

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Champion Laboratories, Inc.,
Petitioner

v.

Hengst SE,
Patent Owner

IPR2024-00603
Patent 9,023,203 B2

PETITIONER'S REPLY

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LIST OF EXHIBITS

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	U.S. Patent Pub. No. 20120261326 (“Deschamps”)
1005	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)

Patent Owner's ("PO") challenges to the Petition's grounds lack merit. For Ground 1, PO offers a narrow construction of "eccentric" that ignores PO's own dictionary and excludes the only embodiment that mentions "eccentric blocking elements. Yet even under its proffered dictionary definition, Yokoyama's blocking element is "eccentric." PO also relies on a narrow construction of "opening" as well as a misapprehension of Petitioner's arguments with respect to the "top" and "bottom" panels.

For Ground 2, PO argues that there would be no motivation to modify Yokoyama to include an eccentric blocking element, Cline's eccentric blocking element would be advantageous over Yokoyama's purported drain plug in numerous types of housings that were well known—indeed, ubiquitous in the industry for decades—prior to '203 patent.

Finally, for Ground 3, PO argues that in Honermann and the Honermann-Cline combination, only a basket rotates relative to the housing, not the filter insert. PO ignores that the *filter insert also rotates relative to the housing* (in the opposite direction as the basket's rotation) during installation. Thus, both Honermann and the Honermann-Cline combination meet the claim element requiring that the filter rotate relative to the housing.

I. CLAIM CONSTRUCTION

Patent Owner states it “does not dispute Champion’s claim construction positions set forth in the Petition at pages 7-13.” POR 17. Those pages included a discussion of whether certain terms were “means-plus-function” terms, concluding that they were not because each term provided sufficient structure and/or lacked a specified function. Petitioner understands that Patent Owner agrees with this position.

II. GROUND 1

A. Yokoyama Discloses an Eccentric Blocking Element and Opening

PO argues that “eccentric” should be construed narrowly, selectively using only one part of a dictionary definition to construe the term. POR 18-19. But, PO’s construction violates basic principles of claim construction because it would improperly exclude the **only** embodiment in the ’203 patent that uses the word “eccentric” to describe blocking elements.

1. PO’s Construction of “Eccentric” is Unduly Narrow

PO’s narrow construction of “eccentric” fails because (1) it ignores the plain meaning, and **half of** PO’s own dictionary definition, and (2) excludes the ’203 patent’s only express description of an “eccentric blocking element.”

PO’s construction of “eccentric” is taken from the current online Merriam-Webster dictionary, which provides multiple definitions with

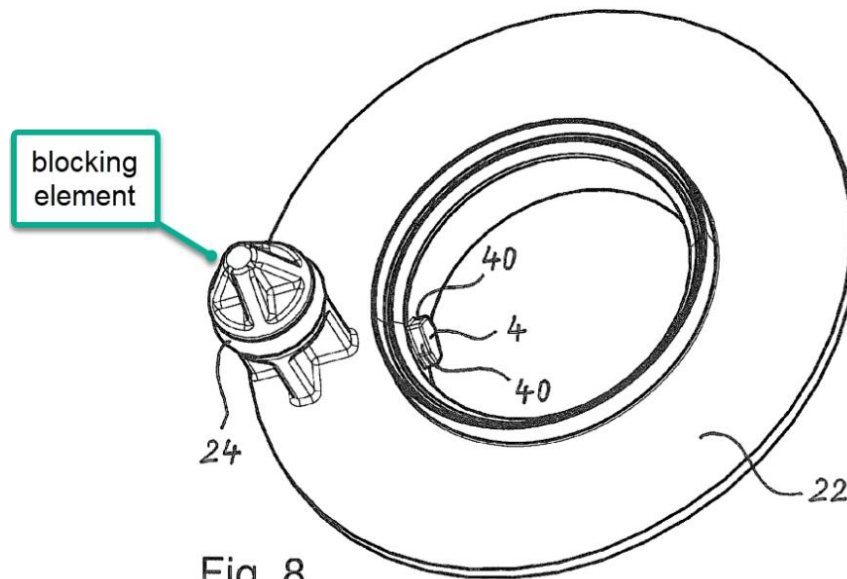
subparts. PO’s definition is derive qd from the second definition. Yet PO ignores *half* of its own definition—instead, relying on the portion highlighted below:

The screenshot shows the Merriam-Webster dictionary entry for the word "eccentric". On the left is a dark blue sidebar with the word "Dictionary" at the top. Below it is a "Definition" section with a red tab labeled "adjective" and a "noun" tab below it. Further down are links for "Did you know?", "Synonyms", "Synonym Chooser", "Example Sentences", "Word History", "Rhymes", "Entries Near", "Podcast", and "Show More". At the bottom of the sidebar is a "Save Word" button. The main content area on the right has the word "eccentric" in large blue font, followed by "1 of 2 adjective". Below this is the phonetic transcription "ec·cen·tric (ik-'sen-trik)" and a link to "Synonyms of eccentric". The definition is divided into two numbered sections. Section 1 has two sub-definitions: "a : deviating from conventional or accepted usage or conduct especially in odd or whimsical ways" with the example "an eccentric millionaire", and "b : deviating from an established or usual pattern or style" with the example "eccentric products". Section 2 has two sub-definitions: "a : deviating from a circular path" with the example "especially : ELLIPTICAL sense 1" and "an eccentric orbit", and "b : located elsewhere than at the geometric center" with the example "also : having the axis or support so located" and "an eccentric wheel". At the bottom of the main area is the word "eccentrically" with its phonetic transcription "(ik-'sen-tri-k(ə-)lē)" and the label "adverb".

POR 18; EX1018. PO’s construction selectively ignores the first part of its *own* proffered definition, namely: “located elsewhere than at the geometric center.” *Id.* Ironically, this is *exactly* how Petitioner defined the term. Pet. 35 (“*not located at the center* of the filter insert or housing.”). It is clear why PO ignores the first part of its own proffered definition: Yokoyama indisputably meets the “eccentric blocking element” limitation under the first part of the definition. PO’s attempt to ignore that aspect of the definition is

purely results-driven. The first part of the Merriam Webster definition, which PO ignores, is *also* consistent with the definition of “eccentric” found in technical dictionaries. For example, the American Press Dictionary of Science and Technology defines “eccentric” as “located away from a center.” EX1019, 3; EX1016, ¶2. Accordingly, PO provides no justifiable reason such as disclaimer or lexicography to depart from the plain meaning of eccentric ***as reflected in PO’s own dictionary and technical dictionaries.***

