

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 RESPONSE

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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> , https://www.uspto.gov/web/patents/classification/cpc/html/cpc-A23F.html#A23F5/26

Exhibit	Description
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 – Bialetti</i> , 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)
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Ex. 2020	Declaration of Dov Glucksman in Support of the Patent Owner’s Response (October 1, 2024)
Ex. 2021	U.S. Patent No. 10,294,020 (issued Jan. 17, 2017)
Ex. 2022	Declaration of Arnaud Gerbaulet re Application No. 14/358,404 (February 25, 2016)
Ex. 2023	Declaration of Alfred Yoakim re Application No. 12/602,542 (June 18, 2014)
Ex. 2024	U.S. Patent No. 5,103,081 (issued Apr. 7, 1992)

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Ex. 2025	Transcript of Deposition of Michael J. Jobin (September 19, 2024)
Ex. 2026	Declaration of Arnaud Gerbaulet re Application No. 14/358,361 (February 8, 2016)
Ex. 2027	U.S. Patent No. 9,277,837 (issued March 8, 2016)
Ex. 2028	U.S. Patent No. 9,271,598 (issued March 1, 2016)
Ex. 2029	U.S. Patent No. 9,668,604 (issued June 6, 2017)
Ex. 2030	U.S. Patent Appl. No. 14/901,912, Response to February 8, 2018 Office Action (dated June 8, 2018)
Ex. 2031	U.S. Patent Appl. No. 16/956,726 to Société Des Produits Nestlé SA, Response to September 9, 2022 Office Action (dated December 8, 2022)
Ex. 2032	WO2010076048 (issued Jul. 8, 2010)
Ex. 2033	Declaration of Ian B. Brooks in Support of the Patent Owner's Response under 37 C.F.R. § 42.120 (Oct. 1, 2024)

K-fee System (“K-fee” or “PO”) submits this Response to the above-captioned Petition for IPR of U.S. Patent No. 11,465,829 (“’829 Patent”) (“Petition” or “Pet.”).¹

I. Introduction

The Board, without the benefit of a full and complete record, instituted review. K-fee now addresses the substantive errors, omissions, and shortcomings underlying Petitioner’s grounds of invalidity. In support, K-fee presents testimony from its expert, Dov Glucksman (Ex.2020).²

Petitioner failed to demonstrate unpatentability of any claim by a preponderance of the evidence for at least the following reasons. Specifically, the Petition fails to demonstrate at least:

- that a person having ordinary skill in the art (“POSITA”) would have combined the teachings of Yoakim alone or with Jarisch/Rossi/Castellani to arrive at the claims;
- that Yoakim and Rossi disclose or render obvious a pump controlled to supply hot water into the portion capsule only after the identifier is read

¹ All emphases added, unless noted.

² 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.

by the sensor/detector and determined suitable with the beverage machine, as claimed in all claims;

- 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;
- 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; and
- that Jarisch is a patent or printed publication, as required under 35 U.S.C. § 311(b).

'829 claims are generally directed to a beverage system including a portion capsule and a beverage machine. Ex.1001, Abstract. The portion capsule has an identifier provided on at least the bottom side of the capsule rim. Only upon detection of the identifier by the beverage machines' sensor/detector, a beverage machine pump is controlled to supply hot water into the capsule.

Prosecution of the application resulting in '829 was extensive. *See* Ex.1002, 366-375 (Examiner finding “[t]he prior art of record references neither discloses, or suggests...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.”). PO made substantial efforts to ensure the Examiner considered Petitioner's IPR

arguments, including those regarding Yoakim, Jarisch, Jarisch929, and Rossi. Ex.1002, 24-58, 355-361, 366-375, 529.

The Petition seeks to undermine PO'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 PO withheld from consideration institution decisions during substantive prosecution. Pet., 14-17. This suggestion is absurd because those decisions did not yet exist until months after the '829 issued on October 11, 2022. Ex.1001. No reasonable conclusion can be drawn in favor of Petitioner from the actual facts that occurred.

II. Claim Construction

The Board determined that no claims require express construction. Institution Decision ("ID"), 17-18. Under *Phillips v. AWH Corp.*, claim terms "are generally given their ordinary and customary meaning." 415 F.3d 1303, 1312 (Fed. Cir. 2005).

The Board previously construed the phrase "a groove that is laterally offset from the chamfered mandrel" (Ex.1001, cl. 4) to require "the groove to be entirely to the side of any part of the mandrel," IPR2022-01574, Paper 29 at 31.³ The same

³ Petitioner sought Director Review, which was denied. IPR2022-01574, Paper 31. Petitioner then filed a Notice of Appeal to the Federal Circuit on August 23, 2024. IPR2022-01574, Paper 32.

construction should apply for purposes of this IPR. *Trustees of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359, 1369 (Fed. Cir. 2016) (“where multiple patents ‘derive from the same parent application and share many common terms, we must interpret the claims consistently across all asserted patents.’”).

III. POSITA

The Board preliminarily adopted Petitioner’s definition of a POSITA. ID, 15-17. PO notes that Petitioner and Mr. Jobin offer no analysis for his opinion on the level of skill and is thus entitled to no weight. Ex.1003, ¶¶37-40; Pet., 17; 37 C.F.R. § 42.65(a). The proper level of ordinary skill is less rigid than Petitioner proposes. Notably, active workers in the field do not require engineering degrees. Moreover, the inventor of ’829 held no engineering degree at the time of his invention, which is a relevant factor that Mr. Jobin was apparently not even aware of. Ex.1003, ¶38; ID, 16; Ex.2025, 51:15-22. The inventor also had less than a year of traditional working experience in design of mechanical beverage systems or similar products. A requirement of a degree in engineering and “[f]ive years of experience in design of mechanical beverage systems, or similar products” unnecessarily places too narrow a lens on the level of skill particularly given the fact the inventor and active works in the field often have less experience. The level of skill should be at least 5 years of technical experience, with at least 1 year of experience in designing, testing,

and/or evaluating single-serve coffee/ beverage makers, with working knowledge of identifying means such as barcodes, sensors, etc. Ex.2020, ¶¶43-48.

IV. Petitioner Has Not Shown by a Preponderance of the Evidence That Any Claim of the '829 Patent Is Unpatentable As Obvious

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

Petitioner argues that a POSITA would have combined Yoakim with Jarisch, Rossi, and Castellani thus rendering the inventions of the '829 Patent obvious. Pet., 21, 37-77. Not so. Petitioner's arguments fail to show any reason combine the references or reasonable expectation of success and rely upon impermissible hindsight in order to arrive at PO's claims. Ex.2020, ¶¶76-140.

It is well established that "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR Int'l v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). A claim cannot be found obvious where Petitioner does "not provide a plausible rational as to why the prior art references would have worked together to render the claims [] obvious." *Power-One, Inc. v. Artesyn Techs., Inc.*, 599 F.3d 1343, 1352 (Fed. Cir. 2010).

Moreover, "[i]t 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 of ordinary skill in the art." *In re Wesslau*,

353 F.2d 238, 241 (CCPA 1965). This, however, is exactly what Petitioner's expert has done. Ex.2025, 186:10-19 (admitting "I don't look at a specific embodiment" in conducting his obviousness analysis). Despite Petitioner's expert's admissions that modifying a beverage machine or capsule requires multiple iterations and potentially years of work (*id.*, 29:7-37:5), Petitioner argues here it simply would have been obvious. Petitioner ignores the many factors present in the art itself that contribute to the unpredictability in seeking to achieve the then unproven results achieve by PO. These factors as admitted in the art here include, e.g., vibration, preferential flow paths, residence time, loss of detected optical signals, capsule shape, and capsule structure. Petitioner also ignores that when its own RPI seeks patents it argues against the very combination(s) Petitioner advocates for here. Ex.2020, ¶¶76-140.

1. No Rationale To Combine Embodiments Within Yoakim

Petitioner seeks to combine multiple different embodiments within Yoakim to cover K-fee's claims. *See, e.g.,* Pet., 42-43, 45-51, 55-56, 59-66, 68-71. As explained below, the different embodiments are a mixture of laboratory models and schematic drawings. But there is an absence of any rationale to support such generic unexplained interchangeability (*see generally* Petition) or a reasonable expectation of success, and as a result the Petition should fail. *Abiomed*, IPR2017-01204, Paper 9, at 8-11; *ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 546 (Fed. Cir. 1998)

(“Determination of obviousness can not be based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the patented invention. There must be a teaching or suggestion ... to select particular elements, and to combine them in the way they were combined by the inventor.”); *In re Fine*, 837 F.2d 1071, 1075 (Fed. Cir. 1988); *In re Stepan Co.*, 868 F.3d 1346 n.1 (Fed. Cir. 2017).

Despite this, in the ID, the Board preliminarily found “the combination of features from different portion capsules is a ‘predictable variation’ that does not ‘require a leap of inventiveness’” and concluded “it appears that Yoakim’s different figures emphasize specific features of its capsule that may be used in other capsules.” ID, 22-23 (quoting *Boston Scientific Scimed, Inc. v. Cordis Corp.*, 554 F.3d 982, 991 (Fed. Cir. 2009)). But unlike *Boston Scientific Scimed, Inc.*, where the Federal Circuit held that “[c]ombining **two embodiments** disclosed adjacent to each other in a prior art patent does not require a leap of inventiveness,” Petitioner here seeks to combine **over five separate embodiments** across numerous paragraphs and figures throughout Yoakim that have drastically different features, structures, intended results, and compatibilities. *See id.* Indeed, some embodiments are laboratory setups that would not be acceptable. The Board’s preliminary determination disregards the fact that Yoakim aggregates various discrete embodiments from a series of continuations-in-part—patent application filings, which, tellingly, show the features

of its various embodiments are not supported by prior embodiments or teachings. Yoakim sought to separately patent embodiments from Figures 1-25, 26-43, and 61/61. Ex.2027, Figures; Ex.2028, Figures; Ex.2029, Figures. Tellingly, Yoakim presents various capsule embodiments without ever presenting or suggesting a capsule having all of the features of PO's claims. Ex.2020, ¶¶82-93.

Importantly, “[t]he Court in *KSR* did not create a presumption that all experimentation in fields where there is already a background of useful knowledge is ‘obvious to try,’ without considering the nature of the science or technology.” *Abbott Labs. v. Sandoz, Inc.*, 544 F.3d 1341, 1352 (Fed. Cir. 2008). The Board’s preliminary finding also disregards a POSITA’s understanding that capsule and device design are complementary such that a POSITA would seek to design a capsule for a particular device (and vice versa) and that would lead to the capsule having specific features. *See* Ex.2025, 30:20-33:3. Especially in the Yoakim context of centrifugal brewing devices, a capsule suitable for one device did not assure suitability for all other devices. Furthermore, in the context of the present asserted modification of Jarisch and Yoakim, a change to one element has effects across a host of other elements. Ex.2020, ¶¶76-78.

One of the Yoakim embodiments Petitioner seeks to rely on is the toothed structure of Figure 23. *See* Pet., 71. Yoakim describes the specific toothed structure being received in a device having a “complementary shape.” Ex.1004, [0216] (“FIG.

24”). The only device Yoakim discloses as accepting the Figure 23 capsule is shown in Figures 8 and 9. *Id.*, [0217]. The devices of Figures 8 and 9 are remarkably different from the device of Fig. 61 that Petitioner also relies upon and seeks to combine with Figure 23. *See* Pet., 71. Petitioner does not explain, for example, how the Figures 23/24 embodiment would work with the system of Figure 61. Indeed, Yoakim’s Figures 8, 9, and 23 are described as different embodiments from Fig. 61. *Compare id.*, [0037]-[0038], [0052]-[0053] *with* [0090]. Ex.2020, ¶79.

Petitioner’s efforts at cobbling together Yoakim’s many capsule embodiments are driven by hindsight from PO’s claims. As explained, Yoakim’s teachings do not suggest any general feature from one capsule may be made in another of Yoakim’s capsules, or to combine every feature across the various embodiments into a single capsule. Indeed, when such modification was contemplated Yoakim expressly says so. Ex.1004, [0216]-[0217]. It is only through studying PO’s novel and non-obvious claims that one would arrive at the specific capsule having the features of the challenged claims on this record. This is improper hindsight. *ATD*, 159 F.3d at 546; *Fine*, 837 F.2d at 1075. Ex.2020, ¶¶80-81.

a. Yoakim Has a Long History of Distinct Inventions That the Petition Fails to Address.

Despite the plethora of disparate teachings and lack of motivation to combine within Yoakim itself, in no place has Petitioner explained why a POSITA would

have been motivated to combine the different teachings of those embodiments. Ex.2020, ¶¶82-93.

