

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 PRELIMINARY RESPONSE

TABLE OF CONTENTS

I.	Introduction.....	1
A.	Background	2
B.	Overview of the '830 Patent.....	5
II.	Petitioner Has Not Demonstrated a Reasonable Likelihood that at Least One Claim of the '830 Patent Is Unpatentable	7
A.	Petitioner's Motivations To Combine Fail, Because a POSITA Would Not Have Been Motivated To Combine Yoakim with Jarisch and Rossi (Claims 1-2, 5-7) (Ground 1) Or To Combine Yoakim with Jarisch, Rossi, and Rapparini (Claims 3, 8-12) (Ground 2)	7
1.	Petitioner's Arguments To Combine Embodiments within Yoakim Lack any Necessary Rationale.....	8
2.	Petitioner's Arguments To Combine Yoakim and Jarisch Are Unpersuasive	22
3.	Petitioner's Arguments To Combine Yoakim and Jarisch with Rossi Are Unpersuasive.....	39
B.	Fails To Teach or Render Obvious Using 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).....	43
C.	Yoakim Fails To Teach or Render Obvious a Base Element that Comprises a Wall with a Plurality of Indentations Arranged on the Outside Surface of the Wall, About the Longitudinal Axis (Ground 1, Claims 1-7)	53
D.	Petitioner Cannot Demonstrate that the References Teach Or Render Obvious a Plurality of Vertically Oriented Grooves as Claimed (Ground 2, Claims 3, 8-12).....	57
III.	Conclusion	60

TABLE OF AUTHORITIES

	Page(s)
Cases	
<i>Abiomed, Inc. v Maquet Cardiovascular, LLC</i> , IPR2017-01204, Paper 9 (PTAB Oct. 23, 2017)	<i>passim</i>
<i>Amazon.com, Inc. v. Almondnet, Inc.</i> , IPR2022-01455, Paper 12 (PTAB Apr. 6, 2023)	10, 56
<i>Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.</i> , 796 F.2d 443 (Fed. Cir. 1986)	11, 51
<i>Edmund Optics, Inc. v. Semrock, Inc.</i> , IPR2014-00583, Paper 9 (PTAB Sept. 19, 2014).....	57, 59
<i>Google LLC v. AGIS Software Dev., LLC</i> , IPR2018-01086, Paper 10 (PTAB Dec. 4, 2018)	10, 56
<i>Hewlett Packard Enterprise Co. v. Intellectual Ventures II LLC</i> , IPR2022-00115, Paper 9 (PTAB Mar. 29, 2022)	10, 56
<i>Intel Corp. v. Tela Innovations, Inc.</i> , IPR2019-01521, Paper 65 (PTAB Mar. 9, 2021)	10, 56
<i>Interconnect Planning Corp. v. Feil</i> , 774 F.2d 1132 (Fed. Cir. 1985)	36
<i>KSR Int’l Co. v. Teleflex Inc.</i> , 550 U.S. 398 (2007).....	10
<i>Lumenis BE Ltd. v. BTL Healthcare Techs. A.S.</i> , IPR2021-01280, Paper 8 (PTAB Mar. 9, 2022)	9
<i>In re Mercier</i> , 515 F.2d 1161 (CCPA 1975)	50
<i>PersonalWeb Techs., LLC v. Apple, Inc.</i> , 848 F.3d 987 (Fed. Cir. 2017)	37
<i>Pro-Dex, Inc. v. Intelligent Automation Design LLC</i> , IPR2023-00218, Paper 8 (PTAB Jul. 19, 2023)	24, 39

<i>In re Ratti</i> , 46 C.C.P.A. 976 (CCPA 1959).....	3, 37
<i>Regents of University of California v. Broad Institute, Inc.</i> , 903 F.3d 1286 (Fed. Cir. 2018)	32
<i>Ex parte Saiki</i> , 2002 WL 32102452 (B.P.A.I. Jan. 17, 2002).....	38
<i>Ex parte Salerno</i> , 2013 WL 5603478 (B.P.A.I. Sept. 23, 2013)	38
<i>In re Schweickert</i> , 676 Fed. App'x 988 (Fed. Cir. 2017)	4, 20
<i>In re Stepan</i> , 868 F.3d 1342 (Fed. Cir. 2017)	9
<i>Trend Micro, Inc. v. Open Text Inc.</i> , IPR2023-00692, Paper 8 (PTAB Nov. 6, 2023).....	25, 26, 39
<i>Unigene Labs, Inc. v. Apotex, Inc.</i> , 655 F.3d 1352 (Fed. Cir. 2011)	57, 59
<i>In re Universal Elecs., Inc.</i> , 2023 WL 3335536 (Fed. Cir. May 10, 2023).....	36
<i>In re Wesslau</i> , 353 F.2d 238 (CCPA 1965)	50, 51
Statutes	
35 U.S.C. § 314.....	1, 60

LIST OF EXHIBITS

Exhibit	Description
Ex. 2001	EP 08171069 Application (filed Sept. 12, 2008)
Ex. 2002	U.S. Patent No. 9,545,121 (issued Jan. 17, 2017)
Ex. 2003	U.S. Patent No. 9,545,121 (issued Jan. 17, 2017), Response to June 6, 2016 Office Action (dated September 7, 2016)
Ex. 2004	WO 2008/148646A1 (issued Dec. 11, 2008) (“Yoakim I”)
Ex. 2005	U.S. Patent No. 10,800,600 (issued Oct. 13, 2020), File History (“’600 File History”)
Ex. 2006	WO 2008/148601A1 (issued Dec. 11, 2008) (“Yoakim ’601”)
Ex. 2007	Nestlé Nespresso SA, <i>The Nespresso History: From a Simple Idea To a Unique Brand Experience</i> (May 2016), https://nestle-nespresso.com/sites/site.prod.nestle-nespresso.com/files/Nespresso%20-%20History%20Factsheet(1).pdf
Ex. 2008	Nespresso, <i>Nespresso Pixie Instruction Manual</i> , https://www.nespresso.com/shared_res/manuals/pixie/2010/www_Pixie_Z2_NESPRESSO(EN_HE).pdf
Ex. 2009	United States Patent and Trademark Office, <i>CPC – Cooperative Patent Classification A 47J</i> , https://www.uspto.gov/web/patents/classification/cpc/html/cpc-A47J.html#A47J31/44
Ex. 2010	United States Patent and Trademark Office, <i>CPC – Cooperative Patent Classification A 23F</i> , 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)
Ex. 2017	EP 08102147 Application (filed Feb. 29, 2008)
Ex. 2018	<i>Nespresso USA, Inc. v. K-fee System GmbH</i> , IPR2022-01574, Paper No. 28, Record of Oral Hearing (PTAB Jan 12, 2024)
Ex. 2019	Declaration of Ian B. Brooks in Support of the Patent Owner’s Preliminary Response under 37 C.F.R. § 42.107 (Mar. 28, 2024)

Patent Owner K-fee System GmbH (“K-fee” or “Patent Owner”) submits this Preliminary Response to the above-captioned Corrected Petition for *Inter Partes* Review of U.S. Patent No. 11,465,830 (“the ’830 Patent”) (“Petition” or “Pet.”).¹

I. Introduction

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

¹ All emphases added, unless otherwise noted.

² The Parties are in litigation where Petitioner’s VertuoLine system meets the claim requirements. Nothing in this Response shall be regarded as a disclaimer of

A. Background

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

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

claim scope and nothing shall be regarded as a concession that any of the cited references are in fact prior art.

As a threshold matter, Petitioner has failed to demonstrate even a reasonable likelihood of prevailing as to any claim. More specifically, the Petition should be denied for at least the following reasons:

- The Petition fails to demonstrate a reasonable likelihood that a person having ordinary skill in the art (“POSITA”) would have combined the teachings of Yoakim with Jarisch, and Rossi to arrive at the claimed invention. As an initial matter, the Petition fails to provide rationale or evidence for the combination of discrete and independent teachings of alternative embodiments within the various individual references, particularly Yoakim. This alone justifies denying institution. *Abiomed, Inc. v Maquet Cardiovascular, LLC*, IPR2017-01204, Paper 9, at 8-11 (PTAB Oct. 23, 2017) (denying institution where Petition failed to provide rationale to combine the teachings of the reference’s different embodiments);
- The differences between the various distinct embodiments of Yoakim, Jarisch, and Rossi are significant, and the modifications Petitioner argues to make are unnecessary and complex. This too dooms Petitioner’s grounds. *See, e.g., In re Ratti*, 46 C.C.P.A. 976, 981 (CCPA 1959) (rejecting prior art combination because the combination “would require a substantial reconstruction and redesign of the elements shown

[in the prior art] as well as a change in the basic principles under which [the prior art] construction was designed to operate”); *In re Schweickert*, 676 Fed. App’x 988, 995 (Fed. Cir. 2017) (reversing Board’s obviousness determination where proposed modification of prior art 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”).;

- The Petition fails to demonstrate a reasonable likelihood that Yoakim, Jarisch and Rossi disclose or render obvious a “optically detectable individualization identifier [] configured to be read by a sensor/detector of a beverage machine to individualize the portion capsule and to activate a pump of the beverage machine” as claimed in independent claims 1 and 8. This alone, even without the other compelling reasons presented herein, dooms Petitioner’s grounds;
- The Petition fails to demonstrate a reasonable likelihood that Yoakim teaches or renders obvious a “plurality of indentations arranged on the outside surface of the wall,” as claimed in independent claim 1. This alone, even without the other compelling reasons presented herein, dooms Ground 1; and

- The Petition fails to demonstrate a reasonable likelihood that Yoakim and Rapparini teach or render obvious a “plurality of vertically-oriented indentations arranged on the outside surface of the wall” and “a plurality of vertically-oriented ribs arranged on the inside surface of the wall” as claimed in independent claim 8 and dependent claim 3. This alone, even without the other compelling reasons presented herein, dooms Ground 2.

