

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NESPRESSO USA, INC.
Petitioner

v.

K-FEE SYSTEM GMBH
Patent Owner

IPR2024-00254

U.S. Patent No. 11,465,829

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

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1001	U.S. Patent No. 11,465,829	'829 Patent
1002	Prosecution History of U.S. Patent No. 11,465,829	'829 Patent File History
1003	Declaration of Michael Jobin	Jobin Decl.
1004	U.S. Patent Pub. US2010/0239734A1	Yoakim
1005	U.S. Patent Pub. US2013/0064937A1	Jarisch
1006	U.S. Patent Pub. US2013/0064929A1	Jarisch 929
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1008	U.S. Patent Pub. US2012/0269933A1	Rapparini
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I. Introduction

K-fee's Patent Owner Response ("POR") is an amalgam of undeveloped, scattershot arguments that mischaracterize plain language of the Petition and prior art. In response to clear motivations to combine, K-fee resorts to attacking irrelevant embodiments of the art that make up no part of the Grounds and ignores the art's clear motivating statements. On the few claim limitations that K-fee challenges, K-fee repeatedly demands more disclosure from the art than what is found in the '829 Patent itself. K-fee does not even dispute that its claims lack priority to its foreign filings.

Petitioner's Grounds have already been found to include motivations to combine and to teach the overwhelming majority of these claim limitations. (IPR2023-00485, IPR2023-00502, Paper 26.) Nothing has changed.¹

¹ Judge Wu construed "identifier" and "individualization" terms. (EX1070, 5-6.) Petitioner addressed both parties' constructions, showing how the claims are obvious under either interpretation. (Pet. 53-54.) The POR never addresses this, and any responsive arguments are waived. (Institution Decision ("ID"), Paper 8, n.10, n.12.)

II. Glucksman's Methods are Flawed

The Glucksman testimony demonstrated that he: (1) does not understand enablement (EX1071, 65:17-66:2); (2) applied the wrong obviousness standard by requiring element-by-element motivations within a reference (87:15-88:4); (3) did not apply the *Phillips* claim construction standard (89:4-90:20); and (4) was unable to answer basic questions about K-fee's patents (47:19-49:1, 104:15-105:22, 112:5-16). Thus, his opinions, including the enablement of prior art (EX2020, ¶¶102-105, 179), the motivations to combine Yoakim embodiments (¶¶76-93), and his analysis of whether the prior art satisfies the claims, should be given little to no weight. *Texas Instruments Inc. v. Cypress Semiconductor Corp.*, 5 F.3d 1504 (Fed. Cir. 1993) ("The testimony of a patent expert based on an obviously incorrect legal analysis is not evidence adequate to support the verdict."). Glucksman also repeatedly took positions plainly inconsistent with the teachings in the art. *Housewares LLC v. Whirlpool Corp.*, 865 F.3d 1372, 1378 (Fed. Cir. 2017) (disregarding expert testimony inconsistent with the record).

Jobin should be afforded greater weight because he properly analyzed the prior art in view of the claims, as interpreted under *Phillips*, applying the correct legal standards. Jobin also has more relevant experience with beverage and fluid

systems integrating identifiers—something Glucksman does not have. (EX1003, ¶¶24-25, EX1072, ¶12; EX1071, 61:19-64:3.)

III. POSITA

K-fee now advocates for a different level of skill than it did in prior related IPRs where the technology was effectively the same. (POR, 3-4; IPR2022-01574, Paper 17, 9; IPR2023-00485, Paper 6, 18; IPR2023-00502, Paper 6, 13.) The only thing that changed is that K-fee expert was found not a POSITA and K-fee's claims were twice found unpatentable. (IPR2023-00485, IPR2023-00502, Paper 26.) The Board has adopted Nespresso's skill level in IPR2023-00485 and IPR2023-00502, and K-fee offers *no evidence* to depart from this—particularly where both experts agree the definition does not change the outcome. (EX2020, ¶47; EX1072, ¶¶2-10; EX2025, 47:4-50:24.) Jobin is unquestionably a POSITA, and K-fee's claims are obvious, under either definition. (EX1003, ¶¶5-30; EX1072, ¶¶11-12.)

IV. K-fee's Motivation Challenges are Meritless

A. Yoakim's Embodiments

K-fee argues that a POSITA would not have combined Yoakim's embodiments. (POR, IV.A.1.) But these arguments feign confusion over a clear reference in a predictable art. The bulk of K-fee's arguments focus on Yoakim's FIG8-9 or FIG23, which do not form Petitioner's element-mapping. Other arguments take issue with prior patent filings that pre-date Yoakim but fail to focus

on *Yoakim's disclosure* and its teachings to a POSITA. K-fee fails to establish any incompatibility between the cited features in *Yoakim*, or that any combination is unpredictable or outside a POSITA's skill. More critically, K-fee's entire challenge violates the legal principle that a reference is read for *all* that it teaches, and element-by-element motivations are not required in multi-reference combinations. *Gen. Elec. Co. v. Raytheon Tech. Corp.*, 983 F.3d 1334, 1351-53 (Fed. Cir. 2020).

K-fee baselessly asserts that there are five embodiments, “*each incompatible with the others.*” (POR, 11; EX1071, 115:20-116:20.) But *Yoakim's* capsules and devices exhibit common features across embodiments, which generally function similarly: *e.g.*, a cup-shaped body, flange, gas-barrier layers, membrane, water inlet, areas for sealing and piercing for water exit. (EX1004, [0128]-[0129], [0162]-[0164]; ID, 22-23.) *Yoakim* describes its capsule in general terms ([0014]-[0016], [0019]), and then presents different arrangements ([0110]-[0112], [0121], [0197]-[0199], [0414]).

Likewise, *Yoakim* describes certain machine features generally (including piercing and identification means, and the valve/seal) and not linked to a specific embodiment. (EX1004, [0018], [0020]-[0023], [0180]-[0182], [0187], [0192].) K-fee suggests that *Yoakim's* identification means can only be used with FIGS61-62, but *Yoakim* discusses this feature as part of the invention. (*Id.*, [0009]-[0013],

[0025], [0028], [0153], [0477], [0521] (describing “the system of the invention” including identification means).)

Any differences between the relied-upon capsules and machines are “predictable variation[s]” that do not “require a leap of inventiveness.” *Boston Sci. Scimed, Inc. v. Cordis Corp.*, 554 F.3d 982, 991 (Fed. Cir. 2009). K-fee provides *no evidence* of unpredictability in this mechanical art. *Tokai Corp. v. Easton Enterprises, Inc.*, 632 F.3d 1358, 1371 (Fed. Cir. 2011) (“[T]he nature of the mechanical arts is such that ‘identified, predictable solutions’ to known problems may be within the technical grasp of a skilled artisan.”); MPEP §2164.03 (“A single embodiment may provide broad enablement in cases involving predictable factors, such as mechanical or electrical elements.”) (collecting cases).

