

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NESPRESSO USA, INC.,
Petitioner,

v.

K-FEE SYSTEM GMBH,
Patent Owner.

Case IPR2024-00254
U.S. Patent No. 11,465,829

PATENT OWNER PRELIMINARY RESPONSE

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Exhibit	Description
Ex. 2001	EP 08171069 Application (filed Sept. 12, 2008)
Ex. 2002	U.S. Patent No. 9,545,121 (issued Jan. 17, 2017)
Ex. 2003	U.S. Patent No. 9,545,121 (issued Jan. 17, 2017), Response to June 6, 2016 Office Action (dated September 7, 2016)
Ex. 2004	WO 2008/148646A1 (issued Dec. 11, 2008) (“Yoakim I”)
Ex. 2005	U.S. Patent No. 10,800,600 (issued Oct. 13, 2020), File History (“’600 File History”)
Ex. 2006	WO 2008/148601A1 (issued Dec. 11, 2008) (“Yoakim ’601”)
Ex. 2007	Nestlé Nespresso SA, <i>The Nespresso History: From a Simple Idea To a Unique Brand Experience</i> (May 2016), https://nestle-nespresso.com/sites/site.prod.nestle-nespresso.com/files/Nespresso%20-%20History%20Factsheet(1).pdf
Ex. 2008	Nespresso, <i>Nespresso Pixie Instruction Manual</i> , https://www.nespresso.com/shared_res/manuals/pixie/2010/www_Pixie_Z2_NESPRESSO(EN_HE).pdf
Ex. 2009	United States Patent and Trademark Office, <i>CPC – Cooperative Patent Classification A 47J</i> , https://www.uspto.gov/web/patents/classification/cpc/html/cpc-A47J.html#A47J31/44
Ex. 2010	United States Patent and Trademark Office, <i>CPC – Cooperative Patent Classification A 23F</i> ,

Exhibit	Description
	https://www.uspto.gov/web/patents/classification/cpc/html/cpc-A23F.html#A23F5/26
Ex. 2011	<i>Nespresso USA, Inc. v. K-fee System GmbH</i> , IPR2023-00485, Transcript of Deposition of Michael J. Jobin (Nov. 28, 2023)
Ex. 2012	U.S. Patent Appl. Pub. No. 2009/0007792 (Pub. Date Jan. 8, 2009)
Ex. 2013	U.S. Patent Appl. Pub. No. 2008/0302252 (Pub. Date Dec. 11, 2008)
Ex. 2014	WO2008100597A1 (issued Aug. 21, 2008)
Ex. 2015	Bialetti, <i>Moka Express</i> – Bialetti, https://www.bialetti.com/it_en/moka-express.html
Ex. 2016	<i>Nespresso USA, Inc. v. K-fee System GmbH</i> , IPR2022-01574, Transcript of Deposition of Michael J. Jobin (June 22, 2023)
Ex. 2017	EP 08102147 Application (filed Feb. 29, 2008)
Ex. 2018	<i>Nespresso USA, Inc. v. K-fee System GmbH</i> , IPR2022-01574, Paper No. 28, Record of Oral Hearing (PTAB Jan 12, 2024)
Ex. 2019	Declaration of Ian B. Brooks in Support of the Patent Owner’s Preliminary Response under 37 C.F.R. § 42.107 (Mar. 20, 2024)

K-fee System GmbH (“K-fee” or “Patent Owner”) submits this Preliminary Response to the above-captioned Petition for *Inter Partes* Review of U.S. Patent No. 11,465,829 (Ex. 1001, “the ’829 Patent”) (“Petition” or “Pet.”).¹

I. Introduction

On its face, Nespresso USA, Inc.’s (“Nespresso” or “Petitioner”) submission fails to provide the Board with the basic evidence required to institute *inter partes* review. If the Board nonetheless institutes trial on the challenged claims, Patent Owner will address in its §42.120 Response the numerous substantive errors and shortcomings that underlie Petitioner’s arguments and its purported evidence. In this paper, however, Patent Owner focuses on several fundamental shortcomings of the Petition under §42.107: particularly, critical substantive deficiencies resulting in a failure to demonstrate, as to any of the challenged claims, a reasonable likelihood of success on any asserted ground of invalidity. Because of this clear threshold failure, the Petition should be denied and no *inter partes* review should be instituted under 35 U.S.C. § 314.²

¹ All emphases added, unless noted.

² The Parties are in litigation where Petitioner’s VertuoLine system meets the claim requirements. Nothing in this Response shall be regarded as a disclaimer of claim scope or as a concession that any of the cited references is prior art.

A. Background

K-fee sells beverage machines and capsules for use in them. K-fee's Verismo machine is recognizable to American consumers through K-fee's marketing/past sales through Starbucks®. In the late 2000's, partly due to securing machines against use with inferior coffee capsules, K-fee conceived various ideas to identify capsules.

Contrary to the Petition, there can be no dispute that Nespresso's Vertuo System takes from K-fee's innovative ideas. After K-fee filed its PCT application in 2011 describing the inventions of Marc Krüger, including improvements to beverage portion capsules, in 2014 Nespresso launched the Vertuo System that falls squarely within K-fee's patents' claims and is the subject of multiple patent disputes between the parties around the world. Having now benefited from K-fee's patented inventions, Nespresso seeks to avoid compensating K-fee for the benefits Nespresso reaped. In this proceeding, Petitioner conjures up a story to suggest wrongdoing on the part of K-fee. But that is a false narrative. K-fee's inventions predate the introduction of the Vertuo System, and as explained herein, would not have been obvious in view of Nespresso's grounds of unpatentability.

Petitioner failed to demonstrate a reasonable likelihood of prevailing as to any claim, and the Petition should be denied for at least the following reasons:

- The Petition fails to demonstrate a reasonable likelihood that a person having ordinary skill in the art ("POSITA") would have combined the

teachings of Yoakim with Jarisch and Rossi to arrive at the claimed invention. As an initial matter, the Petition fails to provide rationale or evidence for the combination of discrete and independent teachings of alternative embodiments within the various individual references. This alone justifies denying institution. *Abiomed, Inc. et al. v. Maquet Cardiovascular, LLC*, IPR2017-01204, Paper 9, at 8-11 (PTAB Oct. 23, 2017);

- The differences between Yoakim, Jarisch and Rossi are significant, and the modifications Petitioner proposes are unnecessary and complex. This too dooms Petitioner's grounds. *See, e.g., In re Ratti*, 46 C.C.P.A. 976, 981 (C.C.P.A. 1959) (rejecting prior art combination because the combination "would require a substantial reconstruction and redesign of the elements shown [in the prior art] as well as a change in the basic principles under which [the prior art] construction was designed to operate");
- The Petition fails to demonstrate a reasonable likelihood the art discloses or renders obvious a pump controlled to supply hot water into the portion capsule only upon detection of the identifier by the sensor/detector and a determination by the beverage machine that the portion capsule is suitable for use with the beverage machine, as

claimed in claims 1, 2, 12, and 13. This alone dooms Petitioner's grounds;

- The Petition fails to demonstrate a reasonable likelihood that Yoakim discloses or renders obvious an annular portion laterally extending outwardly from the base portion, as claimed in claims 3 and 12-19;
- The Petition fails to demonstrate a reasonable likelihood that Yoakim discloses or renders obvious a groove that is laterally offset from the chamfered mandrel, and the seal is at least partially seated in the groove, as claimed in claim 4; and
- The Petition fails to demonstrate a reasonable likelihood that Yoakim discloses or renders obvious the portion capsule is free of a filter inside of the cavity, as claimed in claims 9 and 18.

For these reasons, Petitioner's request for a trial should be denied.

B. Overview Of The '829 Patent

The '829 Patent claims are generally directed to a beverage system including a portion capsule and a beverage machine. The portion capsule produces a beverage and includes a base element having a cavity, in which a beverage raw material is provided and which is closed by a membrane fastened to the base element. Ex. 1001 at Abstract. The portion capsule is free of a filter inside the cavity (Claims 9, 18). The beverage machine comprises a "pump controlled to push water into the portion

capsule only upon a determination that the read optically detectable identifier agrees with a stored reference” (Claims 1, 2, 12, 13) and a groove that is laterally offset from the chamfered mandrel, and the seal is at least partially seated in the groove (Claim 4). The ’829 Patent has two independent claims (Claims 1, 12) and seventeen dependent claims (Claims 2-11, 13-19).

Prosecution of the ’829 Patent application was extensive. *See* Ex. 1002. Patent Owner submitted an Information Disclosure Statement on February 14, 2022 containing the Yoakim (Ex. 1004), Jarisch (Ex. 1005), and Jarisch 929 (Ex. 1006) references, Ex. 1002 at 24-58, and made substantial efforts to ensure the Examiner considered Petitioner’s IPR arguments. Patent Owner submitted a Supplemental Information Disclosure Statement on July 27, 2022, identifying the Rossi (Ex. 1041) and Castellani (Ex. 1009) references, as well as Nespresso’s Preliminary Invalidity Contentions dated July 6, 2022 against related U.S. Patent No. 11,254,491 in view of the Jarisch (Ex. 1005), Jarisch 929 (Ex. 1006), Rossi (Ex. 1041), and Yoakim (Ex. 1004) references. Ex. 1002 at 355-361.

Following the Supplemental IDS submission, the claims were allowed on October 11, 2022. Ex. 1002 at 529. Patent Owner thus made substantial effort to ensure that examination of the ’829 Patent considered the references Petitioner now presents to the Board, as if they were just recently discovered and not duly considered. In fact, in the Notice of Allowance dated August 12, 2022, the USPTO

examiner confirmed that although “[t]he closest prior art of record are Jarisch et al. (US 20130064937) and Schmed et al. (US 7,856,920),” “[t]he prior art of record references neither discloses, or suggests, in combination with the other limitations of independent claim 10, ... a chamfered mandrel that is configured to pierce the cover at the location that is offset from the central longitudinal axis; a seal that is configured to bear against a top side of the cover in a region between the peripheral region of the cover and the region of the cover that is pierced by the chamfered mandrel; and a pump controlled to supply hot water into the portion capsule only upon detection of the identifier by the sensor/detector and a determination by the beverage machine that the portion capsule is suitable for use with the beverage machine.” Ex. 1002 at 366-375.

The Petition seeks to undermine Patent Owner’s candor before the USPTO and the Examiner’s decision to issue the claims in view of the references now presented. Petitioner irresponsibly suggests that Patent Owner withheld from consideration institution decisions during substantive prosecution. Pet. at 14-17. This suggestion is absurd—the ’829 Patent granted on October 11, 2022, and the ’491 Patent institution decision was entered over *six months later on April 14, 2023*. Ex. 1001. Moreover, the IPR petitions for the ’430 and ’923 Patents were *not even filed until January 24, 2023*, and institution decisions were entered *eleven months later on September 13, 2023*. Upon receipt of all IPR petitions, inspections of the

files of the pending cases in the same family would reveal that Patent Owner made each one available to the Examiner. No relevant conclusion can be drawn in favor of Petitioner from the facts that occurred.

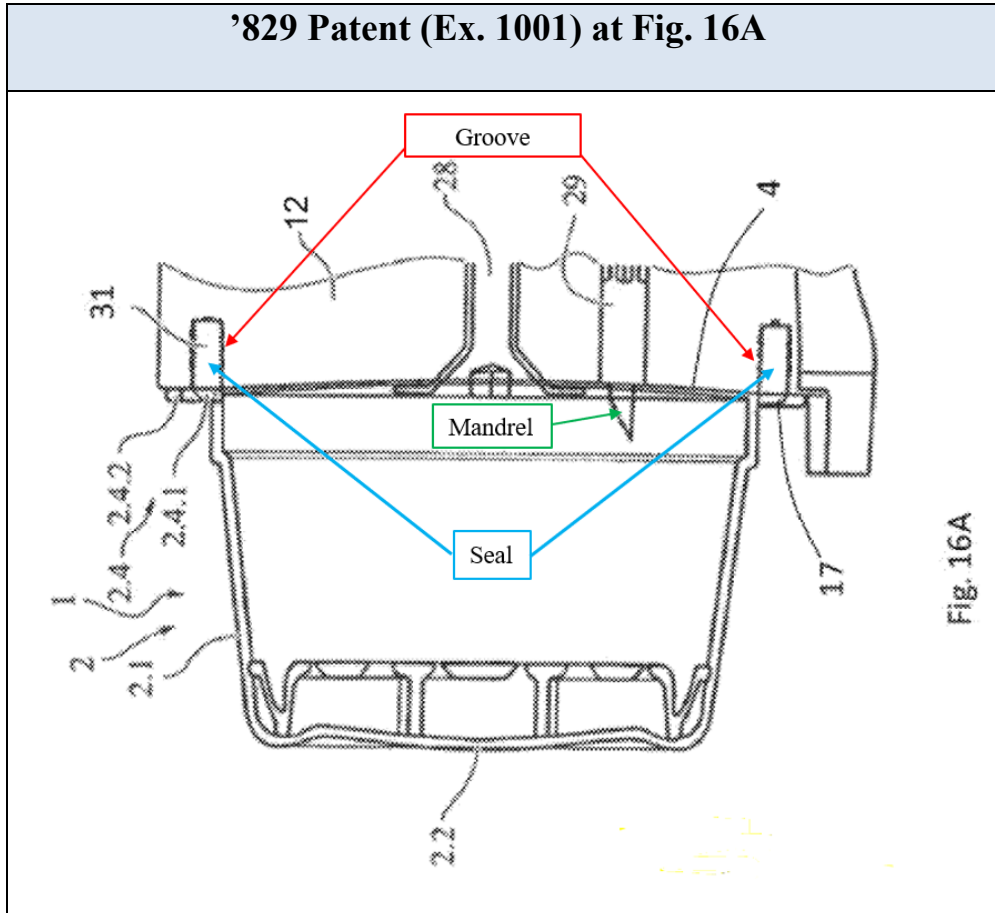
II. Claim Construction

For purposes of this Preliminary Response, claim construction is unnecessary to resolve the issues before the Board. Petitioner submits that, for this proceeding, “no claim terms require formal construction” and “the apparent interpretations that K-fee offered in its infringement contentions (Ex. 1049)” in *Nespresso USA, Inc. v. K-fee System GmbH*, No. 22-9295-GW-AGRx apply. Pet. at 18-21.

