchovsky fails to provide any cited support or explanation for why a [POSA] would understand the plain meaning of the term panel as flat (in this context) or curved portions (in some other unidentified context) or layers that are 'physically separate from components of the housing' and/or 'fully integrated into the housing.'" *Id.* at 16–17 (citing Ex. 1003 ¶ 88); Prelim. Sur-reply 7.

Patent Owner is mistaken. Mr. Puchovsky provides sufficient testimony that, in his opinion, supports the interpretation of "panel(s)" as encompassing structures that can be both physically distinct from other components of the housing or integral to the housing.¹⁷ Ex. 1003 ¶¶ 87–94. Indeed, Mr. Puchovsky identifies portions of the '868 patent's Specification where "panel" is used to describe both manifestations (e.g., side "panels" that are "integral to the housing" and a front "panel" that is physically distinct but mechanically attached to other housing components). *Id.* (citing Ex. 1001, 3:34–49, Figs. 3, 6, 7). Patent Owner does not propose any

¹⁷ There is no apparent dispute here that would require us to decide whether a panel encompasses "curved" structures because both the asserted prior art and the '868 patent depict flat panels. *See, e.g.*, Ex. 1001, Fig. 3 (flat front and side "panels" 114, 122); Ex. 1004, Fig. 5 (flat front wall 16). That said, the '868 patent discloses that the housing is not limited to a square configuration and may have "any desired configuration" (Ex. 1001, 3:11–16). Insofar as this disclosure suggests other housing shapes, such as cylindrical, that would seem to require at least some of the panels be curved.

alternative interpretation in this proceeding, much less support that interpretation with analysis and evidence. We, thus, see no basis on this record that would justify interpreting “panel” to exclude either integral or physically distinct structures. And, we find that Ramorino teaches or suggests the front and rear panels of limitations [1a] and [1b]. *See, e.g.*, Ex. 1004, Figs. 1, 5–6 (front wall 16 and bottom wall 15); Ex. 1003 ¶ 88.

We also find, based on Petitioner’s argument and evidence at this stage, that the combined art teaches limitation [1c] (i.e., housing members “completely detachable from one another”), and that the skilled artisan would have had reasons to use a completely detachable hinge in Ramorino’s fire stop device. On the current record, Petitioner persuasively argues that even if Ramorino does not expressly disclose that its hinged C-shaped housing members are “completely detachable” from each other, the use of completely detachable hinges was well-known and came with known benefits. Pet. 42–46, 54–55. Feil describes a firestopping apparatus that opens and closes about a hinge and Feil teaches that it is helpful, in some installations of the apparatus, if the sleeve (i.e., housing) parts can be disconnected and then reassembled. *See, e.g.*, Ex. 1005, 13:4–21 (“Any suitable hinged connection may be used, whether such a connection allows the hingedly connected sleeve parts to be disconnected from each other or not”), 13:63–14:12 (teaching that disassembly of the sleeve parts can be advantageous if firestopping an opening that already contains tubing). Mr. Puchovsky testifies, and we agree on the current record, a POSA would recognize that use of a hinge that allows the housing members to be completely separated would be beneficial in retrofit applications where a preexisting conduit is to be fire stopped with a collar. Ex. 1003 ¶¶ 77–80. This benefit provides a reason to use a completely detachable hinge design,

such as Petitioner contends is shown in Feil and Rigollet, in Ramorino's device.

Patent Owner challenges the sufficiency of Petitioner's rationale for combining the teachings of Ramorino, Feil, and Rigollet. Prelim. Resp. 12–14, 18–19; Prelim. Sur-reply 5–7. Patent Owner contends that “Mr. Puchovsky often fails to cite any additional supporting evidence or provide any technical reasoning to support his statements.” Prelim. Resp. 12. As an example, Patent Owner argues that the Petition (and Mr. Puchovsky's declaration) provides no analysis to explain why a skilled artisan would have understood Feil's hinge of interlocking teeth to concern the same concept as Rigollet's hinge, and no analysis for why using Rigollet's hinge would be cheaper. *Id.* at 12, 18–19 (citing Ex. 1003 ¶¶ 80–81).