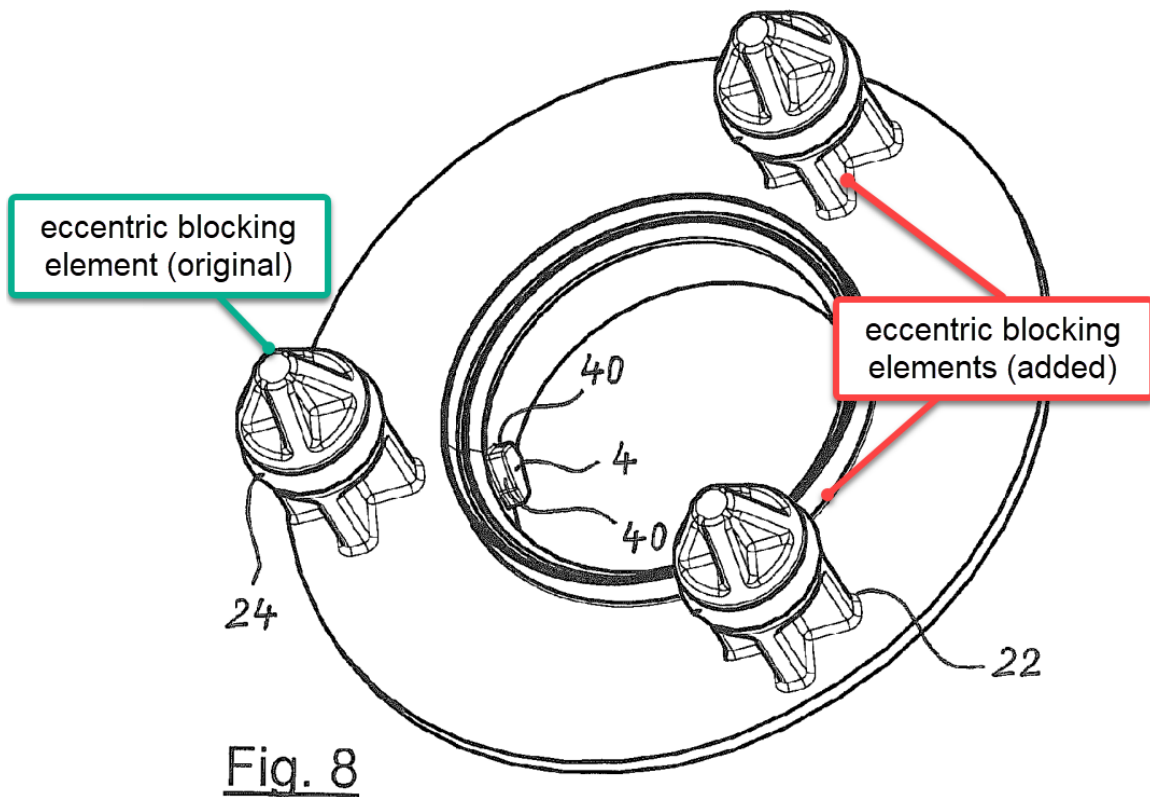
PO’s construction also fails because it ignores the intrinsic evidence. As shown in Figure 8 (annotated), the ’203 patent illustrates an embodiment with a “blocking element”:



The specification also teaches that any number of blocking elements may be used—and in so doing, it expressly describes them as “a plurality of eccentric blocking elements”:

[I]t is also possible for a plurality of fluid lines or channels to be arranged eccentrically in the bottom of the filter housing and for these fluid lines or channels to be closed via **a plurality of eccentric blocking elements**, which are arranged accordingly, on the filter insert.” EX1001, 5:66-6:3.

Importantly, this is the **only** reference in the ‘203 patent to “**eccentric** blocking elements.” These multiple blocking elements are illustrated in the following modified Figure 8, in which two additional blocking elements have been added. EX1016, ¶¶3-4.

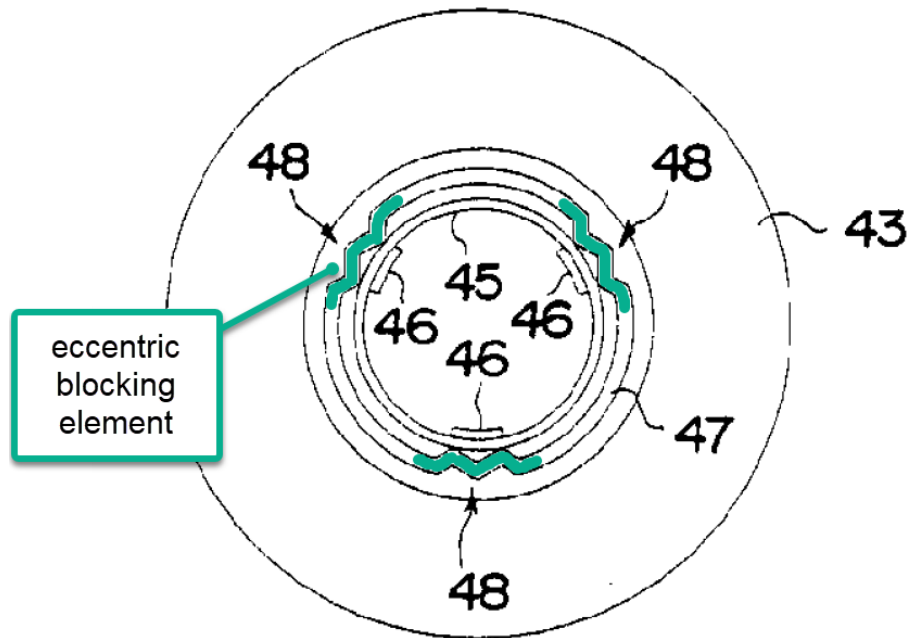


Yet PO's construction improperly excludes this embodiment.¹ *CytoLogix Corp. v. Ventana Medical Systems, Inc.*, 424 F. 3d 1168, 1175 (Fed. Cir. 2005) (“[A] claim construction that excludes a preferred embodiment is rarely, if ever, correct.”). PO's construction excludes blocking elements that

¹ PO's expert did not testify about any intrinsic evidence, and plainly did not understand this portion of the '203 patent when asked at his deposition, stating that a “plurality” meant “one.” EX2017, ¶¶33-34; EX1017, 59:2-61:20.

are “concentrically arranged” with an “axis located in a geometric center,” which precisely describes this embodiment. POR 24; EX1016, ¶5.

The rationale for excluding this embodiment is results-driven to exclude the **very same** configuration from Yokoyama. EX1016, ¶7.



Rather than focus on the one embodiment of the ‘203 patent that expressly describes “eccentric” blocking elements, PO instead attempts to analogize to non-blocking elements in the patent that are described as “central,” such as a “central” pipe nozzle or “central” through hole, as a contradistinction to the claimed “eccentric blocking element.” POR 19-20.² However, the fact

² PO does not rely on expert testimony discussing the intrinsic evidence. *Id.*; EX2017, ¶¶33-34

that other, non-blocking elements are described as “central” does not in any way change the ordinary meaning of the term “eccentric” and does not justify a claim construction that excludes the **only** embodiment that describes “eccentric” blocking elements, in addition to **half** the definition in the very dictionary PO relies on. Moreover, nowhere, as PO argues, does the ‘203 patent “**contrast**[]” centrally-located components with the “eccentric” blocking elements. POR 19. In short, PO offers no reason to abandon the ordinary meaning of the term eccentric, as evidenced by their **own dictionary**, and certainly no “clear and unmistakable” intent to disavow or redefine the term. *Thorner*, 669 F.3d at 1365 (Fed. Cir. 2012).

PO also argues that Petitioner’s expert’s conclusions “are not at all based on what the ‘203 Patent explains” because he disagreed that “inclined planes 3.1 and 3.2” of Figures 4 and 6 are “centered.” POR 23 (quoting EX2018, 52:11-14). PO misinterprets his testimony and the ‘203 patent. The ‘203 patent explains that “the inclined plane 3” **as a whole** is “in the center of the filter insert,” because it is circular and located in the center, just like the nozzle that it surrounds. Mr. Nranian, however, testified that each “partial plane[]” 3.1 or 3.2, when taken individually, are **not** centered—consistent

with the '203 patent's disclosure of a plurality of eccentric blocking elements.³ EX1016, ¶6.

