

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CHAMPION LABORATORIES, INC.,
FIRST BRANDS GROUP, LLC

Petitioners

v.

HENGST SE

Patent Owner

Case No. IPR2024-00603
Patent No. 9,023,203

PATENT OWNER'S SURREPLY UNDER 37 C.F.R. § 42.120

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LISTING OF EXHIBITS

Cited by Petitioner	
Exhibit	Description
1001	U.S. Patent No. 9,023,203 B2
1002	File History for U.S. Patent No. 9,023,203 B2
1003	Declaration of Mr. Michael Nranian
1004	European Patent No. 1,714,688
1005	Certified Translation of European Patent No. 1,714,688 to Brisson ("Brisson")
1006	U.S. Patent Pub. No. 20100044295 A1 ("Honermann")
1007	JP Application 2002-303171
1008	Certified Translation of JP Application 2002-303171 ("Yokoyama")
1009	U.S. Patent Pub. No. 20040232063 ("Cline")
1010	U.S. Patent Pub. No. 20120261326 ("Deschamps")
1011	<i>Curriculum Vitae</i> of Mr. Michael Nranian
1012	Plaintiff's Final Infringement Contentions, <i>Hengst SE v. Champion Laboratories, Inc.</i> , No. 23-cv-00794 (Jan. 16, 2024)
1013	Time-to-trial statistics for N.D. Ill.
1014	Defendant Champion Laboratories' Opening Claim Construction Brief, <i>Hengst SE v. Champion Laboratories, Inc.</i> , 23-cv-00794, Dkt. 30 (N.D. Ill. May 7, 2024).
1015	Plaintiff's Local Patent Rule 4.1 Exchange of Proposed Claim Terms, <i>Hengst SE v. Champion Laboratories, Inc.</i> , 23-cv-00794 (N.D. Ill. Feb. 27, 2024).
1016	Supplemental Declaration of Mr. Michael Nranian
1017	Transcript of Deposition of Dr. Basirat
1018	"eccentric", merriam-webster.com, available at https://www.merriam-webster.com/dictionary/eccentric (last accessed April 4, 2025)
1019	Excerpts from the American Press Dictionary of Science and Technology (1992)
1020	"opening", merriam-webster.com, available at https://www.merriam-webster.com/dictionary/opening (last accessed April 4, 2025)

Cited by Patent Owner	
Exhibit	Description
2001	Defendant's Initial Non-Infringement and Invalidity Contentions
2002	Plaintiff's Response to Initial Invalidity Contentions
2003	Defendant's Final Invalidity Contentions
2004	Plaintiff's Response to Final Invalidity Contentions
2005	District Court Amended Scheduling Order
2006	Defendant's Opening Claim Construction Brief
2007	Plaintiff's Responsive Claim Construction Brief
2008	Defendant's Claim Construction Reply Brief
2009	Minute Entry Setting Markman Hearing
2010	United States District Court for the Northern District of Illinois Estimated Patent Schedule
2011	Waiver of Service
2012	German Patent Application DE 202007001227
2013	Translation of DE 202007001227
2014	Petitioners' Request for Leave to File Reply Brief
2015	District Court Scheduling Order
2016	Markman Hearing Minute Entry
2017	Declaration of Dr. Medhi Basirat
2018	Transcript of the Deposition of Michael Nranian
2019	U.S. Patent Pub. No 2007/0193936 ("Almasian")
2020	U.S. Patent No. 6,752,924 ("Gustafson")
2021	U.S. Patent Pub. No 2004/0144734 ("Suzumori")
2022	U.S. Patent No. 4,372,847 ("Lewis")
2023	Transcript of Deposition of Dr. Basirat (with Errata Sheet)

I. INTRODUCTION

Petitioners attempt to restructure their argument on reply in view of Patent Owner's ("PO") Response and in doing so introduce new positions/arguments. As detailed below, even with Petitioners' proposed modifications, several claim elements are not disclosed for each of Grounds I-III. Moreover, Petitioners have failed to show why a POSITA would modify the prior art references in the manner proposed. As an example, Petitioners failed to give any reasoning or motivation to invert the entire filter assembly of Yokoyama.¹ For the reasons stated herein, and asserted in its Response, PO submits that the '203 Patent is not rendered invalid by the grounds asserted in the Petition.

II. GROUND I

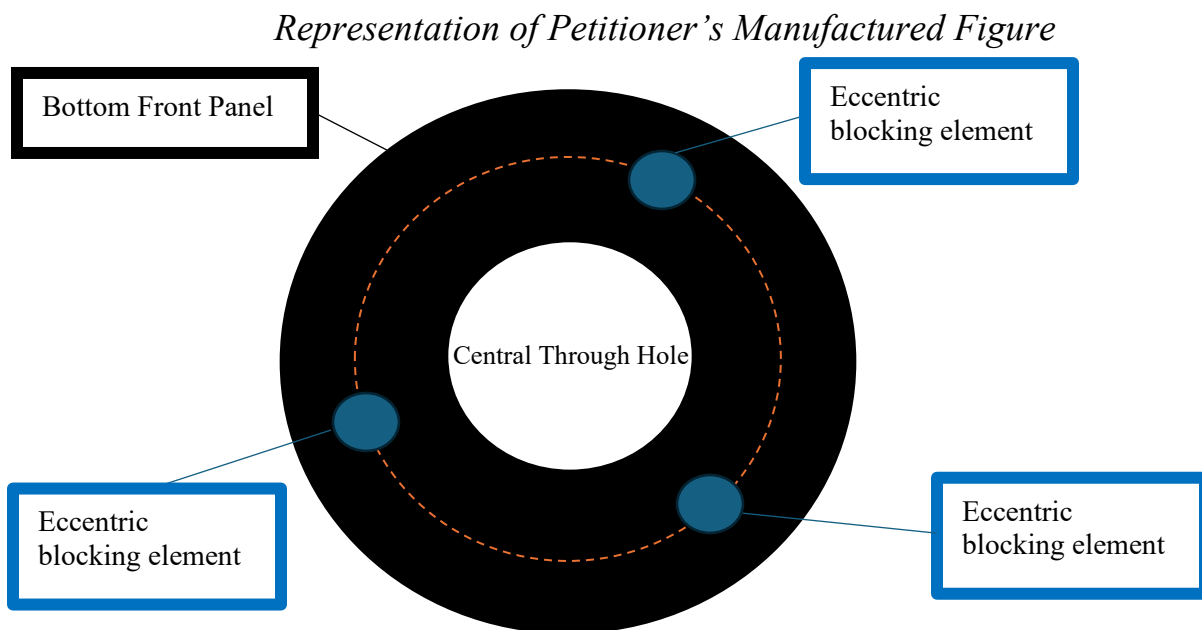
A. Petitioners' definition of "eccentric" is not supported by the intrinsic evidence

