

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 No. IPR2023-00485
U.S. Patent 11,230,430

Before GRACE KARAFFA OBERMANN, JON B. TORNQUIST, and JAMES J.
MAYBERRY, *Administrative Patent Judges*.

PATENT OWNER RESPONSE

TABLE OF CONTENTS

I.	Introduction.....	1
II.	K-fee's Inventions	2
	A. Overview of the '430 Patent.....	2
	B. The German Applications	3
	C. Prosecution of the '430 Patent	5
III.	Claim Construction.....	8
IV.	Level of Ordinary Skill in the Art	9
V.	Petitioner Has Not Shown By A Preponderance of the Evidence The '430 Patent Is Unpatentable	9
	A. Yoakim Fails to <i>Disclose</i> a Capsule Free of a Filter (Claims 1 and 7)	10
	B. The Art Fails to Disclose or Render Obvious a Pump Control Limitation (Claims 1 and 7).....	15
	C. Yoakim Does Not Disclose or Render Obvious A Side Wall Having Indentations (Claims 5 and 7).....	22
	D. Petitioner's Motivations To Combine Fail.....	25
	1. A POSITA Would Not Have Been Motivated to Combine Rossi with Yoakim and Jarisch.....	25
	2. A POSITA Would Not Have Been Motivated to Further Combine Yoakim, Jarisch, and Rossi with Castellani.....	34
	E. Ground 1 Fails Because Patent Owner's German Applications Antedate Jarisch.....	35
	1. The USPTO Has Already Rejected Petitioner's Priority Arguments.....	35
	2. The Second German Application Provides Priority Support.....	38
	3. Petitioner's Arguments Are Unpersuasive	54
	a. An upper end portion that has an annular convexity and a lower end portion that has an annular concavity	54

b.	Barcode located on the bottom of the flange	56
----	---	----

TABLE OF AUTHORITIES

	Page(s)
Cases	
<i>Cummins-Allison Corp. v. SBM Co.</i> , 484 Fed. Appx. 499 (Fed. Cir. 2012).....	39
<i>D-Three Enterprises, LLC v. SunModo Corp.</i> , 890 F.3d 1042 (Fed. Cir. 2018)	64
<i>Flash-Control LLC v. Intel Corp.</i> , 2021 WL 2944592 (Fed. Cir. July 14, 2021).....	62, 63
<i>FWP IP ApS v. Biogen MA, Inc.</i> , 749 Fed. Appx. 969 (Fed. Cir. 2018).....	40, 41, 64, 65
<i>Henny Penny Corp. v. Frymaster LLC</i> , 938 F.3d 1324 (Fed. Cir. 2019)	14
<i>Hologic, Inc. v. Smith & Nephew, Inc.</i> , 884 F.3d 1357 (Fed. Cir. 2018)	57, 66
<i>Hyatt v. Dudas</i> , 492 F.3d 1365 (Fed. Cir. 2007)	62, 63
<i>Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.</i> , 821 F.3d 1359 (Fed. Cir. 2016)	15
<i>Interconnect Planning Corp. v. Feil</i> , 774 F.2d 1132 (Fed. Cir. 1985)	31
<i>In re Kahn</i> , 441 F.3d 977 (Fed. Cir. 2006)	33
<i>Koito Mfg. Co. v. Turn-Key-Tech, LLC</i> , 381 F.3d 1142 (Fed. Cir. 2004)	54
<i>Nike, Inc. v. Adidas AG</i> , 812 F.3d 1326 (Fed. Cir. 2016)	54
<i>Novozymes A/S v. DuPont Nutrition Bioscisc. APS</i> , 723 F.3d 1336 (Fed. Cir. 2013)	65

<i>PersonalWeb Techs., LLC v. Apple, Inc.</i> , 848 F.3d 987 (Fed. Cir. 2017)	32
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005)	8
<i>Pro-Dex, Inc. v. Intelligent Automation Design LLC</i> , IPR2023-00218, Paper 8 (PTAB Jul. 19, 2023)	27
<i>Purdue Pharma LP v. Recro Tech. LLC</i> , 694 Fed. Appx. 794 (Fed. Cir. 2017)	64
<i>In re Ratti</i> , 46 C.C.P.A. 976 (CCPA 1959)	32
<i>Regents of University of California v. Board Institute, Inc.</i> , 903 F.3d 1286 (Fed. Cir. 2018)	24, 29
<i>Ricoh Co., Ltd. v. Quanta Computer Inc.</i> , 550 F.3d 1325 (Fed. Cir. 2008)	33
<i>SAS Inst. Inc. v. Iancu</i> , 138 S. Ct. 1348 (2018)	14
<i>In re Schweickert</i> , 676 Fed. App'x 988 (Fed. Cir. 2017)	25, 32
<i>Ex Parte Sims</i> , 2019 Pat. App. LEXIS 4077 (P.T.A.B. June 24, 2019)	39
<i>Trend Micro, Inc. v. Open Text Inc.</i> , IPR2023-00692, Paper 8 (PTAB Nov. 6, 2023)	25, 27
<i>Union Oil Co. of Cal. v. Atlantic Richfield Co.</i> , 208 F.3d 989 (Fed. Cir. 2000)	38, 39
<i>In re Universal Elecs., Inc.</i> , 2023 WL 3335536 (Fed. Cir. May 10, 2023)	31
Other Authorities	
37 C.F.R. § 1.81(a)	57
37 C.F.R. § 42.65(a)	24

37 C.F.R. § 42.100(b)	8
MPEP § 2163.04(I)	62

LIST OF EXHIBITS

Exhibit	Description
Ex. 2001	Declaration of Laurens “Lars” Howle (“Howle Decl.”)
Ex. 2002	Examiner-Initiated Interview Summary for Appl. No. 17/324,182
Ex. 2003	Examiner-Initiated Interview Summary for Appl. No. 17/108,175
Ex. 2004	<i>K-fee System GmbH v. Nespresso USA, Inc.</i> , Case No. 2:21-cv-3402 GW(AGRx), Dkt. No. 126-1 (Apr. 1, 2022)
Ex. 2005	<i>K-fee System GmbH v. Nespresso USA, Inc.</i> , Case No. 2:21-cv-3402 GW(AGRx), Dkt. No. 211 (June 17, 2022)
Ex. 2006	U.S. Patent No. 11,254,491
Ex. 2007	U.S. Patent No. 10,858,177
Ex. 2008	Excerpts of file history for U.S. Patent No. 10,858,176
Ex. 2009	Excerpts of file history for U.S. Patent No. 10,870,531
Ex. 2010	Excerpts of file history for Appl. No. 17/547,363
Ex. 2011	Applicant-Initiated Interview Summary for Appl. No. 17/963,392
Ex. 2012	File history for U.S. Patent 11,254,491
Ex. 2013	Notice of Allowance for Appl. No. 17/330,572
Ex. 2014	Excerpts from Appl. No. 17/670,629
Ex. 2015	Excerpts from Appl. No. 17/670,765

Exhibit	Description
Ex. 2016	Suggestion for Declaration of Interference, Appl. No. 13/697,297
Ex. 2017	Declaration of Laurens “Lars” Howle in Support of Patent Owner’s Response (“Howle Decl.”)
Ex. 2018	Transcript of deposition of Michael Jobin taken June 22, 2023
Ex. 2019	Transcript of deposition of Michael Jobin taken November 28, 2023
Ex. 2020	NOT USED
Ex. 2021	NOT USED
Ex. 2022	U.S. Patent Appl. Pub. No. 2009/0007792
Ex. 2023	U.S. Patent Appl. Pub. No. 2008/0302252
Ex. 2024	WO Pub. No. WO2008100597A1
Ex. 2025	Bialetti Moka Express (https://www.bialetti.com/it_en/moka-express.html)

Patent Owner K-fee System submits this Response to the above-captioned Petition for *Inter Partes* Review of U.S. Patent No. 11,230,430 (“the ’430 Patent”) (“Petition”).¹

I. Introduction

Petitioner would have the Board find the claims of the ’430 Patent unpatentable as obvious. To get there, Petitioner uses hindsight to cobble together teachings from four disparate references, which were well known to Patent Office examiners. As examiners have repeatedly found, Petitioner’s combination fails to teach or render obvious K-fee’s inventions.

The Board, without the benefit of a full and complete record, instituted review on one ground: whether claims 1-10 are obvious over the combination of Yoakim, Jarisch, Rossi, and Castellani. K-fee now address the substantive errors, omissions, and shortcomings underlying Petitioner’s grounds for invalidity. In support, K-fee presents testimony from its expert, Laurens “Lars” Howle (Ex. 2017).

Ultimately, Petitioner’s arguments fail because:

(1) Petitioner cannot demonstrate Yoakim teaches the “single-serve capsule is free of a filter that is located inside of the cavity” limitations of independent claims 1 and 7;

¹ All emphases added, unless otherwise noted.

(2) Petitioner cannot demonstrate Yoakim alone and/or in combination with Rossi teaches or renders obvious the “pump” limitations of independent claims 1 and 7;

(3) Petitioner cannot demonstrate Yoakim alone and/or in combination with Rossi teaches or renders obvious the beverage machine “configured to determine if the single-serve capsule belongs to a group of single serve capsules operable for use with the beverage machine” limitation of independent claim 7;

(4) Petitioner cannot demonstrate Yoakim teaches or renders obvious the “side wall [having/includes] indentations” limitations of independent claim 7 and dependent claim 5; and

(5) The Jarisch reference is not prior art because the '430 Patent is entitled to the priority date of at least the September 2, 2010 (second) German application.

II. K-fee's Inventions

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.

A. Overview of the '430 Patent

The '430 Patent claims are generally directed to a beverage system that includes a single-serve capsule containing a beverage raw material and a beverage

machine (*i.e.*, coffee machine). Ex. 1001 at Abstract. The single-serve capsule has a barcode on a bottom side of a flange. A pump is controlled to push water into the capsule based upon reading the barcode. *Id.* The '430 Patent has two independent claims (Claims 1, 7) and eight dependent claims (Claims 2-6, 8-10).²

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”). Ex. 2017, ¶¶33-34.

B. The German Applications

The disclosures in the first two German applications are similar, with the second German application adding features to the common inventive aspect in both applications. Both teach a “portion capsule” containing a beverage raw material, wherein the portion capsule has an “identifier” to indicate the portion capsule is “suitable just for a quite specific coffee machine” – the disclosed invention can thus prevent potential serious safety problems and/or damage to the

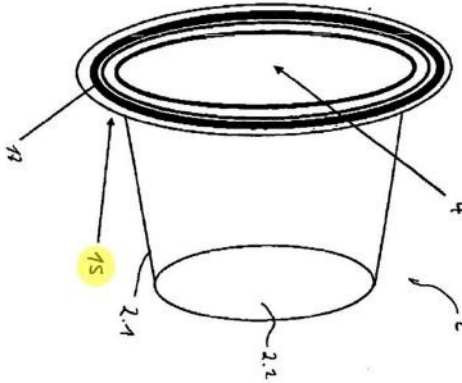
² The Parties are in litigation where Petitioner’s VertuoLine system meets the claim requirements. Nothing in this Response shall be regarded as a disclaimer of claim scope.

coffee machine that may arise from the use of a capsule “not suitable” for a particular coffee machine. Ex. 1046 at 22; Ex. 1047 at 30. The applications specify this aspect of the invention as follows:

The coffee machine, in particular, the pressure pump thereof, which makes the water available, can preferably be operated only when the identifier determined coincides with the reference identifier. Otherwise, the coffee machine cannot be operated.

Ex. 1046 at 23; Ex. 1047 at 31.

The applications specify the identifier may take a variety of forms and is “preferably a machine-readable print...preferably a barcode, a logo or a repeat pattern.” Ex. 1046 at 24; Ex. 1047 at 33. Importantly, the applications state the disclosures with respect to the identifiers are broadly applicable to all of the disclosed embodiments or examples, specifically stating “[w]hat has been said in relation to the identifier applies to all other examples.” Ex. 1046 at 28; Ex. 1047 at 38. Immediately after that statement, the applications describe Figure 2, stating “it is possible, as symbolized by the arrow 15, for the barcode to be provided on that side of the peripheral region of the basic element which is directed away from the membrane.” Ex. 1046 at 28; Ex. 1047 at 38.



Ex. 1046 & Ex. 1047 at Fig. 2 (annotated). Ex. 2017, ¶53.

The membrane 4 is sealed or bonded to the upper most area of the capsule so as to close the cavity. Ex. 1046 at 27; Ex. 1047 at 37, Fig. 2. Alternatively, the “capsule has a barcode in the region of the upper side of the membrane.” Ex. 1046 at 28; Ex. 1047 at 38.