On the present record, Patent Owner's argument is unavailing. Mr. Puchovsky's comparison between Feil's interlocking teeth and Rigollet's hinge invokes his uncontested interpretation of the references' teachings about relatively simple mechanical features from his perspective as a POSA. *See* Ex. 1003 ¶¶ 80–81. Mr. Puchovsky also reasons that using an *integrated* hinge like Rigollet's would reduce the number of parts needed and simplify manufacturing compared to use of a separate hinge that would need to be affixed separately. *Id.* Absent evidence to the contrary, Mr. Puchovsky's reasoning draws on common sense and flows logically from his experience—reasoning endorsed in *KSR* and its progeny. *KSR*, 550 U.S. at 415–18 (holding that reasons for combining the art's teachings may be explicit or implicit and draw on, for example, a POSA's creativity and common sense); *Fleming v. Cirrus Design Corp.*, 28 F.4th 1214, 1223 (Fed. Cir. 2022) (“Since *KSR*, we have explained that it is appropriate to consider the knowledge, creativity, and common sense of a skilled artisan in an

obviousness determination.”). Moreover, even if there are open questions about the comparison between Feil’s and Rigollet’s hinges or the costs of implementing an integrated hinge, Patent Owner provides no rebuttal evidence, nor does Patent Owner’s attorney argument grapple persuasively with Petitioner’s additional reasons for combining the art’s teachings (i.e., benefits in retrofitting, use of a known feature for its known and predictable function, and simple design choice between limited options). Motivation to combine the asserted art is a question of fact, and Patent Owner will have the opportunity to test Petitioner’s reasoning and evidence through trial. *Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1289 (Fed. Cir. 2006) (“The presence or absence of a motivation to combine references in an obviousness determination is a pure question of fact”) (internal citation omitted).

Patent Owner also makes an omnibus argument, urging us to give no weight to Mr. Puchovsky’s testimony because there is significant overlap between that testimony and the language used in the Petition. Prelim. Resp. 10–17 (asserting the Puchovsky declaration and Petition are “little more than verbatim copies of one another and provide nothing more than conclusory attorney argument”); *see also id.* at 13–15 (table showing textual overlap). We agree that there is significant overlap between the language used in the Petition and the Puchovsky declaration. On this record, however, we disagree that Mr. Puchovsky’s testimony is entitled to no weight.

As a threshold matter, we determine that “[v]erbatim duplication between a brief and a declaration does not require giving the declarant’s testimony ‘little or no weight’ under *Xerox*.” *Netflix, Inc. v. GoTV Streaming, LLC*, IPR2023-00757, Paper 11 at 67 (PTAB Nov. 7, 2023) (citing cases and discussing *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 at 15 (PTAB Aug. 24, 2022) (precedential)). “If declaration

testimony is supported sufficiently and, in turn, supports contentions in the Petition, we do not give it little to no weight simply because it is repeated in the Petition.” *Hum Indus. Tech., Inc. v. Amsted Rail Co.*, IPR2023-00540, Paper 10 at 37 (PTAB Aug. 11, 2023). As Petitioner here aptly states:

“preparing an IPR petition is not an exercise in determining whether the same argument can be articulated using two different sets of words.”

Prelim. Reply 5. The key issue, therefore, under *Xerox* and decisions that have since applied that precedent is whether the petition and declaration together amount to only conclusory assertions or whether sufficient evidence or technical reasoning is provided in support of a petitioner’s challenge.