Notably, regarding “a groove that is laterally offset from the chamfered mandrel” (claim 4), Patent Owner’s infringement contentions (Ex. 1049 at 55-56) illustrating infringement of this limitation are consistent with the disclosure in the ’829 Patent. Ex. 1001 at cl. 4, Figs. 16A, 10:11-34, 12:1-56, 12:60-13:28 (identifying (2.4.1) as a sealing surface, (29) as a mandrel, (31) as a seal).

For exemplary purposes, Figure 16A in the ’829 Patent (annotated below) depicts the seal 31 (blue) at least partially seated in a groove (red), which is laterally offset from a chamfered mandrel (green). Given Petitioner’s position that no formal claim construction is needed, an interpretation consistent with the ’829 Patent’s disclosure (which is consistent with Patent Owner’s infringement contentions)

should apply here, and there is no dispute as to the meaning/construction of “a groove that is laterally offset from the chamfered mandrel.”



III. Petitioner Has Not Demonstrated A Reasonable Likelihood That At Least One Claim Of The '829 Patent Is Unpatentable

A. Petitioner's Motivations To Combine Fail (All Claims, 1-19)

Petitioner argues that a POSITA would have combined Yoakim with Jarisch and Rossi, thus rendering the inventions of the '829 Patent obvious. Pet. at 37-43.

Not so. Petitioner's arguments fail to make even a *prima facie* showing to combine the references.

1. Petitioner's Arguments To Combine Embodiments Within Yoakim Lack The Necessary Rationale

Petitioner seeks to combine multiple different embodiments within Yoakim to cover K-fee's claims. Pet. at 42-43, 45-51, 55-56, 59-66, 68-71. But there is an absence of any rationale to support such generic unexplained interchangeability (*see generally* Petition), and as a result the Petition should fail. *Abiomed*, IPR2017-01204, Paper 9 at 8-11. A close review of Yoakim reveals that the proposed combination is not supportable and is arrived at only through hindsight of K-fee's claims.

a. Yoakim Has A Long History Of Distinct Inventions That The Petition Fails To Address.

Yoakim reveals a complex ancestral lineage to nearly one dozen application filings spanning from June 2007 to May 2010. Indeed, on its face Yoakim identifies numerous priority and continuation-in-part applications, which add new material not found in prior applications. Ex. 1004 at 1. Yoakim aggregates (without interrelating) the various discrete embodiments from among those filings and groups them based upon, *inter alia*, the nature of the valve arrangement for brewing, the nature of whether the capsules are part of a set of different volume capsules, and whether the system employs a sensing device for selectively controlling the machine based on

the different volume of capsules in the set and the nature of the intended beverage. Thus, while Yoakim is a single reference, it lacks any teaching that would suggest combining the various discrete embodiments in the way Petitioner seeks.

Moreover, despite all these disparate teachings, nowhere has Petitioner explained *if* or *how* the different respective embodiments are taught as interchangeable with each other or otherwise provided sufficient rationale to combine the different teachings of those embodiments. The reality is there is no basis, in Yoakim or otherwise, for combining the different embodiments of Yoakim in the way Petitioner seeks.

It is black letter law that regardless of whether an obviousness argument “is based on combining disclosures from multiple references, combining multiple embodiments from a single reference, or selecting from large lists of elements in a single reference,” Petitioner **must** direct the Board to “a motivation to make the combination and a reasonable expectation that such a combination would be successful, otherwise a skilled artisan would not arrive at the claimed combination.” *In re Stepan Co.*, 868 F.3d 1342, 1346 n.1 (Fed. Cir. 2017); *Lumenis BE Ltd., v. BTL Healthcare Techs. A.S.*, IPR2021-01280, Paper 8 at 20 (PTAB Mar. 9, 2022) (“Given that Petitioner’s obviousness assertions rely on combining the teachings from multiple embodiments, Petitioner was **required** to provide **some** explanation of

how those teachings fit together to teach or suggest a method employing all of the steps recited in the claims.”).

Petitioner’s failure to even **mention** a motivation to combine the various embodiments of Yoakim is a fatal omission that cannot be cured. *See Amazon.com, Inc. v. Almondnet, Inc.*, IPR2022-01455, Paper 12 at 18 (PTAB Apr. 6, 2023); *Intel Corp. v. Tela Innovations, Inc.*, IPR2019-01521, Paper 65 at 25 (PTAB Mar. 9, 2021) (FWD finding claims not unpatentable where Petitioner failed to “explain why a POSITA would have combined the elements disclosed in the separate embodiments described in [the reference]”); *Hewlett Packard Enterprise Co. v. Intellectual Ventures II LLC*, IPR2022-00115, Paper 9 at 15 (PTAB Mar. 29, 2022); *Abiomed*, IPR2017-01204, Paper 9 at 11; *Google LLC v. AGIS Software Dev., LLC*, IPR2018-01086, Paper 10 at 19 (PTAB Dec. 4, 2018); *see also KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). The defect in the Petition to combine the various different embodiments of Yoakim is exacerbated by the fact that the various different embodiments are **not** intended to be combined.

Instead of showing why or how a POSITA would have combined the distinct alternative embodiments within Yoakim, Petitioner merely assumes their relatedness and interchangeability. *See, e.g.*, Pet. at 55-62 (citing Yoakim Figs. 4, 35, 37-38, 61), 71 (citing Yoakim “FIG4, FIGS23-24, FIGS34-35, FIGS37-38, FIGS54-55, FIGS61-62” in a string cite as alleged disclosure for claims 6/15”). “It is

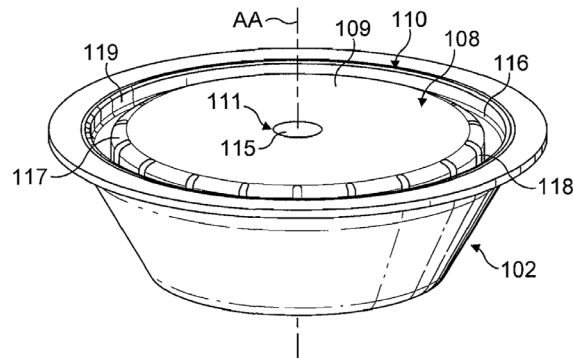
impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art.” *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 448 (Fed. Cir. 1986).

b. Yoakim’s Different Embodiments Are Not Interchangeable And Petitioner Does Not Address This Fact.

As mentioned above, Petitioner draws from several different embodiments of Yoakim and ignores that the different embodiments are each specific to particular requirements for multiple different systems. These differences are reflected across Yoakim’s embodiments, yet the Petition offers no reasoning for their combinations. The explanation for Petitioner’s failure is clear—a POSITA would *not* have combined the very different designs presented in each of the distinct embodiments disclosed in Yoakim.

Some significant differences in the Yoakim embodiments that the Petition fails to explain are found in the brewing device and capsules. *Compare* Ex. 1004 at Figs. 35, 38 *with id.* at Figs. 61, 62. For example, Petitioner has not addressed the teachings that Yoakim Figs. 35 and 38 employ a specific capsule (depicted in Figs. 28-31) with a peripheral collecting recess 116 surrounding the tubular inlet portion 113, and positioned inwardly and below the peripheral rim 104, to receive coffee

that exits the outlet openings 118. The capsule is loaded into a capsule holder of a machine able to support only a single size, and that is not configured to receive multiple different volume capsules. *See* Ex. 1004 at Figs. 33-35, [0062]-[0065]. Despite Petitioner's reliance on Yoakim's other embodiment depicted in Figs. 61 and 62, Petitioner has not addressed that the capsules of Figs. 61 and 62 do not explicitly show any such collecting recess, and the capsule holder is configured to receive capsules in a set of different volumes.



Ex. 1004 at Fig. 29.

Moreover, Petitioner has not addressed an even more compelling distinction in that the system of Fig. 35 (below) employs a specific valve assembly for that type of capsule (Figs. 28-31 type of capsule) which Yoakim depicts and describes as a water injection subassembly 129 shown in Fig. 36 (as having a peripheral collection recess 116) and described in paragraphs [0429] and [0434]-[0440].

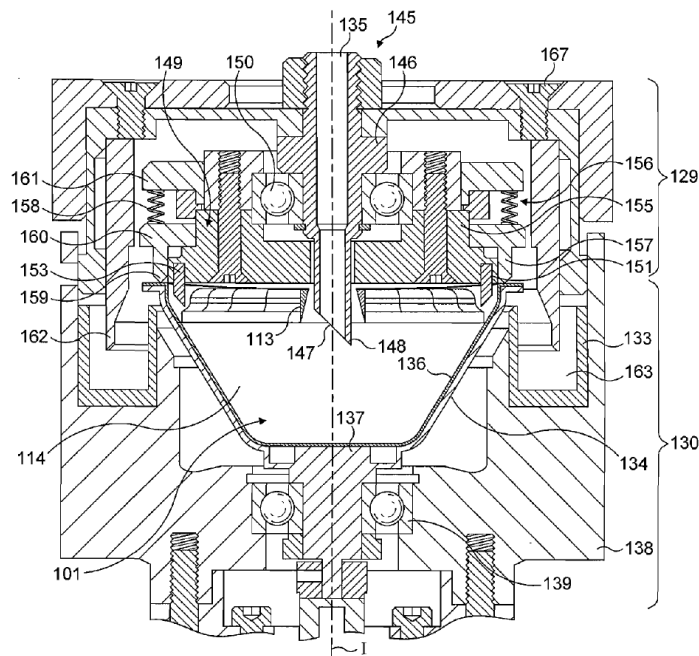


FIG. 35

Ex. 1004 at Fig. 35.

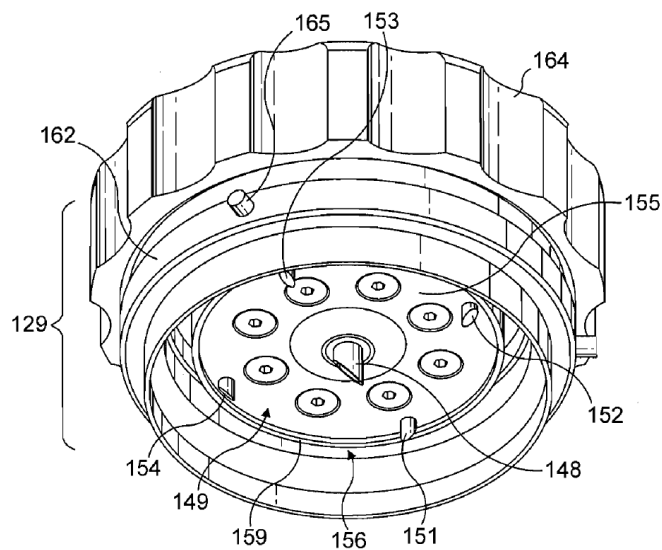


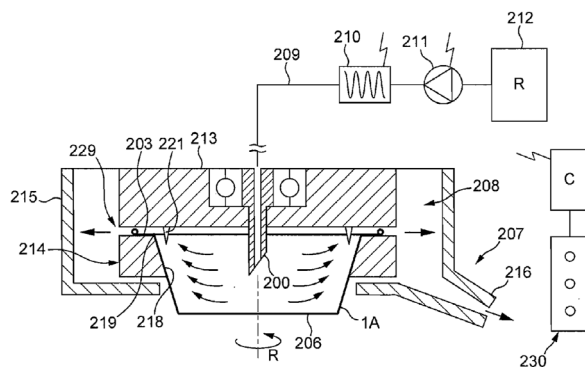
FIG. 36

Id. at Fig. 36. It is the V-shaped surface 159 (depicted in Figures 35 and 36) that Petitioner relies upon as teaching the claimed seal arrangement. *See* Pet. at 59-62.

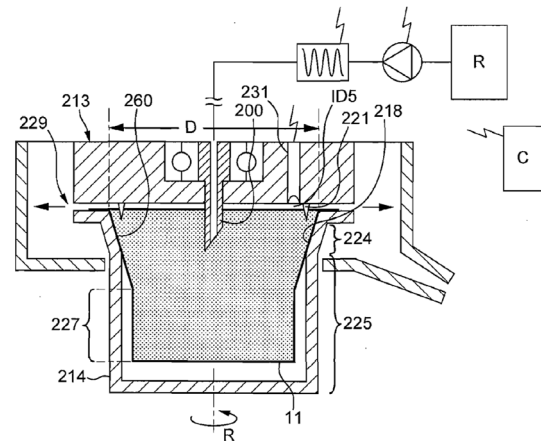
However, that seal, as used in the water injection subassembly of Fig. 36, dates back to February 29, 2008 where it is described in combination with the capsules depicted in Figs. 28-31. *See* Ex. 2017 (EP 08102147) at Figs. 5-14. The disc-shaped engaging wall 155 is fixed vertically in place during brewing with a bottom surface that is juxtaposed inwardly with the peripheral rim 104. This “inwardly” arrangement of the disc-shaped engaging wall 155 is necessary to allow the coffee to escape from above the collecting recess in order to apply pressure to the V-shaped surface 159. *See* Ex. 1004 at [0435]-[0436]. During brewing, the only movement of an element within the water injection subassembly is the raising of the V-shaped surface 159 for allowing coffee to escape. The V-shaped element 159, which is an integrated component of the Fig. 36 assembly, is designed to be lifted by the pressure of coffee that escapes from the annular recess (and Petitioner has not explained where there is any real estate to accommodate the sensing device 231 of Fig. 61 or how the sensing device would be positioned to avoid “unbalance.”).

In contrast, the system of Fig. 61 and 62 (below) (as with the system of Figs. 54 and 55 (below)) is configured to employ an alternative type of valve assembly. That valve requires that there be an interface assembly 213 that extends over the capsule flange. The interface itself forms a seal with the capsule during initial brewing. Because it is suspended from a spring axially above it, the entire interface assembly 213 is vertically translatable during brewing. In this manner, pressure

build-up from centrifugation during brewing results in the interface assembly 213 wholly raising to form a radial gap for brewed coffee to escape. This valve has its origin in an application by Petitioner's affiliate (and real party-in-interest ("RPI")) dating to or about December 9, 2008. *See* Exs. 2001 (EP 08171069), 2002 at Cover (30), Figs. 4-6 (citing EP 08171069 for priority).



