

***Champion Laboratories, Inc. et al. v.
First Brand Groups LLC***

IPR2024-00603

U.S. Patent No. 9,023,203

Petitioner's Demonstratives

Hearing: June 28, 2025

Summary: Grounds

Ground	Claim(s) challenged
1. Yokoyama	15-17, 19, 23, 25, 30
2. Yokoyama, Cline	15-17, 19, 23, 25, 28, 30
3. Honermann, Cline	1, 3, 5, 8-11, 15, 17, 19, 23-25, 28-30

Summary: Disputed Issues (Ground 1) (Yokoyama alone)

- **Ground 1 disputed issues:**
 - **“eccentric”** (15[b]):
 - PO’s construction selectively uses one part of its dictionary definition
 - PO’s construction excludes the embodiment with “eccentric blocking elements”
 - Even under PO’s construction, Yokoyama’s W-shaped portions are off-center
 - **“opening”** (15[b]):
 - PO’s construction improperly imports the “outlet” limitation from claim 1
 - Petitioner’s construction is consistent with its plain meaning
 - **“top” / “bottom” panels** (15[b]):
 - Yokoyama’s panels are a labeling convention depending on orientation
 - Yokoyama’s orientation is dependent on the design criteria of the engine
 - Yokoyama’s filter can be operated in any orientation because it is pressurized

Summary: Disputed Issues (Ground 2) (Yokoyama and Cline)

- Ground 2 disputed issues:
 - *Motivation to Combine* (Yokoyama and Cline):
 - PO did not address most of the Petition's motivations to combine
 - Motivation to reorient and use an eccentric drain is based on design needs of engine
 - Cline's quick-drain valve is simpler, more secure, and easier to use compared to Yokoyama's drain plug
 - *"first positioning means"* (15[c]):
 - In the proposed combination, Cline's valve is sealed when Yokoyama's nose/plane sliding mechanisms causes locking protrusions to enter their corresponding depressions.
 - PO's surreply argument that Yokoyama has three locking positions ignores Yokoyama's express disclosure of one locking position

Summary: Disputed Issues (Ground 3) (Honermann and Cline)

- **Ground 3 disputed issues (Claims 15 and 1):**
 - ***“rotating the ring filter insert”*** (15[e]):
 - Not a new argument: In the Petition’s Honermann-Cline combination, Honermann’s filter insert rotates relative to the housing
 - In Honermann, the filter insert rotates, and then the basket rotates
 - ***“first positioning means”*** (15[c]):
 - In the proposed combination, the filter insert rotates until the eccentric blocking element is aligned, and then the basket rotates to cause the blocking element to engage the opening
 - ***Motivation to Combine*** (Honermann and Cline):
 - Cline’s quick-drain valve requires less parts and is thus simpler and more reliable

Summary: Disputed Issues (Ground 3) (Honermann and Cline)

- Ground 3 disputed issues (Claim 1 only):
 - “removable cover” (1[c]):
 - Honermann’s filter head is removable from the filter housing
 - “filter housing including at least one inlet” (1[d]):
 - Honermann’s filtering housing has an opening for raw liquid to enter, which is the claimed “inlet”
 - Alternatively, the removable cover (and its inlet conduit) is part of the filter housing
 - “excludes a self-locking” (1[n]):
 - Honermann’s inclined plane allow the filter cartridge to fall into its correct position and therefore excludes a self-locking mechanism

'203 Patent Overview

'203 Patent Overview

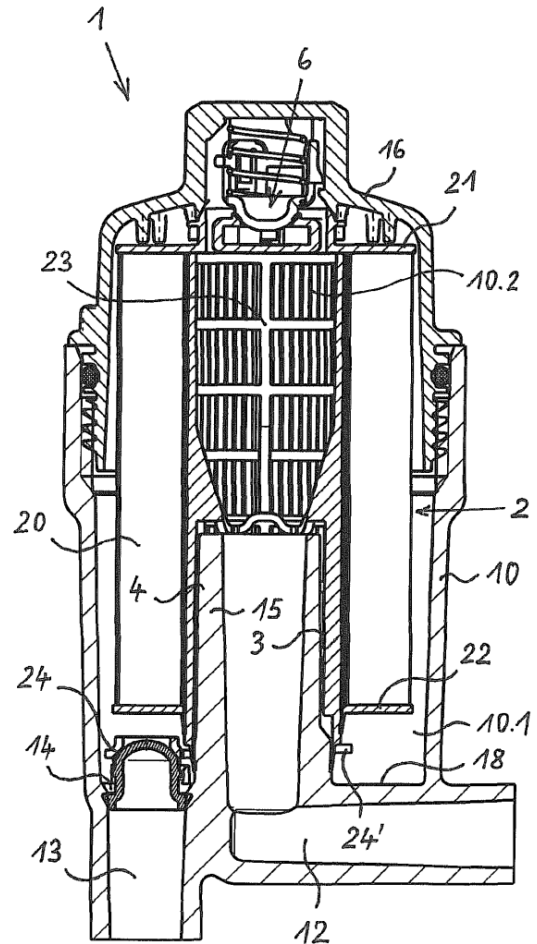


Fig. 1

“The filter housing 10 furthermore has an outlet 13, through which an emptying of the filter housing 10 is carried out in response to a replacement of the filter insert 2. During operation of the filter 1, the screw cover 16 is tightly screwed to the filter housing 10. Through this, a blocking element 24 is pressed tightly against a seat 14 in the outlet 13. The blocking element 24 is connected to the lower front panel 22 of the filter insert 2 via spring arms 24' or is embodied integrally. In the state according to FIG. 1, the outlet 13 is thus closed.”

Ex. 1001 (203 patent) at 6:59-67; Surreply 13

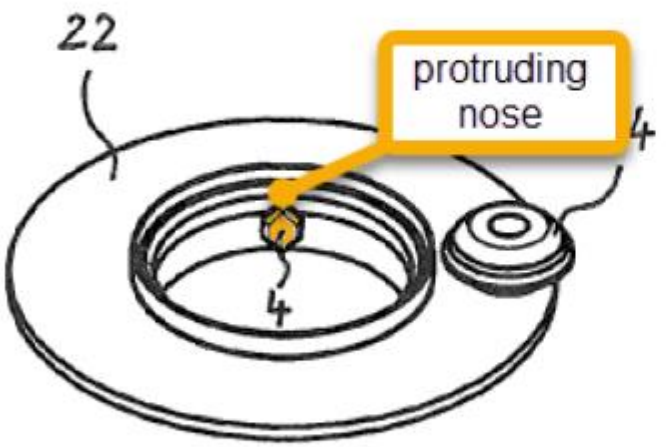


Fig. 30

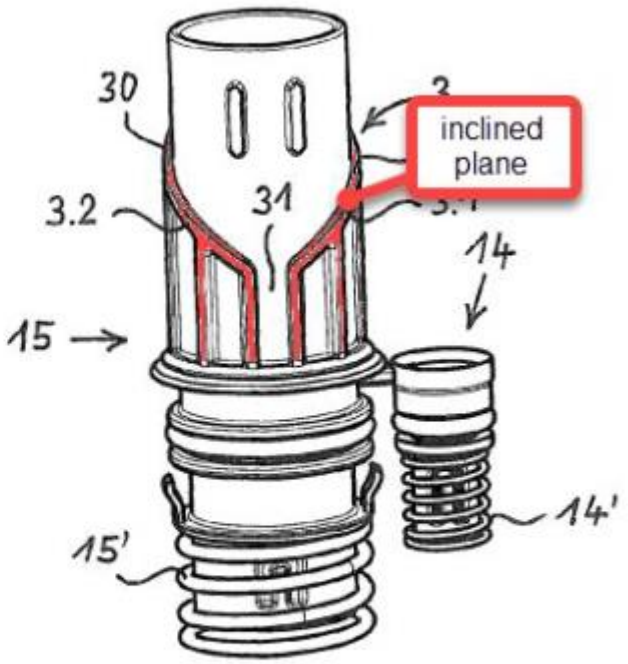


Fig. 29

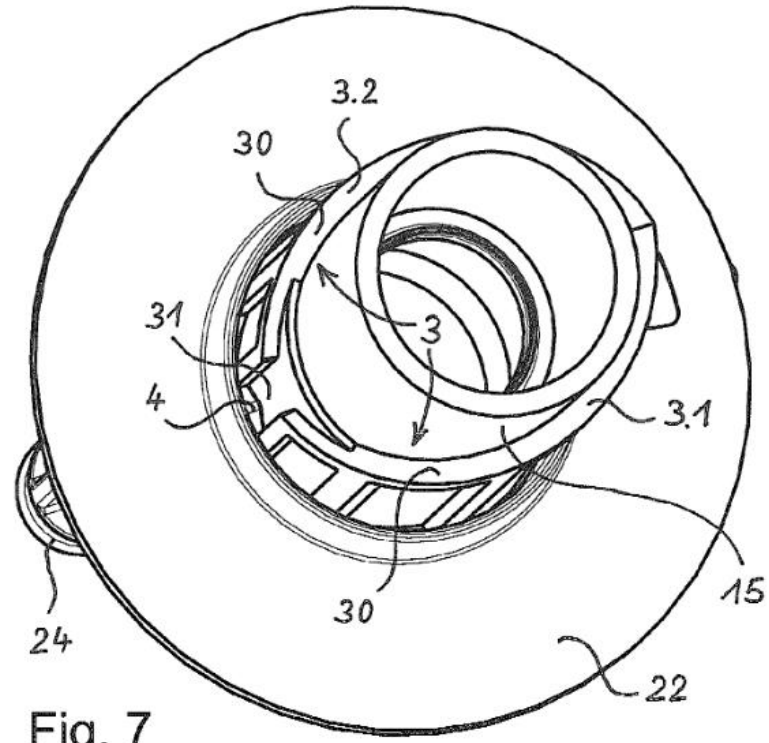
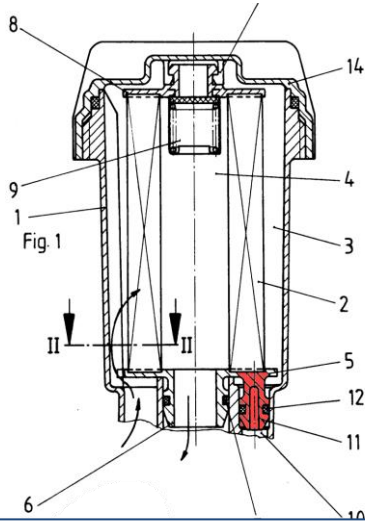


Fig. 7

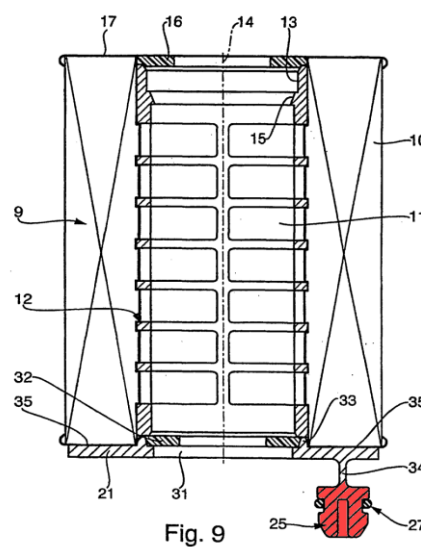
'203 Patent Overview

- The prior art embodiments are consistent with the ordinary meaning of eccentric



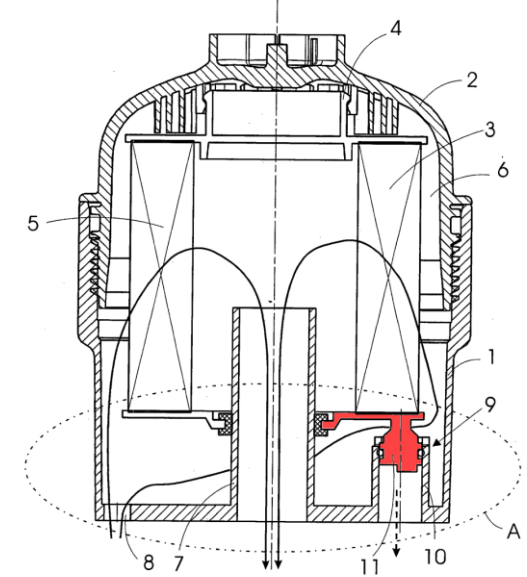
“This document shows an oil filter comprising a filter housing and a ring filter insert, which is arranged therein so as to be capable of being replaced. On its lower front panel, the ring filter insert has an eccentric bolt as closure for an eccentric outlet, which is provided in the bottom of the filter housing and which provides for an emptying of the filter housing in response to a replacement of a filter insert.

Ex. 1001 (203 patent) at 1:26-30; Surreply 7



“This document also shows a liquid filter comprising a filter housing a ring filter insert. On its lower front panel, the ring filter insert has an eccentric bolt for closing an outlet, which is arranged eccentrically in the bottom of the filter housing and through which the filter housing is emptied when the filter insert is replaced.”

Ex. 1001 (203 patent) at 1:49-54; Surreply 7



“In the case of this liquid filter, the corresponding ring filter insert also has an eccentric bolt on its lower front panel as first press-lock element for closing an outlet as second press-lock element.”

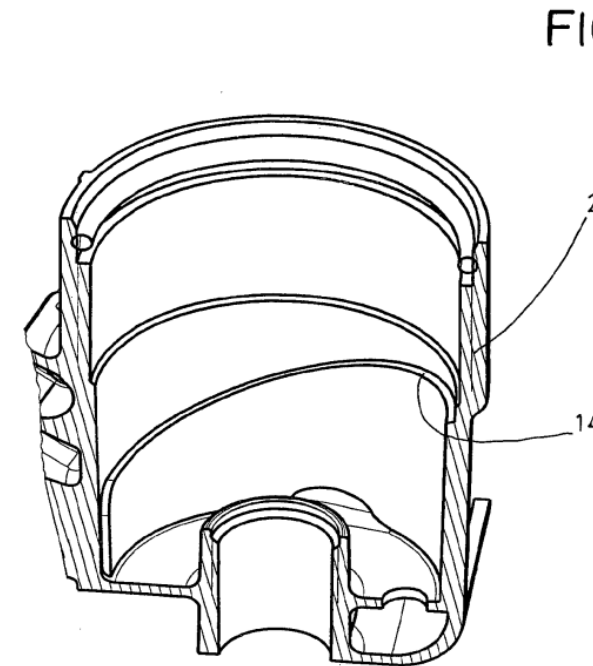
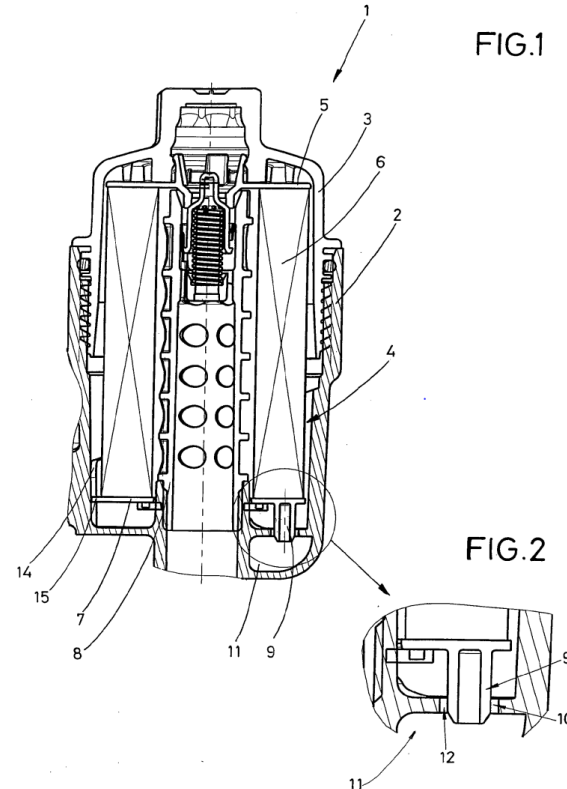
Ex. 1001 (203 patent) at 1:65-2:1; Surreply 7

'203 Patent Overview

“The closest prior art [DE-227] teaches [all the elements except] the **inclined plane or nose** being arranged on either of the inner circumference of the ring filter insert or the outer circumference of a filter housing part arranged inside the ring filter insert nor would it have been obvious to one of ordinary skill in the art at the time of the invention to provide the inclined plane or nose in the positions recited in the claims.”

Ex. 1002 (file history) at 131-132; Pet. 21

- Prior art DE-227:



'203 Patent Overview

- '203 patent, Claim 15:

15. A ring filter insert for a liquid filter, comprising a hollow-cylindrical filter material body surrounded on front sides by top and bottom front panels and which can be replaceably arranged in a filter housing, an eccentric blocking element arranged on the bottom front panel for engaging an eccentric opening in the filter housing, first positioning means on the ring filter insert, which interact with second positioning means on the filter housing when the ring filter insert is inserted into the filter housing and which are arranged to bring the blocking element into engagement with the eccentric opening, the first positioning means being one of an inclined plane and a protruding nose, with the second positioning means being the other of the inclined plane and the protruding nose, the inclined plane and the nose arranged to be moved in relation to each other in such a way that they slide along each other and bring the blocking element into engagement with the eccentric opening, by rotating the ring filter insert relative to the filter housing, the first positioning means being one of embodied and arranged on an inner circumference of the ring filter insert.