For these reasons, as explained in more detail below, the Petition fails to meet the threshold burden of showing a reasonable likelihood of success as to any challenged claim. The very purpose of the § 314 threshold is to avoid the empty, wasteful exercise Petitioner asks this Board to commence. Because the Petition on its face fails to show a reasonable likelihood of success as to any challenged claim, Petitioner’s request for a trial should be denied.

B. Overview of the ’830 Patent

The claims of the ’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 at 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).

The family claims priority to PCT/EP2011/003677 (“the PCT application”), filed July 22, 2011. The PCT application, in turn, claims priority to three German patent applications filed on (1) July 22, 2010 (Ex. 1046); (2) September 2, 2010 (Ex. 1047 or “the second German application”); and (3) February 7, 2011 (Ex. 1045) (collectively, “the German applications”).

During prosecution of the application resulting in the '830 Patent, Patent Owner submitted a Supplemental Information Disclosure Statement (“IDS”) in which Patent Owner disclosed Petitioner’s Preliminary Invalidity Contentions filed in Case No. 2:22-cv-00525-GW (AGRx) for US Patent 11,254,491 (“’491 Patent”). Ex. 1002 at 364. This Supplemental IDS further listed the Rapparini, Rossi, Jarisch, Jarisch 929, and Yoakim references that are relied on by Petitioner here. *Id.* at 366-67. Patent Owner received a Notice of Allowance on August 11, 2022. *Id.* at 373. To completely ensure candor before the Patent Office, Patent Owner 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.* at 511-513. The claims of the '830 Patent were then allowed in a Corrected Notice of Allowance on September 9, 2022, and received an issue notification on September 21, 2022. *Id.* at 524, 532. Despite all of this, 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 (for the '430 and '923 Patents, *which IPRs were not even filed until January 24, 2023 after the '830 Patent issued*) later. Pet. at 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 Patent Owner's proactive efforts to ensure the Examiner considered Petitioner's arguments for another patent.

II. Petitioner Has Not Demonstrated a Reasonable Likelihood that at Least One Claim of the '830 Patent Is Unpatentable

A. Petitioner's Motivations To Combine Fail, Because a POSITA Would Not Have Been Motivated To Combine Yoakim with Jarisch and Rossi (Claims 1-2, 5-7) (Ground 1) Or To Combine Yoakim with Jarisch, Rossi, and Rapparini (Claims 3, 8-12) (Ground 2)

Petitioner argues that a POSITA would have combined multiple embodiments within Yoakim with each other, and then with Jarisch and Rossi or that a POSITA would have combined together such diverging embodiments of Yoakim and then with Jarisch, Rossi, and Rapparini, thus rendering the invention of the '830 Patent obvious. Pet. at 40-46, 73-76. Not so. Petitioner's arguments fail to make even a prima facie showing of motivation to combine the references.

1. Petitioner's Arguments To Combine Embodiments within Yoakim Lack any Necessary Rationale

Petitioner seeks to combine several different embodiments within Yoakim to cover K-fee's claims. *See, e.g.*, Pet. at 47-55, 60-62, 65-69, 72-75, and 78. But there is an absence of any rationale in the Petition to support such a generic unexplained combination (*see generally* Petition), and as a result the Petition should fail. *Abiomed*, IPR2017-01204, Paper 9, at 8-11 (denying institution where Petition failed to provide rationale to combine the teachings of the reference's different embodiments). A close review of Yoakim reveals that the proposed combination is not supportable and is arrived at only through hindsight of K-fee's claims.

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

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

Thus, while Yoakim is a single reference, it lacks any teaching that would suggest combining the various discrete embodiments in the way Petitioner seeks.

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

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

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

Instead of showing why or how a POSITA would have combined the distinct alternative embodiments within Yoakim, Petitioner provides various lengthy strings of citations to Yoakim without identifying that those paragraphs pertain to different embodiments, and without explaining the if, why, or how the alternative embodiments could be combined. *See, e.g.*, Pet. at 47-55, 60, 62-63, 66-69 (relying

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

The Petition ignores the various distinct embodiments of Yoakim and fails on the most fundamental level to show why or how those embodiments would be modified to 1) work with each other, 2) to work with Jarisch, and 3) to work with Rossi. There are at least five alternative embodiments within Yoakim, each incompatible with the others. For example, Yoakim Fig. 4 does not have a valve, Yoakim teaches 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 on the assumption that a POSITA would be motivated to merely grab one isolated element or technique from

an assembly and move it to a much different assembly. Petitioner uses these elements and techniques as fungible features, when in fact they are unique and distinct to specific embodiments.

b. Yoakim’s different embodiments are not interchangeable and Petitioner ignores this fact.

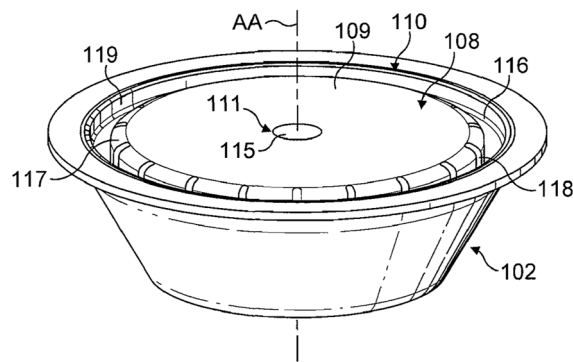
As mentioned above, Petitioner draws from several different embodiments of Yoakim, and ignores that the different embodiments are each specific to particular requirements for multiple different systems. These differences are reflected across Yoakim’s embodiments yet the Petition offers no reasoning for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

As an initial matter, the Petition fails to offer any evidence or argument to support why and how the “plate valve” system for capsule sets of Fig. 61 of Yoakim and the “no valve” system for single volume capsules of Fig. 4 of Yoakim would have been combined to achieve K-fee’s claims. *See* Pet. at 51-53 (jumping between different embodiments), 59 (same). Figure 4 of Yoakim has no valve that would provide a seal, and the injection assembly is shown always permitting a lateral gap. On this basis alone, it depicts another brewing module that is different and unlike the ones found in Figures 35 and 61. *See* Ex. 1004 at [0181], Fig. 4; *compare id.* At Figure 4, [0187] (“FIG. 4 shows a more sophisticated system of the invention.”)

with Figures 35, 61, [0426] (“a beverage preparation device, as illustrated in FIGS. 32 and 33”), [0512] (“In the embodiment of FIGS. 61 and 62....”), [0061]-[0064] (showing Figures 32-35 illustrate different views of the same embodiment). This is fatal to the Petition. The Petition similarly fails to offer any evidence or argument to support why and how the system of Fig. 35 of Yoakim and the system of Fig. 4 of Yoakim would have been combined. *See* Pet. at 65-66 (jumping between different embodiments). Figure 4 of Yoakim depicts another brewing module that is different and unlike the ones found in Figures 35 and 61. *See* Ex. 1004 at [0181], Fig. 4; *compare id.* at Figure 4, [0187] (“FIG. 4 shows a more sophisticated system of the invention.”) with Figures 35, 61, [0426] (“a beverage preparation device, as illustrated in FIGS. 32 and 33”), [0512] (“In the embodiment of FIGS. 61 and 62....”), [0061]-[0064] (showing Figures 32-35 illustrate different views of the same embodiment).

Moreover, there are other significant differences in the Yoakim embodiments that the Petition fails to explain. For example, there are differences found in the brewing device and capsules. *Compare* Ex. 1004 at Figs. 35, 38 with *id.* at Figs. 61, 62. Petitioner has not addressed the teachings that Yoakim Figs. 35 and 38 employ a specific capsule (depicted in Figs. 28-31) with a peripheral collecting recess 116 surrounding the tubular inlet portion 113, and positioned inwardly and below the peripheral rim 104, to receive coffee that exits the outlet openings 118. The capsule

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



Ex. 1004 at Fig. 29

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

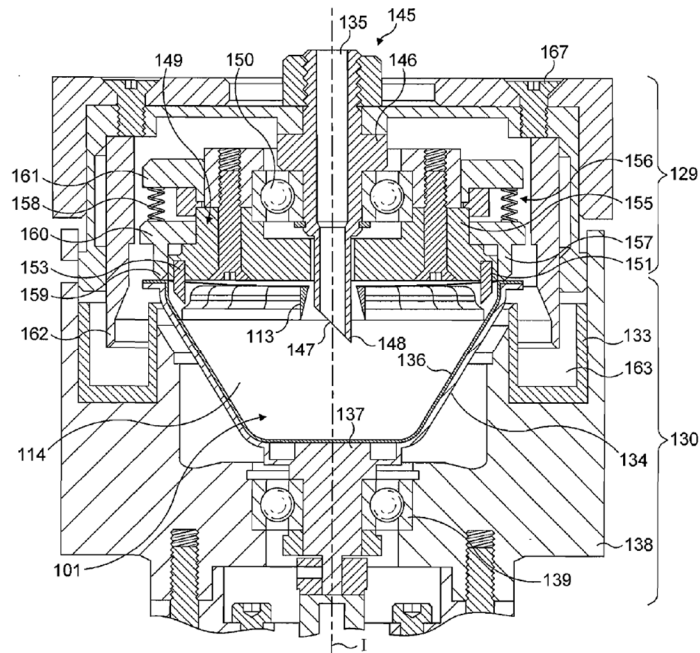


FIG. 35

Ex. 1004 at Fig. 35.