The identifier can be used to control the operation of the coffee machine:

Once the identifier has been sensed, it is compared with a reference identifier and, for the case where these are identical, operation of the coffee machine is permitted. For the case where these identifiers do not coincide, in particular operation of the pump which forces, for example, hot water through the brewing chamber is prevented.

Ex. 1046 at 28; Ex. 1047 at 37-38.

The identifiers of the various embodiments are linked by common subject matter, namely, they are configured for use in a machine with a brewing chamber.

C. Prosecution of the '430 Patent

During prosecution of the '430 Patent, Examiner Jennison considered each reference Petitioner relies upon. Patent Owner submitted for consideration the

ultimately unsuccessful Petitions for *inter partes* review against three other patents in this patent family. *See* Ex. 1002, Part 1 at 301. Even after a Notice of Allowability, Patent Owner complied with its duty of candor by submitting all of the information concerning validity Petitioner asserted against patents related to the '430 Patent in a co-pending district court litigation. *See* Ex. 1002, Part 1 at 232, 304, 321-24. Examiner Jennison considered all of these submissions. *See* Ex. 1002, Part 1 at 301; Ex. 1002, Part 4 at 422.

Examiner Jennison was well aware of the prior art landscape. In his 11/02/2021 Notice of Allowance, Examiner Jennison pointed out the numerous limitations not disclosed by the cited art – with a full understanding and knowledge of the very same art cited in the present Petition, Examiner Jennison found:

none of the cited prior art discloses or suggests ... only if the beverage machine determines that the single-serve capsule belongs to the group of single serve capsules operable for use with the beverage machine is the pump controlled to push the water into the single-serve capsule.

Ex. 1002, Part 1 at 233.

Additionally, approximately one month after issuing the Notice of Allowance, Examiner Jennison issued a Notice of Allowance for contemporaneously-prosecuted U.S. Patent Appl. No. 17/383,951 (the “'951 Application”) in this patent family, concluding:

allowance ... is indicated as none of the cited prior art discloses or suggests a pump controlled to supply water into the single-serve capsule only upon detection of the identifier

Ex. 1002 at 334-339, 406-407; Ex. 2012 at 1815.

Additionally, in an *Examiner-Initiated Interview Summary* in two applications related to the '430 Patent, Examiner Jennison verified the priority dates in light of the co-pending applications and recent IPRs; acknowledged the number of references filed in the IDS documents is not excessive; and confirmed the identification of the references that had been repeatedly relied upon in the applications he had Examined:

Other

Examiner was updated on status of co-pending applications and recent IPR filings. The priority dates of the applications, and prior art cited, under Pre-AIA were verified.

Examiner acknowledges the number of references filed in the IDS documents is not excessive or overly burdensome.

Attorney also cited the references which have been repeatedly relied upon in this application and any related applications. It was also pointed out that these seem to be most relevant to the co-pending applications.

Ex. 2003 at 2; *see also* Ex. 2002 at 2. The list of references confirmed by the Examiner include each of the references relied on in the current Petition:

Summary List of Potentially Relevant References Most Heavily Relied Upon By Petitioner

Petitioner alleges in its numerous IPR petitions that “K-fee never provided guidance on the relevance of its voluminous IDS references” (See page 2 of the ‘923 and the ‘430 Petitions).

Based upon the observed pattern and history of Petitioner and/or its affiliates world-wide filings against Applicant and its related patents, below is a summary of references that have been repeatedly relied upon by Petitioner and/or its affiliates in attacking the patentability of Applicant’s claims.

- US2008/0105131A1 (Castellani)
- US2010/0239734A1 (Yoakim)
- WO2005/044067A1 (Ruchonnet)
- WO2005/079638A1 (Pancsar)
- WO2010/026053A1 (Denisart)
- WO2010/099806A1 (Rossi)
- US2002/0048621A1 (Boyd)
- WO2002/028241A1 (Boyd)
- US20060233921A1 (Mock)
- US2010/0078480A1 (Aker)
- US2012/0269933A1 (Rapparini)
- US2013/0064929A1 (Jarisch 2)
- US2013/0064937A1 (Jarisch 1)
- WO2011/141532A1 (Jarisch)
- EP0512468A1 (Fond)

Ex. 2003 at 4; Ex. 2002 at 4.

Examiner Chou was also presented with the same list of references and “did not find any issue with patent owner’s foreign priority date.” Ex. 2011 at 2, 4.

III. Claim Construction

The Board, in its Institution Decision, determined no claims require express construction. The Board construes claim terms “using the same claim construction standard that would be used to construe the claim in a civil action” 37 C.F.R. § 42.100(b); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005).

IV. Level of Ordinary Skill in the Art

In its Institution Decision, the Board adopted Patent Owner's definition of a POSITA. Institution Decision at 8; Ex. 2017, ¶¶31-32.

V. Petitioner Has Not Shown By A Preponderance of the Evidence The '430 Patent Is Unpatentable

On the incomplete record, the Board determined Petitioner's assertions regarding Yoakim, Jarisch, Rossi, and Castellani (Ground 1) were sufficient at the institution stage of the proceeding. *See* Institution Decision at 18–34. But as explained below, it is clear Petitioner has failed to show by a preponderance of the evidence that a POSITA would have arrived at the claimed inventions merely through the combined teachings of the alleged prior art presented in the Petition.

Petitioner's asserted combination fails to render obvious claims 1–10.

First, the Petition fails to show Yoakim teaches a capsule free of a filter, as required by independent claims 1 and 7.

Second, neither Yoakim nor Rossi teaches pump control, as required by independent claims 1 and 7.

Third, the Petition fails to show Yoakim teaches a capsule having a side wall with indentations, as required by dependent claim 5 and independent claim 7.

Fourth, the Petition fails to present evidence demonstrating how or why a POSITA would have combined the references to achieve the claimed beverage systems.

Finally, Jarisch is not prior art because the '430 Patent is entitled to a priority date at least to the second German application.

A. Yoakim Fails to *Disclose* a Capsule Free of a Filter (Claims 1 and 7)

Claim elements [1.h] and [7.h] both require “the single-serve capsule is free of a filter that is located inside of the cavity.” According to Petitioner, “Yoakim *discloses* a capsule that does not include a filter and expressly confirms that a filter is optional.” Pet. at 62. Wrong. Yoakim expressly teaches his capsules contain a filter, and such filter is inside the cavity, for the purpose of filtering the brewed liquid from the solid particles in the capsule. Indeed, this is evident from the passages and figures Petitioner cites, which lack any express statement that Yoakim’s capsule lacks a filter. *See* Ex. 2017, ¶¶106-07.

Specifically, [0171] teaches a filter made of “a series of slits” where “the brewed liquid can pass through the slits whereas the solid particles are retained in the capsule.” Yoakim teaches sizing these slits “to also filter the brewed liquid and maintain solid particles of the substance in the capsule.” Ex. 1004 at [0131]. [0171] further teaches “[a]n *additional* filtering layer can be used to filter liquid depending on the size of the outlets.” A POSITA would have understood this “additional filtering layer” to be additive to the slits already described in the same paragraph. *See* Indeed, Yoakim explains “depending on the size of the outlets,” it may be necessary to provide additional filtering to ensure the solid particles are retained in

the capsule. Ex. 1004 at [0171]. Smaller outlets would not need such additional filtering, whereas larger outlets likely would in order to separate (filter) brewed liquid from the solid particles. Ex. 1004 at [0210] (“The slits are sized so as to act as a filter for retaining the solid particles such as the ground coffee particles but let the liquid leave the capsule.”). Ex. 2017, ¶¶108-09.

In fact, Mr. Jobin testified “[a]ccording to 0171 [of Yoakim] and my general understanding in Yoakim, it depends on the size of the holes and that one can add a filter to -- to change the characteristics of the -- of the filtering function.” Ex. 2019 at 59:17-22. As a practical matter, larger outlets *without* an additional filtering layer would result in particles of beverage material in the final beverage product—which would negatively impact the drinking experience and would be contrary to Yoakim’s stated purpose of “better ... controlling quality of the final brewed beverage or food liquid product” (Ex. 1004 at [0010]; *see also id.* at [0011], [0012], [0210]). Thus, Yoakim at [0171] teaches the capsule has a filter. Ex. 2017, ¶¶109-10.

The fact that Yoakim’s capsules use filters is confirmed elsewhere in Yoakim. *See, e.g.*, Ex. 1004 at [0271] (“the capsule comprises an *internal filter portion* placed at the periphery of the enclosure. The internal filter portion can be an internal perforated lid *and/or* a portion of porous material.”), [0375], [0376] (“the openings can have a filtering function per se.”); *see also id.* at [0016], [0017], [0113], [0131] (“The premade peripheral outlets may be a series of small slits of small size to also

filter the brewed liquid and maintain solid particles of the substance in the capsule.”), [0139], [0171], [0210], [0255], [0265] (“In order to filter the liquid in the capsule before it is centrifuged out through the (e.g., pierced) outlets, a filter part is positioned in the capsule to separate a cavity containing the substance and a cavity for collecting the centrifuged liquid.”), [0266], [0271], [0272], [0288], [0300], [0334], [0337], [0338], [0343], [0375], [0424], [0444] (“These outlet openings 118 of the enclosure of the capsule are sized as a function of the substance stored in the capsule. Small openings such as slots of small width or holes of small diameter tend to provide *a filtering function* to retain the solid particles in the enclosure of the capsule while allowing only the liquid extract to pass the openings.”), [0448], [0450], [0456], [0460], [0461], [0462], [0465], Figs. 28, 29, 39, cls. 4, 6. Petitioner also cites [0343] but admits this paragraph discloses the use of filters within Yoakim’s capsule. Ex. 2017, ¶111.

Petitioner further cites two figures of Yoakim that purportedly disclose capsules that do not have a filter (Pet. at 62), but Petitioner’s reliance here is also misplaced. For example, Figure 42 depicts a porous wall 180, which is a filter. Ex. 1004 at [0451], [0452], Figs. 41, 42; Ex. 2019 at 14:13-15:22 (Mr. Jobin admitting porous wall 180 provides “a filtering function”). Porous wall 180 is shown in both Figures 41 and 42 (annotated in yellow below) and is within the cavity. Ex. 2017, ¶112.

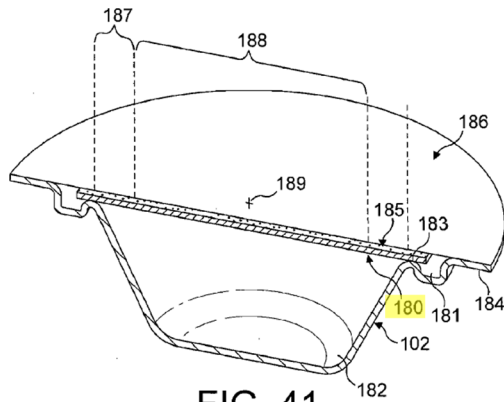


FIG. 41

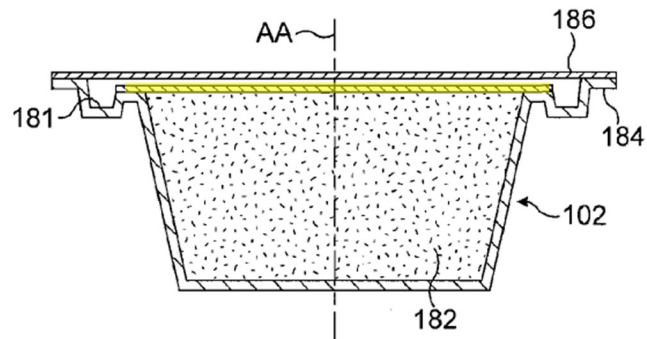


FIG. 42

Finally, Figure 54—the final disclosure of Yoakim relied upon by Petitioner—is provided to illustrate “the centrifugal device into which is inserted the capsule of Fig. 51.” [0083]. Figure 54 depicts one of many different capsule shapes for Yoakim’s brewing system, but its primary purpose is to teach aspects of the brewing system. A POSITA would have understood the capsules depicted in Figure 54 (as well as Figs. 52, 55, 61, 62, 63) are the same as those in the rest of Yoakim’s teachings and thus exhibit the same filter. They each depict a “schematic” view, which does not contain every detail. *See* Ex. 2019 at 50:24-56:1 (Mr. Jobin admitting Yoakim’s schematic views are “at a very high level,” “drawn with less detail,” and “there are details which are excluded in this view because it’s intended to represent particular information”). Tellingly, Figure 54 reflects a “schematic side view of a capsule of small volume” (i.e., a simplified view) and not a cross sectional view like figures 41 and 42. *See* Ex. 1004 at [0080], [0083]; *see also* Ex. 1004 at Fig. 1, [0030]. Indeed, it does not depict any of the detailed features of the capsule, such as the food

substance and lid. A POSITA would thus have not concluded from Figure 54 that Yoakim's capsules are free of a filter. Moreover, any suggestion by Petitioner that the figures teach a capsule free of a filter is inconsistent with the disclosures of Yoakim that consistently and repeatedly describe a capsule having a filter. Ex. 2017, ¶113.³

Petitioner thus fails to satisfy its burden that Yoakim *discloses* this element. Ex. 2017, ¶115. To the extent Petitioner seeks to rely on other aspects of Yoakim in reply or suggest a filter would have been obvious, such reliance is improper. *See, e.g., SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018) (“the petitioner’s petition ... is supposed to guide the life of the litigation.”); *Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1330-31 (Fed. Cir. 2019) (“Board did not abuse its discretion

³ Petitioner’s expert testified his sworn declaration in IPR2023-00502 incorrectly identified Figure 42 of Yoakim (and should have instead included Figure 52) for a similar limitation there. He conveniently characterizes this as a “typo.” Ex. 2019 at 11:22-12:7. He did not identify such an error in his declaration here. *Id.* at 16:17-19. The Petition here does not cite Figure 52. Pet. at 62. To the extent Petitioner seeks to correct the Petition to rely on Figure 52 here, Figure 52 is also a schematic view. Ex. 1004 at [0081], Fig. 52. The shortcomings described above with respect to Figure 54 apply equally to Figure 52. Ex. 2017, ¶114.

in holding [Petitioner] to its word and disregarding its new theory first raised in reply.”); *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016) (affirming the Board’s rejection of obviousness argument raised for first time in reply where petition relied on what the reference “teaches”); PTAB Consolidated Patent Trial Practice Guide (Nov. 21, 2019), at 73 (“Petitioner may not submit new evidence or argument in reply that it could have presented earlier, e.g.,] to make out a prima facie case of unpatentability.”).