Summary of Prior Art and Ordinary Knowledge

Summary: Honermann (Ex. 1006)

- Honermann:

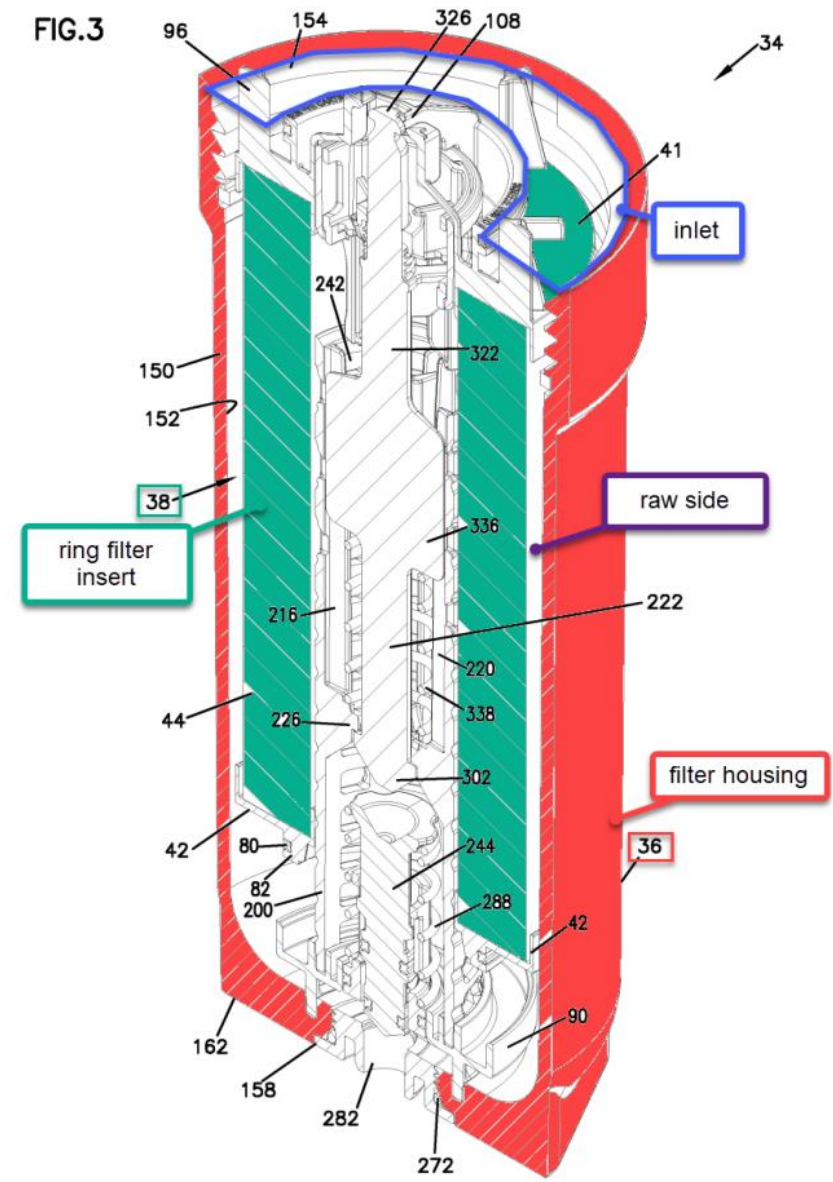
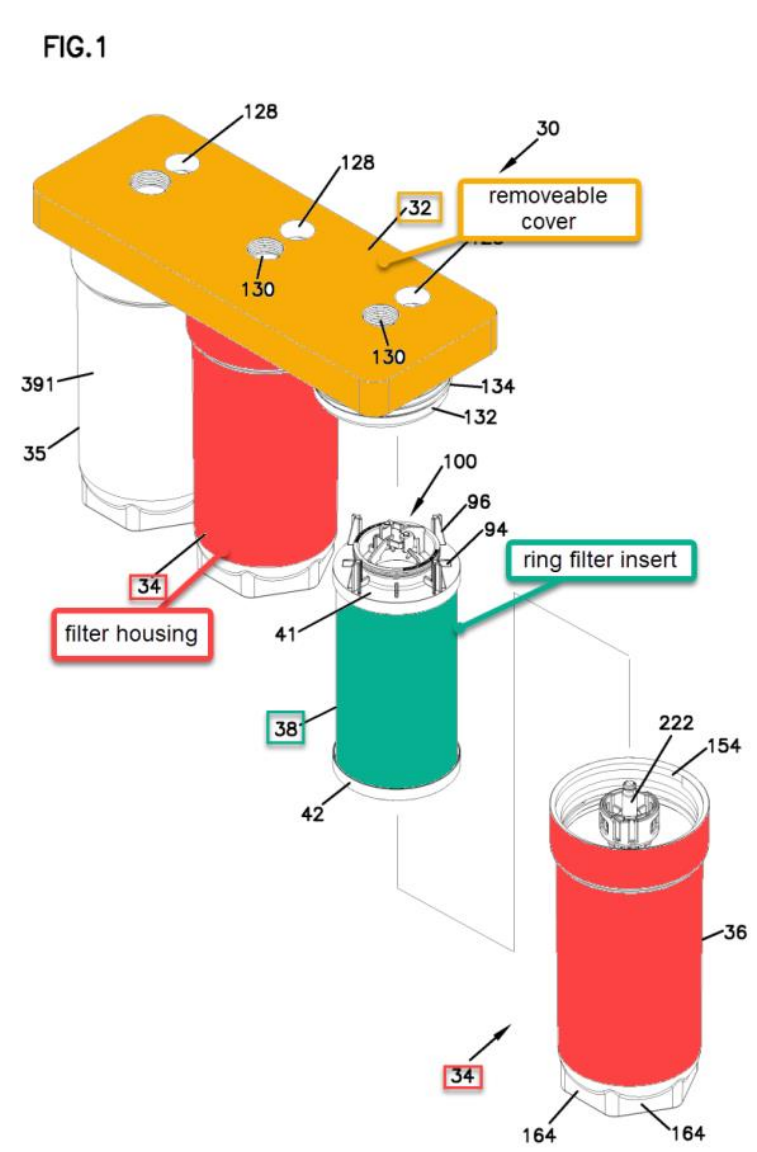
“Filters are commonly used in connection with lubrication systems and fuel systems for internal combustion engines, and hydraulic systems for heavy-duty equipment. Filters are also used in many other types of liquid systems. In these types of systems, the filter is changed periodically. In the art, there are at least two standard types of filters used. One type is a spin-on canister filter, while the other is a bowl-cartridge filter.”

“Bowl-cartridge filters typically include a reusable bowl holding a replaceable filter element (filter cartridge). Bowl-cartridge filters are sometimes preferred instead of spin-on canister filters due to disposal or other issues. Bowl-cartridge filters are mounted onto a filter head, and liquid to be cleaned passes through the filter head, into the bowl, through the replaceable filter cartridge, out of the bowl, and back into the filter head. After a period of use, the bowl-cartridge filter is removed from the filter head, and the replaceable filter cartridge is removed from the reusable bowl. The old filter cartridge is discarded and replaced with a new filter cartridge. The new filter cartridge is operably-mounted into the reusable bowl to provide a refurbished bowl-cartridge filter. This refurbished bowl-cartridge filter, containing the new filter cartridge, is then mounted onto the filter head.”

Ex. 1006 (Honermann) at ¶¶3-4

Summary: Honermann (Ex. 1006)

- Honermann:



Summary: Honermann (Ex. 1006)

- Honermann:

FIG.7

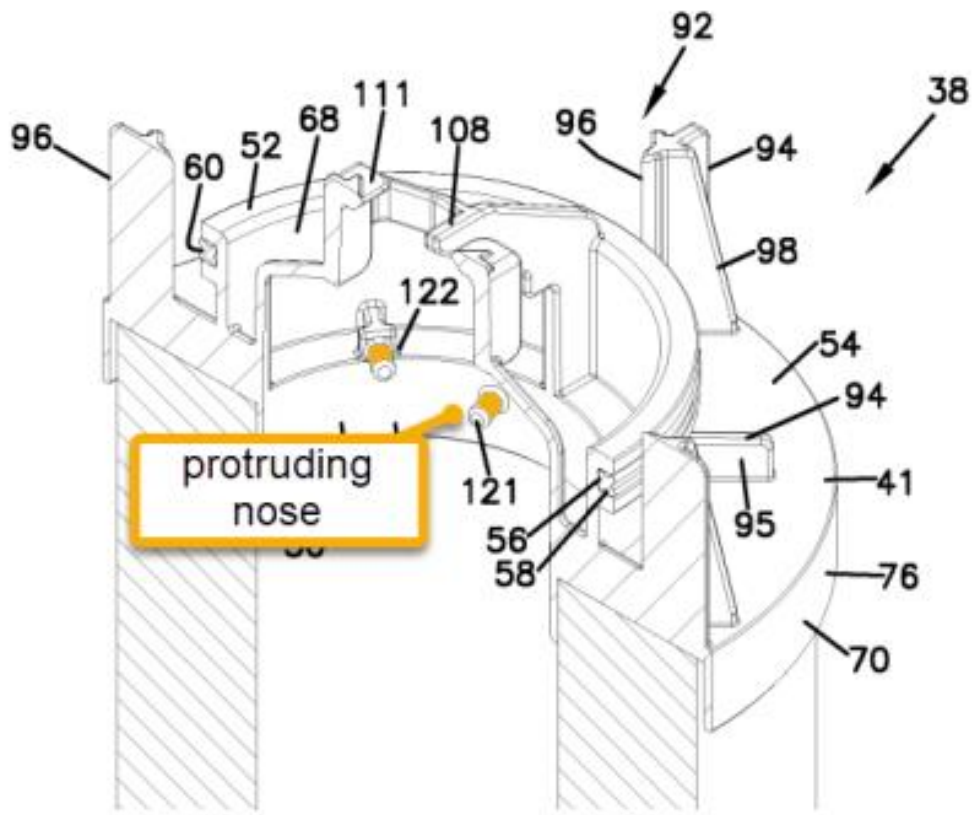
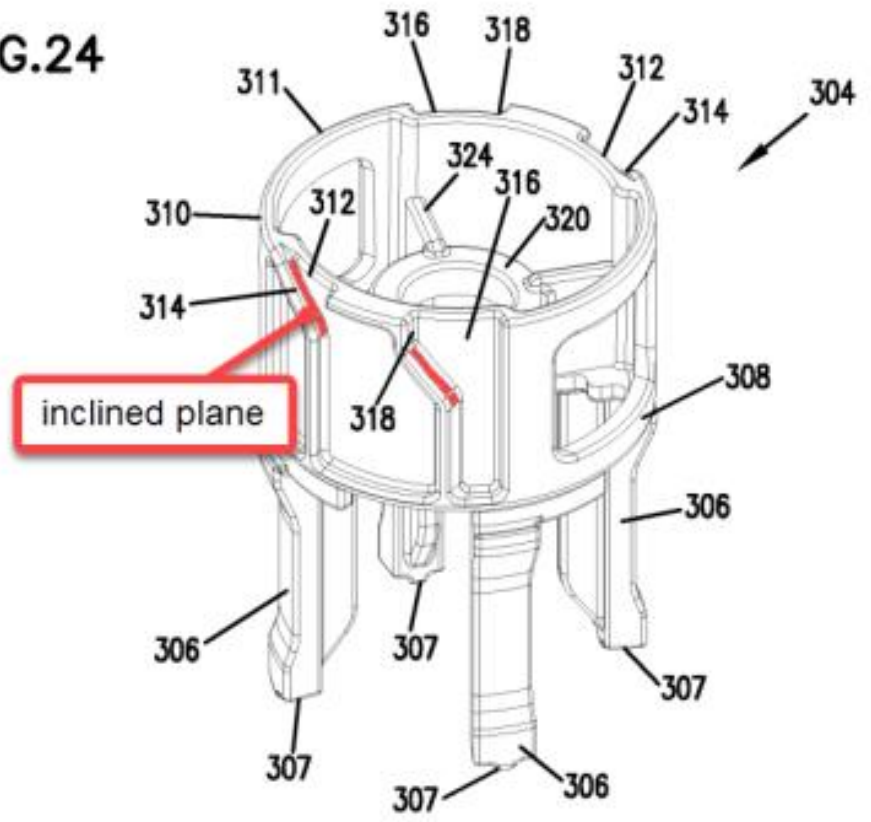


FIG.24



Summary: Honermann (Ex. 1006)

- Honermann:

FIG.19

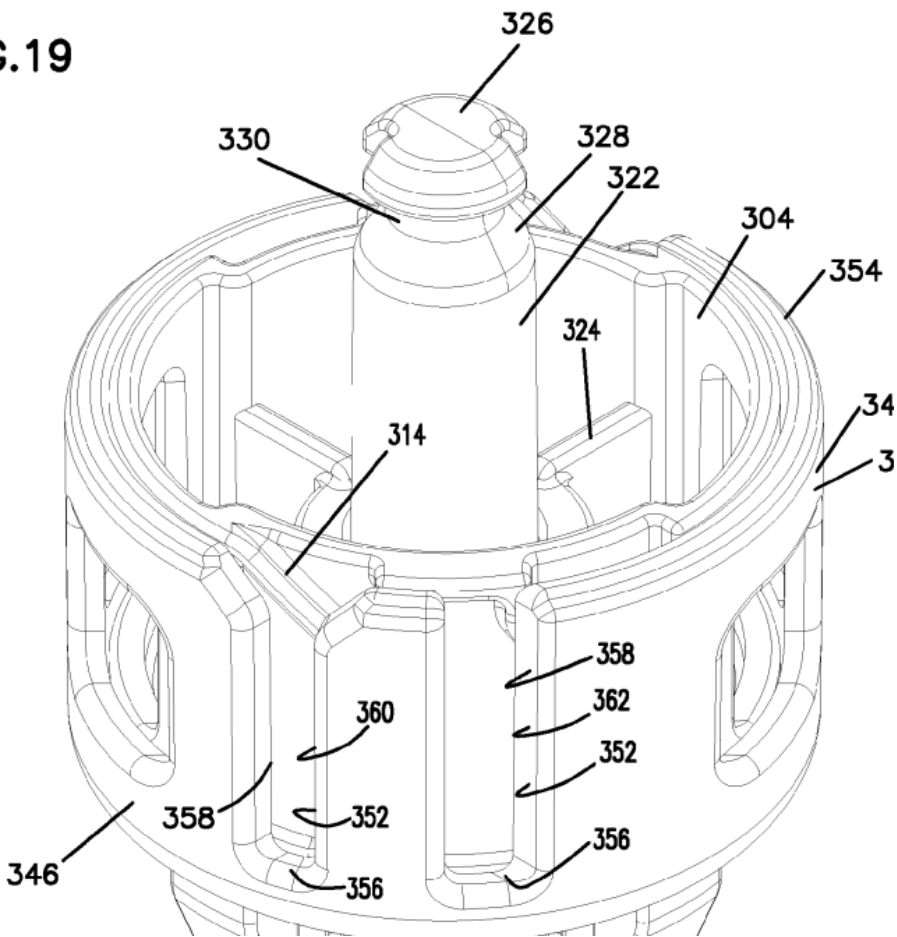
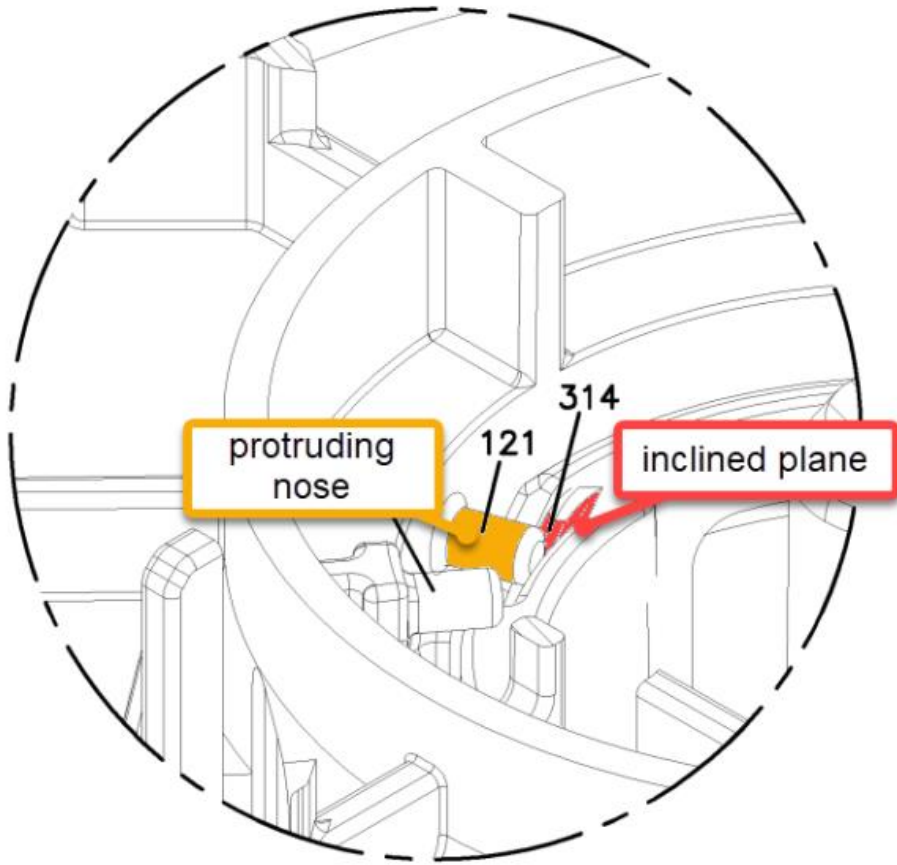


FIG.30

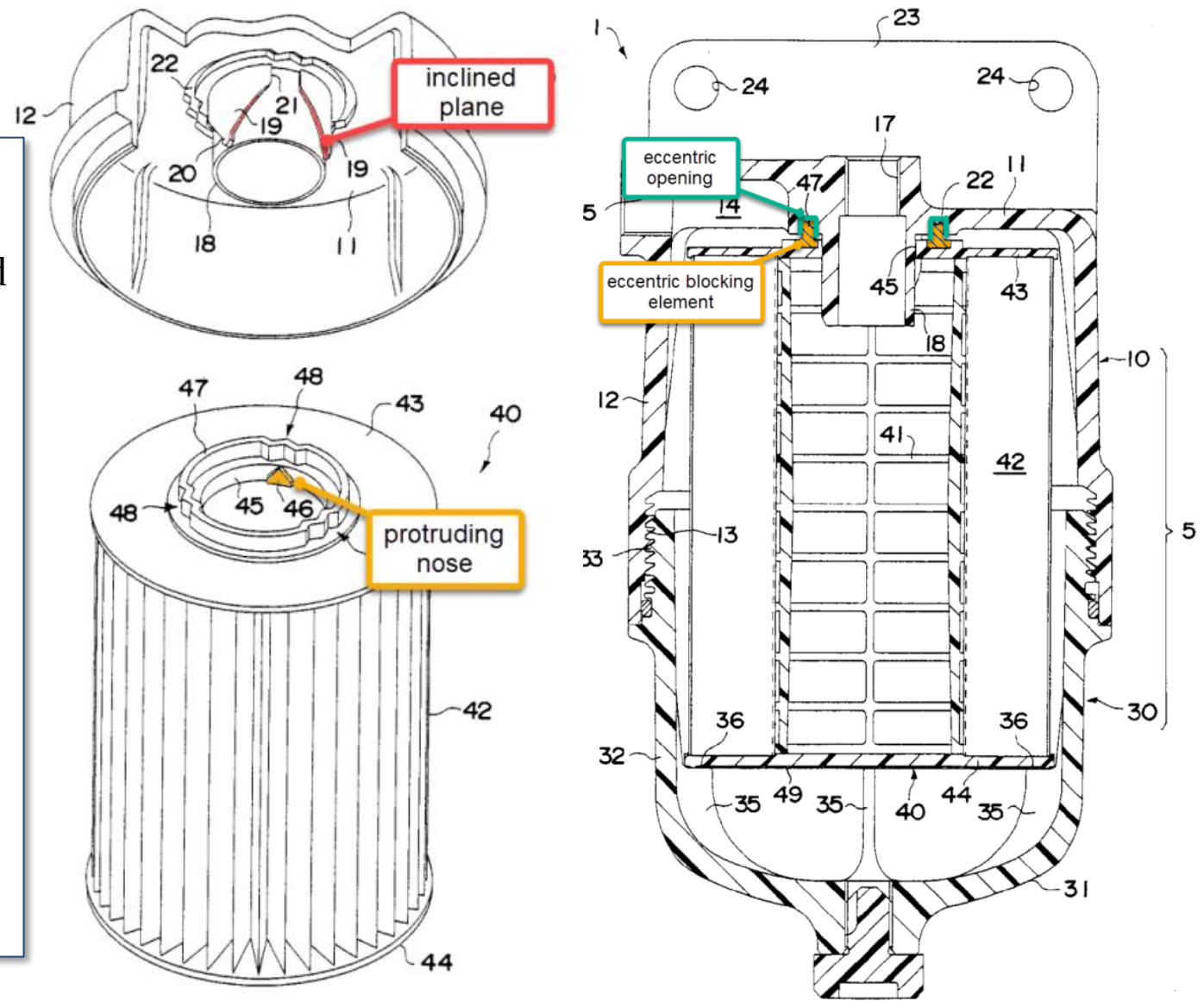


Summary: Yokoyama (Ex. 1008)

- Yokoyama:

“As a result, the three locking protrusions 46 provided on the upper plate 43 are guided by the side surfaces 19a of the three pleated portions 19 provided on the upper case half 10, and move upward (At this time, the filter element 40 will rotate slightly in the twisting direction), and they fit into depressions 21 formed between two adjacent pleated portions 19, respectively. ...

