

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

EXTRACTIONTEK SALES LLC,
Petitioner,

v.

GENE POOL TECHNOLOGIES, INC.,
Patent Owner.

IPR2022-00832
Patent 9,145,532 B2

Before JEFFREY N. FREDMAN, CYNTHIA M. HARDMAN, and
JAMIE T. WISZ, *Administrative Patent Judges*.

HARDMAN, *Administrative Patent Judge*.

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

I. INTRODUCTION

Petitioner ExtractionTek Sales LLC requests *inter partes* review of claims 1–19 of U.S. Patent No. 9,145,532 B2 (“the ’532 patent,” Ex. 1001). Paper 1 (“Pet.”). Patent Owner Gene Pool Technologies, Inc. filed a Preliminary Response. Paper 11¹ (“Prelim. Resp.”).

Considering the arguments and evidence of record, we determine that the Petition demonstrates “a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). Thus, we institute an *inter partes* review.

The following preliminary findings of fact and conclusions of law are made solely for determining whether to institute review. Any final decision will be based on the full trial record.

A. *Real Parties in Interest*

The parties identify themselves as the real parties in interest. Pet. 2;² Paper 8, 1.

B. *Related Matters*

Petitioner states that the ’532 patent is among several patents asserted in *Gene Pool Technologies, Inc. v. ANM, Inc.*, Case No. 1:21-cv-01154-CL

¹ The deadline for Patent Owner’s Preliminary Response was August 5, 2022. The filing receipts for Patent Owner’s Preliminary Response and associated exhibits bear time stamps of after midnight, in the very early morning of August 6, 2022. Petitioner has not objected to the timing of filing of Patent Owner’s Preliminary Response. On the specific facts of this case, we excuse any late filing of Patent Owner’s Preliminary Response and find that it is in the interests of justice to consider it. 37 C.F.R. § 42.5(c)(3).

² Petitioner states that it has “two trade names: ExtractionTek Solutions and ExtractionTek Stainless.” Pet. 2.

(D. Oregon). Pet. 2. According to Petitioner, this case was transferred to the United States District Court for the Central District of California and captioned *Gene Pool Technologies, Inc. v. ANM, Inc.*, Case No. 2:21-cv-08756-JWH-SHK, and was then consolidated into *Gene Pool Technologies, Inc. v. Coastal Harvest, LLC*, Case No. 5:21-cv-01328-JWH-SHK (C.D. California) (the “California Action”). *Id.* at 2–3.

Patent Owner identifies the California Action and *Gene Pool Technologies, Inc. v. ANM, Inc.*, 2:21-cv-08756 (C.D. California), which is consolidated with the California Action, as related matters. Paper 8, 1.

The parties note that Petitioner filed IPR2022-00625 against Patent Owner’s U.S. Patent No. 9,587,203, which is related to the ’532 patent. *Id.* at 1; Pet. 3. We also note that Petitioner filed IPR2022-01011 against Patent Owner’s U.S. Patent No. 9,144,751 B2.

Patent Owner identifies related U.S. Patent Nos. 9,682,333, 9,926,513, 10,595,555, and 10,974,165. Paper 8, 2.

C. The ’532 Patent (Ex. 1001)

The ’532 patent relates to systems and methods for extracting solute from source materials. Ex. 1001, code (54), 1:6–7. According to the Specification, “many existing systems are configured to extract solute from a single container of source material,” and are thus “unable to simultaneously extract from materials stored in a plurality of distinct containers,” leading to a “bottleneck.” *Id.* at 1:11–16. Per the Specification, “many conventional extraction systems do not allow extraction to be performed in a single, closed loop process that reclaims solvent and re-introduces the reclaimed solvent in subsequent cycles of the system,” and manual reclaiming and reuse of solvent is inefficient. *Id.* at 1:22–28. The Specification identifies

“a need for cooling reclaimed solvent to a liquid state prior to collect[ing]” the solvent, because “[l]iquid solvent may be more efficiently stored” than gaseous solvent. *Id.* at 1:41–44.

Figure 1 of the '532 patent is reproduced below.

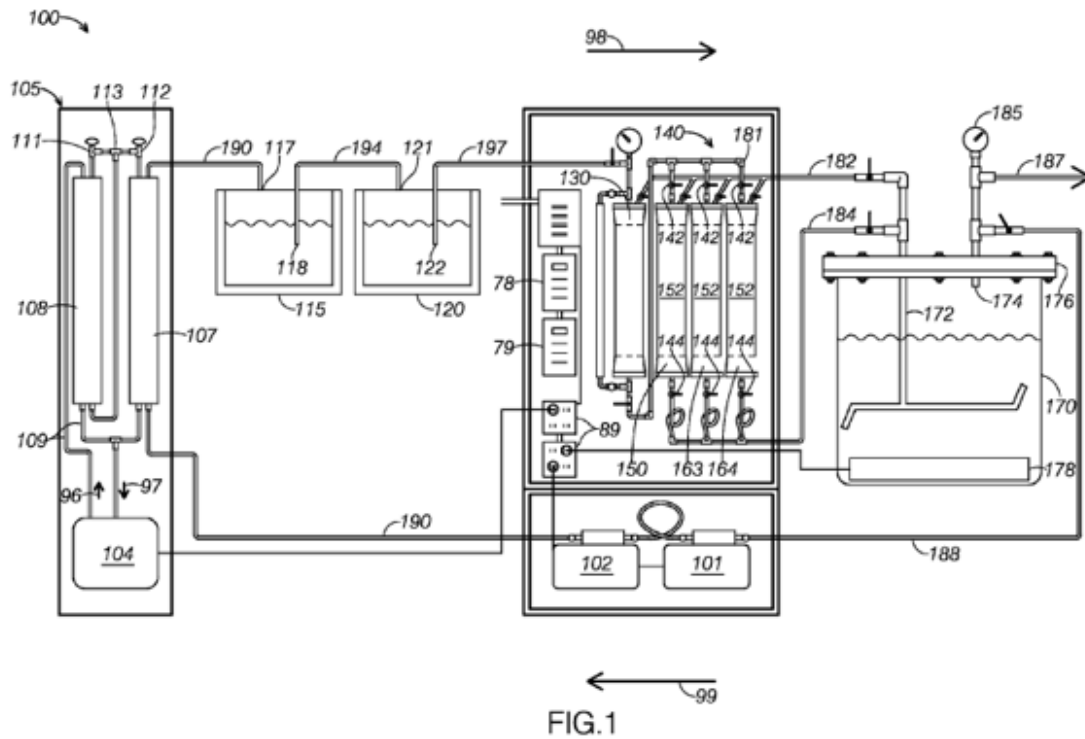


Figure 1, reproduced above, depicts a system for extracting solvent from a source material. *Id.* at 2:34–35. The system includes solvent source container 120, solvent compressor 130, detachable canister system 140, extract container 170, first pump 101, second pump 102, condensing system 105, and solvent collection container 115. *Id.* at 3:10–14.