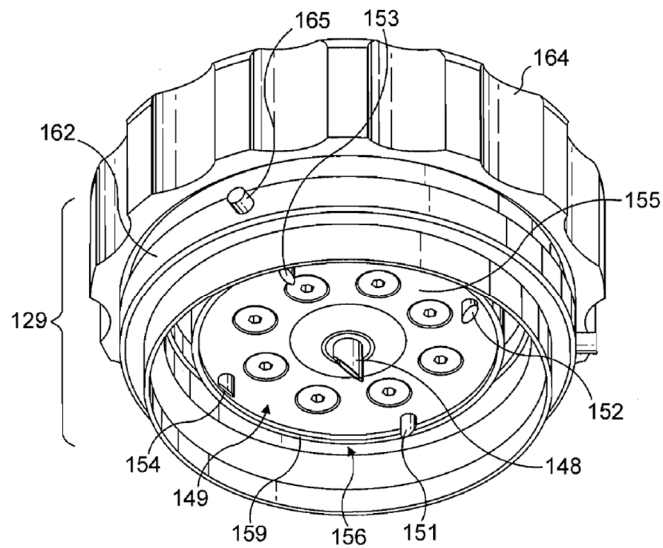


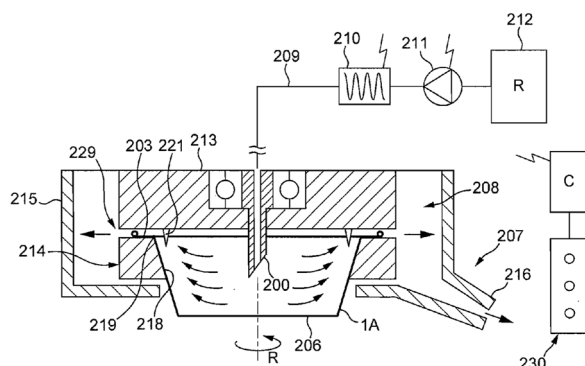
FIG. 36

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

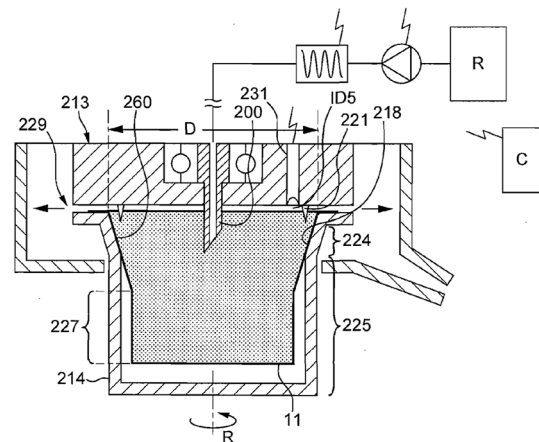
However, that seal, as used in the water injection subassembly of Fig. 36, dates back to February 29, 2008 where it is described in combination with the capsules depicted in Figs. 28-31. *See* Ex. 2017 (EP08102147) at Figs. 5-14. The disc-shaped engaging wall 155 is fixed vertically in place during brewing with a bottom surface that is juxtaposed inwardly with the peripheral rim 104. This “inwardly” arrangement of the disc-shaped engaging wall 155 is necessary to allow the coffee to escape from above the collecting recess in order to apply pressure to the V-shaped surface 159. *See* Ex. 1004 at [0435]-[0436]. During brewing, the only movement of an element within the water injection subassembly is the raising of the V-shaped surface 159 for allowing coffee to escape. The V-shaped element 159, which is an integrated component of the Fig. 36 assembly, is designed to be lifted by the pressure of coffee that escapes from the annular recess (and Petitioner has not explained where there is any real estate to accommodate the sensing device 231 of Fig. 61 or how the sensing device would be positioned to avoid the “unbalance” problem identified in paragraphs [0006] and [0507] of Yoakim).

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. 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. Because it is suspended from a spring axially above it, the entire

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



Ex. 1004 at FIG. 54



Ex. 1004 at FIG. 62

In fact, the difference is of such a nature that Petitioner's affiliate and RPI distinguished this over its own Yoakim I to obtain U.S. Patent No. 9,545,121. *See* Exs. 2003 at 3-6 (distinguishing over differences in valve engagement); 2002 at Figs. 4-6 (illustrating similar structure to Yoakim's Figures 32-36 in Figs. 4-6); 2004 ("Yoakim I") at Figs. 7-19. Specifically, as shown from the excerpts below, in prosecuting the pending application that resulted in U.S. Patent No. 9,545,121, Petitioner's affiliate and RPI distinguished "Yoakim I" based, in part, on the valve

configuration, contending it would not have been obvious to achieve the pending claims because Yoakim I “does not even suggest a plate” structure as found in, e.g., Ex. 1004 Figures 54 and 62 above.

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

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

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

Additionally, the Petition has not explained that the use of the complex spring arrangement of Yoakim Fig. 35 would or could have been modified for use in the system of Figs. 54, 55, 61, and 62 to accommodate a multi-capsule set with different capsule volumes. In fact, the Petition is absolutely silent as to the obstacles that a skilled person would have faced in seeking to implement such a spring biased valve into a system intended for brewing multiple different capsule volumes. Due to the

different back pressures alone, which would have been experienced when brewing beverages from among the respective different volume capsules of the capsule set of the Figs. 54, 55, 61, and 62 embodiments, it has not been explained how a spring having a single spring constant would have accommodated the different backpressures without ongoing spring adjustment or other significant modifications occasioned by the different capsules in a set.

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.

But even looking past the prior disparagement of the combinations argued here, the Petition has not explained how or why the use of the complex spring arrangement of Yoakim Fig. 35 would or could have been modified for use in the system of Figs. 54, 55, 61, and 62 to accommodate a multi-capsule set with different capsule volumes. *See generally* Pet.

Moreover, an examination of Fig. 61 reveals that there is no need whatsoever for the seal of Fig. 35, because the interface assembly seals already at the peripheral flange using the capsule flange surface. Thus, a second seal would introduce an

unnecessary redundancy, would add complexity to the system of Figs. 61 and 62, and would alter the principle of operation of the Figs. 61 and 62 interface assembly.

In re Schweickert, 676 Fed. App'x at 995.

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

Nor has the Petition addressed the fact that the different valve systems of Fig. 35 and 61 came about at different times in response to different needs and were intended to be used for different purposes (e.g., capsules having a peripheral collection recess 116 vs. capsules not having a collection recess and being part of

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

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

Each of the capsules of Yoakim are designed to be used in a unique centrifugation system. Specifically, by way of example, Fig. 23 is designed to be used with the system of Fig. 8. The Petitioner does not explain why or how a POSITA would use the capsule of Fig. 23 with the spring-biased annular seal system of Figs. 35 and 36 (which is designed to be used with capsules having a peripheral

collection recess 116). Further, the Petitioner does not explain why a POSITA would then use the capsule of Fig. 23 (associated with Fig. 8) and the spring-biased annular seal system of Figs. 35 and 36 with the multi-volume capsule set system of Figs. 61 and 62, given that the water injection subassembly of Figs. 35 and 36 uses an engaging wall 155 that does not extend over the peripheral flange. Moreover, the Petition is silent as to why the skilled person would then use such a capsule in the multi-volume capsule set system of Figs. 61 and 62.

In summary, the Petition fails to present any explanation as to how or why a POSITA would have blended the divergent teachings of Yoakim's distinct embodiments that utilize different features that were tailored for specific capsules, valve arrangements, the nature of whether the capsules are part of a set of different volume capsules, and whether the system employs a sensing device for selectively controlling the machine based on the different volume of capsules in the set, and the nature of the intended beverage.

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

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

a. The Petition lacks adequate 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. Pet. at 42. As

an initial matter, Petitioner has not explained the principle of operation of Jarisch. Petitioner has not addressed the apparent requirement in Jarisch that the code be read by a stationary sensor while the rim of the capsule is rotated relative to the sensor. *See* Ex. 1006 at [0066], Fig. 5. Nor has Petitioner addressed how or why a POSITA would alter the embodiment of Figs. 61 and 62 of Yoakim in which the sensing device spins and is mechanically coupled with the capsule, and there is no relative movement as between a code and a sensor.

Additionally, Petitioner does not explain why such teachings in Jarisch would have motivated a POSITA to modify Yoakim to relocate the code to the flange bottom given that it has been shown that Yoakim would have experienced the alleged problem when operating under the embodiments of Figs. 61 and 62. Indeed, there is no reason to believe that Yoakim's placement of a "barcode" on the top of the membrane would suffer from readability issues, given that Yoakim's device reads the "barcode" before brewing when a capsule would not yet be soiled by beverage residues. Ex. 1004 at [0525], [0526]. 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.* at Figs. 61, 62, [0507].

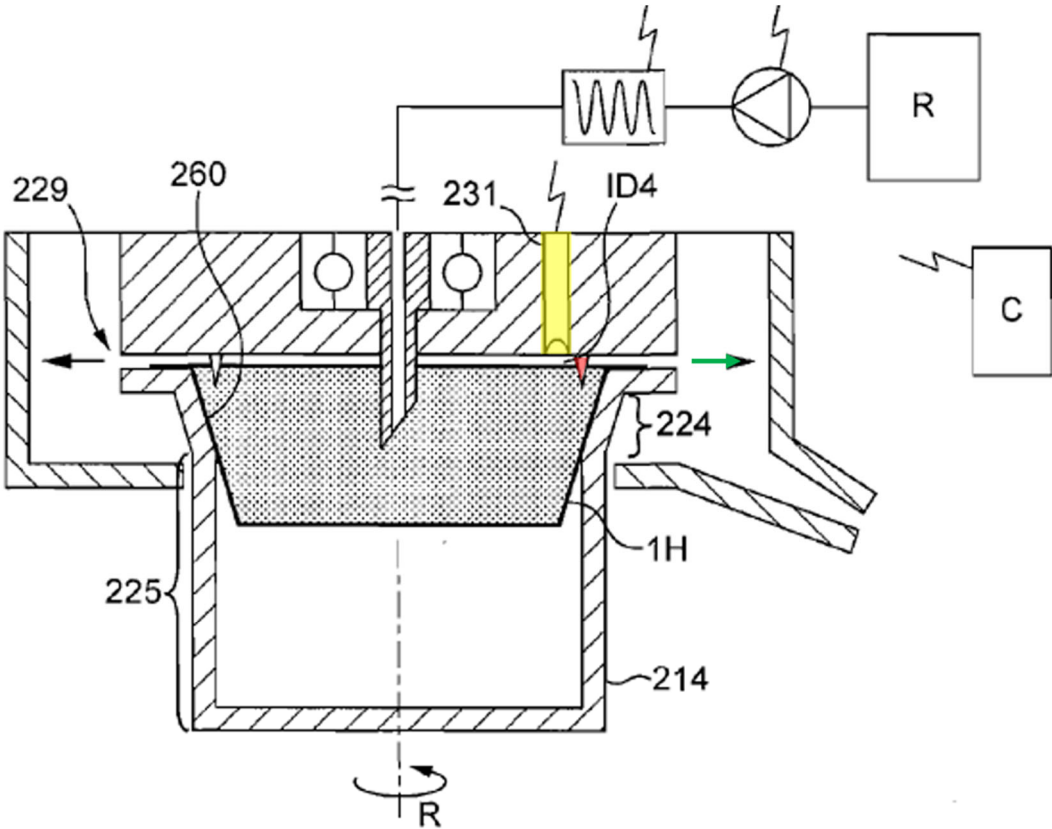


FIG. 61

There is not a showing to suggest the sensor 231 and the code would ever be exposed to the fluids.