In addition, in this state in which each of the locking protrusions 46 of the filter element 40 is inserted into the depressions 21 formed between the adjacent pleated portions 19 of the upper case half 10, a sealing member 47 provided on the upper plate 43 of the filter element 40 fits into the grooves 22 of the upper case half 10.”



Ex. 1008 (Yokoyama) at ¶¶21-22; Pet. 37, 42

Summary: Cline (Ex. 1009)

- Cline:

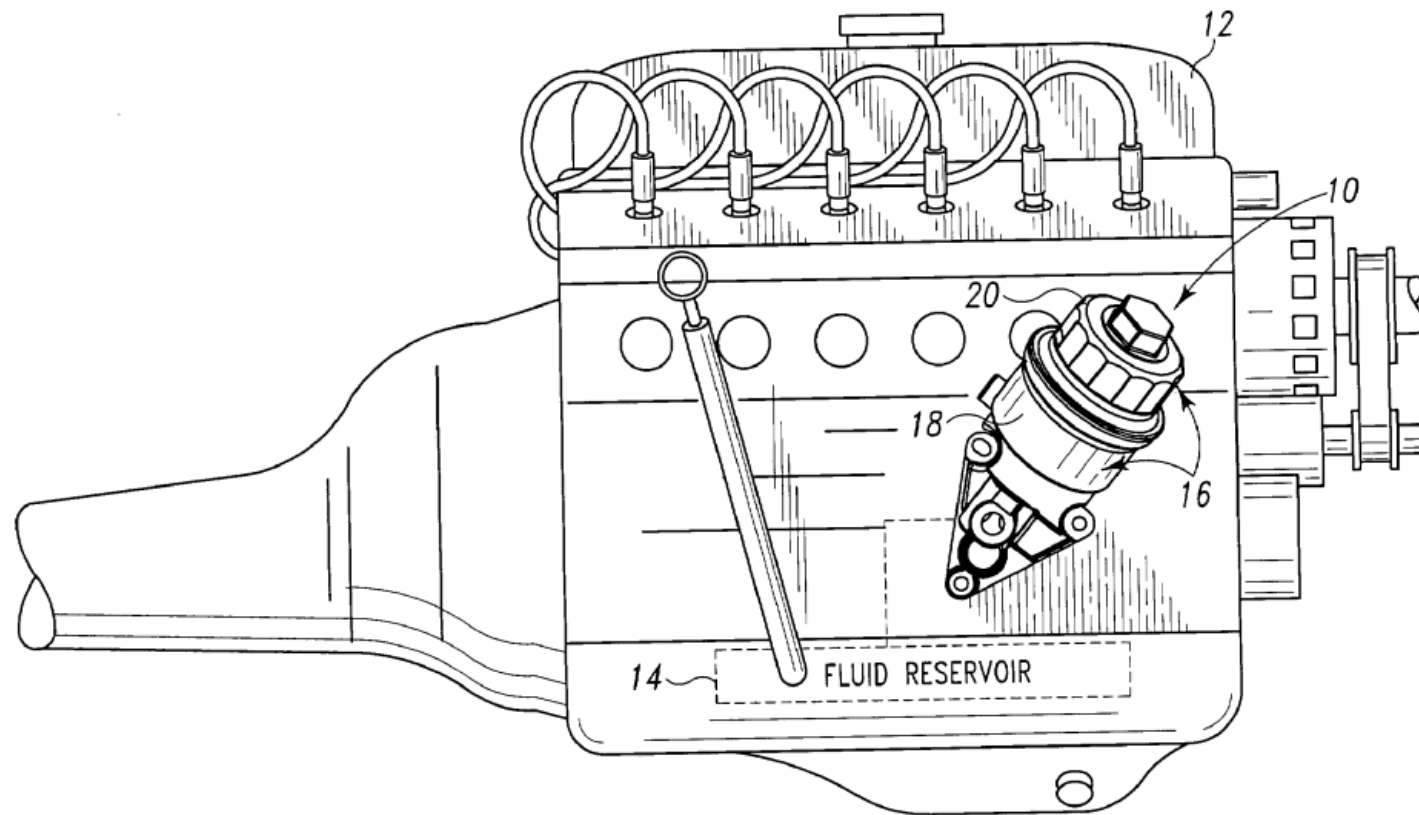
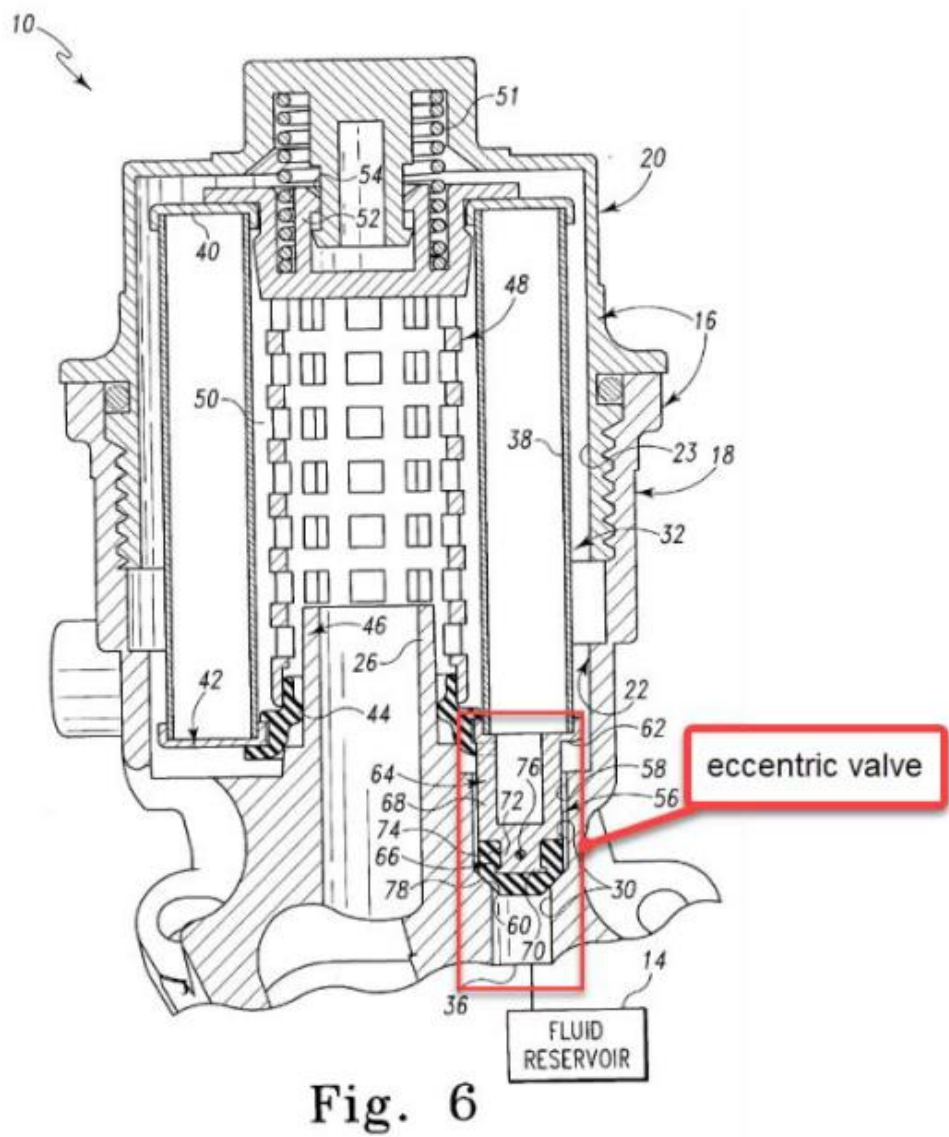


Fig. 1

Summary: Cline (Ex. 1009)

- Cline:



“In particular, when the filter element 32 is positioned in the filter chamber 23, the quick-drain valve member 56 extends in the valve chamber 58 so as to block fluid flow from the interior region 22 to the fluid reservoir 14. The quick-drain valve member 56 is removed from the valve chamber 58 and disengages the valve seat 60 to allow a flow of fluid from the interior region 22 through the quick-drain outlet 36 to the fluid reservoir 14 when the filter element 32 is removed from the interior region 22, as shown in FIG. 7.”

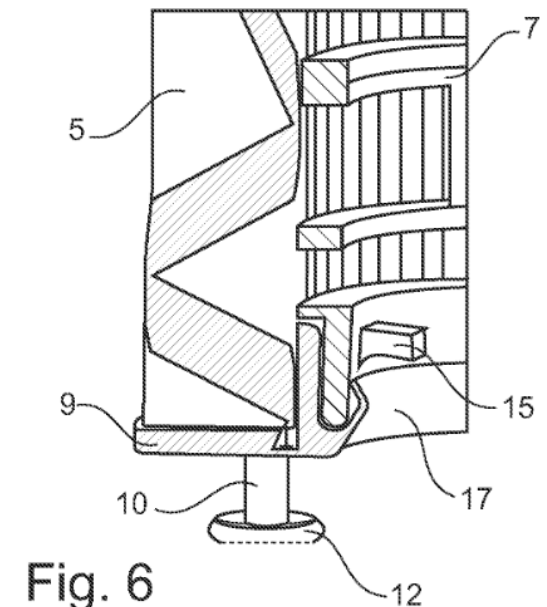
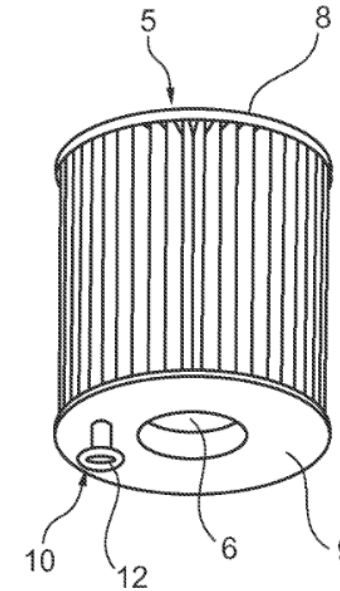
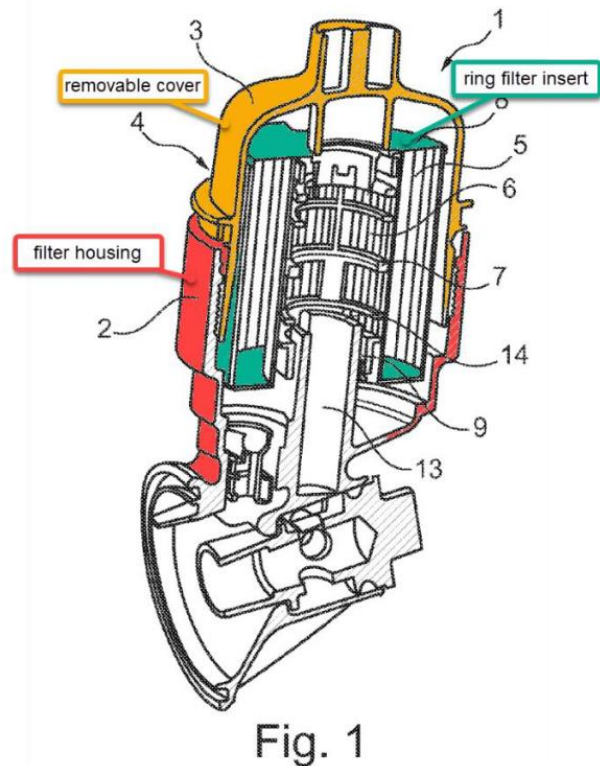
Ex. 1009 (Cline) at ¶25; Pet. 62

Summary: Deschamps (Ex. 1010)

- Deschamps:

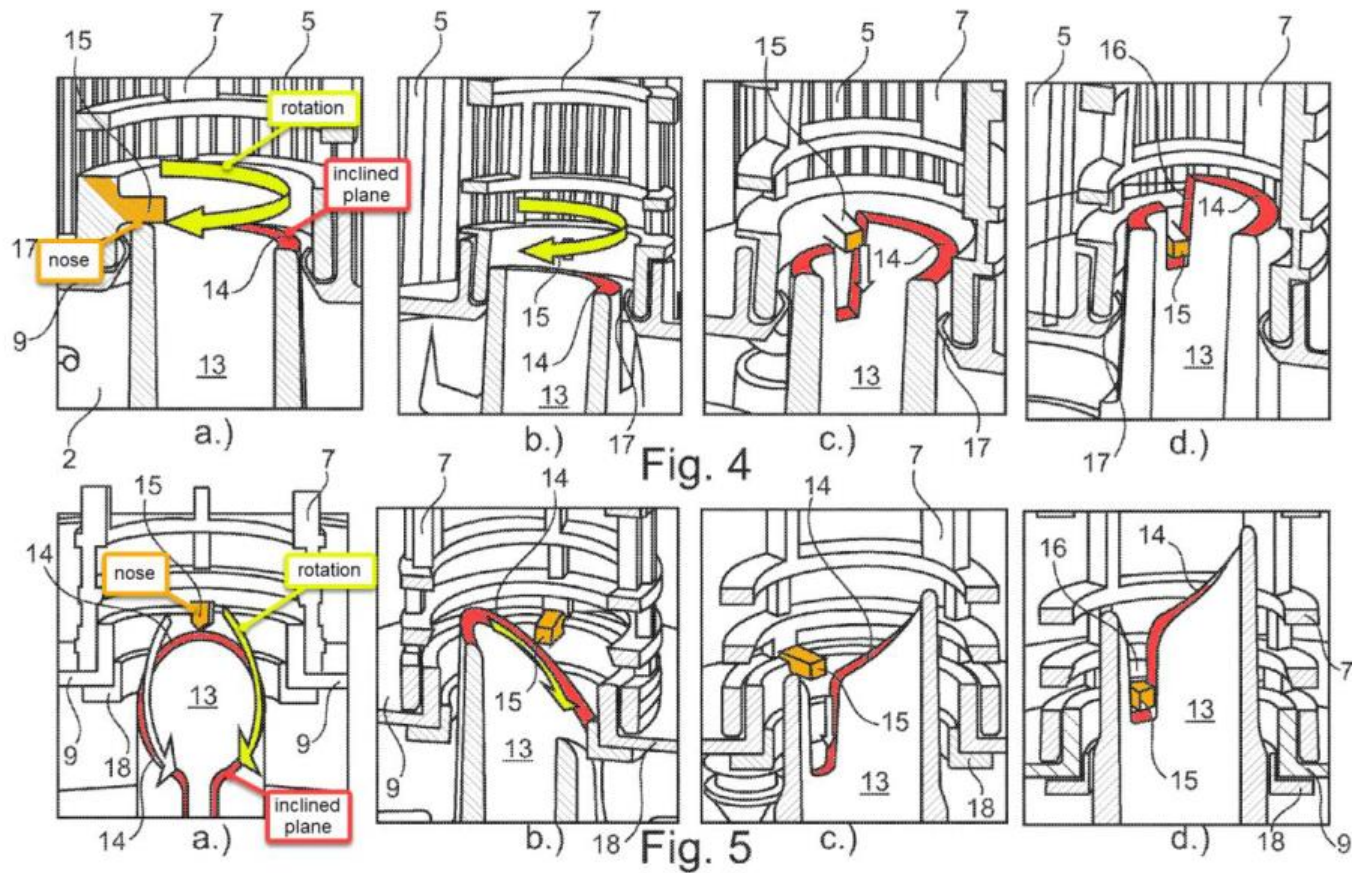
“A pin 10 which projects from the lower end disc 9 in the axial direction is provided (cf. for example FIGS. 6 and 7), which preferably engages in a leakproof manner in a channel 11 on the filter housing crucible side and thereby seals it when the filter device 1 is completely assembled. To this end, a sealing element formed in a known manner, for example an O-ring seal 12, can be provided on the pin 10. The channel 11 is in most cases a no-load channel.”