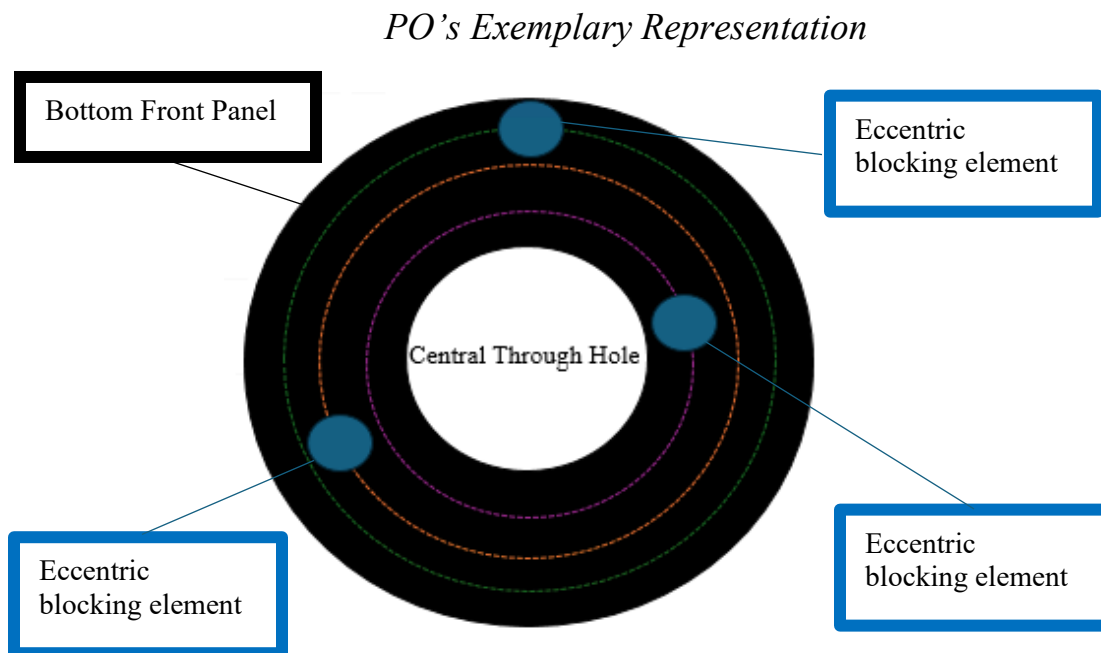
Petitioners' construction of the term "eccentric" completely disregards how the Specification defines this term, and instead heavily focuses on cherry-picked dictionary terms to support their proposed definition. Reply 1-4; see *Free Motion Fitness, Inc. v. Cybex Int'l*, 423 F.3d 1343, 1348 (Fed. Cir. 2005) ("The court must

¹ After PO's Response showed that the Petition did not articulate a single reason as to why the filter assembly of Yokoyama would be inverted by a POSITA, Petitioners now state that the inversion of Yokoyama's entire filter assembly "is not a modification." Reply 14.

ensure that any reliance on dictionaries accords with the intrinsic evidence: the claims themselves, the specification, and the prosecution history.”).

The only intrinsic evidence Petitioners rely upon is the Specification teaching there may be a “plurality of eccentric blocking elements.” Reply 5; Ex. 1001, 5:66-6:3. The ‘203 Patent’s Figures do not show how a “plurality of eccentric blocking elements” would be arranged on the filter insert. Yet, Petitioners proffer their own interpretation of how the eccentric blocking elements would be configured. See Reply 6. Petitioners’ arbitrarily-manufactured figure has blocking elements arranged to mirror the concentric configuration of Yokoyama’s W-shaped portions. *Id.* However, a “plurality of eccentric blocking elements”, as described in the Specification, can be arranged in any number of arbitrary configurations. For example:



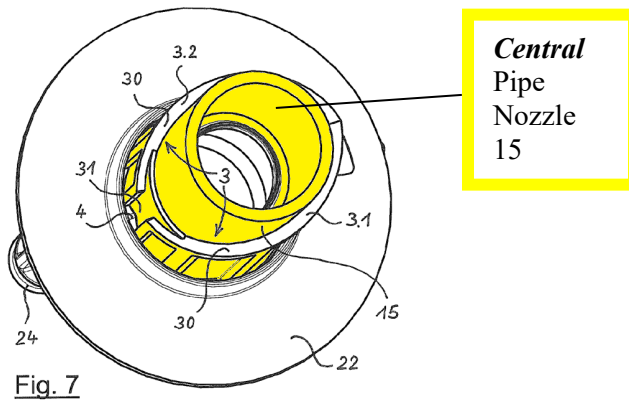


Petitioner's concocted figure and elaborative focus on this embodiment does nothing to assist the Board in determining the meaning of "eccentric." Overall, their argument is a red herring to distract from the fact Petitioner's construction is not supported by intrinsic evidence.

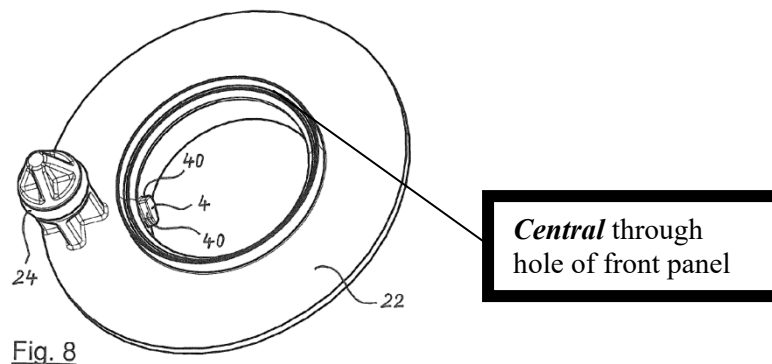
Conversely, the construction proffered by PO is fully supported by the intrinsic evidence. Ex. 1001, FIGS. 1-3, 5-7, 15-16. See *Hoist Fitness Sys. v. TuffStuff Fitness Int'l, Inc.*, 826 F. App'x 916, 923 (Fed. Cir. 2020) (quoting *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005)) ("[C]laim terms are generally given their ordinary and customary meaning as understood by [POSITA], who is 'deemed to read the claim term ... in the context of the entire patent, including the specification.'"). That is, the plain and ordinary meaning of "eccentric" is having an axis not located in a geometric center.

Contrary to Petitioners' claims, where the '203 Patent positions "centrally" described elements is imperative for determining the positioning of "eccentric" elements that must be, under either party's construction, positioned based on a center:

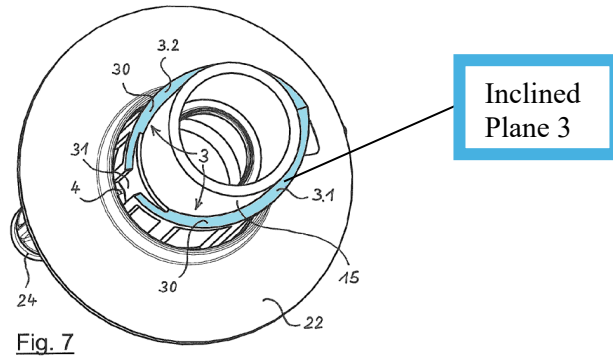
- "...a *central* pipe nozzle 15..." Ex. 1001, 7:13-14.



