

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 IPR2024-00304
U.S. Patent No. 11,465,830

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
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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
Ex. 2011	<i>Nespresso USA, Inc. v. K-fee System GmbH</i> , IPR2023-00485, Transcript of Deposition of Michael J. Jobin (Nov. 28, 2023)

Exhibit	Description
Ex. 2012	U.S. Patent Appl. Pub. No. 2009/0007792 (Pub. Date Jan. 8. 2009)
Ex. 2013	U.S. Patent Appl. Pub. No. 2008/0302252 (Pub. Date Dec. 11, 2008)
Ex. 2014	WO2008100597A1 (issued Aug. 21, 2008)
Ex. 2015	Bialetti, <i>Moka Express</i> – Bialetti, https://www.bialetti.com/it_en/moka-express.html
Ex. 2016	<i>Nespresso USA, Inc. v. K-fee System GmbH</i> , IPR2022-01574, Transcript of Deposition of Michael J. Jobin (June 22, 2023)
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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)

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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)
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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)

Patent Owner K-fee System (“K-fee” or “PO”) submits this Response to the above-captioned Corrected Petition for IPR of U.S. Patent No. 11,465,830 (“the ’830 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 ground 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 Yoakim/Jarisch/Rossi/Rapparini to arrive at the claims;
- that Yoakim, Jarisch and Rossi teach or render obvious an “optically detectable individualization identifier [] configured to be read by a

¹ All emphases added, unless otherwise 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.

sensor/detector of a beverage machine to individualize the portion capsule and to activate a pump of the beverage machine” as claimed in all claims;

- that Yoakim teaches or renders obvious a capsule free of a filter inside of the cavity as claimed in claims 7 and 8;
- that Yoakim teaches or renders obvious a ledge at the inside surface of the wall projecting towards the central longitudinal axis as claimed in claims 1-7 and 9-12; and
- that Jarisch and Rapparini are patents or printed publications, as required under 35 U.S.C. § 311(b).

’830 Patent are generally directed to a portion capsule for producing a beverage that includes a base element having a cavity in which a beverage raw material is provided and which is closed by a membrane fastened to the base element. Ex.1001, Abstract. The individualization identifier is configured to be read by a specific coffee machine to perform certain functions, including to activate a pump of the specific coffee machine. The ’830 Patent has two independent claims (Claims 1, 8) and ten dependent claims (2-7, 9-12).

During prosecution of the application resulting in the ’830 Patent, PO submitted a Supplemental IDS in which PO disclosed Petitioner’s Preliminary Invalidity Contentions for US Patent 11,254,491 (“’491 Patent”). Ex.1002, 364. This

Supplemental IDS further identified the Rapparini, Rossi, Jarisch, Jarisch 929, and Yoakim references relied on by Petitioner here. *Id.*, 366-67. PO received a Notice of Allowance on August 11, 2022. *Id.*, 373. To ensure candor before the Office, PO also submitted a Supplemental IDS on August 30, 2022, containing notice of references cited in Application No. 17/844,372 (U.S. Patent No. 11,548,722). *Id.*, 511-513. The claims of the '830 Patent were then allowed. *Id.*, 524, 532. The Petition seeks to undermine the Examiner's decision to issue the claims in view of the prior art now presented here because the Examiner never received institution decisions that issued seven months later (for the '491 Patent) and a year later (for the '430 and '923 Patents, *which IPRs were not even filed until January 24, 2023 after the '830 Patent issued*). Pet., 16; Ex.1001. This suggestion is absurd. The Petition cites no precedent or reasoning for why it would have been justified for Patent Owner to delay issuance of the '830 Patent, especially in light of PO's proactive efforts to ensure the Examiner considered Petitioner's arguments for another patent.

II. Claim Construction

The Board determined that no claims require express construction. Institution Decision ("ID") at 18-19. Under *Phillips v. AWH Corp.*, claim terms "are generally given their ordinary and customary meaning." 415 F.3d 1303, 1312 (Fed. Cir. 2005).

III. POSITA

The Board preliminarily adopted Petitioner’s definition of a POSITA. ID, 17. PO notes that Mr. Jobin offers no analysis for the level of skill and is thus entitled to no weight. Ex.1003, ¶40; Pet., 16; 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 the ’830 Patent held no engineering degree at the time of his invention, which is a relevant factor in the determination 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 Is Unpatentable

A. Petitioner's Motivations To Combine Fail (All Claims)

Petitioner argues that a POSITA would have combined Yoakim with Jarisch, Rossi, and Rapparini thus rendering the inventions of the '830 Patent obvious. Pet., 40-46, 73-76. 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, ¶¶73-157.

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 achieved 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, ¶¶73-157.

1. No Rationale To Combine Embodiments within Yoakim

Petitioner seeks to combine several different and distinct embodiments within Yoakim to cover K-fee’s claims. *See, e.g.*, Pet., 47-55, 60-62, 65-69, 72-75, and 78. As explained below, the different embodiments are a mixture of laboratory models

and schematic drawings. But there is an absence of any rationale in the Petition to support such a generic unexplained combination (*see generally* Petition) or a reasonable expectation of success, and as a result the Petition should fail. *See* Ex.2020, ¶¶76-89; *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).

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 that “it appears that Yoakim’s different figures emphasize specific features of its capsule that may be used in other capsules.” Institution Decision, 22 (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, Figs; 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, ¶¶76-77.

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, 33:24-35:23. 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 modifications here, a change to one element has effects across a host of other elements. Ex.2020, ¶78.

One of the Yoakim embodiments Petitioner seeks to rely on in Yoakim is the toothed structure of Figure 23. 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]. Those devices of Figures 8 and 9, however, are remarkably different from the devices that accept the capsules of Figs. 6, 7, 26, 27, 28, 61 that Petitioner also relies upon and seeks to combine with Figure 23. Indeed, Yoakim’s Figures 8, 9, and 23 are described as different embodiments from Figures 6, 7, 26, 27, 28, 61. *Compare id.*, [0037]-[0038], [0051]-[0052] *with* [0033]-[0036], [0054]-[0057], [0083]-[0090]. It has also not been shown how the Figures 23/24 embodiment would work with the system of Figure 61. Petitioner’s expert conceded “as for Figure 8, I haven’t considered that one in detail.” Ex.2025, 183:2-3; Ex.2020, ¶¶79-80.

A POSITA would have understood that Figures 8-9 (and related capsules) illustrate a *laboratory* setup that would not be acceptable and that Yoakim did not intend those teachings to be applied to later described embodiments due to their lack of acceptability. Moreover, Figures 8-9 and the related capsule embodiments show a capsule that is not pierced by a mandrel, does not have an identifier or flange, and

does not bear against a seal. These differences (and others) are a consequence of the devices in which the capsules are compatible. This all demonstrates to a POSITA that disclosed features of Yoakim's capsules are not interchangeable in a predictable way. A POSITA thus would not combine features from one capsule and arbitrarily add them into another capsule, absent some need or motivation in the device design for doing so and would not have had a reasonable expectation of success in doing so. Ex.2020, ¶¶81-82.

Petitioner's efforts at cobbling together Yoakim's many capsule embodiments are driven by hindsight based on motivation gleaned 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, ¶¶88-89.

a. Yoakim has a long history of distinct inventions that the Petition fails to address.

Despite all the disparate teachings and lack of motivation to combine within Yoakim itself, nowhere has Petitioner explained why a POSITA would have been

motivated to combine the different teachings of those embodiments. Ex.2020, ¶¶90-105.

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 cannot be cured. *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 Yoakim embodiments, 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. 47-55, 60, 62-63, 66-69 (alleging a combination of Yoakim's embodiments of Figs. 4, 6-7, 23, 26-28, 35, 37-38 61 for independent claims 1 and 8), 72-73 (additionally relying on Yoakim's embodiments of Figs. 54-60). Ex.2020, ¶¶90-91.

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. For example, Yoakim Fig. 4 does not have a valve. In contrast, other embodiments of Yoakim teach multiple different valve alternatives some using the lid, some using an engaging wall, and some using 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

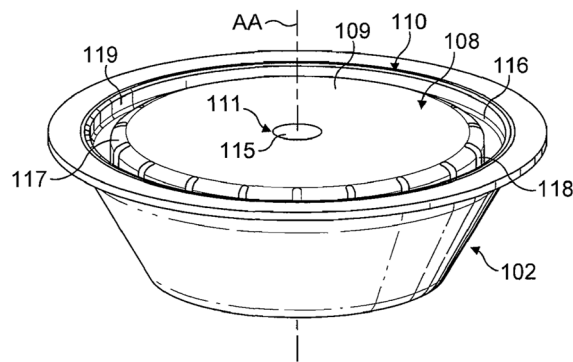
fungible features, when in fact they are unique and distinct to specific embodiments.
Ex.2020, ¶¶92-93.

The ID observes that “the claims of the ’830 patent are directed to a portion capsule, not a brewing system.” ID at 24. But, as explained above, the features of the devices are instructive of the ability to combine features of Yoakim’s capsules. Indeed, Yoakim’s express disclosures of different capsules specific for different devices demonstrates the capsule structure is directly correlated to the device for which it is compatible. For example, not all capsules require puncturing by a mandrel. *Compare* Ex.1004, Fig. 35 *with id.*, Fig. 37. Similarly, not all capsules have an identification means. *See, e.g., id.*, Figs. 54, 55. Consequently, the collection of features of the specific capsules and brewing systems are unique to their usage. There is no basis within Yoakim or elsewhere to mash together disparate features into a single capsule. Doing so requires hindsight. *See* Ex.2020, ¶¶98-99; *ATD*, 159 F.3d at 546; *In re Fine*, 837 F.2d at 1075.

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 Petitioner's reliance on Yoakim's other embodiment depicted in Figs. 61 and 62, Petitioner has not addressed that the capsules of Figs. 61 and 62 do not 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, ¶94.



Ex.1004, Fig. 29

Moreover, Petitioner has not addressed an even more compelling distinction in that the lab model of Fig. 35 (below) employs a specific valve assembly for that type of capsule (Figs. 28-31 type of capsule) which Yoakim depicts and describes as a water injection subassembly 129 shown in Fig. 36 (as having a peripheral collection recess 116) and described in paragraphs [0429] and [0434]-[0440]. This valve system lacks any place for an identification means. Ex.2020, ¶95.