B. The Art Fails to Disclose or Render Obvious a Pump Control Limitation (Claims 1 and 7)

Claims [1.o] requires a “pump [] controlled to push the water into the single-serve capsule only upon a determination that the read barcode agrees with a stored reference.” Claim [7.p] requires, after “reading or detecting the identifier with the sensor/detector,” “only if the beverage machine determines that the single-serve capsule belongs to the group of single serve capsules operable for use with the beverage machine is the pump controlled to push the water into the single-serve capsule.” The claims therefore require a pump controlled to supply water into the single-serve capsule only upon (1) detection of a barcode or identifier, and (2) determination by the beverage machine the single-serve capsule is operable for use (or the detected barcode agrees with a stored reference). Neither of the references Petitioner relies on discloses this limitation. Ex. 2017, ¶¶116-17.

Yoakim alone fails to teach these limitations. Petitioner first relies on Yoakim, arguing Yoakim discloses a pump controlled to push water into the single-serve capsule, and alleging Yoakim also discloses the pump is controlled based on the detection of barcode identification means by the sensor/detector. Petitioner fails, however, to point to any disclosure in Yoakim that suggests relying upon identifier detection for the purposes of controlling a pump, particularly as a safety measure. That is because Yoakim does not disclose this element. In fact, Yoakim 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”). Ex. 2017, ¶118.

Yoakim’s description of an “identification means for identifying the different capsules, and control means capable of operating the device... according to predetermined liquid food preparation parameters, including the flow rate and the volume of liquid to be injected into the capsule, with the identification means comprising capsule recognition means which are recognized by sensing means connected to the control means of the device to control the preparation parameters accordingly” does not disclose or render obvious the pump supplies water into the capsule only when a sensor or detector detects it. Ex. 1004 at [0025]; Ex. 2017, ¶118.

As an initial matter, a POSITA would not have understood controlling the flow rate of liquid to occur necessarily by control of the machine's water pump, as Mr. Jobin contends. *See* Ex. 1003 at ¶ 261. Yoakim describes "flow rates [] are influenced by two key parameters: the rotational speed of the capsule in the device and the back-pressure exerted on the centrifuged liquid." Ex. 1004 at [0521]. "The back-pressure can be varied by varying the closing force of a flow restriction valve placed downstream of the enclosure of the capsule and/or by varying the cross-section of the restriction outlets." *Id.*; *see also id.* at [0523] [0136]; [0429]; [0501]; Ex. 2017, ¶118.

Nor does the volume of liquid supplied to the capsule in Yoakim necessarily occur by control of the pump. Yoakim describes a method in which "hot water is introduced into the capsule at substantially no pressure. Water can be brought by a hot water feed mechanism using a principle of aspiration or vaporization," without a pump. Ex. 1004 at [0132], [0180]. Yoakim also does not teach its pump, when it is used, is controlled to supply water into the capsule ***only when an identifier is detected***. Indeed, most embodiments described in Yoakim lack an identifier, *see* cls. 1-17, and there is nothing to suggest an identifier is required for the pump to operate or to control the pump in any way. Yoakim also discloses numerous controllable features, including, for example, a restriction valve, a heater, flow rate, rotational speed, etc. Ex. 1004 at [0521]. It is only with hindsight and the benefit of the '430

Patent that a POSITA is given any indication to select using an identifier to activate a pump in Yoakim. Ex. 2017, ¶119.

Rossi's teachings do not overcome Yoakim's shortcomings. Petitioner then concedes Yoakim falls short, arguing (again, without supporting evidence) Rossi discloses the complete limitation – controlling a pump to supply water upon both detection of the identifier and a determination by the machine that the barcode agrees with a stored reference. Of course, both the Rossi and Yoakim references were before the Examiner during prosecution, and therefore the Examiner previously found this limitation to be missing from the Rossi and Yoakim references. The Examiner was correct. Ex. 2017, ¶120.

Rossi teaches two elements recognized in two steps. Like Yoakim, Rossi discloses an identification element that is used to select the appropriate brewing conditions. Rossi *also* discloses a validation element. Rossi confirms a separate validation element, that has nothing to do with the operation of the machine, controls whether the machine will be unlocked. Rossi states, “[t]he edible-product making machine is only allowed to take further steps if it in the first step also recognizes on the load element a validation element to be validated. In practice, this may take the form of unlocking the machine when both the identification element and the unvalidated validation element are recognized.” Ex. 1041 at 9. But Petitioner has not shown how the validation element has anything to do with the operation of the

machine, and certainly not the control of a pump. Instead, the validation element is used to ensure the load element is used a single time, and only serves to unlock the machine so it can be used at all. *Id.* at 7, 9; Ex. 2017, ¶121.

Moreover, Petitioner does not explain how Rossi's two elements—one for identifying and one for validation—are used in two separate steps to teach or render obvious the K-fee's invention. The '430 Patent claims require a barcode—a single identifier—agrees with a stored reference and enables pump operation. In contrast, Rossi teaches two elements must be separately read compared with pre-stored data. Rossi at 11. In fact, Rossi reads the second element for validation “only if it also recognizes the load element” from the first step of reading the identifying element. *Id.* at Abstract. Having two elements read at two separate steps does not render obvious a single identifier read in a single step. In the Institution Decision, the Board relied upon Rossi's teaching that “[t]he validation element could be identical to the identification element.” Rossi at 7. But having two elements that are identical is not the same as having a single element that performs both functions of identifying and validation. Indeed, nowhere does Rossi teach using only one element for identification and validation. *See generally* Ex. 1041. The Petition lacks any evidence on this point and fails to show how or why a POSITA would modify Yoakim's capsule to add a second code to where Yoakim and Jarisch teach having

only one code. The Examiner was correct, and Petitioner has not fulfilled its burden to show where that feature is disclosed in Rossi. Ex. 2017, ¶122.

Rossi does not teach pump activation only upon determination by the beverage machine. Rossi does not disclose a pump, which is not inherent. *See, e.g.*, Ex. 2022, 2023, 2024, 2025. Indeed, 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. 2018 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 are sufficient. Ex. 2017, ¶123.

Given Rossi’s lack of disclosure of a pump, it is not surprising Rossi does not teach the claimed activation of the pump only upon determination by the beverage machine that the single-serve capsule is operable for use (or the detected barcode agrees with a stored reference). Specifically, the first step may consist of “unlocking the machine when both the identification element and the unvalidated validation element are recognized.” *Id.* at 9. This step does not teach the use of a pump to supply water into the capsule. *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; Ex. 2017, ¶¶124-26.

The second 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 also does not teach the use of a pump to supply water into the capsule. Ex. 2017, ¶127.

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. Ex. 1041 at 9-10. “The use of an activation step of automatically activating the cycle of edible-product production only when the same identifying element is recognized in combination with the validated validation element ensures that the operating condition actually used are the correct conditions as selected by the machine in the first recognition step” so as to “help to prevent the user from making the mistake of inserting into the machine a different load element to the one that was first recognized, for which the operating conditions are set.” *Id.* at 8. None of these steps listed actually teach activating a pump. Ex. 2017, ¶128.

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 a pump is controlled to supply water into the capsule after the claimed determination. Ex. 1041 at 13; *see also id.* at 11, 12. Indeed,

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]. “[I]n order to allow the machine to proceed to **activation**,” the machine must “recognise[] the identifying element and the unvalidated validation element.” *Id.* at 11. Thus, activating the cycle of production may not necessarily involve controlling the pump to supply water to the capsule. Ex. 2017, ¶129. Thus, Rossi’s teachings fail to overcome the apparent shortcomings of Yoakim. Ex. 2017, ¶¶129-30.

C. Yoakim Does Not Disclose or Render Obvious a Side Wall Having Indentations (Claims 5 and 7)

Independent claim element [7.k] requires the single-serve capsule comprise “a side wall having indentations.” Similarly, dependent claim 5 requires “the side wall of the base element includes indentations.” According to Petitioner, Yoakim discloses or renders obvious these elements. Not so. Ex. 2017, ¶¶131-32.

Petitioner identifies the “toothed structure around [the capsule’s] perimeter.” Pet. at 75. Petitioner’s annotated Figure 23, depicting the so-called indentations at the green dashes is reproduced below. Ex. 2017, ¶133.

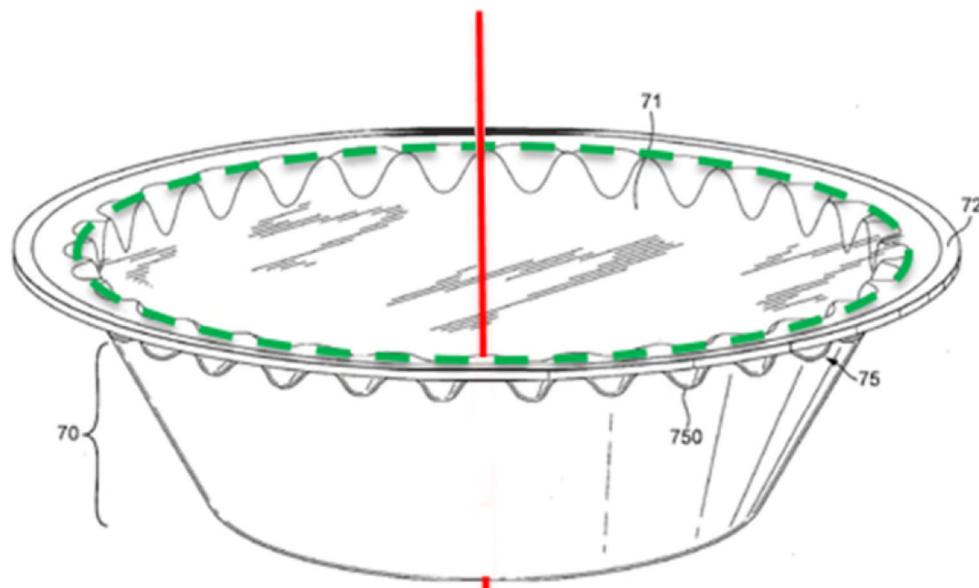


FIG. 23

Pet. at 75-76. But Petitioner fails to demonstrate these teeth are on the side wall. Specifically, Yoakim teaches the enclosure has “a *widening side wall* located between top and bottom walls, and an *outer surface* or structure for engaging external rotational driving means of a centrifugal device with the outer surface or structure configured to offer resistance....” Yoakim at [0016]. The toothed structure Petitioner relies upon is expressly taught to be on the outer surface, which Yoakim teaches is a different surface from the side wall. *See* Ex. 1004 at [0215] (“For this, capsule has a toothed structure 75 on at least one of its outer surface.”); *see also* Ex. 2019 at 69:19-70:17 (Petitioner’s expert, Mr. Jobin, admitting the outer surface “is different from the wall itself”). Petitioner never explains how Yoakim’s

outer surface taught in paragraphs [0016] and [0215] satisfies the claimed side wall. Accordingly, Yoakim does not disclose this element. Ex. 2017, ¶134.