Ex. 1004 at FIG. 54



Ex. 1004 at FIG. 62

In fact, the difference is of such a nature that Petitioner's affiliate and RPI distinguished this over its own Yoakim I to obtain U.S. Patent No. 9,545,121. *See* Exs. 2003 at 3-6 (distinguishing over differences in valve engagement); 2002 at Figs. 4-6 (illustrating similar structure to Yoakim's Figures 32-36 in Figs. 4-6); 2004 ("Yoakim I") at Figs. 7-19. Specifically, as shown from the excerpts below, in prosecuting the pending application that resulted in U.S. Patent No. 9,545,121, Petitioner's affiliate and RPI distinguished "Yoakim I" based, in part, on the valve configuration, contending it would not have been obvious to achieve the pending

claims because Yoakim I “does not even suggest a plate” structure as found in, e.g., Ex. 1004 Figures 54 and 62 above.

The secondary reference *Yoakim I* teaches an annular engaging portion 57 that comprises a pressing surface 59 applying a closing force on the peripheral rim 4 of the capsule to be able to restrict the flow of liquid. See *Yoakim I*, page 14, second full paragraph. Increased pressure of liquid on the internal surface of the pressing surface 59 can lift the pressing surface 59 to create a small passage for the liquid. See *Yoakim I*, page 17, first full paragraph. Nevertheless, *Yoakim I* does not even suggest a plate that is pressed to engage the pressing surface portion with the force-setting portion.

Therefore, *Baecchi* and *Yoakim I* alone or in combination fail to disclose or suggest applying a resilient load from a resilient member onto the plate to engage the pressing surface portion with the force-setting portion, the annular raising portion being rigid to resist compression by the pressing surface portion applying a closure force thereto; and forcing the valve to open by the pressing surface portion of the valve being pushed against the resilient member by the centrifuged liquid that is moving away from the annular raising portion for creating a flow restriction gap while the annular raising portion remaining of a relatively constant dimension to restrict the centrifuged liquid flowpath through the restriction gap as required by the present claims.

Ex. 2003 at 3; *see also id.* at 5.

The valve structure in Yoakim I (Ex. 2004) at Fig. 10 is similar to the valve structure at Figure 35 of Yoakim, while the structure of Yoakim’s Figs. 54, 55, 61 and 62 exhibit a similar plate structure to that found in the ’121 Patent’s (Ex. 2002) Figures 5-7. Thus, even the patentee of Yoakim would not contend that combining these embodiments would have been obvious and Petitioner should not be allowed to argue otherwise here.

But even looking past the prior disparagement of the combinations argued here, the Petition has not explained how or why the use of the complex spring arrangement of Yoakim Fig. 35 would or could have been modified for use in the system of Figs. 54, 55, 61, and 62 to accommodate a multi-capsule set with different capsule volumes. *See generally* Pet. In fact, the Petition is absolutely silent as to the obstacles that a POSITA would have faced in seeking to implement such a spring biased valve into a system intended for brewing multiple different capsule volumes. *Id.* Due to the different back pressures alone, which would have been experienced when brewing beverages from among the respective different volume capsules of the capsule set, it has not been explained how a spring having a single spring constant would have accommodated the different backpressures without ongoing spring adjustment or other significant modifications from capsule to capsule.

Moreover, an examination of Fig. 61 reveals that there is no need whatsoever for the seal of Fig. 35, because the interface assembly seals already at the peripheral flange using the capsule flange surface. Thus, a second seal would introduce an unnecessary redundancy, would add complexity to the system of Figs. 61 and 62, and would alter the principle of operation of the Figs. 61 and 62 interface assembly. *In re Schweickert*, 676 Fed. App'x 988, 995 (Fed. Cir. 2017) (reversing Board's obviousness determination where proposed modification is "unnecessary" to prior

art system that “already” performs function of proposed additional feature and “would do little more than add unwanted cost and complexity to the system”).

Petitioner is plucking one element of a complex subassembly 129 and relocating it to a different interface assembly that already performs the sealing function by the interface assembly engaging with the peripheral flange. This would require a substantial reconfiguration of Fig. 61, and Petitioner has not explained how such modification could be made. The design of the valve in Fig. 35 requires that the spring pushes against a fixed counter-force portion to keep the valve closed. It is seen that during brewing the engaging wall 155 and the perforators remain fixed in position relative to the capsule. Not only does Fig. 61 not have a fixed counter-force portion, it does not have a fixed surface to act as the counter-force portion since the entire interface assembly moves up and down to create the seal. But the Petition has pointed to no teaching and has offered no explanation as to the modifications needed to address the varying backpressures that the valve would encounter from the various different volume capsules in a capsule set.

Petitioner also hasn’t addressed that the different valve systems of Fig. 35 and 61 came about at different times in response to different needs and were intended to be used for different purposes (e.g., capsules having a peripheral collection recess 116 vs. capsules not having a collection recess and being part of a different volume set). The Petition ignores that the valve systems of Fig. 35 and

61 each have specific and unique sub-assemblies for deriving the valve functions. The Petition has not presented evidence or rationale to explain why a person of skill in the art would isolate the individual features like the spring and V-shaped member from the valve of Fig. 35 and somehow incorporate it into the valve embodiment of Fig. 61/62 that already has a more robust sealing arrangement in its interface assembly 213 that extends over and seals the capsule flange.

Additionally, the perforators in Fig. 35 also move up and down, and due to their taper provide variable outlet opening sizes as the interface assembly moves upward. This in turn would influence pressure of fluid as it exits. Petitioner has not addressed the ability to use the structure of Fig. 61 to provide the radial laminar flow, whereas in Fig. 35 the small opening and V-shaped surface would cause the fluid to spray outwardly in many directions. In view of at least the above, Petitioner has failed to offer any evidence or argument to support why and how the system of Fig. 35 and the system of Fig. 61 would have been combined. *See generally* Pet.

In summary, the Petition fails to present any explanation as to how or why a POSITA would have blended the divergent teachings of Yoakim's distinct embodiments.

2. Petitioner's Arguments To Combine Yoakim and Jarisch Are Unpersuasive

The Petition's reasons for combining Yoakim with Jarisch are flawed.

a. The Petition Lacks Motivation To Place A Code On The Bottom Of Yoakim's Flange.

Petitioner suggests that Jarisch's placing of the code on the bottom rim of the capsule would result in the reading of such code being more reliable. Pet. at 37-40. As an initial matter, Petitioner has not reconciled Jarisch's principle of operation with that of Yoakim's. For example, Petitioner has not addressed the apparent requirement in Jarisch that the code be read by a stationary sensor while the rim of the capsule is rotated relative to the sensor. *See* Ex. 1005 at [0037], Fig. 4. Nor has Petitioner addressed how or why a POSITA would alter the embodiment of Figs. 61 and 62 of Yoakim in which the sensing device spins and is mechanically coupled with the capsule, and there is no relative movement disclosed between a code and a sensor.

Additionally, Petitioner does not explain why such teachings in Jarisch would have motivated a POSITA to modify Yoakim to relocate the code to the flange bottom given that it has not been shown that Yoakim would have experienced the alleged problem when operating under the embodiments of Figs. 61 and 62. Indeed, there is no reason to believe that Yoakim's placement of a "barcode" on the top of the membrane would suffer from readability issues given Yoakim's device reads the "barcode" before brewing when a capsule would not be soiled by beverage residues. Ex. 1004 at [0525], [0526]. Moreover, as illustrated below the barcode

(ID4 below the yellow region) is inboard of the tapered outlet perforators 221 (annotated in red) so the centrifugal forces when the capsule is spinning would drive the fluid through the outlets and away (annotated in green) from the barcode—not towards it. *See id.* at Figs. 61, 62, [0507].

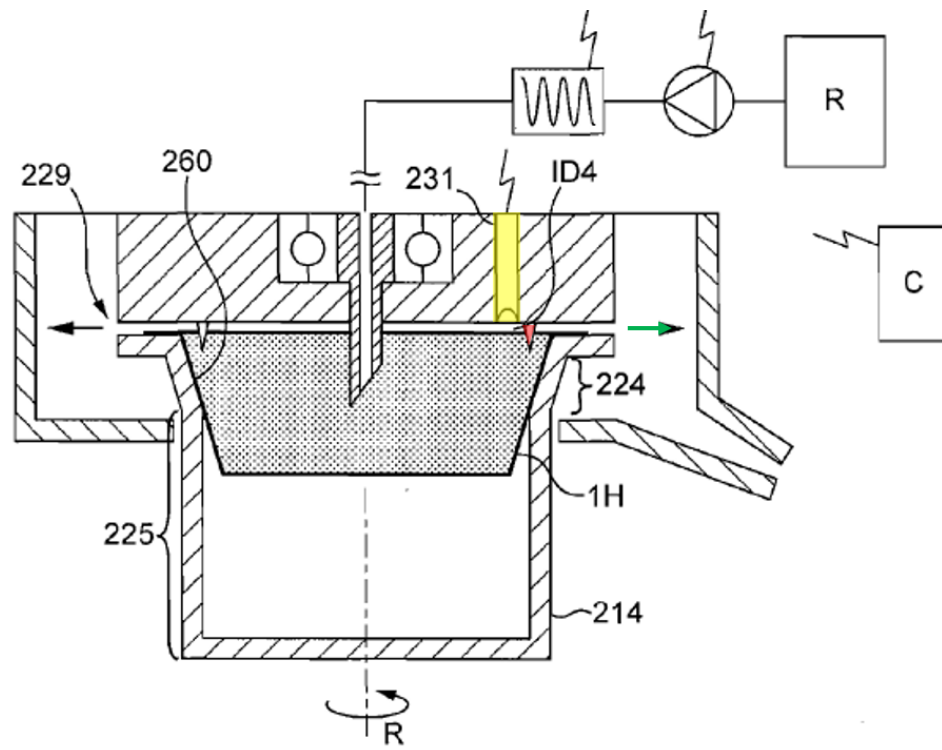


FIG. 61

Thus, the Petition has not shown that Yoakim's sensor 231 or barcode would be soiled and such a modification to Yoakim would be necessary or beneficial. Thus, Petitioner's argument to combine the references for this reason should be rejected. *See, e.g., Trend Micro, Inc. v. Open Text Inc.*, IPR2023-00692, Paper 8 at 24 (PTAB Nov. 6, 2023) (finding combination insufficient where no explanation given as to how teachings might be beneficial in the system modified).

The teachings of Yoakim and Jarisch are also contrary to the alleged combination due to the insufficient space on Yoakim's rim to accommodate the code of Jarisch. Petitioner's expert contends that "[a] person of ordinary skill in the art would have been motivated to use the placement of the optical code and reader from Jarisch in the Yoakim system." Ex. 1003 at ¶201. But Yoakim teaches an annular portion that extends only "about 2-5 mm." Ex. 1004 at [0414].

In contrast, Jarisch teaches placement of the code at a distance as much as 10 mm from the peripheral edge. Ex. 1005 at [0037] ("Preferably, the distance of the code from the peripheral edge is not more than 10 mm, more preferably not more than 8 mm."). Yoakim lacks such a large area on the annular portion. And the Petition lacks any evidence to reconcile Yoakim's teaching of an annular portion that extends about 2-5 mm with Jarisch's teaching of a large rim at least double the size of Yoakim's. The Petition thus lacks any basis to conclude that Yoakim's annular portion provides sufficient space. This is especially true when other features such as the toothed structure of Yoakim's Figure 23 are also added, the effect of which is to further diminish the 2-5mm margin by the teeth 750.

b. Petitioner's RPI Argued Against Such A Modification.

As noted by Petitioner, Yoakim and Jarisch have a common owner, Societe des Produits Nestle S.A. (formerly Nestec SA), an affiliate (and RPI) of Petitioner, and a common inventor, Alexandre Perentes. Pet. at 37. But, this association "is

merely the jumping-off point in reaching the determination of whether a claimed invention is obvious.” *Trend Micro*, IPR2023-00692, Paper 8 at 22. As explained above, other facts undermine the alleged combination. For example, Jarisch’s priority document was filed May 12, 2010, merely five days after Yoakim was filed on May 7, 2010. *Compare* Ex. 1005 at 1 *with* Ex. 1004 at 1. Yet, Jarisch makes no mention of Yoakim in the background or otherwise. Rather, Jarisch mentions Denisart (WO 2010/026053 (Ex. 1007)) as the system for which the capsule was intended. Ex. 1005 at [0034]. Amongst the swamp of at least 14 priority claims in Yoakim, there is not a priority claim to the Denisart applications. This suggests the inventors of those references and Petitioner’s affiliate (and RPI) did not themselves see relation between the two references.

Tellingly, during prosecution of the Jarisch (Ex. 1005) reference, a priority application to Yoakim (WO 2008/148601, “Yoakim ’601”) (Ex. 2006) was cited against Jarisch. In attempting to overcome the rejection, Petitioner’s affiliate (and RPI) disparaged the combinability of Yoakim ’601, stating that “the skilled artisan would not have combined these cited references [including Yoakim ’601] to arrive at a capsule comprising a code arranged on a bottom of the flange-like rim.” Ex. 2005 at 6. Yoakim ’601 includes the same images Petitioner relies on here to support the opposite conclusion, i.e., placing the code on the bottom of the flange. *See*, Ex. 2006 at Figs. 6-7, 23 (below).

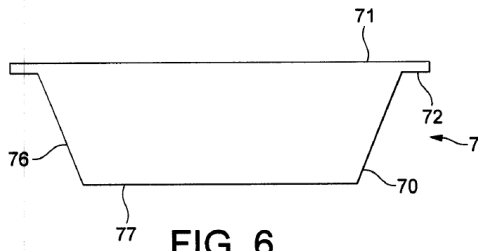


FIG. 6

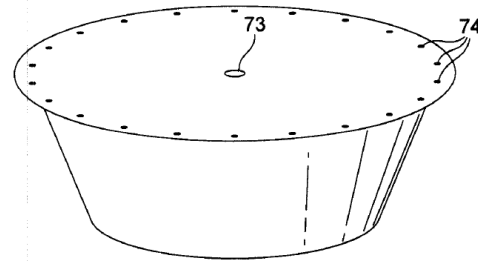


FIG. 7

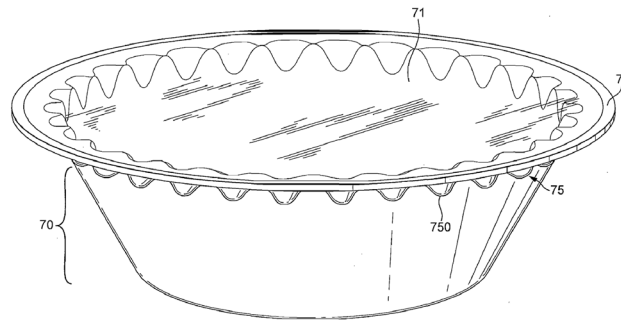


FIG. 23

See also Ex. 2005 at 8-9. In brief, because Yoakim (Ex. 1004) is a continuation-in-part of the Yoakim '601 reference, and Figure 23 of Yoakim '601 is identical to Figure 23 of Yoakim, Petitioner's RPI's prior arguments that Yoakim was not combinable should undermine Petitioner's arguments now to the contrary.

c. The Differences In The Capsule Holders Would Discourage Combining Yoakim And Jarisch.