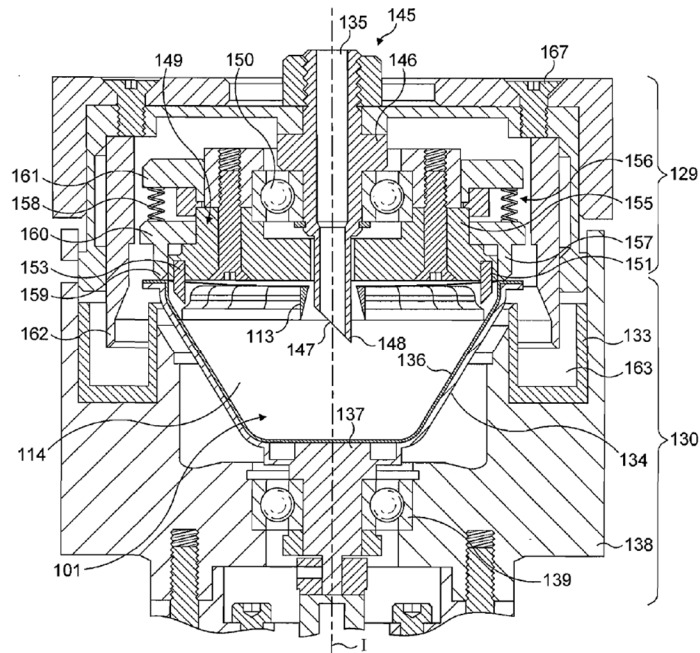


FIG. 35

Ex.1004, Fig. 35.

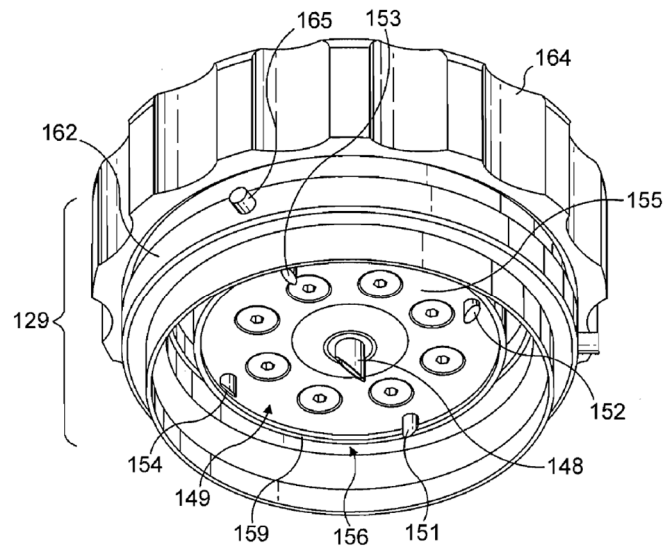
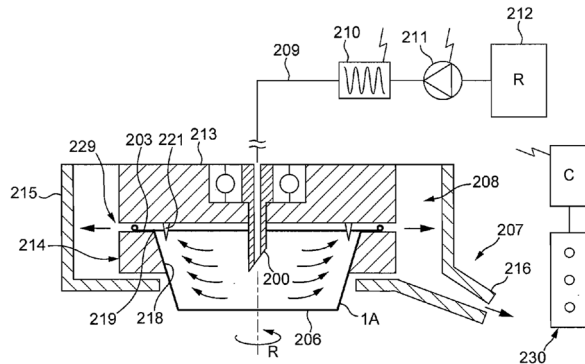


FIG. 36

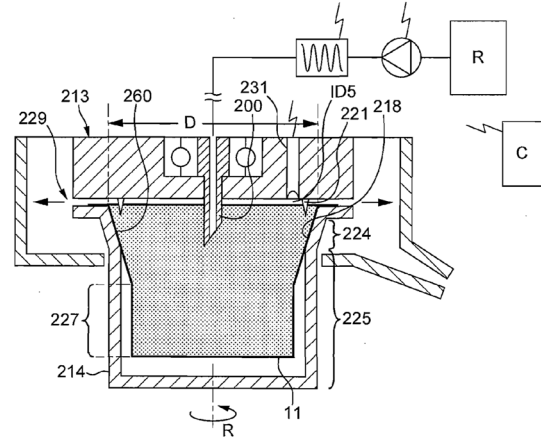
Ex.1004, Fig. 36.

It is the V-shaped surface 159 (depicted in Figures 35 and 36 above) that Petitioner relies upon as teaching the claimed seal arrangement. *See* Pet., 67-69. 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, ¶96.

In contrast, the system of Figs. 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* Exs.2001 (EP 08171069), Ex.2002, Cover (30) (citing EP 08171069 for priority), Figs. 4-6. Ex.2020, ¶97.



Ex.1004, FIG. 54



Ex.1004, FIG. 62

The difference is of such a nature that Petitioner's affiliate and RPI distinguished over its Yoakim I to obtain U.S. Patent No. 9,545,121. *See* Ex.2003, 3-6 (distinguishing over differences in valve engagement); Ex.2002, Figs. 4-6 (illustrating similar structure to Yoakim's Figures 32-36 in Figs. 4-6); Ex.2004 ("Yoakim I"), at Figs. 7-19. Ex.2020, ¶100.

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 also id.*, 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, ¶101.

The Petition’s overreaching in combining Yoakim’s disparate features is further evident for elements [1.f], where the Petition changes course from relying on laboratory set up compatible Yoakim’s non-toothed capsule embodiment (i.e., the one illustrated in, e.g., Figures 27 and 61 (*see* Pet., 45-55, 65-66)) to relying on the laboratory set up compatible toothed capsule embodiment of Yoakim’s Figure 23 (Pet., 56). In the Institution Decision, the Board preliminarily determined that Petitioner’s reliance on Figure 23 is “to indicate Yoakim contemplates that a portion capsule can have drawn structures.” Institution Decision, 47. But it is not enough to say a modification “could be” done. *PersonalWeb Techs.*, 848 F.3d at 994-95. The Petition never establishes any motivation for such drawn structures on the capsule embodiment of Figures 27 and 61. *See* Pet., 56-59. Yoakim describes the capsule of Figure 27 as “a preferred capsule” (Ex.1004, [0414]) and the capsule of Figure 23 as “another capsule of the invention” (*id.*, [0215]). They are thus taught by Yoakim to be different capsules for different systems serving differing purposes. Ex.2020, ¶102.

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, as explained above, 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 deflectable lip 82. *See id.*, [0521]; *compare* Figure 61 (showing identification means above the capsule) *with* Figure 8 (no identification means depicted); Pet., 70, *see also*, Ex.1004, [0131], [0200], and [0202]. Indeed, the brewing systems, including the flow restriction arrangement, of the embodiments of Figures 8 (deflectable lip and no valve) and 61

(valve and no deflectable lip) are notably different, evidencing Yoakim's abandonment of the laboratory set up. Ex.2020, ¶¶103-104.

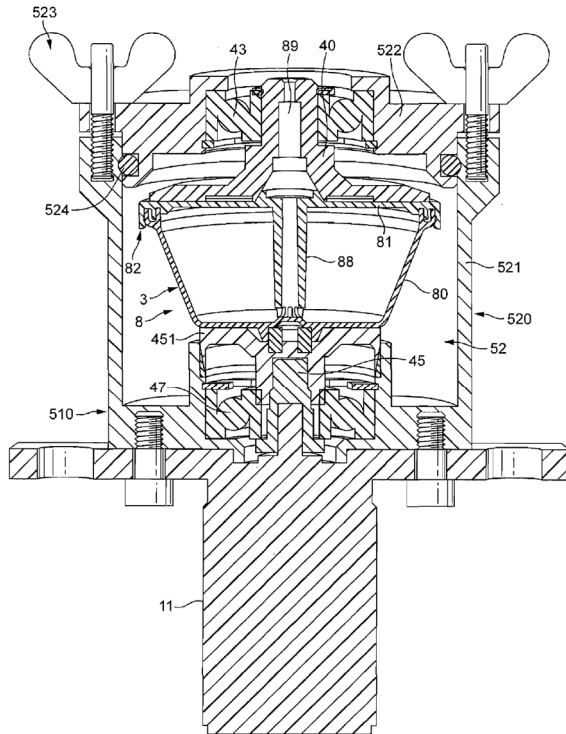


FIG. 8

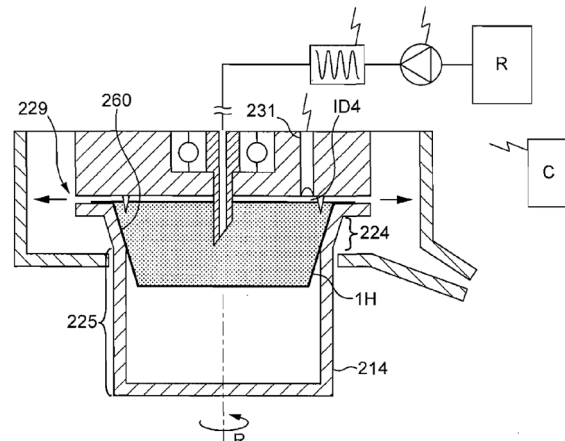


FIG. 61

There is thus no rationale for combining the teachings of the laboratory toothed embodiments and the non-toothed embodiments. Ex.2020, ¶¶102-105. 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; *Abiomed*, IPR2017-01204, Paper 9, 11.

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., 43, it does not address at all whether there exists a reasonable expectation of success in such a combination to achieve an optically detectable identifier configured to be read by the sensor/detector. As explained below, the evidence shows there is not. Ex.2020, ¶¶106-145.

a. Jarisch and Jarisch 929 Do Not Enable an Optically Detectable Identifier on the Bottom of the Flange

“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.

Here, the claims require an “optically detectable identifier, which is carried on the bottom surface of the rim.” Jarisch teaches first a code on the top of a capsule. Ex.1005, Figs. 2-3, [0040]-[0062]. The code is read without any obstructions between it and the sensor. *See id.*, Fig. 2-3; Ex.2025, 138:22-139:17. This embodiment is purportedly further described in Denisart. *Id.*, [0034]-[0035]; *see* Ex.1007.³ Jarisch then discloses the code “on the bottom side 72 of its rim 73” (*id.*, [0064]), but sending the light through a cell (and reflected by a mirror). *Id.*, [0082]; Ex.2025, 140:6-143:3. Jarisch’s “bottom side” embodiment, however, fails to enable any optically detectable code because it provides nothing more than the code and general structure of the capsule, reader, and capsule holder.⁴ Ex.2020, ¶¶116-117.