At bottom, there is no dispute that Yokoyama's "W-shaped portions" disclose the '203 patent's "eccentric blocking elements" under both Petitioner's construction and the definition in *PO's chosen dictionary*. As set forth in the Petition, each or all of the "W-shaped" elements in Yokoyama are eccentric blocking elements.⁴ Pet. 35-36; EX1003, ¶96.

2. Yokoyama Discloses an "Eccentric Blocking Element/Opening" Under PO's Construction

Yokoama discloses an eccentric blocking element/opening even under PO's construction of "eccentric" that ignores half of its dictionary definition.

First, as discussed above, Yokoyama's "W-shaped portions 48" individually do not have an axis located at the geometric center—and PO does not argue otherwise. Pet. 35-36; EX1003, ¶96; EX1016, ¶¶8-9.

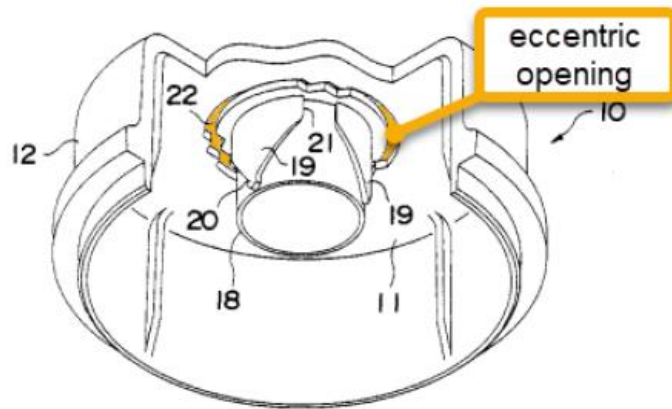
³ PO's argument that "partial planes 3.1 and 3.2" each individually are "centered" is not supported by expert testimony.

⁴ PO argues that the entire sealing member must be the accused blocking element, not just one or all of the W-shaped portions. POR 24. Nothing in the claims precludes a blocking element from being a portion of a seal.

Second, and specifically in response to PO’s new claim construction argument, Yokoyama renders obvious a sealing member that has only one W-shaped portion and corresponding W-shaped opening to receive it—and in that embodiment, the sealing member (even if ring-shaped) would not have an axis in the center. While Yokoyama only expressly describes three “W-shaped” portions, Yokoyama discloses that there may be “**one** or more” “locking protrusions 46.” EX1008, ¶33. A POSITA would have understood that the number of W-shaped portions should equal the number of locking protrusions. EX1016, ¶10. This will at least guarantee that the orientation of the locking mechanisms will always allow the “W-shaped” portions to engage with their corresponding opening. *Id.* For example, if there are two “locking protrusions 46” oriented from each other at 180 degrees, but three “W-shaped portions,” then there would be configurations of the locking protrusions where the W-shaped portions are oriented incorrectly and therefore will not engage with the W-shaped openings. *Id.* In the embodiment with one “W-shaped” portion, it would have an off-center axis, because the W-shaped portion is imbalanced. EX1016, ¶11.

B. Yokoyama Discloses an Opening

PO argues that the elements in Yokoyama that receive the W-shaped portions are not an “opening,” because an opening must allow “fluid” to flow. POR 24-25. Yokoyama’s openings are highlighted in the following figure:



PO does not offer an ordinary meaning for the word “opening,” but instead commits one of the cardinal sins of claim construction: importing limitations from the specification. PO argues that the specification describes an “outlet” (though the specification never uses the word “opening” to describe any part of the alleged invention) and that claim 1 expressly states that the “eccentric opening [is] an outlet for emptying the filter housing.” *Id.*⁵

Yet the fact that independent claim 1 expressly recites that the opening is “an outlet,” but independent claim 15 does not, indicates that the term “opening” is **broader** than an outlet. *Seachange Intern., Inc. v. C-Cor, Inc.*,

⁵ PO’s construction is not supported by expert testimony.

413 F. 3d 1361, 1368 (Fed. Cir. 2005). Moreover, the plain meaning of an “opening” does not preclude Yokoyama’s receiving elements, as shown above. A POSITA would understand that Yokoyama includes openings for corresponding objects to be inserted. This is consistent with Merriam-Webster’s definition of “opening” as “an open width” or “span,” or the American Press Dictionary of Science and Technology’s definition of “opening” as “an open place; a hole or space.” EX1020; EX1019, 4; EX1016, ¶¶12-14.

C. Yokoyama Discloses “Top” and “Bottom” Panels

Claim 15 requires “top” and “bottom” panels, and that the eccentric blocking element be arranged on the bottom panel.

PO argues that Yokoyama’s blocking element is not on a bottom panel, because it is labeled as the “upper plate 43.” EX1008, ¶20. But, which panel is the “top” and “bottom” is simply a labeling convention that is interchangeable depending on the application (*e.g.*, if the filter were to be inserted in a top- versus a bottom-mounted housing). Pet. 31. A POSITA would also have understood that Yokoyama’s filter case (including the filter) could be operated in any orientation, including in an inverted orientation. EX1016, ¶15. Patent Owner, however, rigidly argues that the labels in

Yokoyama must be adhered to, and what Yokoyama refers to as the “upper” panel can only be the “top” panel. POR 25-26.

PO is incorrect. As the Petition explained, the entire filter device would operate in an identical manner regardless of the orientation, because the oiling system is *pressurized*, and thus can operate when inverted. Pet. 31; EX1003, ¶91. It was well understood that filter housings are oriented differently based on the spacing and servicing needs particular to a vehicle. *Id.*, ¶16. Vehicle manufacturers may, for example, use a housing mounted on the bottom of the motor with an opening on the bottom of the housing, or mounted on the top of the motor, with an opening at the top of the housing. *Id.* A POSITA would have therefore understood that Yokoyama’s naming convention was flexible and not intended to be definitional. Pet. 58; EX1003, ¶139.⁶

PO argues that “features of Yokoyama would discourage a POSITA from making such a modification,” specifically that “the orientation [of

⁶ Indeed, housings where the filter is inserted from the top were well-known in the art. Cline and Brisson and the accused products have such an orientation, and ‘203 patent recognizes that such devices are prior art. EX1009, Fig. 6; EX1005, Fig. 2; EX1006, ¶126; EX1001, 1:25-33; EX1012; EX1010, ¶16.

Yokoyama's filter device] is critical to the stated goals of Yokoyama and must be arranged as depicted." POR 25-26. PO thus argues that there is no motivation to modify Yokoyama by inverting it.

But, as discussed above, there is more than sufficient motivation to do so when the POSITA is confronted with an inverted housing for the Yokoyama filter insert. Moreover, this is not a "modification," simply a recognition as to how these filters are used in industry and how a POSITA would understand them. Pet. 31.