Thus, the Petition has not addressed that Yoakim’s sensor 231 or barcode would not be soiled and such a modification to Yoakim would be neither necessary nor beneficial. Thus, Petitioner’s argument to combine the references for this reason should be rejected. *See, e.g., Pro-Dex, Inc. v. Intelligent Automation Design LLC*, IPR2023-00218, Paper 8 at 23-25 (PTAB Jul. 19, 2023) (denying institution where “Petitioner does not set forth sufficient articulated reasoning with rational underpinnings to supports its argument that it would have been obvious to a person

of ordinary skill in the art to modify” one reference to include the functionality from another reference); *Trend Micro, Inc. v. Open Text Inc.*, IPR2023-00692, Paper 8 at 24 (PTAB Nov. 6, 2023) (finding combination insufficient where no explanation given as to how teachings might be beneficial in the system modified).

The teachings of Yoakim and Jarisch are also contrary to the alleged combination due to the insufficient space on Yoakim’s rim (*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 at ¶209. 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 at [0414].

In contrast, Jarisch teaches placement of the code at a distance as much as 10 mm from the peripheral edge. Ex. 1005 at [0037] (“The code is further located close to the peripheral edge of the capsule. The peripheral edge is defined as the outermost circular line of the capsule. Preferably, the distance of the code from the peripheral edge is not more than 10 mm, more preferably not more than 8 mm.”), Fig. 5. 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 750.³

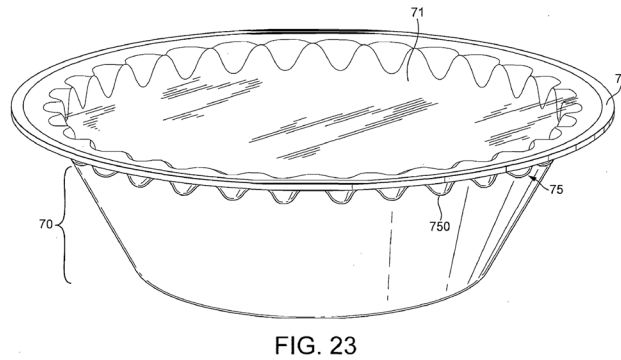
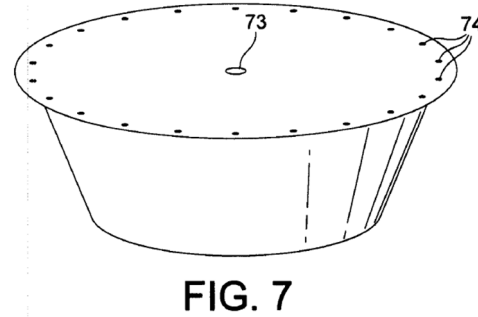
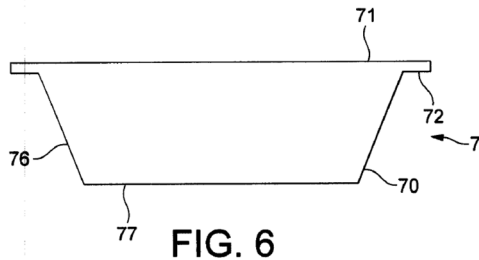
b. Petitioner's RPI argued against such a modification.

As noted by Petitioner, Yoakim and Jarisch have a common owner, Societe des Produits Nestle S.A. (formerly Nestec SA), an affiliate (and RPI) of Petitioner, and a common inventor, Alexandre Perentes. Pet. at 41, 87 (listing Petitioner's RPIs). But this association "is merely the jumping-off point in reaching the determination of whether a claimed invention is obvious." *Trend Micro*, IPR2023-00692, Paper 8 at 22. As explained above, other facts undermine the alleged combination. Indeed, there are more reasons to reject Petitioner's attempts at combination of the references. For example, Jarisch's priority document was filed May 12, 2010, merely days after Yoakim was filed on May 7, 2010. Yet, Jarisch makes no mention of Yoakim in the background or otherwise. Not only that, but

³ Patent Owner 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.

Jarisch mentions at paragraph [0034] Desinart (WO2010/026053 (Ex. 1007)) as the system for which the capsule was intended. Amongst the swamp of at least 14 priority claims in Yoakim, there is not a single claim of priority to the applications for Denisart. This suggests the inventors of those references and Petitioner's affiliate (and RPI) did not themselves see any clear relation between the two references. Further, a review of Denisart suggests that Denisart disparages the systems of Figs. 35 and 38 of Yoakim, in its statement at page 1, lines 26-27 of Ex. 1007, read in combination with Ex. 1007, page 3, lines 8-17 (referring to Yoakim priority PCT/EP08/056310 (Ex. 2004)).

Tellingly, 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 at 6. Yoakim '601 includes the same images Petitioner relies on here to support the opposite conclusion, i.e., placing the code on the bottom of the flange. *See, e.g.*, Ex. 2006 at Figs. 6-7, 23 (below).



See also Ex. 2005 at 8-9.

Petitioner's affiliate (and RPI) continued, stating that the other references (e.g., Jarisch) do not “provide any reason or motivation for the skilled artisan to modify *Yoakim* [’601] alone or in combination with *Boyd* (even if they are combinable) to include the claimed code on a bottom of the flange-like rim of a capsule as required by independent claim 1.” Ex. 2005 at 8-9. Moreover, *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*. Thus, when prosecuting its own application, Petitioner's affiliate (and RPI) argued that different references describing single-serve coffee capsules were not combinable.

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 should undermine Petitioner's arguments now to the contrary.

c. The differences in the capsule holders would discourage combining Yoakim and Jarisch.

Yoakim recognized a propensity for “unbalance” that would produce undesired vibrations. *See* Ex. 1004 at [0006], [0479], [0482], [0484], and [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]. The Petition fails to address this critical requirement and fails to address where such a “snug” fit could be found in Jarisch. Yoakim teaches that the capsule holder “*advantageously* has an interior surface or structure for engaging the capsule with the interior surface or structure configured to offer resistance to torque during rotation or for frictionally engaging or receiving a complimentary surface or structure of the capsule to enable the driving means to rotate the capsule.” Ex. 1004 at [0024]; *see also id.* at [0094], [0205], [0216], [0507], [0512], [0517], Figs. 54, 55, 61, 62, 65. Yoakim explains that 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.* at

[0479], *see also id.* at [0478], [0484], and [0507]. The snug complementary fit is expressly taught to provide an important “safety function.” *Id.* at [0205]. Yoakim thus teaches, and depicts, the capsule side wall advantageously engaging with the capsule holder.

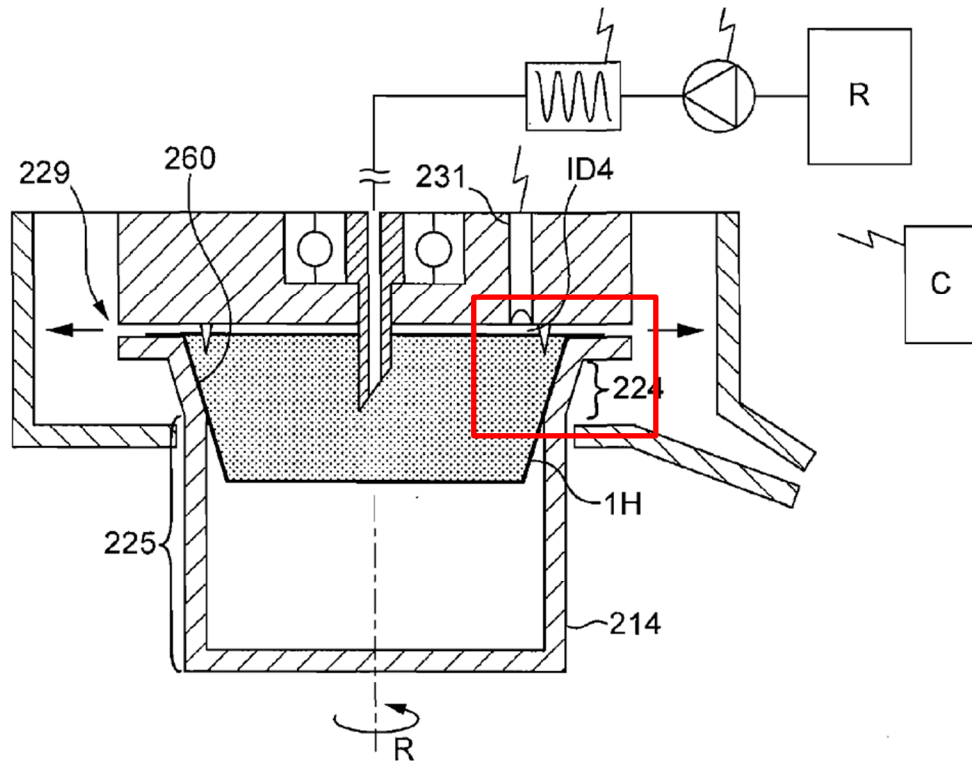
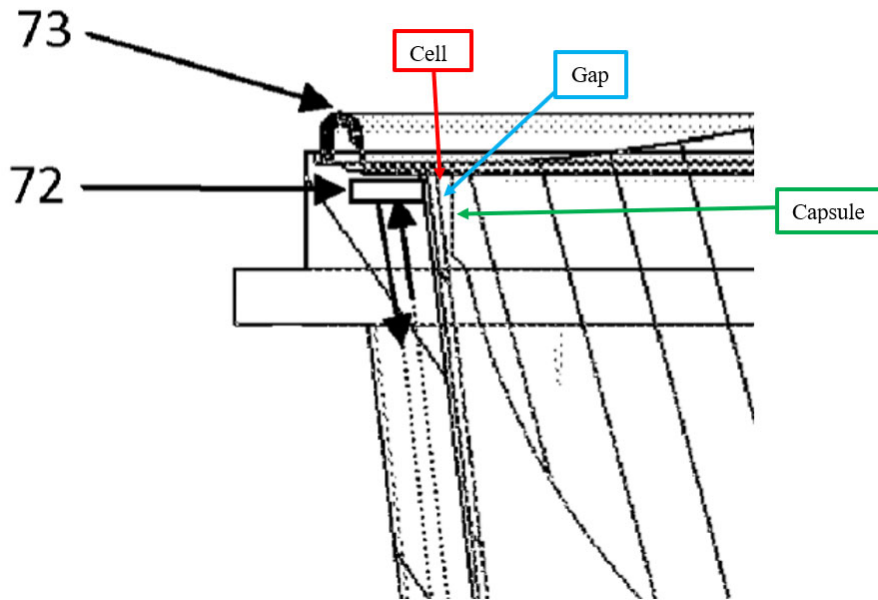