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 Jarisch929 (and thus Jarisch) did not work. In

³ 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, ¶116n.1.

⁴ Jarisch929 suffers from the same defects. *See* Ex.1006, Fig. 3; Ex.2020, ¶116n.2.

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; *see also id.*, 3:7-13. Thus, the support on the capsule of Jarisch lacked an optically detectable, machine-readable code and Jarisch lacked sufficient disclosure to enable a code that could be read/detected. Ex.2020, ¶¶117-118.

Jarisch also conceded challenges due to the code being “relatively complex to integrate to the packaging structure forming the capsule itself.” Ex.2021, 3:9-13. 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 code (after PO’s PCT) and abandoning the mirror disclosed in Jarisch. *See generally* Ex.2021. Mr. Jobin conceded that “[i]t can be years” 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, ¶¶118-120.

Moreover, for these same reasons, Petitioner's contention of expectation of success in combining Yoakim and Jarisch must fail, because Jarisch does not teach "how to read a code positioned on the bottom of the capsule flange." *See* Pet., 39-401; Ex.2021; Ex.2022. Petitioner does not cite anything else in support of placing the code under the flange. Ex.2020, ¶120.

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 of the flange would result in the reading of such code being more reliable, allegedly because it is less prone to damage. Pet., 42. As just explained, Christian Jarisch and his co-inventors conceded that reliability was a problem with Jarisch and Jarisch929's teachings that they later sought to partially address. Ex.2021, 3:14-15. Regardless, Jarisch does not teach or suggest any rationale for moving the support to the underside of the capsule rim. Petitioner cites Jarisch [0014], [0022] and Jarisch 929 [0017]-[0018] (Pet., 13), but those passages are silent on any motivation to move the support and instead summarily assert it can be done. *See id.*; Ex.2020, ¶108.

There is no reason to believe that Yoakim's placement of a "barcode" on the top of the membrane would suffer from readability issues given that Yoakim's device reads the "barcode," without any obstruction before brewing when a capsule would not yet be soiled by beverage residues or damaged. Ex.1004, [0525], [0526].⁵ Indeed, Yoakim teaches capsule holders that would not exhibit the problems described with Jarisch's system. For example, Jarisch illustrates a support on the top of the capsule that sits within a dished area that is read from the side of

⁵ To the contrary, Petitioner identifies Panesar as a motivating reference for "the benefits of positioning the barcode away from liquid injection areas to avoid 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 or Jarisch 929) to move the code in Yoakim. *See* Ex.2020, ¶110; *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).

the capsule. *See, e.g.*, Ex.1006, Fig. 3. Unlike this dished area, which would have the potential to collect residues, Yoakim teaches a capsule that is not dished where the sensor reads from directly above. *See* Ex.1004, Fig. 61. There is thus no reason to modify Yoakim's design in the manner suggested by Jarisch. *In re Schweickert*, 676 Fed. App'x 988, 995 (Fed. Cir. 2017); Ex.2020, ¶109.

Moreover, as illustrated below, the barcode (ID4 in the yellow region) is inboard of the tapered outlet perforators 221 (annotated in red) so when the capsule is spinning, the centrifugal forces acting on the fluid would drive any fluid out of the holes created by the perforator and in a direction radially away (annotated in green) from the sensor and 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 membrane forming a seal around the piercing inlet. Ex.1004, [0128], [0449]. Ex.2020, ¶111.

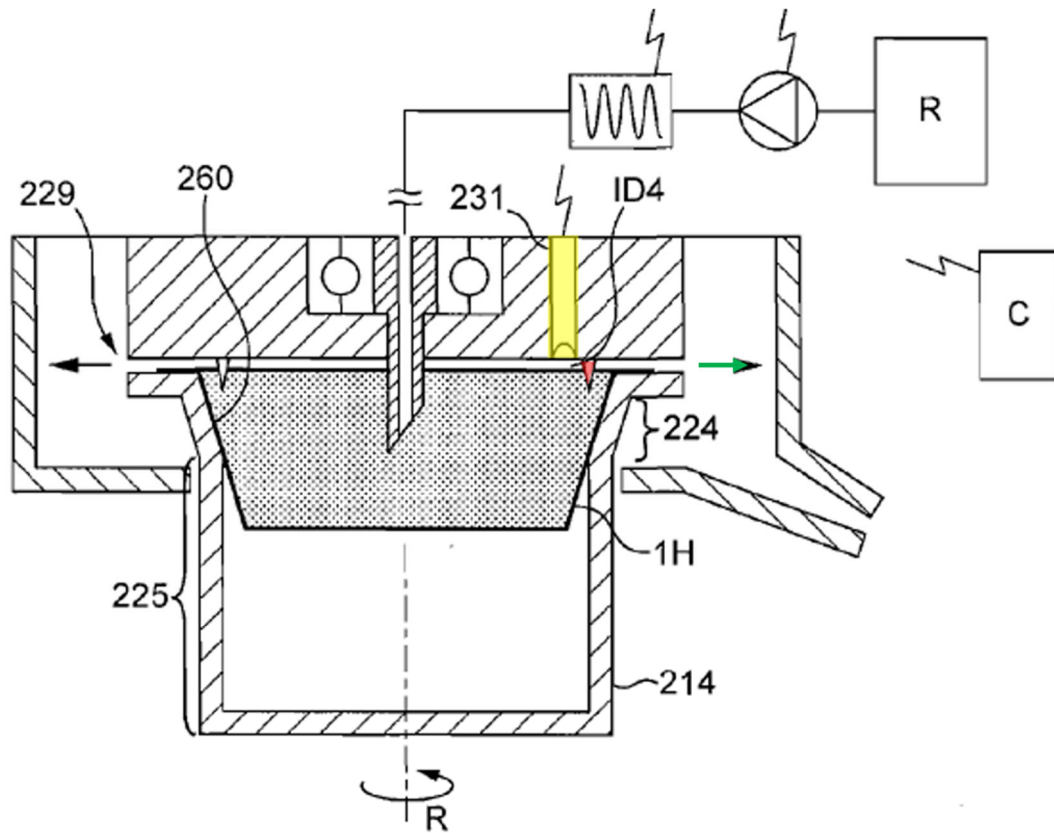


FIG. 61

Thus, the Petition has not shown that Yoakim's sensor 231 or barcode would be soiled and that such a modification would be necessary or beneficial. Ex.2020, ¶111. 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).

The teachings of Yoakim and Jarisch are also contrary to the alleged combination due to the insufficient space on Yoakim's rim (*see, e.g.*, Fig. 23) to accommodate the code of Jarisch. Petitioner's expert contends that a POSITA would have been motivated "to modify Yoakim to include Jarisch's a code on the bottom of the flange." Ex.1003, ¶209. 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 Petitioner's expert never contends that the bottom of the flange of Yoakim would provide adequate space for the code. *See id.* This is not surprising because Yoakim teaches an annular portion that extends only "about 2-5 mm." Ex.1004, [0414]. Ex.2020, ¶112.

In contrast, Jarisch teaches placement of the code at a distance as much as 10 mm from the peripheral edge. Ex.1005, [0037]. Yoakim lacks such a large area on the annular portion. And the Petition lacks any evidence to reconcile Yoakim's teaching of an annular portion that extends about 2-5 mm with Jarisch's teaching of a large rim at least double the size of Yoakim's. The Petition thus lacks any basis to conclude that Yoakim's annular portion provides sufficient space. This is especially true when other features such as the toothed structure of Yoakim's Figure 23 are also added, the effect of which is to further diminish the 2-5mm

margin by the teeth 750.⁶ It has also not been shown how the addition of teeth as taught by Yoakim's Figures 23 and 24 would allow light to pass through the capsule holder (Figure 24) without interference or how beverage would flow from the capsule. Ex.2020, ¶¶113-114

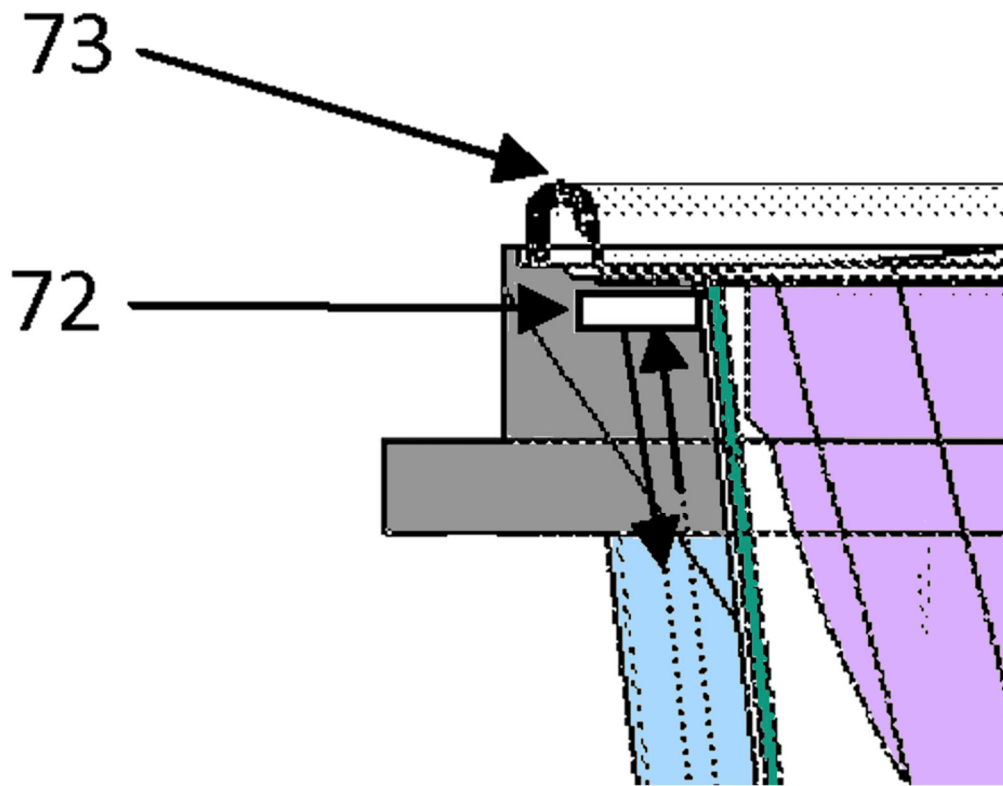
To the extent there was any interest in moving the identification means in Yoakim, the skilled artisan would have more readily placed the code on the unobstructed bottom of the capsule rather than the flange. *See* Ex.2020, ¶¶108-115.