Ex. 1010 (Deschamps) at ¶33; Pet. 16



Summary: Deschamps (Ex. 1010)

- Deschamps:

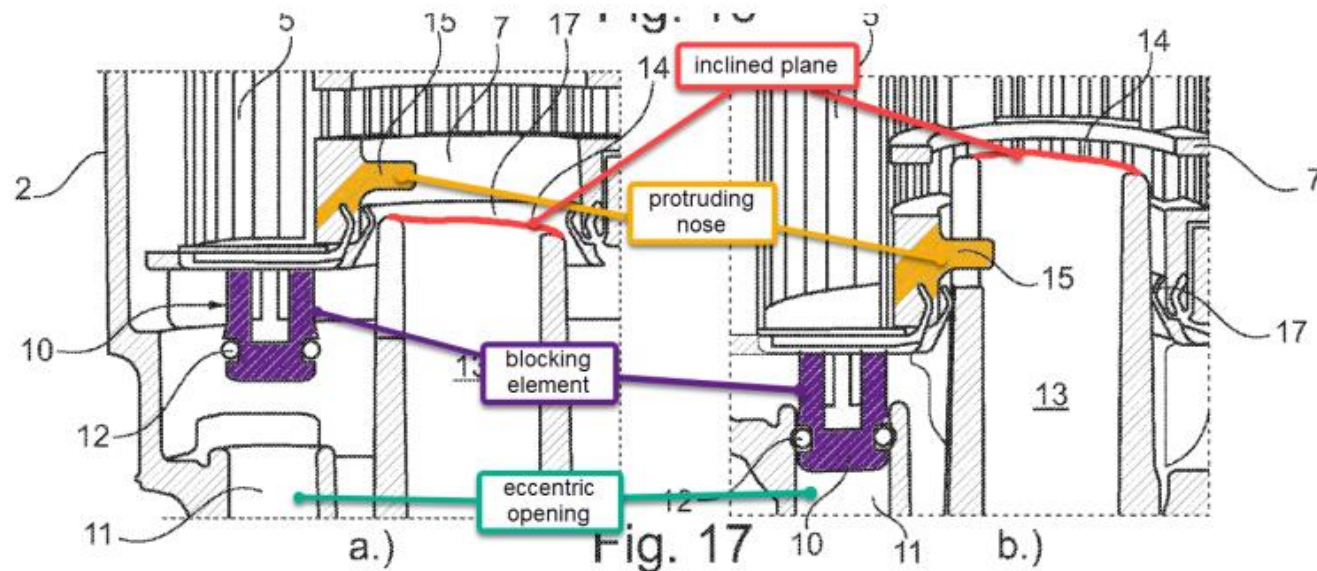


“First, in assembly step 4 a, the ring filter element 5 is inserted into the filter housing crucible 2 until it rests with the guide element 15 on the guide contour 14 on the dome side. The ring filter element 5 is then rotated, for example by screwing on the filter housing cover 3, so that the guide element 15, as shown in FIG. 4 b, slides along the guide contour 14 as far as the axial groove 16, which is preferably arranged between the highest and the lowest point of the ramp-like guide contour 14. After it has reached the axial groove 16, the pin 10 is aligned coaxially flush with the channel 11, so that the ring filter element 5 can be pushed in the axial direction with the guide element 15 into the axial groove 16 and at the same time with the pin 10 into the channel 11.”

Ex. 1010 (Deschamps) at ¶35; Pet. 18

Summary: Deschamps (Ex. 1010)

- Deschamps:

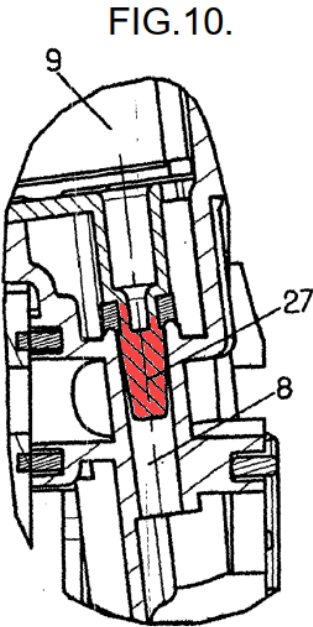
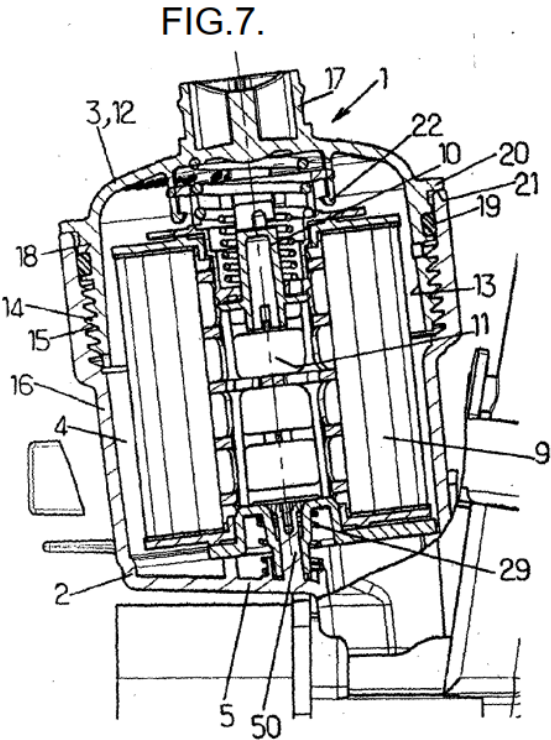
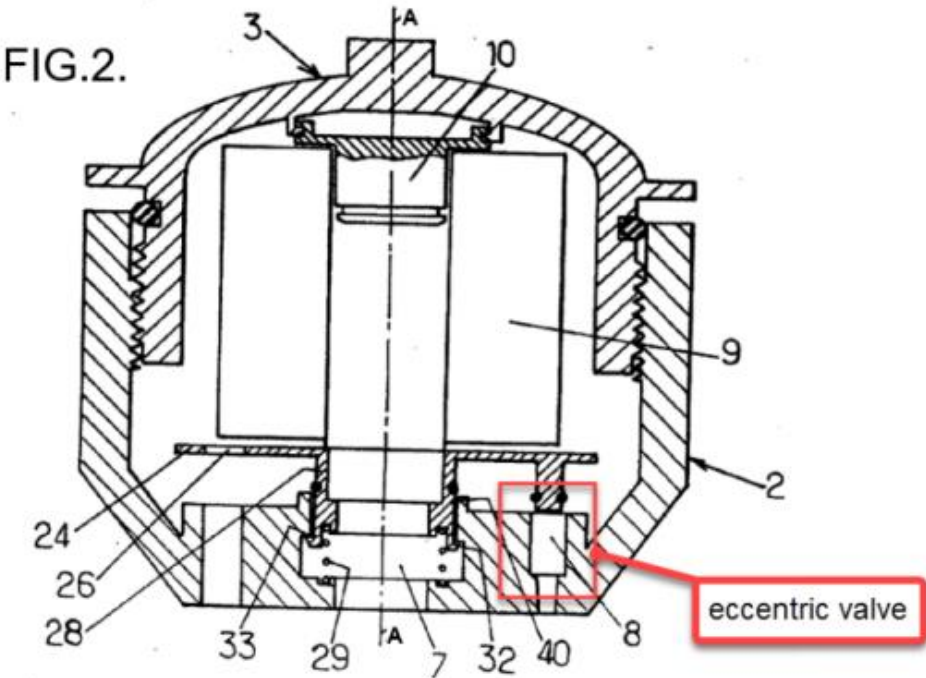


“[I]f the ring filter element 5 has reached its final rotary position and can be pushed axially downwards into this position. One condition for this axial displacement of the ring filter element 5 over the dome 13 is that the guide element 15 on the ring filter element side is in the axial groove 16, which means at the same time that the pin 10 can be arranged coaxially flush with the channel 11 on the filter housing crucible side and introduced into the channel. This is shown for example in FIGS. 17 a and 17 b.”

Ex. 1010 (Deschamps) at ¶43; Pet. 56

Summary: Brisson (Ex. 1005)

- Brisson:



**Ground 1: Yokoyama's sealing members are "eccentric"
(Claim 15)**

Ground 1/Claim 15: Claim Construction of “eccentric”

Proposed Construction	
Petitioner	Patent Owner
Plain and Ordinary Meaning: “not located at the center”	“having an axis not located in the geometric center”

- PO’s construction is **inconsistent with** the intrinsic and extrinsic evidence. *Sony v. Thorner*.
- Petitioner’s construction: “not located at the center”
 - **Consistent** with the specification’s only embodiment of eccentric blocking elements
 - The **same definition** found in **PO’s dictionary**

Ground 1/Claim 15: Claim Construction of “eccentric”

- Plain meaning of eccentric:

eccentric 1 of 2 adjective

ec·cen·tric ik-'sen-trik ek-

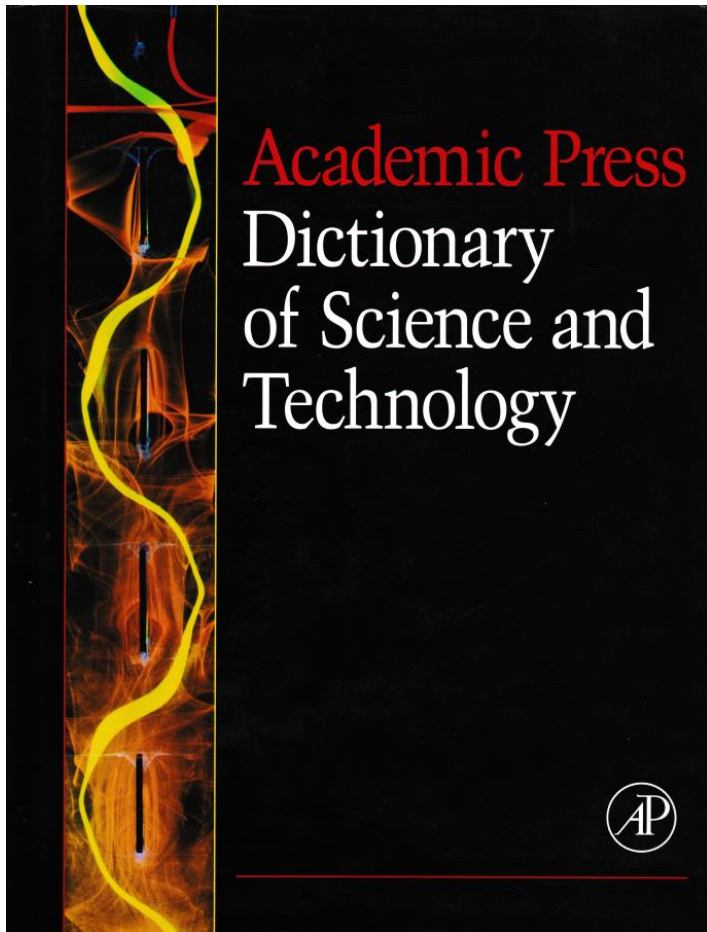
[Synonyms of *eccentric*](#) >

- 1 a** : deviating from conventional or accepted usage or conduct especially in odd or [whimsical](#) ways
an *eccentric* millionaire
- b** : [deviating](#) from an established or usual pattern or style
eccentric products
- 2 a** : deviating from a circular path
especially : **ELLIPTICAL sense 1**
an *eccentric* orbit
- b** : located elsewhere than at the [geometric](#) center
also : having the axis or support so located
an *eccentric* wheel

Reply 3; Ex. 1018 (Merriam-Webster)

Ground 1/Claim 15: Claim Construction of “eccentric”

- Plain meaning of eccentric:



ECC earth continuity conductor.

eccentric *Science*. **1.** located away from a center. **2.** of two circles, having different centers. **3.** of a body in motion, deviating from an orbit or path. *Mechanical Devices*. see ECCENTRIC ROD.

eccentric angle *Mathematics*. the angle measured at the center of an ellipse (or hyperbola) from the line passing through the foci to the line from the center to a point on the ellipse (or hyperbola). Equivalently the angle ϕ that appears in the parametric equations of the ellipse or hyperbola.

Ex. 1019; Reply 4

Ground 1/Claim 15: Claim Construction of “eccentric”

- **Surreply:**

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

Surreply 1



“The words of a claim are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history. There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution. ...

It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must ‘clearly express an intent’ to redefine the term.”

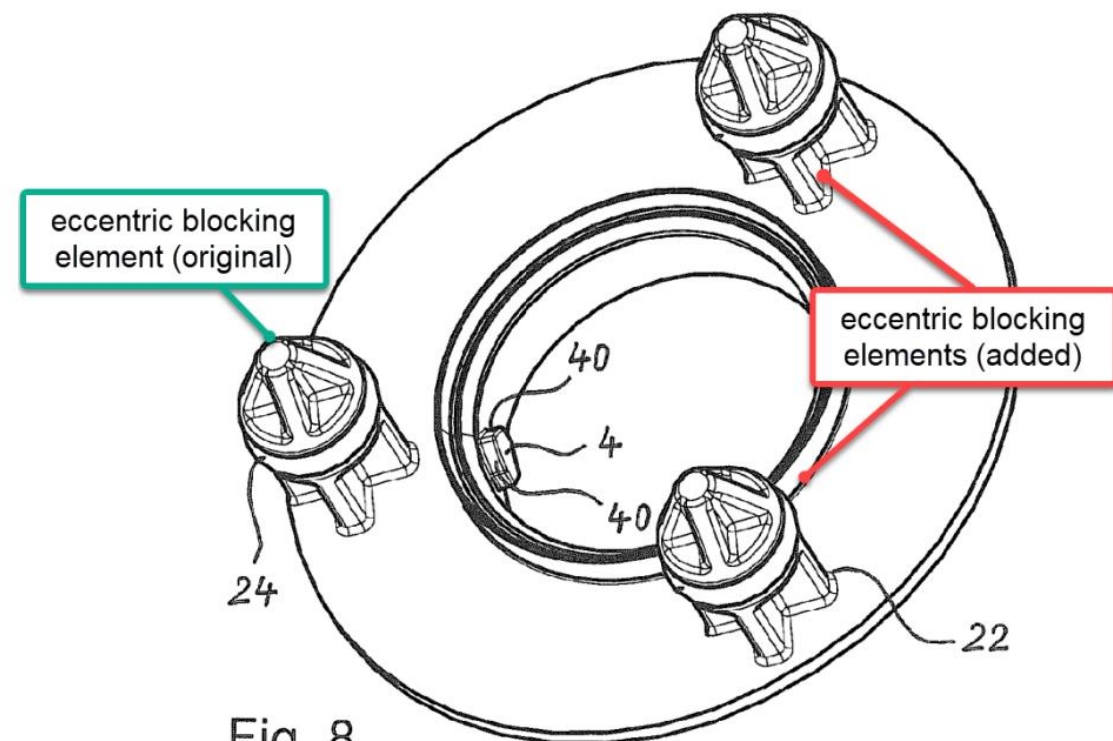
Thorner v. Sony Corp., 669 F.3d 1362, 169 (Fed. Cir. 2012); Reply 8

Ground 1/Claim 15: Claim Construction of “eccentric”

- Plain meaning consistent with the specification
- PO’s construction excludes “concentrically arranged” blocking elements *POR 24*

“In the context of the invention, it 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.”

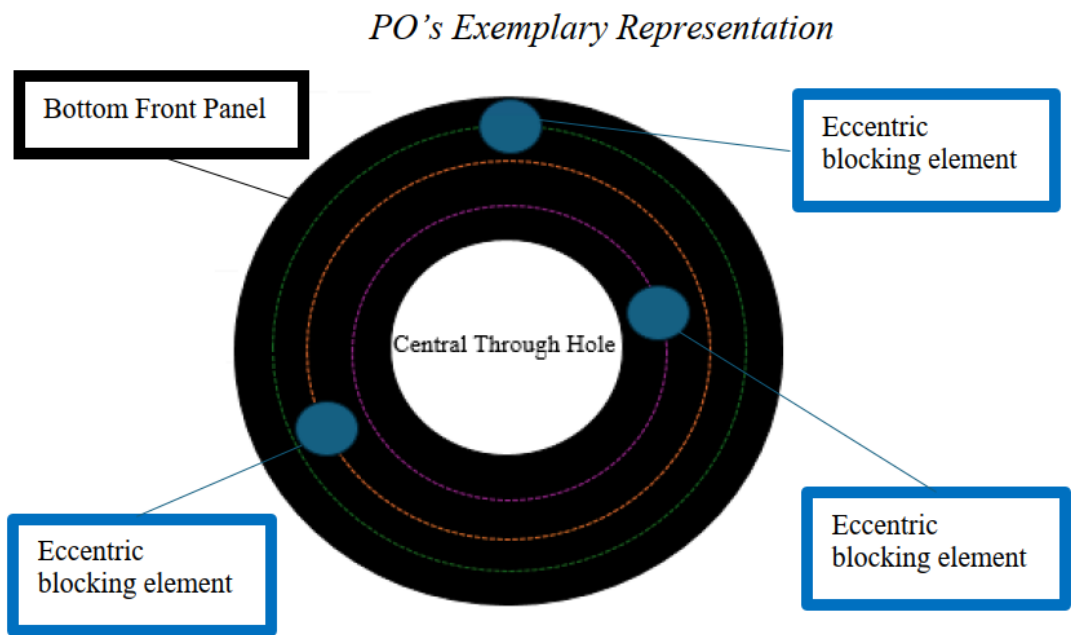
Ex. 1001 (203 patent) at 5:66-6:3; Reply 5