The Specification explains that “[s]ource container output 122 is configured to direct solvent contained in solvent source container 120 to

solvent compressor 130 via a solvent source line 197.”³ *Id.* at 3:66–4:1.

The Specification states that “solvent source line 197 may include an internal filter,” which “may be used to remove impurities in solvent prior to introducing the solvent to detachable canister system 140.” *Id.* at 4:4–7.

“Solvent compressor 130 may be used to compress solvent to an extraction pressure, the extraction pressure selected to maintain solvent in a liquid state even when exposed to an elevated extraction temperature.” *Id.* at 4:53–56.

According to the Specification, “detachable canister system 140 allows a user to refill a selected canister as one or more of the other canisters remain closed and to continue extracting solute from contained source material.” *Id.* at 5:23–26. Additionally, “solvent compressor 130 is configured to communicate with each detachable canister individually,” so that “when one canister is attached and extracting, solvent compressor 130 may charge solvent for a second canister.” *Id.* at 5:21–22, 6:20–22.

The Specification describes an example in which butane is used to extract essential oils from lavender plants contained within a canister to produce an extract solution. *Id.* at 3:18–21. The extract mixture is heated “to a distilling temperature to produce an evaporated portion of the solvent in extract container 170,” where “[t]he distilling temperature . . . is greater than the boiling point of butane and less than typical essential oil boiling points.” *Id.* at 8:28–33. Condensing system 105 is configured to cool post-extraction solvent before the solvent reaches solvent collection container 115. *Id.* at 9:23–28.

³ Throughout this Decision, we omit bolding of reference numbers in quotes from the challenged patent and prior art references.

D. The Challenged Claims

Petitioner challenges all nineteen claims of the '532 patent. Claims 1, 9, and 14 are independent. Independent claim 1, reproduced below with bracketed letter and number designations added, is illustrative:

1. [1(a)] A method for extracting solute from a source material, the method comprising:
 - [1(b)] depositing the source material having a solute in a canister;
 - [1(c)] introducing a solvent into the canister;
 - [1(d)] exposing the source material to the solvent for a predetermined period of time to create an extract mixture having the solute in solution with the solvent;
 - [1(e)] fluidly communicating the extract mixture to a first extract container, the first extract container in fluid communication with the canister;
 - [1(f)] selectively fluidly communicating the extract mixture to a second extract container, the second extract container selectively being in fluid communication with the canister;
 - [1(g)] separating the solute from the extract mixture to define a recycled solvent by heating the one or more of the first extract container and the second extract container to evaporate the recycled solvent; and
 - [1(h)] collecting the recycled solvent in a solvent collection container in fluid communication with the first extract container and the second extract container.

Ex. 1001, 17:31–51.⁴ Independent claims 9 and 14 are similar to claim 1, but contain some different features. For example, claim 9 recites a detachable canister interface. *Id.* at 18:34–57. Claim 14 recites one extract container, whereas claim 1 recites two extract containers. *Id.* at 19:29–48.

⁴ For ease of reference, we adopt the letter and number designations Petitioner uses in the Petition. *See, e.g.*, Pet. 28 n.3.

The challenged dependent claims add additional features. For example, claims 2–8 depend directly or indirectly from claim 1 and relate to heating the extract containers and to the recycled solvent. *Id.* at 17:52–18:33. Claims 17 and 18 depend directly from claim 1 and relate to selectively removing the second extract container and placing additional source material in a second extract container. *Id.* at 20:23–44.

Claims 10–13 depend directly or indirectly from claim 9 and relate to introduction of a second canister or to connecting the canister to the detachable canister interface. *Id.* at 18:58–19:28.

Claims 15, 16, and 19 depend directly or indirectly from claim 14 and relate to, e.g., separating liquid solvent from the extract mixture, cooling the evaporated solvent, and the boiling point of the solvent. *Id.* at 20:1–22, 20:45–47.

E. The Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–19 are unpatentable on the following six grounds:

Ground	Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1	14, 15	§ 103	Britt, ⁵ Hebert, ⁶
2	19	§ 103	Britt, Hebert, Buese ⁷

⁵ Britt, U.S. Patent Pub. 2006/0041154 A1, published February 23, 2006 (“Britt,” Ex. 1004).

⁶ Hebert et al., U.S. Patent No. 5,516,923, issued May 14, 1996 (“Hebert,” Ex. 1009).

⁷ Buese et al., U.S. Patent No. 9,242,189 B2, issued January 26, 2016 (“Buese,” Ex. 1005).

Ground	Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
3	16	§ 103	Hebert, Liebert ⁸
4	1–8, 17, 18	§ 103	Buese, Hebert, Britt, Main ⁹
5	9–12	§ 103	Buese, Hebert, Main
6	13	§ 103	Buese, Hebert, Main, Jones ¹⁰

Pet. 5–6. Petitioner supports its contentions with the Declaration of Fritz Chess. Ex. 1002.

II. ANALYSIS

A. Discretionary Denial Under § 314(a)

The parties dispute whether the Board should discretionarily deny the Petition under 35 U.S.C. § 314(a) in view of the California Action. Prelim. Resp. 25–43; Pet. 53–55. Although Petitioner is not a party to the California Action (Pet. 54), Patent Owner asserts that Petitioner “is the supplier of certain of the accused products” and is coordinating with the litigation defendants concerning the litigation and/or the Petition. Prelim. Resp. 27–28.

Institution of an *inter partes* review is discretionary. *See* 35 U.S.C. § 314(a); *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018). When determining whether to exercise discretion to deny institution in view of a parallel litigation, we consider the following factors:

⁸ Liebert, U.S. Patent No. 3,267,689, issued August 23, 1966 (“Liebert,” Ex. 1007).

⁹ Main, U.S. Patent No. 2,457,251, issued December 28, 1948 (“Main,” Ex. 1006).

¹⁰ Jones, U.S. Patent No. 5,074,332, issued December 24, 1991 (“Jones,” Ex. 1008).

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board's exercise of discretion, including the merits.

Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11 at 6 (PTAB Mar. 20, 2020) (precedential) ("*Fintiv*"); *see also* Memorandum, Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (USPTO June 21, 2022).¹¹

We address the *Fintiv* factors below and discuss our reasons for not denying institution based on § 314(a).

1. Likelihood of a Stay

Patent Owner indicates that defendants in the California Action filed a motion to stay that action based on the filing of the Petition, and Judge Holcomb¹² denied that motion without prejudice. Prelim. Resp. 31. The

¹¹ Available at https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf.