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 "the optically detectable individualization identifier is configured to be read by a sensor/detector of a beverage machine." '830 Patent, cls. 1, 8. 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, ¶¶127-145.

⁶ PO notes that it will be discussed later that the disclosed structure also imposes obstacles upon the POSITA when seeking to combine the Rapparini reference because the grooves in Rapparini intersect with the flange thereby reducing the "large area" required for the Jarisch code.

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, ¶130.



The Petition fails to address where such a “snug” fit disclosed in Yoakim would be abandoned in favor of in favor of the configuration in Jarisch, absent hindsight. 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.*, [0094], [0205], [0216], [0507], [0512], [0517], Figs. 54, 55, 61, 62, 65. Yoakim explains that as a result 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 also id.*, [0478], [0484], and [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, ¶131.

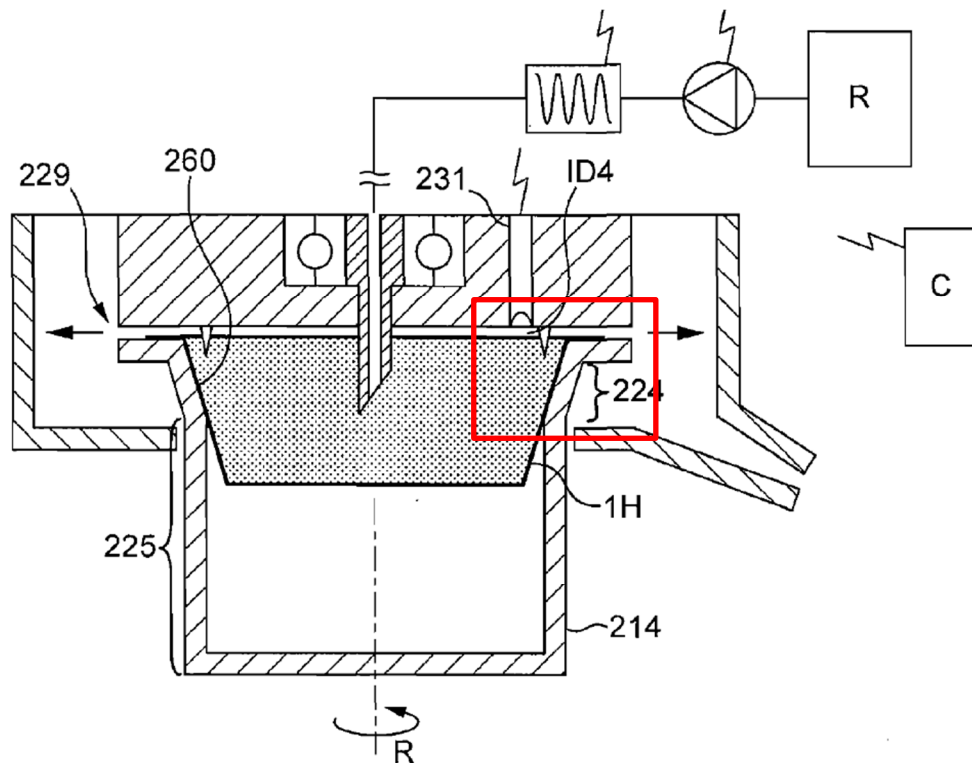


FIG. 61

Jarisch teaches that “the capsule of the invention” is designed for use in the system of “WO2010/026053” (Denisart, Ex.1007). Ex.1005, [0034], [0035]. 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. Desinart is silent as to any “unbalance” or vibration problems. Ex.1007. The Petition simply does not address 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” (*id.*, [0261]). Ex.2020, ¶132.

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 performs a safety function, the 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, ¶133. “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. Broad Institute, Inc.*, 903 F.3d 1286, 1291 (Fed. Cir. 2018).

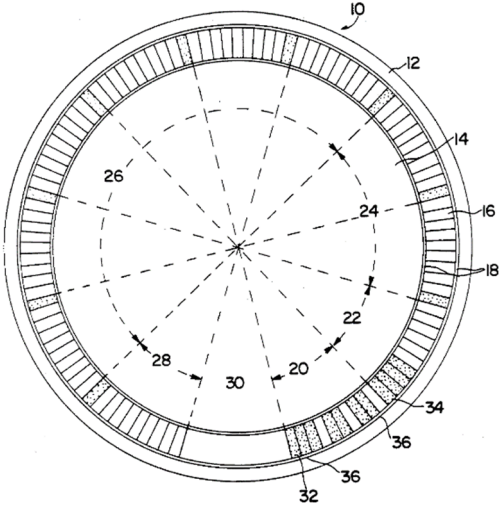
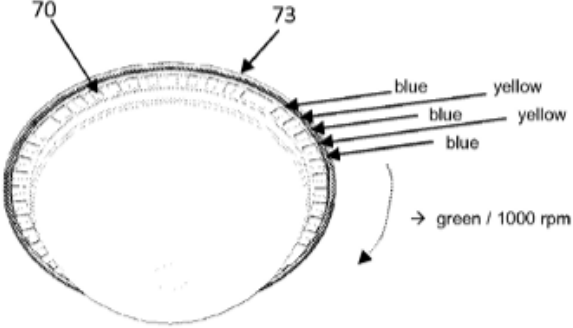
Here, as Petitioner contends, “[t]he Jarisch optical reader configuration is depicted below [in the annotated Figure 5] in order to read the code on the capsule (yellow) with the light path (red) shown from detector (62) to capsule rim (73).” Pet., 43. However, the “sensor/detector (231) enabled to identify and read an optically detectable identifier (ID4) on a capsule” as described in Yoakim is positioned to read a code on the opposite side of the capsule. Pet., 60; *see also* Ex.1004, [0525], Figs. 61, 62. Ex.2020, ¶133.

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 & 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. 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, ¶134.

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, 2; *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, ¶135.

Table 1

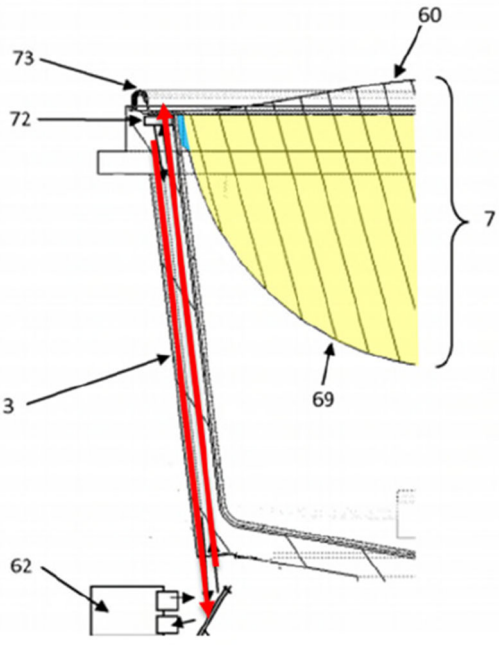
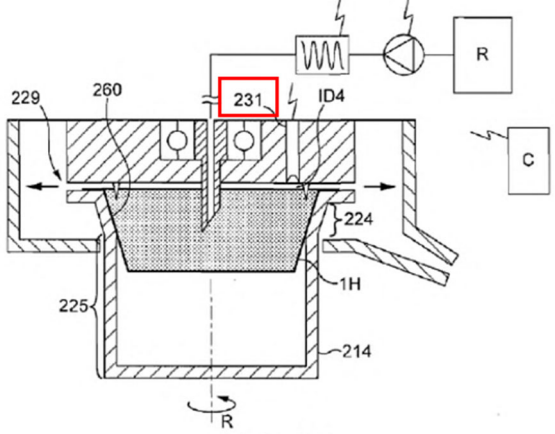
Fisher (Ex.2024 Fig. 1)	Jarisch (Ex.1005 at Fig. 7)
 FIG. 1	

Compare Ex.2024, Fig. 1 (left), Abstract with Ex.1006, Fig. 2 (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

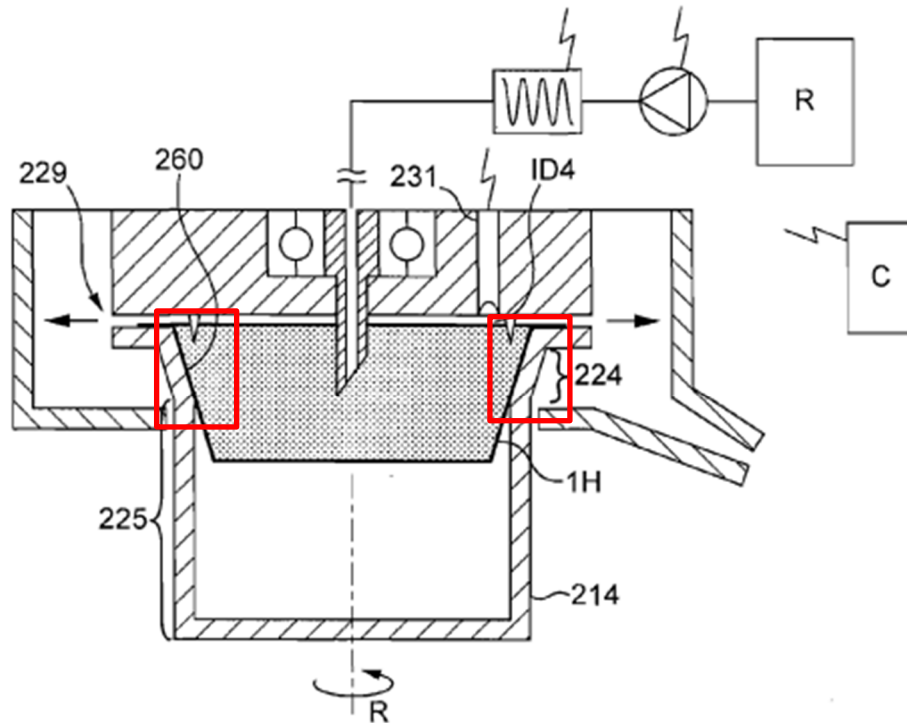
POSITA would have somehow been motivated to make such a combination. But again, Petitioner has not explained how or why a skilled person would modify Yoakim with Jarisch, which would require (among other things) a complete reconfiguration of the multiple combined embodiments of Yoakim. Ex.2020, ¶136.