The Petition fails also to address a critical “snug” fit structural requirement for the capsule/capsule holder relationship of Yoakim and completely absent from Jarisch. For example, Yoakim teaches that the capsule holder “*advantageously* has an interior surface or structure for engaging the capsule with the interior surface or structure configured to offer resistance to torque during rotation or for frictionally

engaging or receiving a complimentary surface or structure of the capsule to enable the driving means to rotate the capsule.” Ex. 1004 at [0024]; *see also id.* at [0094], [0205], [0216], [0507], [0512], [0517], Figs. 54, 55, 61, 62, 65. Yoakim explains that because of this complimentary surface, “the risk of producing vibrations during centrifugation is reduced because all the capsules of the set are snugly fitted in the device with limited possible relative movement between each capsule and the device during rotation, i.e., capsule holder.” *Id.* at [0479], *see also id.* at [0478], [0484], [0507]. The snug complementary fit is expressly taught to provide an important “safety function.” *Id.* at [0205]. Yoakim thus teaches, and depicts, the capsule side wall advantageously engaging with the capsule holder.

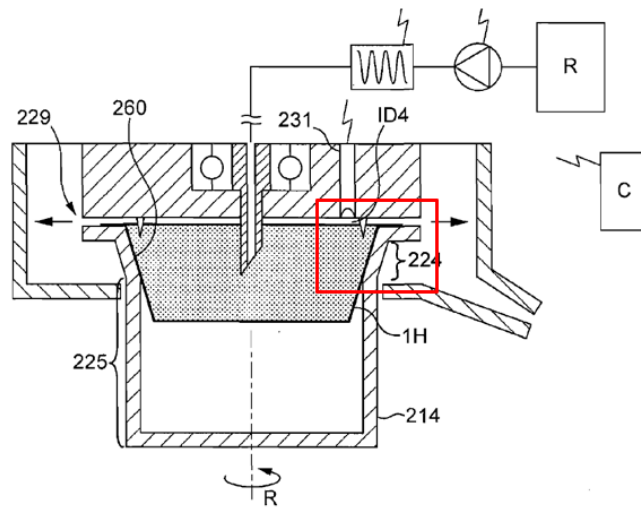
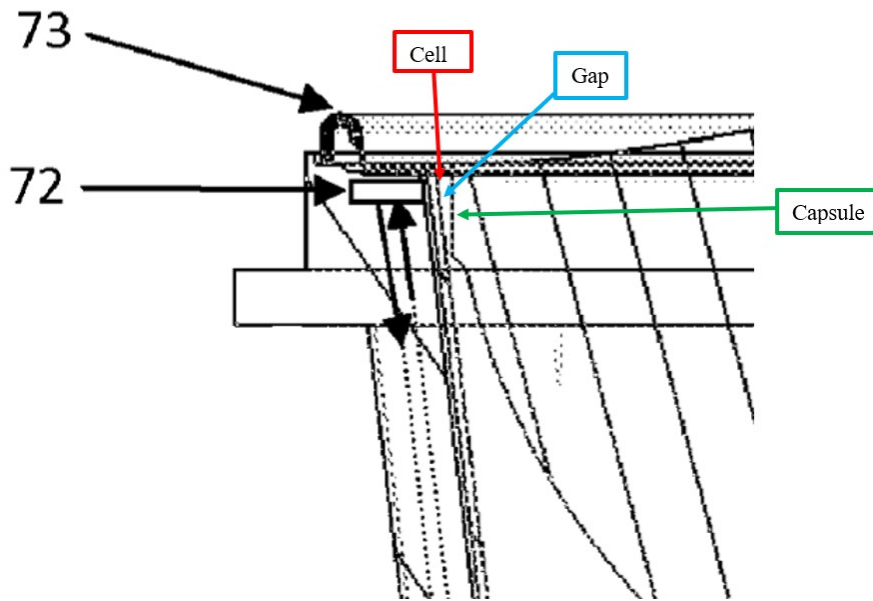


FIG. 61

In contrast, Jarisch’s capsule does not engage with the interior of cell 3. As can be seen in Figure 4 of Jarisch (zoomed in below), there is a deliberate gap between the capsule and the cell.



Petitioner's images obscure this gap with a blue line. As mentioned earlier, Jarisch teaches that "the capsule of the invention" is designed for use in the system of "WO2010/026053" (Denisart, Ex. 1007). Ex. 1005 at [0034]. In contrast, Yoakim describes various other systems with capsules designed for those systems and makes no mention of Denisart or its system at all. Ex. 1004 at [0002], Figs. 1-65. Denisart is silent as to any "unbalance" or vibration problems. The Petition simply does not address and even seeks to obscure (with a blue line) what the effect would be due to the presence of this gap, particularly as to the "unbalance" problem identified in paragraphs [0006] and [0507] of Yoakim. This further demonstrates the challenges that discourage incorporation of the teachings from Jarisch into Yoakim and the unlikelihood that a POSITA would be motivated to incorporate the teachings from Jarisch.

Yoakim specifically emphasizes the “snug” fit between the capsule and the capsule holder as a solution to unbalance and vibrations. Denisart is silent as to unbalance and vibrations. Jarisch pointed to Denisart instead of Yoakim even though they were filed days apart and had the same inventors and assignee. Yet the Petition has not reconciled that the capsule/capsule holder relationship of Jarisch would not have satisfied the snug fit critical requirement of Yoakim thus there is no explanation why a POSITA would have been motivated to use the capsule of Jarisch in the Yoakim system.

Given all the differences between Yoakim and Jarisch, it is hard to see why a POSITA would have modified Yoakim in view of Jarisch. Especially since the snug fit in Yoakim performs a safety function, a POSITA would have been discouraged from modifying Yoakim in view of the Jarisch embodiment, which has a gap and incompatible capsules. Indeed, Petitioner has not demonstrated how (or why) Yoakim and Jarisch could be combined without a substantial reconstruction and redesign of elements. “An obviousness determination requires finding that a person of ordinary skill in the art would have been motivated to combine or modify the teachings in the prior art ***and would have had a reasonable expectation of success in doing so.***” *Regents of University of California v. Board Institute, Inc.*, 903 F.3d 1286, 1291 (Fed. Cir. 2018). Here, Petitioner explains “[t]he Jarisch optical reader configuration is depicted below left in order to read the code on the capsule (yellow)

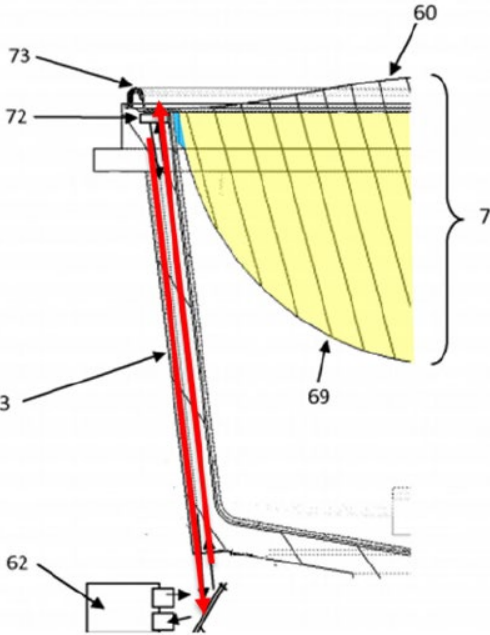
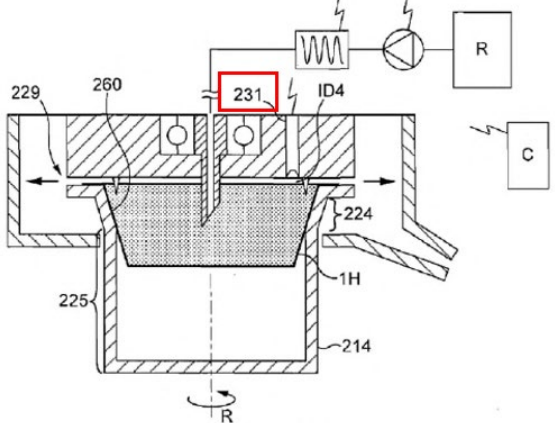
with the light path (red) shown from detector (62) to capsule rim (73).” Pet. at 39-40. However, the sensor/detector (231) enabled to identify and read a barcode as described in Yoakim is positioned to read a code on the *opposite* side of the capsule. Ex. 1004 at [0525], Figs. 61, 62.

Moreover, Jarisch tries to distinguish itself from prior art systems by asserting that it has a configuration to read a code sequentially as the code is rotated relative to the detector. Ex. 1005 at [0085], [0099], Figs. 2, 4. In contrast, Petitioner points to the embodiment of Figs. 61 & 62 of Yoakim in which a barcode (among other means) seemingly is read while it is in a fixed position relative to the sensing device 231. Given these diverging approaches, Petitioner has not explained how or why a POSITA would modify Yoakim with Jarisch which would require (among other things) a complete reconfiguration of the multiple combined embodiments of Yoakim.

Recall from Section III.A.2 that a POSITA would have been discouraged from combining Jarisch and Yoakim because of the potential “unbalance” described by Yoakim at paragraph [0507] that requires the snug fit. However, assuming *arguendo*, a POSITA could have moved, and would have moved the system shown in Jarisch into Figs. 61 and 62 in Yoakim, a POSITA would not have then sought to combine the annular V-shaped valve structure of Yoakim Figs. 35 & 36. This is because the resulting valve arrangement would resemble the valve system of Figs. 54 & 55, and

there would have been no further need for the annular V-shaped valve arrangement of Figs. 35 & 36 of Yoakim. Petitioner has not reconciled any of these teachings and its proposed combination is nothing more than hindsight analysis.

Table 1 – Comparison of Sensor Placement in Jarisch and Yoakim

Jarisch	Yoakim
 Pet. at 40 (citing Ex. 1005, Fig. 4).	 FIG. 61 Ex. 1004 at Fig. 61.

Not only would there be no motivation to make such a combination, a POSITA would not have had a reasonable expectation of success in moving the sensor to the bottom of Yoakim's brewing device. For example, unlike the cell 3 in Jarisch, which has a straight chamber made of transparent material between the code and the sensor, Yoakim's capsule holder 214 (above right) is comprised of lower portion 225 and first portion 224, which are connected by a bend (or flare) in the structure. Ex. 1004 at Fig. 61, [0512]. For the sensor/detector to pass light bidirectionally through this

flare, Yoakim would require extensive modifications, including mirroring or index-of-refraction matching within the flared structure. This would have been particularly challenging given the fact that the barcode of Yoakim would be read while the capsule holder is rotated from a capsule that is not required to be snugly fit. The use of Jarisch's transparent material would also have contributed to undesired refraction from anisotropy in the material, Fresnel effects, internal reflection, transmission loss along the wall of the holder, and other impairment to the light available for detection. Petitioner asserts Jarisch teaches use of a single external mirror to better position the detector; however, Petitioner ignores how complex an optics assembly needs to be for the accommodation of fully encapsulated optical elements within the wall structure of the capsule holder *and* to accommodate the flare of the Yoakim capsule holder necessary for assuring a snug fit with the accommodation for multiple-sized and multi-volume capsule set embodiments in Yoakim (i.e., Figs. 61 and 62), which require bending of a light beam.

In sum, the Petition fails to demonstrate that a POSITA would have had the requisite experience to utilize those teachings with a reasonable expectation of success. In fact, it would take extraordinary skill to achieve the combination for at least the reasons presented above. *See Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138 (Fed. Cir. 1985) ("The invention must be evaluated not through the eyes of the inventor, who may have been of exceptional skill, but as by one of 'ordinary

skill.”). Yoakim and Jarisch would lead a POSITA *away* from combining these two references.

Here, the complicated optics assembly required in a brewing environment required more than a conclusory assessment that the POSITA could have combined Jarisch and Yoakim. The analysis requires an explanation of how such combination would have been made within the skills of the POSITA. *See generally PersonalWeb Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 993-94 (Fed. Cir. 2017) (“But that reasoning seems to say no more than that a skilled artisan, once presented with the two references, would have understood that they *could be* combined. And that is not enough: it does not imply a motivation to pick out those two references and combine them to arrive at the claimed invention.”) (emphasis in original). But the Petition lacks any such rationale or supporting facts.

Because the combination of Jarisch and Yoakim would have required a significant redesign of the elements, including the unnecessary moving of the location of the sensor or detector (ostensibly directly into a flow path of the brewed coffee), insufficient space on Yoakim’s annular portion, and other significant differences, a POSITA would not have been motivated to combine the teachings of the two references. *See, e.g., In re Ratti*, 46 C.C.P.A. at 981. In addition, it cannot be forgotten that the Petition has not explained why or how the embodiments of Figs. 35 and 38 of Yoakim would have been modified to take into account the distinct

valve arrangement of Figs. 54, 55, 61, and 62. The embodiment of Figs. 54, 55, 61, and 62 have their own unique sealing arrangement that co-acted with the upper surface of the flange and had no need for the annular V-shaped element of Figs. 35 and 38. *Ex parte Saiki*, Appeal No. 2000-0373, Ser. No. 08/450,245 (Jan. 31, 2002); *Ex parte Salerno*, Appeal No. 2011-004947, Ser. No. 12/359,805 (Sept. 25, 2013).

Finally, Petitioner has not addressed the complicated reconfiguration of subassemblies and parts that would be necessary to make the three-way combination of Jarisch with the different embodiments of Yoakim. Petitioner's mantra that the teachings do not need to be bodily incorporated is not an unrestricted license to combine multiple embodiments within a reference and then combine those embodiments with two, three or more references just because they may be in a similar field. As explained above, even without bodily incorporation there must be a motivation to achieve the combination. On the present facts, Petitioner's arguments fail because they do not provide a rationale for why a POSITA would make the specific modifications alleged, there are so many pointers discouraging the combinations sought, and any such combinations would have required a POSITA to make significant reconfigurations of the different embodiments to introduce a feature that would be redundant to a feature already present.