¹² The California Action is pending before Judge John W. Holcomb. *See* Prelim. Resp. 27.

defendants have since filed a renewed motion to stay, which remains pending. *See id.*

We will not speculate on whether Judge Holcomb will grant the pending motion to stay. Accordingly, this factor is neutral.¹³ *See, e.g., Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 14 (PTAB Dec. 1, 2020) (precedential as to § II.A).

2. *Proximity of Trial Date to Projected Statutory Deadline*

To date, Judge Holcomb has not set a trial date in the California Action. Pet. 54; Prelim. Resp. 35. Although the litigants have proposed trial dates (*see* Prelim. Resp. 35), we will not speculate about what trial date Judge Holcomb will set and its proximity to our projected statutory deadline to issue a final written decision in this proceeding. Thus, this factor weighs against discretionary denial. *See, e.g., London Luxury LLC v. E & E Co., Ltd.*, PGR2021-000083, Paper 10 at 10 (PTAB Nov. 15, 2021).

3. *Investment in the Parallel Proceeding*

Petitioner characterizes the investment in the California Action as “minimal,” while Patent Owner characterizes it as “substantial.” Pet. 54; Prelim. Resp. 30. Even assuming, as Patent Owner asserts, the parties have exchanged infringement and invalidity contentions (Prelim. Resp. 37), and acknowledging that Judge Holcomb held a claim construction hearing on

¹³ We decline Patent Owner’s invitation for the Board “to adopt a rule whereby a delay in seeking a stay – either to seek favorable orders in the district court or due to a concern that a stay would be denied – should be found to weigh against institution.” Prelim. Resp. 34. On this record, we will not speculate about the motives of the defendants in the California Action regarding the timing of filing their motions to stay.

May 19, 2022 (*see* Ex. 2005¹⁴) and recently issued a claim construction order (*see* Ex. 3001), the record indicates that substantial work remains to be completed. Prelim. Resp. 30. For example, on this record, fact discovery remains open, dispositive motions are not yet due, and expert discovery and pre-trial preparation must be completed. *See, e.g.*, Ex. 2003, 8 (proposals for case deadlines including future dates for fact and expert discovery cut-off, dispositive motions, and trial preparation activities). Because the record indicates much work remains to be done in the California Action, this factor weighs against discretionary denial. *See, e.g., Sotera Wireless, Inc.*, Paper 12 at 16–17.

4. *Overlap of Issues*

Patent Owner asserts that “Petitioner asserts the same prior art references against the same claims using substantially the same arguments as those presented in the co-pending litigation.” Prelim. Resp. 39. Patent Owner, however, does not direct us to evidence substantiating the alleged overlap. Moreover, even assuming overlap, given the lack of trial date, on this record it is not clear that there would be duplication of effort or inefficiencies. Accordingly, this factor is neutral.

5. *Identity of Parties*

Petitioner is not party to the California Action. Pet. 54; Prelim. Resp. 40. Patent Owner asserts, however, that “Petitioner is absolutely involved in the co-pending litigation,” as “established by (1) the extensive

¹⁴ We note that although this exhibit was filed as Exhibit 2005, the label on the exhibit identifies it as Exhibit 2006. The document filed as Exhibit 2006 lacks an exhibit label. We remind the parties of their duty to comply with the Board’s rules regarding proper exhibit labeling. 37 C.F.R. § 42.63.

communication between Petitioner and Defendants (Ex. 2002 at Pages 10-19.); (2) the claim of common interest privilege to withhold those communications from discovery (*id.*); (3) the pre-existing contractual relationship (supplier/customer) between Petitioner and Defendants; [and] (4) the identity of prior art references asserted in the Petition and those asserted by Defendants in their invalidity contentions.” Prelim. Resp. 40–41. Patent Owner also asserts that “Defendants are a real party in interest to this proceeding,” and while “that showing is not necessary for this factor to weigh against institution, it ought to be viewed as sufficient to establish that the parties are closely related such that this factor should weigh against institution.” *Id.* at 42.

There is no dispute that Petitioner is *not* a party to the California Action. Pet. 54; Prelim. Resp. 40. However, even where the petitioner is not a defendant in the parallel litigation, the Board may exercise its authority to deny institution to avoid duplicative efforts. *See Fintiv*, Paper 11 at 14. Here, we need not decide whether Petitioner and the defendants in the California Action are coordinating with respect to the litigation and/or this Petition because, even assuming such coordination, as discussed above we are unable to ascertain the extent of overlap and thus duplication of efforts between this proceeding and the California Action. We note, however, that on this record, the potential for duplication of efforts appears to be low, given that no trial date has been set in the California Action and that to date, investment in the litigation has not been substantial. Accordingly, this factor weighs against discretionary denial or is at most neutral.

6. *Other Circumstances, Including the Merits*

The parties dispute whether the merits favor institution or discretionary denial. Pet. 55; Prelim. Resp. 42–43. We find that Petitioner’s obviousness challenges meet the standard for institution. On balance, this factor is neutral.

7. *Holistic Assessment of Factors*

In view of the *Fintiv* factors as presented in this case, and taking “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review” (*Fintiv*, Paper 11 at 6), we decline to exercise our discretion to deny *inter partes* review.

B. *Level of Ordinary Skill in the Art*

We consider the grounds of unpatentability in view of the understanding of a person of ordinary skill in the art as of the effective filing date of the challenged claims. Petitioner contends that one of ordinary skill in the art

would typically have either:

- (1) a bachelor’s degree in mechanical engineering, chemical engineering, petroleum engineering, or an equivalent field; and some academic or industry experience working with, designing, or studying methods of extracting solute from a source material or similar devices; or
- (2) at least four years of industry experience working with, designing, or studying methods of extracting solute from a source material or similar devices.

Pet. 11 (citing Ex. 1002 ¶ 13). For purposes of the Preliminary Response, “Patent Owner does not dispute Petitioner’s definition.” Prelim. Resp. 9.

Because Petitioner’s proposed level of ordinary skill in the art is undisputed on this record and is consistent with the cited prior art, we adopt it for purposes of this Decision.

C. Claim Construction

In an *inter partes* review, we interpret a 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, we construe the claim “in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.*

Petitioner asserts that “the claim terms should be construed according to their ordinary and customary meaning,” but also notes that certain terms “warrant clarification.” Pet. 12. Patent Owner “requests that the Board adopt the ordinary and customary meaning of the claim terms as understood by one of ordinary skill in the art.” Prelim. Resp. 9. Patent Owner does not address Petitioner’s “clarifications” or offer any other proposed constructions.