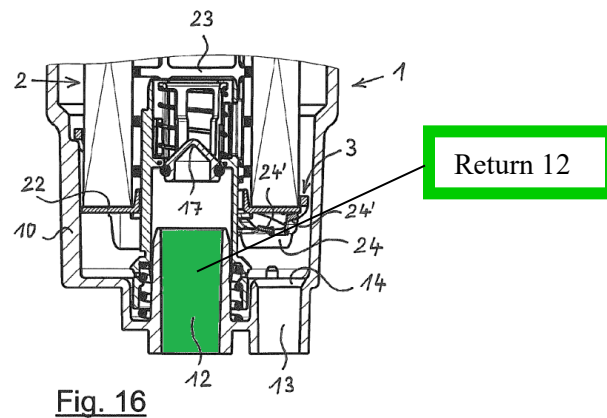
- "In its *center*, the front panel 22 has a **through hole**..." Ex. 1001, 7:65-66.



- “The **inclined plane 3** with its two partial planes 3.1 and 3.2 is again visible **in the center of the filter insert 2.**” Ex. 1001, 8:12-14.

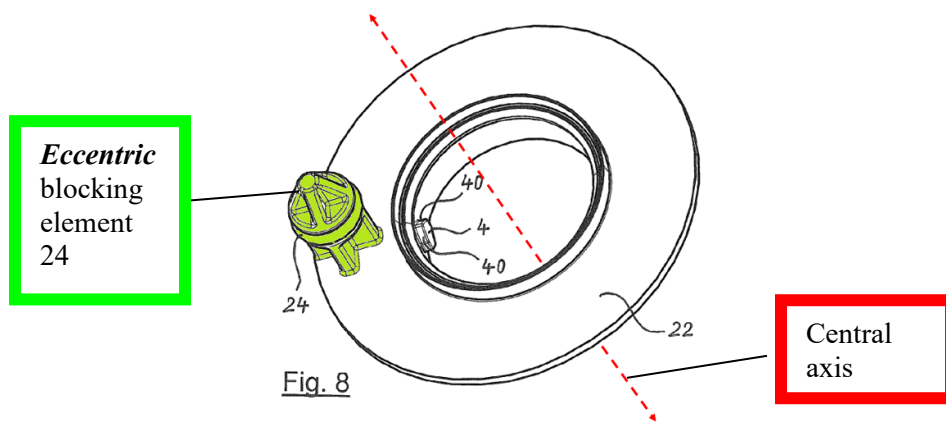


- “The **return 12** is visible **in the center of the bottom 18 of the filter housing 10.**” Ex. 1001, 9:21-22.

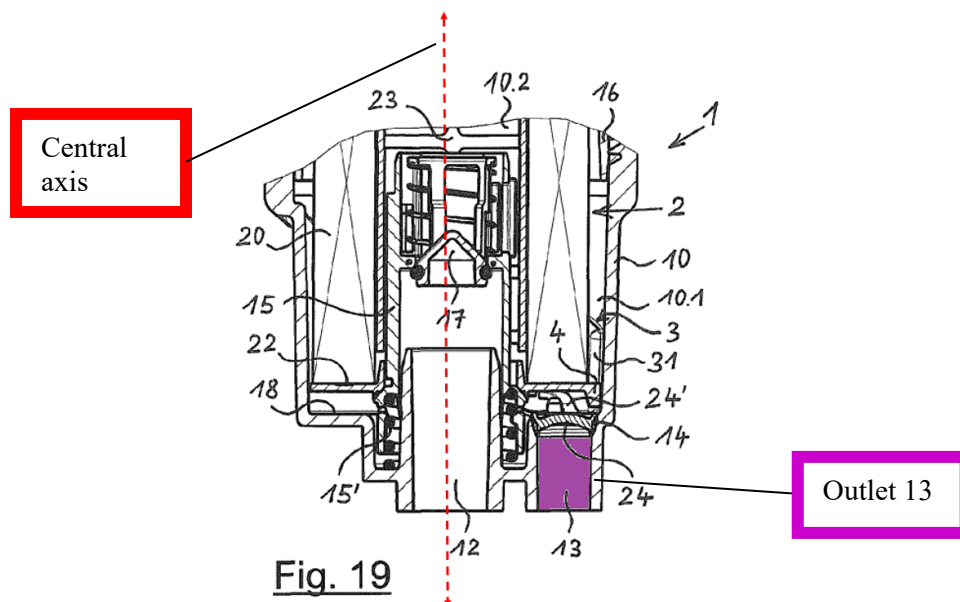


The Specification further teaches for the “eccentric” elements to be aligned *away* from the central axis around which the centrally located elements are positioned:

- “...wherein an ***eccentric blocking element*** for the outlet is arranged on the front panel facing the bottom...” Ex. 1001, 1:19-21.

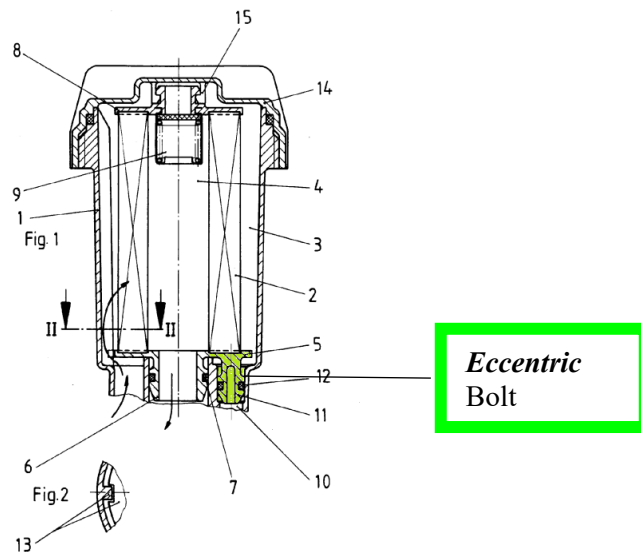


- “...in the center of which the return 12 and, ***eccentrically thereto, the outlet 13...***” Ex. 1001, 10:28-29.

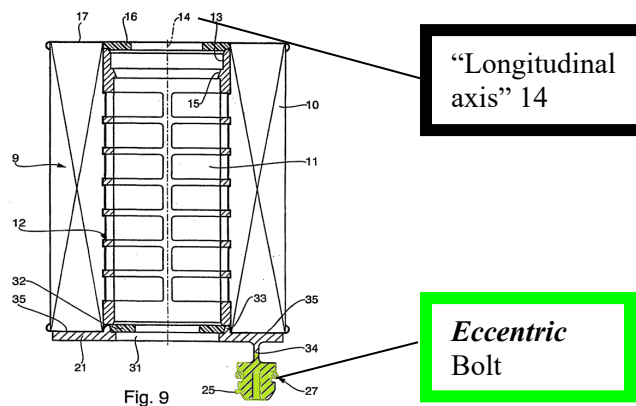


The construction of the term “eccentric” is further made clear by the Specification's description of other patents in the prior art:

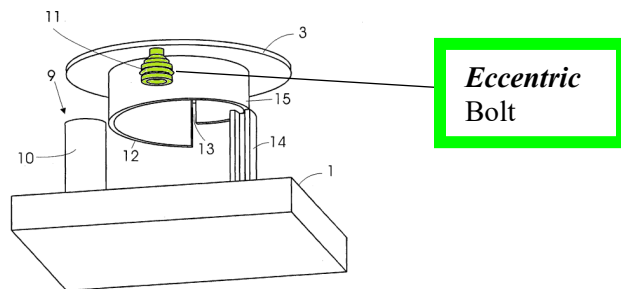
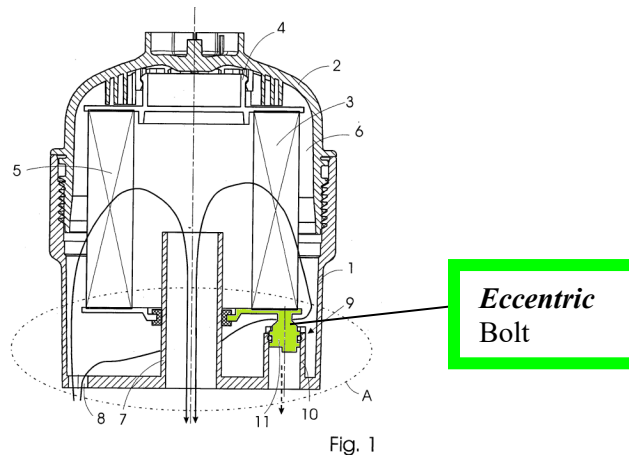
- DE 39 03 675 C2: “On its lower front panel, the ring filter insert has an ***eccentric bolt***” Ex. 1001, 1:26, 1:28-30.



- EP 1 229 985 B1: “the ring filter insert has an ***eccentric bolt*** for closing an outlet.” Ex. 1001, 1:48-53.



- DE 103 53 424 A1: "...an ***eccentric bolt*** on its lower front panel..." Ex. 1001, 1:65, 1:66-67.



Thus, a POSITA would understand that the eccentric features of the '203 Patent have an axis not located in a geometric center. The Specification teaches that the "eccentric blocking element" does not share the central axis of the filter insert with the "central pipe nozzle 15", the "through hole", and "inclined plane 3." PO's construction is further supported by the dictionary definition of "eccentric", which

is defined² as “located elsewhere than at the geometric center; *also: having the axis or support so located.*” See *Pressure Prods. Med. Supplies v. Greatbatch Ltd.*, 599 F.3d 1308, 1315 (Fed. Cir. 2010) (a Court “may rely on dictionary definitions, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents.”). Accordingly, PO respectfully requests that the Board follow the plain and ordinary meaning of the term “eccentric” – having an axis not located in a geometric center.

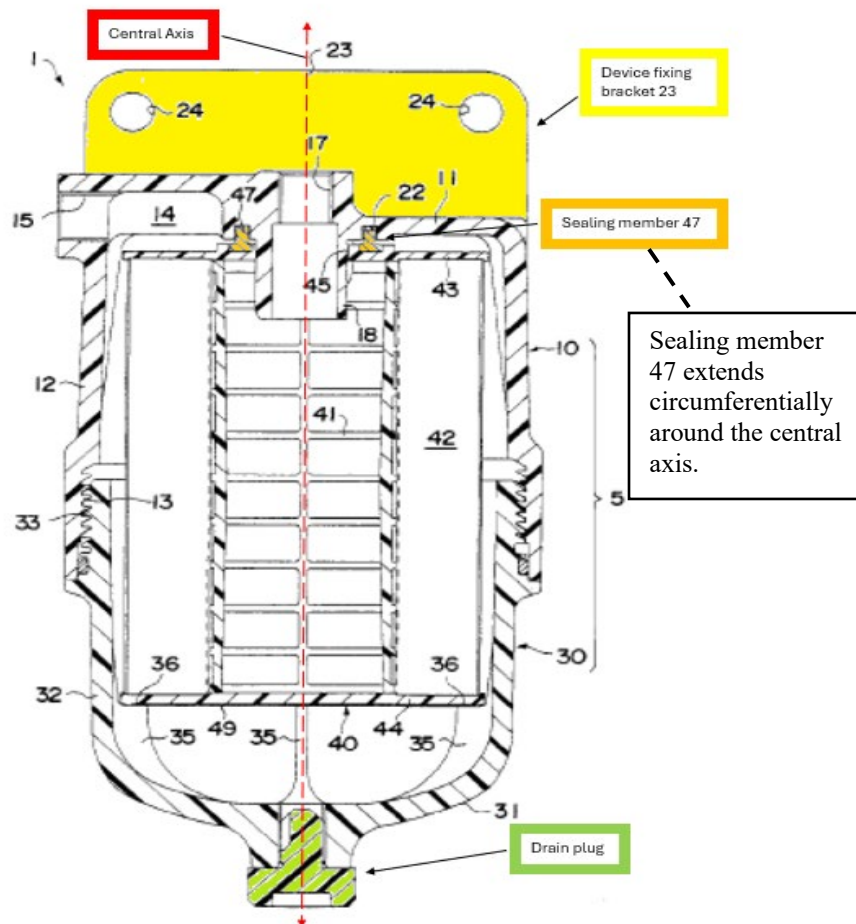
B. Yokoyama fails to disclose or suggest the claimed eccentric blocking element

Petitioners fail to identify with particularity the element of Yokoyama that discloses the ‘203 Patent’s eccentric blocking element. In the Petition, Petitioners identify the “sealing member 47” as the claimed eccentric blocking element, while in the Reply, Petitioners identify the “W-shaped portions 48.” Petition 33; Reply 9; see *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (“In an [inter partes review], the petitioner has the burden from the onset to show with particularity why the patent [claims] it challenges [are] unpatentable.”). Regardless, neither of these portions of Yokoyama disclose the claimed eccentric blocking element.

² “Eccentric,” Merriam-Webster, <https://www.merriam-webster.com/dictionary/eccentric>, Accessed December 18, 2024.

1. The sealing member of Yokoyama does not disclose or suggest the claimed eccentric blocking element.

Sealing member 47 of Yokoyama has a central axis located at the geometric center of the filter element 1. Ex. 1008, FIG. 3. This is demonstrated in the below Figure wherein the sealing member 47 and the outlet for the drainage plug share the central axis.



Thus, considering the sealing member 47 is centrally located, Yokoyama fails to disclose and/or suggest the eccentric blocking element.

2. The W-shaped portions of Yokoyama do not disclose or suggest the claimed eccentric blocking element

Though Petitioners insist the W-shaped portions 48 are to be viewed as separate elements from the sealing member 47 (See Reply 9-10), the entire structure of the sealing member 47 (which includes the W-shaped portions 48) is required to perform the function of prohibiting the flow of fluid, *i.e.*, the function of the eccentric *blocking element* in the '203 Patent. Yokoyama discloses that the sealing member's "*outer shape* has three W-shaped portions 48 formed in a 'W' shape at 120 degree intervals with respect to the *center* of the sealing member 47 as a reference." Ex. 1008, ¶0020. The case halves of Yokoyama are connected when "the sealing member fits into the grooves, thereby fixing the attitude of the filter element with respect to the upper case half." *Id.*, ¶0011. Yokoyama does not describe an embodiment where the W-shaped portions 48 function independent of the sealing member 47.