FIG. 61

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



Petitioner's images obscure this gap with a blue line. As mentioned earlier, Jarisch teaches that "the capsule of the invention" is designed for use in the system of "WO2010/026053" (Denisart, Ex. 1007). Ex. 1005 at [0034], [0035]. That reference indicates no unbalance problem sought to be avoided. In contrast, Yoakim describes various other systems with capsules designed for those systems and makes no mention of Denisart or its system at all. Ex. 1004 at [0002], Figs. 1-65. Yoakim and Jarisch thus teach different systems and capsules for those systems. The Petition simply does not address and even seeks to obscure (with its blue line) what the effect would be due to the presence of this gap, particularly as to the "unbalance" problem identified in paragraphs [0006] and [0507] of Yoakim. This further demonstrates the challenges that discourage incorporation of the teachings from Jarisch into Yoakim

and the unlikelihood that a POSITA would be motivated to incorporate the teachings from Jarisch.

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

Given all the differences between Yoakim and Jarisch, it is hard to see why a POSITA would have modified Yoakim in view of Jarisch. Especially since the snug fit 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. “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*

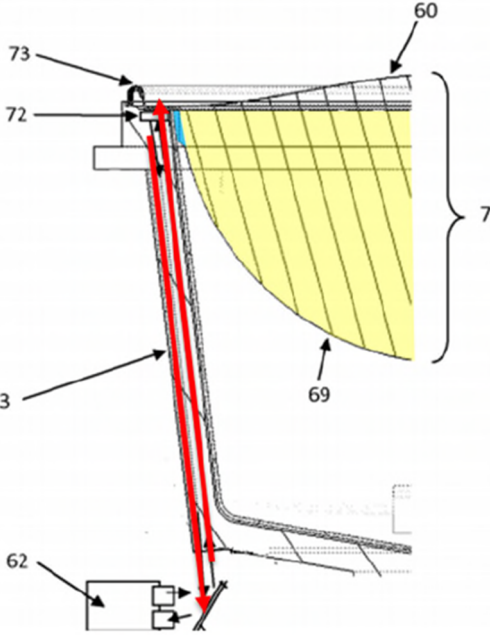
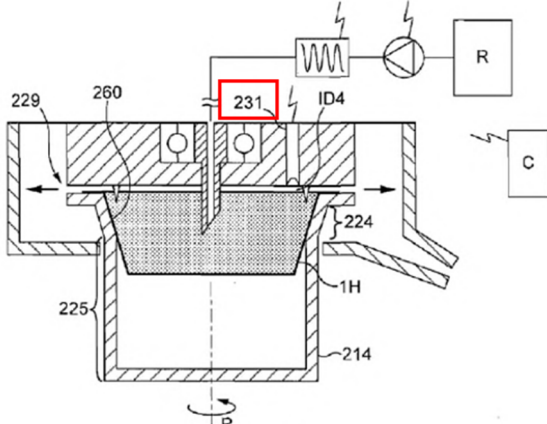
California v. Broad Institute, Inc., 903 F.3d 1286, 1291 (Fed. Cir. 2018). Here, as Petitioner explains, “[t]he Jarisch optical reader configuration is depicted below [in the annotated Figure 5] in order to read the code on the capsule (yellow) with the light path (red) shown from detector (62) to capsule rim (73).” Pet. at 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. at 60; *see also* Ex. 1004 at [0525], Figs. 61, 62.

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

Recall from Section II.A.2 that a skilled person would have been discouraged from combining Jarisch and Yoakim because of the potential “unbalance” described by Yoakim at paragraph [0507] that requires the snug fit. However, assuming *arguendo*, a POSITA could have moved, and would have moved the system shown

in Jarisch into Figs. 61 and 62 in Yoakim, a POSITA would not have then sought to combine the annular V-shaped valve structure of Yoakim Figs. 35 & 36. This is because the resulting valve arrangement would resemble the valve system of Figs. 54 and 55, and there would have been no further need for the annular V-shaped valve arrangement of Figs. 35 & 36 of Yoakim. Petitioner has not reconciled any of these teachings and its proposed combination is nothing more than hindsight analysis.

Table 1 – Comparison of Sensor Placement in Jarisch and Yoakim

Jarisch	Yoakim
 Pet. at 43 (citing Ex. 1005, Fig. 4).	 FIG. 61 Ex. 1004 at Fig. 61.

Not only would there be no motivation to make such a combination, the Petition fails to show that a POSITA would not have had a reasonable expectation of success in moving the sensor to the bottom of Yoakim's brewing device. For example, unlike the cell 3 in Jarisch which has a straight chamber made of transparent

material between the code and the sensor, Yoakim's capsule holder 214 (above right) is comprised of 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 at Fig. 61 (below), [0512].

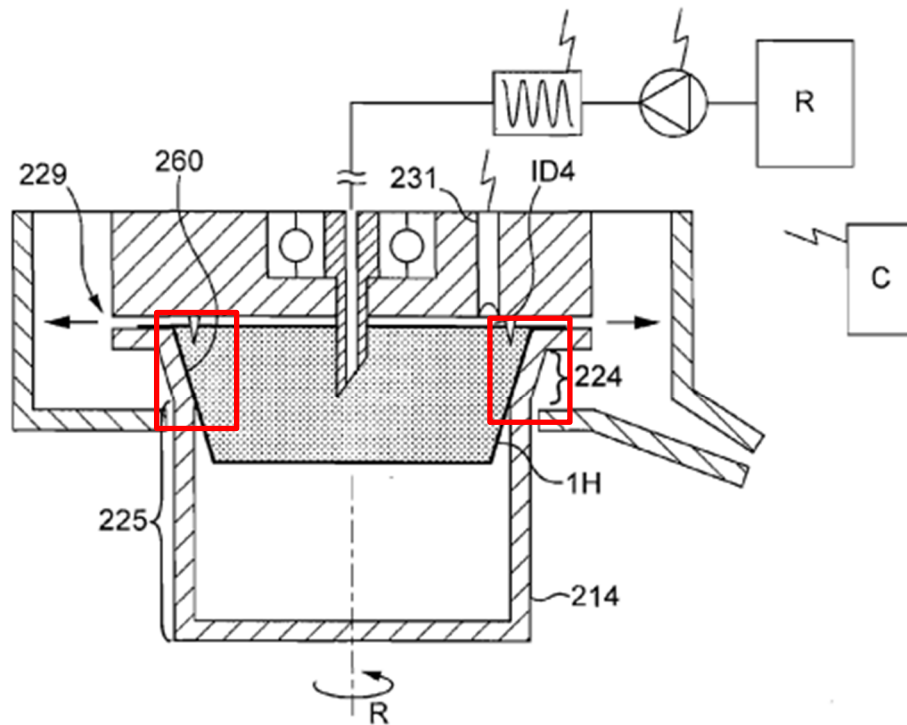


FIG. 61

For the sensor/detector to pass light bidirectionally through this flared region, Yoakim would require extensive modifications, including mirroring or index-of-refraction matching within the flared structure. This would have been particularly challenging given the fact that the barcode of Yoakim would be read while the capsule holder is rotated from a capsule that is not required to be snugly fit. The use of Jarisch's transparent material would also have contributed to undesired refraction

from anisotropy in the material, Fresnel effects, internal reflection, transmission loss along the wall of the holder, and other impairment to the light available for detection. Petitioner asserts Jarisch teaches use of a single external mirror to better position the detector, however, Petitioner ignores how complex an optics assembly needs to be for the accommodation of fully encapsulated optical elements within the wall structure of the capsule holder *and* to accommodate the flared wall structure of the Yoakim capsule holder necessary for assuring a snug fit with the accommodation for multiple-sized and multi-volume capsule set embodiments in Yoakim (i.e., Figs. 61 and 62), which require bending of a light beam.

In sum, the Petition fails to demonstrate that a POSITA would have had the requisite experience to utilize those teachings with a reasonable expectation of success. In fact, it would take extraordinary skill to derive a complication reconfiguration to achieve the combination (if achievable at all) for at least the reasons presented above. *See Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138 (Fed. Cir. 1985) (“The invention must be evaluated not through the eyes of the inventor, who may have been of exceptional skill, but as by one of ‘ordinary skill.’”); *In re Universal Elecs., Inc.*, 2023 WL 3335536, at *4 (Fed. Cir. May 10, 2023). Given all of this, Yoakim and Jarisch would lead a POSITA *away* from combining these two references in the manner Mr. Jobin claims.