For purposes of this Decision, we provide preliminary constructions for the terms “canister,” “extract container,” and “solvent collection container”/“solvent source container.” At this stage we need not construe the additional term Petitioner addresses (i.e., “boiling point”), or any other term. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Any final written decision entered in this case may include final claim constructions that differ from the preliminary understanding of the claims set

forth below, or from any discussion of claim scope provided in our analysis below. Any final claim constructions will be based on the full trial record.

1. *“canister”*

Petitioner contends that the claimed “canister” “serves as a repository of a source material,” and “[w]ithin the canister, the source material is exposed to a solvent to create an extract mixture.” Pet. 12 (citing Ex. 1001, 2:16–20). We adopt this understanding of the term “canister,” because it is supported by the cited portion of the Specification.

2. *“extract container”*

Petitioner contends that the claimed “extract container” “serve[s] as a repository for the extract mixture created in the ‘canister’, wherein the extract container is configured to evaporate the solvent to separate the solvent from the extract solution.” Pet. 12–13 (citing Ex. 1001, 2:20–25). We adopt this understanding of the term “extract container,” because it is supported by the cited portion of the Specification.

3. *“solvent collection container”/“solvent source container”*

Petitioner contends that the claimed “solvent collection container” and “solvent source container” “serve as a repository for post-process solvent separated from the extract solution in the ‘extract container(s).’” Pet. 13 (citing Ex. 1001, 2:3–7). We adopt this understanding of the terms “solvent collection container” and “solvent source container” because it too is supported by the cited portion of the Specification.

D. *Alleged Obviousness*

Petitioner asserts six obviousness grounds. Pet. 6. As will be discussed below, on this record Petitioner has established a reasonable

likelihood that at least one of the challenged claims would have been obvious over the asserted prior art combinations.

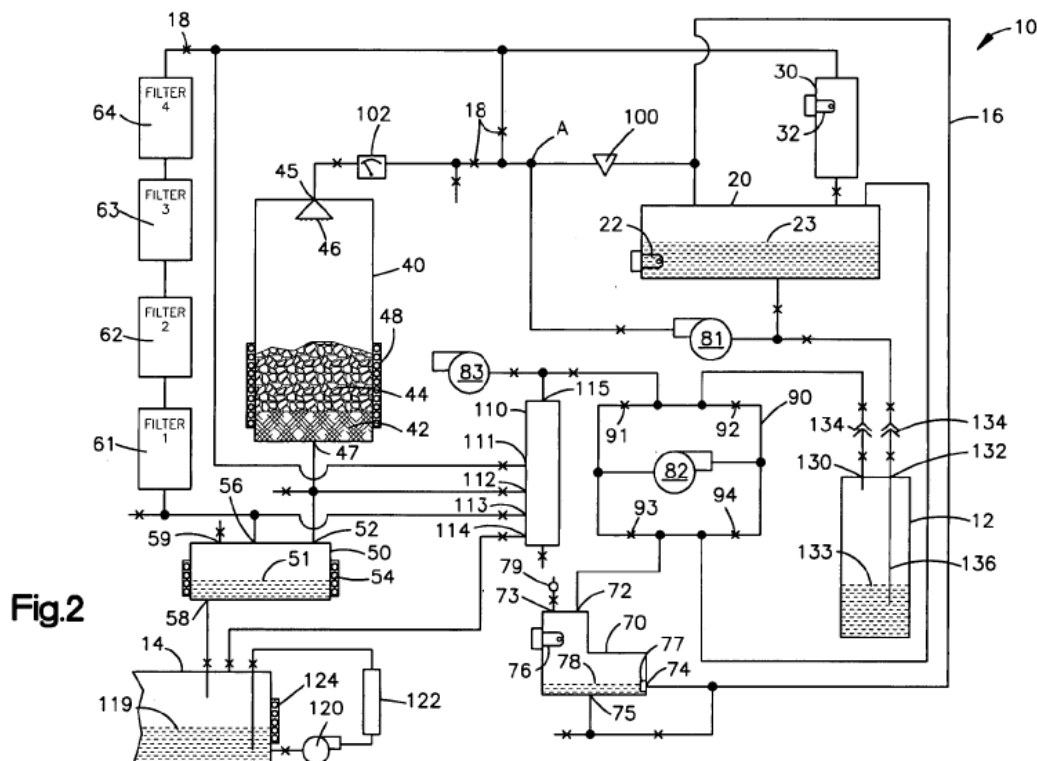
1. *Legal Standards*

A claim is unpatentable as obvious “if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.” 35 U.S.C. § 103; *see also KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved based on underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) any objective indicia of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). An obviousness determination requires a reason to combine “accompanied by a reasonable expectation of achieving what is claimed in the patent-at-issue.” *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367 (Fed. Cir. 2016).

2. *Overview of Asserted Prior Art References*

a) *Britt (Ex. 1004)*

Britt, titled “Oil Extraction Method,” “relates to methods for extracting oils from oil bearing materials.” Ex. 1004, code (54), ¶ 2. We reproduce Britt’s Figure 2 below.



Britt's Figure 2, reproduced above, is a schematic diagram of an oil extraction system, which can be used to extract oil from plant materials.

Id. ¶¶ 5–6, 10.

During system operation, plant materials such as rose petals 44 are placed in extraction tank 40. *Id.* ¶¶ 13, 23. Solvent 23 is pumped from reservoir 20 through the rose petals to extract rose oil and yield a mixture of solvent and oil. *Id.* ¶¶ 12, 13. Distillation tank 50 receives the solvent/oil mixture from extraction tank 40. *Id.* ¶ 14. The mixture is heated “to a temperature that is high enough to evaporate the solvent, but low enough to avoid decomposing or evaporating the oil.” *Id.* ¶¶ 28, 14. Evaporated solvent vapor flows out of distillation tank 50, leaving the oil in distillation tank 50. *Id.* ¶¶ 15, 28. The solvent continues through filter tanks 61–64 to remove particles, water, and acid, and then flows through chiller 30 back to

the reservoir 20. *Id.* ¶¶ 15, 28. Chiller 30 has a cooling coil 22 for condensing solvent vapor into a liquid and maintaining the solvent in the liquid phase. *Id.* ¶ 12.

a) *Hebert (Ex. 1009)*

Hebert, titled “Extracting Oil from Oil Bearing Plant Parts,” “relates to a method for extracting oil from oil-bearing plant parts.” Ex. 1009, code (54), 1:16–18. Hebert’s Figure 1 is reproduced below.