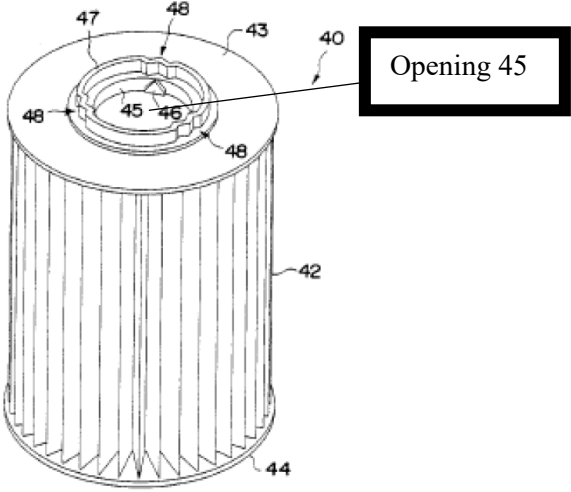
Moreover, by virtue of being a portion of the concentrically arranged sealing member, the W-shaped portions 48 share the axis located at the geometrical center of the filter element 40 of Yokoyama. Ex. 1008, FIG. 4. The W-shaped portions are, therefore, not *eccentric*. Accordingly, the W-shaped portions do not disclose an eccentric blocking element.

C. Yokoyama fails to disclose or suggest an eccentric opening

Initially, for the reasons detailed above, the grooves 22 of Yokoyama, which interact with the sealing member 47, are not eccentrically located. Ex. 1008, FIGS. 1, 4. As such, Yokoyama fails to disclose the *eccentric* opening of the '203 Patent.

Moreover, a POSITA could not conceivably interpret the “grooves 22” of Yokoyama to be any type of “opening in the filter housing.” As described by Yokoyama, the grooves 22 are an “inversion” of the outer shape of the sealing member 47 (*i.e.*, the W-shaped portions 48). Ex. 1008, ¶0020. The sealing member 47 is then *fitted* into the grooves 22 to attach the filter element 40 and the upper case half 10. *Id.* Thus, the grooves 22 are indents that mirror the shape of the sealing member 47 to lock the sealing member into place. No POSITA would interpret this element as an opening in the housing.

In fact, Yokoyama does plainly describe an “opening 45”.

Yokoyama Specification	Yokoyama FIG. 1
“...the pipe portion of the upper case half is inserted through the <i>opening</i> provided in the upper plate of the filter element...” Ex. 1008, ¶0037.	

Thus, an “opening” in Yokoyama (and the ‘203 Patent) is a hole allows ingress/egress and/or allows for elements to be “inserted through.” Ex. 1008, ¶0037. Conversely, the sealing member 47 is “fitted into” the grooves 22, *i.e.*, the sealing member does not go *through* the grooves 22. The grooves are, therefore, not an “opening.”

In the context of the ‘203 Patent, the eccentric opening is consistently described as an opening in the filter housing *through* which fluid may flow. The ‘203 Patent repeatedly shows the eccentric opening as outlet 13. Ex. 1001, FIGS. 1-2, 14-16; 6:59-63 (“The filter housing 10 furthermore has an outlet 13, through which an emptying of the filter housing 10 is carried out”). Fluid does not flow through the housing via the grooves of Yokoyama. The grooves are, therefore, not

configured as an opening in the housing as described and claimed in the '203 Patent.

Accordingly, the grooves of Yokoyama are neither “eccentric” nor an “an opening in the filter housing” as described by the '203 Patent.

D. A POSITA would find no motivation to modify Yokoyama in the “upside down” orientation

Petitioners state that the positioning of the drain plug in Yokoyama is “simply a matter of design criteria,” and if the device was to be inverted, “an eccentric drain would be necessary.” Reply 15. Petitioners then reference Cline showing a desirable “eccentric drain.” *Id.* In other words, Petitioners argue Cline’s drain mechanism is necessary for Yokoyama to function inverted. Thus, Ground I fails where Petitioners concede that Yokoyama by itself fails to disclose or suggest all claimed features.

A fatal flaw also persists in Petitioners’ argument to reorient the Yokoyama filter device to operate inverted: they offer no proposed motivation for a POSITA to invert the filter device. See *Yita LLC v. MacNeil IP LLC*, 69 F.4th 1356, 1367 (Fed. Cir. 2023) (“The issue is not whether a skilled artisan *could* [make a modification of a prior art reference] or whether it *would have been trivial* to do so. The issue is whether a skilled artisan would have been motivated ... to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.”) (emphasis added). Throughout their Petition and Reply, Petitioners merely state a “POSITA would understand” their conclusory reasoning

that the Yokoyama filter insert could still operate upside-down, but they offer no particular motivation for this modification to be attempted. See Petition 31; Reply 14.

Aside from the many operational issues identified in the Response (see Response 25-34), inverting the Yokoyama filter device would undeniably cause excess oil to be spilled each time the filter element is replaced. A POSITA would also recognize there would be a buildup of excess oil and sediment where gravity was not being utilized to drain the Yokoyama filter device. See Ex. 2017, ¶47 (“the drain and drain plug are designed at the lowest point of the filter system [which is] ... essential for effectively removing debris and dirt”). This is an obvious issue a POSITA would seek to avoid in the design of any oil filter. See Ex. 2018, p. 42, ln. 12-15 (Petitioners’ expert confirming spilling fluid is an issue to be avoided). Thus, in addition to lacking motivation to reorient the device, arbitrarily inverting the Yokoyama filter device will also cause at least the undesirable outcome of causing spillage.

PO does not argue that the Yokoyama device is incapable of filtering fluid in any orientation, but that inverting the device would make no practical sense from an operational and efficiency standpoint. Undermining Petitioners’ assertion that the Yokoyama system is “pressurized,” the system is not pressurized when the filter is replaced. Reply 13. Because of this, anti-drainback valves must be placed on filter

assemblies with bottom-located fluid passageways to prevent fluid from draining out of the filter housing by gravity. See, e.g., Ex. 1001, FIG. 11 (non-pressure check valve 17). Moreover, if Yokoyama's filter were inverted, gravity would undesirably drain fluid through the inlet and/or outflow. Ex. 2017, pp. 27-26 ("potentially causing backflow"). Though Petitioners would like for the Board to think otherwise, reconfiguring filter systems to operate "upside-down" is a considerable, non-trivial proposition where these filter devices are a part of intricate engine systems. Ex. 2017, p. 26-31; Ex. P. 59, ln. 18-19 (an engine compartment is "a very crowded area").

III. GROUND II

A. A POSITA would be discouraged from modifying Yokoyama as proposed

Petitioners first assert that the PO "ignores most of the motivations set for the in the petition." Reply 17. But PO provided several explanations as to why a POSITA would be *discouraged* from making such modifications. Response 33-41. Moreover, as discussed in the Response, the Petition, taking the original incorrect position that Yokoyama did not disclose a drain, did not provide any motivation *to replace* the now-acknowledged drain plug of Yokoyama with the flow blocker of Cline. Indeed, Petitioners' alleged advantages of the flow blocker of Cline already

existed in or were exceeded by advantages of Yokoyama's drain plug.