Likely recognizing Yoakim’s shortcomings, Petitioner offers a single sentence obviousness contention. But this fails to overcome Yoakim’s shortcomings. “An obviousness determination requires finding that a person of ordinary skill in the art would have been motivated to combine or modify the teachings in the prior art and would have had a reasonable expectation of success in doing so.” *Regents of University of California v. Board Institute, Inc.*, 903 F.3d 1286, 1291 (Fed. Cir. 2018).

Petitioner failed to make the requisite “evidence-supported account of the contemplated workings of” its proposed modification of Yoakim, and thus has failed to demonstrate a POSITA would have been motivated to and had a reasonable expectation of success in modifying Yoakim as Petitioner proposed. Neither the Petition nor Mr. Jobin’s Declaration describe *how* a POSITA would have implemented indentations on the side wall of Yoakim’s capsule. Ex. 2017, ¶135-37.

Moreover, Mr. Jobin’s conclusory opinions to use indentations to facilitate controlled rotation during beverage extraction are unsupported. Such testimony is entitled to little or no weight. 37 C.F.R. § 42.65(a) (expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to

little or no weight). Mr. Jobin does not explain at all why or how a POSITA would have been motivated to modify Yoakim with such indentations. He fails to explain what impact this proposed modification would have on his proposed combination for placement of a barcode under the flange. And he still fails to account for the added complexity that would be required of the capsule holders of Yoakim and Jarisch in order to address the optical aberrations that would inevitably result due to such factors as birefringence, internal reflection, Fresnel effects, etc. *See In re Schweickert*, 676 Fed. App'x 988, 995 (Fed. Cir. 2017). Not only would this discourage any such motivation, to make the combination would require skills that well exceed the POSITA. Ex. 2017, ¶¶137-38.

D. Petitioner's Motivations To Combine Fail

1. A POSITA Would Not Have Combined Rossi with Yoakim and Jarisch

The combination of Yoakim and Jarisch fails. Petitioner is the owner of Jarisch. As noted by Petitioner, Yoakim and Jarisch have a common owner, and a common inventor. Pet. at 47. This “is merely the jumping-off point in reaching the determination of whether a claimed invention is obvious.” *Trend Micro, Inc. v. Open Text Inc.*, IPR2023-00692, Paper 8 at 22 (PTAB Nov. 6, 2023). Other facts undermine the alleged combination. For example, Jarisch's priority document was filed days after Yoakim. Yet, Jarisch make no mention of Yoakim in the background or otherwise. This suggests the inventors of those references did not

themselves see any clear relation between the two references. Tellingly, during prosecution of a similar Jarisch reference (U.S. Patent No. 10,800,600), a parent application to Yoakim was cited by the Examiner (WO 2008/148601, “Yoakim ’601”). In attempting to overcome a rejection based on Yoakim ’601, Petitioner disparaged the ability of Yoakim ’601 to be combined with other references describing single-serve coffee capsules, stating “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.” IPR2021-01222, Paper 6, EX2002-1 at 393. Ex. 2017, ¶¶140-42.

Petitioner continued, stating the other references 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 bottom of the flange-like rim of a capsule as required by independent claim 1.” *Id.* at 395-96. Patent Owner acknowledges 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. When prosecuting its own application, Petitioner argued different references describing single-serve coffee capsules were non-combinable. Petitioner should not be permitted to argue the opposite now. Ex. 2017, ¶143.

Moreover, a POSITA would not have combined the teachings of Yoakim (namely the embodiments of Figures 23, 61, and 62) and Jarisch (Figure 4), as

Petitioner suggests. Ex. 2017, ¶144. Petitioner suggests Jarisch’s placing of the code on the bottom of the flange would result in the reading being more reliable. Pet. at 47-48. But Petitioner does not explain why such teachings in Jarisch would have motivated a POSITA to modify Yoakim in that way. Indeed, there is no reason to believe Yoakim’s placement of a “barcode” on the top of the membrane would suffer from readability issues given Yoakim’s device reads the “barcode” before brewing when a capsule would not be soiled by beverage residues. Ex. 1004 at [0525], [0526]. Moreover, the barcode (ID4 in the yellow region) is inboard of the outlet perforators 221 (annotated in red) so the centrifugal forces when the capsule is spinning would drive the fluid (annotated in green) away from the barcode—not towards it. *See id.* at Figs. 61, 62, [0507]. Thus, the barcode would not be soiled and such a modification would be unnecessary in Yoakim’s brewing system. Ex. 2017, ¶¶144-45. Petitioner’s argument thus should be rejected. *See, e.g., Pro-Dex, Inc. v. Intelligent Automation Design LLC*, IPR2023-00218, Paper 8 at 24-26 (PTAB Jul. 19, 2023); *Trend Micro*, IPR2023-00692, Paper 8 at 24 (finding combination insufficient where no explanation given as to how teachings might be beneficial in the system modified).

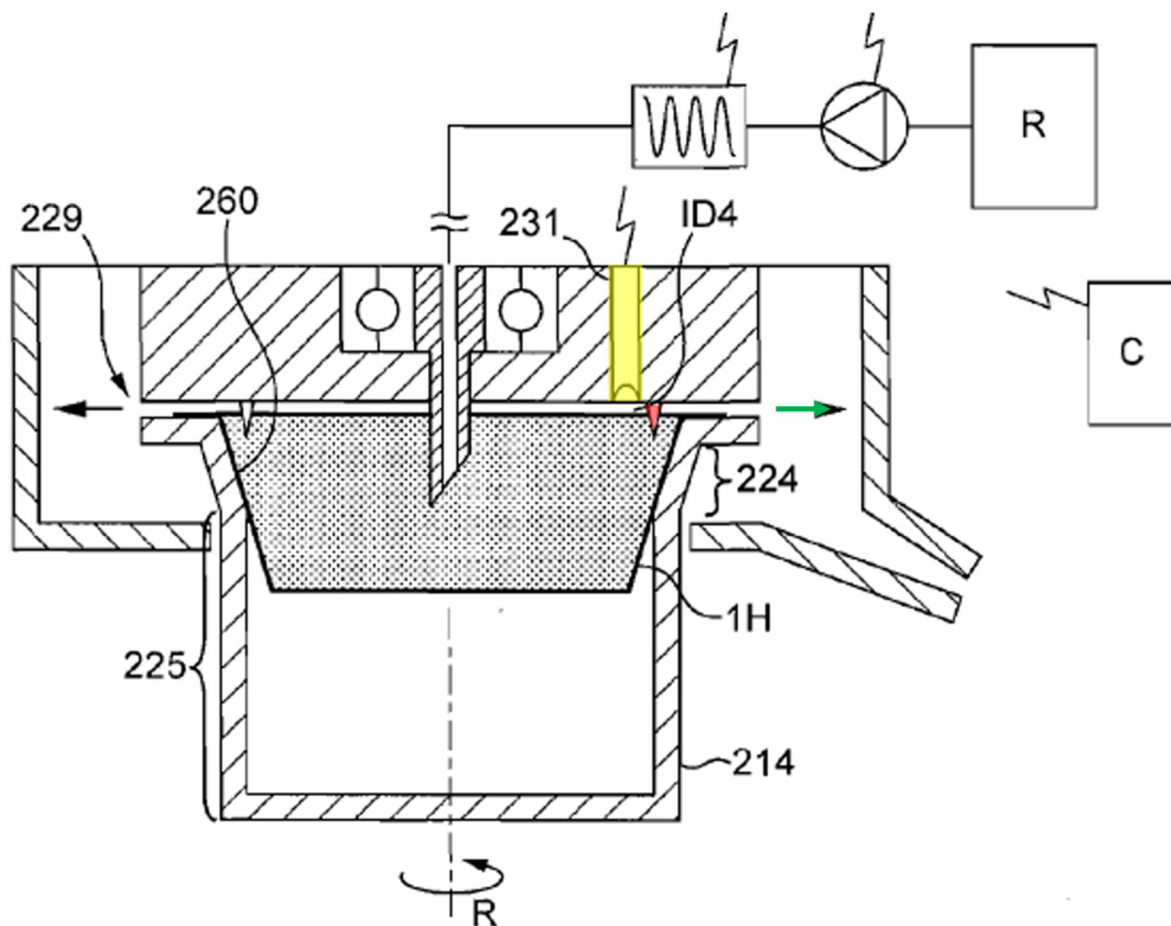
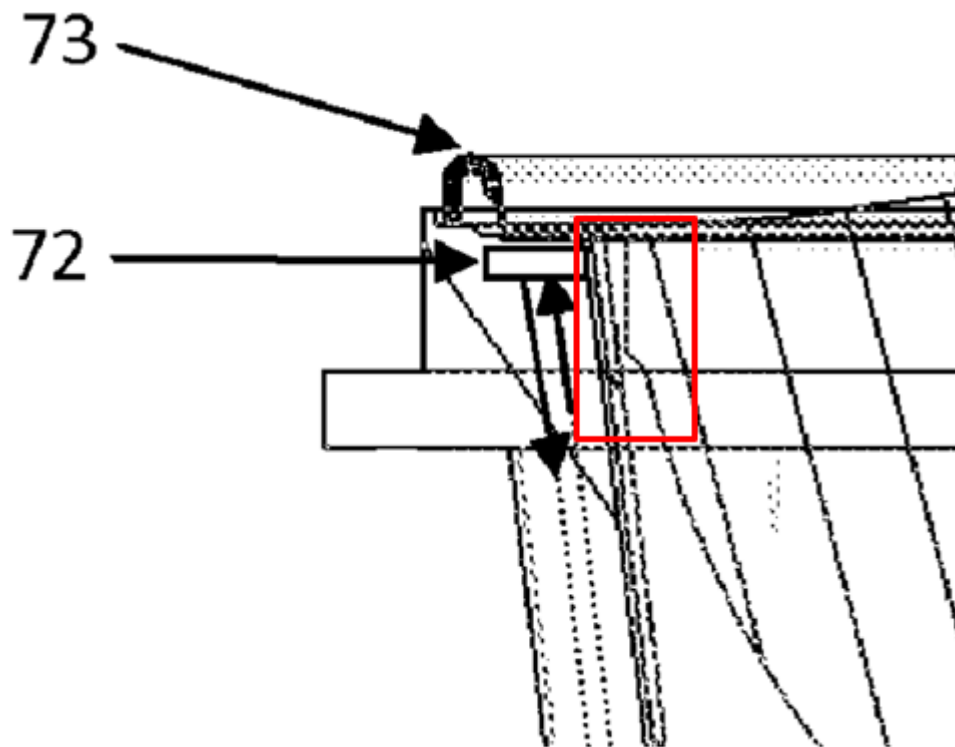


FIG. 61

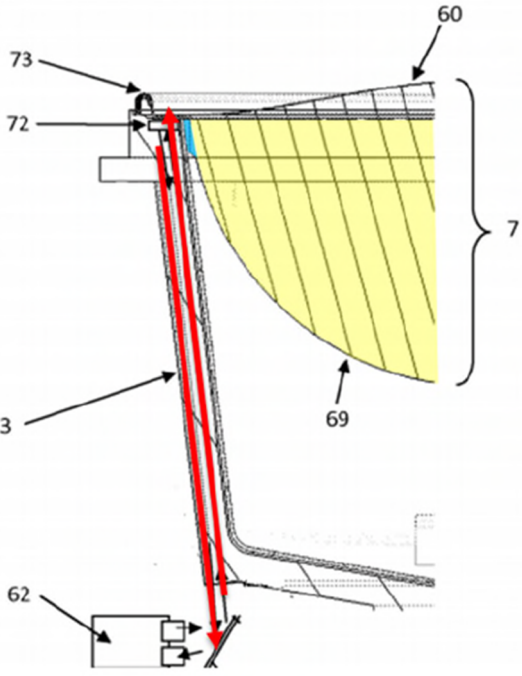
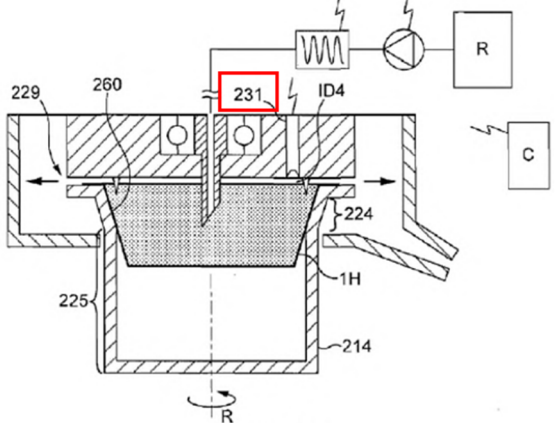
There are other important differences between Yoakim and Jarisch that undermine the combination of the two that Petitioner fails to address. For example, Yoakim teaches that the capsule side wall advantageously engaging with the capsule holder. Ex. 1004 at [0024]; *see also id.* at [0205], [0216], [0512], Figs. 61, 62. In contrast, Jarisch's capsule does not engage with the interior of cell 3. Ex. 2017, ¶146.