3. Petitioner’s Arguments To Combine Yoakim and Jarisch With Rossi Are Unpersuasive

If the Petition’s shortcomings regarding the combination of Yoakim and Jarisch were not enough, in seeking to combine Yoakim and Jarisch with Rossi, the Petition argues that this would have been obvious for the benefit of providing safety and “ensuring that an appropriate [capsule] is used.” Pet. at 40. But Yoakim already expressly recognizes a need for a safety function, achieving that need specifically by the complementary shape of the capsule holder. Ex. 1004 at [0205] (“a safety function for ensuring that only capsules adapted to the system can be used and brewed successfully”). Petitioner thus again argues for another unnecessary and redundant feature to be added to Yoakim. Petitioner’s argument here too should be rejected. *See, e.g., Pro-Dex, Inc. v. Intelligent Automation Design LLC*, IPR2023-00218, Paper 8 at 24-26 (PTAB Jul. 19, 2023); *Trend Micro*, IPR2023-00692, Paper 8 at 24.

Petitioner also suggests that the features of Rossi would be necessary in Yoakim due to Yoakim’s teaching of pressure. Pet. at 40-42. But the Petition fails to identify any teaching in Yoakim of **high** pressures that are the concern in Rossi. Indeed, Yoakim contrasts his methods to “known methods using brewing water pressurized by a pump.” Ex. 1004 at [0124]; *see also id.* at [0009] (“the effect of centrifugal forces to brew coffee or other food substances **presents many**

advantages compared to normal type brewing methods using high pressure pumps.”), [0010].³

In contrast, Yoakim teaches “[t]he method of *the invention* comprises an operation wherein hot water is introduced into the capsule at *substantially no pressure*,” or alternatively, “using a *low pressure* pump.” *Id.* at [0132]-[0133], [0186] (“water is pushed by the effect of gravity”), [0209] (“water can be injected at low pressure”), [0413] (“Water can be introduced at relatively low pressure or a pressure close to gravity.”), [0428] (“a pressure of between 0 and 2 bar above atmospheric pressure”). So, in contrast to the high pressures taught in Rossi, it has not been indicated if or how Yoakim presents the same safety concerns—thus there would be no motivation to use Rossi’s teachings to improve safety as Petitioner suggests. Yoakim says any rapid expulsion of hot beverage is influenced by two key parameters: rotational speed and backpressure exerted on the centrifuged liquid by valving (Yoakim at [0521]). The Petition ignores this and fails to explain why a POSITA would not have sought to control these features instead of the pump.

³ For frame of reference and showing such contrast, in 2011 Petitioner offered a high pressure brewing machine, the Pixie espresso making machine, and marketed it as having 19 bar pressure. Ex. 2007 at 3; Ex. 2008 at 13 (describing specification “Pmax 19 bar”).

Yoakim's teachings relating to "espresso" are directed to the size of the beverage—not the method for making the beverage or any pump pressure involved. *See, e.g.*, Ex. 1004 at [0471], [0476], [0526] ("in particular coffees, of different volumes (e.g., risetto, espresso, lungo, americano, etc.)"). cursory mentions of "espresso" do not overcome the necessary conclusion from Yoakim as a whole—Yoakim is a low-pressure system and not the type that Rossi's teachings seek to improve. Yoakim thus teaches away from high-pressure systems in favor of centrifugal, low or no water delivery pressure, systems.

Furthermore, there should not be a safety problem in Yoakim because Yoakim already teaches using a complementary snug fit which is applicable to all embodiments. *See* Ex. 1004 at [0205], [0479], [0484], [0507]. Nevertheless, to the extent that there remains another safety problem, they would be due to the high pressure resulting from centrifugation at well beyond 10,000 rpm, not water delivery by a pump. *See* Ex. 1004 at [0442]. Petitioner has not explained why a POSITA would not have looked to address that safety problem by controlling valve operation, motor centrifugation speed, or both, as these are what gives rise to any high pressures in Yoakim. Absent hindsight, there is no basis to conclude that any safety problem would motivate looking to Rossi's methods.

Moreover, Rossi does not disclose a pump at all, and a pump is not inherent in Rossi's teachings. Indeed, there are many ways to supply water under pressure

without a pump. *See, e.g.*, Ex. 2012 at Abstract, [0073], Fig. 10; Ex. 2013 at Abstract, [0009], [0010], [0033], [0067], Fig. 2A; Ex. 2014 at Abstract, Figs. 1, 2; Ex. 2015 at 1. Therefore, this combination does not suggest a beverage system as K-fee claims.

Petitioner's ground thus fails on this basis alone.

B. Yoakim And Rossi Fail To Teach Or Render Obvious The Claimed Pump Control (All Claims, [1.o], [12.p])

Claim element [1.o] requires “a pump controlled to supply hot water into the portion capsule only upon detection of the identifier by the sensor/detector and a determination by the beverage machine that the portion capsule is suitable for use with the beverage machine.” Similarly, claim element [12.p] requires “a pump that supplies hot water into the portion capsule only after the identifier is read by the sensor/detector.” Claims 2 and 13 require “an operation of the pump,” which pushes/forces the “hot water through a brewing chamber [which] is prevented upon a determination by the beverage machine that the portion capsule is not suitable for use with the beverage machine.” The claims therefore require a pump controlled to supply water into the single-serve capsule only upon (1) detection/reading of the identifier, and (2) determination by the beverage machine that the single-serve

capsule is not suitable for use. According to Petitioner, these elements are taught by Yoakim and Rossi. Pet. at 62-66. Not so.

Starting with Yoakim, Petitioner contends that Yoakim discloses a pump controlled to push water into the single-serve capsule and that the pump is controlled based on detection of the identifier by the sensor/detector. Pet. at 62-63. But Yoakim lacks any express teaching for a pump that is controlled to push water into the portion capsule only after the identifier is read by the sensor/detector. At best, Yoakim might arguably/inherently disclose control of when to stop filling water. This is apparent from the citations relied upon by Petitioner. *See* Pet. at 62-63 (citing Ex. 1004 at [0477] (stating that “[t]he identification means are associated to control means placed in the centrifugal brewing device which ***controls the adjustment of the said parameters, by controlling*** the rotational motor driving the capsule holder or/and ***the pump supplying liquid in the capsule.***”), [0522], [0025], [0192], [0218]).

Moreover, Yoakim explains “[a] volume of water may be added ***before, during or after*** the centrifugal brewing operation in the capsule.” Ex. 1004 at [0218]. This teaching demonstrates that the supply of water is not dependent upon the (1) detection/reading of the identifier, or (2) determination by the beverage machine that the single-serve capsule is not suitable for use, but instead something else—such as the control means. Tellingly, Yoakim teaches activation of the pump through “rotational momentum”—detection/reading of the identifier and determination of

suitability. *Id.* at [0022] (“liquid introducing means is operatively associated with a pump and injection tube connected to a reservoir for injection of the liquid into the capsule *under the effect of rotational momentum*”), [0212] (“an injection of water by aspiration under the effect of the rotational momentum”), [0522]. Rotational momentum is one of “two key parameters”—the other being “back pressure”—in “delivering different flow rates” in the “system of the invention.” *Id.* at [0521]. Thus, Yoakim teaches motor activation, which causes rotational momentum, which causes pump activation—not by detection and determination as required by the ’829 patent claims. Once activated, as explained above, Yoakim stops pump activation based on the desired volume of liquid.

Moreover, pump activation only upon detection/reading of the identifier by the sensor/detector and a determination by the beverage machine that the portion capsule is not suitable for use with the beverage machine is not inherent from Yoakim’s teachings. Petitioner’s arguments are a consequence of hindsight from K-fee’s inventions. The Petition does not explain why a pump—as opposed to a valve, centrifugal, motor, heater, or any of the other controllable features in Yoakim—would be controlled only after/upon detection of the identifier. Tellingly, Schifferle (Ex. 1039) teaches a coffee maker where “[a]s soon as the brewing chamber 5 is closed, the pump 2 is operated.” Ex. 1039 at [0021]. Yoakim’s system could activate

the pump in this way. Thus, it is not the case that Yoakim necessarily uses the identification means to activate a pump.

Petitioner's arguments are further undermined by Denisart (Ex. 1007), which Petitioner contends "includes many features similar to Yoakim's centrifugal brewing system" (Pet. at 23), "is similar to the Yoakim system, both including... compatibility with code readers to identify the capsule and adjust brewing parameters" (Pet. at 38), and "shares two common inventors with Yoakim" (Pet. at 37). First, Denisart is not among the several applications from which Yoakim claims priority. Denisart is silent on use of its system for multi-size capsule sets discussed in Yoakim starting at paragraph [0468] and encompassing the specific embodiment of Figs. 54, 55, 61, & 62. *See, e.g.*, Ex. 1007 at Figs. 3-8. As taught by Denisart, the pump is switched on by a controller "after the user's selection." Ex. 1007 at 29:23-27 ("At the beginning of the beverage preparation cycle, and after the user's selection, the centrifugal pump 7 is switched on by the controller 12 and thus, hot water is pumped from the reservoir 6 to the centrifugal cell 3 through the flow-metering turbine 8."), Fig. 9 (reproduced below).

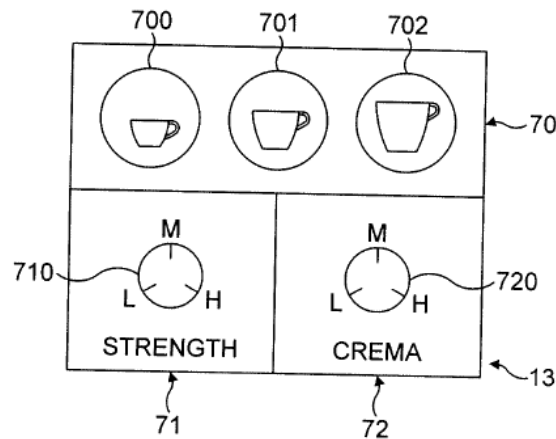


FIG. 9

It is noted relative to Fig. 9 that the different choices for volumes on the interface are presented to the user for selection and brewing various volumes is not in response to a reading that there is a different sized capsule in the machine. There is no description in Denisart to account for brewing a multi-sized capsule set and it is clear that the receptacle of Denisart can only accommodate a single sized capsule in contrast to Figs. 54, 55, 61, & 62 of Yoakim which can accommodate different sized capsules. *See, e.g.*, Ex. 1007 at Figs. 3, 7. Thus, as taught by Denisart, it is a selection on the user interface that activates the pump.

Yoakim teaches a selection means that similarly might activate the pump. This is consistent with Mr. Jobin's own experiences. *See* Ex. 1003 at ¶58 ("Consumers typically place the single-serve capsule into a brewing chamber of the machine, close the chamber to seal it, and ***press a button or switch to initiate the extraction process, which causes the machine to mix heated water with coffee grounds inside the***

capsule to brew coffee.”), ¶63 (“Beaulieu [Ex. 1019] explains that the controller waits for the user to press the brew button”); Ex. 1019 at 3:64-4:5.

The Petition next relies on Rossi. Pet. at 63-66. However, Rossi falls short of disclosing controlling a pump to supply water into the capsule only upon detection of the identifier by the sensor/detector and a determination by the beverage machine that the portion capsule is suitable for use with the beverage machine. This is because Rossi does not disclose a pump at all, and a pump is not inherent in Rossi’s teachings. Indeed, there are many ways to supply water under pressure without a pump. *See, e.g.*, Ex. 2012 at Abstract, [0073], Fig. 10; Ex. 2013 at Abstract, [0009], [0010], [0033], [0067], Fig. 2A; Ex. 2014 at Abstract, Figs. 1, 2; Ex. 2015 at 1.

In fact, Mr. Jobin readily admits during his work on coffee machines design, he worked on a machine that did not use a pump to move fluid from the reservoir to the brew basket. Ex. 2016 at 50:12-25. While Rossi describes “the load element is generally pierced to allow water to pass through it,” and “[t]he contents of the load element are brewed or dissolved in the water in order to make the edible product,” nowhere does it use the word “pump.” *See* Ex. 1041 at 3. Even Yoakim describes a pump is not necessary to supply water into a capsule, because other means such as vaporization and gravity are sufficient. *See, e.g.*, Ex. 1004 at [0132] (explaining water can be fed using aspiration or vaporization), [0427] (explaining tap water can be used).

Given Rossi's lack of disclosure of a pump, it is not surprising that Rossi does not teach the claimed activation of the pump. First, Rossi teaches a process unlike the one claimed or compatible with Yoakim/Jarisch. Rossi has a three-step safety validation process. Two mandatory steps must occur before the activation takes place. Without any compelling rationale, Petitioner has selectively omitted consideration of the second step and the effect that a destroyed identifier would have upon the claimed combination. This is improper selective picking and choosing. *See In re Wesslau*, 353 F.2d 238, 241 (C.C.P.A. 1965). The third step of the process, the activating step, mandatorily requires, that the first and second steps be performed, namely the reading of the code and destruction of the validation element. *See* Ex. 1041 at 10 (activation of a cycle requires that identifying element “***must*** be recognised in combination with the validation element as validated.”).

The Petition has failed to show how or why Yoakim (and/or Jarisch) would have been modified to include the mandatory second validation step of Rossi. In fact, any such step of destruction of any of the capsule features before starting the brewing process would be contrary to the principle of operation of Yoakim (and Jarisch). The Petition is also silent as to any teaching in Yoakim and Jarisch that would include any destruction of any validation element of the capsule after reading of the code takes place and before activating the machine in order to realize the step 2 validation. “It is impermissible within the framework of section 103 to pick and

choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art.” *Bausch & Lomb*, 796 F.2d at 448.

Second, Rossi fails to teach or suggest activation of any pump. Specifically, the first step may consist of “unlocking the machine when both the identification element and the unvalidated validation element are recognized.” Ex. 1041 at 9. This step does not teach the use of a pump to supply water into the capsule. *See also* Ex. 1041 at 6 (“allowing said edible-product making machine to take further steps only if it also recognises on said load element a validation element to be validated”), cl. 1.

The second, mandatory step of validating the validation element may consist of “mechanical destruction of the validation element,” which ensures the validation element cannot be re-recognized. Ex. 1041 at 9. This step also does not teach the use or control of a pump to push water into the capsule.