K-fee's remaining arguments fail:

“Laboratory Models”: K-fee describes certain embodiments as “laboratory models” or “schematics.” (POR, 6.) But Yoakim never uses “laboratory model,” K-fee offers no evidence *why* a POSITA would consider them a “laboratory model,” and offers no evidence *how* such a depiction undermines Yoakim's collective teachings. *Univ. of Strathclyde v. Clear-Vu Lighting LLC*, 17 F.4th 155, 165 (Fed. Cir. 2021); (EX1071, 62:15-63:14, 96:20-97:5.)

“Toothed Structure”: K-fee argues that Petitioner improperly combines FIG23 “toothed structure” with other embodiments. (POR, 8-9.) ***But Petitioner***

never relies on FIG23 for a limitation. Rather, Petition at 71 demonstrates the general concept throughout all of Yoakim that the portion capsule drops into the brewing chamber in a specific position—a limitation that K-fee does not challenge. Moreover, Yoakim never limits capsule FIG23 to the machine of FIGS8-9, and generally references the option of textured surfaces to drive rotation. (EX1004, [0016], [0024], [0215]-[0216].)

“Valve/Seal”: K-fee argues that the FIG35 valve assembly is only compatible with the capsule of FIGS28-31, and incompatible with an identifier. (POR, 13-16.) K-fee focuses on earlier patent filings instead of what *Yoakim as a whole* teaches a POSITA. (*Id.*, 15-16.) K-fee ignores that FIG35's valve/seal assembly comports broadly across embodiments. (EX1004, [0018], [00369]-[00374].) Regardless of whether a capsule includes lid 108 (FIGS28-31), Yoakim's capsules are commonly configured to be pierced at the membrane by spike (151-154, 221) for liquid exit along their outer perimeter, and including a flange where the valve/seal can press to control pressure. (FIGS6-7, 34-35, 54-65.)