Recall that a POSITA would have been discouraged from combining Jarisch and Yoakim because of the potential “unbalance” described by Yoakim at paragraph [0507] that requires the snug fit. However, assuming *arguendo*, a POSITA would have moved the system shown in Jarisch into Figs. 61 and 62 in Yoakim, a POSITA would not have then sought to combine the annular V-shaped valve structure of Yoakim Figs. 35 & 36, 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, ¶¶137-138.

Table 2 –Sensor Placement

Jarisch	Yoakim
 Pet., 43 (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 a machine-readable code (*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, ¶¶139-140.



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. In sum, the Petition fails to demonstrate that a POSITA would have a reasonable expectation of success. Ex.2020, ¶¶140-142.

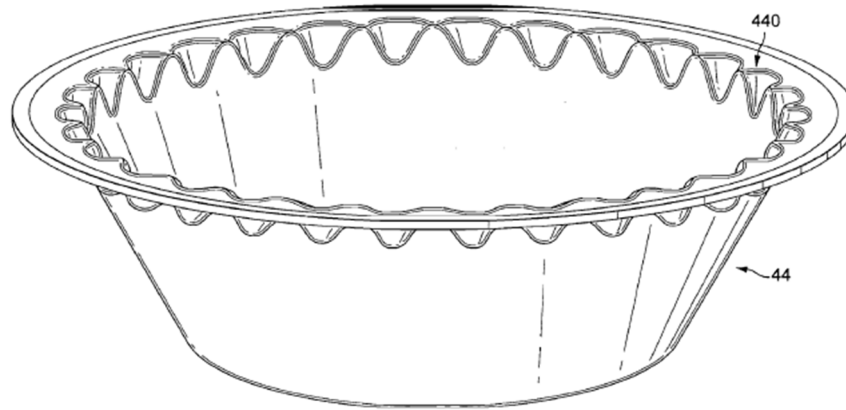


FIG. 24

Here, the complicated optics assembly required in a harsh brewing environment required more than a conclusory assessment that the POSITA could have combined Jarisch and Yoakim. *See* Ex.2021, 2:18-47. 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. Ex.2020, ¶¶142-143; *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, ¶¶144; *see, e.g., In re Ratti*, 46 C.C.P.A. at 981 (rejecting prior art combination because the combination “would

require a substantial reconstruction and redesign of the elements shown [in the prior art] as well as a change in the basic principles under which [the prior art] construction was designed to operate”); *In re Schweickert*, 676 Fed. App’x at 995; *Saiki*, Appeal No. 2000-0373, 2002 WL 32102452, at *3 (B.P.A.I. Jan. 17, 2002); *Salerno*, Appeal No. 2011-004947, 2013 WL 5603478, at *2 (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, ¶145.

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., 41, 87 (listing Petitioner’s RPIs).

During prosecution of Jarisch (Ex.1005), a priority application to Yoakim (WO2008/148601, “Yoakim ’601”) (Ex.2006), was cited against Jarisch. 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, 23 (below); Ex.2020, ¶¶121-123.

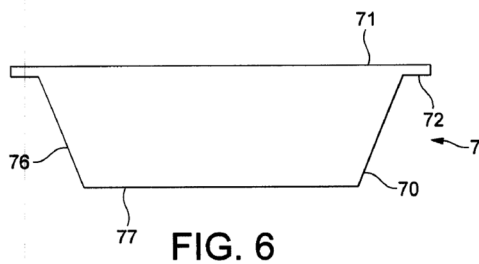


FIG. 6

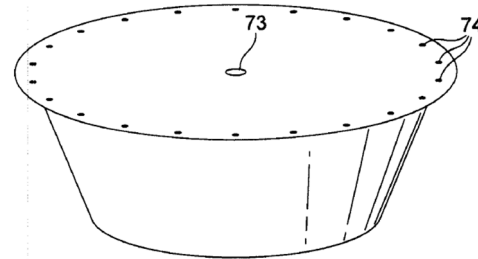


FIG. 7

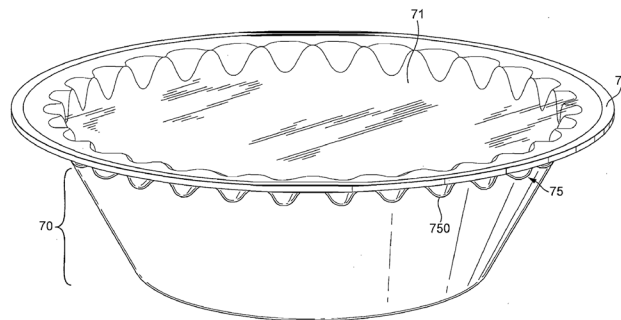


FIG. 23

See also Ex.2005, 8-9.

In brief because Yoakim (Ex.1004) is a continuation-in-part of the Yoakim '601 reference and Figure 23 of Yoakim '601 is identical to Figure 23 of Yoakim, Petitioner's prior arguments that Yoakim was not combinable undermine Petitioner's arguments now to the contrary. *See* Ex.2020, ¶¶121-126.

3. No Motivation To Combine Yoakim/Jarisch with Rossi

The Petition argues that this combination with Rossi would have been obvious for the benefit of providing safety “for ensuring that an appropriate capsule is used.” Pet., 44. 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] (“a safety function for ensuring that only capsules adapted to the system can be used and brewed successfully”). Petitioner thus again argues for another unnecessary and redundant feature to be added to Yoakim. Ex.2020, ¶¶146-153. This too should be rejected. *In re Schweickert*, 676 Fed. App’x at 995.

Petitioner also suggests that the safety features of Rossi would be necessary in Yoakim due to Yoakim’s teaching of pressure. Pet., 44. But the Petition fails to identify any teaching in Yoakim of **high** pressures that are the concern in Rossi. Indeed, Yoakim differentiates its methods from “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, ¶147.

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.

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], (“water is pushed by the effect of gravity”), [0209] (“water can be injected at low pressure.”), [0413] (“Water can be introduced at relatively low pressure or a pressure close to gravity.”), [0428] (“a pressure of between 0 and 2 bar above atmospheric pressure can be envisaged at the water inlet of the module”). 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 suggest. Ex.2020, ¶¶148-149.

As to Yoakim’s teachings relating to “espresso,” the Petition seems to ignore that the teachings are directed to beverage size by using specific capsules of a capsule set—not the method for making espresso or any pump pressure involved. *See, e.g.*, Ex.1004, [0471], [0476], [0526] (“in particular coffees, of different 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”

Ex.2007, 3 (“2011 – Nespresso launches the PIXIE machine”); Ex.2008, 13 (describing specification “Pmax 19 bar”). Ex.2020, ¶147.

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 pump systems in favor of centrifugal, low or no water delivery pressure, systems. Ex.2020, ¶150.

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, ¶153.

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, ¶152.

4. No Motivation To Combine Yoakim/Jarisch with Rapparini

Rapparini describes a manufacturing process for containers by means of thermoforming starting from a flat strip of permeable, filtering and thermoformable material, wherein the body of the container comprises longitudinal stiffening ribs. Ex.1008, Abstract, [0010], [0023]. The ribs are provided for stability in packaging and/or filling at high production rates. *Id.*, [0003], [0007]. A POSITA reading the application would have understood that while Rapparini describes the use and application of the container in moka pots, suspending it by a wire, and including a suspension tab, no figure or description is offered for use in centrifugal espresso machines, such as Yoakim and Jarisch. *See generally id.* Indeed, a POSITA would have understood from the figures of Rapparini that no specific embodiment for any espresso machine is depicted. A POSITA would recognize that Rapparini's container is not suitable for use in a centrifugal espresso machine due to its body's permeability, which would result in spillage in such machines. Moreover, Petitioner's argument based on Rapparini at [0067] states the invention "can be applied to other capsule materials (which includes metal)" is unfounded because

Rapparini at [0067] does not mention metal. *See* Pet. at 43; Ex.1008 at [0067]. Ex.2020, ¶¶154-157.

Accordingly, a POSITA would not have looked to Rapparini's permeable containers to modify Yoakim's sealed capsules. Indeed, Rapparini on its face is directed to "the field of filtering and permeable containers" (Ex.1008, [0001]), which Yoakim and Jarisch are not. *See* Ex.1004, [0027], [0096], [0110], [0129]; Ex.1006, [0049].⁸ Rapparini is silent as to any benefit realized from his invention in providing stability to non-permeable containers and thus provides no motivation for applying its ribs to those containers. *See id.*, [0007] ("the present invention guarantees stability of the structure of filtering and permeable containers"). Moreover, Yoakim lacks any suggestion that packaging and/or filling at high production rates would have been a problem. It is only with hindsight of the '830

⁸ Petitioner incorrectly contends that Rapparini "states its invention can be applied" to metal capsules, as claimed in the '830 Patent. Pet., 74. Not so. This too is based solely on hindsight. A POSITA would have understood from Rapparini's disclosure of "thermoforming" (Ex.1008, [0010], [0026]) a permeable capsule that Rapparini teaches a solution for plastics. Ex.1029 at 13 ("Thermoforming is the process of heating a plastic material"); Ex.1026, 11. Rapparini in no way teaches or suggests ribs on a deep drawn capsule made of metal, as claimed. Ex.2020, ¶155n.3.

Patent that one would seek to modify Yoakim's sealed capsules to add the ribs of Rapparini's permeable containers to achieve the claims. The different applications and the fact that Yoakim's capsule bodies are not permeable would lead a POSITA away from Rapparini. Ex.2020, ¶155.

Petitioner argues that “Yoakim already contemplates a capsule using a textured body,... as Yoakim explains that they can be used to engage the capsule in the centrifugal brewing system.” Pet., 44. But this does not provide a motivation for looking to permeable filters for modifying Yoakim's capsules and again relies entirely on impermissible hindsight, since Yoakim teaches capsules without “a textured body” already engage the capsule in the brewing system. Ex.1004, [0479]. There is thus no motivation to modify the capsules for that purpose alone in Yoakim because doing so would be redundant and superfluous. *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1369 (Fed. Cir. 2012) (finding no reason to combine features from reference where device already operates effectively and accomplishes the same function); *ATD*, 159 F.3d at 546. Notably, Yoakim himself tested using permeable capsules in centrifugal brewing devices and concluded the results were “poor.” Ex.2023 at 2-5, 13-14. Ex.2020, ¶156.