These differences are not insignificant. 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 had a reasonable expectation of success in doing so.**” *Regents of University of California*, 903 F.3d at 1291. 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 48-49. However, the “sensor/detector (231) [] enabled to identify and read a barcode” as described in Yoakim is positioned to read a code

on the opposite side of the capsule. Pet. at 58; *see also* Ex. 1004 at [0525], Figs. 61, 62.

Table 1 – Comparison of Sensor Placement in Jarisch and Yoakim

Jarisch	Yoakim
 Pet. at 49 (citing Ex. 1005, Fig. 4).	 FIG. 61 Ex. 1004 at Fig. 61.

Ex. 2017, ¶147. 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 transparent material between the code and the sensor, Yoakim's capsule holder 214 (above right) is comprised of lower portion 225 and first portion 224, which are connected by a bend (flare) in the structure. Ex. 1004 at Fig. 61, [0512]. For the sensor/detector to pass light through this flare, Yoakim would require extensive modifications, including mirroring or

index-of-refraction matching within the flared structure. This would have been particularly challenging given the fact the barcode of Yoakim would be read while the capsule holder is rotated. The use of Jarisch's transparent material would also have contributed to undesired 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. Ex. 2017, ¶¶148-53.

This combination would thus require extensive experience with optics and more than ordinary skill. At his deposition, Mr. Jobin stated “[b]odily incorporation is not required, in my understanding” to combine Jarisch and Yoakim. Ex. 2019 at 108:13-14. But he fails to demonstrate a POSITA would have had the requisite experience to utilize those teachings with a reasonable expectation of success. In fact, it would take extraordinary skill to achieve the combination for at least the reasons presented above. *See Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138 (Fed. Cir. 1985) (“The invention must be evaluated not through the eyes of the inventor, who may have been of exceptional skill, but as by one of ‘ordinary skill.’”); *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. *See* Ex. 2017, ¶153.

On the present facts, the complicated optics assembly required in a harsh operating environment required more than conclusory assessment 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, 994 (Fed. Cir. 2017).

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), 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. 976, 981 (CCPA 1959) (rejecting combination because it “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 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”); Ex. 2017, ¶154.

The “bit code” described in the Jarisch reference teaches away from Petitioner’s proposed combination. “A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent

from the path that was taken by the applicant.” *Ricoh Co., Ltd. v. Quanta Computer Inc.*, 550 F.3d 1325, 1332 (Fed. Cir. 2008) (quoting *In re Kahn*, 441 F.3d 977, 990 (Fed. Cir. 2006)). Here, Yoakim uses the bare term “barcode,” without providing any information as to what that code would actually be.⁴ In contrast, Jarisch teaches “[a] problem with identifying a capsule in a beverage preparation machine,” including those that use “barcodes,” “is that retrieving or reading information from the capsule is not always reliable or convenient.” Ex. 1005 at [0008], [0009], [0011], [0013]. Jarisch’s solution is to use a “bit code.” *Id.* at [0017], [0064]. Indeed, Jarisch makes no mention of barcodes in describing “the present invention.” A POSITA would therefore be left with the “bit code” described in Jarisch, which Petitioner agrees is not a “barcode.” Jarisch further adds complexity in requiring the code be read while rotating, which Yoakim does not require. Ex. 1005 at [0048]. As a result, a POSITA would not have been motivated to combine the Yoakim and Jarisch references to achieve K-fee’s claimed inventions. Even if a POSITA was so motivated, the outcome would be the employment of a “bit code,” which does not meet the “barcode” limitation of the claim. Ex. 2017, ¶141.

⁴ Petitioner’s expert testified the plain and ordinary meaning of barcode would “include a collection of bars of light and dark colors and of varying widths.” Ex. 2019 at 137:13-17. Neither he nor the Petition identify such a disclosure in Yoakim.

Finally, Petitioner fails to adequately explain why a POSITA would be motivated to add the separate validation element of Rossi to the centrifugal brewing systems of Yoakim and Jarisch. This is particularly true in light of the Petitioner's failure to take into account the nature of the validation element disclosed in Rossi, which is (1) separate from the identification element used to control the operation of the machine, (2) used to determine whether a load element has already been used, (3) preferably takes the form of the mechanical destruction of the validation element, (4) is described as advantageous if the validation is visible to the user, such that it is clear the load element is validated and cannot be reused, (5) is generally described as taking place outside of the machine, and (6) is used for purposes of "unlocking" the machine. The Petition is silent in assessing how a skilled person would consider Rossi as a whole, and how Rossi could be reconciled with the systems of Yoakim and Jarisch. Ex. 2017, ¶155.

2. A POSITA Would Not Have Combined Yoakim, Jarisch, and Rossi with Castellani

Independent of its failure to cite any prior art disclosure of the recited pump feature, Petitioner also fails to demonstrate motivation to combine the prior art teachings. As stated above, there is no motivation to combine Yoakim, Jarisch, Rossi and Castellani, and Petitioner's conclusory statements regarding motivation to combine are insufficient. Pet. at 73-76; Ex. 1003 at ¶¶293-300; Ex. 2017, ¶156.

E. Ground 1 Fails Because Patent Owner’s German Applications Antedate Jarisch

On priority to the German applications, Petitioner argues the disclosure *within* a single reference is unavailable because the description of the relevant limitations purportedly appears in discrete embodiments. Petitioner also argues certain limitations are not disclosed at all, despite clear written description to the contrary. Petitioner is wrong on both the facts and the law, and the Patent Office has already rejected Petitioner’s argument. As demonstrated below, the embodiments in the second German application are linked by the discussion of an identifier and the notion that the capsules are all intended for use in a coffee machine having a brewing chamber and a pump that pumps water into the brewing chamber. A POSITA would look to the drawings, including Figure 16’s detailed discussion of the brewing chamber, and then look at page 36 of Ex. 1047 and learn “Figure 16 shows a portion capsule with toothed ring in the brewing chamber.” A POSITA would then understand from the preceding disclosure the same brewing chamber is previously discussed would be led to the general teachings of pages 1-6 of the application—linking such embodiments. Ex. 1047 at 33:22-30, 34:13-25; Ex. 2017, ¶¶53-55.

1. The USPTO Has Already Rejected Petitioner’s Priority Arguments

The USPTO has repeatedly addressed priority and has already specifically settled in Patent Owner’s favor the very same priority issue Petitioner now raises. In an April 4, 2022 Office Action in related U.S. Application No. 17/547,363 (the “’363

Application,” now U.S. Patent No. 11,542,094), Examiner Chou initially concluded the German application did not provide support. Ex. 2010 at 3-4.

However, in a subsequent interview on June 14, 2022 Applicant directed Examiner Chou to the same supporting disclosure Patent Owner cites below, including that the “identifier applies to all other examples” and the disclosure of the embodiment described in Figure 16. In light of that disclosure, Examiner Chou withdrew the priority notification and confirmed that the German application *does* provide support:

Examiner noted that the arrow pointed at the bottom side of flange of a capsule. ***Examiner agreed that fig.16A is an example of the capsule that can be with a beverage machine.*** Thus, priority notification will be withdrawn.

Id. at 11.

In ***two other*** related applications, U.S. Application Nos. 17/670,629 (the “629 Application,” now U.S. Patent No. 11,465,829) and 17/670,765 (the “765 Application,” now U.S. Patent No. 11,465,830), Examiner Chou initially reached similar conclusions regarding priority date and support for the drawings filed with the applications. *See, e.g.*, Ex. 2014 at 6-7, 18-19; Ex. 2015 at 7-10. However, for similar reasons as discussed above, the Examiner withdrew his drawing objections after an interview with Patent Owner identifying support in the German applications. Ex. 2015 at 2; *see also* Ex. 2014 at 2. Patent Owner and Examiner Chou then discussed the priority claims, and Examiner Chou concluded “[t]he

support can be found in the above drawing objection section.” Ex. 2015 at 2; Ex. 2014 at 2.

Shortly after the interview, Applicant submitted remarks. Ex. 2010 at 21. In particular, Applicant traversed the Examiner’s drawing objection by explaining “various teachings in the written description and drawing breathe meaning and inherency into claim terms and certain claim features implicitly give rise to the presence of others,” such as those depicted in Figures 16a and 16b. *Id.* at 23. In overcoming the priority notification, Applicant stated “[i]t appeared to have been understood by the Examiner that the support need not have been verbatim, and that the drawings taken in connection with the text portion of the specification (including the multiple dependent claims) was to be considered.” *Id.* at 21.⁵

More recently, in an Applicant-initiated interview with Examiner Chou, Patent Owner apprised him of the status of the various related IPR filings and brought to his attention the 15 references that Petitioner has consistently used in challenging the validity of Patent Owner’s applications. *See* Ex. 2011. Examiner

⁵ During the prosecution of related Application Nos. 17/670,765 and 17/670,629, entitlement to the German applications was also at issue and Patent Owner overcame those rejections.

Chou concluded he had “reviewed these references and did not find any issue with patent owner’s foreign priority date.” *Id.* at 2.

In addition, during the prosecution of the related ’491 Patent, when Examiner Jennison cited Jarisch in his Notice of References Cited, Patent Owner noted “certain references cited by the Examiner in the ‘Notice of References Cited’ section of the Office Action are not prior art, in view of Applicant’s entitlement to at least the claimed September 02, 2010 priority application,” which predates Jarisch. Ex. 2012 at 1899. And finally, when discussing the status of the numerous IPR filings and co-pending applications in this patent family, Examiner Jennison concluded “[t]he priority dates of the applications, and prior art cited, under Pre-AIA were verified.” Ex. 2003 at 2; *see also* Ex. 2002 at 2.

2. The Second German Application Provides Priority Support

The second German application confirms the USPTO reached the correct conclusion. A POSITA would have understood the embodiment disclosed in Figures 16-18 of the second German application alone satisfies the written description requirement, reciting every limitation in each of the claims of the ’430 Patent. *See generally* Ex. 2017, ¶¶53-88. Indeed, “[t]he written description requirement does not require the applicant ‘to describe exactly the subject matter claimed, [instead] the description must clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed.’” *Union Oil Co. of*

Cal. v. Atlantic Richfield Co., 208 F.3d 989, 997 (Fed. Cir. 2000) (citation omitted); *see also Cummins-Allison Corp. v. SBM Co.*, 484 Fed. Appx. 499, 505 (Fed. Cir. 2012) (explaining that “the earlier filed application need not describe the later filed claims verbatim”); *Ex Parte Sims*, Appeal 2018-003749, 2019 Pat. App. LEXIS 4077, at *11 (P.T.A.B. June 24, 2019) (finding the specification provided adequate written description support because it explicitly stated “[a]ny embodiments described in one or more of such patent applications and/or herein may be used in any combination with one or more embodiments described herein in any combination”). Additional relevant disclosure can be found, for example, in Figures 1 and 2 and the accompanying written description for each of Figures 1, 2, 16, 17, and 18. Moreover, a POSITA would understand the embodiments are linked by virtue of Fig. 16 and various passages in the general teachings of the application. *See generally* Ex. 2017, ¶¶53-88.

Starting with the written description and figures, the second German application teaches a “portion capsule” which contains a beverage raw material, such as ground coffee, wherein the portion capsule has an identifier, such as one in the form of a machine-readable barcode. As described with respect to the embodiment depicted in Figure 16, “[a]ccording to a further, or a preferred, subject matter of the present invention,” the identifier can be “a...detection means to be sensed by a detector,” which indicates “whether the respective portion capsule is

suitable for the respective coffee machine.” Ex. 1047 at 34-36, 41, Fig. 16; *see also id.* at 30. The disclosed invention thus uses an identifier to prevent “considerable safety-related problems” and/or damage to the coffee machine that may arise from the use of a capsule that is “not suitable” for a particular coffee machine. *Id.* at 30.

As additional support, the second German application describes “[t]he invention will be explained hereinbelow with reference to figures 1-18. These explanations do not have a limiting effect on the general concept of the invention.” Ex. 1047 at 35. After the general description of the invention, including numerous different examples of identifiers, as well as the complete description of Figure 1, the application states, “[w]hat has been said in relation to the identifier applies to all other examples.” Ex. 1047 at 38. The very next “example” is Figure 2, which provides additional disclosure regarding the location of the identifier on the capsule. A POSITA would have understood upon reading the second German application that the capsule features described would be intended to be combinable with each of the described embodiments. Ex. 2017, ¶61.

