

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LOCO CRAZY GOOD COOKERS, INC.,
Petitioner,

v.

NORTH ATLANTIC IMPORTS, LLC,
Patent Owner.

IPR2024-00642
Patent 10,660,473 B2

Before WILLIAM V. SAINDON, ERIC C. JESCHKE, and
RICHARD H. MARSCHALL, *Administrative Patent Judges*.

MARSCHALL, *Administrative Patent Judge*.

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

Petitioner LoCo Crazy Good Cookers, Inc. filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1–4, 6, 7, 10–13, 15–18, and 20 of U.S. Patent No. 10,660,473 B2 (Ex. 1001, “the ’473 patent”). *See* Pet. 1. Patent Owner North Atlantic Imports, LLC filed a Preliminary Response (Paper 6, “Prelim. Resp.”). With our authorization, Petitioner filed a Reply (Paper 7, “Prelim. Reply”) to the Preliminary Response, and Patent Owner filed a Sur-reply (Paper 8, “Prelim. Sur-reply”) to the Reply.

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314; 37 C.F.R. § 42.4(a) (2023). Under 35 U.S.C. § 314(a), we may not authorize an *inter partes* review unless the information in the pre-institution filings “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.” Upon consideration of the evidence and arguments in the record, we institute *inter partes* review of the ’473 patent on all challenges set forth in the Petition.

BACKGROUND

A. Real Parties-in-Interest and Related Matters

Petitioner identifies itself, LoCo Crazy Good Cookers, Inc., as the real party-in-interest. Pet. 1–2. Patent Owner identifies itself, North Atlantic Imports, LLC, as the real party-in-interest. Paper 5, 2.

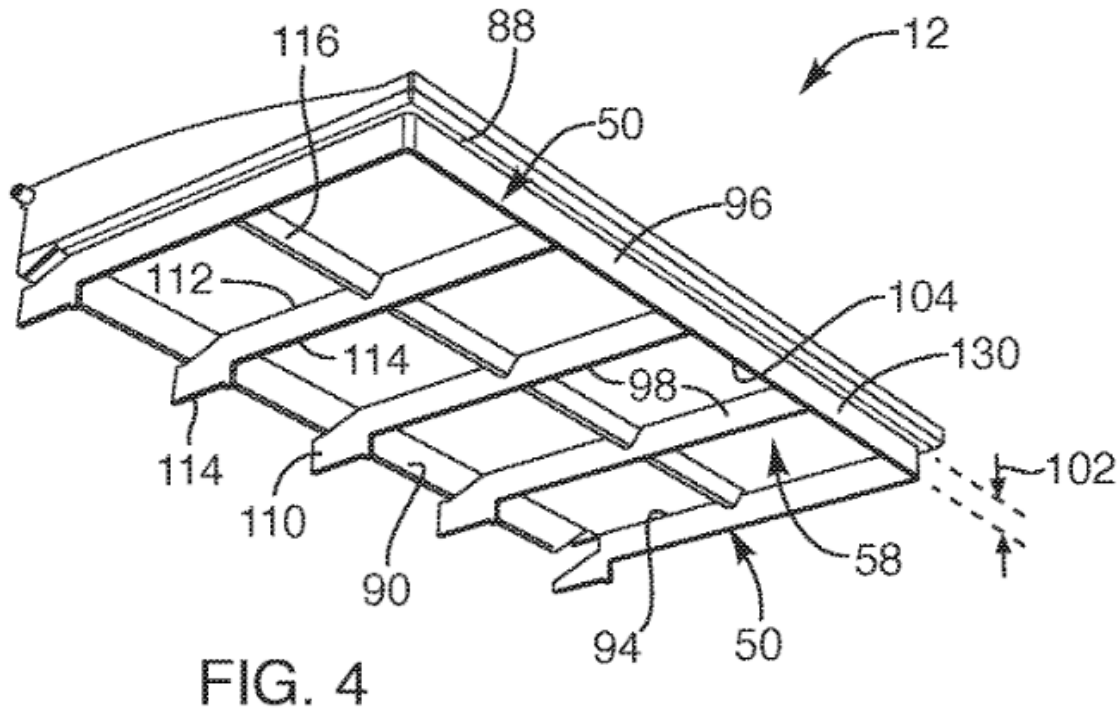
The parties identify the following related matters: *North Atlantic Imports, LLC v. LoCo Crazy Good Cookers, Inc.*, No. 23-cv-00999 (D. Del) (the “Delaware Litigation”), filed on September 8, 2023. Pet. 2; Paper 5, 2.

B. The ’473 Patent

The ’473 patent relates to a system “for maintaining convection heat within a heating region of a griddle and channeling the convection heat

therefrom.” Ex. 1001, code (57). The system includes a ribbing structure that “allows a user to control the convective heating of the griddle as desired and channels the convective heat to a single side of the griddle, away from the user.” *Id.*

Figure 4, reproduced below, illustrates the ’473 patent’s system.



Ex. 1001, Fig. 4. Figure 4 depicts the underside surface 58 of griddle 12, including ribbing structure 50. *Id.* at 6:65–7:4. Figure 4 also shows ribbing structure 50 coupled to underside surface 58 to define heating regions and channels for venting or channeling convection heat from burners. *Id.* at 7:4–8. Ribbing structure 50 includes front rib 96 and multiple lateral ribs 98, which extend laterally relative to front rib 96 such that lateral ribs 98 are positioned parallel with each other and perpendicular relative to front rib 96. *Id.* at 7:8–10, 7:16–20. Additionally, “the underside surface 58 may also include one or more stabilizers 116 . . . configured to stabilize the griddle 12

so as to substantially prevent warping upon the griddle 12 being over heated.” *Id.* at 7:41–48. Front rib 96 and lateral ribs 98 “may also serve as stabilizers” to prevent warping. *Id.* at 7:48–53.

C. Challenged Claims

As noted above, Petitioner challenges claims 1–4, 6, 7, 10–13, 15–18, and 20 of the ’473 patent. Claims 1, 10, and 17 are independent claims while claims 2–4, 6, and 7 depend from claim 1, claims 11–13, 15, and 16 depend from claim 10, and claims 18 and 20 depend from claim 17. *See* Ex. 1001, 10:19–12:61.

Claim 10, which illustrates the challenged subject matter, is reproduced below.