Finally, the claims here require “a barrier layer to prevent moisture or aroma from escaping out of the portion capsule.” Claim [1.m]/[8.m]. Petitioner contends that Yoakim teaches such layers. Pet. at 62. But Petitioner does not explain why a

POSITA would have looked to teachings of a permeable capsules when seeking to modify capsules designed to prevent moisture or aroma from escaping out of the portion capsule. They would not. Ex.2030, 9 (Petitioner’s RPI arguing “a person having ordinary skill in the art would find no motivation or reasonable expectation of success in modifying a filtering, permeable container to include oxygen barrier or gas barrier layers...”); Ex.2020, ¶157.

B. The Art Fails To Teach or Render Obvious an Optically Detectable Individualization Identifier that Is Configured To Be Read by a Sensor/Detector of a Beverage Machine To Activate a Pump of the Beverage Machine (All Claims)

Claim elements [1.k-1.l]/[8.k-8.l] both require “the optically detectable individualization identifier is configured to be read by a sensor/detector of a beverage ... to activate a pump of the beverage machine.” According to Petitioner, this element is taught by Yoakim and Rossi. Pet., 60-61. Not so. Ex.2020, ¶¶158-174.

Starting with Yoakim, Petitioner contends that Yoakim discloses a beverage machine that includes an optical sensor/detector for an identifier and a pump that supplies water into the capsule that is controlled based on the detection of the identifier. Pet., 60-61. But Yoakim lacks any express or inherent teaching that an optically detectable individualization identifier in his identification means is configured to be read to both individualize the portion capsule and to activate a pump. At best, the only disclosure of Yoakim is that the identification means is

associated to control means, which controls parameters such as when to stop filling water to achieve a desired volume. *See* Ex.1004, [0477] (“The identification means are associated to control means placed in the centrifugal brewing device which ***controls the adjustment of the said parameters, by controlling*** the rotational motor driving the capsule holder or/and ***the pump supplying liquid in the capsule.***”), [0521] (“an identification means ID1, ID2, ID3 (FIGS. 54 and 55) or ID4, ID5 (FIGS. 61 and 62) associable to each capsule ***to ensure control of the brewing parameters***, in particular, ***the flow rate and the volume of injected liquid in the capsule***, as a function of the volume of the capsule and/or the product characteristics of the capsule (granulometry, roasting, etc.) and/or the beverage to be delivered”), [0522], [0523] (“the identification means can set different volumes of injected liquid”), [0025], [0028], [0192], [0218]. For example, as reflected in [0477], Yoakim uses the information from the identification means to “identify[] each capsule and adjust[] brewing parameters,” including “the volume of liquid fed in the capsule.” None of that teaches or suggests the identification means is ***configured*** to activate a pump—adjusting settings is not activation of a pump. Yoakim is silent as to whether the control means uses information from the identification means to activate a pump. As Mr. Jobin confirmed, “[Yoakim is] not getting into the detail of the software” and he “ha[sn’t] cited in particular the how of control means because it’s not central to my analysis.” Ex.2025, 175:6-18. Ex.2020, ¶¶159-160.

Pump activation from reading the identification means is not inherent from Yoakim's teachings. For example, 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]. A POSITA would have understood Yoakim's system could operate in this way, i.e., operating the pump without information read from an identification means configured to activate the pump. Ex.2020, ¶161.

Indeed, a signal (such as high or low)—independent of the identification means—is all that is necessary to activate the pump. This is consistent with Mr. Jobin's own experiences. *See* Ex.1003, ¶58 ("Consumers typically . . . ***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; Ex.1019, 3:64-4:5 ("The routine 100 includes a test 102 that determines if the brewing process should begin. This test checks the state of the start brewing signal on the line 52 (FIG. 1). Ex.2020, ¶162.

Petitioner attempts to disregard Yoakim's lack of any express or inherent teaching by arguing that it would be obvious to "only utilize the pump to supply water into the capsule after the identifier is read" to allow the system to process the correct parameters. Pet., 61. But the claims are not directed to only utilizing the pump after an identifier is read. Rather, they are directed to an identifier configured

to be read to activate a pump. As explained above, that is not taught or suggested by Yoakim. Ex.2020, ¶163.

Moreover, Petitioner's argument is contrary to Yoakim's disclosure of a "pre-wetting" step to ensure that the water has sufficient time to infiltrate the beverage material. Ex.1004 at [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 at [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.* at [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.* at [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.* at [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. Ex.2020, ¶164.

Petitioner’s arguments are a consequence of hindsight from K-fee’s inventions. Mr. Jobin suggests there would be reason to modify Yoakim “in order to allow the system to process the optimal brewing parameters before beginning the brewing process.” Ex.1003 ¶273. But he does not identify any specific relationship between optimal brewing parameters and pump activation. Brewing parameters, such as water volume, are directed more specifically to when to shut off the pump—not when to turn it on—so as to ensure proper volume is dispensed and do not suggest an identification means configured to be read to activate a pump. Ex.2020, ¶165.

The Petition next relies upon Jarisch “disclos[ing] an optical code detector (62), designed to read the code positioned on the underside of the flange.” Pet., 60. Petitioner did not identify any teachings related to an identifier configured to be read to activate a pump. This is not surprising given Jarisch’s limited teachings of a pump and lack of express disclosure of how it works, is controlled, or is activated. *See generally* Ex.1005; Ex.2020, ¶166.

Finally, the Petition relies on Rossi. Pet., 60-61. But Rossi too falls short of teaching an identifier read by a sensor/detector to activate a pump. Specifically, the Petition contends that “Rossi ***discloses*** activating a beverage production cycle only upon reading the identifier by the sensor.” Pet., 61. Notably, the Petition does not allege that Rossi discloses an identifier configured to activate a pump. Indeed, Rossi

does not even use the term “pump.” *See id.* 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. There are also many subsystems in Rossi to control. Ex.2020, ¶167.

Given Rossi’s lack of disclosure of a pump, it is not surprising Rossi does not teach the claimed identifier configured to be read to activate a pump. At best, Rossi teaches a process where once an identifying element and a validation element have been confirmed, an edible-product making machine automatically activates a cycle of production of edible product. Ex.1041, Abstract. Rossi, however, does not teach or suggest that reading is configured to activate a pump. A POSITA would have understood that the delivery of water could be achieved without use of the identifying element and validation element. At best, Rossi teaches once the elements are confirmed the water is provided automatically, without indication of how water supply is activated. Ex.2020, ¶¶168-169, 174; *see id.*, ¶¶170-173.

C. Yoakim Fails To Teach or Render Obvious a Capsule Free of a Filter Inside of the Cavity (Claims 7, 12)

Claims 7 and 12 require the portion capsule to be “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, ¶¶175-176.

Yoakim expressly teaches using 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 id.*, [0014], [0017], [0113], [0131], [0139], [0171], [0210], [0265], [0266], [0272], [0288], [0334], [0337], [0338], [0343], [0375], [0424], [0444], [0448], [0450], [0456], [0460], [0462], [0465], Figs. 28, 29, 39, cls. 4, 6; Ex.2020, ¶177.⁹

Yoakim teaches capsule enclosure configurations having openings/outlets and/or a porous material (*id.*, [0016]), each of which provide a filter according to the ’830 Patent. Figure 29 of Yoakim (below) “is a perspective view of *the capsule of the invention*” and depicts the openings/outlets (118) configuration. Ex.2020, ¶179.

⁹ Yoakim is within International Classification “A47J 31/44,” entitled “Parts or details {or accessories} of beverage-making apparatus (*filters or strainers* A47J 31/06)” Ex.2009, 4, and International Classification “A23F 5/26,” entitled “Extraction of water-soluble constituents {(A23F 5/246 takes precedence)}” Exhibit 2010, 2. *See* Ex.1004, Cover (51). Ex.2020, ¶178.

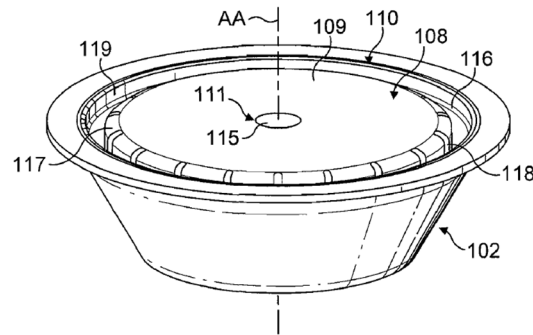


FIG. 29

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 inside the cavity. Ex.1004, [0451], [0452], Figs. 41, 42; Ex.2011, 14:13-15:22. Porous wall 180 is shown in both Figures 41 and 42 (annotated in yellow below) and is within the cavity.

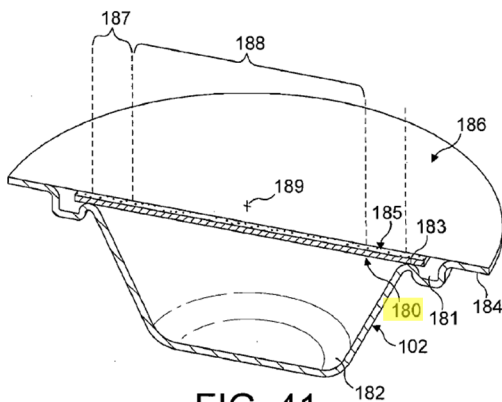


FIG. 41

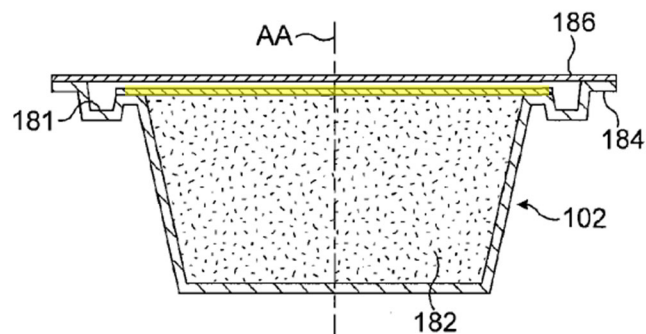


FIG. 42

Thus, Yoakim teaches his capsules have filters. Ex.2020, ¶¶180-181.

Critically, Petitioner fails to identify *any* express teaching in Yoakim of a capsule free of a filter. The passages and figures Petitioner cites all lack any express

teaching that Yoakim’s capsule lacks a filter or that filtering is optional. 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.¹⁰ Ex.1004, [0171]; Ex.2020, ¶182.