Nevertheless, PO will address each identified assertion. Reply 17, n. 8. Petitioners first assert that the flow blocker of Cline is replaceable such that "it can be made of any size or shape to better fit the quick-drain outlet." Petition 54. However, the design of Yokoyama does not include any blocking element on the filter element itself, so there is no need for resizing any filter element part to begin with. Ex. 1008, FIG. 1-2. This design issue arises *only after* a hypothetical "comprehensive redesign" required in Ground II is made. Ex. 2017, p. 37. Moreover, the filter element of Yokoyama is designed to fit in a specific filter housing with a specific outlet such that the filter insert can be "replaced many times," so there would be no need to resize any component. Ex. 1008, ¶12.

Petitioners next assert that Cline's flow blocker would "minimize oil loss." Petition 54. As already stated, Petitioners' proposed modification would increase leakage and oil loss. See Response 32; Ex. 2017, p. 13.

Petitioners assert that Cline's design is "more reliable." Petition 55. However, the modification leads to "misalignment, leakage, and reduced filtration efficiency" and "[contradicts] Yokoyama's goal of simplicity and reliability." Ex. 2017, p. 13.

Petitioners assert that adding Cline's flow blocker "is the application of a known technique," but fail to recognize that they reference Cline, Deschamps, and

Brisson, which all disclose standard systems in which the filter housing is formed integrally with the engine. Petition 57. Petitioners do not cite any eccentric flow blocker utilized with the type of filter disclosed in Yokoyama. This makes it “impractical to integrate Cline’s *bottom centric design* with Yokoyama’s *top-mounted configuration*.” Ex. 2017, p. 34 (emphasis added).

Petitioners assert that the modification is a “simple design choice and just the substitution of one known element for another.” Petition 58. But adding the flow blocker would require a “comprehensive redesign” of Yokoyama’s filtration system and would impact other critical engine components. Ex. 2017, p. 37. This is not a simple substitution of parts where the entire assembly must be inverted and Petitioners now assert in Reply that the upper and lower case halves also must be modified. Reply 19. Further, Petitioners fail to account for several critical design implications including the available engine space, accessibility, and the effect on several other critical engine systems. Ex. 2017, p. 36-37.

Finally, Petitioners assert that a POSITA would have a reasonable expectation of success. Petition 59. But, in addition to the identified issues with modified Yokoyama, the designs of Yokoyama and Cline present a “fundamental mismatch” that would lead to “unpredictable results.” Ex. 2017, p. 32-34, 36.

Even disregarding the several issues in Petitioners’ modification of Yokoyama related to the orientation, required redesign, and functional issues of the

fluid system itself, a POSITA would find no motivation to *replace* Yokoyama's drain plug with Cline's flow blocker. Petitioners' claims that the flow blocker of Cline would be preferable to the drain plug of Yokoyama are incorrect. Reply 18-19.

Petitioners state that Yokoyama's drain plug is "more likely to be loosened due to gravity, vibration from driving, and normal wear-and-tear" and is "more prone to misplacement" because it is a "separate component." Petition 18; Ex. 1016 ¶23. But Petitioners also argue that the flow blocker is "removable and replaceable," *i.e.*, also a separate component. Petition 34. It is Cline's flow blocker that would introduce "seal instability and potential leakage" to Yokoyama's system. Ex. 2017, p. 35. Additionally, such allegations regarding gravity make no sense in the modified, upside version of Yokoyama Petition's put forth.

Petitioners also assert that the flow blocker of Cline "prevents the draining of fluid until the filter needs to be replaced" and addresses "the need for a technician/mechanic to access" the filter assembly. Reply 18-19. Any POSITA would immediately understand that the drain plug and filter assembly of Yokoyama would be accessible by a technician and would prevent fluid from draining until the technician disengages the plug during filter replacement.

Petitioners also assert that the "quick-drain valve" of Cline is a simpler mechanism than Yokoyama's. Reply 17. They do not address, however, the

complexity of Cline's flow valve in comparison to the simplicity of Yokoyama's drain plug – especially when considered in its original orientation. Response 36; Ex. 2017, ¶62 (“Yokoyama's design prioritizes simplicity and reliability ... adding Cline's drain mechanism [would] increase[] the risk of misalignment or failure ... [and] complicates[] assembly”). Unlike in Cline, where the fluid is automatically drained through the engine via passageway 30 to fluid reservoir 14, a replacement of the filter insert in modified Yokoyama would require the user to both remove the filter and collect the oil. Thus, modified Yokoyama would not exhibit the same advantages described in Cline.

Since modified Yokoyama would necessarily spill oil, Petitioners now assert that “it would be a trivial variation for a POSITA to make the upper case half 10 smaller to accommodate additional fluid.” Reply 19. The Board should not consider this new modification to Yokoyama. *Yita LLC*, 69 F.4th at 1367 (Rejecting argument where Petitioner “waited until its reply to present what in substance is an argument that it would have been obvious to a relevant artisan to modify” a prior art reference). But even making the upper case half “smaller” would not eliminate this issue since the filter case can no longer be drained of oil before the replacement of the filter element in modified Yokoyama.

B. A POSITA would find no motivation to modify Yokoyama with Cline in the asserted “upside-down” orientation

As established in Section I(D), Petitioners provide no motivation for a POSITA to reorient the Yokoyama filter device to operate in an “upside-down” orientation. Doing so would only cause operational issues and would result in unfavorable outcomes, such as causing unnecessary spillage.

The inclusion of Cline's drain mechanism does not cure the identified defects of reorienting Yokoyama, including Petitioner's failure to *articulate a single reason as to why* a POSITA would invert Yokoyama. For one, Petitioners argue that a “POSITA would have been motivated to combine Cline's drain mechanism *with Yokoyama's inverted orientation*” as if Yokoyama explicitly discloses an embodiment of the device operating inverted, which it does not. Reply 19-20. Moreover, Petitioners suggest that Yokoyama's design would not be complicated by replacing Yokoyama's drain mechanism with Cline's blocking element and keeping the sealing member of Yokoyama (which they also argue discloses the '203 Patent's eccentric blocking element) that is not configured to bring the Cline blocking element into engagement with an eccentric opening (discussed below), all while needlessly inverting the Yokoyama device in its entirety. Reply 17-25. Petitioners offer no intelligible reason as to why these modifications are not unnecessarily complex other than the conclusory statement that “the combination clearly places

Cline's blocking element on Yokoyama's upper plate and reorients the device." Reply 21; See *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016) (Petitioners cannot satisfy its burden of proving obviousness by employing "mere conclusory statements.").

Accordingly, for substantially the same reasons described in Section I(D) herein, Petitioners' argument fails.

C. Yokoyama's protrusions are not arranged to bring the blocking element into engagement with the eccentric opening

Modified Yokoyama fails to disclose first positioning means which are *arranged to bring the blocking element into engagement with the eccentric opening*. Petitioners state that "in the proposed combination, Yokoyama's locking protrusions glide along side surfaces 19 and enter depressions 21" such that "Cline's drain plug would be oriented correctly to enter the drain opening." Reply 25. As noted in PO's Response and emphasized in Petitioners' Reply, Yokoyama includes three locking protrusions 46 which interact with three depressions 21 to reduce friction and the abrasion of the sealing member. Ex. 1008, ¶11.