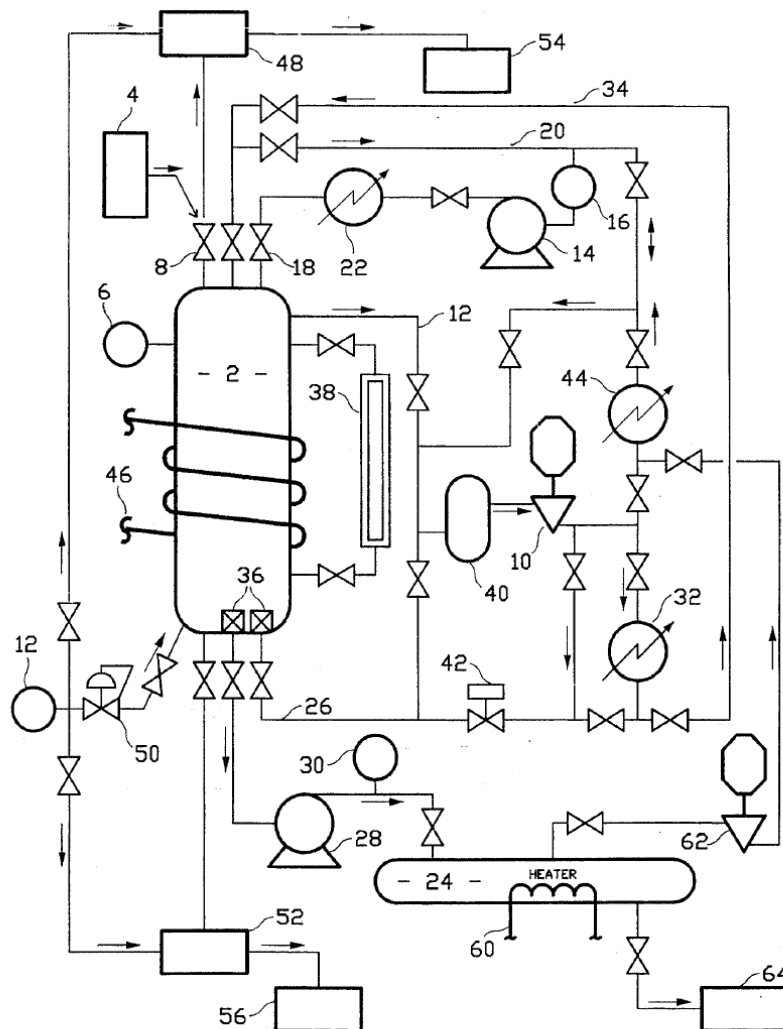


FIGURE 1

Hebert Figure 1, reproduced above, is a schematic illustration of a system for extracting oil from an oil-bearing plant material. *Id.* at 3:49–53. The system includes reactor vessel 2, which is “designed to receive an oil bearing plant material, for example, rice bran.” *Id.* at 3:62–67. Liquid solvent, such as propane, is pumped by pump 14 from tank 16 into reactor 2. *Id.* at 4:25–28. The liquid solvent contacts the rice bran for a time sufficient to dissolve a substantial portion of the rice’s oil. *Id.* at 2:62–64. The liquid solvent and oil combination is transferred from reactor 2 to separator 24. *Id.* at 4:59–62. In separator 24, the solvent and oil combination is heated to vaporize the solvent, and the solvent vapor is drawn from separator 24 by compressor 62. *Id.* at 7:34–38. The solvent vapor is then liquified by condenser 44 and sent to storage tank 16. *Id.* at 7:38–39.

b) Buese (Ex. 1005)

Buese, titled “Continuous Extractor, Concentrator and Dryer,” relates “to a continuous immersion extraction system.” Ex. 1005, code (54), 2:18–19. Buese describes a unit that allows “the recycling of the extraction solvent, and the drying of the extracted plant material while all are fully contained within the unit.” *Id.* at 1:35–40. “The unit employs a plurality of extraction chambers such that one extraction chamber is removed and replaced without halting the extraction process in other extraction chambers.” *Id.* at 1:41–44. Buese describes the use of connectors, such as quick release connectors, for its system. *Id.* at 4:48–51.

Buese explains that “[t]he temperature at which the solvent is introduced into the extraction chambers can be controlled by employing a heater, chiller, or other heat exchanger in the solvent reservoir or the

conduits situated prior to flow into the extraction chambers.” *Id.* at 5:10–14. Buese discloses that butane can be used as a solvent. *Id.* at 7:7–65.

c) Liebert (Ex. 1007)

Liebert, titled “High and Low Temperature Refrigeration Systems with Common Defrosting Means,” relates to a refrigeration system. Ex. 1007, 1:3–13. Liebert teaches a coolant “closed loop system” with an “expansion valve.” *Id.* at 4:9–10, 5:36–39.

d) Main (Ex. 1006)

Main, titled “Quick Connect Self-Sealing Coupling,” describes a quick connect coupling sleeve that advantageously enables quick coupling or uncoupling by rotating the sleeve a fractional turn relative to another part. Ex. 1006, 1:28–33, 3:15–22. The coupling is self-sealing, i.e., “the moving valve parts are effectively sealed against leakage of the operating fluid.” *Id.* at 1:5–9.

e) Jones (Ex. 1008)

Jones, titled “Hose Coupling Unit for Refrigerant System,” is directed to “an improved coupling unit for manually connecting a flexible hose to a process fitting on a refrigeration or air conditioning system.” Ex. 1008, 1:1–2, 1:46–50. The coupling unit is a “quick connect and disconnect coupler for locking the unit to the process fitting,” which “assures that the valve within the process fitting remains in its closed position until after the coupling unit is connected to the fitting.” *Id.* at 1:51–55. The coupling unit “assures that no refrigerant will escape through the process fitting during connecting and disconnecting the coupling unit.” *Id.* at 1:58–60.

3. *Analysis*

In its six obviousness grounds, Petitioner, supported by Mr. Chess, asserts that the cited prior art combinations teach or suggest each limitation of the challenged claims, and that a person of ordinary skill in the art would have had a reason to combine the cited prior art to reach the claimed subject matter. Pet. 14–51; Ex. 1002 ¶¶ 72–96. At this stage of the proceeding, Patent Owner does not argue that the cited prior art combinations fail to teach or suggest each limitation of the challenged claims.¹⁵ Rather, Patent Owner focuses its arguments on the assertion that Petitioner’s proffered “motivations to combine . . . are generic, unsupported by facts, and legally insufficient.” Prelim. Resp. 16.

We have considered the arguments and evidence of record and find that Petitioner has demonstrated a reasonable likelihood of prevailing in showing that at least one of the challenged claims would have been obvious over the asserted combinations of prior art. Pet. 14–51; Ex. 1002 ¶¶ 72–96. We discuss each of Petitioner’s grounds, then turn to Patent Owner’s arguments.