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

Because the combination of Jarisch and Yoakim would have required a significant redesign of the elements, including the unnecessary moving of the location of the sensor or detector (ostensibly directly into a flow path of the brewed coffee), insufficient space on Yoakim’s annular portion, and other significant differences, a POSITA would not have been motivated to combine the teachings of the two references. *See, e.g., In re Ratti*, 46 C.C.P.A. at 981. In addition, it cannot be forgotten that the Petition has not explained why or how the embodiments of Figs. 35 and 38 of Yoakim would have been modified to take into account the distinct valve arrangement of Figs. 54, 55, 61, and 62. The embodiment of Figs. 54, 55, 61, and 62 have their own unique sealing arrangement that co-acted with the upper

surface of the flange and had no need for the annular V-shaped element of Figs. 35 and 38. *Ex parte Saiki*, Appeal No. 2000-0373, Ser. No. 08/450,245, 2002 WL 32102452, at *3 (B.P.A.I. Jan. 17, 2002) (overruling rejection where no indication in the art that POSITA would have appreciated a problem to be solved and unclear how POSITA would arrive at the claimed invention from the art's teachings); *Ex parte Salerno*, Appeal No. 2011-004947, Ser. No. 12/359,805, 2013 WL 5603478, at *2 (B.P.A.I. Sept. 23, 2013) (rejecting Examiner rejection that insufficiently explained why modification would have been made absent hindsight).

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

reconfigurations of the different embodiments to introduce a feature that would be redundant to a feature already present.

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

If the Petition’s shortcomings regarding the combination of Yoakim and Jarisch were not enough, in seeking to combine Yoakim and Jarisch with Rossi, the Petition argues that this would have been obvious for the benefit of providing safety “for ensuring that an appropriate capsule is used.” Pet. at 44. But Yoakim already expressly recognizes a need for a safety function, achieving that need specifically by the complementary shape of the capsule holder. Ex. 1004 at [0205] (“a safety function for ensuring that only capsules adapted to the system can be used and brewed successfully”). Petitioner thus again argues for another unnecessary and redundant feature to be added to Yoakim. Petitioner’s argument here too should be rejected. *See, e.g., Pro-Dex*, IPR2023-00218, Paper 8 at 24-26; *Trend Micro*, IPR2023-00692, Paper 8 at 24.

Petitioner also suggests that the safety features of Rossi would be necessary in Yoakim due to Yoakim’s teaching of pressure. Pet. at 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 at [0124]; *see also id.* at [0009] (“the effect of centrifugal forces to brew coffee or other food substances **presents many**

advantages compared to normal type brewing methods using high pressure pumps.”), [0010].⁴

Throughout Yoakim, use of pressure pumps is disparaged. More particularly, Yoakim teaches “[t]he method of *the invention* comprises an operation wherein hot water is introduced into the capsule at *substantially no pressure*,” or alternatively, “using a *low pressure* pump.” *Id.* at [0132], [0133], [0186], (“water is pushed by the effect of gravity”), [0209] (“water can be injected at low pressure Due to high speed rotational movement, the centrifugal forces exert themselves uniformly on the mass of substance. Consequently, the water distribution is also more uniform compared to usual methods using a pressure pump to exert pressure on and through the bed of substance.”), [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

⁴ For frame of reference and showing such contrast, in 2011 Petitioner offered the Pixie espresso making machine and marketed it as having 19 bar pressure. Ex. 2007 at 3 (“2011 – Nespresso launches the PIXIE machine”); Ex. 2008 at 13 (describing specification “Pmax 19 bar”).

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.

Moreover, to the extent it may be urged that Yoakim realizes a potential user safety issue due to pressure, that issue is not attributable by Yoakim to pressure from a pump. Rather, it is a result of the centrifugation process itself that may cause safety issues. Specifically, Yoakim says any rapid expulsion of hot beverage is influenced by two key parameters: rotational speed and backpressure exerted on the centrifuged liquid by valving (Yoakim at [0521]). The Petition ignores this and fails to explain why a skilled person would not have sought to control rotational speed and backpressure when seeking to address safety issues. The identification by Petitioner of controlling a pump to push water is guided solely by hindsight.

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 at [0471], [0476], [0526] (“in particular coffees, of different volumes (e.g., risetto, espresso, lungo, americano, etc.)”). cursory mentions of “espresso” do not overcome the necessary conclusion from Yoakim as a whole—Yoakim is not the type that Rossi’s teachings seek to improve.

Yoakim thus teaches away from any danger that could be caused by a high-pressure pump system.

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

Moreover, as explained in more detail below, Rossi does not disclose a pump at all. And a pump is not inherent in Rossi's teachings. Indeed, there are many ways to supply water under pressure without a pump. *See, e.g.*, Ex. 2012 at Abstract, [0073], Fig. 10; Ex. 2013 at Abstract, [0009], [0010], [0033], [0067], Fig. 2A; Ex. 2014 at Abstract, Figs. 1, 2; Ex. 2015 at 1. Even Yoakim describes a pump is not necessary to supply water into a capsule, because other means such as vaporization and gravity are sufficient. *See, e.g.*, Ex. 1004 at [0132] (explaining water can be fed using aspiration or vaporization), [0427] (explaining tap water can be used)

[0209] (explaining water can be fed by simply pouring unpressurized water). Therefore, this combination thus does not suggest a beverage system as K-fee claims.

Petitioner's ground thus fails on this basis alone.⁵

B. Fails To Teach or Render Obvious Using 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 [1.1] and [8.1] both require “the optically detectable individualization identifier is configured to be read by a sensor/detector of a beverage machine . . . to activate of pump of the beverage machine.” According to Petitioner, this element is taught by Yoakim and Rossi. Pet. at 60-61. Not so.

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. at 60-61. But Yoakim lacks any express teaching that his identification means activates a pump. At best, the only inherent disclosure of Yoakim might arguably be the pump controls when to stop filling water. This is apparent from the citations relied upon by Petitioner. *See* Pet. at 60 (citing Ex. 1004

⁵ The combination with Rapparini also fails for the reasons explained below regarding elements [3] and [8.f]-[8.g]. *See infra* Section II.D.

at [0180] stating that “[a] fluid transport means such as a low pressure pump 6 can be provided in the water circuit to transport water from the reservoir to the module.”) This is further apparent from Petitioner’s language in the Petition. *See* Pet. at 60 (stating that “Yoakim further discloses that the pump is controlled based on the detection,” and completely avoiding any use of the term “activate.”).

There is no link (explicit or inherent) in Yoakim between the reading of the identification means and the initiation of the flow of water. Indeed, Yoakim explains “[a] volume of water may be added ***before, during or after*** the centrifugal brewing operation in the capsule.” Ex. 1004 at [0218]. This teaching demonstrates that the supply of water is not dependent upon the identification means but instead something else, such as the control means. This control means being the source of pump activation is supported by the Yoakim reference itself. *See id.* at [0192] (stating that “depending on the types of beverage to be brewed, the control unit can be programmed to adjust the optimal centrifugal conditions. For instance, the control unit may be associated to a capsule recognition system enabling to recognize the types of capsules, i.e., espresso, lungo, cappuccino, long coffee (e.g., 180-400 ml), latte, tea, etc., and to adjust the speed and/or other brewing parameters (e.g., water temperature) according to the capsule which is inserted in the device.” Contrary to Petitioner’s identifier argument regarding Yoakim (which relies on what would be obvious to a POSITA and is not adequately supported by the reference itself), the

control means being the source of controlling the pump to push water into the portion capsule is fully supported by the language of the '722 Patent.

Tellingly, in teachings ignored by Petitioner, Yoakim teaches activation of his pump as a result of “rotational momentum”—not as a result of an identifier read to individualize the portion capsule and activate a pump. *See, e.g., id.* at [0022] (“liquid introducing means is operatively associated with a pump and injection tube connected to a reservoir for injection of the liquid into the capsule ***under the effect of rotational momentum***”), [0212] (“an injection of water by aspiration under the effect of the rotational momentum”), [0522] (“As known per se, the control of the rotational speed is carried out by the control means selectively activating the rotational motor (not shown) which drives part of the interface assembly 213, the capsule holder 214 and the capsule together in rotation.”). Rotational momentum is one of “two key parameters”—the other being “back pressure”—in “delivering different flow rates” in the “system of the invention.” *Id.* at [0521]. Thus, among the various embodiments of Yoakim, it has not been shown that Yoakim controls its pump according to a reading of the identification means.

What can be interpreted from Yoakim is that the pump is controlled to stop the delivery of liquid into the capsule. But as to the start of water delivery, Yoakim has substantial teachings to indicate that can result from other means. First, Yoakim does not require a pump. Second, Yoakim teaches the water can be aspirated through

rotation of the motor. Third, the brewing could be activated automatically by closing the lid as taught by Schifferle (described in more detail below). The Petition has not pointed to a teaching in Yoakim that definitively says to start pushing water into the capsule upon agreement with a code. From the perspective of Rossi, Rossi likewise only teaches activation of a cycle of production. But that does not demonstrate that pumping would necessarily be the first step of the activation because Rossi does not even teach a pump. The step could just as easily refer to activating a heater, turning on a motor.

Pump activation from reading the identification means is not inherent from Yoakim's teachings. Tellingly, Schifferle (Ex. 1039) teaches a coffee maker where "[a]s soon as the brewing chamber 5 is closed, the pump 2 is operated." Ex. 1039 at [0021]. Yoakim's system could activate the pump in this way. Thus, it is not the case that Yoakim necessarily uses the identification means to activate a pump.