The claims that are included at the end of the application further support the notion the invention is a portion capsule, which can have any number of features that are introduced in connection with the different Figures and examples in the application. Petitioner’s reliance on *FWP IP ApS v. Biogen MA, Inc.*, 749 Fed.

Appx. 969, 977 (Fed. Cir. 2018) to suggest multiple-dependent claims cannot satisfy the written description requirement under any circumstances is wrong. In that case, the multiple-dependent claims resulted in a tangled mess of combinations of diseases, dosages, dosing schedules, active ingredients, and formulations, which did not demonstrate the patentee had possession of and invented the claimed unpredictable biotechnology invention. *Id.* at 977. A review of the underlying application in that case reveals the number of potential combinations occasioned by the multiple dependent claims was in the thousands.

Here, the combinable elements in the second German application are well in scope relative to thousands of combinations in the unpredictable art of *FWP*. The second German application discloses only one illustration of a brewing chamber for a coffee machine, which the Petitioner and Mr. Jobin have urged as being conventional and well known in the field. Additionally, in contrast with the facts in *FWP*, the specification provides guidance for how to combine them. *See* Ex. 1047 at 38 (“What has been said in relation to the identifier applies to all other examples”); *see also id.* at 31 (“According to the invention, then, it is provided that this portion capsule has an identifier”), 34 (“According to *a further*, or a preferred, subject of the present invention, the portion capsule has a peripheral region”). Moreover, the reliance upon the multiple dependent claims in this case has been for the purpose of demonstrating the inventor contemplated features from

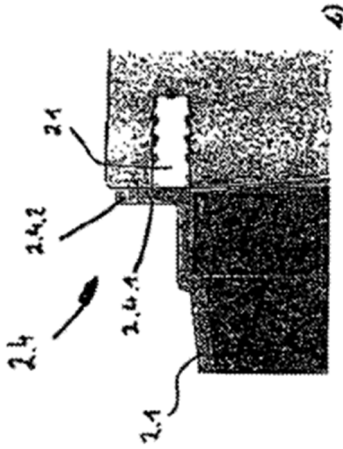
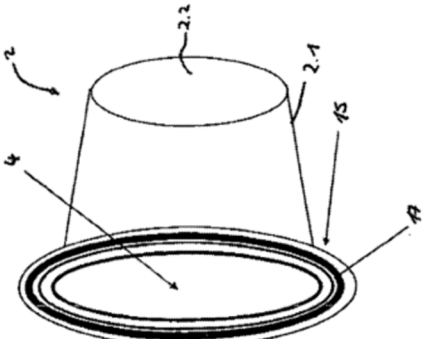
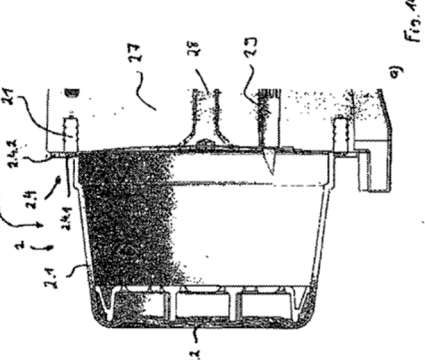
one embodiment were not confined solely to that individual embodiment. Rather, the multiple dependent claims corroborate the inventor envisioned, for this invention, features of one illustrative embodiment had applicability to other embodiments and such embodiments were linked and indeed combinable. Indeed, in withdrawing his drawing objections during the examination of the related '765 Application, Examiner Chou considered the multiple dependent claims of the second German application as sufficient for support for priority entitlement. Ex. 2015 at 2 (“[C]laim 7 can [] depend on claim 3 so that both identifier features can be added in independent claim.”). Petitioner has pointed to no evidence in the second German application that would militate any contrary outcome. Petitioner has pointed to nothing in the application that would prevent the linkage of the embodiments.⁶

⁶ It should be noted when *Petitioner* attempted to demonstrate written description support in order to invoke an interference with Patent Owner, Petitioner was perfectly willing to link embodiments, cite to numerous different figures and rely on multiple dependent claims from the Jarisch EP application (EP 10169374.5). Ex. 2015 at 38-39 and *passim*. Petitioner obtained US Patent No. 10,800,600 as a result.

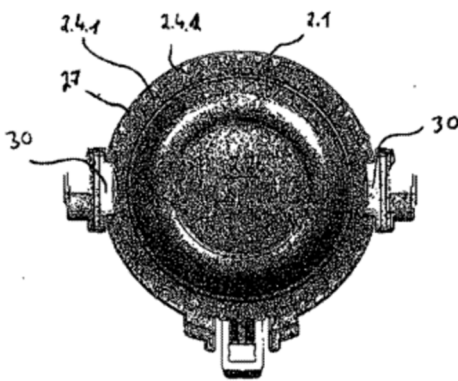
The following Table 2 maps the support for each limitation of claim 1 to Figures 16, 17, and 18 of the second German application, Ex. 1047 at 36, and the associated descriptions in the specification. Nothing herein should be interpreted as limiting the scope of identifier to the specific embodiment of these Figures, in view of the other teachings mentioned, in which other identifiers can be employed. Additional support from, *inter alia*, Figures 1 and 2 is also recited in order to further demonstrate the applicant was in possession of the claimed invention:

Table 2 – Comparison of Claim 1 to the second German application

'430 Patent	Second German application
1. A beverage system for making a beverage, comprising:	An object of the invention is to provide a capsule that is suitable for a particular <i>coffee machine</i> . See, e.g., Ex. 1047 at 30; Ex. 2017, ¶66.
[1.a] a single-serve capsule comprising: a base element with a cavity, in which a raw beverage material is provided	Figure 16, an embodiment of the claimed portion capsule, has “a basic element 2, which in the present case is essentially conical and has a wall 2.1 and a base region 2.2. The raw material . . . [is] provided in this basic element.” Ex. 1047 at 41; Ex. 2017, ¶¶67-68.
[1.b] a flange extending outwardly from the base element, the flange comprising a top side and an opposing bottom side;	“<i>An annular peripheral region 2.4</i>, onto which for example a cover sheet is sealed, is arranged at that end of the basic element which is <i>located opposite the base region 2.2</i>.” Ex. 1047 at 41. As depicted in Figure 16(b), the peripheral region has an upper side and an opposing bottom side. Ex. 2017, ¶69.

'430 Patent	Second German application
	 Figure 2 confirms that the invention includes a flange extending outwardly from the base element. <i>Id.</i> 
[1.c] a cover that is fastened to the top side of the flange to close the cavity;	An “annular peripheral region 2.4, <i>onto which for example a cover sheet is sealed, is arranged at that end of the basic element which is located opposite the base region 2.2.</i>” Ex. 1047 at 41; Ex. 2017, ¶¶70-71. 

'430 Patent	Second German application
[1.d] and a barcode provided on the bottom side of the flange; and	With respect to Figure 16, the application discloses that the “peripheral region 2.4 has, in its outer region, a form-fitting and/or friction-fitting means <i>and/or a detection means 2.4.2.</i>” Ex. 1047 at 41. While the means 2.4.2 can be a toothed ring as depicted in Figures 16 and 17(a)-(c), a POSITA would have understood that other “detection means” such as the barcode disclosed with respect to Figure 2 could be located on the bottom side of the flange instead of the toothed ring. Ex. 2017, ¶¶72-73. Figure 17a depicts the repeated toothed ring identifier on the bottom side of the flange at 2.4.2, but a POSITA would have understood that other “detection means” could be used instead. Ex. 1043 at 42; Ex. 2017, ¶73; Ex. 2018 at 186:10-20 (agreeing that a POSITA would have understood Figure 17a (and the other drawings) to be a view of the bottom of a portion capsule, or base region 2.2, looking up at the toothed ring on the bottom side of the flange).

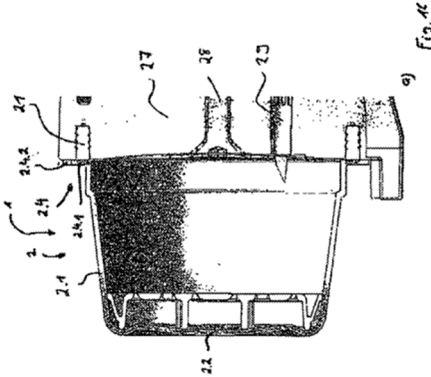
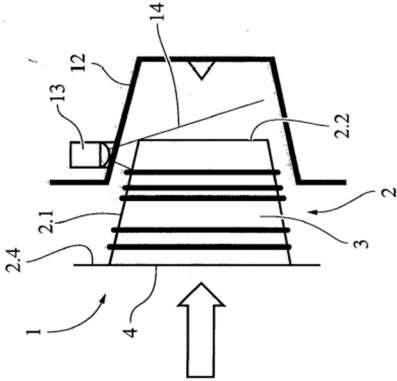
'430 Patent	Second German application
	 In a description of the different identifiers that could be used with the portion capsule, the application describes that “[t]he identifier is further preferably a machine-readable print,” and the “print is preferably a barcode, a logo or a repeat pattern.” Ex. 1047 at 33. Figure 2⁷ also depicts the barcode on the bottom side of the flange which

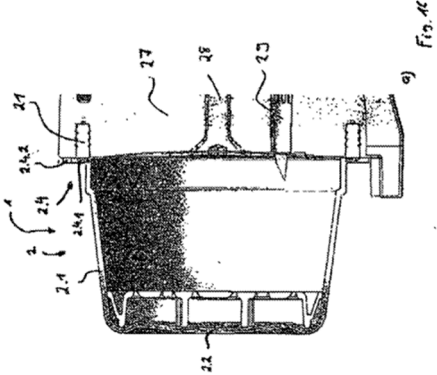
⁷ In the Institution Decision, the Board questioned whether the second German application supports placing a barcode under the flange. Institution Decision at 14 n.9. It does. Specifically, a POSITA would understand the application discloses the membrane 4 is provided to close the cavity once it is filled with a raw beverage material. Ex. 1047 at 37 (“This cavity, once filled, is closed by a membrane”). Thus, the membrane as depicted in Figure 2 is applied to the upper side of the capsule. The

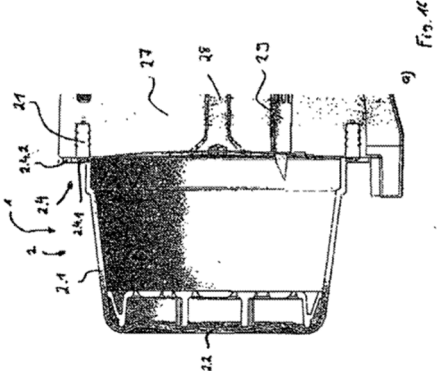
'430 Patent	Second German application
	further informs the understanding of a POSITA reviewing the application. Ex. 2017, ¶¶73-75. A POSITA would have understood that the barcode on the bottom side of the flange can also be combined with the toothed rings. Ex. 1047 at 30 (“It has therefore been an <i>object of the present invention</i> to provide a portion capsule which is suitable just for a quite specific coffee machine. The <i>object is achieved by a portion capsule for making a beverage</i>, having a basic element with a cavity, ... in which <i>the portion capsule has an identifier</i>, which makes

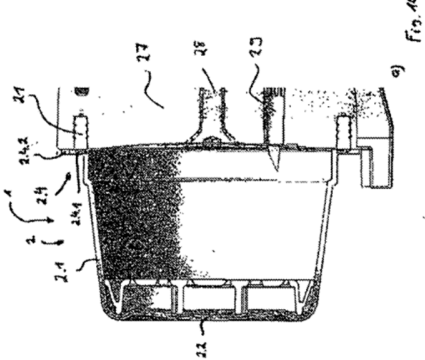
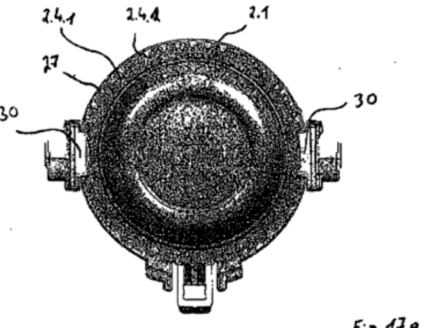
application continues the Figure 2 “capsule has a barcode in the region of the upper side of the membrane.” *Id.* at 38. The application alternatively discloses “as symbolized by the arrow 15, for the barcode to be provided on that side of the peripheral region of the basic element which is directed away from the membrane” (*id.*), i.e., the underside of the flange. Accordingly, the application supports placing a barcode under the flange. Ex. 2017, ¶¶72-74; Ex. 2019 at 131:1-21 (Petitioner’s expert admitting that at that time of his declaration this was his interpretation). Moreover, a POSITA would have understood the placement of the detector could be moved depending on the placement of the identifier. This is illustrated in the second German application by its depictions of detector locations. *See, e.g.*, Figs. 1-3, 11-13, 15.