10. A griddle configured to control convection heat from one or more gas flame burners of a cooking station, the griddle comprising:

a cooking surface having a rectangular shape, the cooking surface configured to face upward;

an underside surface, the underside surface extending to generally correspond with the cooking surface, the underside surface facing in an opposite direction than the cooking surface, the underside surface extending to define a periphery with a front end, a rear end, a left end, and a right end;

a front rib having a front rib height and coupled to the front end of the underside surface, the front rib extending longitudinally along the front end of the underside surface; and

multiple lateral ribs each extending laterally relative to the front rib and extending along the underside surface from the front rib to the rear end of the underside surface,

the multiple lateral ribs being spaced from each other so as to define multiple heating regions such that each heating region

is defined between adjacently extending lateral ribs, the heating regions each configured to be positioned above a gas flame burner,

each of the lateral ribs extend downward from the underside surface a lateral rib height such that the adjacently extending lateral ribs are configured to funnel the convection heat from the gas flame burner toward the rear end of the underside surface and away from a rear side of the cooking station;

wherein the front rib and the multiple lateral ribs are integrally formed with the underside surface; and

wherein the multiple lateral ribs directly extend from the underside surface such that each lateral rib is spaced and separate from an adjacent lateral rib.

Ex. 1001, claim 10.

D. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability (Pet. 4):

Claim(s) Challenged	35 U.S.C. §	Basis/Reference(s)
10–13, 15, 17, 18, 20	103 ¹	Williams ²
10–13, 15, 17, 18, 20	103	Williams, Best ³
10–13, 15, 17, 18, 20	103	Williams, Farnsworth ⁴
1–4, 7, 16	103	Williams, May ⁵
1–4, 6, 7, 16	103	Williams, May, Best
1–4, 7, 16	103	Williams, May, Best, Farnsworth

¹ Because the '473 patent issued from an application filed after March 16, 2013, the effective date of the amendment to 35 U.S.C. § 103 enacted by the Leahy-Smith America Invents Act (AIA), we apply the AIA version of this section. *See* AIA, Pub. L. No. 112–29, § 3(n)(1), 125 Stat. 284, 293 (2011).

² US 6,389,960 B1, issued May 21, 2002 (Ex. 1005, “Williams”).

³ US 5,676,043, issued Oct. 14, 1997 (Ex. 1007, “Best”).

⁴ US 5,890,482, issued Apr. 6, 1999 (Ex. 1008, “Farnsworth”).

⁵ US 2013/0112088 A1, published May 9, 2013 (Ex. 1006, “May”).

Petitioner filed a Declaration of Glenn E. Vallee (Ex. 1002) with the Petition.

ANALYSIS

A. Legal Standards

A claim is unpatentable as obvious under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *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 skill in the art; and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. Level of Ordinary Skill in the Art and Petitioner’s Reliance on Dr. Vallee

The level of 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). Factors pertinent to a determination of the level of ordinary skill in the art include: (1) educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of workers active in the field. *Env’t Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696–97 (Fed. Cir. 1983) (citing *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d

1376, 1381–82 (Fed. Cir. 1983)). Not all such factors may be present in every case, and one or more of these or other factors may predominate in a particular case. *Id.* Moreover, these factors are not exhaustive but are merely a guide to determining the level of ordinary skill in the art. *Daiichi Sankyo Co. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007). In determining a level of ordinary skill, we also may look to the prior art, which may reflect an appropriate skill level. *Okajima*, 261 F.3d at 1355.

Petitioner contends that one of ordinary skill in the art

would have had either: (1) a bachelor’s degree in mechanical engineering or a closely related field and at least 2 years of experience in product design and development in the field of griddle cooking stations and/or outdoor cooking grills; or (2) no college degree, but at least 5 years of experience in product design and development in the field of griddle cooking stations and/or outdoor cooking grills.

Pet. 15 (citing Ex. 1002 ¶¶ 24–29).

Patent Owner adopts Petitioner’s proposed level of skill in the art for the purposes of its Preliminary Response, but “reserves the right to . . . propose a different level of ordinary skill should the Board institute trial.”

Prelim. Resp. 12. Although Patent Owner adopts Petitioner’s proposal, Patent Owner contends that “Petitioner has not demonstrated that its expert, Dr. Vallee, meets [Petitioner’s proposed] level of skill.” *Id.* at 16.

According to Patent Owner, “Petitioner has failed to provide any explanation for how Dr. Vallee has the requisite multiple years of experience “in product design and development *in the field of griddle cooking stations and/or outdoor cooking grills.*” *Id.* (emphasis original). Patent Owner argues that “because Petitioner has not demonstrated that Dr. Vallee satisfies its

definition of a POSITA, Petitioner cannot rely on Dr. Vallee’s testimony to support the grounds asserted in the present Petition.” *Id.* at 17–18.

In response, Petitioner points to Dr. Vallee’s testimony that “he has a Ph.D. in mechanical engineering and has for decades taught courses to students including courses on designing consumer products that includes the subject matter of these proceedings.” Prelim. Reply 4 (citing Ex. 1002 ¶ 3; Ex. 1003, 1–2). More specifically, “Dr. Vallee led a Product Development and Innovation (PDI) course teaching students specially about the design and development of consumer products, including the design and development of mechanical and heating components for griddle cooking.” *Id.* at 5. Petitioner also notes that “Dr. Vallee has served as an expert in the field of cooking appliances in other cases.” *Id.*; *see* Ex. 1002 ¶ 7 (“[Dr. Vallee] was retained as a technical expert by Char-Broil, LLC in an IPR matter related to barbecue grills.”). Petitioner further argues that there “is no requirement that Dr. Vallee’s design and development experience come from working for a company in the griddle or grill industry as Patent Owner seems to imply.” Prelim. Reply 5. Instead, according to Petitioner, “the relevant design experience can come from any source, including designing and developing griddles in academia as well as teaching students (some of whom would also likely qualify as a [person of ordinary skill in the art]) to do the same.” *Id.*

Patent Owner responds that despite “Dr. Vallee’s teaching [of] ‘courses on designing consumer products,’ which Petitioner alleges ‘includes the subject matter of these proceedings,’ . . . Petitioner has not shown that such courses include design and development experience for ‘griddle cooking stations and/or outdoor cooking grills.’” Prelim. Sur-

reply 3 (emphasis original). According to Patent Owner, “Dr. Vallee provides no indication of any experience designing (nor does he even mention) griddles, grills, or any type of cooking device.” *Id.* at 3–4.

We begin by interpreting Petitioner’s proposal as to the level of skill in the art, which refers to having a bachelor’s degree and “at least 2 years of experience in product design and development in the field of griddle cooking stations and/or outdoor cooking grills” or no degree and at least 5 years of such experience. *See* Pet. 15. Because the proposal does not specify the source of the “experience,” we agree with Petitioner that the proposal does not require design and development experience that stems “from working for a company in the griddle or grill industry” and that “the relevant design experience can come from any source, including designing and developing griddles in academia as well as teaching students.” Prelim. Reply 5. Patent Owner does not dispute Petitioner’s arguments on these points and, as noted, adopts the wording of Petitioner’s proposal as its own. *See* Prelim. Sur-reply 3–4; Prelim. Resp. 12. For purposes of this Decision, we also adopt the wording of Petitioner’s proposal as our own, and note that the relevant design experience can come from any source.