In modified Yokoyama, a *single* blocking element of Cline could not be reliably brought into the correct rotational engagement with a *single* opening because the *three identical* locking protrusions 46 interchangeably interact with *three identical* depressions 21. Ex. 1008, FIG. 1. At best, it could be brought to *one*

of three positions. While the protrusions arranged to reduce friction and the abrasion of the sealing member, they cannot reliably bring the filter insert into a *single* correct rotational orientation. Therefore, the protrusions are not *arranged to bring the blocking element into engagement with the eccentric opening*.

IV. GROUND III

A. Petitioners' new argument should not be considered

Petitioners asserted that “because the basket is part of the filter housing, the ring filter insert has rotated *relative to the filter housing*.” Petition 98. Now, after being confronted with the plain language of the claims and having their expert acknowledge that the claims require rotation of the ring filter insert, Petitioners attempt to offer a new explanation.

Citing Deschamps, the Reply first states that “the Petition explained that a POSITA would readily understand how to modify Honermann “to include a rotating filter insert.” Reply 25. But nowhere in the Petition or Reply is it described how Honermann would be modified “to include a rotating filter insert.” *Id.* In making this argument, Petitioners' only support is a reference to a “guide element” of Deschamps, which it admits is not prior art. *Id.*, p. 26.

Petitioners assert for the first time,³ citing a new annotated figure and a “supplemental” expert declaration, that the protrusions interact with a newly-identified tapered opening and slide surface, causing a rotation of the filter cartridge. Reply 27-28. Nowhere in the Petition is it asserted that the filter cartridge of Honermann rotates, and it is clear that the Petition alleges, emphasizing in bold and italics, that the rotation of the basket meets the claim language *rotating the ring filter insert relative to the filter housing*. Petition 97-98 (“causes the basket 304 to **rotate**”; “because the basket is part of the filter housing, the ring filter insert has rotated **relative to the filter housing**”). The Board should not allow Petitioners to correct the deficiencies of the Petition in Reply and should not consider this new theory. *Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1329-31 (Fed. Cir. 2019) (rejecting a new theory of unpatentability where petitioner presented a new argument in reply as to how a claim element was disclosed by a prior art reference); *Wasica Fin. GmbH v. Cont'l Auto. Sys.*, 853 F.3d 1272, 1286 (Fed. Cir. 2017) (Because it is of the “utmost importance that petitioners in the IPR proceedings adhere to the requirement that the initial petition identify with particularity the evidence that supports the grounds for the challenge to each claim” the Board must reject “shifting arguments” of petitioners).

³ Since the Petition (and Reply) do not state how Honermann would be modified “to include a rotating figure insert,” Petitioners now offer a new assertion as to how the ring filter insert of Honermann rotates without modification to the basket and protrusion engagement.

B. Petitioners' new argument fails

The new argument with respect to Honermann now alleges that it is the filter cartridge that rotates along the slide surface 314. Reply 28. But nowhere in Honermann is it stated or implied that the filter cartridge rotates. The portions of Honermann cited by Petitioner repeatedly state the opposite of Petitioners' original contention, *i.e.*, the protrusions rotate the basket. For example, Petitioners cite ¶143 of Honermann as disclosing that the "protrusion slides rightward on the slide surface 314," but this paragraph repeatedly states that the protrusions rotate the basket. Petition 28; Ex. 1006, ¶143 ("the first protrusion 121 engages the first slide surface 314, which rotates the basket 304 clockwise"). A POSITA would understand that the slide channel 358 is specifically designed *to prevent rotation* of the filter element, because it otherwise could not function to rotate basket 304. *Id.*; Ex. 2017, p. 40-41.

Asserting the protrusions would cause a *de minimis* rotation of the filter cartridge 38 is speculative at best, especially considering that the protrusions *must not rotate* to enable the rotation of the basket. Consistent with the above and in the paragraph cited as purportedly providing support for Petitioners' assertions, Honermann states that the first slide surface "is constructed and **arranged to** engage the filter cartridge 38 and **rotate the basket 304.**" Thus, the combination of Honermann and Cline does not disclose positioning means *which are arranged to*

bring the blocking element into engagement with the eccentric opening, as required.

Additionally, it is the user who, “while orienting, [pushes] the filter cartridge against the basket to rotate the basket.” Ex. 1006, Claim 86. The technician must align the protrusion 121 above groove 312 to allow for the parts to interact. *Id.*, FIG. 19. For this and the reasons provided above, the combination of Honermann and Cline also does not disclose first and second positioning means that *bring the blocking element into engagement with the eccentric opening, by rotating the ring filter insert⁴ relative to the filter housing*.

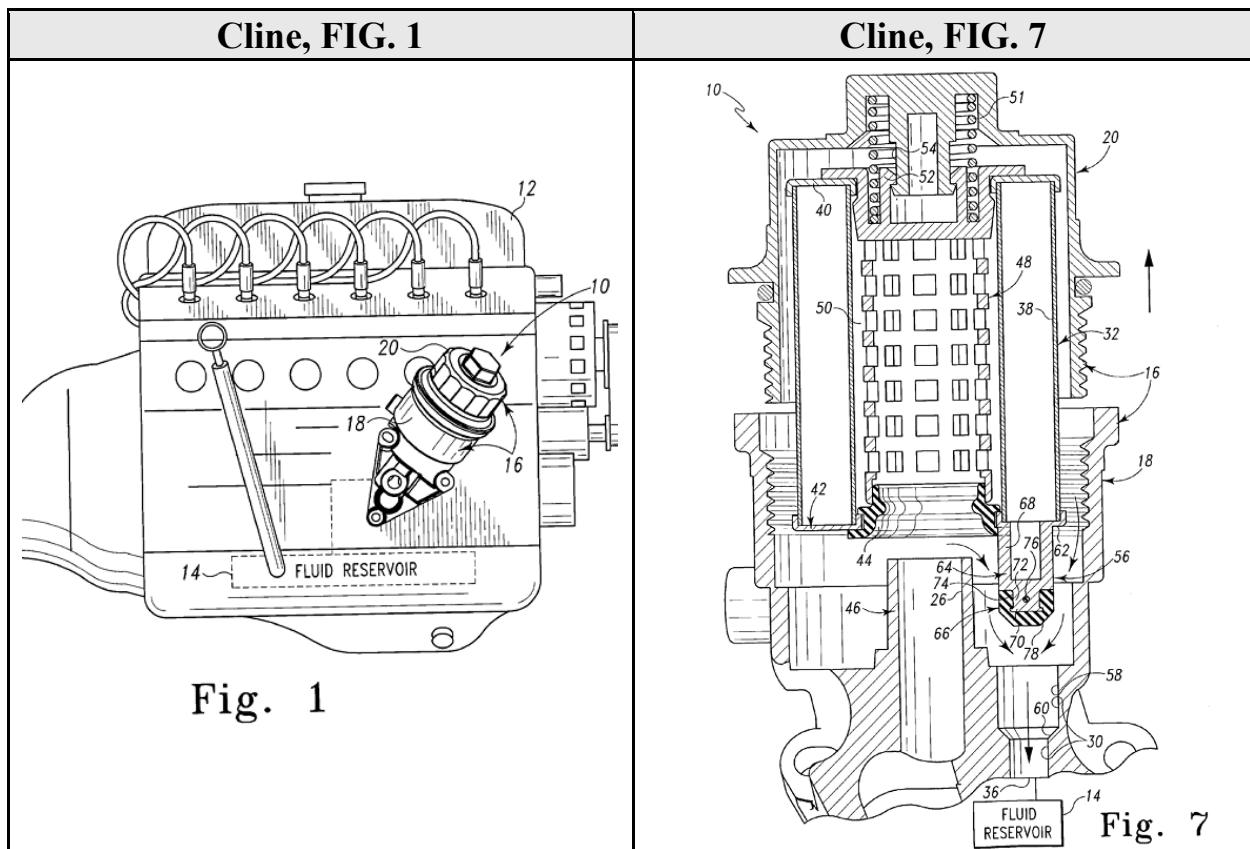
C. No POSITA would combine Honermann and Cline