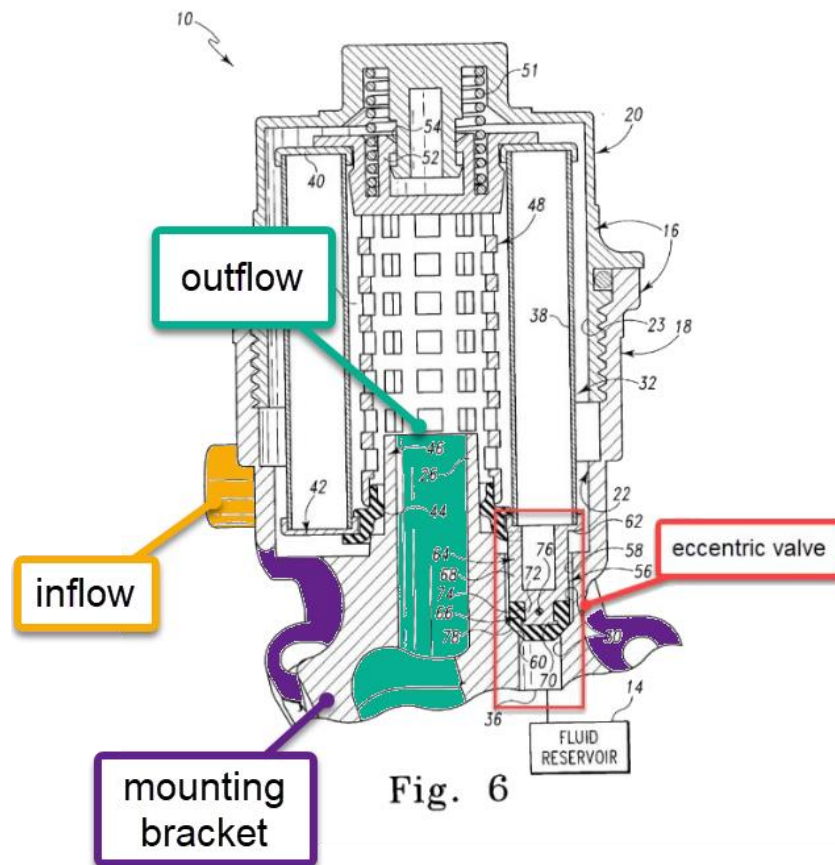
PO's argument that the "front" and "rear" of an automobile does not change regardless of the automobile's orientation relative to the viewer or the direction of the vehicle is not relevant. An automobile has one forward direction and one rear direction, which is dictated by the design of the car, by the seating position of its occupants, etc. EX1016, ¶17.

PO also disputes that inverting would "disrupt" the "flow path." POR 33. But oil filtration systems are pressurized. EX1003, ¶91; EX1017, 48:21-50:2.

PO further argues that Yokoyama's alleged "drain plug would be rendered useless." POR 28-32, 33. However, claim 15 does **not** require a drain plug. Moreover, PO admits that Yokoyama's specification "does not explicitly describe" any drain plug. POR 30. Indeed, Yokoyama describes

that its filter could be filtering “air,” in which case a drain plug would not be necessary. EX1008, ¶36; EX1016, ¶18. In any case, even if Yokoyama depicts a drain plug, by not describing it in any detail in the specification, Yokoyama confirms that its location is simply a matter of design criteria. EX1016, ¶18. Moreover, where the housing is opened from the top,⁷ an eccentric drain would be **necessary** to avoid physical interference with the outflow of the mounting bracket. *Id.* Specifically, filtered fluid flows into the center of the filter, so fluid must likewise flow out the **center**. *Id.* As a result, the drain must be located off-center to avoid the outflow path. Cline’s Figure 6, as annotated below, provides an example:

⁷ Oil filter housings that open from the top are common in the industry and as discussed above are expressly described in the prior art. See n.6; EX1010, ¶19.



In addition, such placement of the drain plug would allow ease of maintenance. EX1003, ¶139.

PO also argues that the inverted orientation is likely to wobble. POR 33. This is not true. In the inverted orientation, the filter element 40 will be inserted downward into the “upper case half 10,” and then the “lower case 30” will be lowered onto the insert, applying force to the filter element and rotating it until the sealing member enters the groove openings via the rotation of the locking protrusion via guided side surfaces 19. EX1008, ¶21; EX1016, ¶20. Yokoyama makes clear that it is the “locking protrusion 46 ... positioned in a

depressions 21” that prevents the filter element from wobbling, which equally applies in the inverted orientation.

III. GROUND 2

A. A POSITA would be motivated to combine Yokoyama and Cline

PO ignores most of the motivations set forth in the petition (Pet. 52-59) addressing only two of them.⁸ PO argues that “Yokoyama teaches a drain plug”⁹ and therefore there would be no reason to modify Yokoyama to include Cline’s drain mechanism. Pet. 34-38. As already discussed above, however, such drain plugs, their location, and their design to fit particular applications was well-known in the art. EX1016, ¶¶21-22. A POSITA would have readily understood that certain applications would require different placement of the

⁸ Specifically, PO failed to address motivation due to replaceability, minimization of oil loss, reliability, application of a known technique, design choice, and reasonable expectation of success. Pet. 52-59.

⁹ PO claims the Petition stated Yokoyama fails to disclose any draining mechanism. POR 34. The Petition clearly stated Yokoyama does not disclose *Cline’s* “such draining mechanism.” Pet. 53. And Yokoyama certainly does not describe in words any draining mechanism.

drain plugs, and would have found doing so to be a trivial exercise of ordinary skill. *Id.*

For example, Petitioner explained that Cline’s design is “more reliable and less prone to damage compared to other designs.” Pet. 55. This also holds true for Yokoyama’s alleged drain plug. Because Cline’s drain mechanism is attached to Cline’s filter insert, Yokoyama’s alleged 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 and requires tools to remove. EX1016, ¶23. Indeed, as Petitioner and Mr. Nranian explained, Cline’s drain mechanism “prevent[s] the draining of fluid until the filter needs to be replaced.” Pet. 58; EX1003, ¶138. Moreover, because of Cline’s design, the drain mechanism is activated simply when “the filter element is removed from the interior region.” EX1009, Abstract. That is why Cline’s mechanism is called a “quick-drain valve,” since it provides a quick, single mechanism for draining the fluid and removing the filter. *Id.* Contrary to PO’s assertions (POR 37-38), Cline’s design is a simpler and more user-friendly mechanism than Yokoyama’s drain plug, which requires multiple steps to use, as PO admits. POR 37; EX1016, ¶23. Misalignment is minimized due to the reliance on the Yokoyama’s guiding mechanism for alignment.

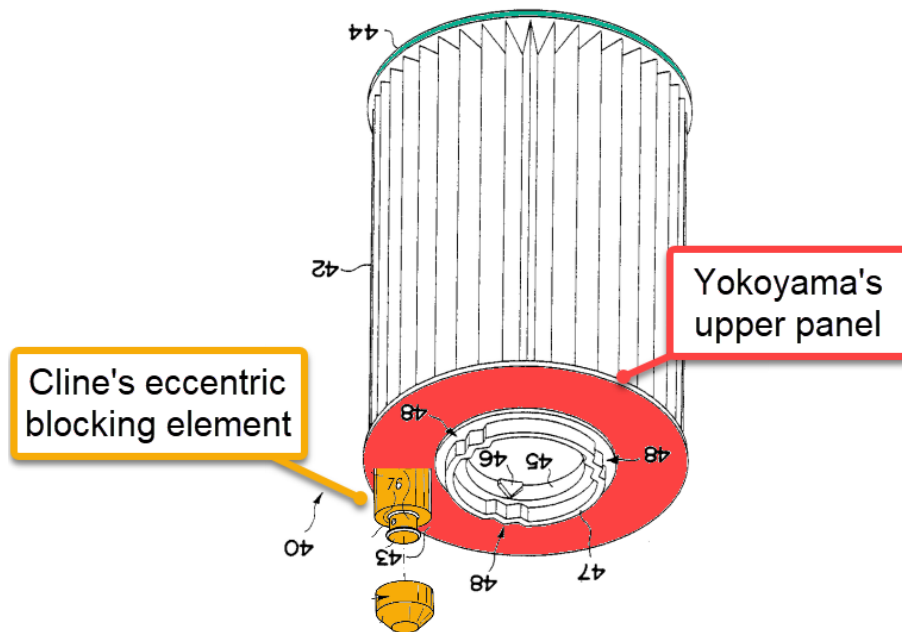
PO also fails to appreciate that Petitioner’s motivations to combine were directed to the superiority of Cline’s “quick-drain outlet” over other draining mechanisms, including Yokoyama’s. As Cline explains, for example, its “flow blocker” is “molded onto the post 64,” thereby making it customizable, easily removable, and easily replaceable. Pet. 54.