In the third activation step, the machine “activates a cycle of edible-product production” after it recognizes on the capsule the same identifying element and the validated validation element. Ex. 1041 at 9-10. “The use of an activation step of automatically activating the cycle of edible-product production only when the same identifying element is recognized in combination with the validated validation element ensures that the operating condition actually used are the correct conditions

as selected by the machine in the first recognition step” so as to “help to prevent the user from making the mistake of inserting into the machine a different load element to the one that was first recognized, for which the operating conditions are set.” Ex. 1041 at 8. None of these steps teach activating or controlling a pump to push water into the portion capsule. And even in combination with Yoakim, as explained above, edible-product production would not mean that there is control of the pump to push water into a portion capsule from information in the identifier.

That “the activation means 10, connected to the barcode reader 7 through the control unit 9, automatically activate[s] a cycle of production of the edible product” does not necessarily suggest control of the pump to push water into the capsule after the claimed determination. Ex. 1041 at 13; *see also id.* at 11, 12. Indeed, Yoakim teaches many other steps of the production cycle, any one of which could presumably be controlled. For example, Yoakim teaches centrifugal rotation, a step of the production cycle, can occur even before water is introduced into the capsule. *See, e.g.*, Ex. 1004 at [0440]. As disclosed in Rossi, “in order to allow the machine to proceed to *activation*,” the machine must “recognise[] the identifying element and the unvalidated validation element.” Ex. 1041 at 11. Thus, activating the cycle of production will not necessarily (or obviously) involve activating or controlling the pump to push water to the capsule, and Petitioner’s selection of the pump of Yoakim

is based only on impermissible hindsight. Thus, Rossi's teachings fail to overcome the apparent shortcomings of Yoakim and Jarisch.

Petitioner's ground fails on this basis alone.

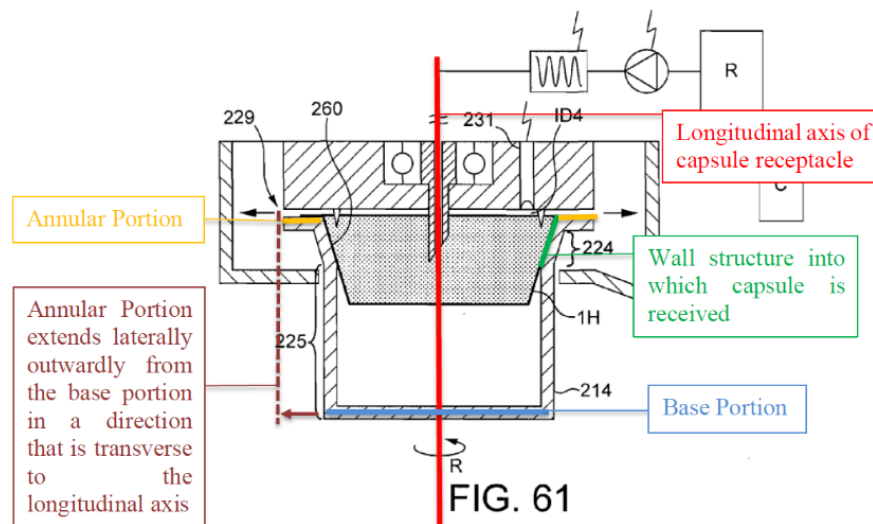
C. The Petition Fails To Show An Annular Portion Laterally Extending Outwardly From The Base Portion (Claims 3, 12-19)

Claim element [12.1] requires “an insertion shaft having a wall structure into which the portion capsule is received, the insertion shaft defined by a base portion and an *annular portion laterally extending outwardly from the base portion* in a direction that is transverse to a longitudinal axis of the insertion shaft.” Ex. 1001 at cl. 12. Similarly, claim [3] requires that “the insertion shaft has a wall structure into which the portion capsule is received, the insertion shaft being defined by a base portion and an *annular portion laterally extending outwardly from the base portion* in a direction that is transverse to a longitudinal axis of the insertion shaft.” Ex. 1001 at cl. 1.

The Petition relies on the teachings of Yoakim for this claim element (Pet. at 57-58, 68), but the Petition fails to demonstrate a reasonable likelihood of prevailing with respect to these claim elements. Specifically, the Petition on its face fails to

show that Yoakim teaches “an annular portion laterally extending outwardly from the base portion,” as required by the claim elements.

The Petition states that Yoakim discloses this limitation in Fig. 61, as annotated below. Pet. at 57-58. But in the below annotation of Fig. 61 of Yoakim, Petitioner depicts the base portion (in blue), the wall structure into which the capsule is received (in green), and the annular portion (in yellow). Pet. at 57-58; Ex. 1003 at ¶¶269-274. The Petition does not show “an annular portion *laterally extending outwardly from the base portion.*” Ex. 1001 at cls. 3, 12. Indeed, the Petition makes no connection between the so-called base portion and the so-called annular portion. Therefore, Petitioner’s argument fails.



Pet. at 58.

Petitioner then cites to different embodiments disclosed in Yoakim without addressing at all *why* a POSITA would combine this distinct disclosure. This

omission is fatal to Petitioner's arguments. *Abiomed*, IPR2017-01204, Paper 9, at 8-11. Specifically, Petitioner turns to Yoakim at [0187], [0024], and [0512] for further support that Yoakim discloses this limitation, and Mr. Jobin argues that the capsule receptacle of Yoakim (in green) is part of the brewing chamber assembly. Ex. 1003 at ¶¶269-274; Pet. at 57-58. But as explained below, Yoakim's teachings do not overcome the shortcomings of the Petition.

Yoakim at [0187] describes Fig. 4 of Yoakim, not Fig. 61 which Petitioner uses as the heart of the argument. Therefore, Petitioner relies on an improper combination of embodiments approach to the teachings of Yoakim but fails to present any evidence motivating such combination.

Petitioner's citation to Yoakim at [0024] fails to provide any additional context or support for *where* the alleged annular portion, base element, and wall structure into which the capsule is received are located *in relation to each other*. Yoakim at [0024] merely states that the "capsule receiving means of the device comprises a capsule holder" and lists advantages of placing a capsule in the interior surface of the capsule holder. Ex. 1004 at [0024]. Therefore, Yoakim at [0024] also does not disclose claim elements [3]/[12.1] of the '829 Patent.

Lastly, Petitioner's citation to Yoakim at [0512], describing "the embodiment of FIGS. 61 and 62," does not state where the "annular portion" is located on Figure 61. Yoakim at [0512] states that "the capsule holder 214 of the brewing device

comprises a first portion 224 forming the support surface 218 for the upper portion 260 of the capsules.” Petitioner’s annotation of Yoakim Fig. 61 depicts the annular portion extending from “a first portion 224 forming the support surface 218 for the upper portion 260 of the capsules.” Ex. 1004 at [0512]; Pet. at 57-58. Element 224 of Yoakim Fig. 61 is clearly *not* what Petitioner has annotated as the “base portion.” Pet. at 57-58.

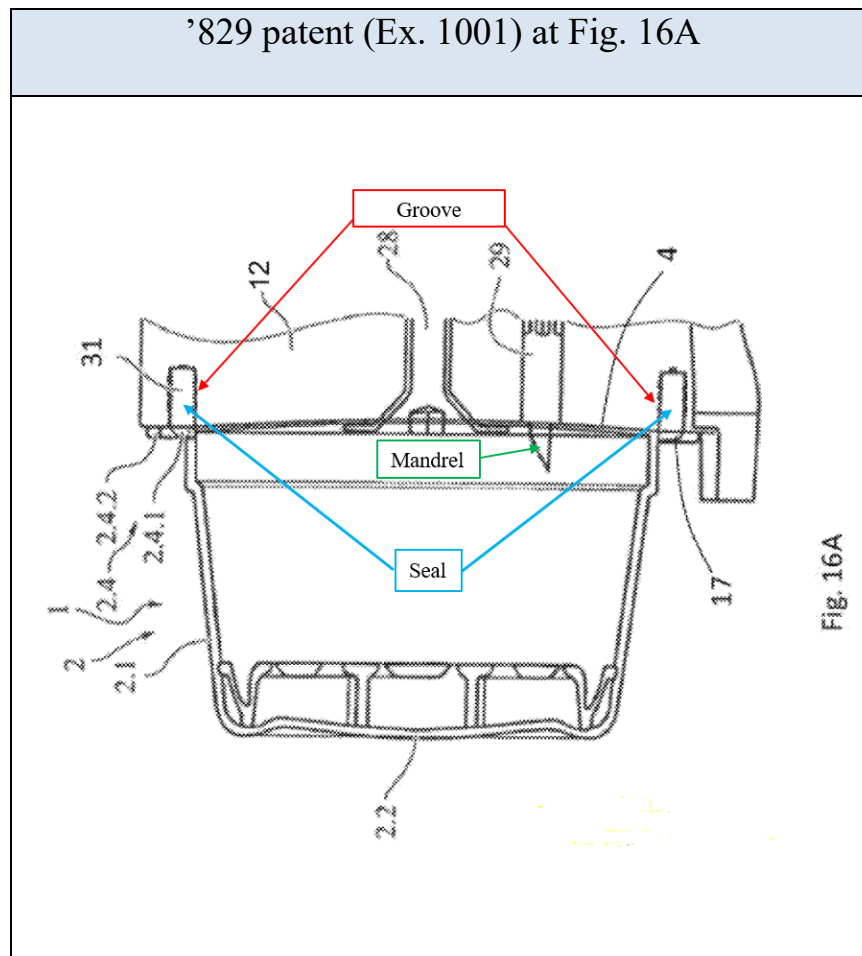
Petitioner fails to demonstrate a reasonable likelihood of showing that Yoakim discloses claim elements [3]/[12.1] of the ’829 Patent.

D. Yoakim Fails To Teach Or Render Obvious A Groove That Is Laterally Offset From The Chamfered Mandrel, And The Seal Is At Least Partially Seated In The Groove (Dependent Claim 4)

Claim element 4 requires the beverage machine to comprise “a groove that is laterally offset from the chamfered mandrel, and the seal is at least partially seated in the groove.” The Petition relies on the teachings of Yoakim for this claim element (Pet. at 68-70), but the Petition lacks any rationale for such reliance and thus fails to demonstrate a likelihood of prevailing with respect to this claim element.

As an initial matter, Petitioner’s arguments fail because Petitioner relies on a flawed claim construction of claim element 4 as the basis for its arguments. Petitioner submits that, for this proceeding, “no claim terms require formal construction” and “the apparent interpretations that K-fee offered in its infringement contentions (Ex. 1049)” in *Nespresso USA, Inc. v. K-fee System GmbH*, No. 22-

9295-GW-AGRx apply. Pet. at 18-21. Notably, Patent Owner's infringement contentions (Ex. 1049 at 55-56) illustrating the Accused Products' infringement of this limitation are consistent with the disclosure in the '829 Patent. Ex. 1001 at cl. 4, Figs. 16A, 10:11-34, 12:1-56, 12:60-13:28 (identifying (2.4.1) as a sealing surface, (29) as a mandrel, (31) as a seal).



But in its efforts to show that this limitation is found in Yoakim, Petitioner shifts its position to assert a different claim construction of claim element 4 that is inconsistent with both the '829 patent and Patent Owner's infringement contentions

(Ex. 1049). Specifically, Petitioner states that the claim language “a groove that is laterally offset from the chamfered mandrel” “*means* [a groove that is] off to the side (in either direction) of the *central axis* of the chamfered mandrel.” Pet. at 68-69; Ex. 1003 at ¶¶304-305. However, Petitioner cites nothing that specifically supports “laterally offset” being measured from the “*central axis* of the chamfered mandrel.” Neither the intrinsic record of the ’829 Patent, nor Patent Owner’s infringement contentions (Ex. 1049) support construing the claims to require measuring from the central axis. This is also inconsistent with the plain and ordinary meaning of “from,” which indicates that the groove must be offset not at the central axis but rather at the edge of the mandrel.

The plain language of 37 C.F.R. § 42.104(b)(3)-(4) requires that a petition identify how the challenged claim is to be construed and how the construed claim is unpatentable, including where each element of the claim is found in the prior art reference(s). 37 C.F.R. § 42.104(b)(3)-(4); *see Google LLC v. Agis Software Dev., LLC*, IPR2018-01088, Paper 14 at 11–12 (PTAB Dec. 10, 2018) (citing *General Electric Co. v. Vestas Wind Sys. A/S*, IPR2018-00928, Paper 9 at 14–15 (PTAB Nov. 5, 2018)) (“the claim construction requirement in the Rules gives the patent owner a more complete understanding about the basis for the unpatentability challenge in the

Petition and assists the Board in analyzing how the cited prior art meet a claim limitation.”).

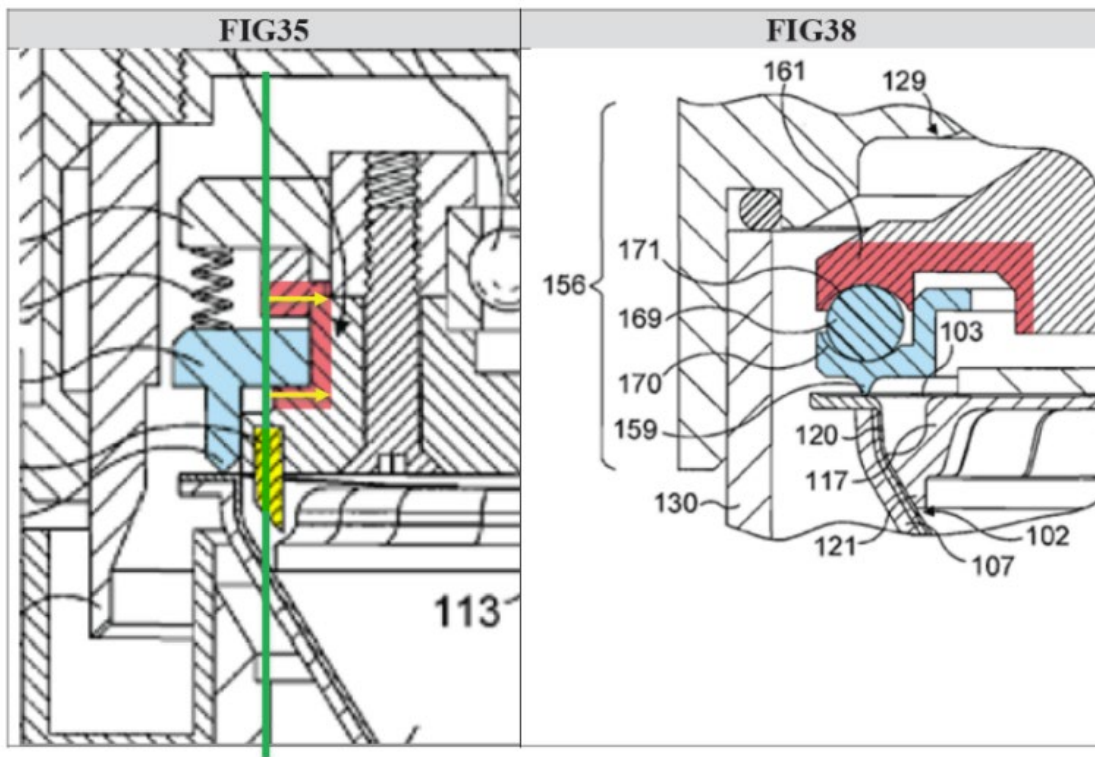
Moreover, the Board Consolidated Trial Practice Guide (“PTAB CTPG”) clearly states that petitioner “*cannot* raise new claim construction issues that were not previously raised in its petition,” therefore, “[i]f a petitioner believes that a claim term requires an express construction, the petitioner *must* include a statement identifying a proposed construction of the particular term and where the intrinsic and/or extrinsic evidence supports that meaning” in its petition. PTAB CTPG at 44–45 (Nov. 2019).