Petitioners brush past PO's discussion as to why a POSITA would be deterred from replacing the auto-drain mechanism of Honermann with Cline's flow blocker, making the conclusory statement that a POSITA would make the combination because “this is how the filters in Cline, Deschamps, and Brisson operate.” Reply 4. A substantive discussion on this point would require Petitioners to address several practical considerations that would prevent a POSITA from making such a nonsensical modification.

First, Petitioners' assertion that the proposed combination of Honermann and Cline would reduce leaking because “this is how” Cline, Deschamps, and Brisson

⁴Consistent with his report, PO's expert clarified that “you put the cartridge inside the housing and rotate [the basket] against [it].” Ex. 2023, p. 89; see Ex. 2017, pp. 40-42; compare Reply 29, n. 11.

operate is simply wrong. Reply 30. Honermann, unlike Cline, Deschamps, and Brisson, is a top-mounted cartridge-bowl type filter system. Cline, Deschamps, and Brisson are standard automobile filter systems with a filter housing formed integrally with the engine, and a removable cap coupled to the filter housing. In this standard arrangement, integral channels at the bottom of the filter housing and/or engine direct oil during servicing so that the technician need not collect it. Figures 1 and 7 of Cline, showing this this standard filter system arrangement⁵ with engine 12, integral housing base 18, removable housing cover 20, and drain passageway 30 directing used oil to a fluid reservoir 14, are below.



⁵ See also Ex. 1005 (Brisson), FIG. 7; Ex. 1010 (Deschamps), FIG. 18.

Honermann, FIG. 1

FIG. 1

Honermann, FIG. 2

FIG. 2

Because the entire bowl must be removed in this type of filter during replacement, the auto-drain feature allows for fluid to be drained by “partially unscrewing the bowl 36,” such that draining occurs when the bowl is still connected to filter head 32. Ex. 1006, FIG. 1, ¶¶190, 194. Petitioners’ modification of Honermann would destroy this feature and require the entire bowl and filter insert of Honermann to be completely unscrewed and removed from the filter head *while still filled with oil*. This modification would make filter cartridge replacement more strenuous, meticulous, and time consuming for the technician, and would lead to more “spills, drips, and inconvenience regarding disposal of this liquid.” Ex. 1006, ¶190. The technician would be required to carefully remove and balance the bowl during this process to minimize oil spillage, carefully position the bowl over a fluid disposal, and then remove filter insert. No POSITA would remove the existing auto drain mechanism of Honermann and include the structure of Cline that would require much more effort and time by the user during service, and is much more likely to result in spills, drips, and inconvenience.

Petitioners admittedly refer to the structure of Cline as a “similarly simple [drain] mechanism” to that of Honermann. Reply 31. A POSITA would never remove the “simple⁶ mechanism” of Honermann and replace it with the drain plug

⁶ Petitioners’ counsel stated that “the whole mechanism for this filter is a little complicated to me.” Ex. 2022 at p. 73, ln. 16-17.

of Cline which, as explained above, is not only highly likely to result in spilled and leaked fluid when the filter cartridge is replaced, but also requires much more time, precision, and meticulousness from the user.

D. Claim 1

Petitioners assert that in Honermann, “it is described, and illustrated as being removeable from the canister [which] is expressly shown in Figures 1 and 40.”

Reply 32. Petitioners do not address that the identified removable cover, not the housing, of Honermann includes outlet conduits 130 that connect to the *top* of the housing. Ex. 1006, FIG. 1. Thus, *an eccentric opening arranged in a bottom of the filter housing* is not disclosed or suggested.

Petitioners next state that a portion of the open mouth 154 of Honermann discloses an inlet. Reply 34; Ex. 1006, FIG. 3. But the identified portion of the open mouth 154 is an arbitrary volume within the filter bowl 36, not an inlet. *Id.* Instead, the inlets of Honermann are inlet conduits 128, arranged on the filter head 32. Ex. 1006, ¶106. Honermann fails to disclose or suggest *a filter housing including at least one inlet*.

Petitioners argue that the inlet conduits 128 of Honermann being *the filter housing including at least one inlet* is a “mischaracterization of the Petition’s ground.” Reply 34. Since this was admittedly not asserted in the Petition, this

position must be rejected by the Board. *Henny Penny Corp*, 938 F.3d at 1329-31 (Fed. Cir. 2019).

Finally, Petitioners state that the slide surfaces are "a self-locking mechanism because they allow the filter cartridge to fall." Reply 35. Petitioners do not address PO's assertion that the self-locking feature allows "for the filter insert to be automatically brought into engagement-compatible rotational position for the blocking element." Response 53. As discussed above, in Honermann the user or technician must orient the protrusions above the grooves. Ex. 1006, FIG. 19.

PO does not interpret the Institution Decision as Petitioners do, since it states that Honermann "appears to" be gravity-fed and "invited the parties to address this issue at trial." Reply 36; ID 23-24. Nevertheless, PO notes that spring 350 is included "to bias the basket 304 rotationally within the basket holder 340 and into the locked position." Ex. 1006, ¶152. To move the basket to the unlocked position against the bias from the spring, the protrusion of the filter cartridge "is pushed against the basket" by the user. Ex. 1006, ¶173. Thus, Honermann does not disclose a rotation of the basket by "the use of gravity." Reply 36.

X. CONCLUSION

For the forgoing reasons, and for the reasons asserted in its Response, Hengst submits that the '203 Patent is not rendered invalid by the grounds asserted in the Petition.

Dated: May 16th, 2025.

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CERTIFICATION OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), the undersigned hereby certifies that the foregoing Patent Owner's Sur-Reply is produced using a 14-point Times New Roman font and contains approximately 5,590 words, which is less than the 5,600 total words permitted by the U.S. Patent Trial and Appeal Board rules. Counsel relies on the word count of the computer program used to prepare the response on May 16th, 2025.

CERTIFICATE OF SERVICE

I hereby certify that on the 16th day of May 2025, I served a copy of the foregoing, via email directed to counsel of record for Petitioners at the following:

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