'430 Patent	Second German application
	it possible to individualize the respective portion capsule.”), 34 (“According to <i>a further</i>, or a preferred, subject matter of the present invention, the portion capsule has a peripheral region, which is preferably provided on the basic element.”), 34-35 (“The portion capsule preferably has a form-filling means, friction-fitting means, and/or detection means in the peripheral region, in particular on the outer circumference thereof, at least in certain regions.”)
[1.e] a beverage machine comprising: a sensor/detector configured to read the barcode;	The means 2.4.2 in Figure 16 is sensed “in order to establish whether the respective portion capsule is suitable for the respective coffee machine.” Ex. 1047 at 35. “As an alternative, or in addition, however, it is also possible for these form-fitting, friction-fitting and/or detection means to be sensed by a detector, in order to establish whether the respective portion capsule is suitable for the respective coffee machine.” Ex. 1047 at 35. With respect to the embodiment of Figures 16 and 17, the application further states, “[a] person skilled in the art is also aware that for example the insertion shaft may also contain a sensor, for example a camera, which senses the shape of the means 2.4.2.” <i>Id.</i> at 43; Ex. 2017, ¶76.

'430 Patent	Second German application
	See also Figure 2 and the associated description of the location of the detector. Ex. 1047 at 38.
[1.f] a brewing chamber configured to receive the base element of the single-serve capsule and having an end portion that opposes the bottom side of the flange; and	Figure 16 depicts a brewing chamber 27: “Preferably a sealing surface 2.4.1 is provided in the peripheral region 2.4, on the inside in respect of this toothed ring, and interacts with sealing action with a seal 21, which is arranged on the brewing chamber 27.” Ex. 1047 at 41; Ex. 2017, ¶77.  Figure 1 provides further description: “This coffee capsule is introduced into a brewing chamber 12 (illustrated schematically here).” Ex. 1047 at 37. 
[1.g] a pump controlled to supply water into the single-serve capsule;	The general description in the application describes that “[t]he coffee

'430 Patent	Second German application
	machine, in particular, the pressure pump thereof, which makes the water available, can preferably be operated only when the identifier determined coincides with the reference identifier. Otherwise, the coffee machine cannot be operated.” Ex. 1047 at 31. Specifically with respect to Figure 16, the accompanying text describes the flow of water through a water inlet 28 and into the capsule, and then out through the opening made by a mandrel or piercing spike. <i>Id.</i> at 41; Ex. 2017, ¶78.
[1.h] wherein the single-serve capsule is free of a filter that is located inside of the cavity,	Figure 16 depicts that “[t]he raw material and, <i>if appropriate</i> , inserts, in this case a filter, are provided in this basic element.” Ex. 1047 at 41; Ex. 2017, ¶79.
[1.i] the single-serve capsule also comprises: (i) an upper end portion that has an annular convexity and a lower end portion that has an annular concavity relative to the central axis of the base element;	Figure 16 depicts the portion capsule where the cover (lid foil) is bowed outwardly (convex).  A POSITA would have understood Figure 16 to depict a convex (not flat) cover and a bottom region with a concavity. Ex. 2017, ¶80.

'430 Patent	Second German application
[1.j] (ii) a barrier layer to prevent moisture or aroma from escaping out of the single-serve capsule;	The application describes generally that a “barrier layer” may be present in the portion capsule, which “prevents moisture or aroma from escaping from the capsule, and/or steam or oxygen from penetrating into the capsule.” Ex. 1047 at 32. With respect to Figure 16, the application similarly describes, “[a]n annular peripheral region 2.4, onto which for example <i>a cover sheet</i> is sealed, is arranged at that end of the basic element which is located opposite the base region 2.2.” Ex. 1047 at 41; Ex. 2017, ¶81.
[1.k] wherein the beverage machine also comprises: (i) a mandrel that is configured to pierce the cover in a region that is offset from the central axis of the base element;	Figure 16 depicts a “spike” (also called a mandrel) for piercing the cover at a location offset from the central longitudinal axis. <i>See also</i> Ex. 1047 at 41 (“an opening . . . produced by the piercing spike 29”). Ex. 2017, ¶82. 
[1.l] (ii) a seal that is configured to seal against the cover in a region between a peripheral edge of the flange and the region of the cover that is pierced by the mandrel;	The “seal” is depicted in Figure 16 at 21 as being sealed between the region of the cover pierced by the “spike” or mandrel, and the peripheral edge of the cover. Ex. 2017, ¶83.

'430 Patent	Second German application
	
[1.m] (iii) a pair of holding arms for engaging the single-serve capsule; and	Figures 17a-17c “show how the portion capsule 1 is retained on a part of the brewing chamber 27 by means of two retaining arms 30. These retaining arms 30 interact with the means 2.4.2.” Ex. 1047 at 42; Ex. 2017, ¶84. 
[1.n] (iv) a dropping box for the single-serve capsule to fall into;	The machines of Figure 17 are described to have a “waste container” or dropping box that capsules “would drop through.” Ex. 1047 at 42; Ex. 2017, ¶85.
[1.o] wherein the pump is controlled to push the water into the single-serve capsule only upon a determination that the read barcode agrees with a stored reference.	With respect to Figure 16, the application provides that an example of an identifier is the “form-fitting, friction-fitting and/or detection means to be sensed by a detector,” such as a toothed ring or barcode.” Ex. 1047 at 41; Ex. 2017, ¶86. Further, the insertion shaft may also contain a sensor to detect the shape of the form-fitting, friction-fitting, and/or detection means. Ex.

'430 Patent	Second German application
	1047 at 43. “This signal, in turn, is passed to a control means, which frees, for example, the brewing chamber if the capsule is the correct one.” <i>Id.</i>; Ex. 2017, ¶86. The general description in the application states that “[a] sensor/detection means provided on the coffee machine preferably senses this identifier and compares it preferably with a stored identifier. The coffee machine, in particular, the pressure pump thereof, which makes the water available, can preferably be operated only when the identifier determined coincides with the reference identifier. Otherwise, the coffee machine cannot be operated.” Ex. 1047 at 31; <i>see also id.</i> at 38 (“For the case where these identifiers do not coincide, in particular operation of the pump which forces, for example, hot water through the brewing is prevented.”); 33 (“the identifier makes it possible for the coffee machine...to set the beverage-making or food-making process, i.e. for example the quantity of water, the pressure thereof and/or the temperature thereof.”). Ex. 2017, ¶86.

As is evident from the foregoing table, a POSITA reading the second German application would have understood each limitation of claim 1 of the '430 patent to be recited at least in Figures 16-18, and/or the associated descriptions of that embodiment in the second German application. *See generally* Ex. 2017, ¶¶58-88.

The same is true for every limitation of every other claim of the '430 Patent. As such, the claims of the '430 Patent are entitled to the priority date of at least the second German application, September 2, 2010, which means the Jarisch reference is not prior art.

3. Petitioner's Arguments Are Unpersuasive

a. An upper end portion that has an annular convexity and a lower end portion that has an annular concavity

The only disclosure Petitioner argues is absent from second German reference is a capsule with “an upper end portion that has an annular convexity and a lower end portion that has an annular concavity relative to the central axis of the base element.” Pet. at 42. Petitioner is wrong.

The second German application very clearly discloses this limitation. Petitioner describes various of the Figures in order to argue the application provides different embodiments of capsules with purportedly flat covers instead of a convexity, but the figures Petitioner incorrectly dismisses do in fact disclose this limitation, are part of the specification, and can thus be relied on for purposes of demonstrating support for the claim. *See Koito Mfg. Co. v. Turn-Key-Tech, LLC*, 381 F.3d 1142, 1155 (Fed. Cir. 2004) (finding the challenged limitation found adequate written description support in Figure 1 of the patent); *see also Nike, Inc. v. Adidas AG*, 812 F.3d 1326, 1349 (Fed. Cir. 2016). In particular, Figure 16 depicts a “cover [that] is bowed outwardly,” Ex. 2017, ¶90, as can be seen relative to the added

red reference line below. Petitioner argues the water inlet 28 and brewing head 27 “are flush with the flat top of the capsule membrane, which it could not be if the capsule had an annular convexity.” Pet. at 43. However, a POSITA would have understood that upon the cover being pierced by the mandrel, the once-convex cover would be flattened as the volume of air inside the capsule decreases. Ex. 2017, ¶90.

The Examiner for the '363 Application agreed. Ex. 2010 at 11. A POSITA would have understood an intact portion capsule would have an outwardly-bowed cover because of, for example, differential pressure inside and outside of the capsule. Ex. 2017, ¶90. At minimum, for these reasons, a capsule with annular convexity would have been inherent from the disclosures of sealing raw coffee material in the capsule. Ex. 1047 at 30-31.

interpreted the curved shape of Figure 16 of the second German application to support the same limitation.

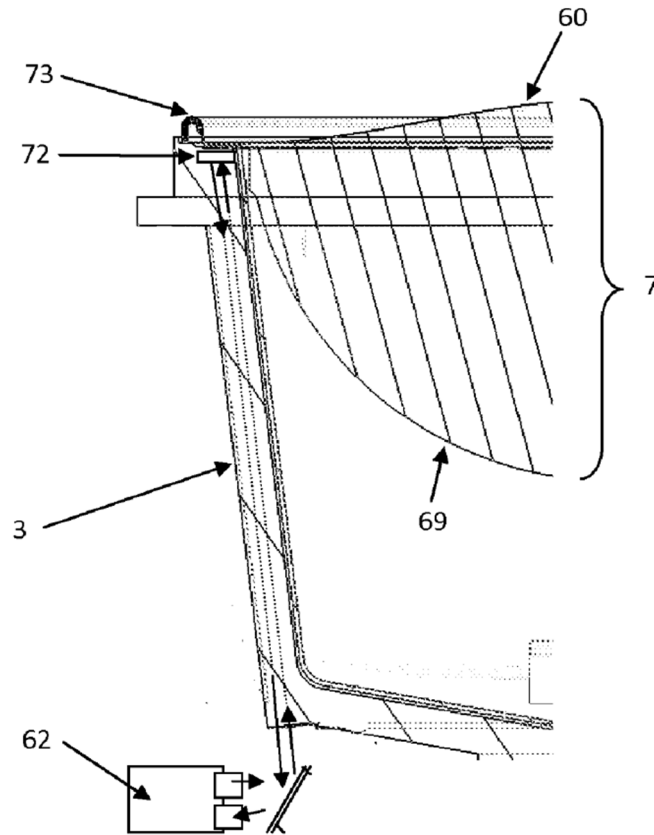


Fig. 4

Ex. 1005 at Fig. 4.

b. Barcode located on the bottom of the flange

With respect to Figures 16-18, the only challenge Petitioner raises is “[t]his embodiment does not disclose a capsule with a barcode located on the bottom side of the flange.” Pet. at 42. But a POSITA upon reading the second German application, would immediately and readily understand the barcode on the underside of the flange of the capsule disclosed and described with respect to Figure 2, could

be applied to the capsule disclosed and described with respect to Figures 16-18.⁸ This is explicitly supported by the statement in the application, “[w]hat has been said

⁸ “The written description does not require that every claimed element be illustrated in the figures, particularly in predictable arts and where the element not depicted is conventional and not ‘necessary for the understanding of the subject matter sought to be patented.’” *Hologic, Inc. v. Smith & Nephew, Inc.*, 884 F.3d 1357, 1362 (Fed. Cir. 2018); *see also* 37 C.F.R. § 1.81(a) (“The applicant for a patent is required to furnish a drawing of the invention where necessary for the understanding of the subject matter sought to be patented.”). The second German application teaches placing a barcode under the flange of the capsule in Fig. 2. It thus does not require repeated depiction in Figures 16-18 in order to support written description there. Moreover, Mr. Jobin admitted that the components of single-serve coffee systems were known in 2010, including brewing chambers, capsules in the brewing chamber, and extraction systems. Ex. 2019 at 23:14-26:6; Ex. 1003 at ¶59. These conventional coffee machine elements need not be depicted to support written description. On the present facts, in which only a single brewing chamber is illustrated in detail, and when there are not multiple different embodiments for the

in relation to the identifier applies to all other examples.” It is further supported by the German application’s description of “an object of the present invention” is “the portion capsule has an identifier.” Ex. 1047 at 30. One such identifier is a barcode. *Id.* at 33. And as described in Table 2 with respect to the embodiment depicted in Figure 16, “[a]ccording to a further, or a preferred, subject matter of the present invention,” the identifier can be “a...detection means to be sensed by a detector,” which indicates “whether the respective portion capsule is suitable for the respective coffee machine.” Ex. 1047 at 34-36, 41, Fig. 16; *see also id.* at 30.