Contrary to Patent Owner’s argument, we do not agree that the Petition and accompanying Puchovsky declaration are so conclusory and lacking in supporting evidence and reasoning that the Petition should be denied. On the issue of motivation, for example, as Petitioner flags, “Mr. Puchovsky’s declaration includes seven paragraphs spanning several pages identifying numerous motivations to combine.” Prelim. Reply 5 (citing Ex. 1003 ¶¶ 77–83). Some of those motivations, including the motivation to use a completely detachable hinge to improve flexibility in retrofitting installations of the firestopping device are supported with both technical reasoning and express disclosures in the prior art. Ex. 1003 ¶¶ 78–79 (citing Feil’s teaching (Ex. 1005, 13:63–14:12) that a completely detachable sleeve provides benefits when retrofitting a wall opening that already contains tubing inserted therethrough). While some motivations discussed in Mr. Puchovsky’s declaration might be argued to lack additional, independent documentary support, that is not fatal here because, as noted above, common sense is involved concerning subject matter that, at least on this record, appears straightforward and predictable. *See, e.g.*, Ex. 1003

¶¶ 81, 83 (testifying that reducing hinge components would be expected to reduce costs, and explaining a simple design choice between a detachable and non-detachable hinge); *Rothman v. Target Corp.*, 556 F.3d 1310, 1319 (Fed. Cir. 2009) (“[T]his invention falls into a very predictable field. In the predictable arts, a trial record may more readily show a motivation to combine known elements to yield a predictable result, thus rendering a claimed invention obvious.”).

For the reasons above, Petitioner has shown sufficiently for institution that the asserted art teaches or suggests the subject matter of claim 1 and that a skilled artisan had reasons to combine those teachings with a reasonable expectation of success. Patent Owner’s counterarguments are unavailing at this stage. Altogether, based on the present record, we find that Petitioner has met its burden and established that it is reasonably likely to prevail on its challenge to claim 1 under Ground 1A.

2. *Claims 2–6 and 9*

Petitioner contends that claims 2–6 and 9 are also unpatentable over Ramorino, Feil, and Rigollet. Pet. 59–72. Petitioner supports its challenge with citations to the asserted prior art and Mr. Puchovsky’s unrebutted testimony. *Id.*; Ex. 1003 ¶¶ 102–120 (citing, e.g., Ramorino’s “fins” as meeting limitation [9e] of a “sealing member” that extends across at least a portion of the front opening). Patent Owner submits no rebuttal evidence and no argument distinct from the argument already addressed above for claim 1 (*supra* Section IV.E.1).

Considering the argument and evidence on the present record, we determine that Petitioner is reasonably likely to prevail in establishing that claims 2–6 and 9 are unpatentable over Ramorino, Feil, and Rigollet.

3. Conclusion

On this record, Petitioner has shown that it is reasonably likely to prevail in establishing that at least one of claims 1–6 and 9 would have been obvious over Ramorino, Feil, and Rigollet.

F. Ground 1B: Obviousness over Ramorino, Feil, Rigollet, and 3M

Petitioner’s Ground 1B is similar to Ground 1A, except that it is premised on an “alternative” and narrower claim construction of the term “panel(s).” Pet. 72–73. Petitioner argues that, if the Board were to “adopt Patent Owner’s (incorrect) ‘alternative’ claim construction of ‘panel(s)’” proposed by Patent Owner to the district court (i.e., “a panel is a ‘layer that is physically distinct from other components of the housing’”), the prior art would still render claims 1–6 and 9 obvious. *Id.* (citing Ex. 1007, 26).

Petitioner states that “Ground 1B is the same as Ground 1A except that either of the 3M Publication or Feil are applied to demonstrate that the prior art disclosed panels in a hinged firestopping device that form a layer of the device that is a physically distinct component.” *Id.*; *see also id.* at 74–78 (citing physically distinct layers in 3M and Feil as meeting the narrower interpretation of “panel”). Petitioner contends that it would have been obvious to use a separate panel construction in Ramorino (even if Ramorino does not teach or suggest such a construction), including for reasons of “structural integrity.” *Id.* According to Petitioner, “if Ramorino’s front wall, bottom wall, and lateral wall, were separately manufactured and then joined together, the joints would be more structurally sound as a result of whatever attachment means were used compared to a fully integrated construction.” *Id.* at 78 (citing Ex. 1003 ¶ 126); *see also id.* at 74 (arguing that a POSA would have two design choices—panels that are physically

distinct and panels that are integrated into the housing); Ex. 1003 ¶¶ 123–125.