Turning to Dr. Vallee’s qualifications, we note that, according to Petitioner and Dr. Vallee, “he has a Ph.D. in mechanical engineering and has for decades taught courses to students including courses on designing consumer products that includes the subject matter of these proceedings.” *See* Prelim. Reply 4 (citing Ex. 1002 ¶ 3; Ex. 1003, 1–2). Petitioner also contends that “Dr. Vallee led a Product Development and Innovation (PDI) course teaching students specially about the design and development of consumer products, including the design and development of mechanical

and heating components for griddle cooking.” *Id.* at 5. These assertions, coupled with Dr. Vallee’s CV and statement of qualifications in his declaration, adequately support, at this stage of the proceeding, Petitioner’s argument that Dr. Vallee qualifies as one of ordinary skill in the art. *See* Ex. 1002 ¶¶ 1–7; Ex. 1003. Patent Owner points out that Dr. Vallee’s CV does not employ the specific language used in Petitioner’s proposal, but we do not view the absence of that language from the CV as undermining Petitioner’s showing that, at this stage, Petitioner establishes a reasonable likelihood of prevailing on this issue at trial. *See* Prelim. Sur-reply 3–4.

The foregoing addresses the express language in Petitioner’s proposal, but we also find that Petitioner establishes a reasonable likelihood of prevailing on this issue using the more flexible approach in its proposal. Petitioner’s proposal uses a familiar format, where the level of skill can be met multiple ways—with a bachelor’s degree in mechanical engineering and some experience in a specific field, or no degree coupled with more experience in the field. *See* Pet. 15. Such an approach helpfully avoids pinning the level of skill in an art to an unduly narrow set of requirements, and acknowledges that, on the facts in this proceeding, more experience can make up for less formal education, and more formal education can make up for less relevant experience. *See id.* Using that approach, Dr. Vallee’s Ph.D. in Mechanical Engineering far exceeds the bachelor’s degree required in Petitioner’s proposal, which in turn means that Dr. Vallee may meet the ordinary level of skill in the art even if he has less than “2 years of experience in product design and development in the field of griddle cooking stations and/or outdoor cooking grills.” *See* Pet. 15. Dr. Vallee’s experience in product design and development, including teaching a course in product

design that encompasses heating components, would appear to easily meet that standard. *See* Prelim. Reply 4–5 (citing Ex. 1002 ¶ 3; Ex. 1003, 1–2); Ex. 1002 ¶¶ 1–7. Indeed, given the straightforward nature of the griddle technology at issue here, it would be hard to imagine a situation where any person with a doctorate in mechanical engineering and substantial experience in consumer product design and development would fail to qualify as one of at least ordinary skill in the art.

As our reviewing court explains, “[t]he ‘person of ordinary skill in the art’ is a theoretical construct used in determining obviousness under § 103, and is not descriptive of some particular individual.” *Endress + Hauser, Inc. v. Hawk Measurement System Pty. Ltd.*, 122 F.3d 1040, 1042 (Fed. Cir. 1997). As such, the relevant inquiry is not whether a particular declarant meets the literal definition of a theoretical person of ordinary skill in the art; rather, the question is whether the declarant possesses at least the level of skill—however obtained—of such an artisan. *See Kyocera Senco Indus. Tools Inc. v. Int’l Trade Comm’n*, 22 F.4th 1369, 1377 (Fed. Cir. 2022). Here, based on the current record, we find that Petitioner presents sufficient evidence, for purposes of this Decision, that Dr. Vallee possesses at least the level of skill as Petitioner’s proposed ordinary artisan, whether viewed as limited to the specific wording in Petitioner’s proposal or more flexibly viewed as encompassing higher levels of formal education and lower levels of experience.

Despite the parties’ apparent agreement on the level of ordinary skill in the art, the parties may continue to address the issue during trial. In doing so, the parties should bear in mind that we are not bound to accept the proposed level of skill in the art from either party if the record does not

support such a finding. For example, given the simplicity of the technology at issue, the parties may wish to explore whether another, lower level of skill in the art may be more appropriate in this case.

C. Claim Construction

We construe each claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b).” 37 C.F.R. § 42.100(b). Under this standard, claim terms are generally given their ordinary and customary meaning as would have been understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc) (“We have frequently stated that the words of a claim ‘are generally given their ordinary and customary meaning.’” (citations omitted)). “The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Petitioner contends that no claim construction is required for us to reach a decision on institution. Pet. 4. Patent Owner disagrees, contending “that the term ‘rib’ from the ’473 Patent claims warrants construction.” Prelim. Resp. 12. Patent Owner argues that “the term ‘rib’ should be construed as ‘an elongated raised piece of strong or thick material across a surface or through a structure, serving to support or strengthen the structure.’” *Id.* at 13.

Patent Owner raises several arguments in support of its construction. First, Patent Owner highlights several dictionary definitions for the term

“rib,” which Patent Owner contends expressly denotes the “structural and strengthening aspects” of a “rib.” Prelim. Resp. 13 (citing Exs. 2003–2005). Second, Patent Owner contends that its “proposed construction is also consistent with the specification of the ’473 Patent.” *Id.* Specifically, Patent Owner argues that Figure 4 of the ’473 patent depicts “both the ‘front rib 96’ as well as the ‘lateral ribs 98’ constitut[ing] elongated raised pieces of strong or thick material across an underside surface 58 of griddle 12.” *Id.* Patent Owner also asserts that “the ’473 Patent exemplifies the structural nature of its various disclosed ‘ribs’” because (1) “both the ‘front rib 96’ and ‘multiple lateral ribs 98’ are described as components of a ‘ribbing structure 50,’” and (2) “‘front rib 96’ and ‘multiple lateral ribs 98’ (and indeed ‘ribbing structure 50’ as a whole) ‘serve as stabilizers in substantially preventing the griddle from warping or partially warping,’ thus serving to support and strengthen the griddle surface.” *Id.* at 13–14 (citing Ex. 1001, Fig. 4, 7:3–15, 5:63–6:11, 7:48–53, 9:10–29). Third, Patent Owner contends that its “proposed construction of ‘rib’ is [] consistent with art referenced by Petitioner.” *Id.* at 15. Specifically, Patent Owner points to a reference discussed by Petitioner, Hinkle (Ex. 1013), which “states that its ‘ribs impart strength to the griddle to prevent warping.’” *Id.* (quoting Ex. 1013, 1:46–47).