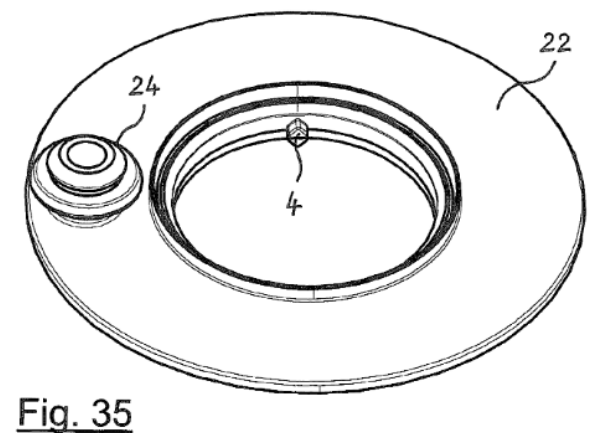
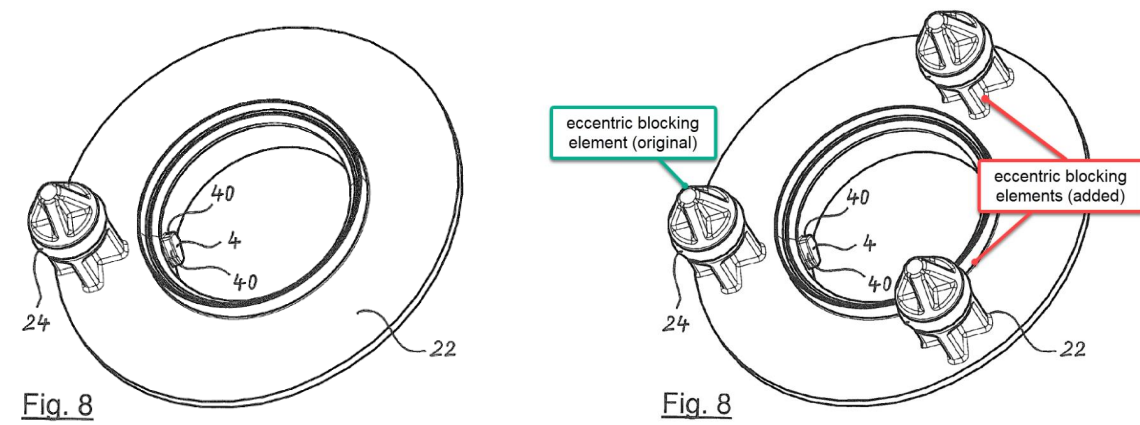
Ex. 1001 (203 patent) at Fig. 8 (**modified**)

Ground 1/Claim 15: Claim Construction of “eccentric”

- **Surreply:** the blocking elements could be arranged non-concentrically *surreply 3*
- 203 patent does not disclose such an arrangement:

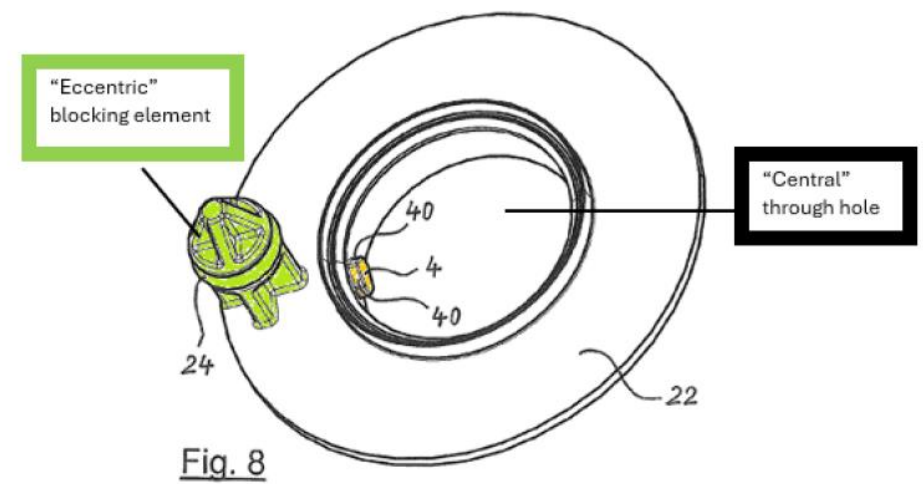
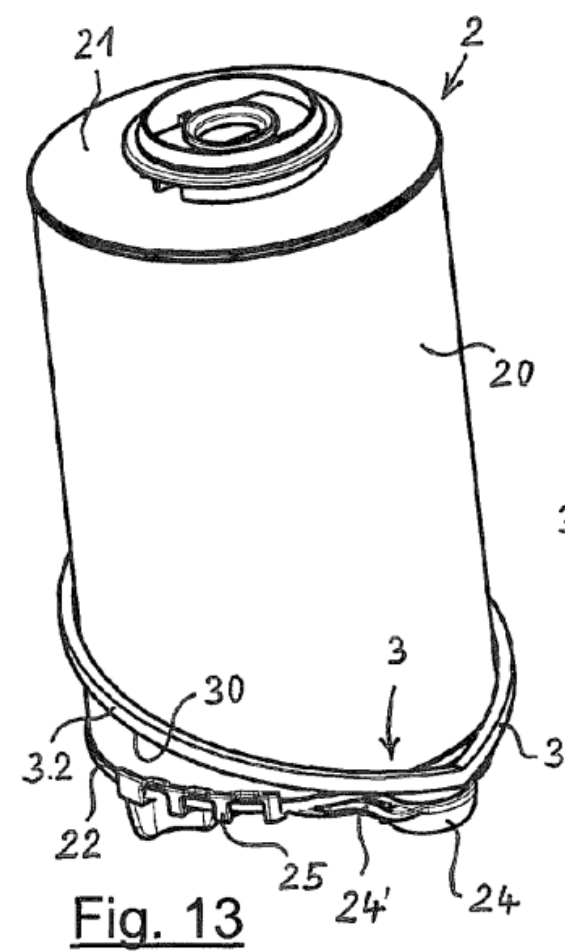


Surreply 3



Ground 1/Claim 15: Claim Construction of “eccentric”

- The patent’s embodiments are consistent with the ordinary meaning of eccentric



“The through hole, on the inner circumference of which the nose 4 is integrally molded with two sliding surfaces 40, which are arranged diagonally, is located in the center of the front panel 22.”

Ex. 1001 (203 patent) at 8:53-56

Ground 1/Claim 15: Claim Construction of “eccentric”

- The patent’s embodiments are consistent with the ordinary meaning of eccentric

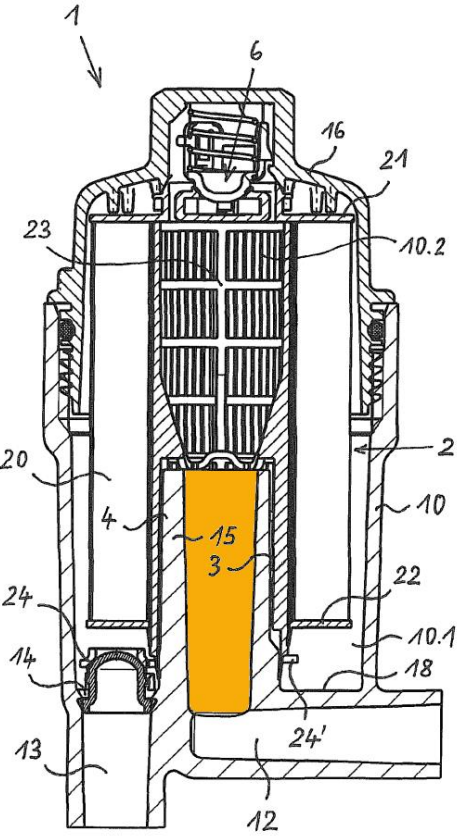


Fig. 1

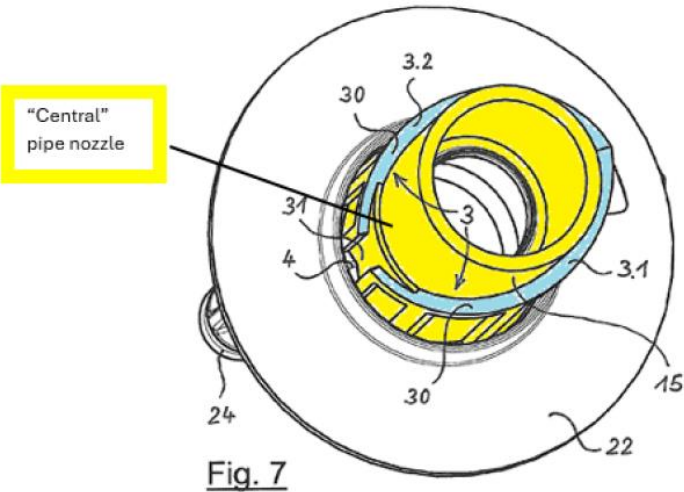


Fig. 7

“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.”

“A pipe nozzle 15, which is arranged centrally in the filter housing 10 of the liquid filter 1 so as to be axially displaceable and which is prestressed in upwards direction by means of a spring 15’.”

Ex. 1001 (203 patent) at 8:12-14, 21-24; Surreply 5

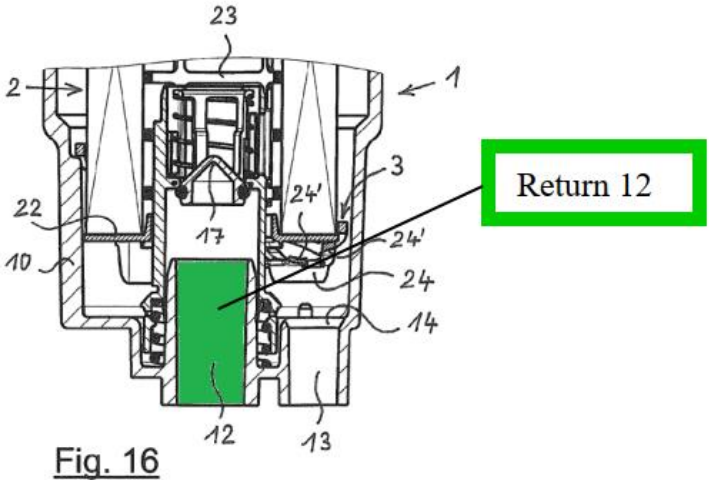


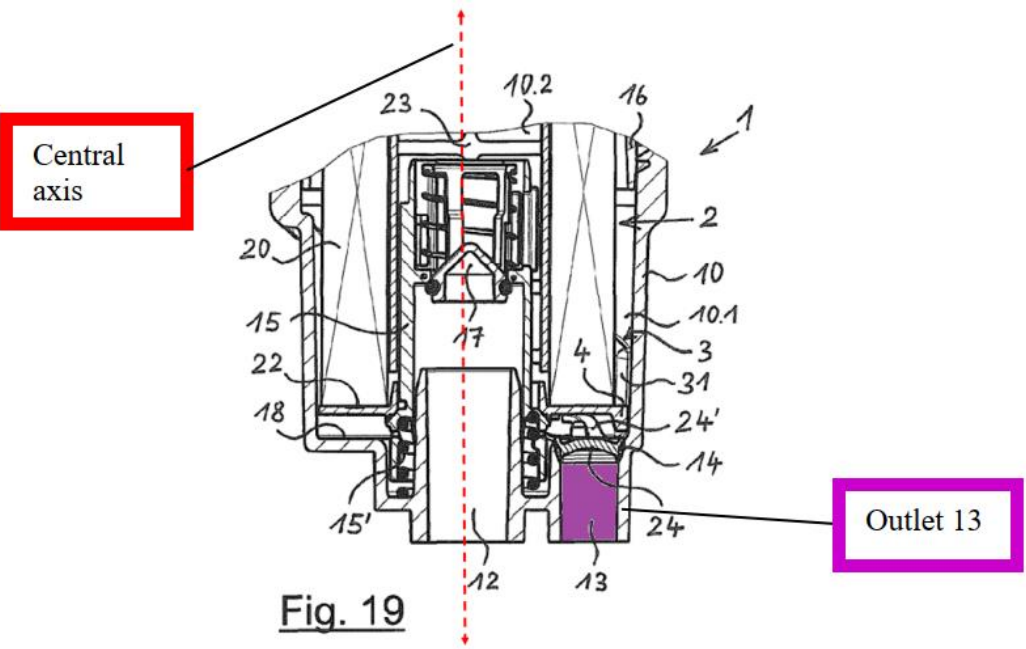
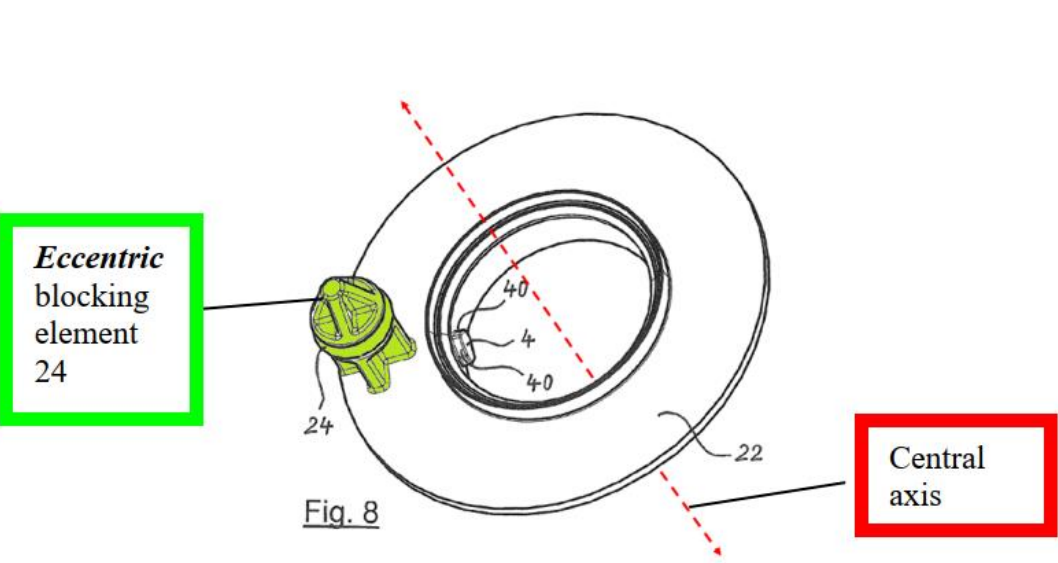
Fig. 16

“The return 12 is visible in the center of the bottom 18 of the filter housing 10.”

Ex. 1001 (203 patent) at 9:21-22; Surreply 5

Ground 1/Claim 15: Claim Construction of “eccentric”

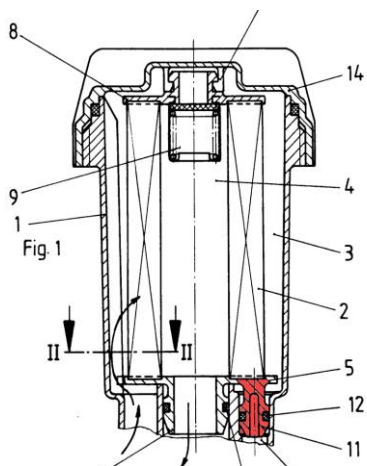
- The patent’s embodiments are consistent with the ordinary meaning of eccentric



Surreply 4-6

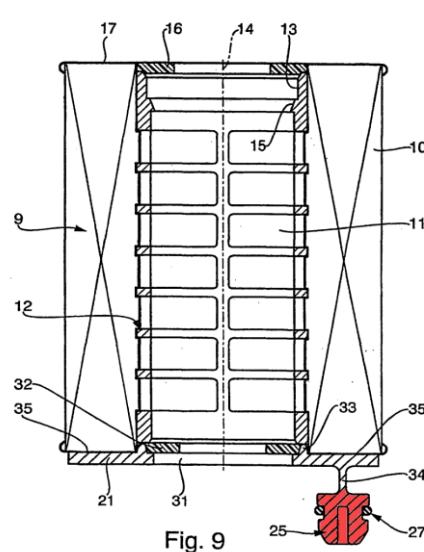
Ground 1/Claim 15: Claim Construction of “eccentric”

- The prior art embodiments are consistent with the ordinary meaning of eccentric



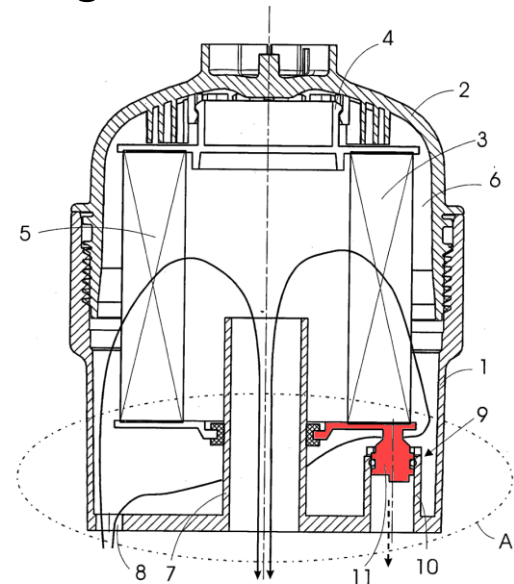
“This document shows an oil filter comprising a filter housing and a ring filter insert, which is arranged therein so as to be capable of being replaced. On its lower front panel, the ring filter insert has an eccentric bolt as closure for an eccentric outlet, which is provided in the bottom of the filter housing and which provides for an emptying of the filter housing in response to a replacement of a filter insert.

Ex. 1001 (203 patent) at 1:26-30; Surreply 7



“This document also shows a liquid filter comprising a filter housing a ring filter insert. On its lower front panel, the ring filter insert has an eccentric bolt for closing an outlet, which is arranged eccentrically in the bottom of the filter housing and through which the filter housing is emptied when the filter insert is replaced.”

Ex. 1001 (203 patent) at 1:49-54; Surreply 7



“In the case of this liquid filter, the corresponding ring filter insert also has an eccentric bolt on its lower front panel as first press-lock element for closing an outlet as second press-lock element.”

Ex. 1001 (203 patent) at 1:65-2:1; Surreply 7

Ground 1/Claim 15: Claim Construction of “eccentric”

- Yokoyama’s filter would operate effectively in any orientation:

“[A] POSITA would understand that the entire filter device would operate in an identical manner if upside-down. This is because it is known that a filter device uses pressure to allow the flow of liquid through the device. This pressure is sufficient enough to allow the device to operate in either orientation.”

Ex. 1003 (Nranian Decl.) at ¶¶91; Pet. 88

“It was well understood that filter housings are oriented differently based on the spacing and servicing needs particular to a vehicle. 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. As a result, a POSITA would have understood that Yokoyama’s naming convention was flexible and not definitional. Indeed, the Cline and Brisson references, as well as the accused product, and the ’203 patent all show filters with such orientation were known in the prior art.”

Ex. 1016 (Nranian Supp. Decl.) at ¶¶16; Reply 13

Ground 1/Claim 15: Claim Construction of “eccentric”

- Petitioner’s expert:

“Further, in my opinion, because Yokoyama never talks about a drain plug, this reflects a POSITA’s understanding that the location of the drain is a design choice based on various criteria, such as the location of the vehicle components and the need to provide easy access to the oil filter for replacement, as I explained in my original declaration. In addition, placement of the drain plug in an eccentric location has other advantages, especially in an application where the housing is opened from the top, as an eccentric drain would be necessary to avoid physical interference with the outflow of the mounting bracket. Because fluid is filtered from the outside to the center of the filter, it must also flow out of the filter canister from the center. Thus, the drain must be off-center to avoid obstructing the outflow path.”