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*, 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 (Mar. 9, 2022) (“Petitioner was **required** to provide **some** explanation of how those teachings fit together to teach or suggest [all of the elements].”).

Petitioner’s failure to even **mention** a motivation to combine the various embodiments of Yoakim is a fatal omission that simply cannot be cured. *See Intel Corp. v. Tela Innovations, Inc.*, IPR2019-01521, Paper 65 at 25 (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]”).

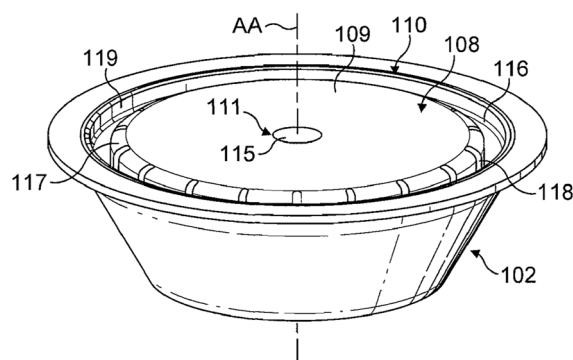
Instead of showing why or how a POSITA would have combined the distinct alternative embodiments within Yoakim, Petitioner provides various lengthy strings

of citations to Yoakim without identifying that those paragraphs pertain to different embodiments, and without explaining the motivation to combine the alternative embodiments. *See, e.g.*, Pet., 55-62 (alleging combination of Yoakim’s discrete embodiments of “FIG4, FIGS23-24, FIGS34-35, FIGS37-38, FIGS54-55, FIGS61-62” for dependent claims 6/15). Ex.2020, ¶83.

The Petition completely ignores the various distinct embodiments of Yoakim. There are at least five alternative capsule/device embodiments within Yoakim, each incompatible with the others. Yoakim teaches multiple different valve alternatives using either the lid, an engaging wall, or an interface assembly that spans to seal a peripheral rim of the capsule. Additionally, Yoakim teaches a variety of capsules without necessarily showing how they would be adaptable to various different embodiments. The sole extent of Yoakim teaching a sensing device is in the embodiment of Figs. 61 and 62, and from this the Petition without any elaboration or substantiation or analysis, lumps the teachings together through hindsight on the assumption that a POSITA would be motivated to merely grab one isolated element or technique from an assembly/capsule and move it to a much different assembly/capsule. Petitioner uses these elements and techniques as fungible features, when in fact they are unique and distinct to specific embodiments. Ex.2020, ¶84.

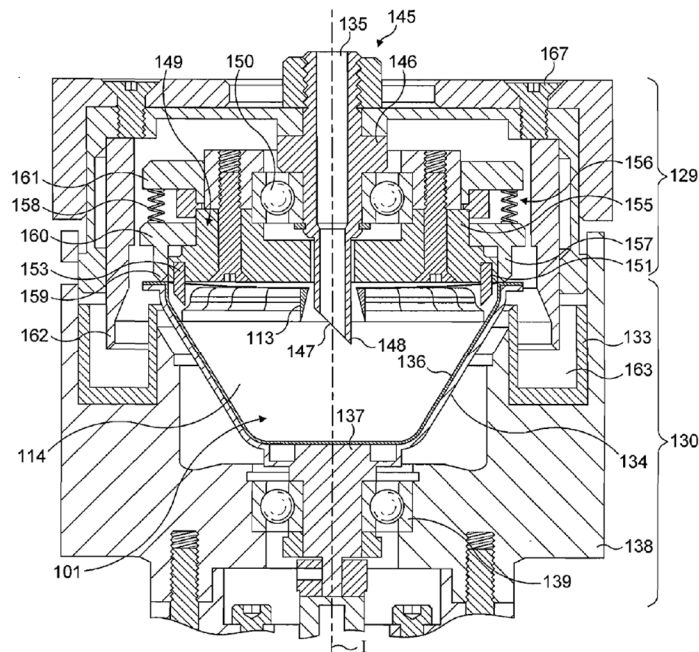
b. The Petition Fails To Explain How Or Why A POSITA Would Combine Yoakim's Different Embodiments.

The explanation for Petitioner's failure is clear—a POSITA would *not* have combined the discrete designs presented in the distinct embodiments disclosed in Yoakim. For example, Petitioner has not addressed the teachings that Yoakim Figs. 35 and 38 employ a specific capsule (depicted in Figs. 28-31) for those specific lab setups with a peripheral collecting recess 116. The capsule is loaded into a lab setup capsule holder of a machine having a single size, and that is not configured to receive multiple different volume capsules. *See* Ex.1004, Figs. 33-35, [0062]-[0065]. Despite its 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 show any such collecting recess, and the capsule holder is configured to receive capsules in a set of different volumes having distinctly different shapes/designs. Ex.2020, ¶¶84-85.



Ex.1004, Fig. 29.

Moreover, Petitioner has not addressed an even more compelling distinction in that the lab model of Fig. 35 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]. This valve system lacks any place for an identification means. Ex.2020, ¶¶86; *see* ID, 24; Pet., 59-60; Ex.1003, ¶¶ 329-330.



Ex.1004, Fig. 35.

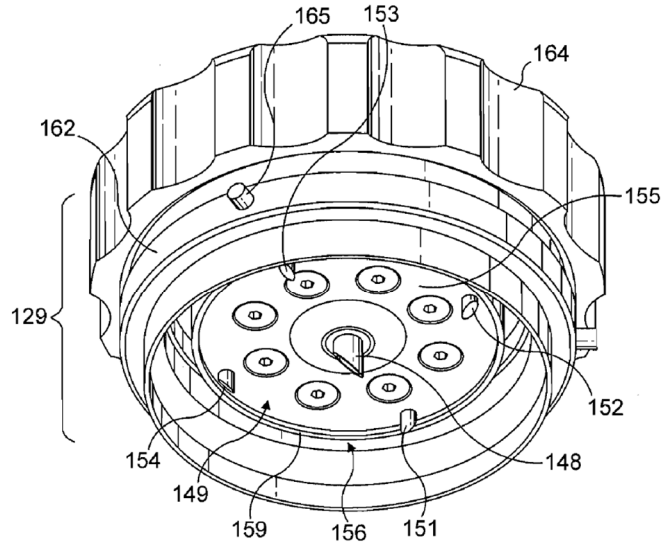
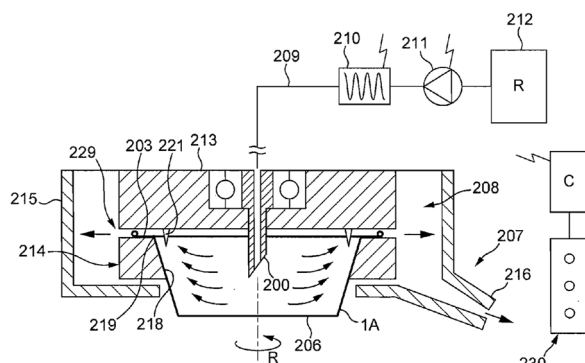


FIG. 36

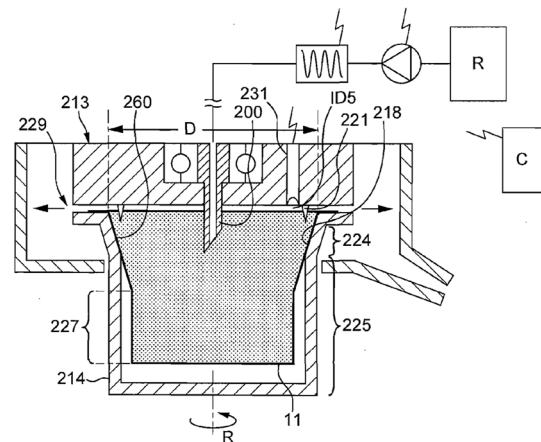
Ex.1004, Fig. 36.

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., 59-62. However, that seal, as used in the water injection subassembly of Fig. 36, dates to February 29, 2008 where it is described in combination with the capsules depicted in Figs. 28-31. *See* Ex.2017, Figs. 5-14. 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 the “unbalance” problem identified in Yoakim paragraphs [0006] and [0507]). Ex.2020, ¶87.

In contrast, the system of Fig. 61 and 62 (below) (as with the system of Figs. 54 (below) and 55) is configured to employ an alternative type of valve assembly and different capsules utilizing identification means. That valve requires that there be a plate-like interface assembly 213 that extends over the capsule flange. The interface itself forms a seal with the capsule rim during initial brewing. 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* Ex.2001(EP 08171069); Ex.2002, Cover (30) (citing EP 08171069 for priority), Figs. 4-6; Ex.2020, ¶88.



Ex.1004, FIG. 54



Ex.1004, FIG. 62

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, 3-6 (distinguishing over differences in valve engagement); 2002, Figs.

4-6 (illustrating similar structure to Yoakim's Figures 32-36 in Figs. 4-6); 2004 ("Yoakim I"), Figs. 7-19; Ex.2020, ¶89.

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.

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

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 combining these embodiments would have been obvious and Petitioner should not be allowed to argue otherwise here. Ex.2020, ¶¶89-90.

Yoakim further teaches that "[t]he device itself that receives the capsule of FIG. 23 comprises a toothed surface of complementary shape." *Id.*, [0216], Fig. 24 (illustrating the device that receives the capsule of Fig. 23). Yoakim expressly provides that "the connecting or engaging structure of FIG. 23 can replace the structure of the capsule of FIGS. 8 and 9 or reciprocally." *Id.*, [0217]. But Yoakim makes no such statement regarding the interchangeability of the capsule holder of

the Figure 61 embodiment. Notably the Figures 8 and 9 embodiments are laboratory set ups that lack the identification means of Figure 61 that the Petition relies upon for other elements and employs flow restriction without a valve based solely upon water escaping from capsule by a deflectable lip 82. *See id.*, [0521]; *compare* Figure 61 (showing identification means above the capsule) *with* Figure 8 (no identification means depicted). Indeed, the brewing systems, including the valves, of the embodiments of Figures 8 and 61 are notably different, evidencing Yoakim's abandonment of the laboratory set up. Ex.2020, ¶91.

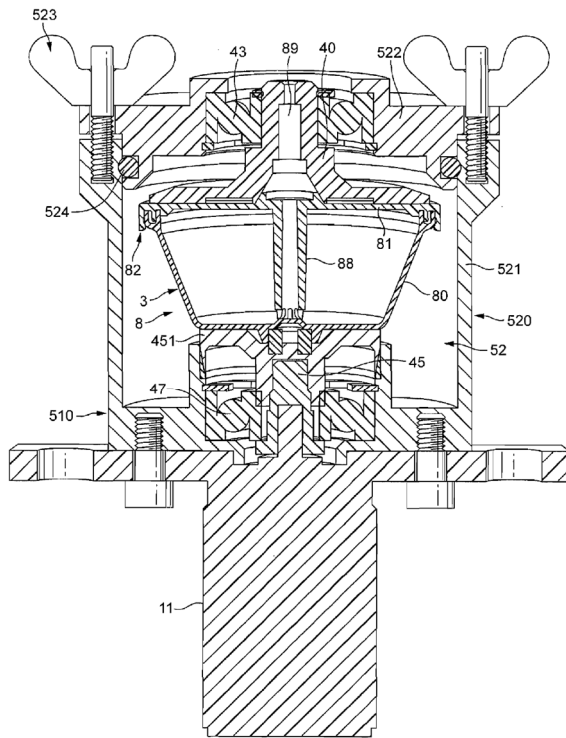


FIG. 8

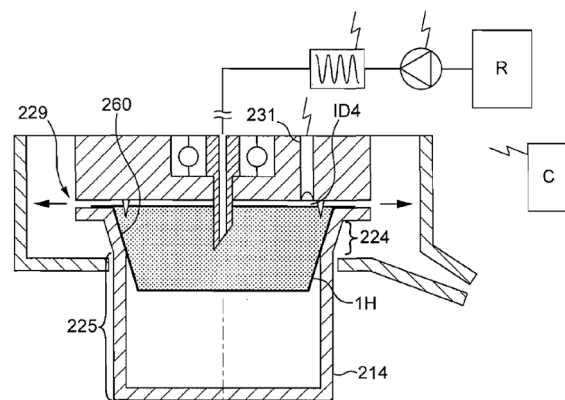


FIG. 61

There is thus no rationale for combining the teachings of the laboratory toothed embodiments and the non-toothed embodiments. Ex.2020, ¶¶92-93. The

Petition’s failure to provide a rationale to combine the teachings of Yoakim’s many different embodiments makes the Petition deficient—it is not enough to say a modification “could be” done. *See PersonalWeb Techs.*, 848 F.3d at 994-95; *Amazon.com*, IPR2022-01455, Paper 12, 18; *Intel*, IPR2019-01521, Paper 65, 25; *Hewlett Packard Enterprise*, IPR2022-00115, Paper 9, 15; *Abiomed*, IPR2017-01204, Paper 9, 11; *Google*, IPR2018-01086, Paper 10, 19.

