

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,

Case IPR2024-00642
U.S. Patent No. 10,660,473

PATENT OWNER RESPONSE

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Other Authorities

Budynas, R.G., Nisbett, K. J., Shigley’s Mechanical Engineering Design, 10th ed., Mcgraw Hill, 2015	11, 14, 36
Collins English Dictionary (2014).....	11, 14
Dictionary of Mechanical Engineering (2011).....	11, 14
Engineering Dictionary, engnetglobal.com	11
Metal Fabricating Glossary, thefabricator.com	11
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EXHIBIT LIST

Ex. #	Exhibit
2001	Reserved
2002	Declaration of Glen Stevick, Ph.D, in support of Patent Owner Response
2003	<i>Rib</i> , New Oxford Dictionary (2010)
2004	<i>Rib</i> , Dictionary of Mechanical Engineering (2011)
2005	<i>Rib</i> , Collins English Dictionary (2014)
2006	<i>Rib</i> , Engineering Dictionary, engnetglobal.com
2007	<i>Rib</i> , Metal Fabricating Glossary, thefabricator.com
2008	Budynas, R.G., Nisbett, K. J.; “Shigley’s Mechanical Engineering Design,” 10th ed., Mcgraw Hill, 2015
2009	<i>Baffle</i> , Online Merriam-Webster Dictionary, https://www.merriam-webster.com/dictionary/baffle (accessed January 21, 2025)
2010	<i>Baffle</i> , Online Collins English Dictionary, https://www.collinsdictionary.com/us/dictionary/english/baffle (accessed January 21, 2025)
2011	Deposition Transcript of Dr. Glenn E. Vallee (January 14, 2025)

Patent Owner North Atlantic Imports, LLC (“NAI” or “Patent Owner”) provides this response to the petition for *inter partes* review (“Petition”) of claims 1–4, 6–7, 10–13, 15–18, and 20 (the “Challenged Claims”) of U.S. Patent No. 10,660,473 (the “’473 Patent”), filed by LoCo Crazy Good Cookers, Inc. (“LoCo” or “Petitioner”) and to the Institution Decision dated October 8, 2024 (“Decision”).

I. INTRODUCTION

Each of the Challenged Claims requires “a front rib” and “multiple lateral ribs” / “parallel ribs,” wherein “the front rib and multiple [lateral/parallel] ribs are integrally formed with the underside surface of the griddle.”

Each of the six Grounds in the Petition incorrectly equates prior art baffles with the claimed ribs. Yet, the plain and ordinary meanings of “baffles” and “ribs” are entirely different and none of the prior art or other publications of record equates the two. The Petition relies entirely on Petitioner’s expert to redefine “rib” to be essentially meaningless and ensnare whatever structure it wants from the prior art.

Additionally, none of the prior art is alleged to include all elements of the Challenged Claims, and the Petition presents six separate grounds, to challenge the Challenged Claims as obvious under 35 U.S.C. § 103. The Petition again entirely relies on Petitioner’s expert to provide alleged motivations to modify single references or combine references regarding “integrally forming” the prior art

baffles with a griddle. While integrally forming baffles with a griddle is not the same as integrally formed ribs, the Petition further fails to persuasively support its proposed modifications or combinations to arrive at dissimilar (and unclaimed) integrally formed baffles.

Because Petitioner has failed to carry its burden of proving each of the Challenged Claims unpatentable by a preponderance of the evidence the Board should uphold the patentability of the Challenged Claims.

II. THE '473 PATENT

The inventors of the '473 Patent teach the modification of a ribbing structure under and integrally formed with the griddle surface. Normally, reinforcing ribs on the underside of a griddle might prevent griddle warping while heated as long as the ribs were positioned to reinforce areas of high thermal stress. (EX1001 at 1:44–55; 7:41–8:28.) The inventors of the '473 Patent taught that ribs could be extended and configured in such a way as to also provide different temperature portions of the griddle surface and control of conductive heat around the periphery of a griddle. (*Id.* at 1:44–55; 7:41–8:28.) An example of the modified ribs is illustrated in Figure 4.

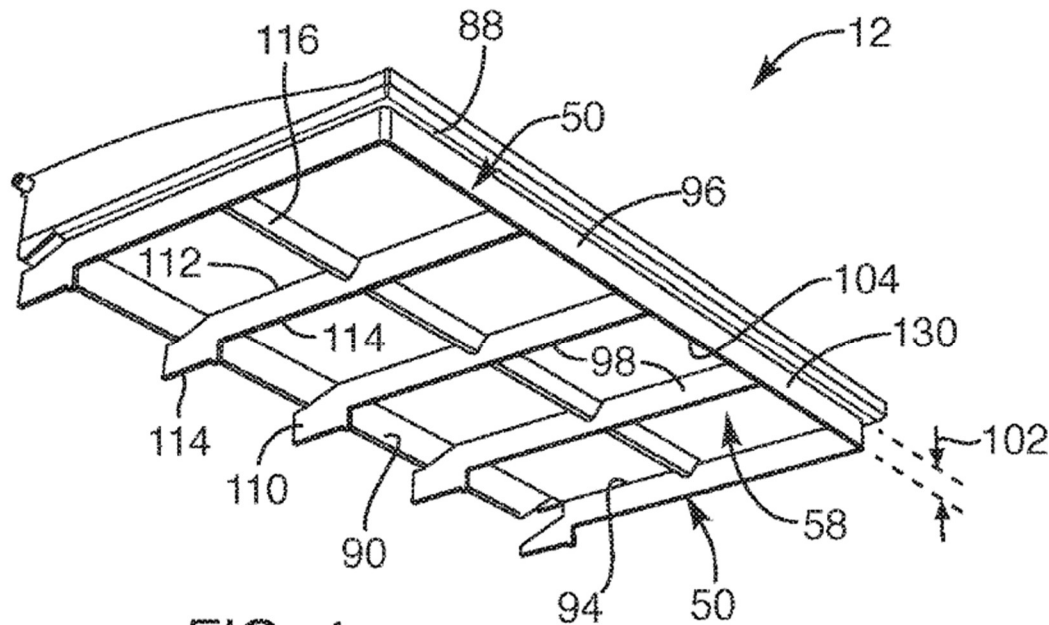


FIG. 4

First, one problem with griddles is that convective heat may move around the entire periphery of the griddle making it difficult to cook or perhaps dangerous around the griddle due to the escape of heated air around the griddle. (*Id.* at 1:44-55.) The inventors of the '473 Patent taught the use of a “ribbing structure” (50), including a front “rib” (96) and multiple lateral “ribs” (98) for venting or channeling convection heat from below the griddle to the rear. (*Id.* at 5:63–6:2, 7:3–15.) The integrated front rib, for example, cooperates with the frame of the cooking station to block and prevent convection heat from escaping from the front side of the frame and griddle. (*Id.* at 8:9–28.)

Second, use of a griddle over burners may not allow for temperature control of the griddle surface if only a portion of the griddle surface is being used or if a

user wants to have different portions of the griddle surface at different temperatures. (*Id.* at 1:44–55.) The inventors of the '473 Patent taught that integrally formed lateral ribs could be spaced to define multiple heating regions. (*Id.* at 7:54–57.) Due to the height of the multiple lateral ribs, a space or volume between the lateral ribs fills with convection heat. As this space fills, the convection heat is drawn toward the rear side of the griddle before bellowing over the lower edge (114) of the lateral ribs. In this manner, the lateral ribs also extend so that convection heat heats particular portions of the griddle surface and aids in temperature control of the griddle surface. (*Id.* at 9:4–29.)