Petitioner argues that Patent Owner’s proposed construction “is inconsistent with all the sources of intrinsic evidence: claims, specification and prosecution history of the ’473 Patent.” Prelim. Reply 1 (citing *Sunovion Pharms., Inc. v. Teva Pharms. USA, Inc.*, 731 F.3d 1271, 1276 (Fed. Cir. 2013); *Seabed Geosolutions (US) Inc. v. Magseis FF LLC*, 8 F.4th 1285, 1287 (Fed. Cir. 2021)). According to Petitioner, “neither the

specification nor the claims describe a rib as needing to be ‘strong or thick,’ or ‘serving to support or strengthen the structure.’ Instead, the specification repeatedly describes the structure and purpose of the ribs with reference to defining heat regions and channels.” *Id.* at 2 (quoting Ex. 1001, 7:3–8). Petitioner contends that “[t]his is consistent with the claims themselves that recite specific position of the ribs ‘to define multiple heating regions.’” *Id.* (quoting Ex. 1001, 10:36).

Petitioner further argues that “the specification discloses a different structure, referred to as a ‘stabilizer,’ that prevents warping of the griddle.” Prelim. Reply 2 (citing Ex. 1001, 7:41–53). According to Petitioner, the ’473 patent “discloses that the ribs’ purpose is serving as channels for channeling convective heat while serving as stabilizers is an optional embodiment.” *Id.* at 3 (quoting Ex. 1001, 7:50–53 (“[I]n addition to the front rib 96 and lateral ribs 98 serving as channel portions for channeling convective heat, the front rib 96 and lateral ribs 98 may also serve as stabilizers in substantially preventing the griddle from warping or partially warping.”)). Petitioner additionally argues that the prosecution history “contradicts Patent Owner’s construction” because Patent Owner did not distinguish over a reference cited during prosecution of the ’473 patent that disclosed “baffles” made of thin sheet metal on the basis that the “baffles” did not constitute the claimed “rib.” *Id.* at 3–4 (citing Ex. 1004, 95, 127; Ex. 1009, 5:1–10).

In response, Patent Owner argues that “the specification describes ribs as able to ‘serve as stabilizers in substantially preventing the griddle from warping or partially warping,’ thus serving to support and strengthen the griddle surface.” Prelim. Sur-reply 1 (citing Ex. 1001, 7:48–53). Patent

Owner contends that “[r]ibs, by their very nature, are ‘strong or thick’ and serve to ‘support or strengthen a structure,’ as further demonstrated by multiple dictionary definitions.” *Id.* (citing Exs. 2003–2005). According to Patent Owner, “[t]hat the ’473 Patent also refers to separate ‘stabilizers’ is of little import given that the specification makes clear that the ribs serve this function.” *Id.* Patent Owner further argues that the description of the ribs as defining heating regions that enable improved temperature control of certain areas of the griddle “is not inconsistent with the ribs being ‘strong or thick’ or ‘serving to support or strengthen the structure.’” *Id.* at 2. Patent Owner also disagrees that the prosecution history of the ’473 patent is inconsistent with its construction because “[o]pting for an unrelated amendment rather than arguing the scope of a particular claim term does not rise to the level of a ‘clear’ disavowal.” *Id.* at 2–3 (citing *Baxalta Inc. v. Genentech, Inc.*, 972 F.3d 1341, 1348 (Fed. Cir. 2020)).

On this record, we decline to adopt Patent Owner’s proposed construction of “rib” that requires “an elongated raised piece of strong or thick material across a surface or through a structure, serving to support or strengthen the structure.” Prelim. Resp. 13. Several reasons support this conclusion. First, none of the claim language supports Patent Owner’s proposed construction. The claims require a “front rib” and “multiple lateral ribs” that define “heating regions” between the laterally-spaced ribs that “funnel” heat from the gas burners away “from a rear side of the cooking station.” *See* Ex. 1001, claims 1, 10. None of this language refers to the ribs as “strong” or “thick” such that they serve “to support or strengthen the structure” as required by Patent Owner’s construction. *See id.*

Second, the specification repeatedly describes the ribs as performing the function described in the claims, i.e., a structure for “venting or channeling convection heat” from the burners. Ex. 1001, 7:3–8; *see also id.* at 7:54–63, 8:46–65, 9:10–29, 10:31–38, 10:51–58. Patent Owner points to portions of the specification that discuss the ribs also providing structural rigidity to prevent warping, but we agree with Petitioner that the cited portions relate to an optional embodiment where the ribs “*may also* serve as stabilizers.” Ex. 1001, 7:51 (emphasis added). Because we generally do not read in such optional, functional features of a claimed structure to a claim limitation, we find the portions of the specification cited by Patent Owner do not support its proposed construction. *See Cadence Pharms. Inc. v. Exela PharmSci Inc.*, 780 F.3d 1364, 1369 (Fed. Cir. 2015). For similar reasons, we are unpersuaded by Patent Owner’s argument that Figure 4 supports its construction merely because it discloses ribs that may be viewed as consistent with Patent Owner’s proposed construction. *See Prelim. Resp.* 13–14; *Anchor Wall Sys., Inc. v. Rockwood Retaining Walls, Inc.*, 340 F.3d 1298, 1306–07 (Fed. Cir. 2003) (“[T]he mere fact that the patent drawings depict a particular embodiment of the patent does not operate to limit the claims to that specific configuration.”).

Based on our review of the claim language and specification, we view the limitations Patent Owner seeks to add via its proposed construction as optional aspects of the claimed ribs. Because we find insufficient support for Patent Owner’s proposed construction in the intrinsic evidence, we find no reason to resort to extrinsic evidence, such as the dictionary definitions proffered by Patent Owner or the background art discussed by Petitioner. *See Seabed Geosolutions*, 8 F.4th at 1287.

Further, even if we agreed with Patent Owner that the claimed ribs must have *some* thickness and provide *some* support and strength to the structure, we still would not adopt Patent Owner’s proposed construction because it would introduce unnecessary ambiguity into the claims. For example, Patent Owner’s construction refers to a “piece of strong *or* thick material,” which would mean that the rib limitation may cover strong and thin material or thick and weak material, but Patent Owner has not supported a construction that expressly covers such structures due to the inclusion of the term “or” in its construction. *See* Prelim. Resp. 13 (emphasis added). In addition, the references to “strong” and “thick” in the proposed construction have no reference point, and it remains unclear, based on the claim language and specification, how strong and/or thick a rib must be to provide “support” and “strength” to the structure to prevent warping or otherwise meet the proposed construction. *See id.* Because Patent Owner’s proposed construction lacks sufficient clarity, we do not adopt it.