2. No Motivation to Combine Yoakim and Jarisch

The Petition’s reasons for combining Yoakim with Jarisch are flawed. While Petitioner contends “Jarisch teaches how to position the Yoakim sensor/detector below and *away* from the flow path,” Pet. at 39, it does not address at all whether there exists a reasonable expectation of success in such combination to detect an identifier by the sensor/detector. As explained below, the evidence shows there is not. Ex.2020, ¶¶94-124.

a. Jarisch And Jarsich 929 Do Not Enable An Identifier Provided On The Bottom Side Of The Rim To Be Read By The Sensor/Detector In The Beverage Machine

“To render a claim obvious, the prior art, taken as a whole, must enable a skilled artisan to make and use the claimed invention.” *Raytheon Techs. Corp. v. General Elec. Co.*, 993 F.3d 1374, 1380 (Fed. Cir. 2021). “[A] non-enabling reference can play a role in an obviousness analysis,” but only where the evidence of record establishes a skilled artisan could have made the claimed invention.” *Id.*,

1381. “In the absence of such other supporting evidence to enable a skilled artisan to make the claimed invention, a standalone §103 reference must enable the portions of its disclosure being relied upon.” *Id.* In *Raytheon*, the Federal Circuit held the Board erred in finding prior art enablement where the evidence showed the solution contemplated by the prior art was not achievable (and thus non-enabled) at the time. *Id.*, 1381-82; Ex.2020, ¶¶102-105.

Here, the claims require “an identifier provided on the bottom side of the rim” wherein the identifier is “read by the sensor/detector” in the beverage machine. Ex.1001, cls.1, 12. Jarisch teaches first a code on foil on the top side rim of a capsule. Ex.1005, Fig. 3, [0040]-[0100]. The top side rim of the capsule is read without any obstructions. Ex.1005, Fig. 2-3, [0043] (“the code [on the top side rim of a capsule] is not distorted due to mechanical constraints and can be read more reliably.”). Ex.2025, 138:22-139:17. This embodiment is purportedly further described in Denisart. *Id.*, [0034]-[0035]; *see* Ex.1007.⁴ Jarisch then discloses the “code on the bottom side 72 of its rim 73” by using “light mirroring properties.” Ex.1005, [0063]-[0065]; *see* Ex.2025, 140:6-143:3. Jarisch’s “bottom side”

⁴ Denisart reads the identification means while the capsule is stationary. Ex.2031, 10-11; Ex.1007, 8:13-19. Jarisch does not explain how Denisart was modified to read a code while rotating the capsule. Ex.2020, ¶102n.2.

embodiment, however, fails to enable reading an identifier because it provides nothing more than the general structure of the capsule, reader, and capsule holder.⁵ Ex.2020, ¶102.

Jarisch would not have enabled a POSITA to make and use PO's invention, because as Christian Jarisch and others later admitted in a co-pending application, the "bottom side" embodiment of Jarisch did not work. In particular, it had the "disadvantage ... that those reading conditions [in Jarisch] remain specifically difficult for different reasons, such as because the incoming and outgoing rays of light must traverse the capsule holder when the capsule is held by the capsule holder, causing the loss of a great part of energy...." Ex.2021, 2:18-47. They went on to concede "it is not suitable to compensate the loss of reflectivity by improving the performance of the light emitting and sensing devices of the machine as it would make the beverage preparation machine too expensive." *Id.* They concluded "there is a need for providing an improved code support which enables to provide a reliable reading in the particular conditions met in a centrifugal beverage machine using capsules for the preparation of the beverage." *Id.*, 2:66-3:2, 3:7-13. Thus, the

⁵ Jarisch929 suffers from the same defects. *See* Ex.1006, Fig. 3; Ex.2020, ¶102n.3.

rim of Jarisch’s capsule lacked a code and Jarisch lacked sufficient disclosure to enable a code that could be read/detected. Ex.2020, ¶103.

Jarisch also conceded challenges due to the code being “relatively complex to integrate to the packaging structure forming the capsule itself.” *Id.*, 3:7-13. For example, it was known when using a deep drawn capsule that imperfections in the aluminum could cause data of a code to be incorrectly read. Ex.2026, ¶5. This led Christian Jarisch and others to later seek to create a functioning support (after PO’s PCT) and abandoning the mirror disclosed in Jarisch. *See generally* Ex.2021. Mr. Jobin conceded that “[i]t can be years” and “dozens of iterations” when starting from an unproven approach with a beverage capsule and developing a machine to work with it. Ex.2025, 31:20-32:11. Thus, it would have taken undue experimentation to make and use PO’s invention from Jarisch’s teachings. Ex.2020, ¶104.

Moreover, for these same reasons, Petitioner’s contention of expectation of success in combining Yoakim and Jarisch must fail, because Jarisch does not teach “an identifier provided on the bottom side of the rim” wherein the identifier is “read by the sensor/detector” in the beverage machine. *See* Pet., 37-40; Ex.2021; Ex.2022. Petitioner does not cite anything else in support of placing the code under the flange. Ex.2020, ¶105.

b. No 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., 37-40. As just explained, Christian Jarisch and his co-inventors conceded that reliability was a problem with Jarisch929's teachings that they later sought to partially address. Ex.2021, 3:14-15. Regardless, Petitioner's cites to Jarisch and Jarisch929 do not teach or suggest any rationale for moving the code to the underside of the capsule rim. *See* Ex.2020, ¶¶95-101. Petitioner cites Jarisch at [0014] and Jarisch929 at [0017]-[0018] but those passages are silent on any motivation to move the support and instead summarily assert it can be done. Pet., 13-14.

There is no reason to believe that Yoakim's placement of a "barcode" on the top of the membrane would suffer from readability issues, which is the rationale in Jarisch at [0022] that Petitioner cites to, given Yoakim's device reads the "barcode," without any obstruction before brewing when a capsule would not be soiled by beverage residues or damaged.⁶ *See* Pet., 13-14; Ex.1004, [0525], [0526]; Ex.2020, ¶96.

⁶ To the contrary, Petitioner identifies Panesar as a motivating reference for "the benefits of positioning the barcode away from liquid injection areas to avoid

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 any fluid through the outlets and away (annotated in green) from the barcode—not towards it. *See id.*, Figs. 61, 62, [0507]. A POSITA would also have understood that Figs. 61 and 62 are not drawn to scale, such that the ID4 would not be immediately adjacent to the piercing member. Ex.2025, 169:4-11. Moreover, given the depth of piercing expected at the water inlet, the support materials for the membrane, and the volume of substance, a POSITA would not expect soiling from the inlet of the capsule due to the

soiling or tearing.” Pet., 13. Panesar teaches doing this using a barcode on the same side of the “laminate” that is pierced by the machine. Ex.1010, 18:24-19:9, Fig. 10. Panesar teaches that the concerns raised Petitioner can be addressed through “minimum angular separation” of the barcode from the inlet. *Id.*, 19:9-20:21. Yoakim illustrates such separation and as a result the problems raised by Petitioner would not occur. *See id.* It is only through impermissible hindsight then that Petitioner seeks to find any such motivation (from Jarisch) to move the code in Yoakim. *see* Ex.2020, ¶97; *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1369 (Fed. Cir. 2012) (finding no reason to combine references where device already operates effectively and accomplishes the same function).

membrane forming a seal around the piercing inlet. Ex.1004, [0128], [0449].

Ex.2020, ¶98.

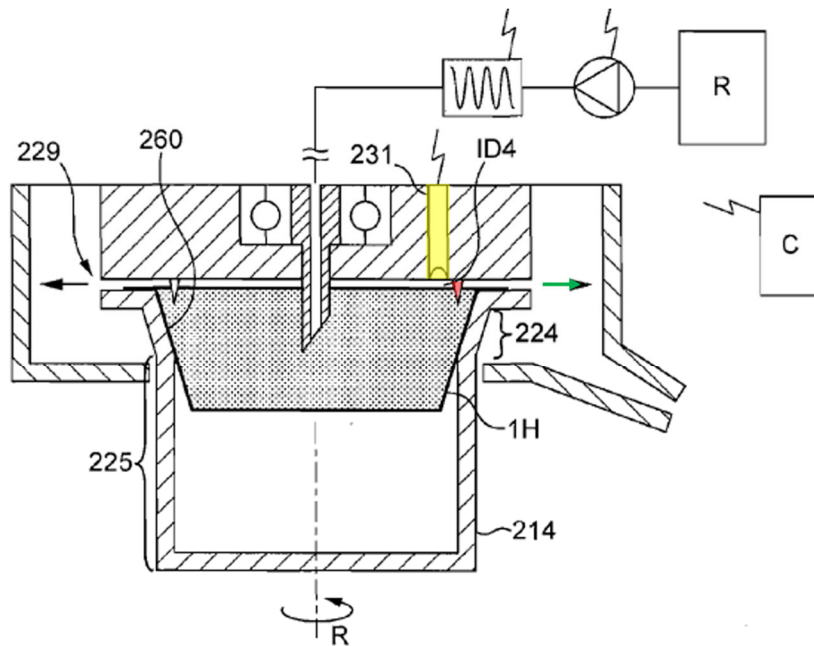


FIG. 61

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. Ex.2020, ¶98. Petitioner's argument to combine the references for this reason should be rejected. *See, e.g., Ex Parte Allen*, 2020 WL 3819948, at *3 (Jul. 1, 2020) (reversing Examiner for failure to provide a sufficient reason based on rational underpinnings to combine the teachings of the references where base reference already disclosed an effective solution); *Trend Micro, Inc. v. Open Text Inc.*, IPR2023-00692, Paper 8, at 24 (Nov. 6, 2023). (finding combination insufficient

where no explanation given as to how teachings might be beneficial in the system modified).

Also, Petitioner's expert contends without support 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, ¶201. But Yoakim teaches an annular portion that extends only "about 2-5 mm." Ex.1004, [0414]; Ex.2020, ¶¶99-100.

In contrast, Jarisch teaches placement of the code at a distance as much as 10 mm from the peripheral edge. Ex.1005, [0037]. The Petition thus lacks any basis to conclude that Yoakim's annular portion provides sufficient space. Ex.2020, ¶¶99-100.

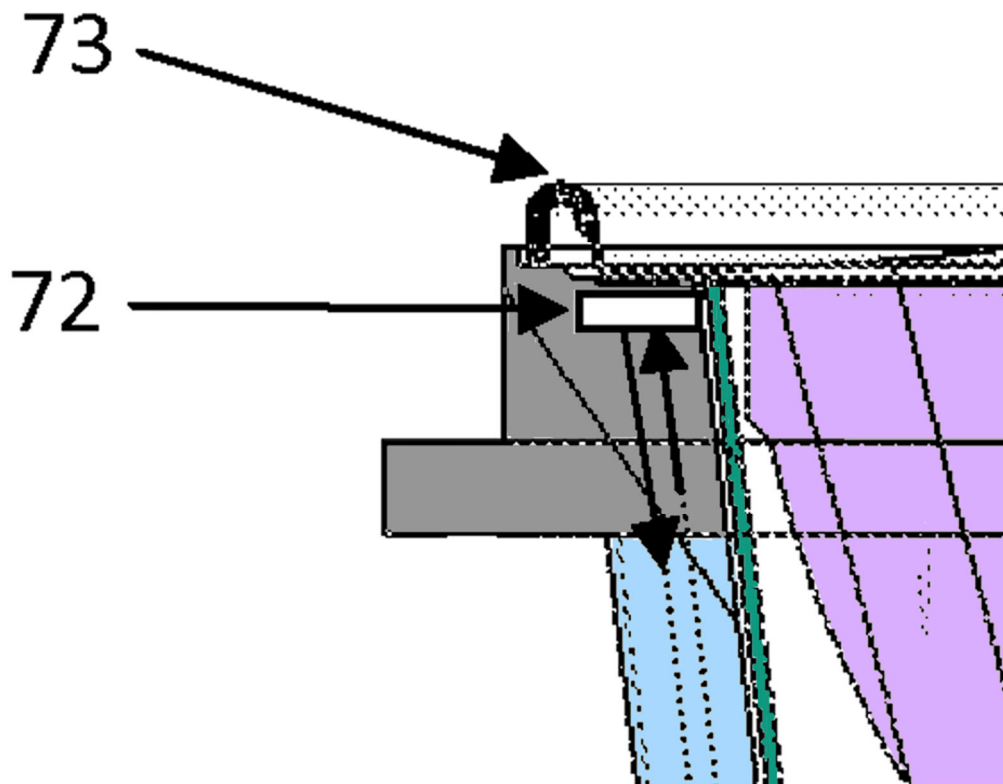
To the extent there was any interest in moving the identification means in Yoakim, the skilled artisan would have more readily placed the code on the unobstructed bottom of the capsule rather than the flange. Ex.2020, ¶101.

c. Lack of Expectation of Success in Combining Yoakim And Jarisch.