Accordingly, unlike other reinforcing ribs that may be more densely packed in order to counter thermal stresses in all directions and at all points, the ribs of the '473 Patent are spaced apart to provide heating regions. Thus, there is a trade-off of sacrificing reinforcement for the creation of different heating regions. Nevertheless, the integrally formed front rib and lateral ribs may still serve as structural stabilizers to prevent warping. (*Id.* at 7:48–53.)

In summary, the inventions of the '473 Patent address shortcomings of the prior art by simultaneously solving multiple problems through the use of structural, integrally formed ribs that provide temperature control of certain areas of a griddle to have different temperature portions of the griddle surface; control of conductive

heat around the periphery of a griddle; and prevent griddle warping—which were not all addressed by the use of baffles in prior art griddles.

III. LEVEL OF ORDINARY SKILL IN THE ART

According to Petitioner, a POSITA for the '473 Patent would have 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. at 15 (citing EX1002 at ¶¶24-29).) For the purposes of this Response, Patent Owner is adopting Petitioner's proposed level of skill in the art.

IV. CLAIM CONSTRUCTION – “RIB”

A central issue with the Petition is its assumption that “rib,” as used in the '473 Patent, means anything that Petitioner wants it to mean. But “rib” is not a nonce term devoid of meaning and as a stand-in for anything and everything. Patent Owner set forth a construction consistent with the plain and ordinary meaning of “rib” in its Preliminary Response, but the Decision declined to adopt Patent Owner's construction “at this stage of the proceeding,” i.e., the institution stage, and applied the plain and ordinary meaning for “rib.”

Whether or not Patent Owner’s proposed construction for the plain and ordinary meaning is used, “rib” is not a meaningless, nonce term. The prior art and supporting references of record, regardless of the exact language used, all point to “ribs” as elongated *structural* supports. (See EX1013; EX1018; EX2003 (New Oxford Dictionary); EX2004 (Dictionary of Mechanical Engineering); EX2005 (Collins English Dictionary); EX2006 (Engineering Dictionary, engnetglobal.com); EX2007 (Metal Fabricating Glossary, thefabricator.com).) None refer to non-structural air-flow dams or baffles as ribs. Simply put, the fundamental and inherent purpose of “ribs” in this context is supportive and structural. The purpose of the ’473 Patent was to describe a particular configuration for ribs that allowed them to be used for an additional purpose. Ignoring the structural context of ribs as Petitioner proposes would result in a construction of “rib” that is divorced from the common understanding of the term and indeed divorced from any meaning whatsoever, thereby allowing one to argue that any component is a “rib.”

A. The plain and ordinary meaning of a claim term is presumed such that claims need not define each term in the claims themselves.

A hypothetical claim to two pieces attached to each other by a “screw” need not also recite, “wherein the screw is a slender metal pin with a raised helical thread running around it and a slotted head to receive a driver.” That is what a

screw is and what it would ordinarily mean absent an alternative definition.

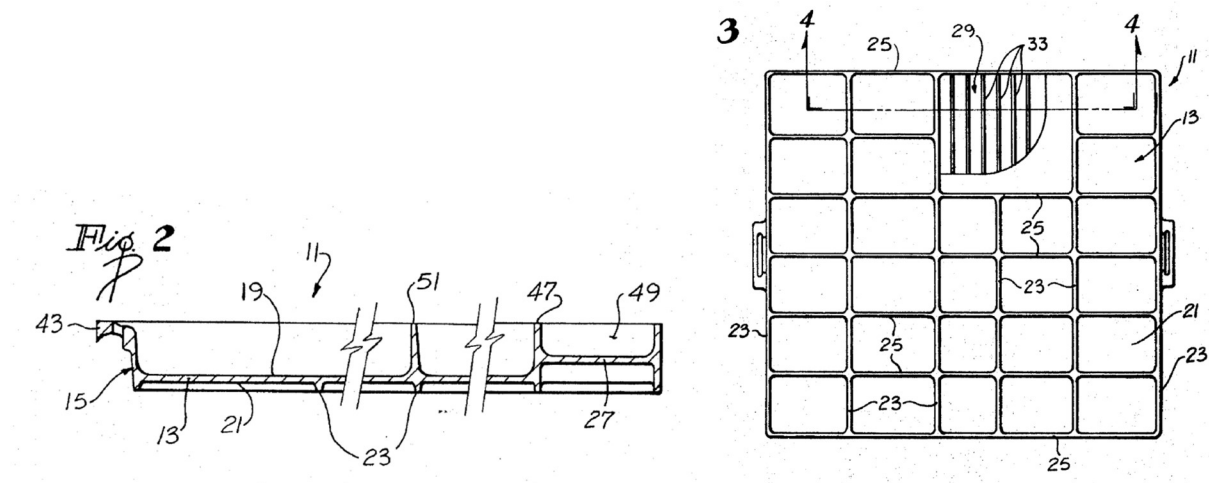
Likewise, the claims of the '473 Patent need not recite, “wherein the ribs are structural supporting members that serve as structural stabilizers to prevent deformation of the griddle”—that is what ribs are and what they inherently do.

The claim construction standard itself presumes that claim terms bring with them their ordinary meaning and need not redundantly recite that plain and ordinary meaning in the claims. *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)). By reciting the term “rib,” the claims of the '473 Patent are inherently limited to manufactures using structural supports, i.e., “ribs.” That is exactly why the claims use the term “rib” instead of contrasting terms such as “baffle” or broader terms such as “member” or “element.”

B. The prior art and other publication references all use “rib” to refer to structural supports, and none use “baffle” for that purpose.

The prior art, dictionaries, and other publications all employ the term “rib” to denote a structural supporting member, which is consistent with how the '473 Patent uses the term.

Starting with the prior art, the only prior art provided by Petitioner that uses the term “rib” is U.S. Patent No. 3,747,509 to Hinkle (EX1013)¹. Hinkle describes a thin griddle plate with a rectangular grid of “ribs” (23) on its underside:



(EX1013 at Figs. 2–3, 2:60–3:18.) Hinkle further states that its “*ribs impart strength* to the griddle to prevent warping” and “serve to *stiffen* the bottom wall against warping or bending.” (*Id.* at 1:46–47, 3:13-14; emphasis added.) Further emphasizing the structural nature of “ribs,” Hinkle states that its ribs “in effect, thicken the bottom wall 13 along the ribs and provide additional mass for the bottom wall.” (*Id.* at 3:5-7.) Thus, Hinkle’s use of “ribs” is consistent with and

¹ While Petitioner referenced Hinkle, it did so only to assert that “griddle designers” used “ribs [to] impart strength to the griddle to prevent warping.” (*See* Pet. at 9-10, 29.) Petitioner did not include Hinkle as an asserted reference in any Ground.

further demonstrative that the plain and ordinary meaning of “rib” must include a requirement that it provide structural support.

Another of Petitioner’s general references, a mechanical engineering textbook also uses the term “rib” consistent with its ordinary meaning as a structural support. For example, the text book shows a cross section of an elliptical tube in connection with stress equations and notes that the “equations presume the buckling of the tube is prevented by ribs, stiffeners, bulkheads, and so on, and that the stresses are below the proportional limit.” (EX1018 at Figure 3-25, p. 122.)

Likewise, with respect to manufacture, numerous dictionary definitions also define “ribs” as structural supports. (*See* EX2003 (defining “rib” as “a long raised portion of stronger or thicker material across a surface or through a structure, and typically serving to support or strengthen it . . .”); EX2004 (defining “rib” as a “flange or fillet carried around the edges of or across a casting or piece of plated work, in order to strengthen and support an otherwise weak web”); EX2005 (defining “rib” as “a part or element similar in function or appearance to a rib, esp a structural or supporting member or a raised strip or ridge” and “a structural member . . .”).) Patent Owner is not proposing that any particular dictionary definition control the meaning of “rib,” but there is nothing wrong with consulting dictionaries to generally understand the plain and ordinary meaning of terms. *See Masimo Corp. v. Sotera Wireless, Inc.*, 2023 WL 6307959, at *3 (Fed. Cir. Sept.