PO also does not address Petitioner’s argument that the use of Cline’s drain mechanism would accommodate “the need for accessibility for service (for example, the need for a technician/mechanic to access by hand and tools the service plug and filter assembly for replacement and service, ideas known in the field as “Design for Service” and “Design for Assembly”).” EX1003, ¶139.

PO also argues that “the drain plug of Yokoyama would be operated *before* the upper case half 10 and lower case half 30 were separated during servicing, so there would be no concern that oil would spill or splash onto the filter housing or other components.” POR 37. But it would be a trivial variation for a POSITA to make the upper case half 10 smaller to accommodate additional fluid. EX1016, ¶24.

B. A POSITA would have been motivated to combine Cline’s drain mechanism with Yokoyama’s inverted orientation

The Petition provided details as to how a POSITA would have combined Yokoyama and Cline, specifically placing Cline's eccentric blocking element on Yokoyama's upper plate next to its sealing member and then re-orient Yokoyama's filter device to allow "liquid to flow out for safe disposal via the pull of gravity." Pet. 57-58 (citing EX1003, ¶138). This is illustrated in the below modified version of Yokoyama's Figure 1, which is inverted and modified to include Cline's blocking element, as expressly described in the Petition. *Id.*; EX1016, ¶25.



PO reiterates its argument that Yokoyama would "discourage" a POSITA from re-orienting its filter device. POR 38-39. These arguments fail for the same reasons discussed above.

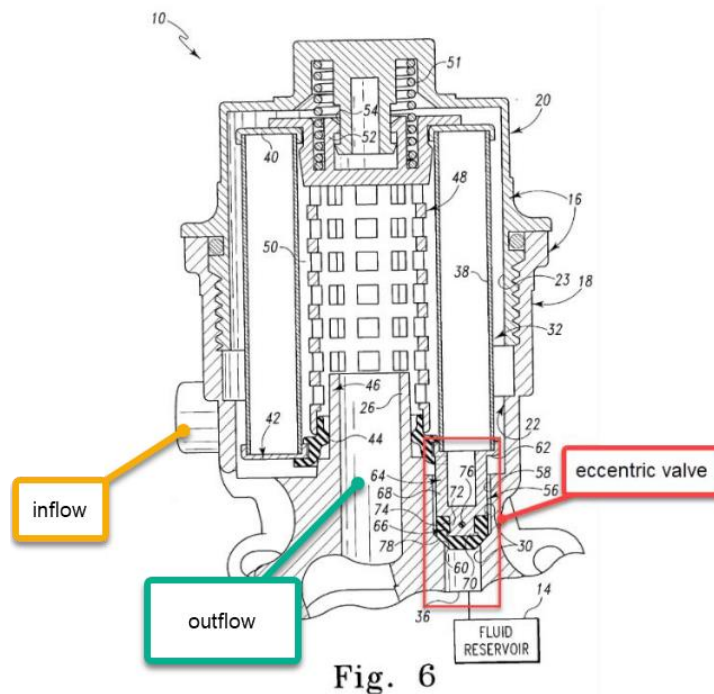
PO also argues that Petitioner's inverted orientation is "unsupported by *any* technical explanation or reasoning." POR 39. Petitioner provided numerous motivations for incorporating Cline's drain mechanism. PO also did not respond to Petitioner's argument that a POSITA would have had a reasonable expectation of success. Pet. 59.

PO again argues that "Yokoyama already discloses a drain mechanism," but as explained above, this fails to address the advantages of Cline's drain mechanism over Yokoyama's drain plug in the inverted configuration, and that a POSITA would readily adapt Cline's drain depending on the housing application. POR 40.

PO also argues that the proposed modification would complicate Yokohama, and that the Petition did not adequately describe the modification. POR 40. As discussed above, the combination clearly places Cline's blocking element on Yokoyama's upper plate and reorients the device. Pet. 57-58 (citing EX1003, ¶138).

PO argues that the addition of Cline's drain adds unnecessary complexity to the upper case half. POR 40. However, as explained in the Petition, numerous references disclose a filter device where the drain valve is located in the same upper or lower portion of the device as the inflow and outflow pipes, including Cline and Brisson. Pet. 55-57. For example, as

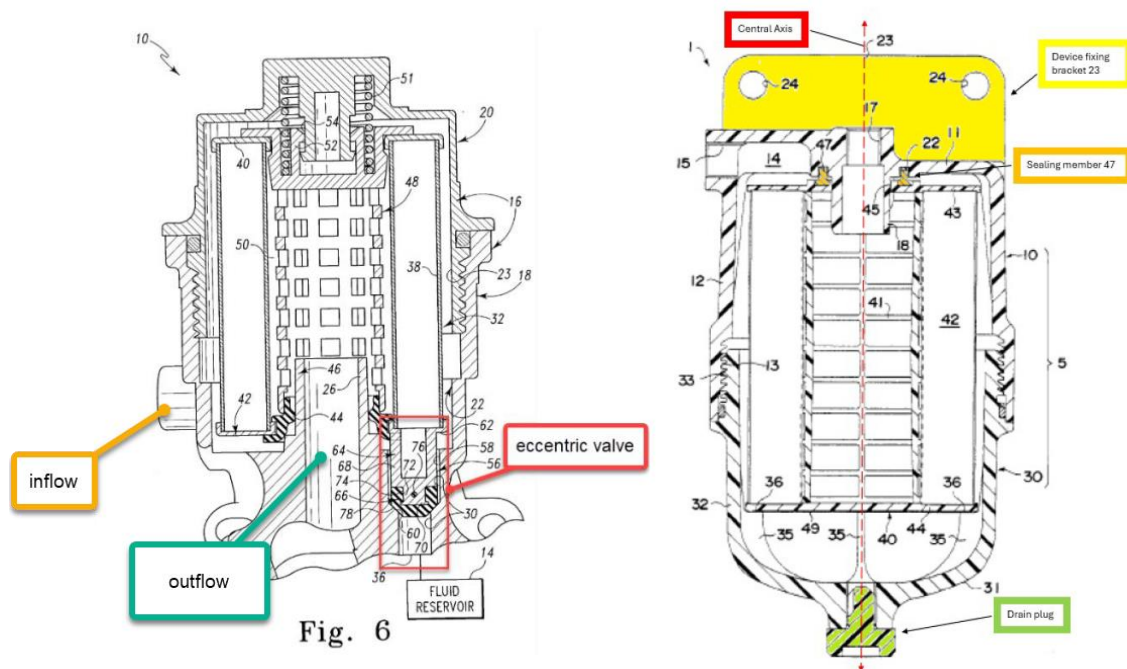
shown in the annotated version of Figure 6 from Cline, Cline's eccentric valve, inflow, and outflow are all on the lower portion of Cline's filter device. EX1016, ¶27; EX1017, 51:10-53:18 (acknowledging that all three elements of Cline are on the "lower part of the filter").