A POSITA would have understood that the combination of Yoakim and Jarisch would have unnecessarily complicated Yoakim's device and would further have failed to yield "an identifier provided on the bottom side of the rim [read] by the sensor/detector" in the beverage machine. Ex.1001, cls.1, 12. It has already

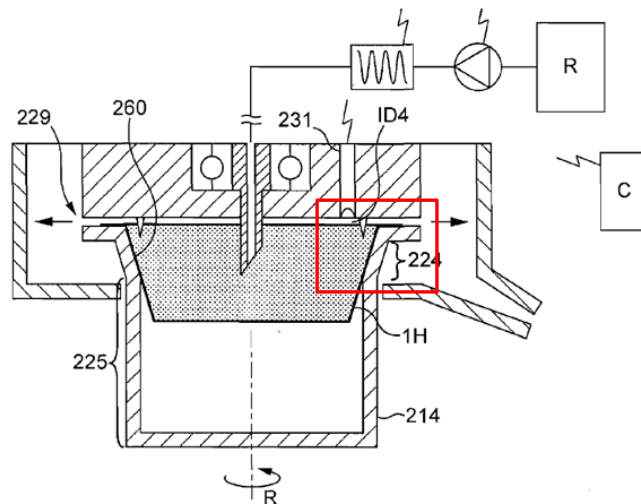
been shown that Jarisch's embodiment for placing a code under the flange did not work. Ex.2021, 2:18-3:13. There are additional reasons why there's no expectation of success. *See* Ex.2020, ¶¶109-124.

First, there is the issue of vibrations when rotating the capsule. Yoakim recognized a propensity for “unbalance” that would produce undesired vibrations. *See* Ex.1004, [0006], [0479], [0482], [0484], [0507]. Yoakim sought to address this with a requirement for a “snug” fit between the capsule and the capsule holder. *See id.* at [0479], [0484], [0507]. In contrast, Jarisch's capsule does not engage with the interior of cell 3, which is taught to supposedly enable reading the code on the underside of the flange. As can be seen in Figure 4 of Jarisch (zoomed in below), there is a deliberate gap between the capsule (purple) and the cell (green). Ex.2021, 2:39-43 (“the light rays may incur significant angular deviations due to particular mechanical constraints born by the rotating assembly of the machine and possibly coming from different origins (e.g., **vibrations**, wearing, unbalanced mass distribution, etc.).”); Ex.2020, ¶110.



The Petition fails to address why such a “snug” fit disclosed in Yoakim would be abandoned in favor of the cell configuration in Jarisch, absent hindsight. It would not have been. 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, [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.*, [0479], *see id.*, [0478], [0484], [0507]. The snug complementary fit is expressly taught to provide an important “safety function.” *Id.*, [0205]. Moreover, the angle of the widening sidewall is also significant in Yoakim. *See id.*, [0260]-[0261]. Yoakim thus teaches, and depicts, the capsule side wall advantageously engaging with the capsule holder. Ex.2020, ¶111.



Jarisch teaches that “the capsule of the invention” is designed for use in the system of “WO2010/026053” (Denisart, Ex.1007). Ex.1005, [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, [0002], Figs. 1-65. Denisart is silent as to any “unbalance” or vibration problems. Ex.1007. 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, or the fact that Jarisch’s cell teaches a side wall angle shown by Yoakim to provide “poor results” (Ex.1004, [0261]); Ex.2020, ¶112.

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 within the skill level of a POSITA. Ex.2020, ¶113. “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, as Petitioner contends, “[t]he Jarisch optical reader configuration is depicted below left [in annotated Figure 4] in order to read the code on the capsule (yellow) with the light path (red) shown from detector (62) to capsule rim (73).” Pet.,

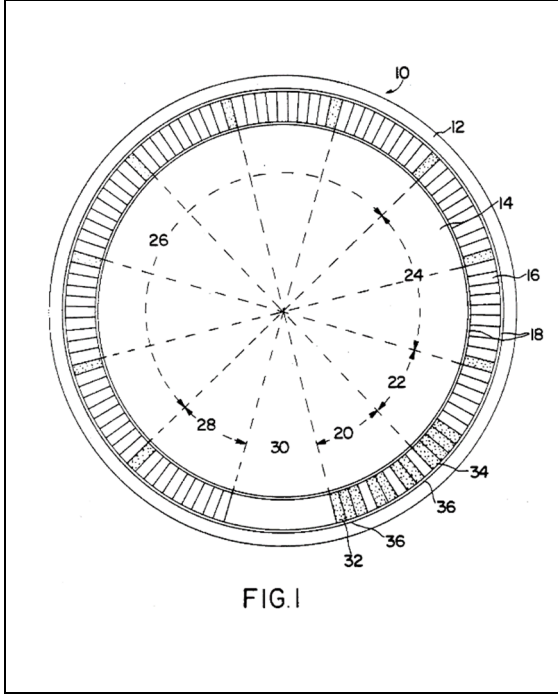
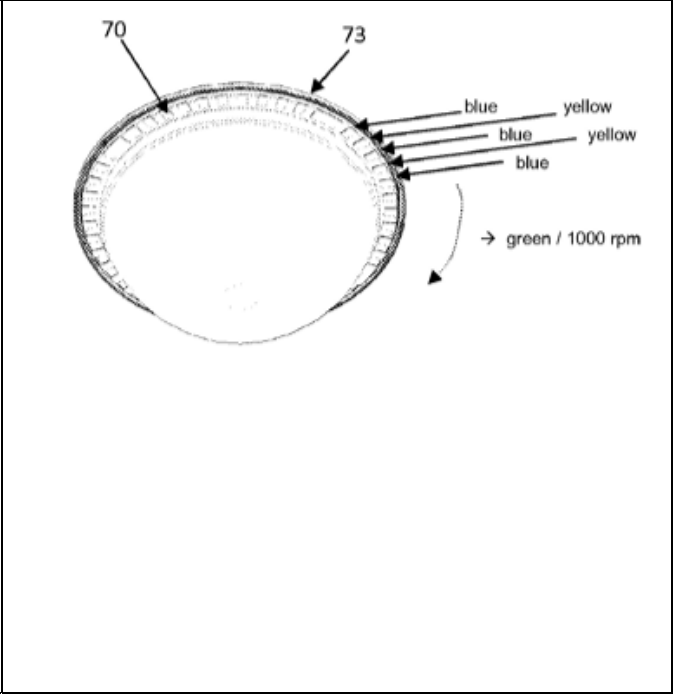
39-40. However, the “sensor/detector (231) enabled to identify and read a barcode” as described in Yoakim is positioned to read a code on the *opposite* side of the capsule. Pet., 40; Ex.1004, [0525], Figs. 61, 62; Ex.2020, ¶113.

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, [0085], [0099], Figs. 2, 4. In contrast, Petitioner points to the embodiment of Figs. 61 and 62 of Yoakim in which a non-repeating barcode (among other means) is read while it is in a fixed position relative to the sensing device 231. Pet., 23. It is beyond dispute that Yoakim also fails to disclose a code that has symbols that are sequentially read while the capsule is rotated, and that the equipment needed to read the code of Yoakim would differ dramatically from that used to read the Jarisch code. Ex.2020, ¶114.

Tellingly, one of the inventors of Jarisch submitted a declaration to the Office holding the Office to (and not disputing) its finding that Yoakim “fails to disclose symbols that are sequentially readable while the capsule is driven in rotation along an axis of rotation.” Ex.2022, ¶¶4-6; *see also* Ex.2031, 10-11 (Petitioner’s RPI arguing Denisart not configured to read a code while capsule is rotated). In that same declaration, he explained that “I and my co-inventors [including Jarisch]” determined that “one of skill in this art would not have combined the beverage preparation capsule of *Yoakim* to have features of the gaming chip of *Fisher*.” *Id.*, 2.

Fisher (Ex.2024) discloses a code like the one Petitioner now argues to combine with Yoakim. Ex.2020, ¶115.

Table 1 – Fisher and Jarisch

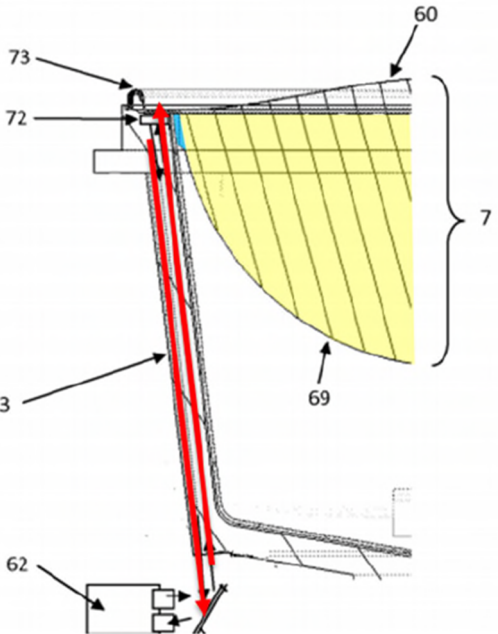
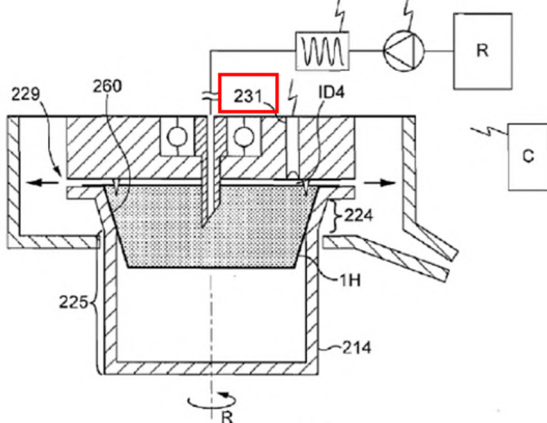
Fisher (Ex.2024, Fig. 1)	Jarisch (Ex.1005, Fig. 7)
 FIG. 1	

Compare Ex.2024, Fig. 1 (left), Abstract *with* Ex.1005, Fig. 7 (right).

Despite these diverging approaches and the Jarisch inventors’ prior sworn testimony to the contrary, Petitioner argues the opposite (because it suits its purposes) here that a POSITA would have somehow been motivated to make such a combination. But again, 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. Ex.2020, ¶116.

Recall that a POSITA would have been discouraged from combining Jarisch and Yoakim because of the potential “unbalance” described by Yoakim at [0507] that requires the snug fit. Ex.2020, ¶117. However, assuming *arguendo*, a POSITA 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 and 36 because there would have been no further need for the annular V-shaped valve arrangement. *In re Schweickert*, 676 Fed. App’x at 995 (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 has not reconciled any of these teachings and its proposed combination is nothing more than hindsight analysis. Ex.2020, ¶118.

Table 2 – Sensor Placement

Jarisch	Yoakim
 Pet., 40 (citing Ex.1005, Fig. 4).	 FIG. 61 Ex.1004, 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 and still failed to yield an identifier detected by the sensor/detector (*see* Ex.2021, 2:18-47), Yoakim's capsule holder 214 (above right) is comprised of a wall structure having a lower portion 225 and first portion 224, which are connected by a bend (or flare) in the structure. Ex.1004, Fig. 61 (below), [0512]. Ex.2020, ¶119.