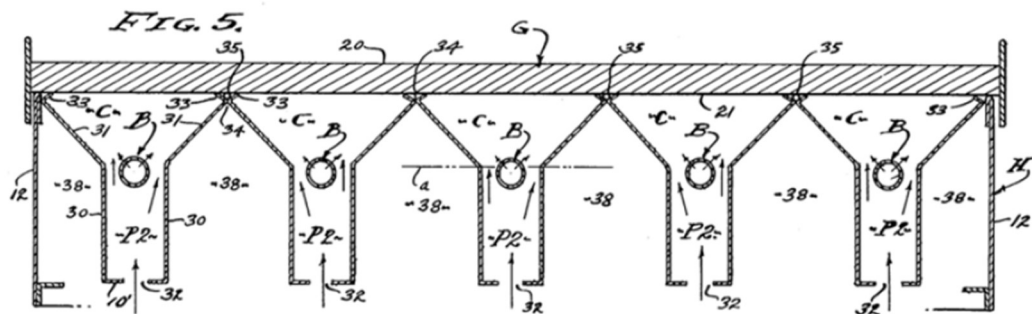
28, 2023) (“*Phillips* does not proscribe the Board from consulting a dictionary definition to help explain its construction when the dictionary definition does not contradict the intrinsic evidence”). Here, such dictionaries in the record do not contradict the intrinsic evidence and provide still further evidence that the plain and ordinary meaning of “rib” must include structural support.

In contrast, the prior art, Petitioner’s expert, and Patent Owner’s expert each demonstrate that, in the context of griddles, “flow-restricting walls” and “baffles” are relatively thin structures used to constrain airflow that do not provide any notable structural support or strengthening. (EX1002 at ¶ 92; EX1007 at 9:18–22, Fig. 5 (94) and (95); EX1008 at 3:17–19, Fig. 1 (30); EX2002 at ¶¶ 45-52, 56–57, 68, 72; *see also* EX2009; EX2010 (defining a baffle as a “thin flat object which is hung in a flow of liquid or gas to cause partial obstruction”).) As explained by Dr. Stevick, a POSITA would have understood a baffle in the context of a griddle as merely a thin sheet of metal that was positioned so as to block or direct the flow of heated air. (EX2002 at ¶¶ 57-58.) Such baffles would be as thin as possible so as to reduce weight and expense. (*Id.* at ¶¶ 57-58, 64.) None of the prior art’s or publications’ uses of “flow-restricting walls” or “baffles” is consistent with a structural support.

First, Williams discloses “flow-restricting” “side walls” (44) that are not part of the cooking surface (12) but are separate elements below the cooking surface

that are indented merely to temporarily trap combustion gasses from the burner (22). (EX1005 at Fig. 2, 3:52–4:2, 2:43-44.) The Petition itself recognizes that “the sidewall (44) is a relatively thin vertical structure” (Pet. at 30.) These sidewalls are not described by Williams as having or being capable of any structural stabilization or strengthening function for the cooking surface.

Reynolds, U.S. Pat. No. 4,715,356, over which the Challenged Claims of the ’473 Patent were allowed, identifies “baffles 30” underneath a cooktop for trapping air, which are “thin sheet metal” that “deflect and depress when the griddle plate G is applied”—i.e., the opposite of ribs. (EX1004 at 127, 135.)

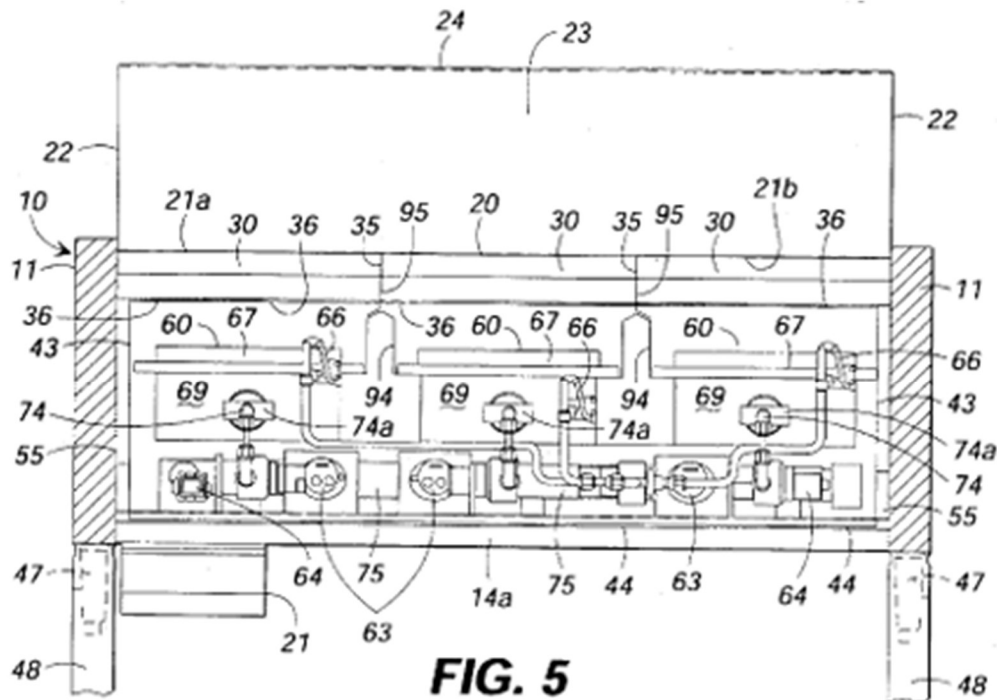


Best provides only a very brief description of the use of various “insulating baffles 94” and “baffles 95” to trap heat:

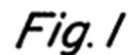
For further isolating the heat from burners 60, a pair of inverted U-shaped, insulating baffles 94, as seen in FIG. 5, are interposed between each pair of burner groups, while other baffles 95 extend downwardly from plate 20

to terminate in overlapping relationship, as shown in
FIG. 5.

(EX1006 at 9:18-22.) These thin baffles 94 and 95 are shown as only paper-thin lines and do not provide any support to the griddle whatsoever. (EX2002 at ¶¶67–68.)



Farnsworth provides an even sparser disclosure regarding its baffles, stating merely that a “laterally extending baffle 30 is attached to the bottom surface 26 of upper plate 18 and is positioned between each pair of burners 14.” (EX1007 at 3:17-19.) This thin baffle is depicted in Fig. 1, which is free-floating without any structural supportive function:



C. The '473 Patent's use of the term "rib" is entirely consistent with its plain and ordinary meaning as a structural support.