A barcode is one such detection means that can be applied to Figures 16-18. *See* Ex. 2017, ¶¶93-96. The disclosure with respect to Figures 16-18 specifically states alternative detection means could be employed with that embodiment. In particular, with respect to Figure 16, the application discloses the “peripheral region 2.4 has, in its outer region, a form-fitting and/or friction-fitting means ***and/or a detection means 2.4.2.***” Ex. 1047 at 41; *see* Ex. 2018 at 186:10-20. While the means 2.4.2 can be a toothed ring, as depicted in Figures 16 and 17(a)-(c), a POSITA would have understood that other “detection means” such as the barcode disclosed with

brewing chamber, the only logical conclusion is the inventor was in possession of the claimed invention.

respect to Figure 2 could be located on the bottom side of the flange instead of the toothed ring. Ex. 2017, ¶¶94; Ex. 2018 at 186:10-20; Ex. 1047 at 33:1-7.⁹ The application is clear the barcode detection means described with respect to Figure 2 is an identifier that “applies to all other examples.” The second German application’s specific intention and guidance to combine the teachings regarding the identifier with all other examples, demonstrates the inventor had possession of the claims at the time of the second German application’s filing. See Ex. 2017, ¶¶94-101.

⁹ In the Institution Decision, the Board preliminarily found “element 2.4.2 is not an *identifier*, but rather a “a form-fitting and/or friction-fitting means and/or a *detection means*.” Institution Decision at 15 (emphasis in original). But reading the German application as a whole, a POSITA would have understood element 2.4.2 is an identifier. Ex. 2018 at 185:6-186:9 (agreeing 2.4.2 is a mechanical identifier); Ex. 2019 at 127:16-22 (admitting the gear-shaped rim or flange is used as an identifier), 128:7-14. Despite his prior unequivocal admission that the gear-shaped rim or flange is used as an identifier, Petitioner’s expert at his deposition attempted to walk back his prior sworn statements. Ex. 2019 at 128:3-6. Mr. Jobin’s sudden inconsistent claims of having difficulty understanding the second German application should be disregarded, and his testimony deemed not credible.

While the Figures 16-18 depict a toothed ring “form-fitting means” located on the underside of the flange, which Mr. Jobin himself admits is an identifier, the application specifically discloses and a POSITA would have understood that other “detection means” (such as a barcode, logo, repeat pattern, or other machine-readable print) could be used in the same location and for the same purpose. *See* Ex. 2018 at 185:10-186:9. Indeed, Mr. Jobin agreed the machine-readable print identifiers are not associated with particular embodiments of the second German application, but rather part of the “overview section” of the specification and “not referring to the figures.” Ex. 2018 at 184:22-185:4; Ex. 2017, ¶97. This is yet further reinforced by the teaching that the embodiment of Figs. 16-18 teach to use a camera as a detector. Mr. Jobin admits a camera can be used to read a barcode. Ex. 2019 at 20:17-25.

Indeed, Mr. Jobin, an alleged POSITA himself, testified a POSITA would have been well aware of numerous types of capsule identifiers and how they could be interchangeably used in a capsule. For example, Mr. Jobin testified in his experience with consulting on the design of identification means for a home beer-dispenser system, he evaluated several ways of identifying and verifying the correct beer cartridge was being used, including through the use of barcodes and the shape of the capsule or its “ribs or features” would result in “physical exclusion related to deactivation of the valve to prevent dispensing.” Ex. 2018 at 63:11-64:10; 64:11-16;

64:18-65:6, 67:16-68:4; Ex. 2017, ¶101. Mr. Jobin agreed a POSITA would have understood all of the aforementioned types of identifiers, including “[s]hapes, ribs, screws, bosses[,] receptacles, barcodes and RFID tags,” would be available for use as identifiers of beer cartridges. Ex. 2018 at 69:23-70:19; Ex. 2017, ¶101.

In the case of Figures 16-18, a POSITA would have also understood the inventor possessed an identifier, such as the barcode, that could be in combination with the “form-filling means, friction-fitting means, and/or detection means in the peripheral region.” Ex. 2018 at 184:22-185:4 (confirming both mechanical and optical identifiers described could be used as the identifier placed on the bottom side of the capsule’s flange); Ex. 2019 at 127:16-22 (Mr. Jobin admitting in his sworn declaration in IPR2023-00502 he said the gear-shaped rim or flange is an identifier), 128:7-14. As the second German application makes clear, such “form-filling means, friction-fitting means, and/or detection means in the peripheral region” is “a *further, or a preferred*, subject matter of the preferred invention.” *Id.* at 34.

Finally, a POSITA would have understood the claims of the second German application to show how features from across the scope of examples could be included in the various examples. For example, claim 11 of the application recites “The portion capsule (1) *as claimed in one of the preceding patent claims*, characterized in that the identifier is a barcode (17).” Ex. 1047 at cl. 11. A POSITA would have understood this claim to encourage replacing the identifier in any

previously-claimed embodiment with a barcode identifier. The claims thus demonstrate possession of subject matter arising from combinations of embodiments, and in particular the identifier element. Ex. 2017, ¶103. By its express terms, claim 14 recites a combination with claim 2, 6 and/or 11, and thus supports a further link among the identifier of the various embodiments.

Petitioner’s cases are inapposite. In opposing priority, Petitioner does not recite the correct standard, and the cases Petitioner cites do not compel a different result. Unlike several of the cases Petitioner cites, as shown above the claimed elements of the ’430 Patent are “linked together in the specification” of at least the second German application, including Figures 16, 17, and 18 in particular. *Flash-Control LLC v. Intel Corp.*, 2021 WL 2944592, 2021 U.S. App. LEXIS 20790 (Fed. Cir. July 14, 2021); *Hyatt v. Dudas*, 492 F.3d 1365, 1371 (Fed. Cir. 2007)¹⁰. Unlike

¹⁰ *Hyatt* alone would not support Petitioner’s arguments because the language Petitioner cites is dicta. The court held there the Examiner’s explanation in rejecting Applicant’s claims, including “it is not enough that applicant show where each claimed element resides . . . but [he] must also provide support for the linkage of the claimed elements creating the embodiment,” was sufficient to comply with MPEP § 2163.04(I) and properly shifted the burden to the Applicant to show written description support.

the patentees in *Flash-Control* and *Hyatt*, Patent Owner can “show where each claimed element resides in the earliest filed application” and “provide support for the linkage of the claimed elements” of the invention. *Hyatt*, 492 F.3d at 1371.

Despite there being only one brewing chamber identified and illustrated, Petitioner argues the second German application discloses several “distinct embodiments,” arguing it would be beyond a POSITA to understand the identifier disclosed with respect to the beverage capsule of Figure 2, could be readily employed with the beverage capsule of Figure 16. Pet. at 41-42. Any distinction among the embodiments is as among the identifiers and does not extend to the brewing chamber or other claimed elements. But the second German application teaches “[w]hat has been said in relation to the identifier applies to all other examples,” thereby providing specific disclosure of *how* the identifier element can be combined with other embodiments. Ex. 1047 at 38. Indeed, Examiner Chou withdrew a drawing objection for the related ’765 Application based on this very teaching. See Ex. 2015 at 2. A POSITA would have understood this teaching to encourage combining and substituting the different elements, and especially the identifiers, of the clearly closely-related capsule embodiments. Ex. 2017, ¶95. For example, the second German application explains “[a]ccording to the invention, then, it is provided that this portion capsule has an identifier, which makes it possible to individualize the respective portion capsule.” Ex. 1047 at 31. It then describes

various preferred “identifiers.” *See, e.g., id.* at 32-33. In describing Figures 16, 17, and 18, the second German application presents several identifiers, stating “a form-fitting and/or friction-fitting means and/or a detection means 2.4.2” is located on the outer region of the peripheral region 2.4. Ex. 1047 at 41. While the figures particularly depict a toothed ring “form-fitting means” located on the underside of the flange, the application specifically states a “detection” means (such as a barcode) could be used in the same location and for the same purpose. The guidance provided demonstrates the inventors possessed the claimed invention by the time of the second German application and is considerably more than the “boilerplate language” the Court rejected in *D-Three Enterprises, LLC v. SunModo Corp.*, 890 F.3d 1042, 1051 (Fed. Cir. 2018).

The remaining cases Petitioner cites are similarly inapt. Petitioner selectively isolates language from the pharmaceutical case of *Purdue Pharma LP v. Recro Tech. LLC*, 694 Fed. Appx. 794, 797-98 (Fed. Cir. 2017) to insinuate it is improper to combine aspects from various embodiments to provide written description support. *See* Pet. at 43. Not so. Indeed, the language Petitioner omits from their quoted language in the Petition would have shown the patentee in *Purdue* attempted to combine aspects from “patents incorporated by reference involving *a different drug*” in order to show support for the claimed invention. *Purdue*, 794 Fed. Appx. at 797-98. And unlike the claim at issue in *FWP*, a POSITA would not be required

to “pick and choose from [the] claims without any guidance from the written description” without an “explanation as to why [he] would be able to cobble together selected elements from several different claims.” *FWP*, 749 Fed. Appx. at 978.

Finally, Petitioner’s reliance on the biotechnology *Novozymes* case is also misplaced. *See Novozymes A/S v. DuPont Nutrition Biosci. APS*, 723 F.3d 1336, 1346 (Fed. Cir. 2013); *see* Pet. at 42. In *Novozymes*, the parties disputed whether an application provided written description support for a claimed protein variant that included an amino acid substitution at a specific location and had increased thermostability under certain conditions. *Id.* at 1348. While each of the claimed limitations was individually described in the application, the Court rejected the patentee’s argument it possessed the claimed protein variant as a whole at the time of filing because Novozymes would have had to make and test every amino acid substitution to determine whether it yielded the claimed increased thermostability. Because the patentee provided no evidence it tested and actually possessed the claimed invention, nor any “‘blaze marks’ that would lead an ordinarily skilled investigator toward such a species among a slew of competing possibilities,” the Court affirmed the finding of lack of written description. *Id.* at 1349.

Here, the second German application’s specific intention and guidance to combine the teachings regarding the identifier with all other examples, demonstrates the inventor had possession of the claims at the time of the second German

application's filing. *See* Ex. 2017, ¶¶94-101. "[T]he test for sufficiency is whether the disclosure of the [earlier] application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of that earlier filing date." *Hologic*, 884 F.3d at 1361 (citations and internal quotation marks omitted). That test is easily met here where the application instructs the reader "[w]hat has been said in relation to the identifier applies to all other examples;" the disclosure associated with Figures 16-18 plainly describe a "detection means" can be used as an alternative to the described form-fitting means; there are a but a small number of multiple-dependent claims that show combinations of features from across the scope of examples, which demonstrates possession of subject matter arising from combinations of embodiments; and there is an absence of any teachings discouraging the combination. Ex. 1047 at 38. A POSITA would have readily understood the inventor to have been in possession of the claimed invention. Ex. 2017, ¶99.

Petitioner's challenge hinges on *Jarisch*. *See*, Pet. at 57, 63, 71-74, 77. Accordingly, Petitioner's ground fails without *Jarisch*.

December 6, 2023

Respectfully submitted,

/Michael P. Chu/

Michael P. Chu, Lead Counsel

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 Response totals 13,978 words, which is less than the 14,000 allowed under 37 C.F.R. § 42.24(a)(1)(i), (b)(1).

Date: December 6, 2023

Respectfully submitted,

/Michael P. Chu/

Michael P. Chu, Lead Counsel

Registration No. 37,112

Attorneys/Agents for Patent Owner

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§ 42.8 and 42.6(e), the undersigned hereby certifies that the foregoing Patent Owner's Response and its respective exhibits was served on counsel of record for the Petitioner by filing this document through PTAB P-TACTS and by sending this document via electronic mail to the following addresses:

B. Clayton McCraw (Reg. No. 68,258)
MAYER BROWN LLP
1221 Avenue of the Americas
New York, NY 10020-1001
Telephone: (212) 5606-2649
CMcCraw@mayerbrown.com

Amanda S. Bonner (Reg. No. 65,224)
MAYER BROWN LLP
71 S. Wacker Drive
Chicago, IL 60606
Telephone: 312-701-8645
Facsimile: 312-701-7711
asbonner@mayerbrown.com

Date: December 6, 2023

Respectfully submitted,

/Michael P. Chu/

Michael P. Chu, Lead Counsel

Registration No. 37,112

Attorneys/Agents for Patent Owner