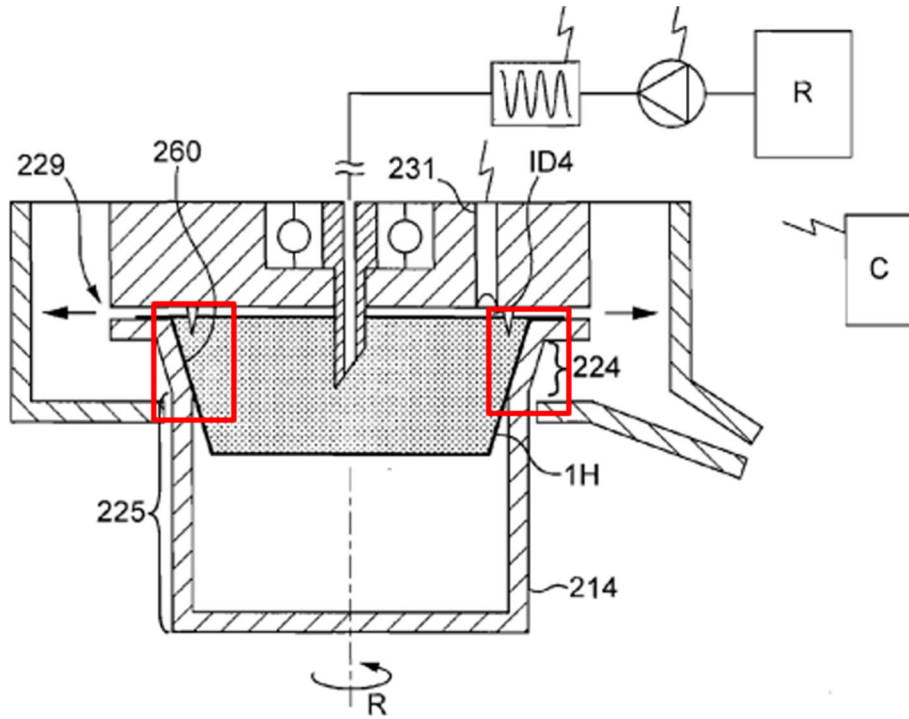


FIG. 61

Resolving this problem would have been particularly challenging given the fact that the barcode of Yoakim would be read while the capsule holder is rotated. The use of Jarisch's transparent material would also have contributed to impairment to the light available for detection. *See* Ex.2021, 2:18-47. This effect is even further exacerbated when trying to envision the required light transmission through a capsule holder like Yoakim Fig. 24. The only path to the code on the flange is through the wave-like structure of the hollow teeth 440. Ex.2020, ¶120.

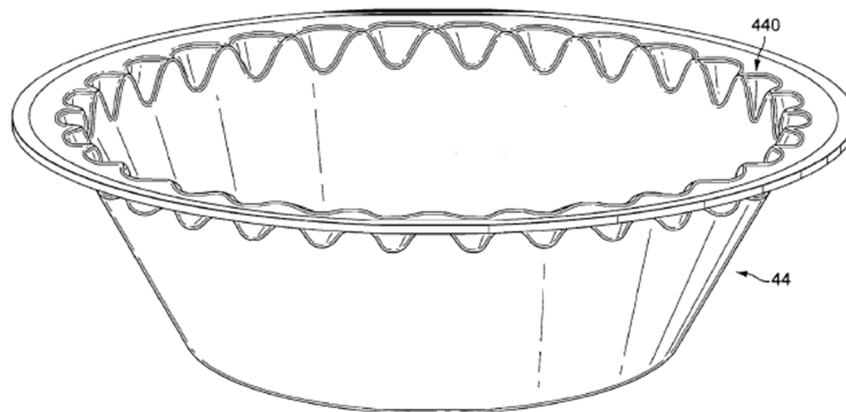


FIG. 24

For the sensor/detector to pass light bidirectionally through this flare to successfully read a code, 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. The use of Jarisch's transparent material would also have contributed to undesired impairment to the light available for detection. Ex.2020, ¶121; *see* Ex.2021 at 2:18-47.

In sum, the Petition fails to demonstrate that a POSITA would have had a reasonable expectation of success. Ex.2020, ¶¶109-124.

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. Ex.2020, ¶122. The analysis requires an explanation of how such combination would have been made with success. But the Petition lacks any

such rationale or supporting facts, and the evidence here (Ex.2021) shows there was no expectation of success. *Teva Pharm. USA, Inc. v. Corcept Therapeutics, Inc.*, 18 F.4th 1377, 1381 (Fed. Cir. 2021) (holding findings of no expectation of success dispositive).

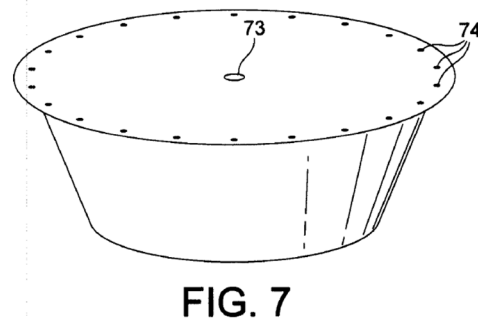
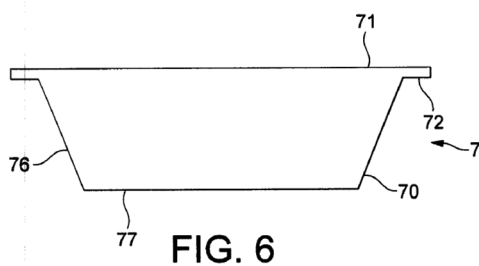
Because the combination of Jarisch and Yoakim would have required a significant redesign of the elements, including the unnecessary moving of the location of the sensor or detector (ostensibly directly into a flow path of the brewed coffee) and other significant differences, a POSITA would not have been motivated to combine the teachings of the two references. Ex.2020, ¶123; *see, e.g., In re Ratti*, 46 C.C.P.A. at 981; *Saiki*, Appeal No. 2000-0373, 2002 WL 32102452 (B.P.A.I. Jan. 17, 2002); *Salerno*, Appeal No. 2011-004947, 2013 WL 5603478 (B.P.A.I. Sept. 23, 2013).

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 and reasonable expectation of success. On the present facts, there is neither as even Jarisch fails to support success in the combination. Ex.2021, 2:18-47. Ex.2020, ¶124.

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

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. Pet., 37.

During prosecution of the Jarisch (Ex.1005) reference, a priority application to Yoakim ("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, 6. Yoakim '601 includes the same laboratory setup images Petitioner relies on here to support the opposite conclusion, i.e., placing the code on the bottom of the flange. *See, e.g.*, Ex.2006, Figs. 6-7 (below), 23 (below). Ex.2020, ¶¶106-108.



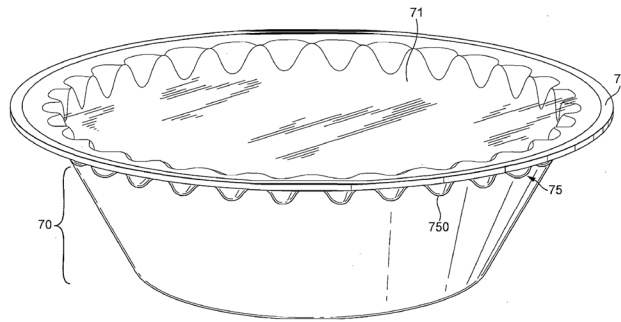


FIG. 23

See also Ex.2005, 8-9. In brief, because Yoakim 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 prior arguments that Yoakim was not combinable undermine Petitioner's arguments now to the contrary. Ex.2020, ¶¶106-108.

3. No Motivation To Combine Yoakim/Jarisch With Rossi

The Petition argues combination with Rossi would have been obvious for the benefit of providing safety "for ensuring that an appropriate [capsule] is used." Pet., 40. But Yoakim already expressly recognizes a need for a safety function, achieving that need by the complementary shape of the capsule holder. Ex.1004, [0205]. Petitioner thus again argues for another unnecessary and redundant feature to be added to Yoakim. Ex.2020, ¶¶125-132. This too should be rejected. *In re Schweickert*, 676 Fed. App'x at 995.

Petitioner also suggests that the features of Rossi would be necessary in Yoakim due to Yoakim's teaching of pressure. Pet., 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, [0124]; *see also id.*, [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].⁷ Ex.2020, ¶¶125-126.

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.*, [0132]-[0133], [0186], [0209], [0413] (“Water can be introduced at relatively low pressure or a pressure close to gravity.”), [0428]. 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. Ex.2020, ¶127.

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, [0471], [0476], [0526] (“in particular coffees, of different

⁷ For frame of reference and showing such contrast, in 2011 Petitioner offered the Pixie espresso making machine and marketed it as having 19 bar pressure. Ex.2007, 3; Ex.2008, 13; Ex.2020, ¶126n.3.

volumes (e.g., risetto, espresso, lungo, americano, etc.)”). A POSITA would have understood from Yoakim’s disclosure that Yoakim’s device lacks the necessary pressure to brew a traditional espresso beverage. 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. Ex.2020, ¶131.

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, Abstract, [0073], Fig. 10; Ex.2013, Abstract, [0009], [0010], [0033], [0067], Fig. 2A; Ex.2014, Abstract, Figs. 1, 2; Ex.2015, 1. Even Yoakim teaches 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). Therefore, this combination does not suggest a beverage system as K-fee claims. Ex.2020, ¶132.

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, [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, [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 teachings. Ex.2020, ¶¶128-130.

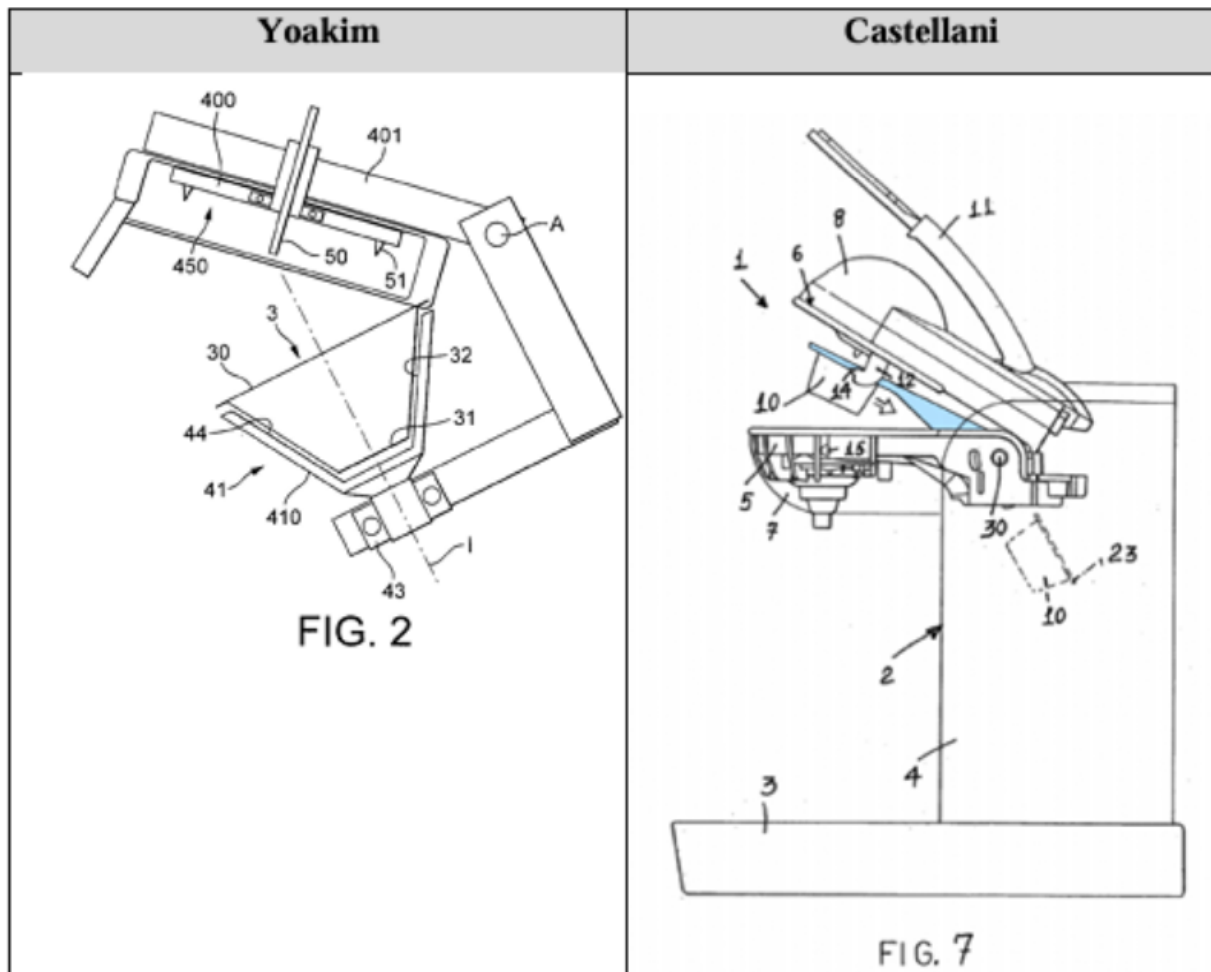
4. No Motivation To Combine Yoakim/Jarisch With Castellani (Ground 2)

Castellani describes a delivery head for non-centrifugal espresso coffee machines “in which the single-use or disposable capsule loading and unloading operations can be performed in a very easy and safe manner, from a user standpoint.” Ex.1009, Abstract, [0010]; Ex.2025, 56:1-20, 57:4-8. A POSITA reading the application would have understood that while Castellani describes an ejection system for the “single-use or disposable capsule” by way of sliding onto the “fork element 21” and “annular portion 22” (i.e. the alleged “holding arms” as required by claims 11 and 19 of the '829 patent) and into a collecting vessel, Castellani's fork element is not suitable for use in combination with Yoakim and Jarisch due to obstruction of the code on the bottom of the flange and resulting interference with reading the code on the bottom of the flange. Ex.1009, [0054], Figs. 2, 7, 11. Accordingly, a POSITA would not have looked to Castellani's

teachings of a conventional espresso coffee machine capsule ejection system via fork element and collecting vessel to further modify the combination of centrifugal brewing machines in Yoakim and Jarisch. Ex.2020, ¶¶133-140.