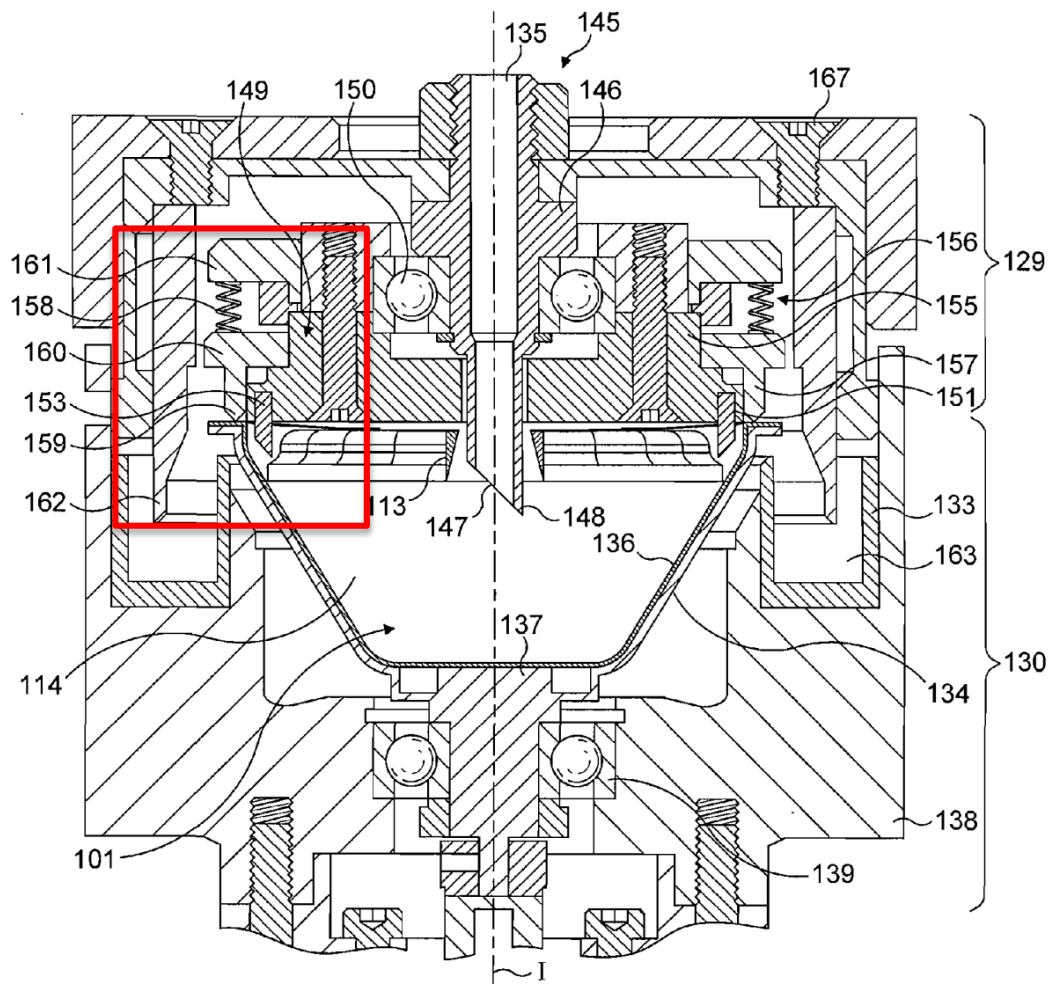


FIG. 35

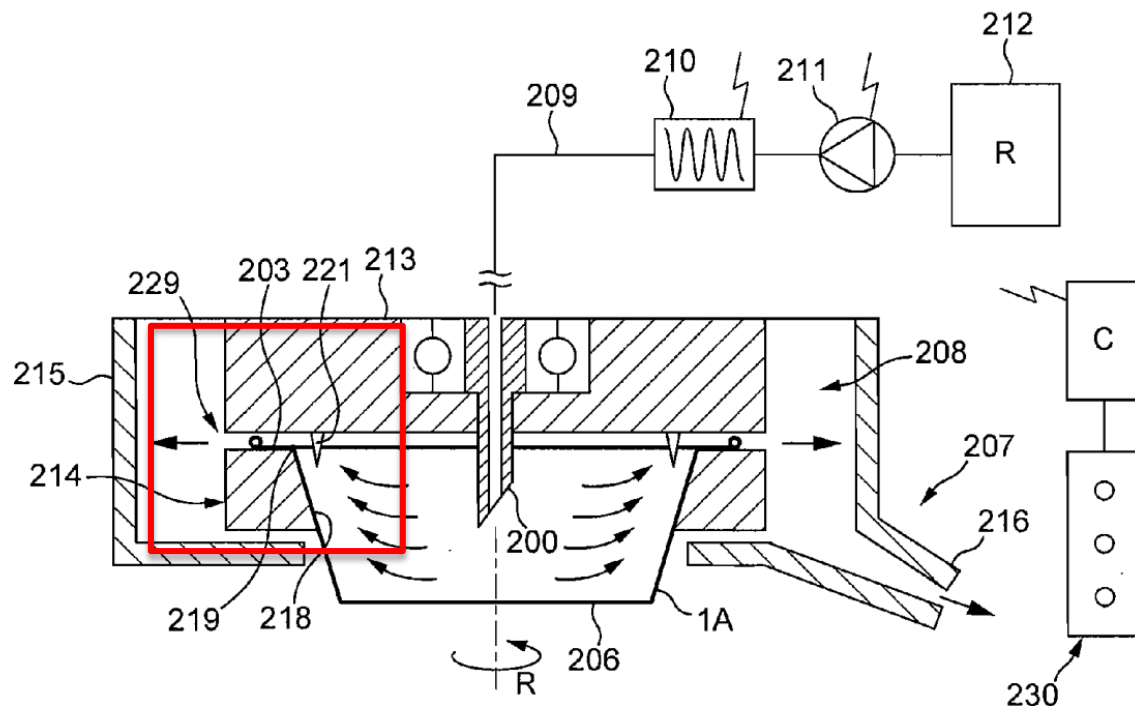


FIG. 54

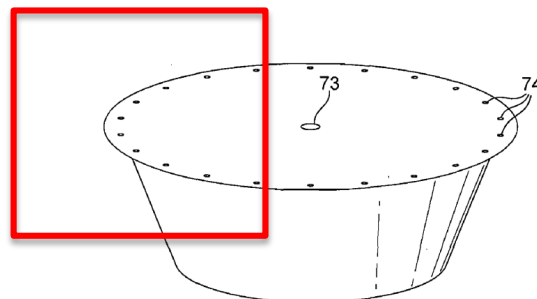


FIG. 7

Moreover, Yoakim’s identifier or multi-volume capsule embodiments expressly teach using this valve/seal configuration. (POR, 13-16; EX1004, [0506] (“A flow restriction can be formed by a *spring-biased valve*...”); [0507] (“[Flow] restriction can be obtained by ... a *restriction valve*...”); [0521]-[0522], [0524]-[0525]; [0382]-[0388] (flow restriction as “valve means” in the form of “spring loading member”); [0436], [0445].) Nor does the valve/seal system require any kind of “collecting

recess” to operate, and specifically notes alternative configurations. (*Id.*; [0422]-[0423], [0425], [0349], [0018], [0420]; POR, 12.) Petitioner explains motivation for using this feature in Yoakim. (Pet., 59-62.)

No Inconsistent Statements: K-fee again takes prior prosecution statements out of context. (POR, 15-16.) *First*, K-fee failed to argue estoppel or any other doctrine that would prohibit Petitioner's arguments. *Second*, K-fee failed to even analyze the rejection and corresponding claims at issue during the cited prosecution. *Third*, Applicant *was consistent with Petitioner* by confirming that Yoakim I discloses “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.” (EX2003, 5.) Applicant simply argued that Yoakim I failed to *teach* “a plate that is pressed to engage the pressing surface portion with the force-setting portion” along with other lengthy limitations. (*Id.*) Such specific limitations are not found in K-fee's claims, and thus Applicant's statements do not speak to *whether Yoakim's complete disclosure renders K-fee's claims obvious*.

B. Motivations to Combine Jarisch

1. Jarisch is Enabling

The USPTO already determined that Jarisch and Jarisch929 are enabling. (EX1069; EX1073; EX1072, ¶15.) K-fee ignores that Jarisch provides *substantially more disclosure* than the '829 Patent. (POR, 18-21.) Jarisch explains precisely how

to accomplish moving and reading a code on the bottom of a flange—including how to modify centrifugal brewers to read a *rotating* code. (EX1005, [0037]-[0039], [0063]-[0093], FIG4-7; EX1003, ¶¶112-121, 199-203, 251-253; EX1072 ¶¶14-16; EX2025, 144:23-145:5.) The '829 Patent simply says that a detector may be placed in the media chute. (EX1001, 8:56-58.) *Motorola, Inc. v. Interdigital Tech. Corp.*, 121 F.3d 1461, 1471 (Fed. Cir. 1997) (affirming obviousness and enabling prior art that had “a level of detail similar to those contained in the patent”); *Constant v. AMD, Inc.*, 848 F.2d 1560, 1569 (Fed. Cir. 1988) (same). Glucksman failed to conduct any *Wands* analysis and admitted he lacks understanding of enablement. (EX1071, 65:17-2.)

Jarisch never admitted in EX2021 that Jarisch929 was non-enabling. (POR, 20-21.) Jarisch actually referenced Denisart and Jarisch929, stating that Jarisch929 “*enables* to make a large volume of encoded information available” and that it is “able to read the code support by rotating the capsule while the capsule is in place.” (EX2021, 2:26-33, 2:7-20.) Jarisch simply identified “difficult” reading conditions and that improved sensors would be “too expensive.” (*Id.*, 2:18-47.) Jobin agrees with this understanding of the Jarisch patent disclosures. (EX1072, ¶¶17-18.) That the prior art does not achieve a perfect or commercially-acceptable practice of invention does not defeat obviousness. *Geo M. Martin Co. v. Alliance Machine Sys. Int'l LLC*, 618 F.3d 1294, 1302-1303 (Fed. Cir. 2010) (finding obviousness even

where prior art “did not work at ‘production speed’”). Glucksman’s own coffee system patents weren’t commercially viable. (EX1071, 63:4-14.) Thus, EX2021 simply provides “an improved code support” from Jarisch929 “for providing an enhancement of the optical signal generated from the code support.” (EX2021, 3:3-6.)

Finally, *Raytheon Techs. Corp. v. Gen. Elec. Co.*, 993 F. 3d 1374, 1382 (Fed. Cir. 2021) held that the Board erred in finding enablement of a reference in a ***single-reference obviousness*** context because un rebutted evidence showed that the reference’s disclosure was based on technology ***that did not exist at the time***. *Raytheon* explained there is no absolute requirement for a 103 reference to be self-enabled as long as the overall evidence establishes that a POSITA could have made and used the invention. (*Id.*, at 1377-78.) Likewise, Jobin never testified that it would take “years” or “dozens of iterations” for Petitioner’s proposed combination. Instead, he simply indicated that the time required is unique to every project and would depend on the circumstances. (EX2025, 28:5-29:6, 30:20-31:19.)