Here, Petitioner’s apparent claim construction position is inconsistent with both the language of the ’829 patent and Patent Owner’s infringement contentions (Ex. 1049). Moreover, Petitioner fails to identify any intrinsic support for its apparent claim construction that “laterally offset from” means “off to the side (in either direction) *of the central axis* of the chamfered mandrel.” Pet. at 68-70. Petitioner’s statutory failures are fatal, and Petitioner should not be permitted to argue inconsistent claim construction positions.

Regardless, whether Patent Owner’s interpretation is applied or whether Petitioner’s apparent interpretation is applied, the Petition fails to show that Yoakim

teaches this element and thus fails to demonstrate a likelihood of prevailing with respect to this claim element.

Specifically, Figures 35 and 38 of Yoakim do not teach a groove that is laterally offset from a chamfered mandrel, which a seal at least partially sits in. Petitioner contends that Figures 35 and 38 depict seals (in blue) and grooves (in red). Pet. at 69. Mr. Jobin states that “laterally” means “off to the side (in either direction).” Ex. 1003 at ¶¶304-305; *see* Ex. 2016 at 35:8-11, 36:11-13 (Mr. Jobin testified that “a groove that is laterally offset” is a concept that is “readily understandable without a technology background”). However, the pictured “groove” is not laterally offset, or off to the side, from the piercing spike (annotated in yellow below) in Figure 35.



Pet. at 69 (annotated with yellow on spoke, other annotations in original).

Rather than positioned laterally (to the side), the groove, as Petitioner defines it, is directly above what Petitioner argues is the chamfered mandrel. Pet. at 69; Ex. 1003 at ¶¶304-308. Further, the “groove” identified in red does not “solidify the placement of the seal and improve its sealing stability and strength” as Mr. Jobin claims a groove should do. Ex. 1003 at ¶306. Rather, the “groove” identified by Petitioner permits the “seal” to move within it to allow liquid to escape. Specifically, Yoakim describes that “at least one of said engaging portions of the valve means is spring loaded to move away relative to the other engaging portion under the force of the centrifuged liquid. In particular, the engaging portion of the device can be

associated to a spring loading member,” which can be an O-ring (as depicted in Figure 38) or a metal spring. Ex. 1004 at [0387].

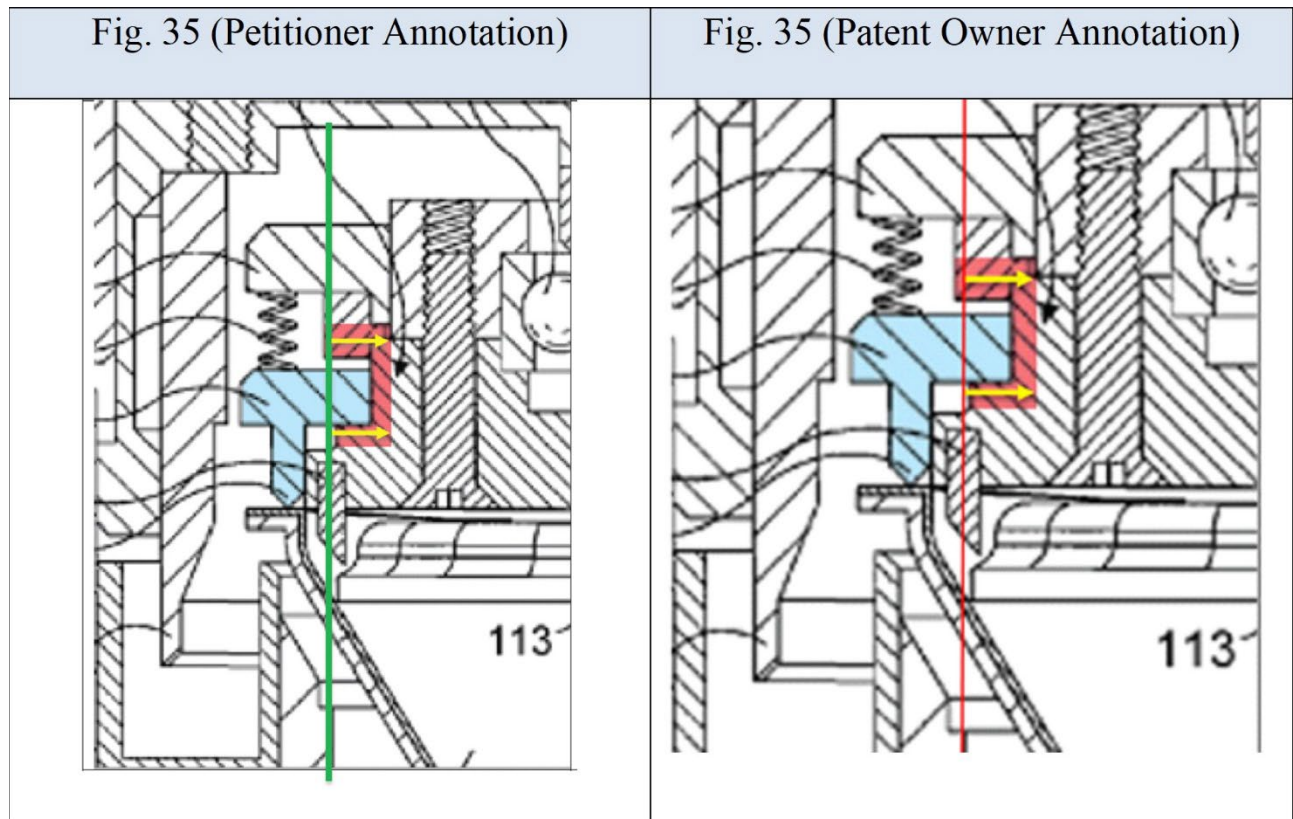
Figure 38 similarly does not disclose this limitation. The blue “seal” region identified by Petitioner in Figure 38 consists of “a rubber elastic O-ring 169” and “a lower member comprising a pinching surface 159.” Ex. 1004 at [0446]. The O-ring 169 is the “elastic loading means” that is maintained in place between the pinching surface 159 and an “upper fixed portion 161 of the water injection subassembly 129,” which Petitioner has identified in red as the “groove.” Ex. 1004 at [0446]. “[D]uring brewing, the pressure of liquid in the capsule tends to lift the pinching surface 159 to create an annular passage between the rim 104 of the capsule at the pinching surface.” Ex. 1004 at [0446]. Thus, the groove identified by Petitioner appears to permit the movement of the identified “seal,” instead of improving the seal’s stability and strength. Ex. 1003 at ¶306. And Figure 38 does not depict a chamfered mandrel at all (Petitioner merely recycles this Figure from its past arguments in prior IPR proceedings without any basis or support for its argument). The Yoakim reference is explicit that Figure 38 does not depict a chamfered mandrel, stating that “[i]n the embodiment shown in mode of FIGS. 37 and 38, the water injector can be a simple water outlet connectable to an inlet of the capsule with

no puncture means.” Ex. 1004 at [447]. Mr. Jobin agreed. Ex. 2016 at 146:10-23; 147:3-23.

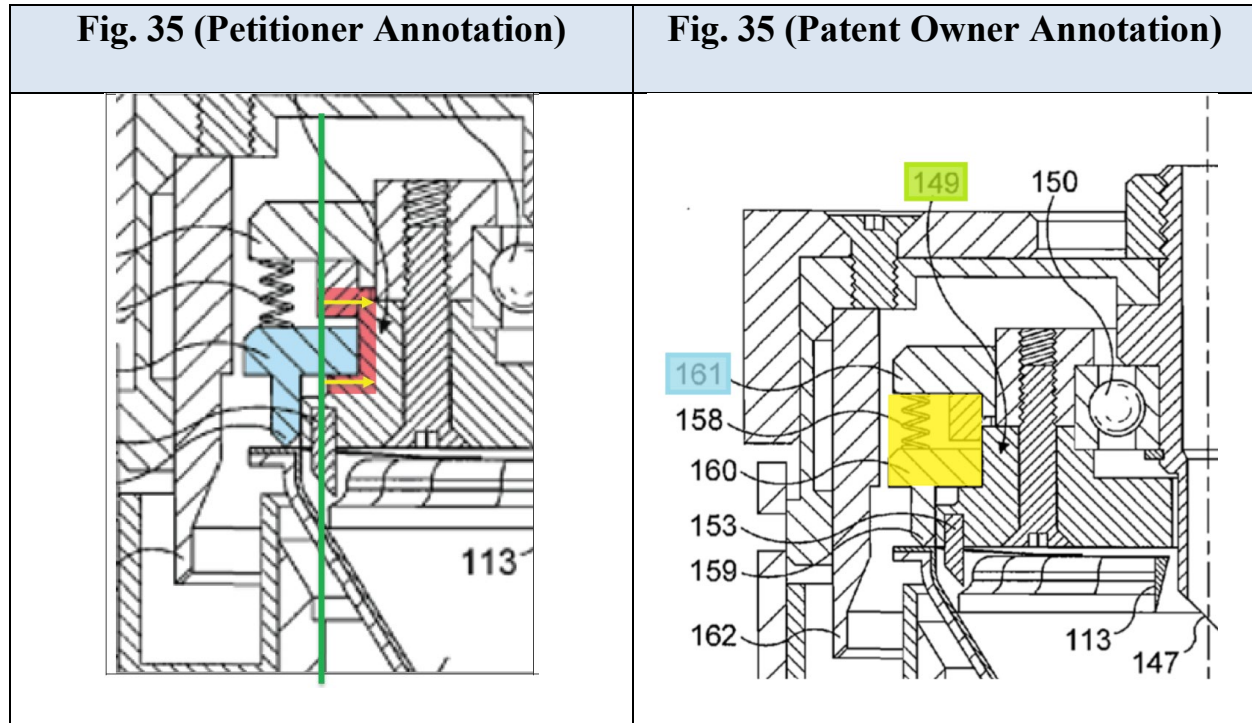
Moreover, Petitioner’s annotation of the purported central axis of the chamfered mandrel (depicted in green) on Fig. 35 is not **actually** located at a central location of the chamfered mandrel. In fact, the area on the left of the green line annotated by Petitioner is notably smaller than the area on the right of green line annotated by Petitioner – this is apparent to the naked eye. By thickening the green line, Petitioner has misleadingly obscured more of the groove that is clearly to the left of the central axis. Nevertheless, Petitioner’s annotation of the purported central axis of the chamfered mandrel (depicted in green) on Fig. 35 **still** does not support Petitioner’s argument that the groove is laterally offset from the central axis of the chamfered mandrel. In fact, during the IPR2022-01574 oral hearing where the identical annotated image was the subject of discussion, by Petitioner’s **own admission**, the red shading indicating a groove “overlaps just a tiny bit...over the top of the chamfered mandrel.” Ex. 2018 at 60:21-25. Notably, at least one Judge was unconvinced by Petitioner’s arguments and stated that she was “having a little bit of trouble with offset from the mandrel because it really does not look offset” and

“offset, to me, means it’s got to be off the line.” Ex. 2018 at 63:4-64:8. These comments at the hearing were correct.

The chart below depicts a line on the central axis of the chamfered mandrel (depicted on the right in red by Patent Owner) on Fig. 35. Upon comparison to Petitioner’s misleading annotation, it is apparent that a proper depiction of the central axis clearly reveals a substantial portion the groove (in red, as Petitioner has depicted it) to the left of the chamfered mandrel. As such, the groove is in fact *not* off to the side of the central axis of the chamfered mandrel, and Petitioner’s argument fails.



In a similar vein, Petitioner's depiction/annotation of a "groove" in Fig. 35 is also arbitrarily alleged and is not supported by Yoakim. Petitioner concedes that reasonable minds could disagree on whether Yoakim discloses a groove *at all*. Pet. at 69 ("To the extent Figs. 35 or 38 do not constitute a groove..."). Petitioner's citation to Yoakim at [0436] as support for disclosure of a groove states that "[t]he elastic loading means 158 is thus inserted in *a space* located between the base portion 160 and a counter-force portion 161 for the engaging part 149. Therefore, at a rest position, the engaging portion 157 of the valve system keeps closing on the rim of the capsule under the compressive effect of the resilient means." Ex. 1004 at [0436]. Petitioner arbitrarily colored the red element and identified it as the "groove." Rather, the more reasonable annotation of the space in Yoakim where the engaging portion rests is the highlighted yellow section depicted below by Patent Owner encompassing the entire space between elements 161 (blue) and 149 (green). Following Petitioner's logic that the disclosed "space" is in fact a "groove," the highlighted yellow section depicted by Patent Owner and shown below is by no means laterally offset from the chamfered mandrel.



Petitioner thus fails to satisfy its burden that Yoakim *discloses* this element.

Petitioner also fails to satisfy its burden, even at this stage, that this element would have been obvious. Indeed, Petitioner makes no contention in the Petition that a POSITA would have been motivated to orient the groove in Yoakim in a place laterally offset from the spike. *See* Pet. at 70. Rather, Petitioner makes claims about controlling of pressure and optimizing interaction of water and coffee grounds. *Id.* Moreover, Petitioner's expert provides no support for altering the location of the groove relative to the chamfered mandrel, and merely states that "it would have been obvious to a POSITA to position a sealing member in a groove." Ex. 1003 at ¶¶306-307. Overall, Petitioner's reasons for obviousness fail to address how or why a POSITA would have sought a different configuration in Yoakim's system.