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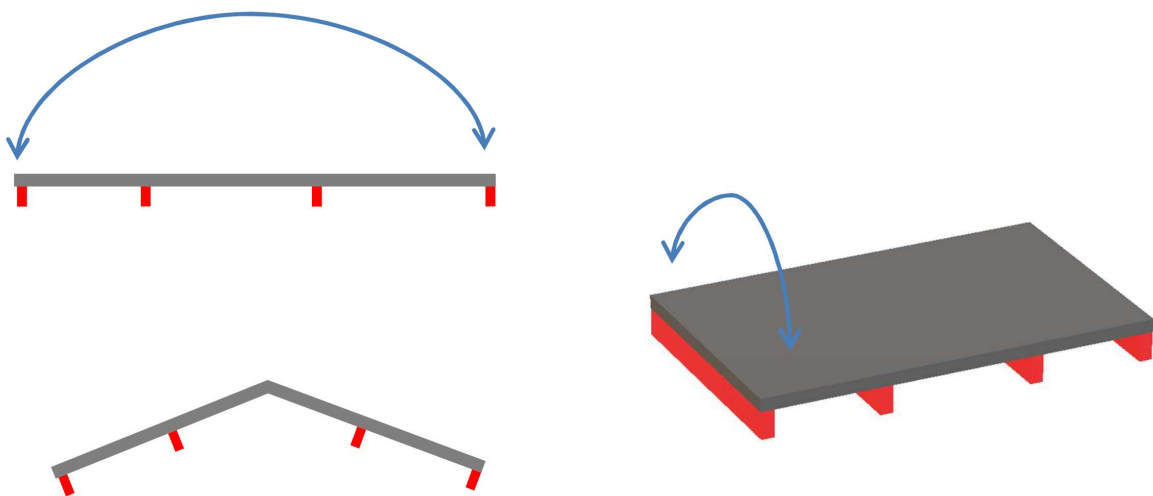
venting or channeling convection heat from below the griddle to the rear. (EX1001 at 5:63–6:2, 7:3–15.) The integrated front rib, for example, cooperates with the frame of the cooking station to block and prevent convection heat from escaping from the front side of the frame and griddle. (*Id.* at 8:9–28.) Additionally, the '473 Patent teaches that integrally formed lateral ribs could be spaced to define multiple heating regions. (*Id.* at 7:54–57.) Due to the height of the disclosed ribbing structure with the multiple lateral ribs, a space or volume between the lateral ribs fills with convection heat. (*Id.* at 9:4–29.)

This additionally disclosed purpose is not inconsistent with the structural function of ribs; rather, it is additive to it. Specifically, the '473 Patent makes mention that the ribs also may serve to prevent griddle warping as well. (*Id.* at 7:48-53.) Accordingly, the '473 Patent addresses shortcomings of the prior art by simultaneously solving multiple problems through the use of structural, integrally formed ribs that prevent griddle warping; provide temperature control of certain areas of a griddle to have different temperature portions of the griddle surface; and control of conductive heat around the periphery of a griddle—which were not all addressed by the use of baffles in prior art griddles.

Petitioner argues that the '473 Patent's use of “rib” is inconsistent with the structural meaning of the term because the '473 Patent discloses that ribs “may” serve as stabilizers in substantially preventing the griddle from warping or partially

warping.” *See* ’473 Patent at 7:48–53. Contrary to Petitioner’s arguments though, there is nothing inconsistent about the ’473 Patent’s use of “may” when describing the warping prevention aspects of ribs and the plain and ordinary meaning of ribs as being structural supports. Indeed, as discussed above, ribs by their very nature always provide structural support. *Supra*, §§IV.A–B. But whether the ribs stabilize the griddle to prevent warping depends on their configuration and the direction of warping—the same is true for ribs in any context. (*See* EX1013 at 8:18; EX2002 ¶¶ 49–50.) Ribs in the griddle context always provide structural support, and their added support prevents warping *if* they are configured in way to counteract the warping. The ’473 Patent’s use of “may” when describing warping prevention merely accounts for this uncertainty. (EX2002 at ¶¶ 49–50.)

For example, lateral ribs (shown below in red) “may” prevent warpage in one direction but not prevent warpage in another.



For this reason, Hinkle, the only other art of record to use the term “rib,” states that ribs are preferably configured “transversely to each other” in order to stiffen a griddle “against bending in both directions.” (EX1013 at 3:13–18; *see also* EX2011 (Dr. Valle Deposition) at 51:2–15 (recognizing the same).) Thus, the fact that ribs “may” prevent a griddle from warping—depending on the direction or type of warping—is not a reason to reject the plain and ordinary meaning of “rib” as a structural support. Ribs are ribs (i.e., structural supports), and the intrinsic description of the invention is not inconsistent and does not state otherwise.

Petitioner also asserts that the prosecution history is at odds with the structural support nature of the term because the patent examiner initially rejected the claims by identifying thin metal “baffles” in connection with the “rib” limitations in the claims. But the applicant did not agree that thin metal baffles were ribs. Instead of arguing this distinction, the applicant amended the claims with further description to reinforce aspects elucidating the structural nature of the claimed ribs. An examiner’s interpretation of a claim term has no bearing on its proper construction in an IPR proceeding. An examiner is not the arbiter of claim constructions, and indeed applies a different claim construction standard (i.e., broadest reasonable interpretation) than applied in an IPR proceeding (i.e., ordinary and customary meaning). Additionally, that the applicant did not expressly contest the examiner’s application of Reynolds is of no consequence.

The doctrine of prosecution history disclaimer is not applied “where the alleged disavowal is less than clear.” *Baxalta Inc. v. Genentech, Inc.*, 972 F.3d 1341, 1348 (Fed. Cir. 2020). Opting for an unrelated amendment rather than arguing the scope of a particular claim term does not rise to the level of a “clear” disavowal.

In the present case, the claims were amended to require ribs “integrally formed with the underside surface of a griddle.” (EX1004 at 123–134.) Thin sheet metal “baffles,” whether integrally formed with the griddle or not, might separate heat regions by controlling air flow. In contrast, ribs that are not connected to the griddle anyway would not provide structural support or reinforcement. The claim amendments requiring the ribs to be “integrally formed with the underside surface of a griddle” further clarify the structural purpose of the ribs. Accordingly, the prosecution history also supports the plain and ordinary meaning of “rib” as providing structural support.

D. The Petition essentially re-writes the claims with a nonce term instead of the actual language of the claim, which purposefully uses the structural term, “rib.”

The Petition essentially re-writes the claims with a nonce term in place of “rib.” The Petitioner and its expert have left entirely unanswered the plain and ordinary meaning of “rib” other than an *ipse dixit* approach of whatever the Petitioner wants to call a rib.

Actual Claim Language	Re-Written Claim
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1. A cooking system, comprising: a frame extending with a front side, a rear side, a left side, and a right side each extending between a lower portion and an upper portion; multiple burners coupled to and extending between the front side and the rear side of the frame; and a griddle sized to be suspended by the frame to be positioned on the upper portion of the frame, the griddle having a cooking surface and an underside surface, the underside surface extending to define a rectangular shape with a front end, a rear end, a left end, and a right end, the griddle including a front rib and multiple lateral ribs, the front rib extending along the front end of the underside surface, and the multiple lateral ribs 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, each of the heating regions includes one of the multiple burners positioned below one of the multiple heating regions, each of the lateral ribs extend downward from the underside surface a height so as to funnel convection heat from any one of the multiple burners toward the rear end of the underside surface of the griddle and from the rear side of the frame; wherein the front rib and the multiple lateral ribs are integrally formed with	1. A cooking system, comprising: a frame extending with a front side, a rear side, a left side, and a right side each extending between a lower portion and an upper portion; multiple burners coupled to and extending between the front side and the rear side of the frame; and a griddle sized to be suspended by the frame to be positioned on the upper portion of the frame, the griddle having a cooking surface and an underside surface, the underside surface extending to define a rectangular shape with a front end, a rear end, a left end, and a right end, the griddle including a front member and multiple lateral members, the front member extending along the front end of the underside surface, and the multiple lateral members extending along the underside surface from the front member to the rear end of the underside surface, the multiple lateral members being spaced from each other so as to define multiple heating regions such that each heating region is defined between adjacently extending lateral members, each of the heating regions includes one of the multiple burners positioned below one of the multiple heating regions, each of the lateral members extend downward from the underside surface a height so as to funnel convection heat from any one of the multiple burners toward the rear end of the underside surface of the griddle and from the rear side of the frame;
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the underside surface of the griddle; and wherein the multiple lateral ribs directly extend from the underside surface of the griddle such that each lateral rib is spaced and separate from an adjacent lateral rib .	wherein the front member and the multiple lateral members are integrally formed with the underside surface of the griddle; and wherein the multiple lateral members directly extend from the underside surface of the griddle such that each lateral member is spaced and separate from an adjacent lateral member .
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The word “rib” has meaning beyond that of a nonce term. The claim limitations directed at a configuration for the ribs to define heat zones are not a definition for “rib” itself—otherwise a nonce term would have meant the same.