2. Yoakim Benefits From Jarisch’s Code Location

K-fee argues that “Jarisch and Jarisch929 do not teach or suggest any rationale for moving the support to the underside of the capsule.” (POR, 22.) But Jarisch’s code location improves reading reliability because it is “sufficiently away from the liquid injection and beverage delivery areas so that there is a lower risk for the code

to become unreadable such as if partly or totally hidden or soiled by beverage residues or otherwise (e.g., coffee particles).” (Pet. 38-39, 52-53; EX1005, [0022]; EX1003, ¶¶251-253.)

K-fee argues that Yoakim's code does not benefit because (i) it is read before brewing (allegedly without soiling), (ii) centrifugal forces would drive fluid away from the code, and (iii) Yoakim's annular portion does not provide sufficient code space. (POR, 22-25.) None of these arguments cut against Jarisch's motivation. (ID, 25-26; IPR2023-00502, Paper 26, 44-51 (PTAB).)

Code Soiling: Jarisch is clear that it is immaterial whether the code is read before brewing because *beverage residues* can cause unreadability, which could occur during brewing or be leftover after. (EX1005, [0022].) Glucksman agrees that coffee residues build up in brewing chambers. (EX1071, 92:17-93:2.) K-fee's unsupported conclusion that the injection needle would supposedly form a “seal” (POR, 23-24; EX2025, 170:5-11) ignores this point, and the fact that other piercing elements allow ingredients to exit the capsule into the chamber.²

² Panesar's disclosures are irrelevant to what Jarisch teaches a POSITA, and Jarisch's explicit motivation to be used with centrifugal brewing like Yoakim. (POR, n.6, EX1005, [0022], FIG4.)

Piercing Location: K-fee is wrong that the piercing location would not impact code reading. (POR, 22-24.) Jarisch's code location is advantageously away from the "piercing elements" (EX1003, ¶201), which were known in the art to tear or distort the barcode on the membrane (Pet. 13-14; EX1003, ¶¶112-116.) Regardless of whether FIG61 is drawn exactly to scale, Yoakim depicts the piercing element in the same general area as the barcode, which—upon closing—would pierce the membrane in the same general location that is meant to be read *after* closing. (EX1004, FIG61.)

Centrifugal Brewing: K-fee argues that centrifugal forces would drive fluid outwards away from the code. (POR, 23.) But that ignores how Yoakim utilizes a *flow restriction seal* designed to keep fluid from exiting until a heightened pressure is reached. (EX1004, [0507], [0382], [0385], [0436], FIG35, 38.) Thus, the fluid would not exit until *after* a sufficient pressure has built up in the chamber, *outside of the capsule*. (EX1071, 123:10-20.)

Code Spacing: K-fee forces bodily incorporation arguing that Yoakim's capsule does not have space for Jarisch's code. (POR, 25.) Yoakim and Jarisch's rim diameters are consistent. Jarisch states that the code should preferably be *less than* 8mm from the peripheral edge. (EX1005, [0037].) Yoakim indicates a rim can

be, *for example*, 5mm (EX1004, [0414]), allowing space within Jarisch's preferred range. It is well within a POSITA's skill to configure the correct rim size.³

Accordingly, none of K-fee's arguments undercut Jarisch's explicit motivation to modify a centrifugal brewing system like Yoakim's.

3. Reasonable Expectation of Success

K-fee's argument that the combination of Yoakim and Jarisch requires a "substantial reconstruction and redesign" unnecessarily complicates a simple combination (EX2011, 32:3-34:2; 108:21-109:5) and is contrary to law. (POR, 25.) Jarisch teaches precisely how to move a code in a centrifugal system like Yoakim's to the bottom of the flange and read it by moving the detector to the bottom and utilizing a light-conductive material to reach the flange. (Pet. 38-40; EX1003, ¶¶202-203, 252-253; EX1005, FIG5, [0063]-[0093].)

K-fee's arguments fail:

Snug Fit/Unbalance: K-fee argues that vibrations in Yoakim's capsule would prohibit combination with Jarisch. (POR, 26-29.) But, a POSITA would know how to design a capsule that fits while accounting for the teachings of both references. (EX2011, 36:18-37:6; EX1071, 42:22-43:9.) K-fee's "gap" is also

³ Contrary to Glucksman's suggestion, Petitioner never proposes utilizing the specific configuration of Yoakim FIG23. (POR, 25.)

manufactured—the only alleged “support” is a highly-zoomed FIG4. (POR, 27.) But Jarisch never teaches a “gap.” (EX2025, 142:7-143:3.) Jarisch *does* teach *holding the capsule and driving it in rotation*, just like Yoakim.⁴ (EX1005, [0023]; EX1004, FIGS61-62.) Moreover, a POSITA would have known how to properly combine the teachings and—if needed—maintain a snug fit. (EX1003, ¶¶112-121, 203, 251-253; EX1072, ¶¶19-20.) Finally, K-fee offers no evidence that, even if there was a “gap,” it would render Yoakim inoperable.

Rotation: Contrary to K-fee's argument (30-34), Jarisch *does* teach holding the capsule and driving it in rotation. (EX1005, [0023], [0037]-[0039].) K-fee ignores that Jarisch is explicitly designed to read through a rotating chamber. (*Id.*) K-fee's argument regarding prior prosecution and the Fisher reference (POR 30-31) is irrelevant because Fisher is directed to a *gaming chip* that has nothing to do with centrifugal brewing systems, and was unrelated to Jarisch's solution of reading a code in a centrifugal brewing system. The Fisher/Yoakim combination is not at issue here (nor is it relevant to the current Grounds), and K-fee never analyzed any

⁴ Nothing in EX2021 suggests that Jarisch929 includes a “gap” or that EX2021 is devoted to creating a “tight fit” for the capsule. EX2021 focuses on an improved code support to improve reflection and readability. (EX2021, 3:3-7; 5:65-6:8.)

similarities in the rejected claims that would render the statements inconsistent with this Petition.

Optically Detectable Code: K-fee incorrectly argues that the combination would have failed to yield an optically detectable, machine-readable code. (POR, 26 (citing EX2021)). EX2021 merely points out some difficulties of this embodiment, but these statements *confirm that the code in the “code under the flange” embodiment is optically detectable*, even if it is expensive to do so. (EX2021, 2:33-47.) K-fee suggests that the “toothed” Yoakim embodiment of FIG23 would impede light transmission, but that is outside of Petitioner's mappings. (POR, 34-35.)