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

¹⁰ Mr. Jobin’s claim that Yoakim “explicitly discloses embodiments including portion capsules where the cavity does not have a filter” (Ex.1003, ¶346) is rebutted by Yoakim itself for all the reasons explained herein. As such, Mr. Jobin’s testimony is insufficient to demonstrate unpatentability. *Cf. Intel Corp. v. Institute of Microelectronics, Chinese Academy of Sciences*, IPR2018-01574, Paper 23 at 11-13 (PTAB Jun. 19, 2020) (denying request for rehearing on decision declining to institute review where prior art reference rebutted expert’s opinion).

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, ¶183.

Petitioner also cites [0343] and wrongly argues that this filter is somehow “optional.” Petitioner identifies no such statement in [0343] because there is none. The other paragraphs Petitioner cites provide express teachings of a filter in Yoakim’s capsule. *See* Ex.1004, [0255], [0288], [0300]. Regardless, Yoakim teaches every embodiment advantageously features either outlet openings or porous materials or both. *See id.*, [0016]; [0376] (“the openings can have a filtering function per se.”). Importantly, none is contrary to Yoakim’s descriptions of the capsule of the invention. *Id.*, [0333]-[0334]; Ex.2020, ¶184.

Further, Yoakim’s [0300] is not an example of capsules that do not have filter inside the cavity and discloses “outlets at the side wall.” Thus, even if the “filter” in [0300] is deemed optional, the outlets at the side wall also serve as a filter in the cavity because they separate the liquid beverage from the solids. *See, e.g., id.*, Figure

45. The same is true for [0461], which is illustrated in Figure 45 (showing outlets 704, 706 in the capsule cavity) that allow liquid to exit while retaining solid material. Moreover, Mr. Jobin has not evaluated the Figure 45 embodiment. Ex.2025, 188:9-13. Ex.2020, ¶185.

Grasping at straws, Petitioner further cites figures 6-7 and 54-60 of Yoakim to argue that Yoakim discloses embodiments using capsules that do not have a filter (Pet., 72-73), but Petitioner's reliance here is also misplaced. First, Figures 6 and 7 fail to show inside the cavity of the capsule and thus cannot demonstrate or even suggest that any of Yoakim's capsules are free of a filter. *See* Ex.1004, Figs. 6, 7, [0035], [0036]. Indeed, they are similar to the capsules of Figures 35, 41, and 42 discussed above that Yoakim teaches include a filter in the cavity. Moreover, Yoakim illustrates the combination of a lid with openings and a pierced membrane in the same capsules. *See, e.g.*, Figs. 28, 29, 35. Ex.2020, ¶186.

Petitioner relies on the embodiments of Figure 54-60 without providing any rationale to combine the teachings of those different embodiments with the Yoakim embodiments Petitioner relies upon elsewhere in the Petition. *See Abiomed*, IPR2017-01204, Paper 9, at 8-11. Even setting aside that deficiency, Figures 54-60 do not demonstrate Yoakim's capsule cavity is free of a filter because they are provided to illustrate "the centrifugal device into which is inserted the capsule of Fig. 51" and various capsule shapes. Ex.1004, [0083]-[0089]. Figure 54 depicts one

of many different capsule shapes for Yoakim’s brewing system, but its primary purpose is to teach aspects of the brewing system—not the capsule. Ex.2020, ¶187.

Each of Figures 54-60 depict a “schematic” view of a capsule, which does not contain every detail of the capsule. *See* Ex.2011, 50:24-56:1 (Mr. Jobin admitting Yoakim’s schematic views are “at a very high level,” “drawn with less detail,” and “there are details which are excluded in this view because it’s intended to represent particular information”). Indeed, it does not depict any of the detailed features of the capsule, such as the food substance and lid. Figures 55-60 depict different sized capsules and shapes, without more detail. Tellingly, Mr. Jobin does not have an opinion on the internals of these capsules. Ex.2025, 189:23-19:5. Moreover, any suggestion by Petitioner that the figures teach a capsule free of a filter is inconsistent with the disclosures of Yoakim that consistently and repeatedly describe a capsule having a filter element in the cavity. Ex.2020, ¶188.

Petitioner also argues “[i]t would also have been an obvious design choice to a POSITA to not use a filter in a centrifuge based brewing system in order to simplify the capsule design.” Pet., 73. But neither Petitioner nor its expert offers any evidence in support of this claim. Nor do they identify any teaching in Yoakim that would motivate the successful removal of Yoakim’s filter elements. Ex.2020, ¶189. “Even when obviousness is based on a single prior art reference, there must be a showing

of a suggestion or motivation to modify the teachings of that reference.” *In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000).

Petitioner’s reliance on “design choice” is also misplaced. “Design choice may serve as a basis for obviousness where alternative elements or configurations in the prior art ***perform the same function*** as the claimed aspects ***with no unexpected results***.” *Ex Parte Elliott*, Appeal 2018-009212, 2020 WL 5231583, at *3 (PTAB Aug. 28, 2020). Here, removal of Yoakim’s filter would result in a different function and unexpected results. Indeed, as evidenced by the multitude of citations to Yoakim above, Yoakim’s use of a filtering element is important to his goal of “better ... controlling quality of the final brewed beverage or food liquid product.” Ex.1004, [0010]; *see also id.*, [0011], [0012], [0210]. Yoakim teaches the benefits of the outlet openings to “form a restriction in the flow of the centrifuged liquid in the enclosure.” *Id.*, [0418]. Yoakim explains further “it can be ***advantageous*** to provide smaller openings than for lungo or ‘Americano’ coffee extract.” *Id.* Removal of the openings would thus be contrary to Yoakim’s express teachings, including the ability to brew various types of coffee, and negatively affect performance. Ex.2020, ¶190.

Finally, the Board has repeatedly found that such conclusory “design choice” contentions are insufficient to support a finding of obviousness. *See Kartri Sales Co., Inc. v. Zahner Design Group, Ltd.*, IPR2016-01327, Paper 10 at 17 (Jan. 3, 2017) (“Merely stating ‘design choice’ when confronted with a missing limitation,

without citing any authority or references to establish why the feature in question amounts to a mere design choice, does not carry Petitioner’s burden.”); *Zepp Labs, Inc. v. Blast Motion, Inc.*, IPR2016-00672, Paper 8 at 13 (Aug. 29, 2016); *Qualcomm Inc. v. ParkerVision*, IPR2015-01819, Paper 8 at 15 (Mar. 8, 2016). The same result applies here.¹¹

D. Yoakim Fails To Teach or Render Obvious a Ledge at the Inside Surface of the Wall Projecting Towards the Central Longitudinal Axis (Claims 1-7, 9-12)

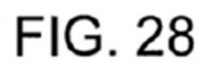
Claims 1-7 and 9-12 require that the portion capsule wall inside surface, “which faces the beverage material,” has a ledge “projecting towards the central longitudinal axis.” Yoakim does not disclose these limitations because the alleged

¹¹ To the extent that Petitioner seeks to rely on other paragraphs and/or teachings of Yoakim in reply, 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, 1330-31 (Fed. Cir. 2019) (“Board did not abuse its discretion in holding [Petitioner] to its word and disregarding its new theory first raised in reply.”).

“ledge” is not formed at the inside surface of the wall and is not projecting towards the central longitudinal axis.¹² Ex.2020, ¶191.

Petitioner alleges that Yoakim’s so-called ledge comprises the “collecting recess 116” which includes “an outer peripheral portion 119 forming an edge bearing onto a seat portion 120.” Pet., 53. Petitioner relies on the following two differently

¹² Petitioner relies solely on Yoakim’s teachings relating to the Figure 28 embodiment without any explanation as to why or how one would have been motivated to modify capsules within Yoakim, which lack the features of Figure 28. *ATD*, 159 F.3d at 546.



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First, the alleged “ledge” is not formed at the inside surface of the wall. As an initial matter, PO’s claims require “the wall has ... an inside surface which faces the beverage material” where the “ledge” is at the inside surface of the wall. Claim [1.e, g]/[9-12]. Petitioner’s annotation above and identified features in Yoakim are not part of any structure that “faces the beverage material.” Rather, the so-called ledge is above the beverage material and facing away from it. It is thus not a ledge formed at the inside surface of the wall. Thus, a POSITA would have understood that the collecting recess 116 is not a ledge at the inside surface of the wall. Ex.2020, ¶193.

Even if the collecting recess is considered a ledge, it would at best be formed at the lid of the capsule. Indeed, as Yoakim describes, “the lid further comprises a peripheral portion 110 including a collecting recess 116.” Ex.1004, [0416]. The collecting recess 116 is essentially made up of two parts as described in Yoakim [0416] and [0420]. Yoakim [0416] provides that “[t]he collecting recess comprises an inner peripheral portion of wall 117 into which is provided a series of outlet openings 118 forming a fluid communication between the enclosure 114 and the collecting recess 116.” Yoakim [0420] then provides that “[t]he collecting recess 116 further comprises an outer peripheral portion 119 forming an edge bearing onto a seat portion 120 of the dished body.” PO’s annotated Fig. 28 (below) highlights in blue the “outer peripheral portion 119” of the collecting recess 116 and highlights in

green the “inner peripheral portion of wall 117” of the collecting recess 116.

Ex.2020, ¶194.