Ex. 1016 (Nranian Supp. Decl.) at ¶18; Reply 14-15

Ground 1/Claim 15: Claim Construction of “eccentric”

- Yokoyama’s filter can be operated in any orientation:

“Q. So it get filtered by 2, and that’s also via pressure; is that correct?

A. There is an – there is an oil pump in the engine, right?

Q. Uh-huh.

A. And that’s what provide the pressure. It goes toward the filter, and then the clean liquid is getting out from the center of it. ...

Q. And so the oil pump is providing pressure to push the liquid through this filter and out through the center; is that correct?

A. Right. That’s normally how the oil filtration system works.

Q. And that’s how oil filtration systems worked even before this patent, correct?

A. That’s how oil filtration system works for engines for many years. I do not – I haven’t seen one that works only based on gravity, if that’s what you’re asking.”

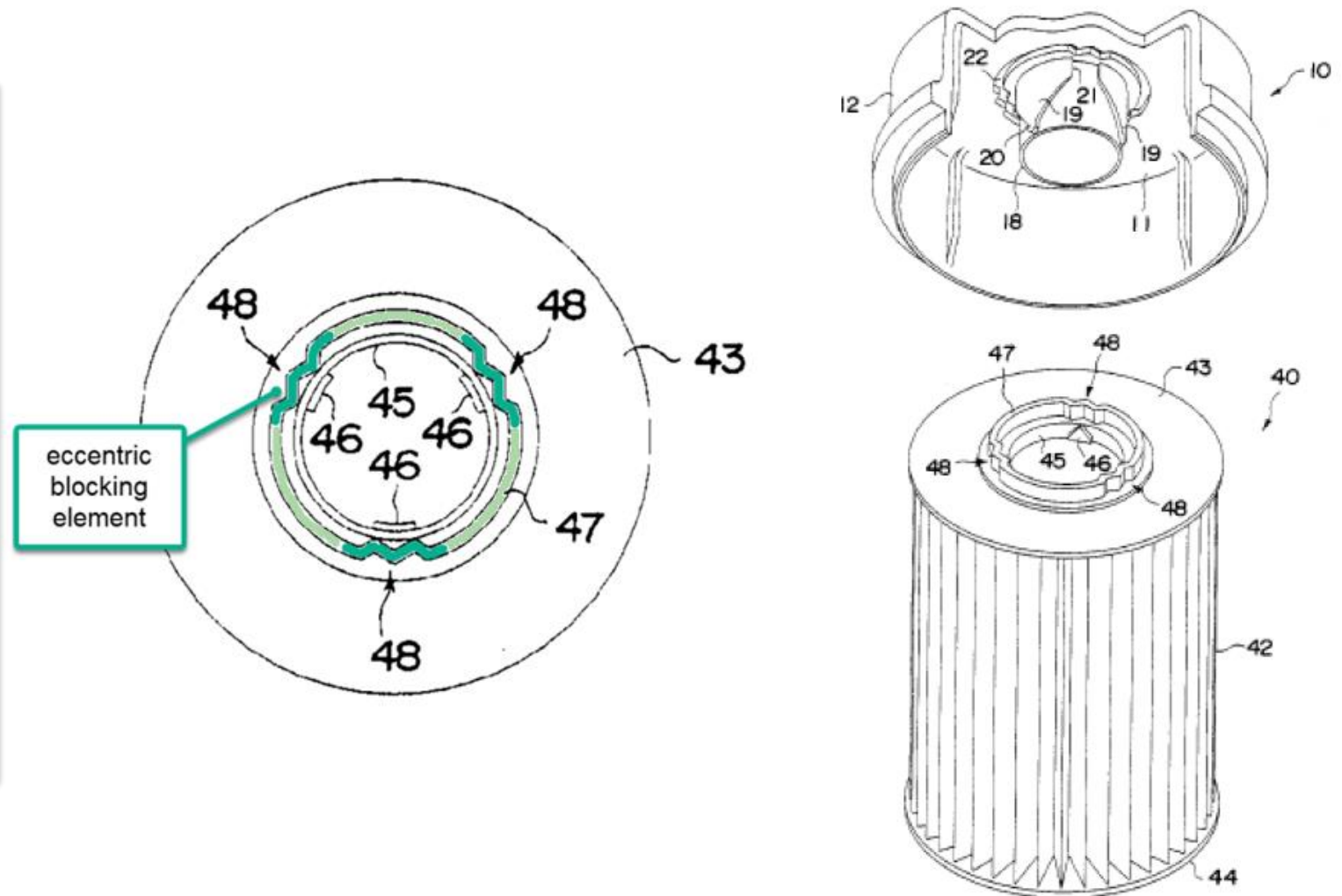
Ex. 1017 (Basirat Tr.) at 49:2-50:2; Reply 14

Ground 1/Claim 15: Yokoyama discloses “eccentric”

- No dispute that under ***Petitioner’s construction***, Yokoyama discloses “eccentric” elements

“Under the proper construction of “eccentric,” Yokoyama’s sealing member meets that definition, because as I explained in my original declaration, the W-shaped portions of the sealing member are each and together eccentric blocking elements. The arrangement of Yokoyama’s W-shaped portions is the same configuration as what the ’203 patent describes with its plurality of blocking elements.”

Ex. 1016 (Nranian Supp. Decl.) at ¶7; Reply 7

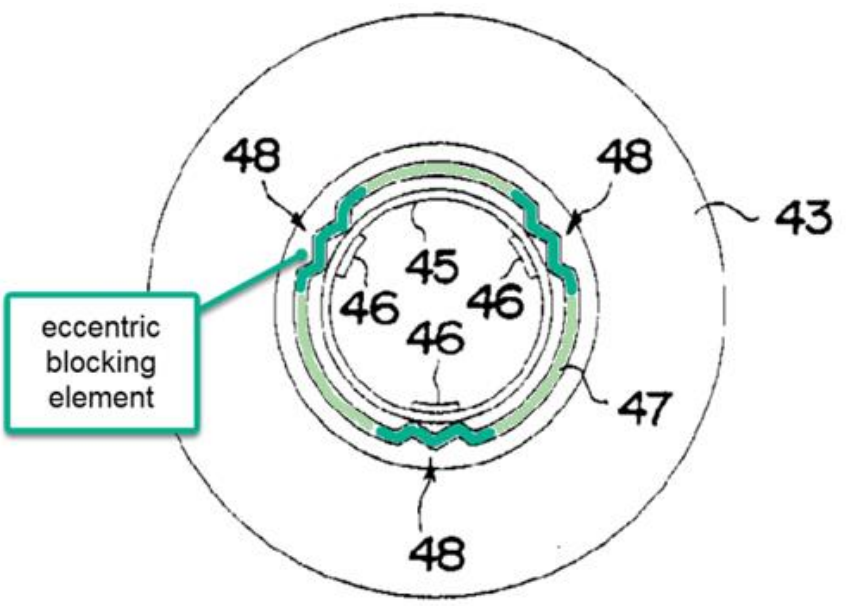


Ground 1/Claim 15: Yokoyama discloses “eccentric”

- Under **PO’s construction**: the sealing member or “each of Yokoyama’s ‘W-shaped portions’” **individually** are both an “eccentric” element

“Yokoyama’s ‘W-shaped portions 48’ individually do not have an axis located at the geometric center.”

Ex. 1016 (Nranian Supp. Decl.) at ¶9; Reply 9



“And in the embodiment where there is only **one W-shaped portion**, the axis of the sealing member would not be in the geometric center. This is because **the W-shaped portion is uneven**, with two portions protruding radially inward and one portions protruding radially outward. Due to this imbalance, the axis of the sealing member would be off-center.”

Ex. 1016 (Nranian Supp. Decl.) at ¶11; Reply 10

• **PO:**

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;

Ground 1: Yokoyama's grooves are “openings” (Claim 15)

Ground 1/Claim 15: Claim Construction of “opening”

Proposed Construction	
Petitioner	Patent Owner
Plain and Ordinary Meaning	“an outlet”

- PO’s construction of “opening”
 - **Requires** an “outlet” *POR 24-25*
 - **Requires** “ingress/egress” of elements *Surreply 13*
 - **Requires** elements to be “inserted **through**” *Surreply 13*
 - **Requires** fluid to flow through *Surreply 13*
- PO’s construction
 - **Not** consistent with claim language or evidence
 - **Inconsistent** with claim 15
- No dispute that under **Petitioner’s construction**, Yokoyama’s W-shaped grooves are individually and together an “opening”

Ground 1/Claim 15: Claim Construction of “opening”

- Claim 1 supports Petitioner’s position:

1. A liquid filter, comprising:
a filter housing,
a ring filter insert, replaceably arranged in the filter housing, and
a removable cover arranged to close the filter housing during operation,
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, and
a return extending from a clean side of the filter housing for filtered clean liquid,
an eccentric opening arranged in a bottom of the filter housing,

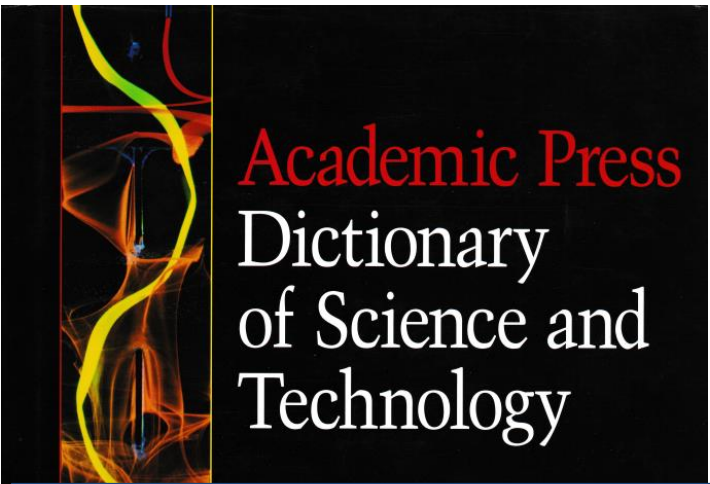
...

the second positioning means comprising a protruding nose which is arranged opposite the inclined plane, and the inclined plane and the nose arranged to be movable in relation to each other in such a way that they slide along each other and bring the blocking element into engagement with the eccentric opening, by rotating the ring filter insert relative to the filter housing,
the inclined plane being one of embodied and arranged on one of the inner circumference of the ring filter insert and the outer circumference of a filter housing part arranged inside the ring filter insert and the protruding nose being one of embodied and arranged on the other of the inner circumference of the ring filter insert and the outer circumference of the filter housing part,
the inclined plane comprising an incline which excludes a self-locking and
the **eccentric opening being an outlet** for emptying the filter housing when the filter insert is removed.

15. A ring filter insert for a liquid filter, comprising
a hollow-cylindrical filter material body surrounded on front sides by top and bottom front panels and which can be replaceably arranged in a filter housing,
an eccentric blocking element arranged on the bottom front panel for engaging **an eccentric opening** in the filter housing,
first positioning means on the ring filter insert, which interact with second positioning means on the filter housing when the ring filter insert is inserted into the filter housing and which are arranged to bring the blocking element into engagement with the eccentric opening,
the first positioning means being one of an inclined plane and a protruding nose, with the second positioning means being the other of the inclined plane and the protruding nose,
the inclined plane and the nose arranged to be moved in relation to each other in such a way that they slide along each other and bring the blocking element into engagement with the eccentric opening, by rotating the ring filter insert relative to the filter housing,
the first positioning means being one of embodied and arranged on an inner circumference of the ring filter insert.

Ground 1/Claim 15: Claim Construction of “opening”

- Plain meaning of opening:



open ice *Oceanography.* sea ice that is sufficiently broken up to allow navigation.

opening an open place; a hole or space; specific uses include: *Forestry.* an area within a forest that is thinly wooded in comparison with adjacent tracts. *Geography.* a break in a coastline or landform, especially between coastal islands or shoals. *Oceanography.* in sea ice, any break that reveals the water. *Anatomy.* an orifice or ostium.

opening die *Mechanical Engineering.* a screw-cutting die head that automatically clears the screw thread as it comes to the end.

opening noun

open·ing 'ōp-nīŋ, 'ō-pə-

[Synonyms of opening >](#)

- 1 **a** : an act or instance of making or becoming open
b : an act or instance of beginning : **COMMENCEMENT**
especially : a formal and usually public event by which something new is put officially into operation
- 2 : something that is open: such as
 - a** (1) : **BREACH, APERTURE**
(2) : an open width : **SPAN**
 - b** : an area without trees or with scattered usually mature trees that occurs as a break in a forest
 - c** : two pages that face one another in a book
- 3 : something that constitutes a beginning: such as
 - a** : a usually planned series of moves made at the beginning of a game of chess or checkers
→ compare **ENDGAME, MIDDLE GAME**
 - b** : a first performance
- 4 **a** : **OCCASION, CHANCE**
b : an opportunity for employment

Ex. 1019 (DST) at 4; Reply 12

Ex. 1020 (Merriam-Webster Dictionary); Reply 12

Ground 1/Claim 15: Claim Construction of “opening”



“The words of a claim are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history. There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution. ...

It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must ‘clearly express an inten’ to redefine the term.”

Thorner v. Sony Corp., 669 F.3d 1362, 169 (Fed. Cir. 2012); Reply 8

Ground 1/Claim 15: Claim Construction of “opening”

- Nothing from the specification is clear lexicography:

“The filter housing 10 furthermore has an outlet 13, through which an emptying of the filter housing 10 is carried out in response to a replacement of the filter insert 2”

Ex. 1001 (203 patent) at 6:59-63; POR 25

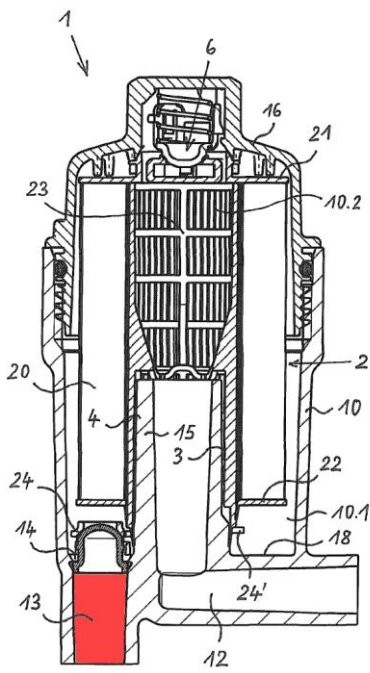


Fig. 1

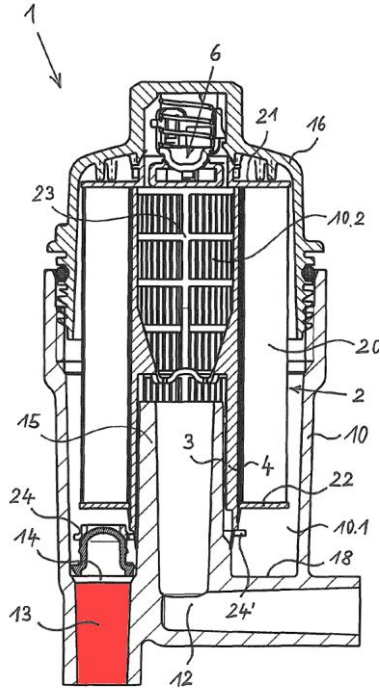


Fig. 2

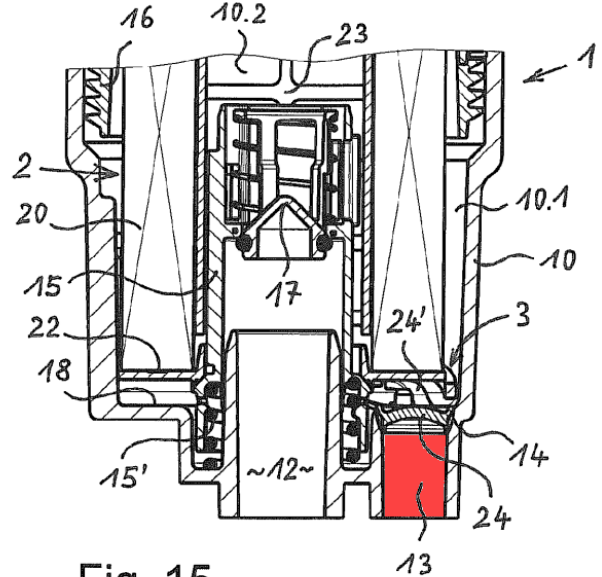


Fig. 15

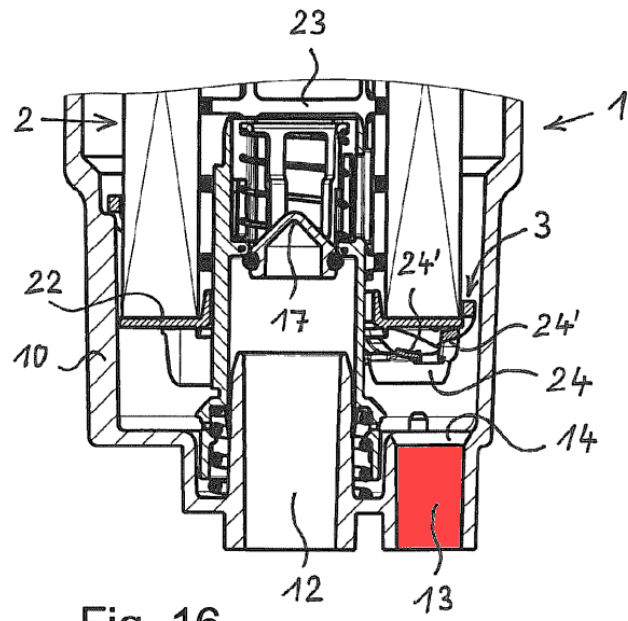


Fig. 16

Ground 1: Yokoyama's discloses "top" / "bottom" panels (Claim 15)

Ground 1/Claim 15: “top” and “bottom” panels

- **PO:** Yokoyama’s filter insert has a top and bottom with no motivation to reorient *POR 25-34*
- **PO is *wrong*:**
 - The orientation of the filter is motivated by design and servicing needs
 - Yokoyama’s filter can be operated in any orientation because it is pressurized

Ground 1/Claim 15: “top” and “bottom” panels

- Yokoyama’s filter would operate effectively in any orientation:

“[A] POSITA would understand that the entire filter device would operate in an identical manner if upside-down. This is because it is known that a filter device uses pressure to allow the flow of liquid through the device. This pressure is sufficient enough to allow the device to operate in either orientation.”