A POSITA would have readily understood how to include Cline's drain mechanism in the same portion of the filter device as the inflow and outflow and would not have viewed the placement of Cline's draining mechanism as adding complexity, or impractical due to space considerations. EX1016, ¶27.

PO also argues that the modification would increase the size and complexity of the filter device. POR 41. Cline's draining mechanism is less

complex than Yokoyama's drain plug. Moreover, a comparison of Cline's Figure 6 and Yokoyama's Figure 1 does not show any appreciable size difference between their drain mechanisms.



Moreover, nothing in Cline suggests that its eccentric draining mechanism is more likely to fail or require more testing and effort in the design process, as PO argues. POR 41.

Finally, PO repeats its argument that the inverted orientation would “not achieve the same function of mitigating wear on the sealing member.” POR 41-42. As discussed above, Yokoyama is clear that it is the “locking protrusion 46 ... positioned in a depressions 21” that mitigates wear on the sealing member. This locking protrusion acts in the same way regardless of

Yokoyama's orientation—indeed, there is less wear on the sealing member due to the help of gravity in aligning the locking protrusions into the depressions. EX1016, ¶20.

C. Yokoyama in view of Cline discloses “first positioning means”

PO argues that the Yokoyama-Cline combination fails to disclose the first positioning means because Yokoyama's locking protrusions are designed to prevent motion, and therefore there would be no means to consistently orient the drain valve with the eccentric opening. POR 42-43.

PO's argument fails to address Petitioner's combination. Petitioner specifically proposed that “Cline's valve design could be placed in such a way as to be sealed and engaged when Yokoyama's filter insert is properly inserted,” that is, the proposed combination would have Cline's plug be inserted into its opening when Yokoyama's locking protrusions enter the depressions. Pet. 57, 62.

The Petition also pointed out that Deschamps describes a protruding nose and inclined plane guiding mechanism to orient a blocking element into an eccentric opening. Pet. 56. The Petition therefore argued in view of this teaching (which would have been part of a knowledge of a POSITA), a POSITA would know “that an eccentric drain mechanism works reliably with

a nose/inclined plane guide mechanism, which would have motivated to provide a similar mechanism in Yokoyama.” Pet. 56-57.

Thus, in the proposed combination, as Yokoyama’s locking protrusions glide along side surfaces 19 and enter depressions 21, Cline’s drain plug would be oriented correctly to enter the drain opening.

IV. GROUND 3

A. Honermann-Cline renders obvious the “rotating” limitation

PO argues that Honermann does not disclose the limitation requiring that the filter insert rotate because in Honermann it is the basket that rotates rather than the filter insert. POR 45-47. Patent Owner is incorrect. While Honermann teaches that the basket is rotated, the filter insert also rotates. EX1016, ¶29. This was further made clear in the Honermann-Cline combination, where the Petition expressly described that the filter insert rotates relative to the housing, and that is sufficient to satisfy the claim language. *Id.*

In describing the motivation to combine Cline’s blocking element/opening with Honermann’s inclined plane/nose, the Petition explained that a POSITA would readily understand how to modify Honermann to include a rotating filter insert, as corroborated by

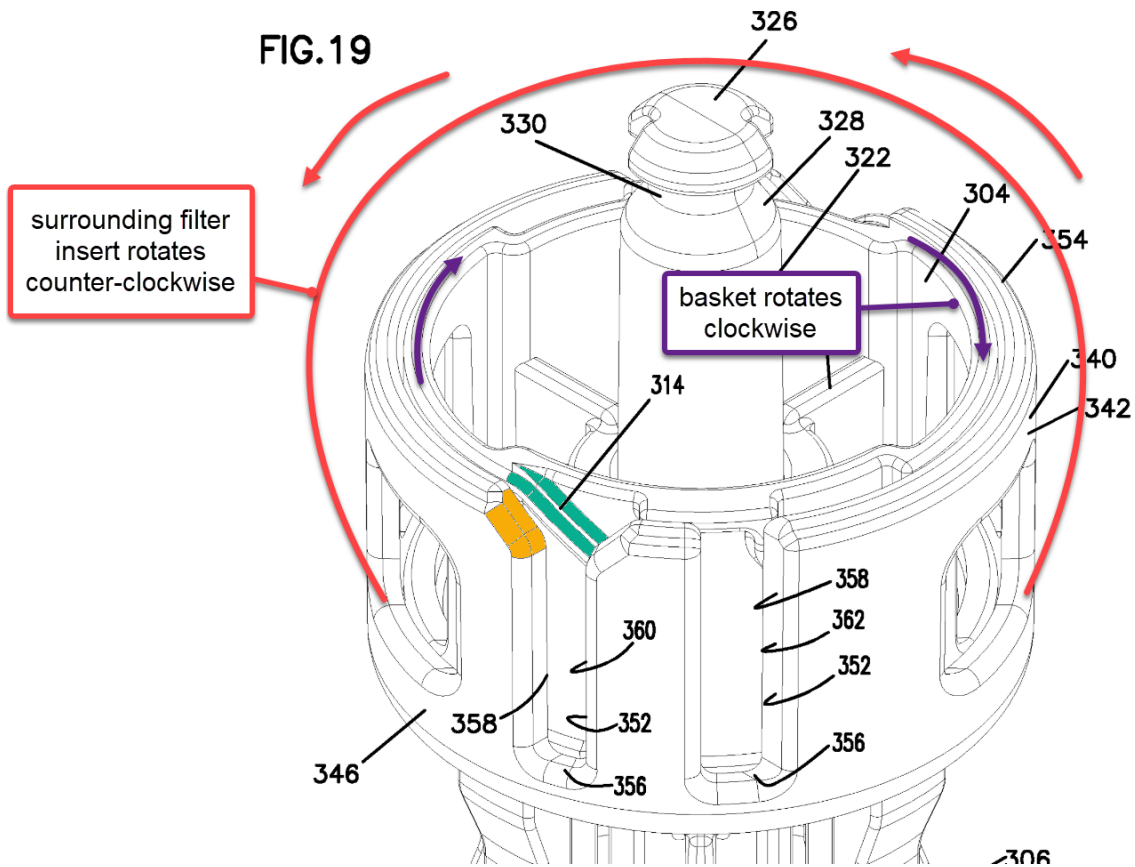
Deschamps's¹⁰ express disclosure of a “filter that rotates in a housing” using a “guide element.” Pet. 75-76. The Petition then explained that a POSITA would be motivated by Deschamps's teachings “to incorporate Cline's ***similar eccentric blocking element***/opening with Honermann's ***similar inclined plane and nose guiding mechanism***.” Pet. 75-76. Notably, Cline's “eccentric blocking element” is integral with its filter. In other words, the

¹⁰ As the Petition notes, Deschamps is not prior art because, while it was filed before the '203 patent, there was no original English translation. It is, however, relevant to motivation to combine and as evidence of the knowledge of a POSITA at the relevant time. *National Steel Car Ltd. v. Canadian Pacific Railway Ltd.*, 357 F.3d 1319, 1338, (Fed. Cir. 2004) (holding that a drawing made by an engineer that was not prior art may nonetheless “be used to demonstrate a motivation to combine implicit in the knowledge of one of ordinary skill in the art”); *Ex parte Erlich*, 22 U.S.P.Q.2d 1463 at *3 (BPAI 1992) (“[T]he Sevier publication itself is not prior art against present claims, [but] establishes the level of ordinary skill in this art at and around the time of the present invention.”).