Petitioner argues a POSITA would have been motivated “to utilize the ejection forks disclosed by Castellani to properly position and secure the capsule in the Yoakim and Jarisch system (in order to facilitate controlled centrifuge extraction and barcode reading).” Pet., 74. But Petitioner’s reasoning ignores that placement of ejection forks and annular portion between the capsule and the cell as taught by Jarisch would prevent reading a code under the capsule flange. Indeed, Castellani provides *no teaching* of a code on the bottom that is read by a sensor/detector or how the portion capsule is detected for suitability/safety/brewing parameters. *See generally* Ex.1009. Ex.2020, ¶134.

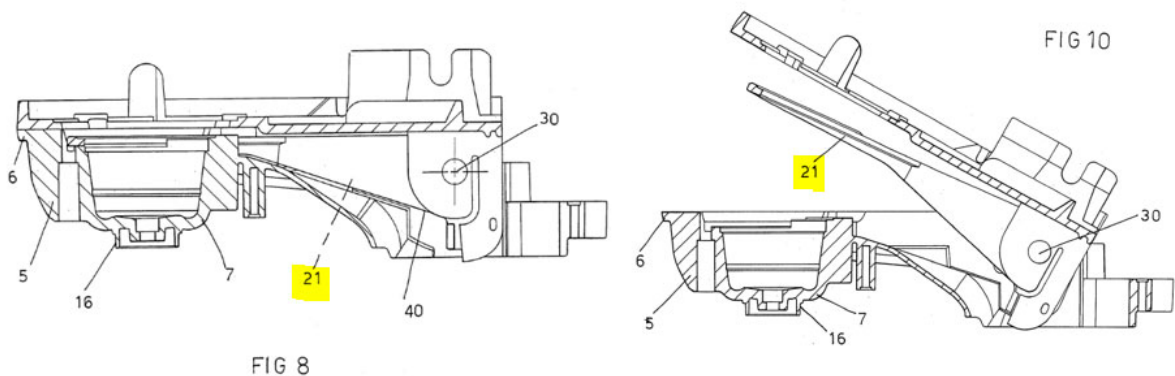
Second, Petitioner’s only support for the cited references containing “structurally similar” systems is that “Yoakim and Castellani systems utilize top-mounting capsule insertion into a brewing head as shown below:”



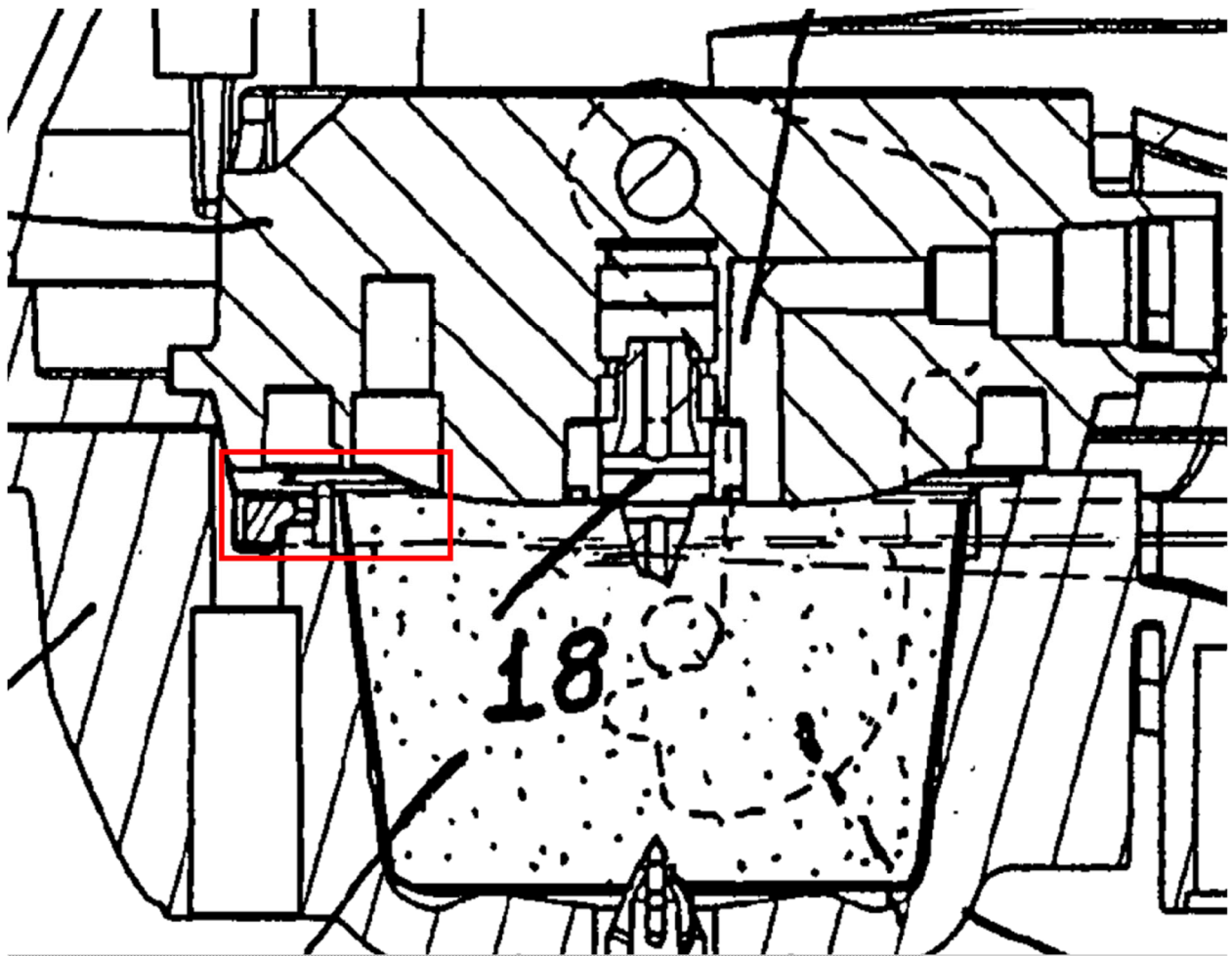
Pet., 74-77; Ex.2020, ¶135.

However, Petitioner’s annotation in blue (allegedly illustrating Castellani’s “fork element 21”) shows Castellani’s holding arms covering the “perimetrical edge portion 23” (i.e. flange) of the portion capsule in the Castellani reference. Ex.1009, Fig. 7, [0053] (“the fork element 21 will rise said capsule 10, by its annular portion 22, which engages at the bottom thereof the bearing perimetrical edge portion 23 of the capsule 10”). Assuming *arguendo* that a POSITA would be motivated to move the position of Yoakim’s code in view of Jarisch to the bottom side, the fork

element and annular portion disclosed in Castellani would obstruct the code and further prevent any capsule recognition for subsequent beverage brewing. Specifically, when Castellani's beverage machine is shown in a closed "rest position" with a single-serve capsule inside, the "fork element 21" (annotated in yellow below by PO) covers the flange of the portion capsule, thereby hindering the passage of light and recognition of a code on the bottom side, which Petitioner deems is required when combining Yoakim and Jarisch. Ex.1009, Figs. 8-10, [0022]-[0024]; Ex.2020, ¶¶136-137. And even if the code was not completely obstructed by the fork element, it would exacerbate the existing "loss of a great part of energy" admitted to have made Jarisch's teachings of a code under the flange unsuitable. *See* Ex.2021, 2:18-47. A POSITA would have been discouraged in placing the sensor in the path between the capsule holder and the waste container because doing so would result in soiling from used capsules moving between the holder and the waste container. Ex.2020, ¶¶137-138.



The fork element would also add friction to the rotation of the capsule within the brewing device, thereby preventing proper centrifugal operation. As taught by Fig. 1 of Castellani (depicting a dotted line for the fork element in a cross-sectional view), the top of the fork element remains in contact with the capsule rim after the lid is closed.



This would result in friction, in the rotation which a POSITA would seek to avoid. Ex.2025, 44:11-20 (explaining you'd want a little bit of clearance). Ex.2020, ¶138.

It is only with hindsight of the '829 Patent that one would seek to modify Yoakim in view of Jarisch for the position of the barcode on the bottom side and then further modify the combination to add Castellani's fork element to achieve the claims. The fact that Castellani's fork element covers the bottom side of the flange would lead a POSITA away from this combination and the added friction would undermine any reasonable expectation of success. Ex.2020, ¶¶133-140; *see ATD*, 159 F.3d at 546.

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.” 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., 62-66. Not so. Ex.2020, ¶¶141-154.

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., 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., 62-63 (citing Ex.1004, [0477], [0522], [0025], [0192], [0218]); Ex.2020, ¶142.

Moreover, Yoakim explains “[a] volume of water may be added *before, during or after* the centrifugal brewing operation in the capsule.” Ex.1004, [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.*, [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. Ex.2020, ¶¶143-144.

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 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, [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. Ex.2020, ¶145.

Petitioner’s argument that “[i]t would have been obvious to a POSITA reading Yoakim to only utilize the pump to supply water into the capsule *after* the identifier

is read by the sensor/detector in order to allow the system to process optimal brewing parameters before beginning the brewing process” is contrary to Yoakim’s disclosure of a “pre-wetting” step to ensure that the water has sufficient time to infiltrate the beverage material. Pet., 63; *see* Ex.1004, [0209], [0441], [0530]. Yoakim discloses a “prewetting of the capsule [that]...is carried out for a few seconds” and then “centrifugation at about 8000 rpm.” Ex.1004, [0530]. Regarding this pre-wetting step, Yoakim teaches that “[w]hen the device is in the closed position...water can be injected at a low pressure....**Then** the control unit starts the motor and the capsule is so driven in rotation at high speed to perform the centrifugal brewing operation. *Id.*, [0209]. A POSITA would have understood this pre-wetting step improves the beverage strength by increasing the “residence time of the liquid in the capsule.” *Id.*, [0309], [0442]. Indeed, Yoakim highlights the advantage of allowing “several seconds that water fills in the capsule **before** starting the centrifugal operation by rotating the capsule.” *Id.*, [0441]. As such, a POSITA would have understood from Yoakim’s teachings of pre-wetting that Yoakim presents/exemplifies a step-by-step process wherein a low-pressure pre-wetting injection via pump occurs **prior to** reading the identification means and the

centrifugal brewing operation which depends on various operational parameters.⁸
Ex.2020, ¶146.

Yoakim teaches a selection means that similarly might activate the pump. This is consistent with Mr. Jobin’s own experiences. *See* Ex.1003, ¶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, 3:64-4:5; Ex.2020, ¶147.

The Petition next relies on Rossi. Pet., 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. *See* Ex.2025, 131:16-135:3 (admitting that Rossi does not (1) mention a pump, (2)

⁸ When asked whether he was familiar with Yoakim’s disclosure of a “pre-wetting” step and when in Yoakim’s brewing process pre-wetting occurs, Petitioner’s expert could not recall his testimony regarding pre-wetting or explain Yoakim’s teachings of pre-wetting. Ex.2025, 172:6-174:24; Ex.2020, ¶146n.4.

describe how the water is supplied into the capsule, or (3) disclose any elements that supply water into the capsule). Indeed, there are many ways to supply water under pressure without a pump. Ex.2020, ¶148; *see, e.g.*, Ex.2012, Abstract, [0073], Fig. 10; Ex.2013, Abstract, [0009], [0010], [0033], [0067], Fig. 2A; Ex.2014, Abstract, Figs. 1, 2; Ex.2015, 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, 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, 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. Ex.2020, ¶149; *see, e.g.*, Ex.1004, [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, 10 (activation of a cycle requires that identifying element “**must** be recognised in combination with the validation element as validated.”). Ex.2020, ¶150.

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. Ex.2020, ¶151. “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, 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, 9. This step also does not teach the use or control of a pump to push water into the capsule. Ex.2020, ¶152.

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, 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, 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. Ex.2020, ¶153.