Based on the foregoing, we decline to adopt Patent Owner’s construction at this stage of the proceeding and apply the ordinary meaning to the term “rib” in the challenged claims.

D. Obviousness Based on Williams

Petitioner argues that Williams renders claims 10–13, 15, 17, 18, and 20 obvious. *See* Pet. 17–33. Patent Owner raises several arguments against this challenge. *See* Prelim. Resp. 10–40. We first provide a brief overview of the prior art, and then address the parties’ arguments.

1. Williams

Williams relates to “a gas-fired cooking device that includes a heat bank to provide a more uniformly heated cooking surface.” Ex. 1005, 1:7–9. Figure 2, reproduced below, is exemplary of Williams’s cooking device.

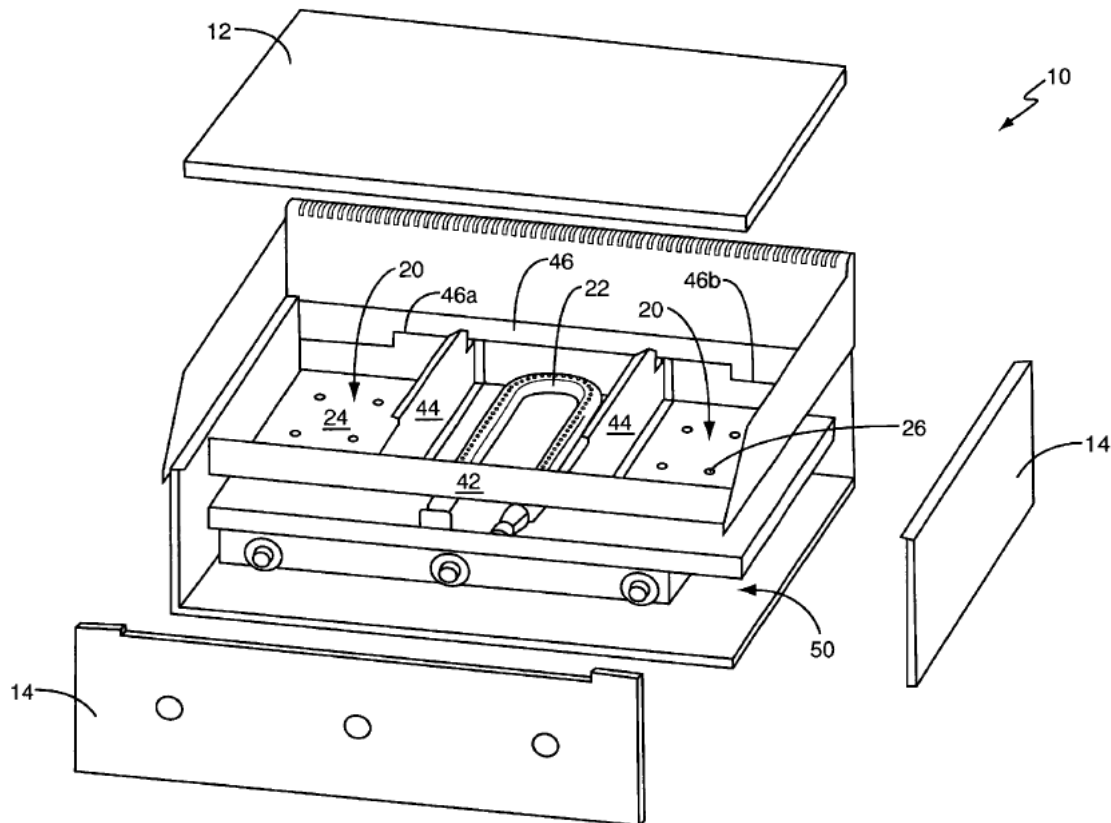


FIG. 2

Ex. 1005, Fig. 2. Figure 2 “is a partially exploded view of [a] gas-fired cooking device.” *Id.* at 1:51–52. Figure 2 depicts griddle 10, including outer housing 14 and cooking surface 12. *Id.* at 2:8–14. Outer housing 14 contains a plurality of heating chambers 20, each including “a lower or burner zone 30, where the hot combustion gases are generated, and an upper or low-flow zone 40 disposed above the lower zone 30 and below the underside of the cooking surface 12.” *Id.* at 2:15–16, 2:35–38. Upper zone 40 is “defined by the underside of the cooking surface 12 and flow-

restricting walls, specifically a front dam wall 42, a rear dam wall 46, and side-walls 44.” *Id.* at 2:41–44.

2. Discussion

We begin by addressing independent claim 10. For each limitation in claim 10, Petitioner points to specific portions of the reference that support its position and declarant testimony from Dr. Vallee addressing each limitation. *See* Pet. 17–33 (citing Ex. 1002 ¶¶ 64–98). Patent Owner argues that Petitioner fails to establish (1) that Williams teaches a “front rib” and “multiple lateral ribs,” (2) that Williams teaches “wherein the front rib and the multiple lateral ribs are integrally formed with the underside surface,” and (3) that a skilled artisan would have a reasonable expectation of success in modifying Williams’s front dam wall and sidewalls to be integrally formed with the underside surface. Prelim. Resp. 21–40. We address each of these arguments in turn below.

a. “Front Rib” and “Multiple Lateral Ribs”

Claim 10 recites “a front rib having a front rib height and coupled to the front end of the underside surface, the front rib extending longitudinally along the front end of the underside surface” and “multiple lateral ribs each extending laterally relative to the front rib and extending along the underside surface from the front rib to the rear end of the underside surface.” Ex. 1001, claim 10.

Petitioner contends that “Williams discloses a griddle with a front rib (e.g., ‘front dam’ 42), extending longitudinally along the underside surface of the griddle.” Pet. 19 (citing Ex. 1002 ¶ 68; Ex. 1005, Fig. 2, 1:35–38, 2:14–44). Petitioner further relies on the statement in Williams that “[a]t least the front dam 42 and the rear dam 46 are downwardly extending,

thereby extending generally away from the underside of the cooking surface 12.” *Id.* (alteration original) (quoting Ex. 1005, 2:44–47). According to Petitioner, the “front dam” in Williams “is coupled to and extends longitudinally across the front end of the underside surface of the griddle [and] has a downwardly extending height in a similar manner as characterized by Patent Owner’s infringement allegations.” *Id.* at 19–20 (citing Ex. 1002 ¶¶ 68–69; Ex. 1025, 1, 2, 5). Petitioner further contends that “Williams discloses a griddle with multiple lateral ribs (e.g., ‘sidewalls’ 44) extending along the underside surface of the griddle from the front rib to the rear end.” *Id.* at 20 (citing Ex. 1002 ¶¶ 70–71; Ex. 1005, Fig. 2, 1:35–38, 2:41–44). Petitioner also asserts that the laterally extending ribs form heating regions and funnel convection heat away from a rear side of the cooking station, as required by later limitations in claim 10. *See id.* at 21–26.