In light of the foregoing, a person of ordinary skill would understand “rib” in accordance with its plain and ordinary meaning, which is a structurally supportive one, whether under the definition proposed in Patent Owner’s Preliminary Response, under any of the dictionary definitions or other uses of the term in publications of record, or simply as a structural support.

V. PATENT OWNER’S RESPONSE TO PETITIONER’S ASSERTED GROUNDS OF UNPATENTABILITY

The Petition presents six grounds for the alleged unpatentability of the Challenged Claims. Ground 1 is based on Williams alone, (Pet. at 17–44; EX1002, ¶¶ 64–161), Ground 2 adds Best to Williams, (Pet. at 45–54; EX1002, ¶¶ 162–276), Ground 3 adds Farnsworth to Williams, (Pet. at 54–61; EX1002, ¶¶ 277–377), Ground 4 adds May to Williams (Pet. at 61–79; EX1002, ¶¶ 378–457),

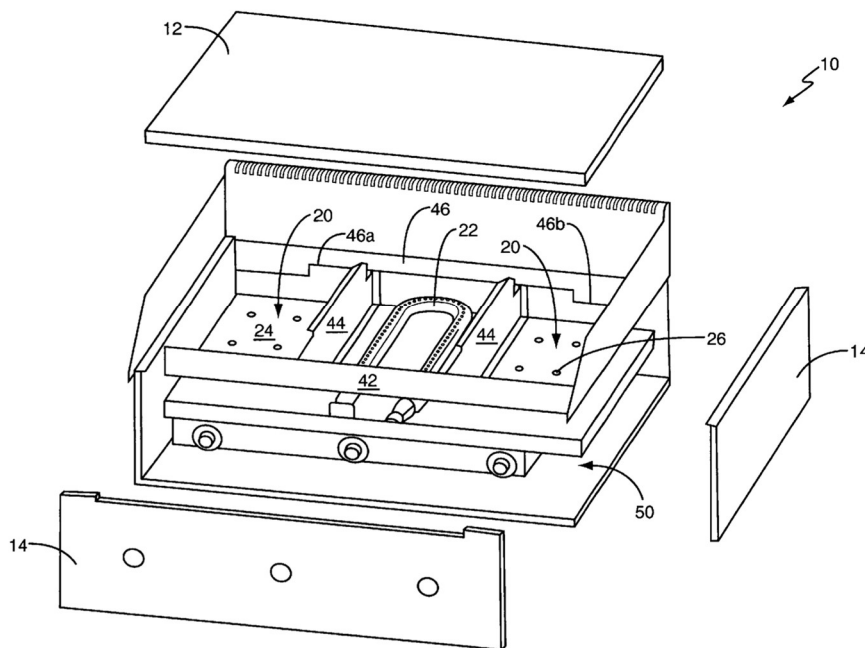
Ground 5 adds May and Best to Williams (Pet. at 79–82; EX1002, ¶¶ 458–540), and Ground 6 adds May and Farnsworth to Williams (Pet. at 83–84; EX1002, ¶¶ 541–619). According to Petitioner, the three independent claims at issue (claims 1, 10, and 17) are all substantially similar in scope. (Pet. at 38–39, 61; EX1002, ¶ 110.)

A. Grounds 1–6: None of the applied references in any of the asserted Grounds discloses the use of “ribs” as claimed.

The Challenged Claims each require a front “rib” and lateral/parallel “ribs” that are “integrally formed with the underside surface of the griddle.” As discussed above, the term “rib” should be construed with its plain and ordinary meaning consistent with a structural support as opposed to non-structural baffles. (*Supra*, §IV.) None of the art relied upon in Grounds 1-6 (i.e., Williams, Best, Farnsworth, and May) discloses such a “rib.” Rather, all of the asserted art describes thin metal “baffles” for impeding or directing air flow. None of the asserted art in the Grounds describes these thin metal “baffles” as providing any structural support to a griddle and indeed a POSITA at the time would have understood that such thin baffles would not have provided meaningful structural support. (EX2002 at ¶¶ 75, 78, 85.) The “baffles” in the asserted prior art, whether in the prosecution history or in the Petition, are not mere substitutes for ribs under the plain and ordinary understanding of that term.

Again, the only art mentioned by Petitioner that discusses a “rib” is Hinkle, which was not included as an asserted reference in any Ground. *See supra*, §IV. Hinkle’s use of “ribs” is entirely consistent with the plain and ordinary meaning of that term as providing structural support. (EX1013 at 3:8–18.) In contrast, the art actually relied on in the Grounds of the Petition does not disclose any analogous structural component. Instead, the elements of the prior art that the Petition tries to identify as ribs are all thin “baffles”—e.g., sheet metal for directing air flow—none of which have any structural function or capability at all.

First, Williams (Grounds 1–6) discloses “flow-restricting” “side walls” (44) that are not part of the cooking surface (12) but are separate elements below the cooking surface to temporarily trap combustion gasses from the burner (22).

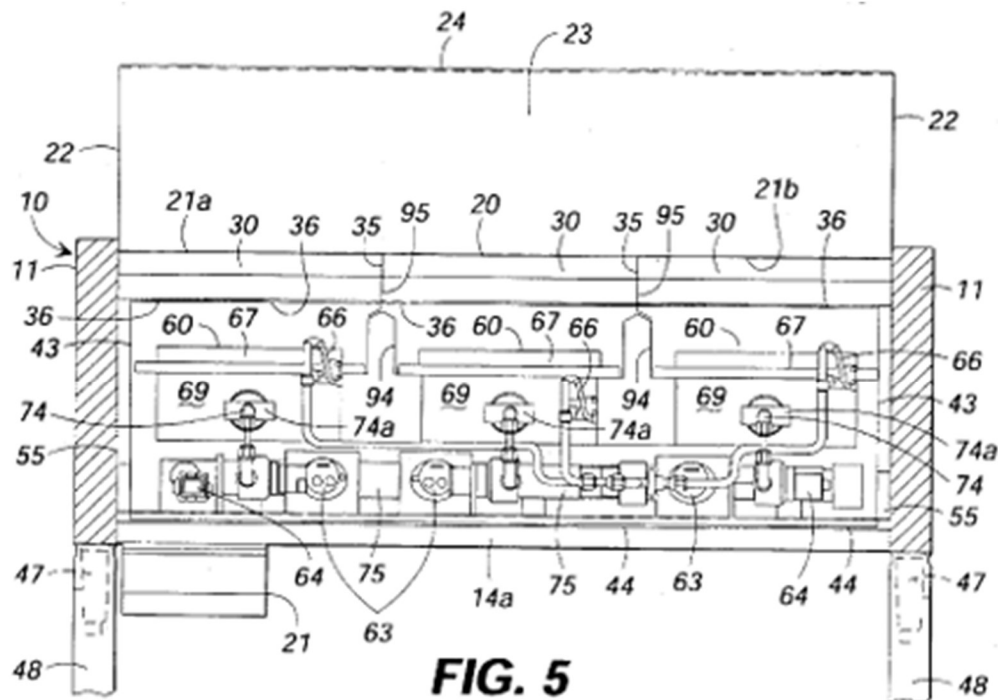


(EX1005 at Fig. 2, 2:41-44, 3:52–4:2.) The Petition itself recognizes that “the sidewall (44) is a relatively thin vertical structure” (Pet. at 30.) These sidewalls are not described by Williams as having or being capable of any structural stabilization function for the cooking surface nor is potential warping mentioned by Williams. Rather, the sidewalls of Williams together with “front dam wall 42” and “rear dam wall 46” are merely utilized as baffles to “temporarily trap[]” combustion gases. (EX1005 at 3:57-4:13.) Indeed, Williams’ description of these walls as “flow-restricting walls” makes clear that these walls are merely “baffles” by another term. (*See id.* at 1:35-38, 2:39-44.)