“Bend” (POR, 33): K-fee never addresses that Jarisch depicts a straight chamber to transmit light and ignores a POSITA's ordinary creativity to implement this. (Pet. 39-40; EX1005, FIG4.) K-fee never argues that Yoakim prohibits a straight chamber that would also accommodate multiple-sized capsules, or that providing one is outside a POSITA's skill.

4. K-fee Misrepresents Jarisch Prosecution History

K-fee did not analyze the prosecution claims, rejections, or any of the references.⁵ (POR, 37.) The references lacked Jarisch's disclosure of a code under

⁵ K-fee stated in passing that Yoakim FIG23 and Yoakim '601 are the same, but provided no analysis for why that matters, as Petitioner does not rely upon FIG23.

the flange. *Using Jarisch here for its own disclosure and motivation is not inconsistent with Jarisch's patentability over previously-cited art lacking Jarisch's teachings.*

C. Motivations to Combine Rossi

K-fee argues that a POSITA would not look to the solutions of Rossi because Yoakim allegedly had its own safety feature. (POR, 38-41.) But Yoakim only discloses one embodiment with a “gripping structure” to drive capsule rotation and ensure adapted-shape capsules are used. (EX1004, [0205].) Glucksman testified that capsule shape (or fit) alone is not a safety issue, and that systems benefit from having multiple safety features. (EX1071, 44:2-13, 51:3-8.)

K-fee argues that Yoakim does not benefit from Rossi because of Yoakim's alleged “low pressure.” (POR, 38-39.) But Yoakim's system can use a high-pressure pump (EX1004, [0428]), and centrifugation generates high pressure (EX1004, [0188]-[0191], [0369], [0458]).

There's ample motivation to utilize Rossi, which prevents unsafe system operation altogether. Coffee systems require safety considerations including whether the capsule can withstand the machine's temperature and pressure. (Pet. 40-43; EX1041, 5, 7.) Glucksman agrees. (EX1071, 44:2-45:6 (“You want to make sure that the capsule does not explode....”).) Rossi offers additional advantages beyond Yoakim by preventing “re-use” of capsules that can cause malfunction.

(EX1041, 7.) Yoakim also uses hot water—another reason for Rossi's safety features. (EX1004, [0506]; EX1041, 5.) Rossi's system also improves quality of the beverage (*id.*, 4, 7), which Glucksman agrees is important (EX1071, 46:6-13).

Accordingly, K-fee's challenges to the motivation to utilize Rossi's teachings all fail.

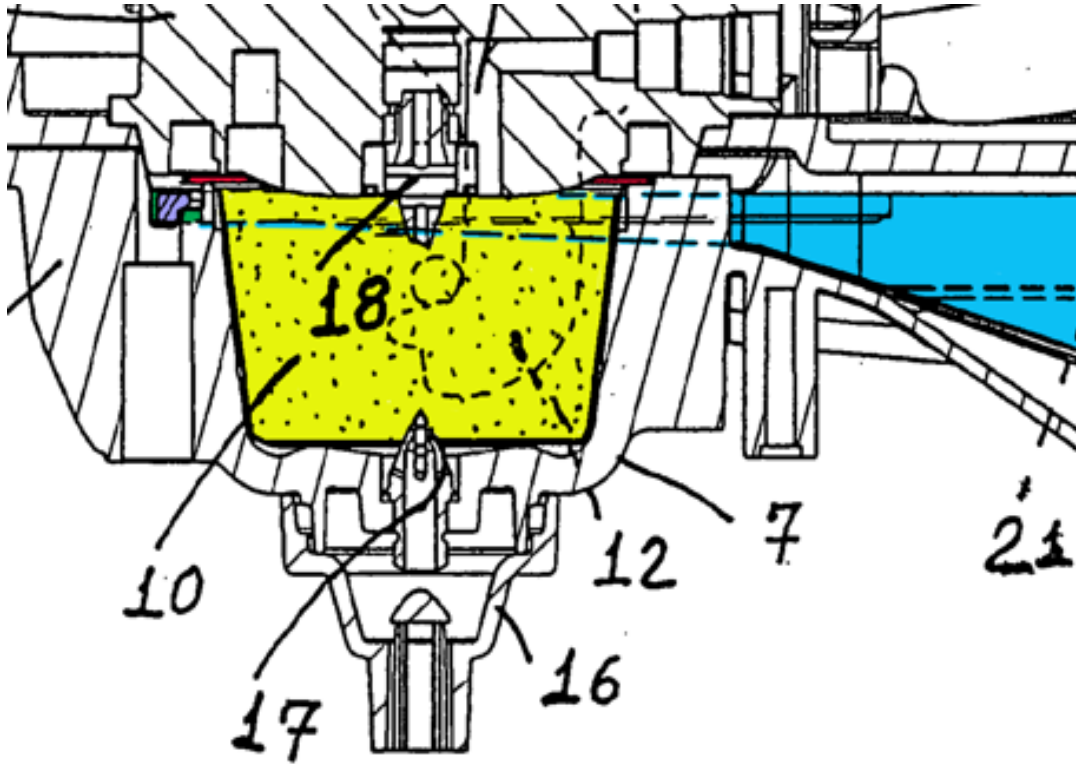
D. Motivations to Combine Castellani

K-fee argues that a POSITA would not look to well-known holding arm/waste basket solutions because Castellani's arms would obstruct code reading and rotation. (POR, 41-46.) But K-fee misreads Castellani's teachings and ignores Jobin's testimony on how Castellani's arms drop out of the way upon closure.