Ex. 1003 (Nranian Decl.) at ¶¶91; Pet. 31

“It was well understood that filter housings are oriented differently based on the spacing and servicing needs particular to a vehicle. 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. As a result, a POSITA would have understood that Yokoyama’s naming convention was flexible and not definitional. Indeed, the Cline and Brisson references, as well as the accused product, and the ’203 patent all show filters with such orientation were known in the prior art.”

Ex. 1016 (Nranian Supp. Decl.) at ¶¶16; Reply 13

Ground 1/Claim 15: “top” and “bottom” panels

- Yokoyama’s filter can be operated in any orientation:

“Q. So it get filtered by 2, and that’s also via pressure; is that correct?

A. There is an – there is an oil pump in the engine, right?

Q. Uh-huh.

A. And that’s what provide the pressure. It goes toward the filter, and then the clean liquid is getting out from the center of it. ...

Q. And so the oil pump is providing pressure to push the liquid through this filter and out through the center; is that correct?

A. Right. That’s normally how the oil filtration system works.

Q. And that’s how oil filtration systems worked even before this patent, correct?

A. That’s how oil filtration system works for engines for many years. I do not – I haven’t seen one that works only based on gravity, if that’s what you’re asking.”

Ex. 1017 (Basirat Tr.) at 49:2-50:2; Reply 14

Ground 1/Claim 15: “top” and “bottom” panels

- **PO:** Petitioner provided no reason to reorient Yokoyama

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.

Surreply 14-15

Ground 1/Claim 15: “top” and “bottom” panels

- **PO:** Petitioner provided no reason to reorient Yokoyama
- Petitioner:

¶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

Reply 13; Ex. 1016 (Nranian Supp. Decl.) at ¶16; Reply 13

“Yokoyama’s filter could be re-oriented so that removal of the filter insert opens the valve and allows liquid to flow out for safe disposal via the pull of gravity.”

Ex. 1003 (Nranian Decl.) at ¶138; Pet. 58

Ground 1/Claim 15: “top” and “bottom” panels

- Petitioner’s expert:

“Further, in my opinion, because Yokoyama never talks about a drain plug, this reflects a POSITA’s understanding that the location of the drain is a design choice based on various criteria, such as the location of the vehicle components and the need to provide easy access to the oil filter for replacement, as I explained in my original declaration. In addition, placement of the drain plug in an eccentric location has other advantages, especially in an application where the housing is opened from the top, as an eccentric drain would be necessary to avoid physical interference with the outflow of the mounting bracket. Because fluid is filtered from the outside to the center of the filter, it must also flow out of the filter canister from the center. Thus, the drain must be off-center to avoid obstructing the outflow path.”

Ex. 1016 (Nranian Supp. Decl.) at ¶18; Reply 15

Ground 1/Claim 15: “top” and “bottom” panels

- Petitioner’s expert:

“A POSITA would also have readily understood and recognized 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”).”

Ex. 1003 (Nranian Decl.) at ¶139; Pet. 58

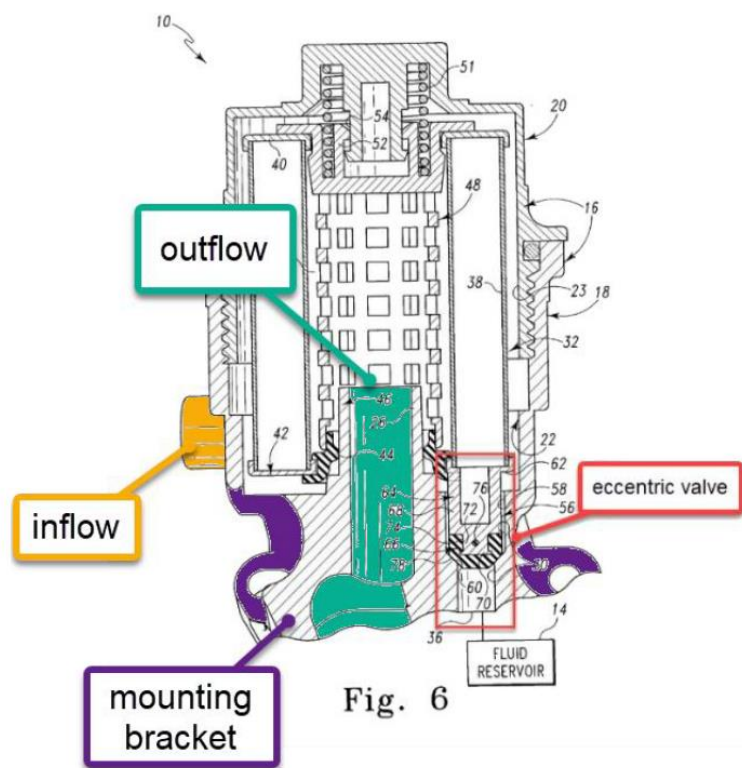
Ground 1/Claim 15: “top” and “bottom” panels

- **PO:** Yokoyama’s drain plug would be rendered useless *POR 28*
- PO agrees that Yokoyama does not “explicitly describe” any drain plug. *POR 30*
- Obvious to reorient placement of drain plug:

“Further, in my opinion, because Yokoyama never talks about a drain plug, this reflects a POSITA’s understanding that the location of the drain is a design choice based on various criteria, such as the location of the vehicle components and the need to provide easy access to the oil filter for replacement, as I explained in my original declaration. In addition, placement of the drain plug in an eccentric location has other advantages, especially in an application where the housing is opened from the top, as an eccentric drain would be necessary to avoid physical interference with the outflow of the mounting bracket. Because fluid is filtered from the outside to the center of the filter, it must also flow out of the filter canister from the center. Thus, the drain must be off-center to avoid obstructing the outflow path.”

Ground 1/Claim 15: “top” and “bottom” panels

- **Surreply:** Top-inserted filters cause oil spills and are non-trivial to design *Surreply 15-16*
- Such filters were commonplace and well-known and posed no such problems:



Ex. 1009 (Cline) at Fig. 6 (annotated by Petitioner)

“A first liquid filter of the afore-mentioned type is **known** from DE 39 03 675 C2. This document shows an oil filter comprising a filter housing and a ring filter insert, which is arranged therein so as to be capable of being replaced. On its **lower front panel**, the ring filter insert has an **eccentric bolt as closure for an eccentric outlet**, which is provided in the bottom of the filter housing and which provides for an emptying of the filter housing in response to a replacement of a filter insert.”

Ex. 1001 (203 patent) at 1:25-33; Surreply 7

Ground 2: Motivation to Combine Yokoyama and Cline

Ground 2/Claim 15: Motivation to Combine Yokoyama and Cline

- Motivations to combine:
 - Orientation of the filter is regulated by the design and serviceability needs of the engine manufacturer
 - Cline's quick-drain valve is simpler, more secure, and easier to use compared to Yokoyama's drain plug
- PO argues the combination would require a complicated re-design
 - **No** evidence such a design would not be within the skill of an ordinary artisan
 - Prior art shows such a design is not complicated

Ground 2/Claim 15: Motivation to Combine Yokoyama and Cline

- Motivation to Combine Yokoyama and Cline:

“It was well understood that filter housings are oriented differently based on the spacing and servicing needs particular to a vehicle. 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.”

Ex. 1003 (Nranian Supp. Decl.) at ¶16; Reply 13

“In addition, placement of the drain plug in an eccentric location has other advantages, especially in an application where the housing is opened from the top, as an eccentric drain would be necessary to avoid physical interference with the outflow of the mounting bracket. Because fluid is filtered from the outside to the center of the filter, it must also flow out of the filter canister from the center. Thus, the drain must be off-center to avoid obstructing the outflow path.”

Ex. 1003 (Nranian Supp. Decl.) at ¶18; Reply 15

“In addition, a POSITA would have understood that having a drain plug / blocking element in an eccentric location is just a matter of simple design choice and just the substitution of one known element for another. This choice would depend on packaging space available as well as the surrounding area and operator/tool/hand access for assembly and disassembly for routine regular service and replacement of the filter element. For example, a POSITA would have readily recognized that vehicle engine compartments contain multiple components, and packaging these components in the limited space available is constraining. A POSITA would also have readily understood and recognized 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”).”

Ex. 1003 (Nranian Decl.) at ¶139; Pet. 58

Ground 2/Claim 15: Motivation to Combine Yokoyama and Cline

- Yokoyama's filter can be operated in any orientation:

“Q. So it get filtered by 2, and that's also via pressure; is that correct?

A. There is an – there is an oil pump in the engine, right?

Q. Uh-huh.

A. And that's what provide the pressure. It goes toward the filter, and then the clean liquid is getting out from the center of it. ...

Q. And so the oil pump is providing pressure to push the liquid through this filter and out through the center; is that correct?

A. Right. That's normally how the oil filtration system works.

Q. And that's how oil filtration systems worked even before this patent, correct?

A. That's how oil filtration system works for engines for many years. I do not – I haven't seen one that works only based on gravity, if that's what you're asking.”

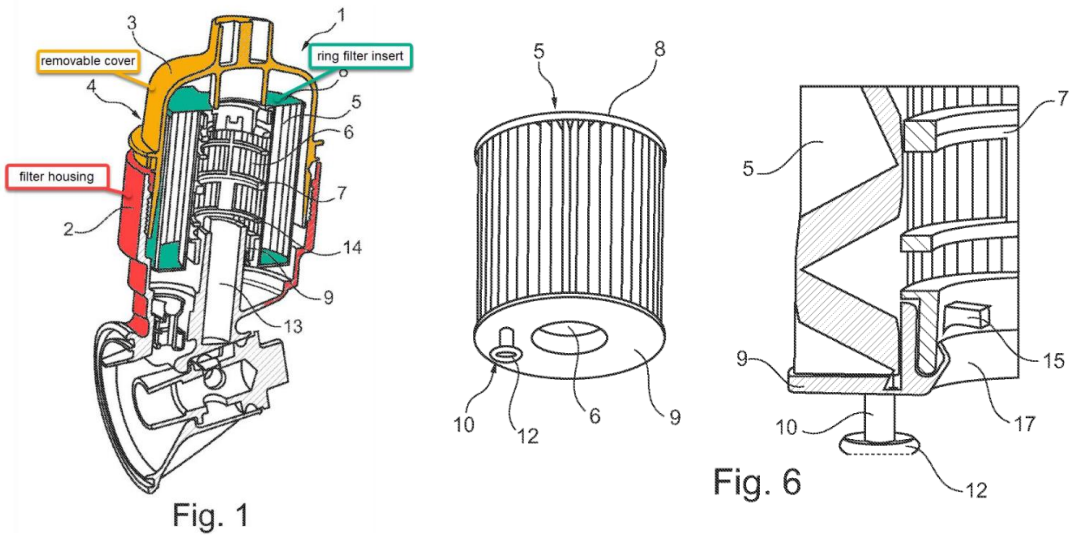
Ex. 1017 (Basirat Tr.) at 49:2-50:2; Reply 14

Ground 2/Claim 15: Motivation to Combine Yokoyama and Cline

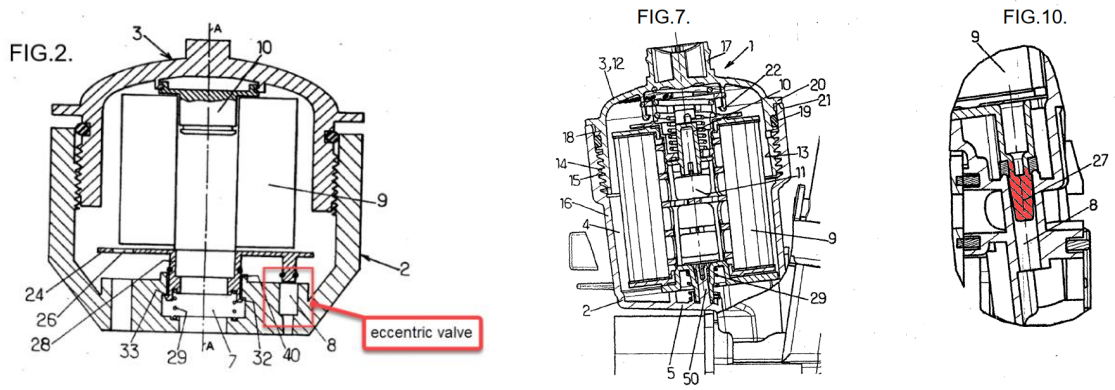
- Motivation to Combine Yokoyama and Cline:

“[E]ccentric drain valves were very common and well-known in the art. Beyond Cline, an eccentric drain valve is also disclosed in Deschamps and Brisson. For example, Deschamps discloses a “pin 10” that “is aligned coaxially flush with the channel 11,” and that the pin engages with the channel to form a seal as a filter insert rotates in the filter housing via a “guide element 15” (i.e. a protruding nose) “slid[ing] along guid contour 14” (i.e. an inclined plane).” Ex. 1010, ¶35.”

Ex. 1003 (Nranian Decl.) at ¶133; Pet. 55



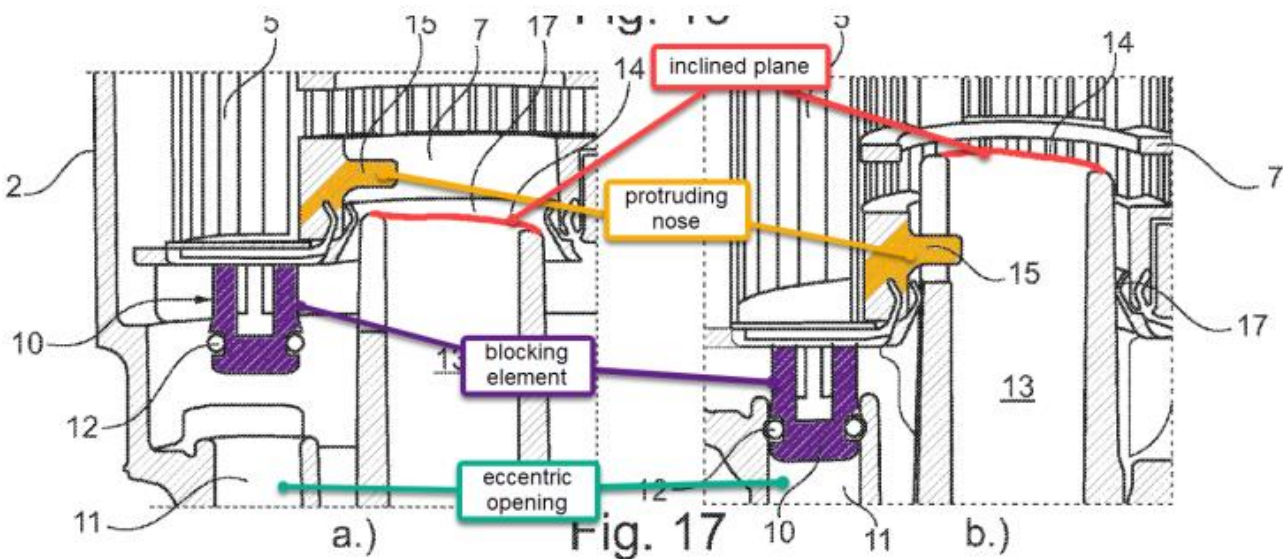
Ex. 1010 (Deschamps) at Figs. 1, 6; Pet. 17, 19



Ex. 1005 (Brisson) at Figs. 2, 7, 10; Pet. 57

Ground 2/Claim 15: Motivation to Combine Yokoyama and Cline

- Motivation to Combine Yokoyama and Cline:



Ex. 1010 (Deschamps) at Fig. 17; Pet. 56

“A POSITA, knowing that an eccentric drain mechanism works reliably with a nose/inclined plane guiding mechanism as shown in Deschamps, would have been motivated to provide a similar mechanism in Yokoyama.”

Ex. 1003 (Nranian Decl.) at ¶¶134-35



“Whether or not the Prichard disclosure is a prior art reference, it is evidence that can be used to demonstrate a motivation to combine implicit in the knowledge of one of skill in the art of rail car design.”

National Steel Car Ltd. v. Canadian Pacific Railway Ltd., 357 F.3d 1319 (Fed. Cir. 2004); Pet. 16

Ground 2/Claim 15: Motivation to Combine Yokoyama and Cline

- As conceded by PO, Yokoyama does not expressly describe any draining mechanism
POR 30
- Motivation to Combine Yokoyama and Cline:

“Yokoyama does not describe such a draining mechanism. But a POSITA would have been motivated to use Cline’s eccentric draining mechanism because of its well-known benefits. For example, Brisson discloses that “[w]hen an operator wants to change the filtering element, it is desirable that he does not receive any oil splashes and that the oil does not flow onto the outer walls of the filter housing and onto the other engine components. It is also desirable that a minimum amount of oil be lost when changing the filter element.” Ex. 1005, ¶¶2-3. Brisson teaches that it was known such things could be accomplished by “draining the housing when changing the filter cartridge.” *Id.*, ¶9. In view of these well-known benefits, a POSITA would have looked to Cline’s draining mechanism.”

Ex. 1003 (Nranian Decl.) at ¶130; Pet. 53

Ground 2/Claim 15: Motivation to Combine Yokoyama and Cline

- Motivation to Combine Yokoyama and Cline:

“A POSITA would have also been motivated to make this modification because of the known benefits from Cline’s relatively simple design for draining. Cline’s design uses a “flow blocker” which is “molded onto the post 64.” Ex. 1009, ¶27. Because the flow blocker is removable and replaceable, it can be made of any size or shape to better fit the quick-drain outlet. Cline’s simpler design allows for easy replacement of the blocking element.”