Best (Grounds 2 and 5) provides only a very brief description of the use of various “insulating baffles 94” and “baffles 95” to trap heat:

For further isolating the heat from burners 60, a pair of inverted U-shaped, insulating baffles 94, as seen in FIG. 5, are interposed between each pair of burner groups, while other baffles 95 extend downwardly from plate 20 to terminate in overlapping relationship, as shown in FIG. 5.

(EX1006 at 9:18-22.) These thin baffles 94 and 95 are shown in Fig. 5 of Best below.



Farnsworth (Grounds 3 and 6) provides an even sparser disclosure regarding its baffles, stating merely that a “laterally extending baffle 30 is attached to the bottom surface 26 of upper plate 18 and is positioned between each pair of burners 14.” (EX1007 at 3:17-19.) This thin baffle is depicted in Fig. 1:

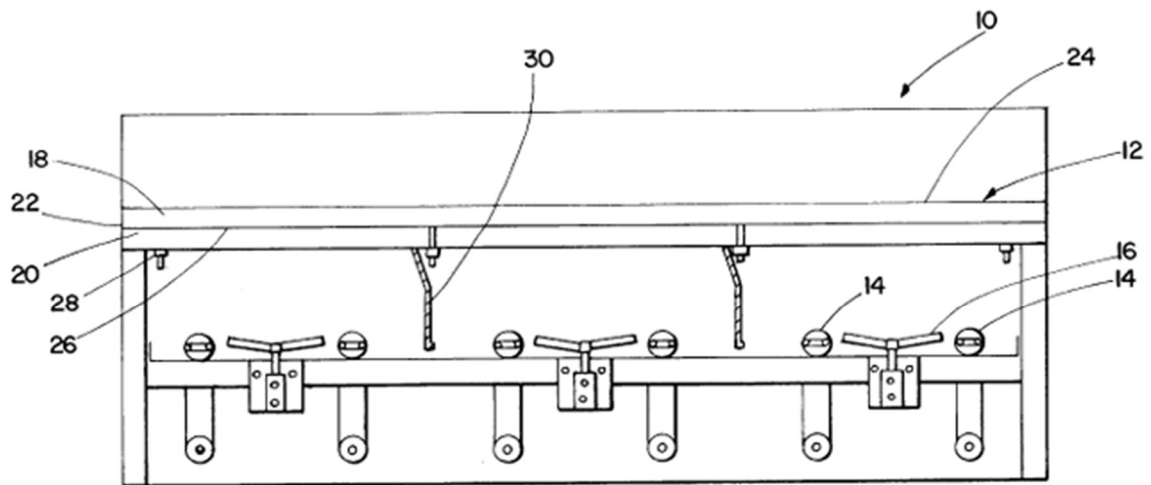
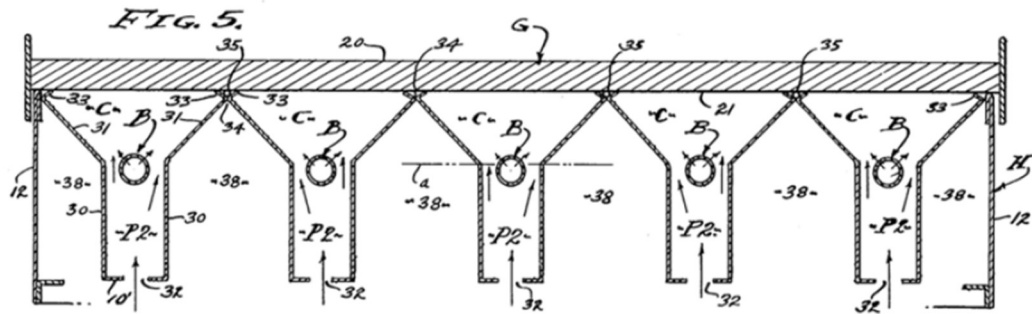


Fig. 1

For the only other asserted prior art, U.S. Patent Publication No. 2013/0112088 (“May”) (Grounds 4 and 6), the Petition does not assert that May discloses any of the claimed “ribs,” though May does disclose the use of baffles or “heat shields” that function to “partition the heat emanating from the burner” (EX1006 at ¶¶ [0050] and [0054].) Like all the other prior art “baffles” in Williams, Best, and Farnsworth, May’s “heat shields” act as only air-flow control and are not intended to provide structural support to the griddle/grill.

Turning to the prior art from the initial examination of the ’473 Patent, Reynolds, over which the Challenged Claims of the ’473 Patent were allowed, also identifies “baffles 30” underneath a cooktop for trapping air.



(EX1009 at Fig. 5.) Specifically, Reynolds describes “baffles” as “thin sheet metal” that “deflect and depress when the griddle plate G is applied”—i.e., the opposite of providing structural stability like “ribs” would.

None of the cited references provides any indication that thin baffles provide any structural stabilization or strengthening, which is unsurprising because that is not what baffles do. The only purported evidence provided by Petitioner to equate the prior art baffles and ribs is the testimony of Dr. Vallee. But Dr. Vallee’s testimony is *ipse dixit* providing to reason why one of ordinary skill in the art would consider thin metal sheets to be “ribs” that provide any meaningful structural support. As discussed by Dr. Stevick, a POSITA would have understood that the various thin baffles in the cited references from the Petition provide no meaningful structural support to the overlying griddle and thus would not have been understood as a “rib.” (EX2002 at ¶¶ 75, 78, 85.)

Accordingly, none of the applied art in the proposed Grounds discloses a griddle having a “front *rib* and . . . multiple lateral *ribs* [that] are integrally formed with the underside surface of the griddle,” as claimed.

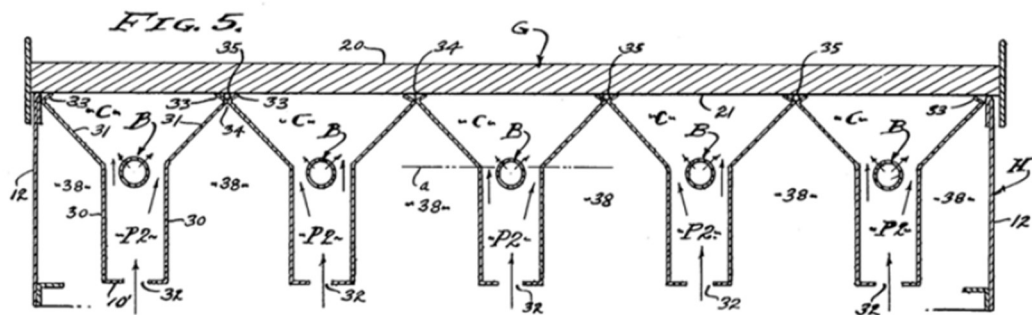
B. Grounds 1 and 4: Petitioner has failed to sufficiently demonstrate the obviousness over Williams alone of the front rib and the multiple lateral ribs being integrally formed with the underside surface of the griddle as required by the Challenged Claims.²

As an initial matter, Williams alone fails to provide any indication that its various “flow-restricting” walls are integrally formed with the underside surface of the griddle. As discussed above, the Petition erroneously analogizes the “front dam 42” and the “sidewalls 44” of Williams to the claimed “front rib” and “multiple lateral ribs,” as recited in the Challenged Claims. *Supra*, §V.A. The Petition further erroneously argues that Williams’ disclosure that the “front dam 42” and “sidewalls 44” are “downwardly extending” indicates that they are also “fixed” or “integral” to the underside surface of the griddle. *See* Pet., 26-27. This conclusory assumption has no merit.