“[T]he 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, 13; *see also id.*, 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, [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, 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. Ex.2020, ¶154.

Rossi’s teachings fail to overcome the apparent shortcomings of Yoakim and Jarisch. Petitioner’s ground fails on this basis alone.

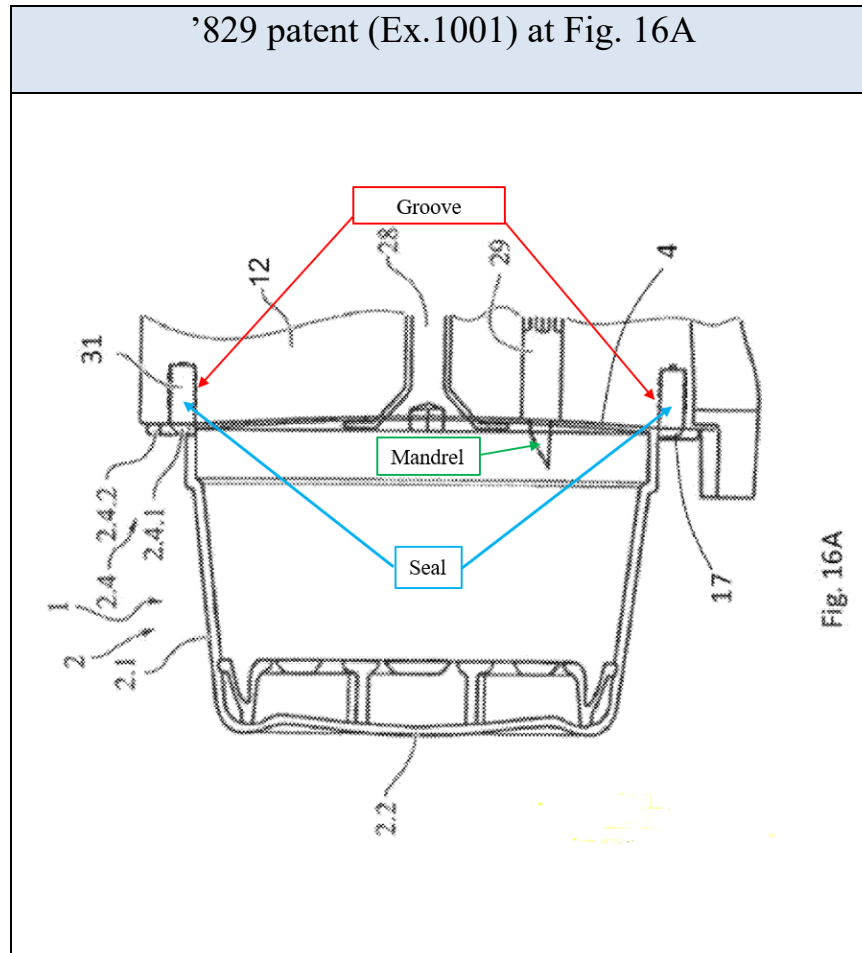
C. Yoakim Fails To Teach Or Render Obvious A Groove That Is Laterally Offset From The Chamfered Mandrel, And The Seal Is At Least Partially Seated In The Groove (Claim 4)

Claim 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., 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. *See* Ex.2020, ¶¶155-168.

The Board agrees with PO that Petitioner provides no support for its construction that the term laterally offset is determined from the centerline of the chamfered mandrel. ID, 47-48; Pet., 68-69. Under the Board’s construction, requiring the groove is “entirely to the side of any part of the mandrel,” Petitioner’s arguments fail. ID, 47-48. Ex.2020, ¶156.

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, PO’s infringement contentions (Ex.1049, 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). Ex.2020, ¶157.



But Petitioner applies a different claim construction. 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., 68-69; Ex.1003, ¶¶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 PO'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. Ex.2020, ¶¶157-158.

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)).

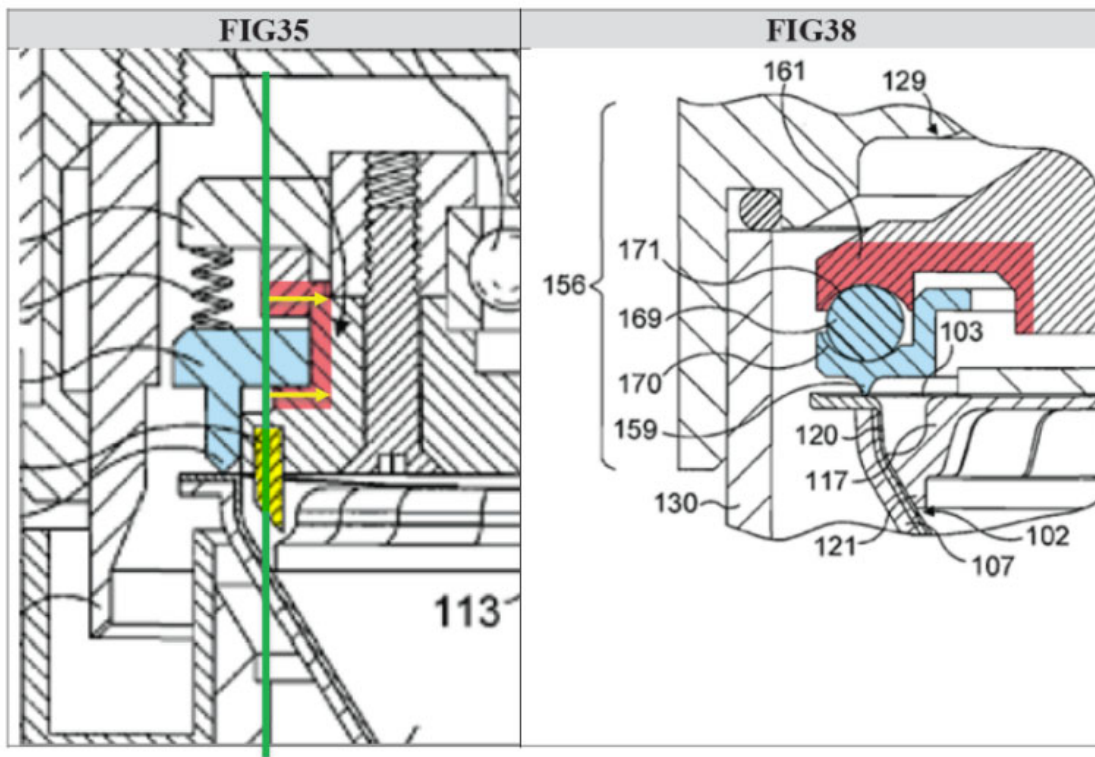
Moreover, the Board Consolidated Trial Practice Guide ("PTAB CTPG") clearly states that petitioner "**cannot** raise new claim construction issues that were not previously raised in its petition," therefore, "[i]f a petitioner believes that a claim term requires an express construction, the petitioner **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 PO'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., 68-70. Petitioner’s statutory failures are fatal, and Petitioner should not be permitted to argue inconsistent claim construction positions. Ex.2020, ¶159.

Regardless, whether PO’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. Ex.2020, ¶160.

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., 69. Mr. Jobin states that “laterally” means “off to the side (in either direction).” Ex.1003, ¶¶304-305; *see* Ex.2016, 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., 69 (annotated with yellow on spoke, other annotations in original). Ex.2020, ¶161.

Rather than positioned laterally (to the side), the groove, as Petitioner defines it, is directly above what Petitioner argues is the chamfered mandrel. Pet., 69; Ex.1003, ¶¶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, ¶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, [0387]. Ex.2020, ¶162.

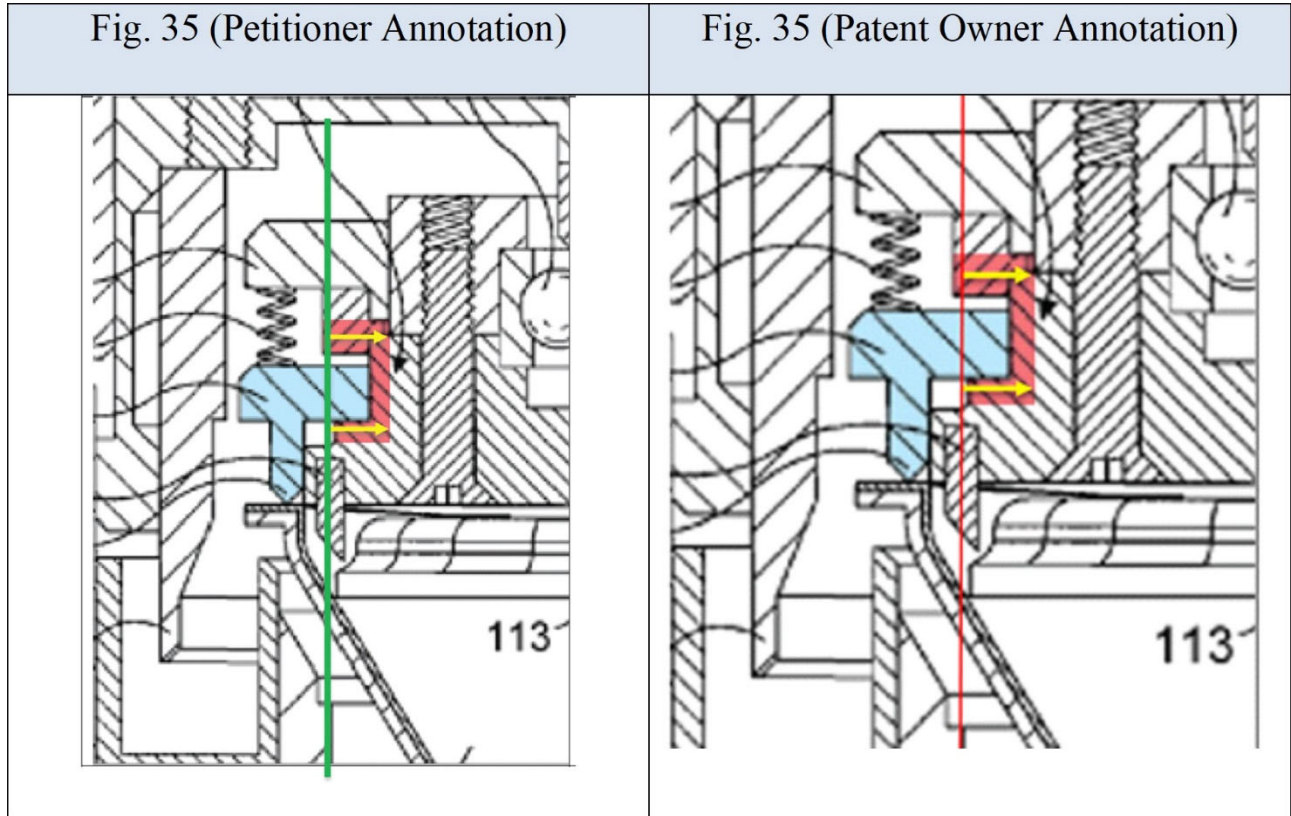
Figure 38 similarly does not disclose this limitation. The blue “seal” region identified by Petitioner in Figure 38 consists of “a rubber elastic O-ring 169” and “a lower member comprising a pinching surface 159.” Ex.1004, [0446]. The O-ring 169 is the “elastic loading means” that is maintained in place 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, [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, [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, ¶306. And Figure 38 does not depict a chamfered mandrel at all. 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, [447]. Mr. Jobin agreed. Ex.2016, 146:10-23, 147:3-23. Ex.2020, ¶163.

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 discussed, 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, 60:21-25. Ex.2020, ¶164.

The chart below depicts a line on the central axis of the chamfered mandrel (depicted on the right in red by PO) 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. Ex.2020, ¶165.