Petitioner's arguments are further undermined by Denisart (Ex. 1007), which Petitioner contends "is similar to the Yoakim system" (Pet. at 41), "includes many similar features to Yoakim's centrifugal brewing system" (Pet. at 25), and "shares two common inventors with Yoakim" (Pet. at 41). As taught by Denisart, the pump is switched on by a controller "after the user's selection." Ex. 1007 at 27:23-27 ("At the beginning of the beverage preparation cycle, and after the user's selection, the centrifugal pump 7 is switched on by the controller 12 and thus, hot water is pumped

from the reservoir 6 to the centrifugal cell 3 through the flow-metering turbine 8.”),

Fig. 9 (reproduced below).

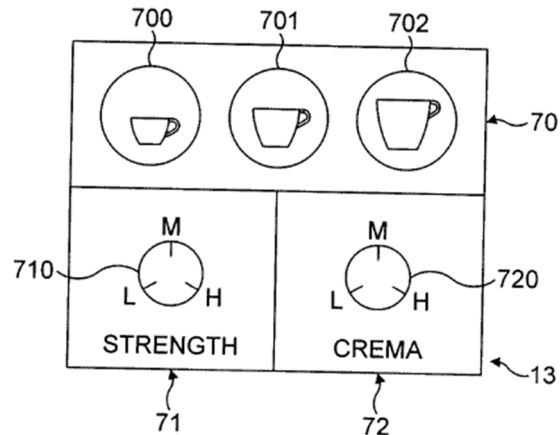


FIG. 9

Thus, as taught by Denisart, it is a manual selection on the user interface that activates the pump.

This is consistent with Mr. Jobin’s own experiences. *See* Ex. 1003 at ¶58 (“Consumers typically place the single-serve capsule into a brewing chamber of the machine, close the chamber to seal it, and ***press a button or switch to initiate the extraction process, which causes the machine to mix heated water with coffee grounds inside the capsule to brew coffee.***”), 63 (“Beaulieu [Ex. 1019] explains that the controller waits for the user to press the brew button”); Ex. 1019 at 3:64-4:5 (“The 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). If the signal indicates that a user has not depressed the start brewing button, then the

remaining steps of the routine 100 are not executed. However, if the start brewing signal indicates that the user has depressed the start brewing button, test 104 is performed to determine if the water temperature is hot enough for brewing.”). Petitioner attempts to ignore 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 at 61. In addition to the issues previously identified, 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.

Finally, the Petition relies on Rossi. Pet. at 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. at 61. Notably, the Petition does not allege that Rossi discloses activating a pump or even use the term “pump.” *See id.* This is due to the fact that Rossi does not disclose a pump at all. And a pump is not

inherent in Rossi's teachings. Indeed, there are many ways to supply water under pressure without a pump. *See, e.g.*, Ex. 2012 at Abstract, [0073], Fig. 10; Ex. 2013 at Abstract, [0009], [0010], [0033], [0067], Fig. 2A; Ex. 2014 at Abstract, Figs. 1, 2; Ex. 2015 at 1.

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

Given Rossi's lack of disclosure of a pump, it is not surprising Rossi does not teach the claimed activation of the pump.

Moreover, closer analysis of Rossi reveals that it teaches a process that is both unlike the one claimed and is incompatible with the teachings of Yoakim/Jarisch. Rossi has a three-step safety validation process. Two steps must occur before the activation takes place. These steps are not optional. Without any compelling rationale, Petitioner has selectively omitted consideration of the second step and the

effect that a destroyed identifier would have upon the claimed combination. This is improper selective picking and choosing. *See In re Wesslau*, 353 F.2d 238, 241 (CCPA 1965); *see also In re Mercier*, 515 F.2d 1161, 1165-66 (CCPA 1975). Rossi's third activating step requires, as mandatory, that the first and second steps be performed, namely the reading of the code and destruction of the validation element. *See* Ex. 1041 at 10 (activation of a cycle requires that identifying element “***must*** be recognized in combination with the validation element as validated.”).

Given that there are three required steps envisioned by Rossi, it was incumbent upon the Petition to explain why the mandatory second validation step could be omitted. Alternatively, if the step was not omitted, it was necessary for the Petition to show how or why Yoakim (and/or Jarisch) would have been modified to include the mandatory second validation step of Rossi. In fact, inclusion of any such step of destruction of any of the capsule features before starting the brewing process as Rossi requires would seem to be contrary to the principle of operation of Yoakim (and Jarisch). The Petition is silent as to any teaching in Yoakim and Jarisch that would include any destruction of any validation element of the capsule after reading of the code takes place and before activating the machine in order to realize the step 2 validation. “It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference

fairly suggests to one skilled in the art.” *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 448 (Fed. Cir. 1986) (quoting *In re Wesslau*, 353 F.2d 238, 241 (CCPA 1965)).

Next, the Rossi teachings extend only to permitting operation of a machine once the three steps are performed. Specifically, the first step may consist of “unlocking the machine when both the identification element and the unvalidated validation element are recognized.” Ex, 1041 at 9. This step is silent as to any pump control. *See also id.* at 6 (“allowing said edible-product making machine to take further steps only if it also recognises on said load element a validation element to be validated”), cl. 1.

The second, mandatory step of validating the validation element may consist of “mechanical destruction of the validation element,” which ensures the validation element cannot be re-recognized. *See id.* at 9. This step is also silent as to any pump control.

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

as selected by the machine in the first recognition step” so as to “help to prevent the user from making the mistake of inserting into the machine a different load element to the one that was first recognized, for which the operating conditions are set.” *Id.* at 8. This step is silent as to any pump control. It is apparent that none of the three steps teach activating a pump. And even in combination with Yoakim and Jarisch, as explained above, “edible-product production” would not necessarily mean that a pump is activated from information in the barcode or RFID. The Petition ignores all of the numerous and many controllable features that Yoakim/Jarisch 929, including (for example), the activation, de-activation, and regulating of centrifugation and valving, the activation, de-activation, and regulating of a heater, and/or the flow meter.

For example, Yoakim teaches centrifugal rotation, a step of the production cycle, can occur even before water is introduced into the capsule. *See, e.g.*, Ex. 1004 at [0440]. As disclosed in Rossi, “in order to allow the machine to proceed to **activation**,” the machine must “recognise[] the identifying element and the unvalidated validation element.” Ex. 1041 at 11.

In sum, activating a cycle of production according to Rossi will not necessarily (or obviously or inherently) involve activating a pump to supply water to the capsule, and Petitioner’s selection of the pump of Yoakim is based only on impermissible hindsight. That “the activation means 10, connected to the barcode

reader 7 through the control unit 9, automatically activate[s] a cycle of production of the edible product” does not necessarily suggest pump control to push water into the capsule after the claimed determination. Ex. 1041 at 13; see also *id.* at 11, 12. Thus, Rossi’s teachings fail to overcome the apparent shortcomings of Yoakim and Jarisch. Again, the Petition is deficient in explaining why a POSITA, in order to avoid rapid expulsion of hot water, would have chosen a pump (an optional feature) to control instead of a valve, centrifugal motor, heater, or any of the other controllable features.

Petitioner’s two grounds thus fails on this basis alone.

C. Yoakim Fails To Teach or Render Obvious a Base Element that Comprises a Wall with a Plurality of Indentations Arranged on the Outside Surface of the Wall, About the Longitudinal Axis (Ground 1, Claims 1-7)

Claim element [1.f] requires that the base element have “a plurality of indentations arranged on the outside surface of the wall, about the central longitudinal axis.” The Petition relies on the teachings of Yoakim alone for this claim elements (Pet. at 51-52). But the Petition lacks any rationale for such reliance and is thus deficient to establish obviousness.

For example, as explained more above, on the most basic level “Petitioner fails to provide a sufficient rationale to combine the teachings of [Yoakim’s] different embodiments.” *Abiomed, Inc. v Maquet Cardiovascular, LLC*, IPR2017-01204, Paper 9, at 11 (PTAB Oct. 23, 2017) (denying institution where Petition

failed to provide rationale to combine the teachings of the reference's different embodiments). For element [1.f], the Petition changes course from relying on Yoakim's non-toothed capsule embodiment (i.e., the one illustrated in, e.g., Figures 27 and 61 (*see* Pet. at 47-50, 53-73)) to relying on the toothed capsule embodiment of Yoakim's Figure 23 (Pet. at 52). But the Petition never establishes that the toothed capsule embodiment is interchangeable with the non-toothed capsule embodiment of Figures 27 and 61. *See* Pet. at 51-52. Yoakim describes the capsule of Figure 27 as "a preferred capsule" (Ex. 1004 at [0414]) and the capsule of Figure 23 as "another capsule of the invention" (*id.* at [0215]). They are thus taught by Yoakim to be different capsules.

Yoakim further teaches that "[t]he device itself that receives the capsule of FIG. 23 comprises a toothed surface of complementary shape." *Id.* at [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.* at [0217]. But Yoakim makes no such statement regarding the interchangeability of the capsule holder of the Figure 61 embodiment. Notably, the Figures 8 and 9 embodiments lack the identification means of Figure 61 that the Petition relies upon for other elements. *See*

id. at [0521]; *compare* Figure 61 (showing identification means above the capsule) *with* Figure 8 (no identification means depicted).