Simply stating that a first part “extends” from a second part does not necessarily mean that the two parts are “integrally formed.” Rather, the first part could merely be positioned adjacent to or very near the second part and still

² Ground 4 relies on Williams in combination with May as a whole but relies solely on Williams with respect to the relevant limitation.

“extend” away or “downwardly” from that first part. This is no different than the prior art of record, Reynolds, U.S. Pat. No. 4,715,356, over which the Challenged Claims of the '473 patent were allowed. EX1004, 127, 135. Specifically, Reynolds discloses “baffles 30” that are positioned adjacent to the underside of a cooktop for the purposes of trapping air.



EX1009, Fig. 5. As demonstrated in Fig. 5 above and as found by the Examiner, although these baffles extend downwardly away from the underside of the cooktop, the baffles are not “integrally formed” with the cooktop. Thus, just as in Reynolds, Williams’ front dam 42 is not integrally formed with the griddle surface.

Further, as even the Petition recognizes, Williams does not, in fact, describe the sidewalls 44 as “downwardly extending” from the griddle. Pet., 51, 54, 58 (“While Williams only explicitly provides the front (42) and rear dams (46) are ‘downwardly extending’...”). Thus, even if “downwardly extending” from the griddle provided a basis to modify Williams to integrally form components with the griddle, Williams does not describe sidewalls 44 (which the Petition has

analogized to the claimed “lateral ribs”—*see* Pet. at 20) as “downwardly extending” from the griddle, and thus would provide no basis for concluding that such sidewalls are “integrally formed” with the underside surface of the griddle.

Recognizing the weakness of its argument, the Petition defaults to an apparent obviousness argument for the missing “integrally formed” limitation, asserting that “a POSITA would also be motivated to integrally form the ribs with the underside of the griddle for several other reasons” (applicable to Grounds 1 and 4 in which the Petition relies on Williams alone for this element). In doing so, the Petition presents several alleged motivations, supported almost exclusively by testimony from Petitioner’s purported expert, Dr. Vallee. Yet, the alleged motivations are insufficiently explained, contradicted by Dr. Vallee’s other statements, and rebutted by the experience of Dr. Stevick.

First, Petitioner’s expert Dr. Valle asserts that a person of ordinary skill in the art would integrally form Williams’ “flow-restricting” walls or baffles to better thermally couple them to the griddle. (EX1002 at ¶ 87.) Dr. Valle does not provide a reason to want to increase thermal coupling between those elements, and in fact such coupling would run counter to the very purpose of Williams’ walls or baffles. (EX2002 at ¶¶ 59–60.) Williams’ “flow-restricting” walls are merely baffles meant to isolate different chambers or zones of a griddle corresponding to different burners. (EX1005 at Abstract.) The griddle is heated by the heated air below it.

(*Id.*) As discussed by Dr. Stevick, there is no particular reason to want to transfer heat from the cooking surface of the griddle to the baffles below it, or for the baffles themselves to transfer heat at their attachment point to the griddle. (EX2002 at ¶ 60.) Indeed, the very thin nature of baffles (included their typical formation from sheet metal or the like) and resulting small thermal mass would make transferring heat through the baffles inefficient. (*Id.*) The goal of Williams is uniform heating of the griddle, which is best accomplished by uniformly heated air beneath the griddle and thin baffles to restrict the airflow while minimally contacting the griddle surface so that the contact of the griddle with the heated air is maximized. (*Id.*)

Second, Dr. Valle asserts that a person of skill in the art would integrally form the “flow-restricting” walls of Williams to “greatly strengthen” the griddle. (EX1002 at ¶ 88.) However, attaching the thin “flow-restricting” walls or baffles of Williams to the underside of the griddle would do very little to strengthen the griddle and certainly would not “greatly” strengthen the griddle. (EX2002 at ¶ 61.) Dr. Valle recognizes that the “flow-restricting” walls of Williams are thin. (EX1002 at ¶ 92.) Any deformation of the griddle would likely fracture the thin walls or baffles if they were integrally formed with the griddle because the thin, weak material would have little resistance against such deformation stresses. (EX2002 at ¶ 61.) Ribs, on the other hand, are much more substantial and are not relatively thin

as described by Dr. Valle and the prior art references. (*Id.*) As a result, in contrast to baffles, integrally formed ribs do add structural support and thereby strengthen the griddle.

Third, Dr. Valle asserts that a person of skill in the art would integrally form the “flow-restricting” walls or baffles to eliminate any gap between the griddle and the walls or baffles. (EX1002 at ¶ 91.) But there is no gap between the baffles and the griddle plate shown or described by Williams. Dr. Valle elsewhere admits that one of ordinary skill in the art can rest a griddle plate atop baffles with no meaningful gap therebetween. (EX1002 at ¶¶ 103–104.) Integrally forming the baffles with the griddle, on the other hand, introduces potential problems or failure points. (EX2002 at ¶ 62.) Moreover, even if some relative movement between the griddle and underlying baffles did result in a gap between the griddle and the baffle, such a gap would likely be very small and have very little impact on the overall airflow restriction function of the baffles or the corresponding retention of heat within the desired heating zone. (*Id.* at ¶ 62; *see also* EX1002 at ¶¶ 152–153 (“This significant directional flow from front-to-back would likewise prevent flow of hot combustion gasses over the sidewalls.”).) Accordingly, a POSITA would understand that eliminating the gap between the griddle and baffles was of little import and certainly not of enough concern to warrant the increased risk of failure points and their associated issues. (*Id.*)

Both Dr. Valle and Dr. Stevick agree that baffles are relatively thin compared to the griddle. (EX1002 at ¶ 92; EX2002 at ¶ 62.) The baffles will heat quicker than the thicker griddle plate creating a temperature disparity between the griddle and the baffles, which can cause thermal stress along the junction between the two. (EX2002 at ¶ 62.) Again, both Dr. Valle and Dr. Stevick agree that it is at times advantageous to *not* couple heated materials in order to provide free expansion. (EX1002 at ¶¶ 194–195, 304–305; EX2002 at ¶ 62.) Petitioner’s expert, Dr. Valle, specifically recognizes this in connection with Williams, Best, and Farnsworth, stating that it may be advantageous to leave a gap for the prior art baffles to expand when subjected to varying thermal stresses. (EX1002 at ¶¶ 194–195, 304–305.)

Further still, the mechanical engineering text submitted by Petitioner at Exhibit No. 1018, “Shigley’s Mechanical Engineering Design,” also includes a caution against joinder of materials when thermal stresses are involved. (EX2008 (Shigley’s Mechanical Engineering Design) at p. 495.) (“The significance of the thermal stresses serves as a caution against joining dissimilar adherends when large temperature changes are involved.”). The dissimilarity in thickness and thermal capacity of the griddle plate in comparison with the relatively thin “flow-restricting” walls or baffles would not so easily be dismissed by a person of ordinary skill in the art and cause them to integrally form such thin baffles with the griddle. (EX2002 at ¶ 62.)

Fourth, Dr. Valle asserts that a person of skill in the art would integrally form the “flow-restricting” walls or baffles to strengthen the walls or baffles themselves. (EX1002 at ¶ 92.) While integrally forming the baffles with the griddle would do very little to strength the griddle, integrally forming the griddle to the baffles would cause undo stress on the baffles during thermal expansion by restricting the free expansion of the baffles during heating. This would actually increase the potential for stress fractures in the baffles. (EX2002 at ¶ 63.) Again Dr. Valle seems to recognize this elsewhere in connection with Williams, Best, and Farnsworth, stating that it may be advantageous to leave a gap for the prior art baffles to expand when subjected to varying thermal stresses, but ignores it when constructing motivations for modifying Williams’ design. (EX1002 at ¶¶ 194–195, 304–305.)