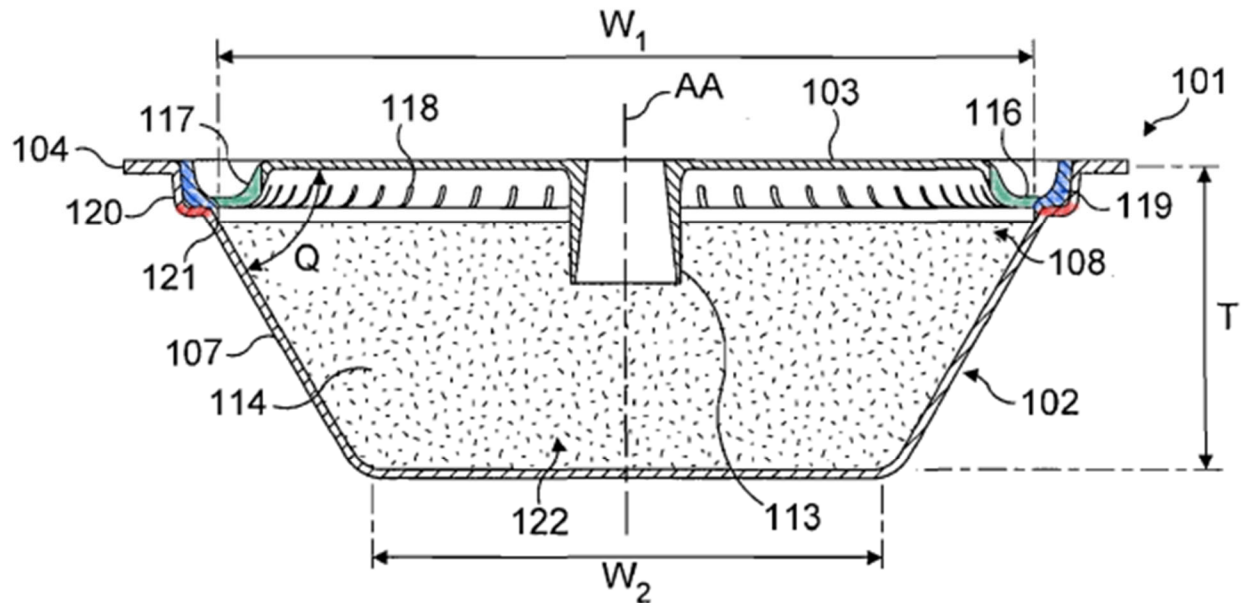


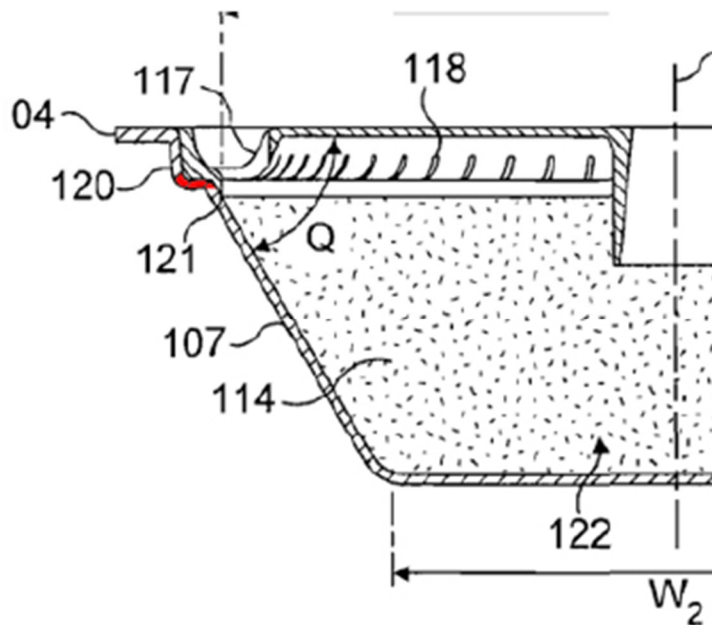
FIG. 28

Ex.1004, Fig. 28 (annotated).

From annotated Fig. 28 above, it is clear that 119 (the outer peripheral portion described in Ex.1004 at [0420] and that is relied on by Petitioner for the ledge) as well as 117 are not part of the inside wall of the capsule and instead are part of the lid of the capsule. Mr. Jobin confirmed that the outer peripheral region 119 is located

on the outside surface of the lid. *See* Ex.2012, 152:6-12; Ex.2025, 197:18-198:9. It is also not facing the beverage material. Ex.2020, ¶195.

Additionally, Petitioner alleges that Fig. 28 “clearly shows the ledge in red at the inside surface of the wall [. . .], in the seat portion 120 of the dished body, and below the open of the base element.” Pet., 53.



Pet., 54.

This argument is inconsistent with Petitioner’s prior argument that the ledge comprises collecting recess 116 which includes peripheral portion 119 forming an edge bearing onto seat portion 120. Petitioner’s argument is that the ledge is collecting recess 116 (part of which bears onto seat portion 120) but also implicitly

suggests from the annotated figure that the ledge is “the seat portion 120 of the dished body.” *Id.* Either way, Petitioner’s arguments fail. Ex.2020, ¶196.

To the extent that what Petitioner points to is actually the seat portion 120 that the outer peripheral portion of the collecting recess bears on, such contention would be counter to Petitioner’s argument that it would be obvious “to utilize the claimed ledge configuration in a centrifugal brewing capsule to provide space for brewed coffee to gather before exiting the capsule into the user’s cup.” Pet., 54. Seat portion 120 could not fulfill that task as it is designed to fit tightly against the collecting recess. *Id.* Petitioner’s annotated image combined with Petitioner’s arguments creates an impossibility which cannot be overcome and is a clear example of Petitioner’s failures. Ex.2020, ¶197.

Figure 29, which is a perspective view of the capsule of the invention of Yoakim, shows that the collecting recess identified by Petitioner is a trough-like depression located outside of the cavity of the capsule. *See id.*, [0058], [0416];

[0420]; [0448]. Figure 29 of Yoakim depicts the collecting recess 116 as being a part of the outer surface of the capsule, not the inside wall of the cavity.

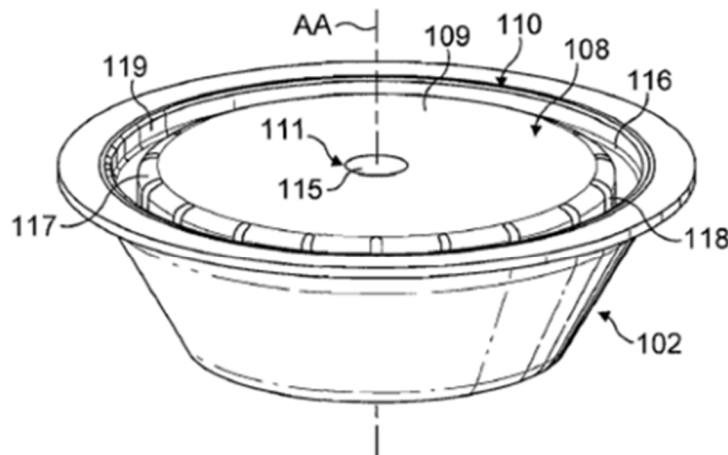


FIG. 29

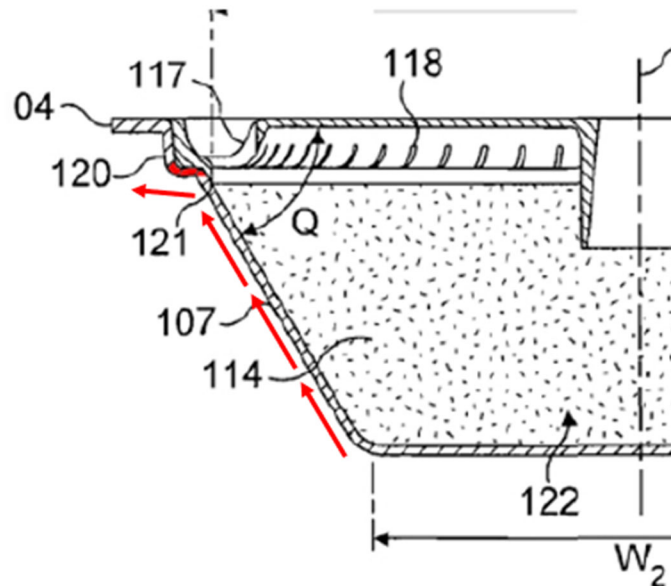
Ex.1004, Fig. 29.

Accordingly, the Petition fails to demonstrate a ledge on the inside wall.

Ex.2020, ¶198.

Second, the alleged “ledge” is not projecting *towards* the central longitudinal axis. Mr. Jobin testified that “projecting towards the central axis just means that if you’re positioned at the inside wall, you’re pointing and the form is being grown from that wall towards the center axis.” Ex.2025, 103:24-105:4. But in viewing Petitioner’s second annotated Fig. 28 and tracing the direction an alleged “ledge” would have to go in order to be formed at an inside wall surface of the wall, it is clear that this direction would be projecting *away* from the central longitudinal axis. To use Mr. Jobin’s words, it is grown from the wall away from the center axis. This

is illustrated in PO's annotated Fig. 28 (below), which takes Petitioner's second version of annotated Fig. 28, and adds red lines showing the direction of Petitioner's alleged "ledge." Ex.2020, ¶199.



Ex.1004, Fig. 28.

It is clear from this image that, even if it is found that the Petitioner's alleged "ledge" is formed at the inside surface of the wall, it projects away from the central longitudinal axis—not towards it. As Mr. Jobin conceded, Yoakim teaches a widening sidewall where the bottom of the capsule is narrower than the top and the sidewall goes outwardly as the wall moves upwards. Ex.2025, 198:21-199:5. Ex.2020, ¶200.

Likely recognizing the shortcomings of Yoakim, Petitioner argues that PO's claims would have been obvious. Pet., 54. Petitioner's relies on hindsight and fails to identify any suggestion to achieve the ledge, as claimed. First, Petitioner again

relies on Yoakim’s disclosure. But as explained above, such disclosure fails to teach or suggest the claimed ledge, including one that projects towards the central longitudinal axis. Second, Petitioner contends the claimed ledge is “an obvious design choice.” But Petitioner fails to show or explain how the claimed ledge was suggested, or even known, before PO’s invention. Indeed, the other exhibits Petitioner cites appear to suffer from the same shortcomings as Yoakim. Ex.2020, ¶201.

V. Petitioner’s Ground Must Fail Because at Least Jarisch and Rapparini Are Not Patents or Printed Publications (All claims)

Petitioner’s ground is based on §102(e) references. 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 and Rapparini are not patents—they are applications. They are also not printed publications because they were not publicly accessibly until after July 22, 2011—the undisputed PCT priority date. *See* Ex.1005, Cover (43); Ex.1008, Cover (43); Pet., 25 n.3. “[P]ublic accessibility” is “the touchstone in determining whether a reference constitutes a ‘printed publication.’” *Acceleration 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) (application “was not ... a patent or printed publication”).

IPR petitioners have “the burden to prove [a reference] is a printed publication.” *Acceleration Bay*, 908 F.3d at 772. 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.* Jarisch⁹²⁹ and Rapparini were not publicly accessible before July 22, 2011. Petitioner has not attempted to prove otherwise. Accordingly, they cannot serve to challenge ’830.

Date: October 1, 2024

Respectfully submitted,

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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 13,688 words, which is less than the 14,000 allowed under 37 C.F.R. § 42.24(a)(1)(i), (b)(1).

Date: October 1, 2024

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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 was served upon the following by ELECTRONIC MAIL:

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