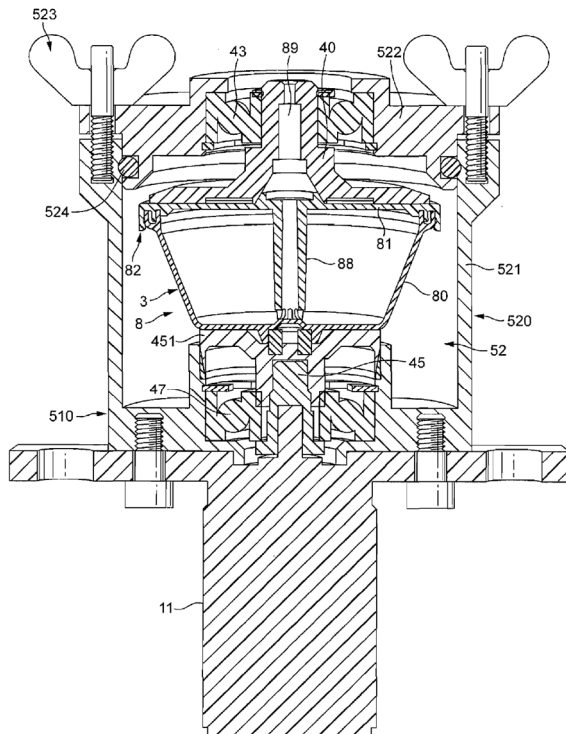


FIG. 8

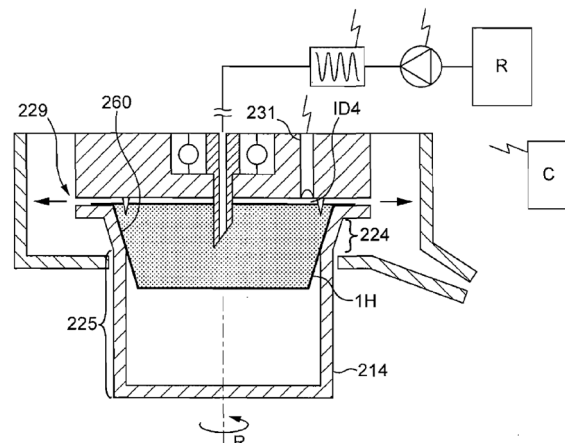


FIG. 61

There is thus no rationale in the Petition or Yoakim for combining the toothed and non-toothed capsule embodiments in the manner the Petition suggests. Each of the capsules of Yoakim are designed to be used in a unique centrifugation system. As explained above, Fig. 23 is designed to be used with the system of Fig. 8. The Petition does not explain why or how one would use the capsule of Fig. 23 with the spring-biased annular seal system of Figs. 35 and 36 (for capsules having a peripheral collection recess 116). Further, Petitioner does not explain why or how one would then use the capsule of Fig. 23 (associated with Fig. 8) and the spring-

biased annular seal system of Figs. 35 and 36 with the multi-volume capsule set system of Figs. 61 and 62. Such combination is not contemplated even by Yoakim given that the water injection subassembly of Figs. 35 and 36 uses an engaging wall 155 that does not extend over the peripheral flange. Moreover, the Petition is silent as to why the skilled person would then use such a capsule in the multi-volume capsule set system of Figs. 61 and 62. The Petition's failure to provide a rationale to combine the teachings of Yoakim's many different embodiments makes the Petition deficient. *See Amazon.com*, IPR2022-01455, Paper 12 at 18; *Intel*, IPR2019-01521, Paper 65 at 25; *Hewlett Packard Enterprise*, IPR2022-00115, Paper 9 at 15; *Abiomed*, IPR2017-01204, Paper 9 at 11; *Google*, IPR2018-01086, Paper 10 at 19. In addition to Petition's shortcomings regarding Yoakim alone, the Petition contends that it would have been obvious to a POSITA to utilize the claimed indentations. Pet at 52. The Petition does not adequately explain how it would have been obvious to arrive at these claim limitations, and is completely silent as to the needs of the capsule that the proposed combination of Jarisch would impose. Indeed, without any explanation, the Petition relies on the same deficient teachings of Yoakim. Pet. at 52. Moreover, the Petition summarily string cites Exs. 1008, 1030-1035 without any pin cites or attempt to explain the combination. "Obviousness requires more than a mere showing that the prior art includes separate references covering each separate limitation in a claim under examination; rather, it requires the additional showing

that a person of ordinary skill at the time of the invention would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention.” *Edmund Optics, Inc. v. Semrock, Inc.*, IPR2014-00583, Paper 9 at 13 (PTAB Sept. 19, 2014) (citing *Unigene Labs, Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011)). Accordingly, Petitioner’s obviousness contentions is insufficient to establish a reasonable likelihood of prevailing.

Petitioner’s ground 1 thus fails on this basis alone.

D. Petitioner Cannot Demonstrate that the References Teach Or Render Obvious a Plurality of Vertically Oriented Grooves as Claimed (Ground 2, Claims 3, 8-12)

Claim elements [8.f]-[8g] require the portion capsule to have a base element with “a plurality of vertically-oriented indentations arranged on the outside surface of the wall” and “a plurality of vertically-oriented ribs arranged on the inside surface of the wall.” Claim 3 has similar claim elements. The Petition relies on the teachings of Yoakim and Rapparini for these claim elements. (Pet. at 76-78). But the Petition lacks any rationale for such reliance and is thus deficient to establish obviousness.

Regarding Yoakim alone, Petitioner’s arguments fail for the same reasons described above in Section II.C.

In addition to Petition’s shortcomings in this combination regarding Yoakim alone, the Petition contends that a POSITA also would have been motivated to combine the capsule and concepts of Yoakim’s centrifugation system with

longitudinal ribs and grooves of Rapparini (as to which suitability for a centrifugation system has not been shown). Pet. at 73. This is incorrect.

Similar to the issues with Petition shown in Section II.C., the Petition again switches, this time going as far as to switch between one paragraph and the next, between the toothed and non-toothed embodiments of Yoakim without ever establishing (or even mentioning) whether the embodiments are interchangeable. *See* Pet. at 74-75 (using non-toothed Fig. 27 to show similar capsule shapes and then immediately quoting [0215] stating that “[t]he toothed structure comprises a series of teeth”), What’s more, Petitioner completely fails to address that the various different capsules of the respective embodiments of Yoakim ostensibly are unique to the different types of valve arrangements for deriving back pressure.

The Petition further does not adequately explain how Yoakim’s different embodiments and Rapparini would have been combined to arrive at these claim limitations. Indeed, without any explanation, the Petition leaps from discussion of the non-toothed capsule shape of Yoakim being similar to Rapparini’s capsule shape to the toothed capsule of Yoakim showing a textured body similar to the grooves and ribs from Rapparini. Pet. at 74. The Petition simply concludes later that a POSITA “would have been motivated to utilize the grooves/ribs of Rapparini in combination with the capsules and concepts of Yoakim” without providing any analysis or explanation. *Id.* at 78. “Obviousness requires more than a mere showing

that the prior art includes separate references covering each separate limitation in a claim under examination; rather, it requires the additional showing that a person of ordinary skill at the time of the invention would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention.” *Edmund Optics, Inc. v. Semrock, Inc.*, IPR2014-00583, Paper 9 at 13 (PTAB Sept. 19, 2014) (citing *Unigene Labs, Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011)). Moreover, there is a problem of combining the capsule of Yoakim Fig. 23 with the code of Jarisch since the flange of Fig. 23 is not suitable for the code of Jarisch due to its small size; the Petition is deficient in rationalizing the at least four-way combination of Yoakim Fig. 23, Yoakim Fig. 61, Jarisch Fig. 5, and Rapparini.

Finally, the grooves of Rapparini’s Figs. 6 and 6 bis intersect with and form part of the flange (annotated in red below).

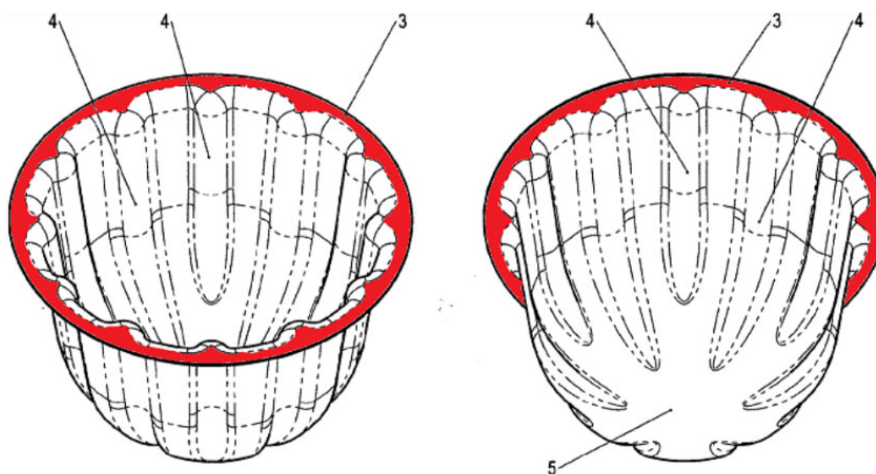


FIG. 6

FIG. 6 bis

Petitioner has not explained how it is feasible to maintain that feature and have ample space for a code as taught by Jarisch. The grooves being part of the flange necessarily means less surface to carry a code. The Petition does not address this effect and the requirement of a substantially-sized rim to employ the code on the bottom of Jarisch.

Petitioner's ground 2 thus fails on this basis alone.

III. Conclusion

It is clear even from this preliminary record that Petitioner's asserted challenges suffer from numerous procedural and substantive deficiencies. In light of these deficiencies, the Petition fails to show that there is a reasonable likelihood that Petitioner will prevail in proving any challenged claim unpatentable. The Petition should, therefore, be denied. Pursuant to 35 U.S.C. § 314, no *Inter Partes* Review should be instituted.

Date: March 28, 2024

Respectfully submitted,

/Douglas Carsten/

Douglas Carsten, Lead Counsel

Registration No. 43,534

Attorneys/Agents for Patent Owner

CERTIFICATION UNDER 37 C.F.R. § 42.24

Under the provisions of 37 C.F.R. § 42.24, the undersigned hereby certifies that the word count for the foregoing Patent Owner Preliminary Response totals 12,983 words, which is less than the 14,000 allowed under 37 C.F.R. § 42.24(a)(1)(i), (b)(1).

Date: March 28, 2024

Respectfully submitted,

/Douglas Carsten/

Douglas Carsten, Lead Counsel

Registration No. 43,534

Attorneys/Agents for Patent Owner

CERTIFICATE OF SERVICE

I hereby certify, pursuant to 37 C.F.R. § 42.6, that on March 28, 2024, a complete copy of the foregoing document was served upon the following by ELECTRONIC MAIL:

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

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

/Douglas Carsten/

Douglas Carsten, Lead Counsel

Registration No. 43,534

Attorneys/Agents for Patent Owner