Patent Owner argues that the front dam wall and sidewalls in Williams do not teach the claimed “front rib” and “multiple lateral ribs” because Williams’s walls are “thin metal (e.g., sheet metal) or ‘baffles’ for impeding or directing air flow.” Prelim. Resp. 21. According to Patent Owner, these structures are incapable of “providing structural support or any stabilization against warping,” as required under Patent Owner’s proposed construction of the term rib. *Id.* Patent Owner also argues that its arguments against Petitioner’s grounds here are consistent with its infringement allegations in the Delaware Litigation and the prior art of record during prosecution. *See id.* at 21–24.

Based on the current record, we find Petitioner’s arguments as to these “rib” limitations persuasive. Williams discloses longitudinally extending

front dam 42 corresponding to the front rib and longitudinally extending sidewalls 44 that correspond to the claimed lateral ribs. *See* Pet. 19–20. Williams states that “[t]he presence of the perimeter wall (front dam 42, rear dam 46, and sidewalls 44) helps create the upper zone 40 where the portion of the hot combustion gases are at least temporarily trapped.” Ex. 1005, 3:65–4:2. Based on the current record, Petitioner establishes that front dam 42 and sidewalls 44 correspond to the claimed “front rib” and “lateral ribs” limitations, respectively, and that these ribs define regions and channel convection heat and therefore fall within the scope of the claimed ribs.

Patent Owner’s arguments do not directly refute Petitioner’s assertions on these points and are unavailing because they rely on Patent Owner’s proposed claim construction.⁶ For the reasons explained in the claim construction portion of this Decision, we decline to adopt Patent Owner’s proposed construction that requires a certain thickness or strength to meet the rib limitation.

We further note that we would reach the same conclusion had we adopted Patent Owner’s construction, as we understand it. Petitioner

⁶ In a later section of its Preliminary Response addressing the limitation requiring a “front rib . . . integrally formed with the underside surface of the griddle,” Patent Owner argues that “[r]egardless of the construction of ‘rib,’ none of the proposed Grounds of the Petition persuasively demonstrate that such a claim element was disclosed or obvious.” Prelim. Resp. 36. Based on our reading of the Preliminary Response, this argument was meant to state that regardless of the construction of “rib,” the grounds still fail to teach a “front rib . . . *integrally formed* with the underside surface of the griddle.” *See id.* (emphasis added). To the extent that Patent Owner sought to argue that the references fail to disclose the claimed “rib” standing alone, even without resort to Patent Owner’s proposed construction, the Preliminary Response fails to explain or develop such an argument.

presents evidence that Williams’s front dam and side walls, when integrally formed with the cooking surface as asserted by the Petition, would “greatly strengthen the horizontally planar griddle to be heated by providing built-in vertical support structures,” which would “aid[] in the prevention of warping of the planar cooking surface (12).” Pet. 28 (citing Ex. 1002 ¶ 88); *see also* Ex. 1002 ¶¶ 89–90. Based on the current record, we agree with Petitioner that such integral ribs would provide at least some strengthening and resistance to warping. Patent Owner appears to assume that the claims and its proposed construction require a specific amount of strengthening and prevention of warping, but neither the claims nor its proposed construction provide the specificity that would support such an argument.

Based on the current record, Petitioner establishes adequately that Williams teaches “a front rib having a front rib height and coupled to the front end of the underside surface, the front rib extending longitudinally along the front end of the underside surface” and “multiple lateral ribs each extending laterally relative to the front rib and extending along the underside surface from the front rib to the rear end of the underside surface.”

b. “Integrally Formed with the Underside Surface”

Claim 10 recites “wherein the front rib and the multiple lateral ribs are integrally formed with the underside surface” of the griddle. Ex. 1001, claim 10. Petitioner argues that Williams renders obvious this limitation for two reasons.

Petitioner first contends that “Williams’s disclosure of a front dam (42)[,] rear dam (46) or sidewalls (44) as ‘downwardly extending’ indicates that these structures are ‘fixed’ or ‘integral’ to the underside surface of the griddle.” Pet. 26–27 (citing Ex. 1002 ¶ 85). Patent Owner argues that

“[s]imply stating that a first part ‘extends’ from a second part does not necessarily mean that the two parts are ‘integrally formed.’” Prelim. Resp. 37. According to Patent Owner, “the first part could merely be positioned adjacent to or very near the second part and still ‘extend’ away or ‘downwardly’ from that first part.” *Id.*; *see also id.* at 29 (arguing that while Williams discloses the front dam and rear dam as “downwardly extending,” it does not even “describe the sidewalls as ‘downwardly extending’ from the griddle”).

We agree with Patent Owner as to this aspect of Petitioner’s argument. In view of Figure 2 in Williams, which depicts cooking surface 12 as separate from front dam 42 and sidewalls 44, we determine that Petitioner has not shown that one of ordinary skill in the art would understand or infer from Williams’s disclosure of a “downwardly extending” front dam that the front dam or the sidewalls are integrally formed with the underside of the cooking surface.

Petitioner next contends that a skilled artisan would have been motivated to modify Williams to integrally form its front dam and sidewalls with the underside of the griddle’s cooking surface for several reasons: (1) to strengthen the underside of the cooking surface to prevent warping, Pet. 28–30 (citing Ex. 1002 ¶¶ 88–90); (2) to ensure there is not a gap between the proximal portion of the sidewalls and the underside of the cooking surface, preventing combustion gasses from passing over the sidewalls to affect adjacent heat zones, *id.* at 30 (citing Ex. 1002 ¶ 91); (3) to provide stability and rigidity to the sidewalls, preventing warping of the sidewalls under the cooking surface, *id.* at 31–32 (citing Ex. 1002 ¶¶ 93–94); and (4) to reduce assembly time and errors since fewer parts would be

required to be assembled by the end user, *id.* at 32 (citing Ex. 1002 ¶ 95). We find Petitioner’s arguments and evidence, supported by the testimony of Dr. Vallee, persuasive based on the current record, which does not contain any countervailing testimony from one of ordinary skill in the art.