Petitioner's arguments plainly rely on a combination of Figures 35 and 38, and yet those Figures recite two distinct chamber and capsule configurations. Petitioner does not even attempt to explain *why* a POSITA would combine these distinct disclosures. This omission is fatal to Petitioner's arguments. *Abiomed*, IPR2017-01204, Paper 9 at 8-11.

E. Yoakim Fails To Teach Or Render Obvious A Capsule Free Of A Filter Inside of the Cavity (Dependent Claims, 9, 18)

Claim elements 9 and 18 each require that “the portion capsule is free of a filter inside of the cavity.” According to Petitioner, “Yoakim *discloses* a capsule with a base element that does not include a filter inside of the cavity, and expressly confirms that a filter is optional.” Pet. at 72. The Petition fails to demonstrate a likelihood of prevailing with respect to this claim element.

The '829 Patent envisions an embodiment where “a filter element [that] is arranged into the cavity. Such a filter element divides the cavity into a first region for accommodating the beverage raw material and into a second region for accommodating a beverage extract.” Ex. 1001 at 7:15-19. “In particular the filter element is utilized as a strainer for the extract of a beverage.” Ex. 1001 at 11:65-67; *see also* Ex. 1001 at 11:45-49 (describing filters made of thermoplastic resin or

polypropylene). The cavity of the capsule is sealed by a membrane. Ex. 1001 at 11:30-45.

Yoakim expressly teaches his capsules contain such a filter inside the cavity for the purpose of filtering the brewed liquid from the solid particles in the capsule. *See, e.g.*, Ex. 1004 at [0016] (“The enclosure advantageously has ... the opening means or arrangement comprises a series of spaced radial outlets positioned or created at or close to the largest perimeter of the flared design of the enclosure. The enclosure can instead have ... a filter part separating the extractable or infusible ingredient(s) and the collecting cavity food with the filter part optionally spaced from the top wall by a gap.”), [0375], [0376], [0338] (“the openings can have a filtering function per se.”); *see also id.* at [0014], [0017], [0113], [0131] (“The premade peripheral outlets may be a series of small slits of small size to also **filter** the brewed liquid and maintain solid particles of the substance in the capsule.”), [0139], [0171], [0210], [0265] (“In order to filter the liquid in the capsule before it is centrifuged out through the (e.g., pierced) outlets, a filter part is positioned in the capsule to separate a cavity containing the substance and a cavity for collecting the centrifuged liquid.”), [0266], [0271], [0272], [0288], [0300], [0334], [0337], [0338], [0343], [0375], [0424], [0444] (“These outlet openings 118 of the enclosure of the capsule are sized as a function of the substance stored in the capsule. Small openings such as slots of small width or holes of small diameter tend to provide **a filtering**

function to retain the solid particles in the enclosure of the capsule while allowing only the liquid extract to pass the openings.”), [0448], [0450], [0456], [0460], [0461], [0462], [0465], Figs. 28, 29, 39, cls. 4, 6.⁴ Petitioner agrees. Pet. at 72.

As such, Yoakim teaches two capsule enclosure configurations having (1) openings/outlets, and/or (2) a porous material (*id.* at [0016]), each of which provide a filter according to the '829 Patent. Figure 29 of Yoakim (below) “is a perspective view of *the capsule of the invention*” and depicts the openings/outlets (118) configuration.

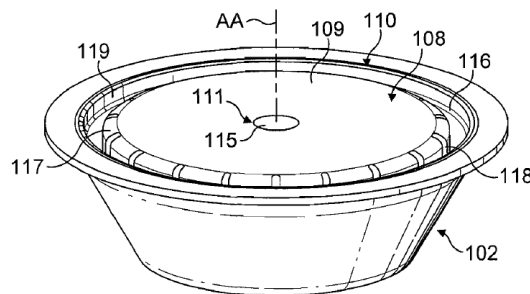
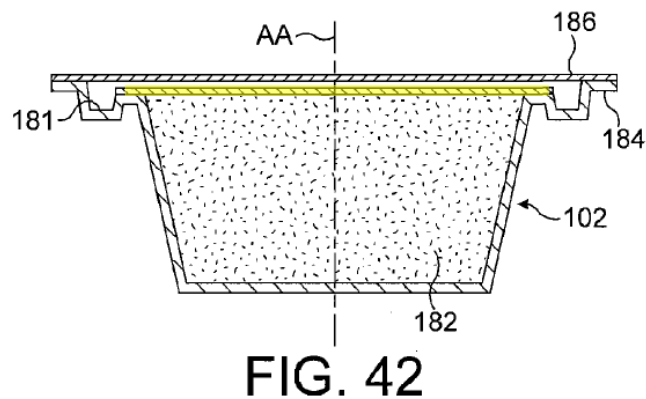
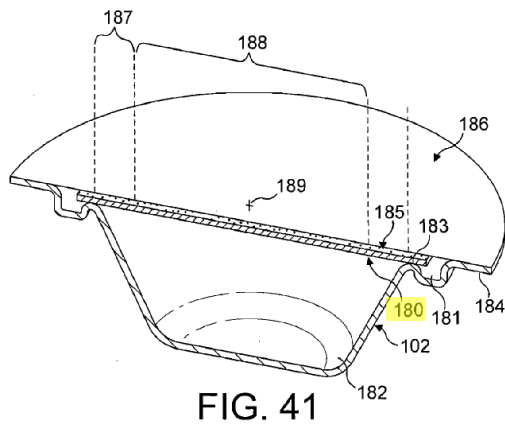


FIG. 29

⁴ Tellingly, Yoakim is within International Classification “A47J 31/44,” which is entitled “Parts or details {or accessories} of beverage-making apparatus (***filters or strainers*** A47J 31/06),” Ex. 2009 at 4, and International Classification “A23F 5/26,” which is entitled “Extraction of water-soluble constituents {(A23F 5/246 takes precedence)}” Ex. 2010 at 2. *See* Ex. 1004 at Cover (51).

According to Yoakim, “[s]lots may be appropriate as they can allow release of liquid at a suitable flow rate while restraining the passage of solid particles.” *Id.* at [0335]. Alternatively, Figures 41 and 42 (below), which are “the *capsule in the system of the invention*” depict a porous wall 180, which is a filter. Ex. 1004 at [0451], [0452], Figs. 41, 42; Ex. 2011 at 14:13-15:22 (Mr. Jobin admitting porous wall 180 provides “a filtering function”). Porous wall 180 is shown in both Figures 41 and 42 (annotated in yellow below) and is within the cavity.



Thus, Yoakim teaches his capsules have filters.

Yoakim’s use of filters in every embodiment is further confirmed by Yoakim’s description that “[t]he *capsule of the invention* is thus designed to enable a liquid to be prepared from a substance contained in an enclosure of the capsule by the effect of centrifugation obtained by rotating the capsule around an axis of rotation which is proper to the capsule. The *plurality of openings provided in the capsule* are thus arranged for letting the centrifuged liquid leave the enclosure at a location

which is substantially peripheral on the enclosure around the axis of rotation of the capsule.” Ex. 1004 at [0333]-[0334]; *see also id.* at [0335]-[0338]. Accordingly, Yoakim teaches that the openings can be sized to “be given a function to filter the liquid from the solid particles” and/or the capsule can include a porous material for filtering the solid particles. Ex. 1004 at [0017], [0271], [0334].

Critically, Petitioner fails to identify *any* express teaching in Yoakim of a capsule free of a filter. Indeed, this is evident from the passages and figures Petitioner cites, which all lack any express statement that Yoakim’s capsule lacks a filter. Specifically, [0171] teaches a filter made of “a series of slits” where “the brewed liquid can pass through the slits whereas the solid particles are retained in the capsule.” Yoakim teaches sizing these slits “to also filter the brewed liquid and maintain solid particles of the substance in the capsule.” Ex. 1004 at [0131]. Paragraph [0171] further teaches “[a]n **additional** filtering layer can be used to filter liquid depending on the size of the outlets.” This “additional filtering layer” is additive to the slits already described in the same paragraph. Indeed, Yoakim explains “depending on the size of the outlets,” it may be necessary to provide additional filtering to ensure the solid particles are retained in the capsule. Ex. 1004 at [0171]. Smaller outlets would not need such additional filtering, whereas larger outlets likely would in order to separate (filter) brewed liquid from the solid particles. Ex. 1004 at [0210] (“The slits are sized so as to act as a filter for retaining

the solid particles such as the ground coffee particles but let the liquid leave the capsule.”).⁵

In fact, Mr. Jobin previously testified “[a]ccording to 171 [of Yoakim] and my general understanding in Yoakim, it depends on the size of the holes and that one can add a filter to -- to change the characteristics of the -- of the filtering function.” Ex. 2011 at 59:17-22. As a practical matter, larger outlets *without* an additional filtering layer would result in particles of beverage material in the final beverage product—which would negatively impact the drinking experience and would be contrary to Yoakim’s stated purpose of “better ... controlling quality of the final brewed beverage or food liquid product.” Ex. 1004 at [0010]; *see also id.* at [0011], [0012], [0210]. Thus, Yoakim at [0171] teaches the capsule has a filter.

⁵ Mr. Jobin’s claim that Yoakim “explicitly discloses embodiments including portion capsules where the base element cavity does not have a filter” (Ex. 1003, ¶322) is rebutted by Yoakim itself for all the reasons explained herein. As such, Mr. Jobin’s testimony is insufficient to show a reasonable likelihood of prevailing. *See Intel Corporation v. Institute of Microelectronics, Chinese Academy of Sciences*, IPR2018-01574, Paper 23 at 11-13 (PTAB Jun. 19, 2020) (denying request for rehearing on decision declining to institute review where prior art reference rebutted expert’s opinion).

Petitioner also cites [0343] but admits this paragraph discloses the use of filters within Yoakim's capsule. Pet. at 72. Petitioner wrongly argues that this filter is somehow "optional," but identifies no such statement in [0343] because there is none. The other paragraphs Petitioner cites provide express teachings of a filter in Yoakim's capsule. *See* Ex. 1004 at [0255] ("The liquid delivered from the capsule can also be ***filtered by filtering means*** provided in the capsule. Such a configuration has many advantages because the device is simplified, the filter does not require cleaning since it is discarded with the capsule."), [0300] ("The capsule may comprise a ***filter means to filter*** the centrifuged before the liquid is released from the outlets at the sidewall."), [0461] (describing "***outlets 704, 706 for release of the liquid*** when centrifuged in the beverage preparation device"). Regardless, Yoakim teaches every embodiment features either outlet openings or porous materials or both. *See* Ex. 1004 at [0016]; [0376] ("the openings can have a filtering function per se."). Importantly, none is contrary to Yoakim's descriptions of the capsule of the invention. Ex. 1004 at [0333]-[0334].

Petitioner further cites Figure 54 of Yoakim to argue that Yoakim "expressly discloses embodiments using capsules without a filter in the base element cavity." Pet. at 72. Petitioner's reliance on Figure 54 does not demonstrate that Yoakim's cavity is free of a filter because Figure 54 is provided to illustrate "the centrifugal device into which is inserted the capsule of Fig. 51" and various capsule shapes. Ex.

1004 at [0083]-[0089]. Figure 54 depicts one of many different capsule shapes for Yoakim’s brewing system, but its primary purpose is to teach aspects of the brewing system—not the capsule.

Tellingly, Figure 54 depicts a “schematic” view of a capsule, which does not contain every detail of the capsule. *See* Ex. 2011 at 50:24-56:1. For example, Figure 54 reflects a “schematic side view of a capsule of small volume” (i.e., a simplified view) and not a cross sectional view like Figures 41 and 42. *See* Ex. 1004 at [0080], [0083]; *see also* Ex. 1004 at Fig. 1, [0030]. Indeed, Figure 54 does not depict any of the detailed features of the capsule, such as the food substance and lid. Moreover, any suggestion by Petitioner that the figures teach a capsule free of a filter is inconsistent with the disclosures of Yoakim that consistently and repeatedly describe a capsule having a filter in the cavity.

Petitioner thus fails to satisfy its burden that Yoakim ***discloses*** this element.⁶

⁶ To the extent that Petitioner seeks to rely on other paragraphs and/or teachings of Yoakim in reply or present a new theory of obviousness for this claim element, such reliance is improper and should not be credited by the Board. *See, e.g., SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018) (“the petitioner’s petition ... is supposed to guide the life of the litigation.”); *Henny Penny Corp. v. Frymaster LLC*,

IV. Conclusion

The Petition should be denied and no *Inter Partes* Review instituted.

Date: March 20, 2024

Respectfully submitted,

/Douglas Carsten/

Douglas Carsten, Lead Counsel

Registration No. 43,534

Attorneys/Agents for Patent Owner

938 F.3d 1324, 1331 (Fed. Cir. 2019); *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016); PTAB CTPG at 73 (Nov. 2019).

CERTIFICATION UNDER 37 C.F.R. § 42.24

Under the provisions of 37 C.F.R. § 42.24, the undersigned hereby certifies that the word count for the foregoing Patent Owner Preliminary Response totals 13,976 words, which is less than the 14,000 allowed under 37 C.F.R. § 42.24(a)(1)(i), (b)(1).

Date: March 20, 2024

Respectfully submitted,

/Douglas Carsten/

Douglas Carsten, Lead Counsel

Registration No. 43,534

Attorneys/Agents for Patent Owner

CERTIFICATE OF SERVICE

I hereby certify, pursuant to 37 C.F.R. § 42.6, that on March 20, 2024, a complete copy of the foregoing document was served upon the following by ELECTRONIC MAIL:

B. Clayton McCraw (Lead counsel)
MAYER BROWN LLP
1221 Avenue of the Americas
New York, NY 10020-1001
Telephone: (212) 506-2649
CMcCraw@mayerbrown.com

Amanda S. Bonner (Back-up Counsel)
MAYER BROWN LLP
71 South Wacker Drive
Chicago, IL 60606
Telephone: (312) 701-8645
asbonner@mayerbrown.com

/Douglas Carsten/
Douglas Carsten, Lead Counsel
Registration No. 43,534
Attorneys/Agents for Patent Owner