¹⁵ To the extent Patent Owner suggests that Hebert does not disclose the claim term “for a predetermined period of time” (*see* Prelim. Resp. 21, stating “. . . assuming Hebert even discloses that step”), on this record, we disagree. Petitioner sufficiently shows for purposes of institution that Hebert discloses “exposing the source material to the solvent for a predetermined period of time” by pointing to Hebert’s teaching that liquid solvent dissolves rice oil from the rice bran “at a predetermined rate and time.” Ex. 1009, 4:40–45; Pet. 16.

a) Ground 1: Alleged Obviousness Over Britt and Hebert

For Ground 1, Petitioner asserts that independent claim 14 and dependent claim 15 are unpatentable as obvious over Britt and Hebert. Pet. 14–18. With respect to claim 14, Petitioner asserts that Britt discloses an oil extraction method that teaches all features of the claim, except it “does not explicitly describe exposing the source material to the solvent *for a predetermined period of time* to create an extract mixture.” Pet. 14; *see also id.* at 16–18 (claim chart); Ex. 1004, Abstr., ¶¶ 2, 12–14, 28, 33. Petitioner asserts that a person of ordinary skill in the art would have looked to Hebert, which also discloses an oil extraction method and thus informs possible improvements or alternative approaches to perform the same functions within the same general structure, for its teaching of exposing the source material to the solvent for a predetermined period of time. Pet. 14–15.

After considering the arguments and evidence of record (including Patent Owner’s arguments discussed below in Section II.D.3.g), we determine that for purposes of institution, Petitioner sufficiently shows that Britt discloses an oil extraction method that teaches nearly all features of claims 14 and 15, and that Hebert teaches to dissolve rice oil from the rice bran “at a predetermined rate and time.” Pet. 16–18; Ex. 1009, 4:40–45. For purposes of institution, Petitioner also sufficiently shows that a person of ordinary skill in the art would have had a reason to combine these teachings with a reasonable expectation of success. Britt teaches flowing solvent through the source material to extract oil from the material, and Hebert more specifically teaches doing so for “a predetermined rate and time,” namely a time sufficient to dissolve the oil from the material. Ex. 1002 ¶ 13;

Ex. 1009, 2:62–64, 4:40–45. Accordingly, on this record, Petitioner shows a reasonable likelihood of prevailing on Ground 1.

b) Ground 2: Alleged Obviousness Over Britt, Hebert, and Buese

For Ground 2, Petitioner asserts that claim 19 would have been obvious over Britt, Hebert, and Buese. Claim 19 depends from independent claim 14, and further recites that “the solvent is butane and the temperature below the boiling point of the solvent is a temperature below 30.8 degrees Fahrenheit.” Ex. 1001, 20:45–47.

After considering the arguments and evidence of record (including Patent Owner’s arguments discussed below in Section II.D.3.g), we determine that for purposes of institution, Petitioner sufficiently demonstrates that Buese, like Britt and Hebert, discloses a closed loop extraction system and methods, and that a person of ordinary skill in the art would have looked to Buese to inform possible improvements or alternative approaches to perform the same functions within the same general structure. Pet. 20. Buese teaches that the extraction solvent in such systems can be butane. Pet. 21; Ex. 1005, 7:63–65. Accordingly, on this record, Petitioner shows a reasonable likelihood of prevailing on Ground 2.

c) Ground 3: Alleged Obviousness Over Britt, Hebert, and Liebert

For Ground 3, Petitioner asserts that claim 16 would have been obvious over Britt, Hebert, and Liebert. Pet. 21. Claim 16 indirectly depends from independent claim 14, and recites, among other things, that the evaporated solvent is thermally engaged to a coolant, and at least a portion of the coolant is directed through a fluid-transmissive coolant loop that includes an expansion valve. Ex. 1001, 20:11–22.

After considering the arguments and evidence of record (including Patent Owner’s arguments discussed below in Section II.D.3.g), we determine that for purposes of institution, Petitioner sufficiently demonstrates that Britt’s extraction system includes a cooling system that circulates fluid through cooling coils. Pet. 22 (citing Ex. 1002 ¶ 81; Ex. 1004 ¶ 43). Petitioner also sufficiently demonstrates that in the state of the art at the time of filing of the ’532 patent, it was common for cooling systems like Britt’s to be closed-loop and include an expansion valve. Pet. 21–24 (citing, e.g., Ex. 1002 ¶¶ 81–83; Ex. 1007, 4:9–10, 5:36–39). Accordingly, on this record, Petitioner shows a reasonable likelihood of prevailing on Ground 3.

d) Ground 4: Alleged Obviousness Over Buese, Hebert, Britt, and Main

For Ground 4, Petitioner asserts that claims 1–8, 17, and 18 would have been obvious over Buese, Hebert, Britt, and Main. Pet. 25–41. For example, Petitioner asserts that Buese discloses most of the limitations of claim 1, but does not specifically teach “exposing the source material to the solvent *for a predetermined period of time.*” Pet. 25–26, 28. As discussed above in connection with Ground 1, Petitioner cites Hebert for this teaching. Additionally, although Buese already teaches recycling solvent by vaporizing it and storing it in a solvent reservoir that is in fluid communication with the extraction chamber as recited in claim limitations 1(g) and 1(h), Petitioner also sufficiently demonstrates for purposes of institution that Britt teaches this subject matter. *See, e.g.,* Ex. 1005, 3:26–29, Fig. 1; Pet. 30 (citing Ex. 1004 ¶¶ 28, 33, Figs. 1–10).

With respect to claim 7, which recites “sealing the solvent container” when it contains a predetermined quantity of the recycled solvent, Petitioner sufficiently demonstrates that although Buese does not explicitly disclose the sealing of the solvent container, it does disclose use of quick release connectors, which a person of ordinary skill in the art would have understood have “self-sealing” functionality. Pet. 26, 34–35 (citing, e.g., Ex. 1005, 4:48–51, 5:4–6; Ex. 1006, 1:28–33, 3:15–22; Ex. 1002 ¶ 86).

After considering the arguments and evidence of record (including Patent Owner’s arguments discussed below in Section II.D.3.g), we determine that for purposes of institution, Petitioner sufficiently demonstrates a reasonable likelihood of prevailing on Ground 4.

e) Ground 5: Alleged Obviousness Over Buese, Hebert, and Main

For Ground 5, Petitioner asserts that claims 9–12 are unpatentable as obvious over Buese, Hebert, and Main. Pet. 41–49. For example, with respect to independent claim 9, Petitioner asserts that Buese discloses each limitation of the claim, except limitations 9(c), 9(d), and 9(f). *Id.* at 43–45.

Limitations 9(c) and 9(d) relate to “removably and fluidly attaching the canister” to an extract container and solvent source container “via connecting the canister to the detachable canister interface.” Ex. 1001, 18:37–42. Petitioner asserts that although Buese does not explicitly disclose “removably and fluidly attaching the canister” (i.e., the “extraction chamber” in Buese), Buese does disclose both replacing the extraction chambers without halting the extraction process, and the use of quick release connectors. Pet. 43–44 (citing Ex. 1005, 1:41–44; 4:48–51, 5:4–6; Ex. 1006, 3:15–22); *see also id.* at 27 (equating Buese’s disclosure with claim terms).