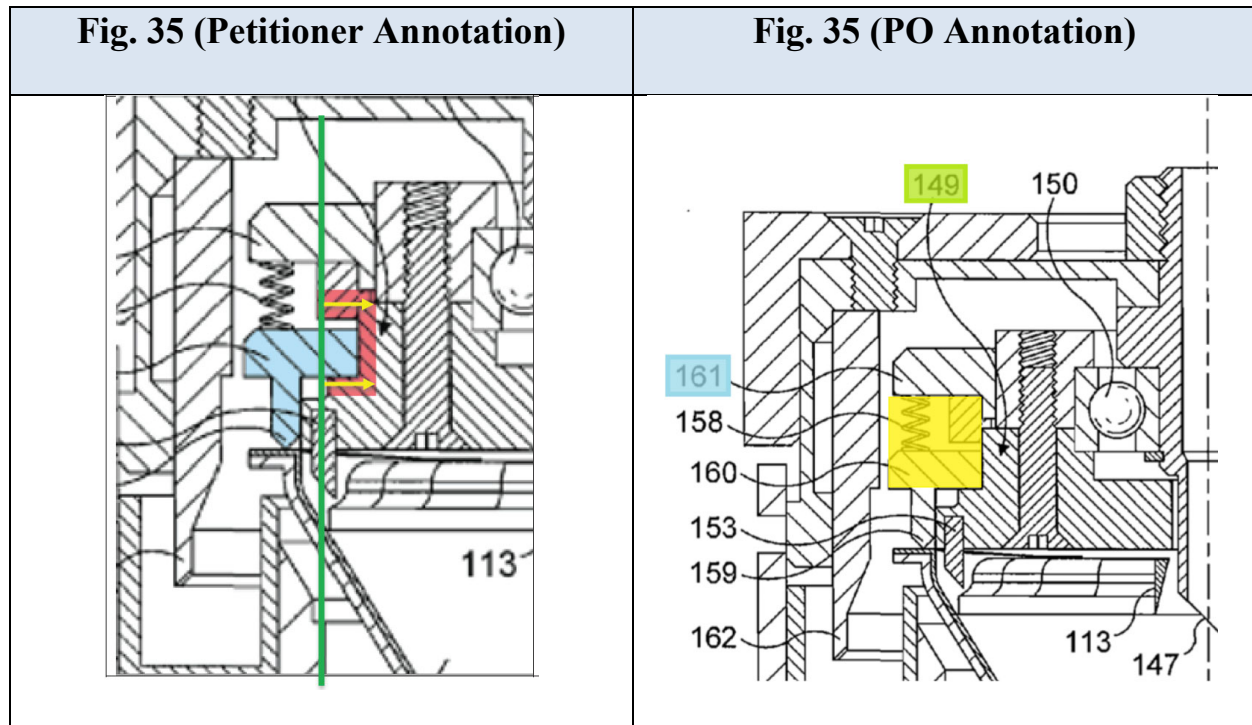


In a similar vein, Petitioner’s depiction/annotation of a “groove” in Fig. 35 is also arbitrarily alleged and is not supported by Yoakim. Petitioner concedes that reasonable minds could disagree on whether Yoakim discloses a groove *at all*. Pet.69 (“To the extent Figs. 35 or 38 do not constitute a groove...”). 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 PO 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 PO and shown below is by no means laterally offset from the chamfered mandrel. Ex.2020, ¶166.



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., 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, ¶¶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. Ex.2020, ¶167.

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. Ex.2020, ¶168. This omission is also fatal to Petitioner's arguments. *Abiomed*, IPR2017-01204, Paper 9 at 8-11.

D. Yoakim Fails To Teach A Capsule Free Of A Filter Inside of the Cavity (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., 72; Ex.2020, ¶169.

Yoakim expressly teaches his capsules contain 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, [0016]-[0017], [0375], [0376], [0338]; *see also* [0333]-[0337].⁹ Petitioner agrees. Pet., 71-72; Ex.2020, ¶170.

⁹ *See also* Yoakim's International Classification. Ex.2009, 4; Ex.2010, 2. Ex.1004, Cover (51). Ex.2020, ¶171.

As such, Yoakim teaches two capsule enclosure configurations having (1) openings/outlets, and/or (2) a porous material (*id.*, [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.

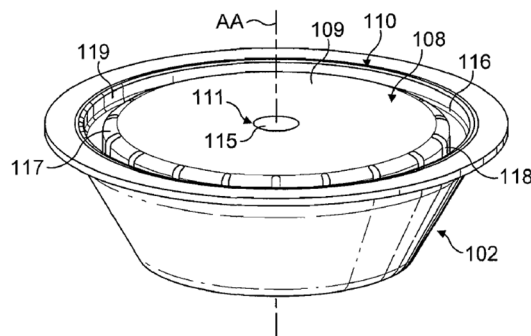


FIG. 29

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.*, [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 within the cavity. Ex.1004, [0451], [0452], Figs. 41, 42; Ex.2011, 14:13-15:22.

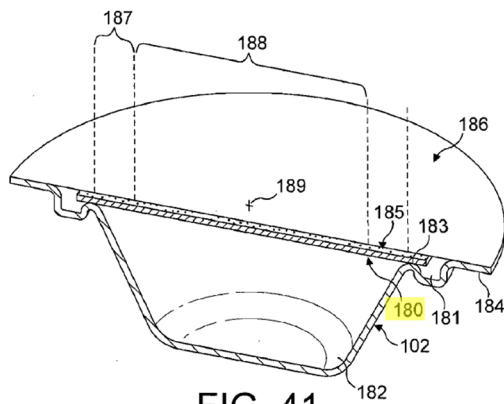


FIG. 41

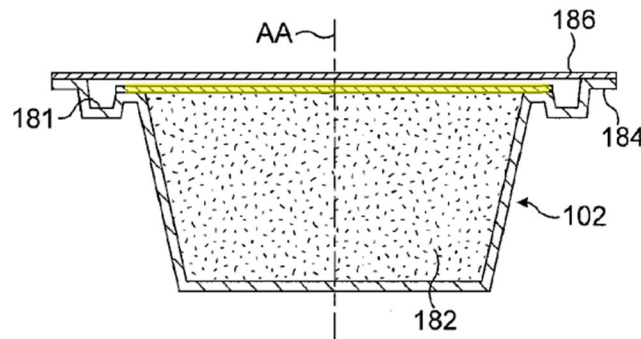


FIG. 42

Thus, Yoakim teaches his capsules have filters. Ex.2020, ¶172.

Critically, Petitioner fails to identify *any* teaching in Yoakim of a capsule free of 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, [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, [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.¹⁰ Ex.1004, [0210]; Ex.2020, ¶174.

In fact, Mr. Jobin previously testified “[a]ccording to 0171 [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, 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, [0010]; *see also id.*, [0011], [0012], [0210]. Thus, Yoakim [0171] teaches the capsule has a filter. Ex.2020, ¶¶175-176.

¹⁰ 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) but fails to identify such disclosure. *Cf. Intel Corporation v. Institute of Microelectronics, Chinese Academy of Sciences*, IPR2018-01574, Paper 23 at 11-13 (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., 72. Petitioner wrongly argues that this filter is somehow "optional," but identifies no such statement in [0343] because there is none. Ex.1004, [0343]. In the ID, the Board determined that Yoakim's disclosure that a filter is an "*optional* addition" discredits PO's argument. ID, 50 (citing Ex.1004, [0171], [0343]). This is incorrect. As the Board acknowledged, [0171] discloses "an additional filtering layer [that] can be used to filter the liquid depending on the size of the outlets" and [0343] discloses "the portion of the wall with the outlet openings." *Id.* Thus, even if the "filter" in [0171] and [0343] are deemed optional, the outlets at the wall will also serve as a filter in the cavity because they separate the liquid beverage from the solids. Ex.2020, ¶177.

Yoakim [0271] discloses "[i]n another mode, the filter could be part of the device or be formed by the puncturable membrane and piercing members." The Petition did not rely upon this disclosure of Yoakim and does not contend that a filter that is "part of the device" teaches this claim limitation. The Board should therefore not consider [0271]. *Ariosa Diagnostics v. Verinata Health, Inc.*, 805 F.3d 1359, 1367-68 (Fed. Cir. 2015) (upholding the Board's decision to decline to consider previously unidentified portions of a prior-art reference for the first time on reply). Ex.2020, ¶178.

Nonetheless, a POSITA would not conclude from this disclosure that the capsule cavity is free of a filter, as claimed. First, the embodiments preceding and following [0271] depict openings in the capsule within the cavity for filtering the liquids from the solids. *See, e.g.*, Ex.1004, Figs. 16, 17, 26-28. Second, Yoakim never describes or illustrates an embodiment where the device has a filter and thus does not enable such a centrifugal device. *Raytheon Techs.*, 993 F.3d at 1380. A POSITA would have understood that a filter solely in the device would result in beverage material solids exiting the capsule and dirtying the device, negatively impacting the device's performance and the ability to achieve "[a] cleaner operation" (Ex.1004, [0325], [0318]-[0319]). This is the very disadvantage in the prior art that Yoakim seeks to overcome. *Id.*, [0004], [0012], [0014]. Yoakim itself thus elsewhere teaches away from having a filter solely in the device. It is only with hindsight of PO's claims that one would even suggest a capsule in Yoakim is free of any filter in the cavity. Additionally, there is no suggestion in Yoakim what to do with solids retained by a system where the filter is solely in the device. Unlike a capsule filter, which is discarded with the capsule, a device filter would require removing/cleaning a dirty device after each use. Ex.2020, ¶¶178-179. Third, the Petition does not explain how a filter in the device would be understood or achieved in Yoakim, relying instead solely on Yoakim's capsule embodiments. Ex.2020, ¶180; Pet., 49-50. Fourth, to the extent that Petitioner or the Board relies upon the "puncturable

membrane and piercing members” in [0271], the piercing means would be inside the capsule cavity at the time of brewing and thus be a filter within the capsule cavity.

See, e.g. Ex.1004, Figs. 4, 35.

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., 72. To the contrary, Petitioner’s reliance on Figure 54 does not demonstrate that Yoakim’s cavity is free of a filter because Figure 54 reflects a “schematic side view of a capsule of small volume” (i.e., a simplified view) and Figure 54’s primary focus is to underscore the different capsule sets and the arrangement of the interface assembly for forming the valve. Ex.2011, 50:24-56:1; Ex.1004, Fig.54, [0080], [0083]; *see* Ex.1004, Fig. 1, [0030]. Indeed, Figure 54 does not depict any of the detailed features of the capsule, such as the food substance and lid. *Id.* Tellingly, Mr. Jobin does not have an opinion on the internals of these capsules. Ex.2025, 189:23-190:5. Moreover, any suggestion by Petitioner that the figures teach a capsule free of a filter is contrary to the disclosures of Yoakim that consistently and repeatedly describe a capsule having a filter element in the cavity. Ex.2020, ¶¶181-182.

Petitioner thus fails to satisfy its burden that Yoakim *discloses* this element.¹¹

V. Petitioner’s Grounds Must Fail Because at Least Jarisch Is Not A Patent or Printed Publication (All claims)

Petitioner’s grounds are based on a §102(e) reference. But a patent can be challenged in an IPR “only on the basis of prior art consisting of patents or printed publications,” 35 U.S.C. § 311(b)—which limits available prior art, as a matter of law, to only references that are themselves “a prior art patent or prior art printed publication.” *Qualcomm Inc. v. Apple Inc.*, 24 F.4th 1367, 1375 (Fed. Cir. 2022). Jarisch is not a patent—it is an application. It is also not printed publications because it was not publicly accessibly until after July 22, 2011—the undisputed PCT priority date. *See* Ex.1005, Cover. “[P]ublic accessibility” is “the touchstone in determining whether a reference constitutes a ‘printed publication.’” *Acceleration*

¹¹ To the extent that Petitioner seeks to rely on other paragraphs and/or teachings of Yoakim not in the Petition 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., Ariosa Diagnostics v. Verinata Health, Inc.*, 805 F.3d 1359, 1367-68 (Fed. Cir. 2015) (upholding the Board’s decision to decline to consider previously unidentified portions of a prior-art reference for the first time on reply); *Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1331 (Fed. Cir. 2019).

Bay, LLC v. Activision Blizzard Inc., 908 F.3d 765, 772 (Fed. Cir. 2018). A “mere application for patent” is neither a “printed publication” nor a “patent.” *Brown v. Guild*, 90 U.S. 181, 224 (1874) (citing Act of July 4, 1836, ch. 357, §7, 5 Stat. 117, 119-20); *see In re Wertheim*, 646 F.2d 527, 532 (CCPA 1981) (application “was not ... a patent or printed publication”).

An IPR “petitioner . . . ha[s] the burden to prove [a reference] is a printed publication.” *Id.* To do so, the petitioner must show that the reference was, before the critical date, ““made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it.”” *Id.* Jarisch was not publicly accessible before July 22, 2011. Petitioner has not attempted to prove otherwise. Accordingly, Jarisch cannot serve as a basis to challenge the ’829 Patent.

VI. Conclusion

The claims should be found not unpatentable.

Date: October 1, 2024

Respectfully submitted,

/Douglas Carsten/

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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 Response totals 13,842 words, which is less than the 14,000 allowed under 37 C.F.R. § 42.24(a)(1)(i), (b)(2).

Date: October 1, 2024

Respectfully submitted,

/Douglas Carsten/

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CERTIFICATE OF SERVICE

I hereby certify, pursuant to 37 C.F.R. § 42.6, that on October 1, 2024, a complete copy of the foregoing document and exhibits were served upon the following by ELECTRONIC MAIL:

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