Petition expressly stated that a POSITA would be motivated to combine Honermann and Cline in such a way that the “***filter rotates in the filter housing.***” *Id.*

Later portions of the Petition confirm that the combination includes rotation of the filter. For limitation 1[k], the Petition expressly states that “in the Honermann-Cline combination, the blocking element enters the eccentric opening **when the filter cartridge has been properly rotated** and inserted into the filter bowl.” Pet. 97. And the next limitation 1[l] goes on to explain that in the combination, “the ***proper insertion of the filter cartridge*** results in Cline’s blocking element entering its eccentric opening.” Pet. 98. Thus, the Petition made clear that in the combination, the ***filter insert*** (and not just the basket) rotates to facilitate engagement of the blocking element with the opening. EX1016, ¶¶30-31. The combination therefore meets the limitation under PO’s construction.

Furthermore, a POSITA would understand that Honermann’s filter insert does, in fact, rotate before the basket rotates. EX1016, ¶32. As shown in Figure 19 below, the basket has a **slide surface 314** and the basket holder has a slide channel 358, which has a **tapered opening** to allow a protrusion to enter the slide channel 358.



When the filter insert's protrusion engages with the **slide surface 314**, it begins on the leftmost portion of the slide surface 314 and slide channel 358's **tapered opening**. EX1016, ¶32. The filter insert includes a protrusion that first slides rightward on the slide surface 314. *Id.*; EX1006, ¶143. Because the protrusion is integral with the filter insert, as the protrusion slides right, the filter will rotate counter-clockwise. *Id.* Once the protrusion slides down the slide surface 314 into slide channel 358, the downward force on the filter will cause the basket to rotate counter clockwise. *Id.*; EX1006, ¶143.

Thus, in Honermann, **both** the filter and the basket rotate as the filter is pressed downward over the basket.

And in the Honermann-Cline combination, as the filter insert rotates (*i.e.* prior to the rotation of the basket), the eccentric blocking element is brought into engagement with the eccentric opening. EX1016, ¶33.¹¹ The Board’s institution decision also agreed that the Petition established how Honermann’s guidance mechanism “would bring the blocking element of the Honermann-Cline combination into engagement with the eccentric opening **by rotating the ring filter insert** relative to the filter housing.” ID, 22.

B. Honermann in view of Cline renders obvious the first positioning means

PO argues that that Honermann’s filter cartridge 38 is not rotated by the protrusions, and therefore in the combination with Cline, the protrusions do not cause Cline’s blocking element to engage with its opening. PO further argues that Honermann’s basket is an independent rotatable portion of the inner assembly. POR 48. However, as explained above, this is not an accurate

¹¹ In addition, when asked about Petitioner’s combination, Patent Owner’s expert testified **on redirect** that the cartridge “rotate[s] against the basket.” EX1017, 83:2-11.

description of Honermann's teachings or Petitioner's combination. Honermann teaches that the protrusions do in fact cause filter cartridge 38 to rotate, and the Petition is also clear that, in the combination, the rotation of the filter cartridge is necessary to engage the eccentric blocking element with the opening.

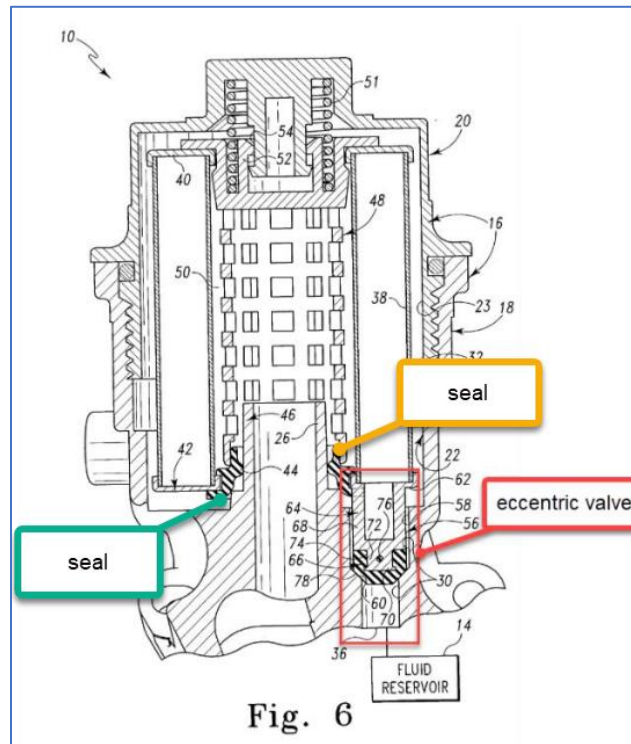
PO also argues that "if an eccentric blocking element were integrated into Honermann, it would need to engage with the eccentric opening in the housing ... and thus rotation of basket 304 would no longer be possible because the eccentric blocking element would inherently prevent any further rotation of the basket 304 due to its functional purpose." POR 49-50 (quoting EX2017, ¶79) (brackets removed). This is not true. In the combination, by the time the basket reaches its second locked position, the eccentric blocking element is aligned with the opening, though not yet engaged. EX1016, ¶33. At that point, the filter insert (and its protrusions) travels downward, causing the basket to continue rotating as taught in Honermann, and the eccentric blocking element to engage with the opening. *Id.*

C. A POSITA would be motivated to combine Honermann with Cline

PO argues that there would be no motivation to combine Honerman with Cline because the combination would obviate Honerman's advantage of

automatic draining. POR 50-52 (quoting EX1006, ¶124). But in the combination, the drain is replaced by a simpler mechanism that allows liquid to be drained by a similarly simple mechanism of removing the filter insert from the filter assembly. EX1003, ¶¶166-67. Indeed, that is how the filters in Cline, Deschamps, and Brisson operate, and thus a POSITA would therefore understand such filters provide adequate protection from “leaking” and “inconsistent draining.” EX1009, ¶25.