Petitioner asserts that as shown in Main, quick connectors permit quick connection and disconnection and have self-sealing functionality. *Id.* at 25 (citing Ex. 1006, 1:28–33, 3:15–22), 26–27; Ex. 1002 ¶ 86.

On this record and for purposes of institution, we agree with Petitioner that a person of ordinary skill in the art would have appreciated “that removably and fluidly attaching the extraction chambers of Buese” to the separation chamber and receiver by using “a quick release interface [is] within the teachings of Buese based on the state of the art,” e.g., as taught in Main. Pet. 43–44; *see also* Ex. 1005, Fig. 2, 5:48–50, Fig. 1, 2:65–3:3 (teaching that the extraction chambers are fluidly attached to the receiver and separation chamber). Accordingly, for purposes of institution, Petitioner sufficiently establishes that Buese and Main collectively teach removably attaching the canister (i.e., Buese’s extraction chamber) to an extract container (i.e., Buese’s separation chamber) and solvent source container (i.e., Buese’s “receiver”) via connecting the canister to a detachable canister interface, e.g., by using self-sealing quick connectors.

As to limitation 9(f), which recites “exposing the source material to the solvent for a predetermined period of time . . .,” Petitioner again cites Hebert for this teaching, as discussed above for Ground 1. Pet. 45.

After considering the arguments and evidence of record (including Patent Owner’s arguments discussed below in Section II.D.3.g), we determine that for purposes of institution, Petitioner sufficiently demonstrates a reasonable likelihood of prevailing on Ground 5.

f) Ground 6: Alleged Obviousness Over Buese, Hebert, Main, and Jones

For Ground 6, Petitioner asserts that claim 13 is unpatentable as obvious over Buese, Hebert, Main, and Jones. Claim 13 depends indirectly from independent claim 9, and relates to a detachable canister interface comprising an upper canister attachment having an over-center securing lever configured to lock the upper canister attachment device in a substantially fixed position over the upper opening of the associated canister.¹⁶ *See* Ex. 1001, 19:24–28.

Petitioner relies on its arguments from Ground 5, which allege that claims 9 and 12 are unpatentable as obvious over Buese, Hebert, and Main, and adds Jones to reach the additional limitations recited in claim 13. *See, e.g.,* Pet. 52. In particular, Petitioner argues that Buese and Main disclose the use of quick connectors, and Jones more particularly shows that quick connectors with a manually actuated lever were able to lock a unit and keep it in a closed position. Pet. 51 (citing Ex. 1002 ¶ 94; Ex. 1005, 4:48–51; Ex. 1006, 1:28–33, 3:15–22; Ex. 1008, 1:51–55, 2:10–12).

On this record, Petitioner adequately shows for purposes of institution that a person of ordinary skill in the art would have had a reason to use Jones’s over-center securing lever, given its benefits such as assuring an

¹⁶ Although claim 13 recites “an over-center securing level,” we understand this phrase to include a typographical error, where “level” should be “lever.” This understanding is supported by the Specification of the ’532 patent, which discloses “an over-center securing lever.” *See* Ex. 1001, 6:30–36, Fig. 2; *see also* *Fitbit, Inc. v. Valencell, Inc.*, 964 F.3d 1112, 1119–20 (Fed. Cir. 2020) (holding that the Board erred in not correcting a “conspicuous” and undisputed error). Should either party disagree with this understanding of claim 13, they should timely address the issue during trial.

interlocking connection and keeping the valve in the process fitting closed until after the coupling unit is connected. Pet. 52–53 (citing Ex. 1008, 1:51–55, 2:10–12, 4:18–22, 4:67–5:2).

After considering the arguments and evidence of record (including Patent Owner’s arguments discussed below in Section II.D.3.g), we determine that for purposes of institution, Petitioner sufficiently demonstrates a reasonable likelihood of prevailing on Ground 6.

g) Patent Owner’s Arguments

We turn to Patent Owner’s arguments regarding Petitioner’s proffered obviousness combinations. Prelim. Resp. 11–25.

First, Patent Owner argues that all six of Petitioner’s unpatentability grounds “lack sufficient detail and clarity.” *Id.* at 12. Patent Owner contends, for example, that Petitioner’s claim charts “provide no more than a fragment of text from a prior art reference with no context or explanation of how the disclosure aligns with the claim language.” *Id.* On this record, we find Patent Owner’s argument unavailing. Petitioner’s arguments are sufficiently detailed and clear to enable us to understand the arguments and render this Decision on institution.

Second, Patent Owner argues that Petitioner equates terminology in the challenged claims with components of prior art systems, but does not adequately support its assertions, e.g., with support from its declarant Mr. Chess. *Id.* at 14–15. This argument is unavailing on this record. As Patent Owner recognizes, “the [prior art] reference need not satisfy an *ipsissimis verbis* test,” i.e., “[i]dentity of terminology is not required to teach a claim limitation.” *Id.* at 15 (citing *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009)). As discussed above (*see supra* Section II.C (Claim

Construction)), the Specification adequately supports Petitioner's contentions that within the claimed "canister," source material is exposed to a solvent to create an extract mixture; within the claimed "extract container," solvent is evaporated to separate the solvent from the extract solution; and within the claimed "solvent collection container," recycled solvent is stored for reuse. Although it would have been a simple matter to identify vessels in the asserted prior art references that perform the same functions even without confirmation from Mr. Chess, Mr. Chess's Declaration in fact equates the claimed vessels with the analogous vessels in the prior art references. *See, e.g.*, Ex. 1003 ¶ 74 (entry for claim limitation 14(c) correlates Britt's distillation tank 50 and the claimed "extract container"; entry for claim limitation 14(f) correlates Britt's reservoir 20 with the claimed "solvent collection container"). Accordingly, we disagree with Patent Owner that Petitioner's equating of limitations in the challenged claims with words in the prior art patents is circular, unsupported, or lacking support.

Third, Patent Owner argues that "[t]he motivations to combine in the body of the Petition are generic, unsupported by facts, and legally insufficient to establish a motivation to combine references." Prelim. Resp. 16. In particular, Patent Owner argues that Petitioner's assertion in Ground 1 that Britt and Hebert both "concern closed loop extraction systems and methods that use a recycled solvent" cannot establish a reason to combine because "asserting that a reference is broadly within the same field or directed to the same art is not sufficient" to establish a reason to combine. *Id.* at 16–17.