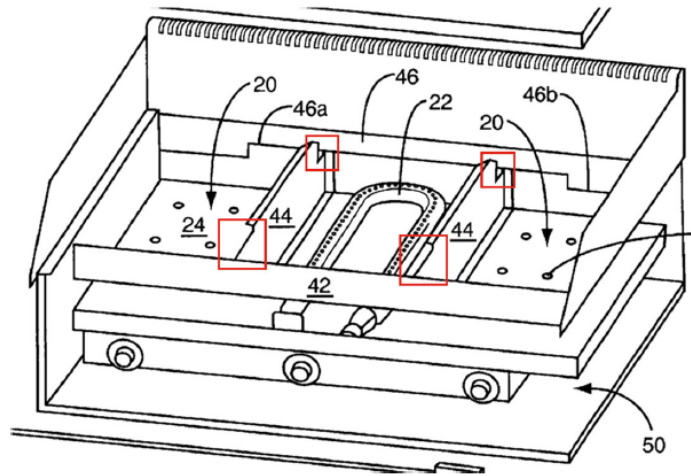
Patent Owner argues that Petitioner’s motivation to modify Williams lacks support for several reasons, which we address in turn. First, Patent Owner argues that “Petitioner is completely silent with respect to any reasons why a POSITA would modify the relatively thin side walls to be the claimed ‘ribs’” and “[b]ecause thin side walls are not ribs, the Petition’s proposed modification of Williams to integrally form the side walls with the griddle plate are both unsupported, make little sense, and contradict Williams’[s] disclosure.” Prelim. Resp. 30. We find this argument unavailing because, as previously discussed, we find that Williams teaches the claimed ribs. Accordingly, the Petition need not address modifying Williams’s sidewalls into a thicker structure to meet the “rib” limitation.

Second, Patent Owner argues that “the Petition fails to explain how such relatively thin side walls . . . would provide extra strength to the griddle plate.” Prelim. Resp. 31–32. Patent Owner additionally argues that “Williams is silent about griddle warping or any need for structural support” and “neither the Petition nor the cited Valle declaration provide a reason to modify Williams to provide increased structural support by integrally forming the ‘relatively thin’ front dam or side walls with the griddle plate.” *Id.* at 31 (citing Pet. 28, 30; Ex. 1002 ¶¶ 88–90). Patent Owner also faults Dr. Vallee for relying on an additional reference to show why ribs can prevent warping. *Id.* at 31–32.

Based on the current record, Petitioner has presented sufficient evidence that integrating Williams’s front dam and sidewalls with the underside of the cooking surface would provide resistance to warping. *See* Pet. 28–29 (citing Ex. 1002 ¶¶ 88–90); Ex. 1002 ¶ 90 (“By integrally forming the front dam (42), rear dam (46) and sidewalls (44) with the underside surface of the griddle, the structural rigidity of griddle will be significantly improved to withstand such warping.”). In the absence of any evidence from one of ordinary skill in the art to the contrary, we are persuaded, at this stage of the proceeding, that the proposed modification would provide at least some amount of resistance to warping.

We further note that whether Williams itself discusses griddle warping is inapposite. Rather, “any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *KSR*, 550 U.S. at 420. Here, based on the current record, we find that Petitioner presents sufficient evidence that griddle warping was a known problem, and that problem could be prevented through the use of known methods—i.e., through the use of “ribs or other structure.” Pet. 29 (citing Ex. 1002 ¶ 90; Ex. 1015, 2:38–42; Ex. 1016, 3:12–15; Ex. 1013, 1:43–48, 3:10–28).

Third, Patent Owner argues that a skilled artisan would not be motivated to modify Williams to ensure that no gap exists between the side walls and the underside of the griddle because Figure 2 of Williams, reproduced below with Patent Owner’s annotations in red, “explicitly shows that the side walls have purposeful gaps.” Prelim. Resp. 32.



Id. (citing Ex. 1005, Fig. 2).

We find this argument unpersuasive, based on the current record. While Figure 2 of Williams does depict a gap or notch between sidewalls 44 and front dam 42 and rear dam 46, we note that the specification does not mention any gap and this gap may be exaggerated for illustration purposes or may merely be present where the sidewalls interface with adjacent structures. *See In re Wilson*, 312 F.2d 449, 454 (CCPA 1963) (“Patent drawings are not working drawings”); *In re Olson*, 212 F.2d 590, 592 (CCPA 1954) (“It is well known that Patent Office drawings are not normally drawn to scale, with the dimensions and sizes of parts shown to exact measurements as are shop drawings.”). In either case, Petitioner’s position that eliminating gaps elsewhere may be helpful may still support its motivation to make the proposed modification. Again, the lack of any evidence beyond mere attorney argument does not persuasively undermine Petitioner’s assertions supported by the testimony of Dr. Vallee.⁷

⁷ We note that even if we were to give no weight to this argument, Petitioner’s remaining arguments would still adequately support its motivation arguments at this stage.

Fourth, Patent Owner argues that a skilled artisan would not be motivated to modify Williams to prevent warping of the sidewalls because “[t]he only reason that Williams’[s] ‘side walls’ would need more rigidity is because they are so thin as to not provide adequate structural support.” Prelim. Resp. 33. Patent Owner contends that Petitioner’s argument “again highlights its failure to address modification of Williams’[s] thin side walls to arrive at the claimed ribs.” *Id.* For the reasons previously discussed, we find Patent Owner’s argument that Williams fails to disclose the claimed ribs, and that Petitioner must provide a motivation to arrive at the claimed ribs, unpersuasive. We similarly find this variation of Patent Owner’s previous arguments unpersuasive. Patent Owner also fails to acknowledge that whether the “ribs” in Williams are thick and strong or narrow and weak as Patent Owner alleges, making them integral with the underside of the griddle may add strength and stability to the sidewalls as well as the underside of the griddle. In fact, Patent Owner’s focus on the weakness of the sidewalls in Williams supports Petitioner’s position that a person of ordinary skill in the art would have been motivated to make them stronger by making them integral with an adjacent structure such as the underside of the griddle.

Fifth, Patent Owner argues that a skilled artisan would not be motivated to “modify Williams to integrally form its front dam and side walls into the griddle plate to reduce assembly time and errors” because “there is no mention in Williams about any need to reduce assembly time or there being any errors in assembly, [and] [t]he Petition’s only support for this argument is the declaration of Dr. Vallee,” whom Patent Owner contends is not a skilled artisan. Prelim. Resp. 33.