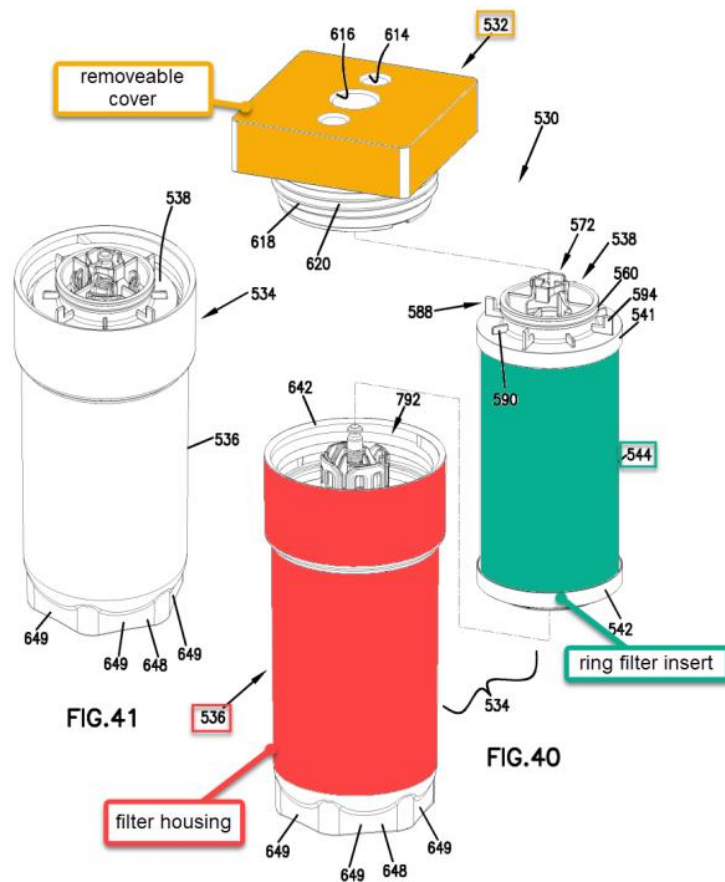
PO also argues that the combination would require removing seal members that separate the filtered fluid from the unfiltered fluid within Honermann’s filter assembly. POR 51-52. However, filters that had eccentric drains were well-known, and they clearly were capable of sealing the unfiltered fluid from the filtered fluid. EX1016, ¶34. For example, Cline itself provides one such filter, and it would have been well within the skill of an ordinary artisan to implement such seals.



D. Honermann in view of Cline Renders Obvious Claim 1

1. Honermann discloses a “removable cover”

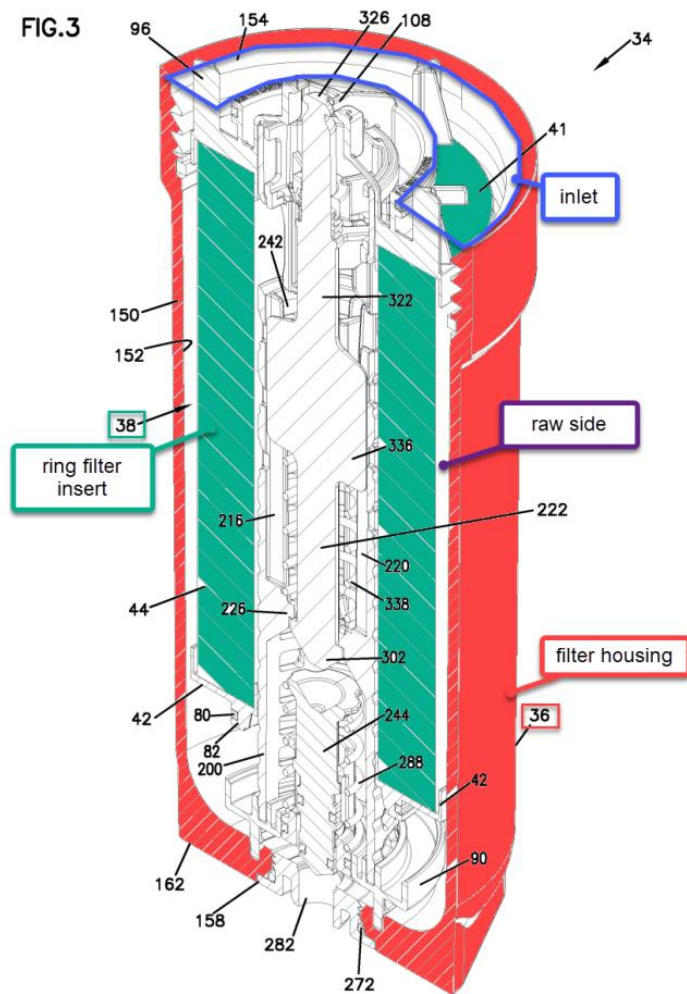
PO argues that Honermann’s filter head is a “fixed element to which the filter assemblies are removably attached,” and thus the filter head is not a “removable cover.” POR 52-53. PO misunderstands Honermann—the reference expressly describes that the filter head is “connected” *to the engine*, but it is described, and illustrated as being removeable from the canister—this is expressly shown in Figures 1 and 40. EX1006, ¶77; *see also* ¶201 (“[T]he filter head 532 has been completely **removed** from the filter assembly 534.”).



2. Honermann discloses “the filter housing including at least one inlet for raw liquid to be filtered, which inlet leads into a raw side of the filter housing”

PO argues that Honermann discloses only that the “inlet conduit 128” is on the “filter head 32” (i.e. the **removable cover**) instead of the “filter assembly 34” (i.e. the **filter housing**). However, Petitioner did not identify the filter head’s “inlet conduit” as the claimed “inlet” but instead identified the filter insert’s opening from which raw liquid flows into the filter housing: “Although the inlet conduit is on the filter head (i.e. **removable cover**) and

not the filter bowl (i.e. **filter housing**), a POSITA would understand that unfiltered liquid flowing from the inlet conduit to the unfiltered liquid volume would **pass through the inlet at the top of the filter housing**, as shown in the annotated Figure 3 below.” Pet. 85.



In any event, even under PO’s mischaracterization of the Petition’s ground, when the removable cover is secured to the housing, it is then part of the

housing, and thus the filter head's "inlet conduit" meets the claim limitation. EX1016, ¶35.

3. Honermann discloses "the inclined plane comprising an incline which excludes a self-locking and"

PO argues Honermann does not disclose the lack of a "self-locking"¹² because Petitioner "identif[ied] the auto-lock mechanism in Honermann as disclosing this feature." POR 53-54. This mischaracterizes the Petition. The Petition argued that as Honermann's "protrusions engage with the slide surfaces," the filter cartridge is allowed to move "downwardly axial direction toward the closed end 156." Pet. 102 (quoting EX1006, ¶¶179-180. In other words, the incline of Honermann's inclined planes is chosen so as to ***exclude a self-locking mechanism*** because they allow the filter cartridge to fall in the "downwardly axial direction," *i.e.* into its correct position. This is identical to the '203 patent's teaching that the exclusion of a self-locking allows the insert to "fall[] into its correction position." EX1001, 9:50-54.

¹² While not a model a of clarity, this limitation means that the incline of the inclined plan is chosen such that it is not "self-locking" with the nose. EX1001, 9:45-54.

If PO is arguing that exclusion of a self-locking mechanism requires engagement “virtually solely by means of the force of gravity” (EX1001, 3:31-35), the Board held that Honermann discloses the use of gravity for the filter housing to be inserted. ID, 23-24. The Board invited the parties to address the construction of the first and second positioning means, but PO declined to do so. *Id.*; POR 17.

V. CONCLUSION

For at least the foregoing reasons, the challenged claims should be found unpatentable.

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CERTIFICATE OF LENGTH (37 C.F.R. §§ 42.24(D))

The undersigned hereby certifies that, according to the word-processing system used to prepare the foregoing document, this document has 5,584 words and thus complies with the applicable word limit.

Date: April 4, 2025

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CERTIFICATE OF SERVICE (37 C.F.R. §§ 42.6(E), 42.105(A))

The undersigned hereby certifies that on April 4, 2025 the above document was served via email on counsel of record at the email address below:

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