Patent Owner is correct that to establish a reason to combine, it is not sufficient to merely demonstrate that references are analogous art or are in the same field of endeavor. *See, e.g., Securus Techs., Inc. v. Global Tel*Link Corp.*, 701 F. App'x 971, 977 (Fed. Cir. 2017) (“a broad characterization of [prior art references] as both falling within the same alleged field . . . without more, is not enough for [a petitioner] to meet its burden of presenting a sufficient rationale to support an obviousness conclusion”). The arguments in the Petition and Chess Declaration, however, go beyond merely asserting that a person of ordinary skill in the art would have combined the references because they directed to the same subject matter.

For example, we understand the Petition to assert that in view of Hebert's teaching of allowing the solvent to dissolve oil from the material (e.g., rice bran) for a predetermined rate and time, a person of ordinary skill in the art would have had a reason to employ this approach with Britt's system to create an extract mixture having the solute in solution with the solvent. *See, e.g.,* Pet. 16–17 (citing Exhibit 1004 ¶ 13; Ex. 1009, 4:40–45; Ex. 1002 ¶ 74). As a person of ordinary skill in the art would understand—and Hebert expressly explains—this step would “allow[] the liquid solvent to contact the rice bran for a time sufficient to dissolve a substantial portion of the rice oil.” Ex. 1009, 2:62–64. Accordingly, we do not read the Petition as merely standing on the relatedness of the prior art references in articulating a reason to combine.

Patent Owner also argues that Petitioner improperly focuses on “‘possible’ improvements or alternative approaches, not on an actual motivation to combine.” Prelim. Resp. 18. On this record, we find that

Patent Owner reads the Petition too narrowly. We read the Petition as asserting that a person of ordinary skill in the art would have seen advantages to applying the techniques of the secondary references to improve the oil extraction systems of the primary references, which *KSR* teaches is a sufficient reason to combine teachings from more than one prior art reference. *See KSR*, 550 U.S. at 417 (“[A] court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.”); *see also Unwired Planet, LLC v. Google Inc.*, 841 F.3d 995, 1003–04 (Fed. Cir. 2016) (“[The prior art’s] teaching of the advantages of combining ordering techniques shows ‘there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.’”) (quoting *KSR*, 550 U.S. at 418).

Patent Owner next argues that in some cases Petitioner asserts that certain prior art showed “capabilities,” but “these generic statements of what one would be capable of cannot establish a motivation to combine.” Prelim. Resp. 19. Patent Owner is again correct that “obviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.” *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015). On this record, however, Patent Owner appears to misconstrue Petitioner’s arguments. We do not read the Petition as resting on what an artisan *could have* made. For example, with respect to Petitioner’s statement that “Main shows . . . that quick connectors had capabilities of quick connection and disconnection, specifically self-sealing capabilities,” we read the Petition as asserting that a person of ordinary skill in the art would have

had reason to use quick connectors because they allowed for quick connection and disconnection and self-sealing. *See* Pet. 26.

Patent Owner also asserts that the Petition’s claim charts are conclusory, including because the Petition does not explain “any problem or disadvantage with the unmodified systems of the prior that would suggest combining these systems with the teachings of other prior art.” Prelim. Resp. 20. The Federal Circuit, however, has held that “a challenger need not prove that there was a known problem with the prior art in order to demonstrate that there was a motivation to combine prior art references.” *Arctic Cat Inc. v. Polaris Indus., Inc.*, 795 F. App’x 827, 833 (Fed. Cir. 2019); *see also Unwired Planet, LLC*, 841 F.3d at 1002–03 (finding that patent challenger need not establish “a known problem with the prior art system in order to articulate the required rational underpinning for the proposed combination”).

Patent Owner further argues that “every Challenged Claim includes the step of ‘exposing the source material to the solvent for a predetermined period of time to create an extract mixture having the solute in solution with the solvent’ before communicating the extract mixture to an extract container.” Prelim. Resp. 21. Patent Owner argues that although Petitioner cites Hebert for this step,

Petitioner points to no rationale for why someone practicing the continuous extraction methods of Britt or Buese would see any benefit to modifying that method to introduce a step where the continuous flow is stopped to allow exposure to a liquid solvent “for a predetermined period of time,” assuming Hebert even discloses that step.

Id.

On this record, Patent Owner's argument is unavailing. It is not clear that the "continuous flow" of the Britt or Buese processes must be "stopped to allow exposure to a liquid solvent 'for a predetermined period of time.'" *Id.* The current record does not indicate that there is a minimum amount of time necessary to meet the claim limitation of "a predetermined period of time." Rather, the Specification broadly indicates that the "predetermined period of time" is selected to, e.g., "effectively extract[] essential oil" from the plant material and "substantially maximize the purity of extracted solvent." Ex. 1001, 3:28–32, 13:30–33. On this record there is no indication that the claimed "predetermined period of time" would require stopping the flow in a continuous extraction method. The parties are free to further explore this issue during trial.

Finally, Patent Owner argues that "most of the Chess Declaration is copied verbatim from the Petition itself," and "[b]y merely parroting the attorney argument container [sic] in the Petition, Mr. Chess has not provided factual support for the testimony provided therein." Prelim. Resp. 22, 23; *see also* Ex. 2001 (Patent Owner's annotated version of the Chess Declaration that highlights language copied directly from the Petition). Contrary to Patent Owner's suggestions, the Chess Declaration discloses "underlying facts or data on which the opinion is based" and identifies "objective evidence to explain the petitioner's arguments," e.g., by citing excerpts of the prior art references that teach or suggest particular claim limitations. Prelim. Resp. 24. Although there may be questionable value in having a declarant merely parrot information from a petition without providing additional analysis or support, we find that Petitioner's and Mr. Chess's contentions are sufficiently detailed and supported to warrant

institution. Patent Owner is free to explore the sufficiency of Mr. Chess's testimony during trial, including via cross examination.

h) Summary

After considering the arguments and evidence of record, we determine that Petitioner has shown a reasonable likelihood of establishing that at least one of the challenged claims is unpatentable as obvious based on the asserted grounds. Accordingly, we institute *inter partes* review of all challenged claims. *See SAS Institute Inc. v. Iancu*, 138 S. Ct. 1348, 1358 (2018); 37 C.F.R. § 42.108(a).

E. Notices

At this stage of the proceeding, the Board has not made a final determination regarding the patentability of any challenged claim. Thus, any conclusion reached in the foregoing analysis could change upon completion of the record.

The Board will deem forfeited any issue not raised in a timely response to the Petition, or as permitted in another manner during trial, even if asserted in the Preliminary Response or discussed in this Decision.

Nothing in this Decision authorizes Petitioner, in a manner not otherwise permitted by the Board's rules, to supplement the information pertaining to any ground advanced in the Petition.

III. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is instituted based on all grounds asserted in the Petition; and

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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 commencing on the entry date of this Decision.

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