Based on the current record, Petitioner's argument on this point remains unrebutted. Further, contrary to Patent Owner's assertion, Williams need not mention "any need to reduce assembly time or there being any errors in assembly" in order for that serve as a motivation to modify Williams to integrally form the sidewalls with the underside of the cooking surface. *See Ball Aerosol & Specialty Container, Inc. v. Ltd. Brands, Inc.*, 555 F.3d 984, 993 (Fed. Cir. 2009) (motivation to combine need not be explicit in the prior art and may take account of inferences and steps an inventor would employ). Rather, a motivation "may be found explicitly or implicitly in market forces; design incentives; the interrelated teachings of multiple patents; any need or problem known in the field of endeavor at the time of invention and addressed by the patent; and the background knowledge, creativity, and common sense of the person of ordinary skill." *ZUP, LLC v. Nash Mfg., Inc.*, 896 F.3d 1365, 1371 (Fed. Cir. 2018) (internal quotation marks omitted). On this record, Petitioner has sufficiently demonstrated why a skilled artisan would have been motivated to integrally form William's sidewalls with the underside of the cooking surface in order to "reduce assembly time and errors since fewer parts would be required to be assembled by the end user." Ex. 1002 ¶ 95. Moreover, to the extent Patent Owner argues that we should not rely on the testimony of Petitioner's declarant, for the reasons discussed above, these arguments are unpersuasive.

Based on the current record, Petitioner adequately establishes that a skilled artisan would have been motivated to modify Williams to include a front rib and multiple lateral ribs that "are integrally formed with the underside surface."

c. Reasonable expectation of success

Patent Owner argues that Petitioner did not meet its burden of establishing that a skilled artisan would have had a reasonable expectation of success in modifying Williams as proposed by the Petition. Prelim. Resp. 34–36 (citing *Endo Pharm., Inc. v. Actavis LLC*, 922 F.3d 1365, 1373 (Fed. Cir. 2019); *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378–79 (Fed. Cir. 2015)). Specifically, Patent Owner contends that “the Petition never explains why a [skilled artisan] would understand the[] proposed modifications to Williams’[s] griddle to have had a reasonable expectation of success.” *Id.* at 34–35.

We find Patent Owner’s argument unpersuasive for two reasons. First, the Federal Circuit has observed that, while motivation to combine the teachings of the prior art requires an explicit analysis, “a finding of reasonable expectation of success can be implicit.” *Elektro Limited v. Zap Surgical Systems, Inc.*, 81 F.4th 1368, 1376 (Fed. Cir. 2023). Moreover, “[e]vidence of reasonable expectation of success, just like evidence of a motivation to combine, ‘may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or in some cases, from the nature of the problem to be solved.’” *Id.* at 1377 (quoting *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1125 (Fed. Cir. 2000); see also *Merck & Cie v. Gnosis S.P.A.*, 808 F.3d 829, 836 (Fed. Cir. 2015) (“KSR does not require an explicit statement of a reasonable expectation of success in every case.”). Based on the current record, including the relatively straightforward mechanical technology at issue, we view Petitioner’s motivation to combine analysis as implicitly addressing the reasonable expectation of success argument. That is, for the reasons

Petitioner provides, one of ordinary skill in the art would not only be motivated to modify Williams to make the ribs integral with the underside of the griddle, but such a person would also reasonably expect such a modification to succeed. *See* Pet. 28–32.

Second, the Petition implicitly addresses reasonable expectation of success by stating how the claimed integral structure “may be achieved.” *See* Pet. 28. For example, the Petition states that “[t]he fabrication of plate steel griddles with reinforcing ribs may be achieved by rolling and/or machining plate stock to an appropriate thickness and size, followed by welding or bolting of the reinforcing ribs to the plate steel,” or alternatively, the ribs may “be formed integrally with the underside of the plate through coldworking or machining.” Pet. 28 (citing Ex. 1002 ¶ 95). In our view, Petitioner described specific ways to carry out its proposed modification that were likely to succeed. Accordingly, we view these statements as supporting a reasonable expectation of success in modifying Williams in the manner proposed by Petitioner.

Based on the current record, Petitioner adequately establishes that a skilled artisan would have had a reasonable expectation of success in modifying Williams to integrally form its front wall and sidewalls with the underside of the griddle.

3. Conclusion

Based on the foregoing, we determine that Petitioner adequately establishes that Williams discloses or suggests the disputed limitations. We have also reviewed Petitioner’s arguments and evidence as to the remaining limitations of claim 10. Based on our review of the current record, Petitioner establishes sufficiently that Williams discloses or suggests the

remaining limitations of claim 10 for the reasons provided by Petitioner. *See* Pet. 17–33. Petitioner, therefore, establishes a reasonable likelihood that independent claim 10 would have been obvious based on Williams.

We have also reviewed Petitioner’s arguments and evidence as to claims 11–13, 15, 17, 18, and 20. *See* Pet. 32–44. Patent Owner does not separately address these claims. Based on the current record, we find Petitioner adequately establishes that Williams discloses or suggests all limitations of these claims and, therefore, establishes a reasonable likelihood that claims 11–13, 15, 17, 18, and 20 would have been obvious based on Williams.

E. Remaining Obviousness Challenges

Petitioner argues that the combination of Williams and Best renders claims 10–13, 15, 17, 18, and 20 obvious; the combination of Williams and Farnsworth renders claims 10–13, 15, 17, 18, and 20 obvious; the combination of Williams and May renders claims 1–4, 7, and 16 obvious; the combination of Williams, May, and Best renders claims 1–4, 6, 7, and 16 obvious; and the combination of Williams, May, and Farnsworth renders claims 1–4, 7, and 16 obvious. *See* Pet. 4, 45–84. Petitioner identifies evidence indicating that the combinations disclose or suggest the limitations recited in the challenged claims and that a person of ordinary skill in the art would have had reason to combine these references to arrive at the inventions recited in the challenged claims. *See id.*

To the extent Patent Owner addresses these challenges at all, Patent Owner generally raises the same arguments as to these challenges as it does with respect to the challenge based on Williams alone, and we reach the same conclusions. For example, Patent Owner argues that none of the

references discloses the claimed “rib,” relying on its proposed claim construction. *See* Prelim. Resp. 21–28. We find these arguments unpersuasive because they rely on a claim construction we decline to adopt, as discussed above.

Because we institute *inter partes* review as to the claims subject to the challenge based on Williams alone, we also institute *inter partes* review as to these additional obviousness grounds to claims 1–4, 6, 7, 10–13, 15–18, and 20. *See SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018); 37 C.F.R. § 42.108(a) (“When instituting . . . 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.”).

CONCLUSION

After considering the evidence and arguments presented in the current record, we determine that Petitioner has demonstrated a reasonable likelihood that it would prevail with respect to at least one claim of the ’473 patent challenged in the Petition. Therefore, we grant institution of *inter partes* review.

ORDER

Accordingly, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is instituted for claims 1–4, 6, 7, 10–13, 15–18, and 20 of the ’473 patent on the unpatentability grounds asserted in the Petition; and

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

IPR2024-00642
Patent 10,660,473 B2

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