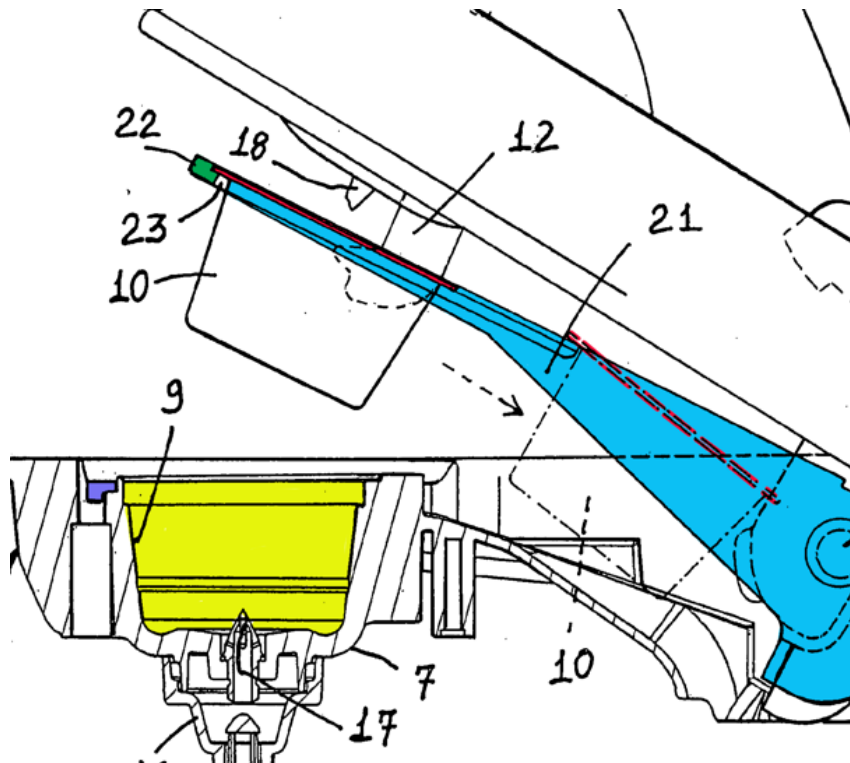
K-fee argues that Castellani FIGS. 2, 7, and 11 depict arms that would prevent Jarisch's code reading. (POR, 41-44.) But, these Figures depict the capsule in the *open, ejecting* position. (EX1009, [0015], [0020], [0025], [0054].) As Jobin explained, when the delivery head is *closed* Castellani's arms "drop[] out of the way" and are not in contact with the capsule. (EX2025, 59:13-62:25; 65:12-66:14.) This is consistent with Jarisch, which reads the code while the machine is in the *closed position* during rotation. (EX1005, [0037]-[0039].) Thus Castellani's arms would not be engaged with the capsule rim and could not obstruct code reading.

As annotated below, Jobin explained that Castellani's dashed line in FIG1 (blue) depicts the holding arm's position ***behind the capsule holder*** and ***below the***

rim (red), sitting in space below (purple). (EX2025, 61:24-62:25.)



Jobin further explained that the holding arms **only lift up and contact** the rim **once the brewing process is over and the delivery head is opened**, at which point they guide the capsule up and out of the capsule holder into the waste container. (EX2025, 61:24-62:25, EX1009, FIG2.)



Moreover, even *if* the holding arms did block the rim (they do not) K-fee fails to acknowledge that Castellani's holding arms form a U-shape and unquestionably leave an open portion of the capsule rim (facing the rear of the machine) unobstructed for code-reading.

Likewise, because Castellani's arms sit *below* the rim when the system is closed, they would not "add friction to the rotation of the capsule" (POR, 45), and it is easy to avoid such friction in design (EX2025, 44:21-45:11).

V. The Prior Art Discloses and/or Renders Obvious the Claims

A. Yoakim and Rossi Render "Pump Control" Obvious

"Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references." *In*

re Merck & Co., 800 F.3d 1091, 1097 (Fed. Cir. 1986). Yoakim discloses pump control and K-fee ***never challenges*** that Rossi's identification element satisfies the claimed "determinations." Accordingly, ***the combined teachings*** of Yoakim and Rossi render the "pump control" limitations obvious. (Pet. 63-66; ID, 38-45.)

First, Yoakim discloses ***controlling*** its pump ***based on*** a detected identifier. (Pet. 62-63; EX1004, [0477].) K-fee incorrectly argues this only discloses when to stop filling water. (POR, 47.) But, Yoakim discloses that "[t]he **control of the volume of liquid injected in the capsule** is carried out by the **control means selectively activating the pump 211** to meter the proper volume of liquid." (EX1004, [0522].) K-fee also suggests "rotational momentum" activates Yoakim's pump (POR, 47-48), but ignores clear disclosure of [0477] and [0522] to the contrary.

K-fee further argues that Yoakim's disclosure of "prewetting" teaches activating the pump before identification. (POR, 49.) But Yoakim teaches this is an *optional* step, and is not part of Petitioner's mapping. (EX1004, [0441] ("[I]t might be advantageous....").) Likewise, K-fee's citations to alternative, unmapped disclosures in Yoakim (POR, 47 (citing [0218])) do not teach away. *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004).⁶

⁶ K-fee speculates that a manual selector switch "might" activate a pump

Second, Petitioner establishes that (i) Rossi discloses automatically activating a coffee system's beverage production process ***only upon*** a determination that an identifier agrees with a stored reference, and (ii) it would have been obvious to apply Rossi's teachings to Yoakim such that Yoakim's brewing process—and accordingly its pump—is not activated until the identifier is determined. (Pet. 65-66, 41-43; ID 42-45.) K-fee criticizes Rossi for not disclosing a pump (POR, 50-52) but ignores Petitioner's combination with Yoakim.

K-fee argues that Rossi is incompatible with Yoakim because of Rossi's "validation" step. (POR 51-54.) But this argument forces improper bodily incorporation and ignores Rossi's general teachings to a POSITA (i.e., prohibiting activation unless the capsule is suitably identified). Moreover, K-fee's "comprising" claims do not prohibit comparison of *additional* elements, so long as the pump is only controlled *after* the required determinations. *Vivid Techs., Inc. v. Am. Sci. & Eng'g.*, 200 F.3d 795, 811 (Fed. Cir. 1999) (comprising claim infringed by a process considering *additional* factors beyond the claims). Rossi also discloses that the

(POR, 50), but this ignores Petitioner's mapping of Yoakim and the combination with Rossi (which "automatically" activates the brewing cycle). (Pet. 66-67, 40-43.) Regardless, Schifferle's and Denisart's control units activate their pumps. (EX1039, [0019]; EX1007, 9:28-33.)

validation element may be identical to the identification element, such that there is no incompatibility at all. (EX1041, 4-5, 7; IPR2023, 00485, Paper 26, 47.)

At bottom, K-fee never disputes that Rossi's system ***will not activate*** until the identification element is detected and compared to a stored reference. This renders K-fee's claimed invention obvious. (EX1003, ¶¶296-297.)

B. Yoakim Discloses and/or Renders Obvious a Capsule “Free of a Filter Inside of the Cavity”

Claims 9 and 18 require that the capsule is “free of a filter inside of the cavity.” K-fee repeats its previously-unsuccessful arguments. (POR, 65-71; IPR2023-00485, Paper 26, 43-45.) But, disclosure of alternative, optional features satisfies negative limitations. *Inphi Corp. v. Netlist Inc.*, 805 F.3d 1350, 1355 (Fed. Cir. 2015).