Finally, Dr. Valle asserts that a person of skill in the art would integrally form the “flow-restricting” walls or baffles to reduce assembly time and errors by the end user. (EX1002 at ¶ 95.) Even assuming decreased assembly time and errors by the end user, such alleged benefits would be offset by the additional required assembly efforts and costs on the part of the manufacturer in integrally forming the baffles with the griddle. And even disregarding this increase in assembly time and costs during manufacturing, integrally forming thin baffles on the underside of a griddle would increase the potential for damage to the baffles. In particular, “flow-

restricting” walls or baffles are not structural and thus are not designed to support the weight of a griddle. (EX2002 at ¶ 64.) Resting the griddle on the baffles alone would likely crush and deform the baffles. End users would need to exercise much more care to avoid damaging integrally formed baffles as opposed to baffles that are separately attached to a burner box and not in danger of being crushed by the weight of a griddle. (*Id.*)

Accordingly, for the many reasons discussed above, a POSITA would not have found it obvious nor would they have been motivated to integrally form Williams’ flow-restricting walls or baffles with the underside of the griddle. The Petition does not assert that May cures these deficiencies of Williams. As such, neither Ground 1 nor Ground 4 establishes the obviousness of the Challenged Claims.

C. Grounds 2–3 and 5–6: Williams in combination with Best or Farnsworth does not render the Challenged Claims obvious because there is insufficient motivation to combine the references and modify the baffles below the griddle into the claimed integrally formed ribs.

With respect to the Grounds directed to Williams in combination with other art (Grounds 2–6), neither Best nor Farnsworth teaches baffles integrally formed with a griddle. Additionally, these Grounds fail to provide a convincing reason to substitute the baffles of Best or Farnsworth for the “flow-restricting” walls/baffles

in Williams, and also fail to persuasively address why a person of ordinary skill in the art would further modify the substituted baffles to arrive at the claimed integrally formed ribs.

The Petition and Petitioner's expert, Dr. Valle, argue that Best's baffles are a simple substitution for Williams' "flow-restricting" walls. (EX1002 at ¶¶ 200, 517.) Even assuming that is true, Best does not teach integrally formed baffles in its scant disclosure of its baffles. Specifically, Best's only disclosure about its baffles is the following:

For further isolating heat from burners 60, a pair of inverted U-shaped, insulating baffles 94, as seen in FIG. 5, are interposed between each pair of burner groups, while other baffles 95 extend downwardly from plate 20 to terminate in overlapping relationship, as shown in FIG. 5.

(EX1007 at 9:18–24.) Best says nothing about how the baffles are attached (if at all) to the griddle plate and nothing about the baffles being integrally formed with the plate.

To make up for the lack of disclosure, Petitioner again relies on Dr. Valle to opine that "to extend downward from the griddle plate, the baffle (as drawn in Fig. 5) must be integral to the plate or griddle." (EX1002 at ¶ 191.) However, for the same reasons discussed above with respect to Williams, the mere statement that a baffle "extends downward" from a surface does not mean that the baffle is integrally formed with that surface. (*Supra* §V.B.) Additionally, the fallacy of

equating extending downward to integrally formed is belied by the Petition itself. For example, instead of asserting anticipation in view of Williams's teaching that its "front dam 42 and rear dam 46 are downwardly extending" from the griddle, the Petition asserts an obviousness ground in which it argues that Williams would be modified to arrive at integrally formed dams and sidewalls. (*See supra* §V.B; Pet. at §VIII(C).) Dr. Valle also recognizes that Best's baffles "would be subject to heat induced stresses that may induce deformation as different portions [of] the baffles expand and contract at different rates" such that it would be advantageous to have thermal expansion gaps at least at some points, again alluding to the fact that the baffles are preferably not air-tight with other components. (EX1002 at ¶¶ 194–195, 513–514.)

The disclosure regarding Farnsworth's baffles is even more sparse than Best. The totality of Farnsworth's disclosure is that a "laterally extending baffle 30 is attached to the bottom surface 26 of upper plate 18 and is positioned between each pair of burners." (EX1008 at 3:17–19.) Like Best, Farnsworth says nothing about how the manner in which the baffles are attached to the griddle plate and nothing about the baffles being integrally formed with the plate. Again, Petitioner relies on Dr. Valle to fill the gap and opine that one of skill in the art would understand the baffles to be integrally formed. (EX1002 at ¶ 304, 592.) As with Best, Dr. Valle also recognizes that Farnsworth's baffles "would be subject to heat induced

stresses that may induce deformation as different portions [of] the baffles expand and contract at different rates” such that it would be advantageous to have thermal expansion gaps. (EX1002 at ¶¶ 305–306, 593–594.)

Accordingly, neither Best nor Farnsworth actually teach integrally formed baffles on the underside of a griddle plate, and both Dr. Valle and Dr. Stevick provide reasons to not do so and to not believe that they would necessarily be integrally formed when subject to high thermal stresses. (EX1002 at ¶¶ 194–195, 305–306, 513–514, 593–594; EX2002 at ¶¶ 62–63, 81.)

Even assuming that Best or Farnsworth disclosed integrally formed baffles on a griddle plate, the Petition and Dr. Valle fail to provide any reason to substitute Best’s or Farnsworth’s allegedly integrally formed baffles for the “flow-restricting” walls or baffles of Williams. Dr. Valle only opines that substituting Best’s or Farnsworth’s baffles for Williams’ walls or baffles would be a simple substitution. (EX1002 ¶¶ 200, 308, 517, 596.) What’s missing is a convincing reason to make the substitution at all. Indeed, for the same reasons discussed above with respect to Grounds 1 and 4, it was not obvious to use integrally formed baffles in Williams. (*See supra* section V(B).)

Finally, baffles are not ribs, and ribs are not baffles. These are not interchangeable structures, and persons of ordinary skill in the art do not equate them with one another. (EX2002 at ¶¶ 57, 75, 78, 85.) To do so would render the

term “rib” essentially meaningless, allowing almost any component of a structure to be called a “rib.” While Dr. Valle asserts that Best’s or Farnsworth’s baffles may be substituted for the “flow-restricting” walls or baffles of Williams (EX1002 ¶¶ 200, 308, 517, 596), Dr. Valle fails to address why one of ordinary skill in the art would further modify the substituted baffles to turn them into integrally formed “ribs.” Accordingly, additional Grounds 2-3 and 5-6, which combine Best and Farnsworth with Williams, fail to establish the obviousness of the Challenged Claims.

VI. CONCLUSION

In light of the foregoing, the Asserted Prior Art fails to teach all the claim limitations of the Challenged Claims and fails to provide motivation to combine the asserted combinations of the Asserted Prior Art. Accordingly, Patent Owner respectfully submits that the Board should uphold the patentability of the Challenged Claims.

Dated: January 21, 2025

Respectfully submitted,

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RESPONSE

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CERTIFICATE UNDER 37 C.F.R. §42.24(d)

The undersigned certifies that the foregoing **Patent Owner Response**, excluding any table of contents, mandatory notices under 37 C.F.R. § 42.8, certificates of service or word count, or appendix of exhibits, contains 8,617 words according to the word-processing program used to prepare this document (Microsoft Word), which is less than the 14,000 allowed under 37 C.F.R. § 42.24(a)(1)(i).

Dated: January 21, 2025

By: / Nicholas M. Lagerwall/

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing **Patent Owner Response** together with all exhibits and other papers filed therewith was served on January 21, 2025 to counsel of record by e-mail to:

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