We decline to further analyze this ground at this time. Patent Owner has not, in this proceeding, argued for any express claim construction or argued that any claim limitation is missing in Petitioner’s combination of asserted art under Ground 1A (or any ground here). As discussed above, we also see no basis on the present record to interpret the term “panel” to exclude an integral construction (and assuming *arguendo* that Ramorino’s disclosure would be interpreted as not teaching or suggesting panels may be either physically distinct or integral). *See supra* Section IV.E.1. Moreover, Patent Owner does not raise any arguments specific to Ground 1B at this stage, and Patent Owner’s more generic arguments are addressed above.

G. Ground 2: Obviousness over Feil

Petitioner argues that claim 9 would have been obvious over Feil, and provides argument and evidence in support. Pet. 81–89 (citing, e.g., Ex. 1004, Figs. 3–4, 9 (annotated in color to show claim features); Ex. 1003 ¶¶ 143–156). Petitioner contends that Feil’s embodiments only “differ slightly from one another,” and Feil suggests that the exemplary embodiments may be combined to predictable effect. Pet. 81 (citing Ex. 1005, 15:40–20:22; Ex. 1003 ¶ 143).

Patent Owner argues that Ground 2 “relies on a combination of multiple different embodiments without sufficiently articulating a motivation to combine those embodiments.” Prelim. Resp. 19 (asserting that Feil includes “23 distinct embodiments having different features”).

Patent Owner’s argument is unavailing. It is true that a motivation must exist for combining embodiments or features, even when dealing with obviousness based on a single reference. *In re Kotzab*, 217 F.3d 1365, 1370,

(Fed. Cir. 2000) (“Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference.”). But, even assuming that Petitioner relies on distinct embodiments in Feil, that motivation is plainly evident in Feil itself. Feil provides “express disclosure concerning combinability” (Ex. 1003 ¶ 143) such as in Embodiment 17, which describes “[t]he apparatus of *any of embodiments 1–16* wherein the sleeve is provided in the form of first and second elongated parts that are connected to each other by a hinged connection” that allows the sleeve to open/close in a “clamshell design.” Ex. 1005, 19:20–35 (emphasis added); Pet. 86 (citing Embodiment 17). This pattern of combinability repeats with Feil’s other embodiments, and Feil includes a final instruction that “[i]t will be apparent to those skilled in the art that the specific exemplary structures, features, details, configurations, etc., that are disclosed herein can be modified and/or combined in numerous embodiments.” *Id.* at 20:8–11. Moreover, inasmuch as Petitioner’s challenge requires little more than adding the hinge of Feil’s Figure 9 to Feil’s Figure 3, Petitioner has shown on the current record that Feil provides express reasons to do so (*see* Embodiment 17, discussed above, and Ex. 1005, 13:63–14:10 (teaching advantages of a hinged sleeve design)). *See, e.g.*, Pet. 85–86.

Patent Owner’s other generic arguments are addressed above and under Ground 1A. *See supra* Sections IV.C, IV.E.

Based on the reasoning and evidence set forth in the Petition (which we adopt herein for purposes of this Decision), Petitioner has established a reasonable likelihood that it will prevail in showing that claim 9 would have been obvious over Feil.

V. CONCLUSION

There is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims challenged in the Petition. We decline to deny the Petition on a discretionary basis. We, therefore, institute *inter partes* review.

Any argument not raised in a Patent Owner Response to the Petition, or as permitted in another manner during trial, shall be deemed waived even if asserted in the Preliminary Response. In addition, nothing in this decision authorizes Petitioner to supplement information advanced in the Petition in a manner not permitted by the Board's Rules.

VI. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), *inter partes* review of all challenged claims of the '868 patent is instituted on all grounds of unpatentability set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(a) and 37 C.F.R. § 42.4, notice is given of institution of trial commencing on the entry date of this decision.

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