Petitioner establishes that Yoakim discloses embodiments lacking a filter and that a filter inside the cavity is optional. (Pet., 67; EX1004, [0171] (filtering layer optional), [0300] (capsule “may” comprise an internal filter), [0461] (optionally including a filter inside the cavity in FIG45-50), [0288] (capsule “may” comprise filter), [0255] (liquid “can” be filtered by filter in capsule); (EX1003, ¶¶344-345). FIGS51-55 and 6-7, as described by [0503] and [0197]-[0199], support no filter or an optional porous wall.⁷ Moreover, [0271] also discloses embodiments where the

⁷ K-fee criticizes these Figures as “schematic” views, but other Figures, such

brewing device could filter the beverage. (POR, 69-70; ID, 50); *Apple, Inc. v. Andrea Elecs. Corp.*, 949 F.3d 697, 706 (Fed. Cir. 2020); *Rembrandt Diagnostics v. Alere, Inc.*, 76 F.4th 1376, 1384 (Fed. Cir. 2023). Thus, a filter could be either part of the brewing device (not in the capsule), or could constitute the puncturable membrane that is sealed to the flange (not inside the cavity).

K-fee argues that every embodiment requires a filter because all capsules have membrane outlet openings (POR, 66-69), but ignores that the claims only prohibit a filter *inside the cavity*. Glucksman agrees the '829 Patent's cavity is **inside** the base element where the beverage raw material is provided. (EX1071, 102:20-103:1; EX1001, 1:10-14, 8:3-7, 11:24-27, 5:5-9.) Even if outlets or slits in Yoakim's membrane constitute a filter (they do not⁸), these outlets or slits are not *inside the cavity*. (EX1004, [0375]-[0376], [0333]-[0338] (*outlet openings* having "filtering function").) Thus, the optional/additional filter, e.g., in [0171], is not "in addition" to *another* filter in the cavity, nor are the radial outlets required to have a certain size or function. (EX2011, 57:19-58:5, 60:4-15, 63:3-20, 64:1-11.)

as FIG16, depict a "cross-sectional" view with no filter in the cavity. (EX1004, [0045].)

⁸ The '829 Patent refers to the optional filter as a different element than the base element or membrane. (EX1001, 1:51-56, 7:15-21, 11:43-54, 11:30-33.)

K-fee's other arguments (POR, 70) ignore what [0271] specifically teaches, which need not be *the best* option. *Intel Corp. v. Qualcomm Inc.*, 21 F.4th 784, 800 (Fed. Cir. 2021). And K-fee's "lack of enablement" argument is unsupported by any evidence suggesting this is an unpredictable art or outside the level of skill.⁹ (EX1071, 65:17-66:2.) Yoakim confirms all that would need to be done in this situation is clean the machine's filter—a known solution. (EX1004, [0255]; EX1071, 36:20-37:16.)

K-fee's contention that a capsule without a filter would not operate properly, or would result in beverage material solids exiting the capsule (POR, 53), is belied by K-fee's own claims and disclosure, which provides no detail on how a capsule "free of a filter inside of the cavity" would operate beyond disclosing an optional filter. (EX1001, 1:51-54; 10:15-17.) *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997).

A capsule free of a filter inside the cavity is also an obvious design choice because the same result (beverage filtering) can be achieved using filters in other locations. (Pet. 71-72; EX1003, ¶319.) This naturally simplifies the capsule design

⁹ K-fee's reference to "cleaner operation" (POR, 70, [0325]) is in comparison to "open" prior art systems, as disclosed in [0007], where the capsule is open with a "lack of control for the dosing of the powder." (EX1074, FIG2-5.)

by removing an additional manufacturing element. (*Id.*)

Accordingly, Yoakim discloses and/or renders obvious this limitation.

C. Yoakim Discloses and/or Renders Obvious a Groove That is Laterally Offset from the Chamfered Mandrel (Claim 4)

K-fee argues that the Board's prior decision involving "laterally offset" from IPR2022-01574 (Paper 29) should be controlling and Yoakim should be found to lack this limitation.¹⁰ However, K-fee never argues that this term should be construed. (POR, 55-58.) And the Board's prior construction did not include evidence regarding the meaning of "offset" because in that proceeding the parties only disputed the *direction* (i.e., laterally)—not the *extent of*—offset. A proper interpretation is "a groove that is *at least partially* off to the side of any part of the chamfered mandrel," which is consistent with both the intrinsic and extrinsic evidence. Under the proper construction, Yoakim discloses and/or renders K-fee's claims obvious.

1. The Proper Construction of "Laterally Offset" is At Least Partially Off to the Side

At the time of the Petition, the PTAB had not issued its Decision in IPR2022-01574 providing a construction for "laterally offset." Although K-fee's POR was filed months afterward, K-fee never argues that this term should be construed. (POR, 55-

¹⁰ Judge Wu's adopted the Board's construction. (EX1070.)

58.) The intrinsic and extrinsic evidence demonstrates that, if “laterally offset” is to be construed, it should mean “at least partially off to the side.”

Nothing in the claim language requires the groove to be entirely to the side of the mandrel, or any particular amount of offset. If K-fee had intended a narrow interpretation, it could have drafted the claims to recite “entirely laterally offset” or a groove “that does not overlap at all” with the chamfered mandrel.

The specification never states the groove should be “entirely” offset from the chamfered mandrel. It does not provide any reason or benefit of such a configuration. There is no lexicography or disavowal that could limit its full scope.

To the extent FIG16 depicts a groove entirely separated from the chamfered mandrel, this is a single embodiment. (EX1001, FIG16A.) “It is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.” *GE Lighting Solutions, LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014). No such limiting language is found in the intrinsic evidence here. The limitation is so insignificant that (i) the specification never even describes the “groove” in words and (ii) FIG16 never numbers or identifies any groove. *Hill-Rom Services, Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371-72 (Fed. Cir. 2014) (single embodiment should not limit claim term absent lexicography or disavowal).

Extrinsic evidence also supports Petitioner's interpretation, which is consistent with the basic understanding of the word "offset" as meaning two things that are not perfectly aligned. (EX1075-1076 ("placed away from a center line; off-center"); EX1077 ("the amount of distance by which something is out of line"); EX1078 ("off center, or at an angle"); EX1079 ("off center").) The term lateral confirms that this mis-alignment is sideways in either direction. (EX1080; EX1081; EX1082.)

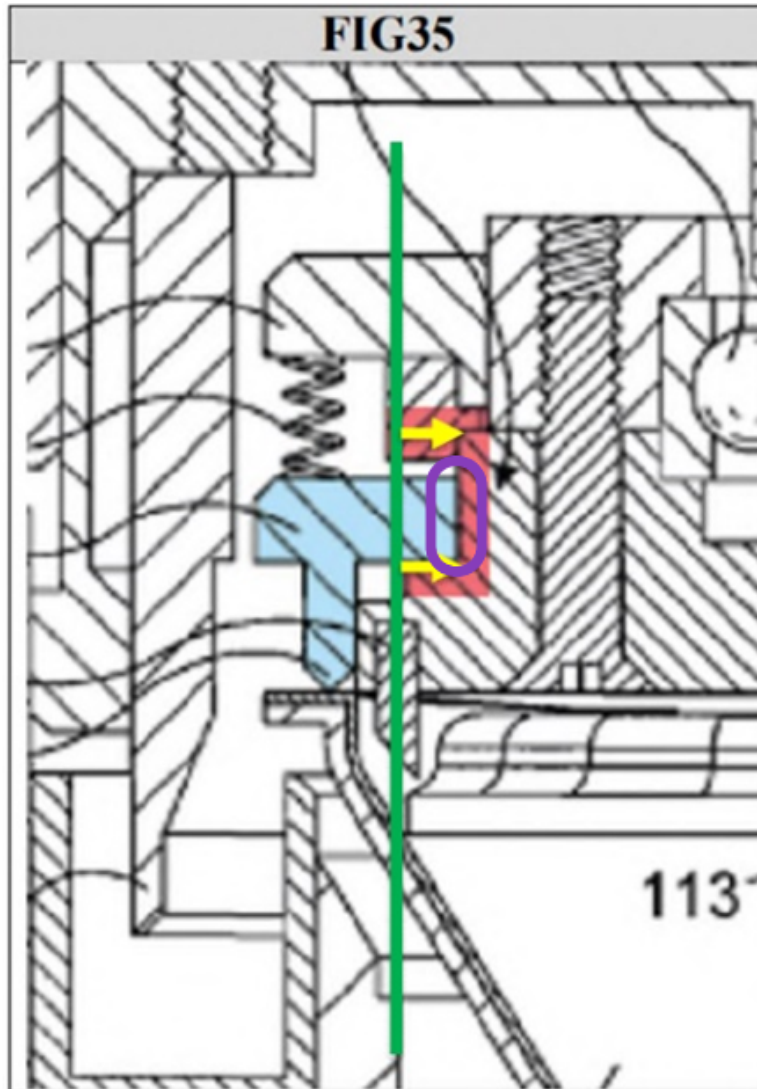
K-fee's POR misconstrues the dispute over this term. (POR, 57.) The issue is simply whether the groove and chamfered mandrel are out of alignment. K-fee's focus on the word "from" is a red herring, as "from" is used to discern what two elements are being compared for "laterally offset"—not whether the comparison focuses on a center-line or edge.

Accordingly, the intrinsic and extrinsic evidence does not support a construction requiring a groove that is "entirely" off to the side of the chamfered mandrel.

2. Yoakim Discloses and/or Renders Obvious the "Laterally Offset" Term

Yoakim discloses this limitation, as confirmed by the below image, which depicts the amount of misalignment between the groove (red) and chamfered mandrel

with yellow arrows. Thus, this groove, and the area where the seal sits in it, is out of alignment, and at least partially off to the side of, the chamfered mandrel.¹¹



¹¹ K-fee's dispute regarding the thickness of the line does not change this.

K-fee argues that Yoakim does not disclose a “groove” (POR, 59) based on requirements that are ***not in the claim***. K-fee argues that Yoakim’s groove “permits the ‘seal’ to move within it to allow liquid to escape.” (POR, 59-60.) Regardless, Yoakim’s groove (red) clearly limits the movement of the seal (blue), providing stability.¹² Yoakim’s groove/seal thus ***restricts the flow of liquid*** and blocks liquid exit “until a certain pressure” is reached. (*Id.*, [0385]-[0388], [0436].)

Yoakim also renders this limitation obvious because it provides the same purported benefit that K-fee identified for this limitation—improving interaction between the water and the capsule substance. (EX1004, [0251], [0384]-[0385]; IPR2022-01574, Paper 29, 35; Pet. 70; EX1003, ¶¶307-308.) To the extent there are any minor differences in the groove/seal configuration of Yoakim, they are trivial. *PlaSmart, Inc. v. Kappos*, 482 F.App’x 568, 573 (Fed. Cir. 2012) (reversing patentability based on minor distinctions over prior art).

¹² K-fee argues that Petitioner’s identification of Yoakim’s groove (red) is “arbitrary.” (POR, 62-63.) But this is the area in which the seal (blue) sits, consistent with the claim language. K-fee’s depiction of a yellow area, or reliance on elements 149 or 161 as the “groove,” is not supported by Yoakim or the claims.

VI. K-fee's Printed Publication Argument Fails

K-fee argues that certain §102(e) references are not “printed publications” under 35 U.S.C. §311(b) because they were not publicly accessible by K-fee's PCT filing. (POR, 72.) But §102(e) art has long been permitted in IPR proceedings and appeals of the same to the Federal Circuit. *Purdue Pharma LP v. Iancu*, 767 F. App'x 918, 920-21, 926 (Fed. Cir. 2019) (nonprecedential).

K-fee relies on 1874 case *Brown v. Guild* to argue that an application is not a printed publication. But this case is not good law, as it predates the publication of applications, the codification of §102(e) in 1926, and the 1999 inclusion of published patent applications in §102(e) under the AIPA. In 2011, Congress enacted the AIA, which set the scope of IPRs as identical to reexaminations, which long permitted §102(e) printed publication art. *Uniloc 2017 LLC v. Hulu LLC*, 966 F.3d 1295, 1306 (Fed. Cir. 2020); *Environmental Techs. Corp. v. Union Sanitary Dist.*, 946 F.2d 870, 875 n.7 (Fed. Cir. 1991).

Patent No. 11,465,829
Petitioner's Reply

Date: December 23, 2024

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§42.6 and 42.105, I hereby certify that on December 23, 2024, a copy of the attached PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE, was served via electronic mail to Patent Owner's Counsel of Record according to Patent Owner's Mandatory Notices.

Date: December 23, 2024

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Patent No. 11,465,829
Petitioner's Reply

CERTIFICATION PURSUANT TO 37 C.F.R. § 42.24(d)

Pursuant to 37 C.F.R. § 42.24(d), the undersigned certifies that this PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE, complies with the type-volume limitation of 37 C.F.R. § 42.24(c). The word count application of the word processing program used to prepare this paper states that the paper contains 5,597/5,600 words, excluding the parts of the paper exempted by 37 C.F.R. §§ 42.24(a)(1).

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