Ex. 1003 (Nranian Decl.) at ¶131; Pet. 54

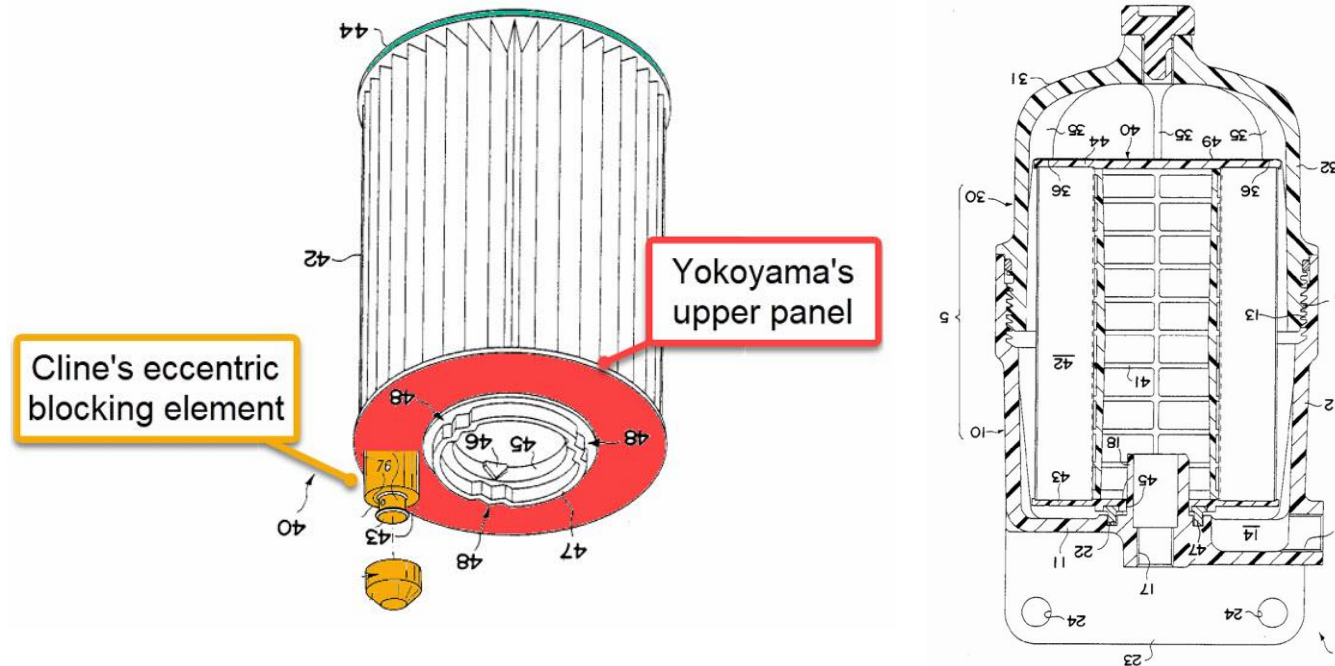
- ***Surreply:*** “[T]he design of Yokoyama does not include any blocking element on the filter element itself, so there is no need for resizing any filter element part to begin with.” *Surreply 17*

Ground 2/Claim 15: Motivation to Combine Yokoyama and Cline

- PO: combination would lead to oil loss. *Surreply 17*

“Cline’s eccentric drain valve had the well-known benefit of minimizing the amount of oil that is lost when changing the filter element. This would provide some environmental protection, as it would avoid the disposal of a large amount of material. Indeed, a POSITA would be motivated by Yokoyama itself, which states that the “filter element 40 is a consumable item” and is to be “replace[d].” Ex. 1008, ¶26. Thus, as well understood to a POSITA and as stated in Yokoyama, the upper and lower casings of these filters have to be disassembled (such as for example, by unscrewing the lower case half from the upper case half) to remove and replace the filter element.”

Ex. 1003 (Nranian Decl.) at ¶132; Pet. 54



Ground 2/Claim 15: Motivation to Combine Yokoyama and Cline

- Motivation to Combine Yokoyama and Cline:

“A POSITA would also understand that Yokoyama recognizes that these filter elements have to be replaced and serviced, and one of the goals of Yokoyama is ease of assembly (prevent wobble) and to prevent wear and/or damage of the seals during replacement (e.g. which can be caused by misalignment and/or friction during replacement, assembly and/or disassembly). A POSITA would understand that an eccentric drain valve would facilitate such desired improvements.”

Ex. 1003 (Nranian Decl.) at ¶132; Pet. 54-55

Ground 2/Claim 15: Motivation to Combine Yokoyama and Cline

- Motivation to Combine Yokoyama and Cline:

“A POSITA would have understood that Cline’s simpler design would be more reliable and less prone to damage compared to other designs. Repairs would also be easier using Cline’s design due to the significant reduction in parts. Thus, given these known benefits, a POSITA would be motivated to use Cline’s flow blocker and quick-drain outlet.”

Ex. 1003 (Nranian Decl.) at ¶133; Pet. 55

“Cline’s drain mechanism is simpler than Yokoyama’s unreliable drain plug. Cline’s drain mechanism releases fluid by simply removing the filter insert, whereas Yokoyama’s drain plug requires multiple steps.”

Ex. 1016 (Nranian Supp. Decl.) at ¶26; Reply 18

- ***Surreply:*** modification leads to “misalignment, leakage” and is not simple. *Surreply 17*
 - Yokoyama’s nose/incline mechanism prevents misalignment
 - Prior art filters were top-inserted and had no issues with leakage
 - Yokoyama’s drain plug requires multiple parts and steps

Ground 2/Claim 15: Motivation to Combine Yokoyama and Cline

- Motivation to Combine Yokoyama and Cline:

“This modification would have also been obvious because it is the application of a known technique (eccentric drain valve) to a known device (Yokoyama’s filter) ready for improvement (the addition of an eccentric drain plug and orifice/port to drain the liquid/fluid in the filter during for example, service, maintenance, and/or replacement) to yield predictable results. Yokoyama does not describe a drain valve, and so including Cline’s valve design would obtain the predictable result of Yokoyama’s filter using Cline’s valve design.”

Ex. 1003 (Nranian Decl.) at ¶137; Pet. 57

- ***Surreply:*** Prior art is “bottom centric” and “formed integrally with the engine,” thus impractical to use with Yokoyama’s “top-mounted configuration” *Surreply 17-18*
 - Yokoyama can be reoriented depending on design criteria

Ground 2/Claim 15: Motivation to Combine Yokoyama and Cline

- Motivation to Combine Yokoyama and Cline:

“In addition, a POSITA would have understood that having a drain plug / blocking element in an eccentric location is just a matter of simple design choice and just the substitution of one known element for another. This choice would depend on packaging space available as well as the surrounding area and operator/tool/hand access for assembly and disassembly for routine regular service and replacement of the filter element. For example, a POSITA would have readily recognized that vehicle engine compartments contain multiple components, and packaging these components in the limited space available is constraining. A POSITA would also have readily understood and recognized 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”). Thus it would have been a simple matter of design choice to a POSITA to have the drain plug / blocking element in an eccentric location depending on vehicle component packaging and accessibility for service.”

Ground 2/Claim 15: Motivation to Combine Yokoyama and Cline

- Motivation to Combine Yokoyama and Cline:

“Cline’s “flow blocker” is “molded onto the post 64,” thereby making it customizable, easily removable, and easily replaceable. And Cline’s design is more reliable and less prone to damage. These are still true in comparison with Yokoyama’s drain plug. In fact, that is why Cline’s drain mechanism is called a “quick-drain valve,” since it provides a quick, single mechanism for draining the fluid and removing the filter. Ex. 1009, Abstract. In addition, Yokoyama’s drain plug, being a separate component that is detached, is more likely to be loosened due to gravity, vibration from driving, and normal wear-and-tear. It is also more prone to misplacement and requires a tool to remove.”

Ex. 1016 (Nranian Supp. Decl.) at ¶23; Reply 18

- ***Surreply:*** Cline’s drain plug is also a separate element *surreply 18*
 - But it comes attached to the filter insert, unlike Yokoyama’s drain plug
- PO does not address the requirement for separate tool

Ground 2/Claim 15: Motivation to Combine Yokoyama and Cline

- Motivation to Combine Yokoyama and Cline:

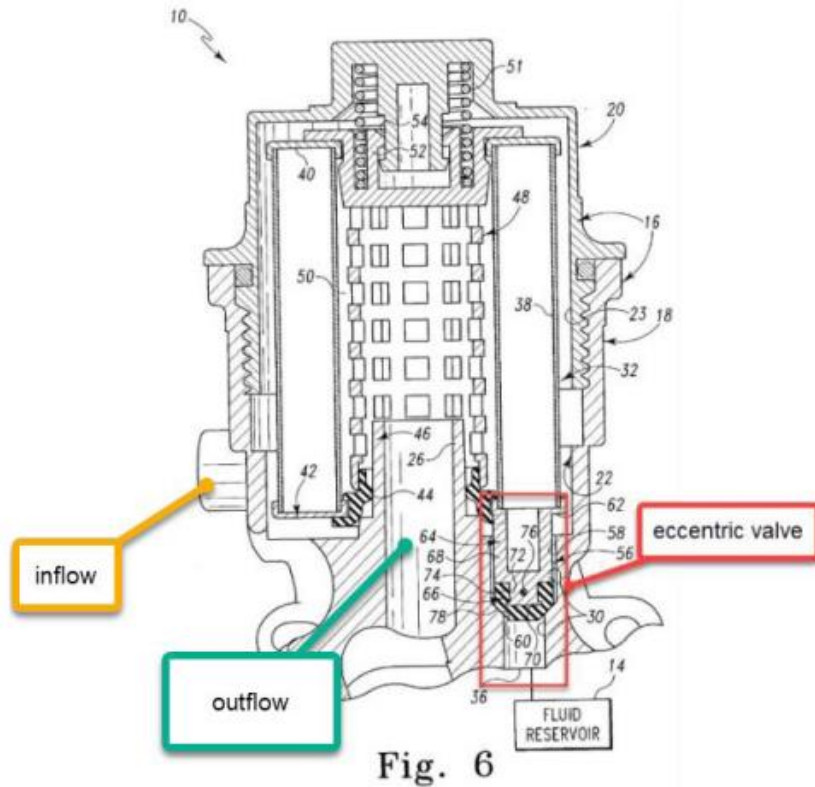
“Cline’s drain mechanism is simpler than Yokoyama’s unreliable drain plug. Cline’s drain mechanism releases fluid by simply removing the filter insert, whereas Yokoyama’s drain plug requires multiple steps.”

Ex. 1016 (Nranian Supp. Decl.) at ¶26; Reply 18

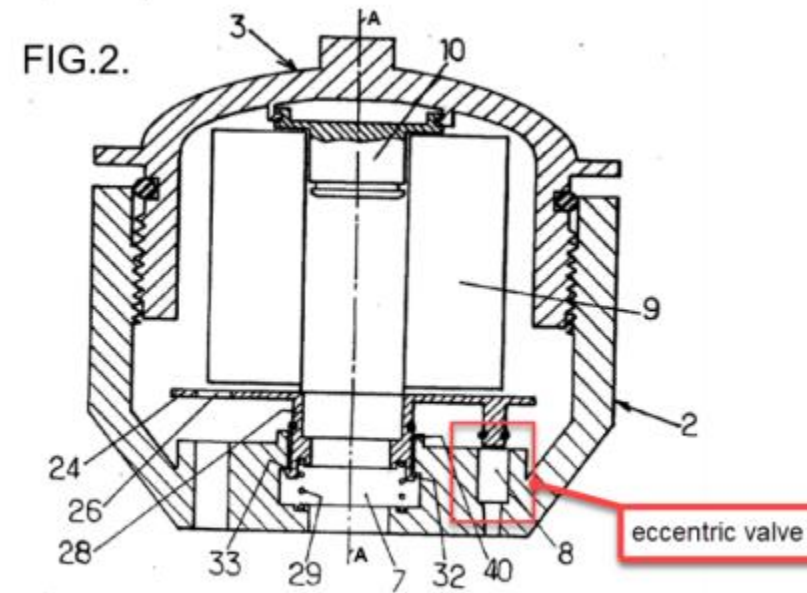
- PO does not address this motivation

Ground 2/Claim 15: Motivation to Combine Yokoyama and Cline

- **PO:** Cline's drain plug is prone to leaking, misalignment, and is less efficient *POR 37*
- **PO:** Too complex to place the drain mechanism on same side as inflow/outflow *POR 40-41*
- Eccentric valves are well known



Ex. 1005 (Cline) at Fig. 6; Pet. 61



Ex. 1005 (Brisson) at Fig. 2; Pet. 57

Ground 2: Yokoyama-Cline Render Obvious “First Positioning Means” (Claim 15)

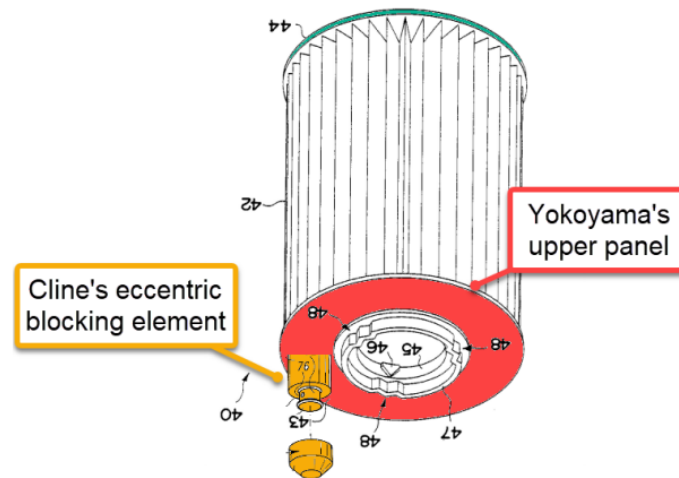
Ground 2/Claim 15: “first positioning means”

- PO argues that Yokoyama’s locking mechanism prevents proper orientation of Cline’s valve mechanism
- PO is *incorrect*
 - Cline’s valve is sealed when Yokoyama’s nose/plane sliding mechanisms causes locking protrusions to enter their corresponding depressions
 - PO’s surreply argument that Yokoyama has three locking positions ignores Yokoyama’s express disclosure of one locking position

Ground 2/Claim 15: “first positioning means”

- **PO:** Yokoyama’s locking protrusion prevents proper orientation of Cline’s drain *POR 42-43*
- Petitioner’s combination:

“As I explained in my original declaration, the combination would involve placing Cline’s valve in such a way as to be sealed and engaged when Yokoyama’s filter insert is properly oriented, such as on the “upper plate 43” next to the “sealing member 47,” and then re-oriented so that removal of the filter insert opens the valve and allows liquid to flow out for safe disposal via the pull of gravity. Ex. 1003, ¶138.”



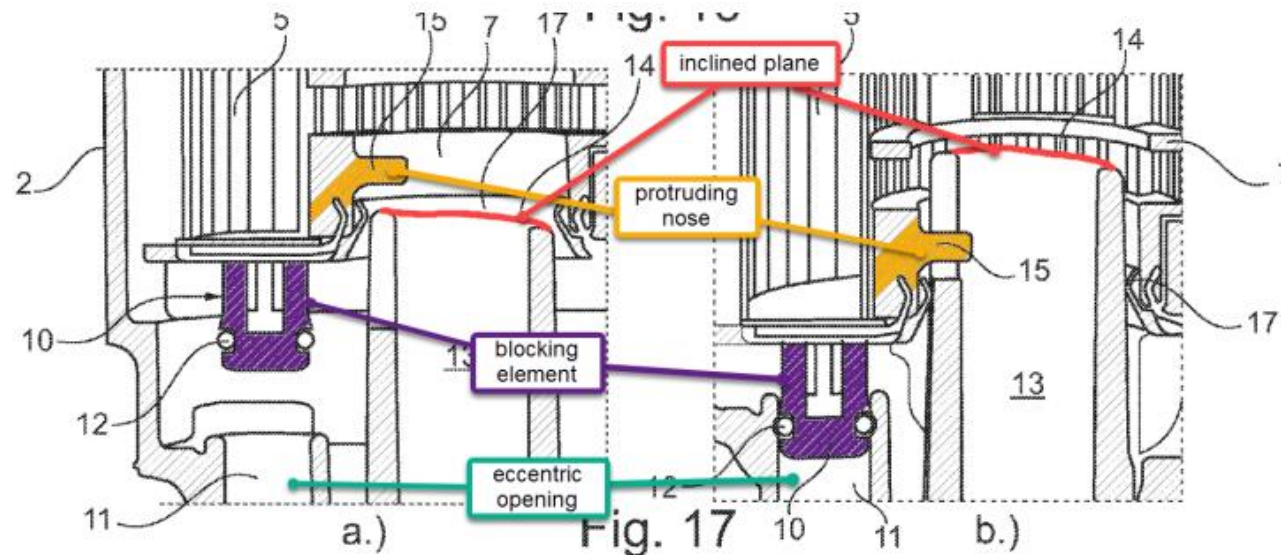
Ex. 1016 (Nranian Supp. Decl.) at ¶25; Reply 31

Ground 2/Claim 15: “first positioning means”

- **PO:** Yokoyama’s locking protrusion prevents proper orientation of Cline’s drain *POR 42-43*
- Petitioner’s combination:

“A POSITA, knowing that an eccentric drain mechanism works reliably with a nose/inclined plane guiding mechanism as shown in Deschamps, would have been motivated to provide a similar mechanism in Yokoyama.”

Ex. 1003 (Nranian Decl.) at ¶¶134-35; Pet. 56



Ground 2/Claim 15: “first positioning means”

- **Surreply:** Yokoyama’s locking protrusions result in 3 possible orientations *Surreply 22-23*
- **Incorrect:**

“The locking protrusions 46 may be one or more, and the pleated portions 19 may be formed in the same number as or greater than the number of the locking protrusions 46.”

Ex. 1008 (Yokoyama) at ¶33; Reply 10

“In my opinion, A POSITA would understand from these disclosures that when there is only one pleated portion 19, its left and right side surfaces extend across half of the outer circumference of the filter housing portion in order to form a tapered shape.”

Ex. 1003 (Nranian Decl.) at ¶115; Pet. 46

Ground 3: Honermann-Cline Renders Obvious “Rotating the Ring Filter Insert” (Claims 1 and 15)

Ground 3/Claims 1 and 15: “rotating the ring filter insert”

- PO argues that Honermann’s filter insert does not rotate, only the basket of the filter housing rotates
- PO is *incorrect*
 - Honermann’s protrusions / planes cause the filter insert to rotate before the basket rotates
 - Petition made clear that the combination involves the filter insert rotating

Ground 3/Claims 1 and 15: “rotating the ring filter insert”

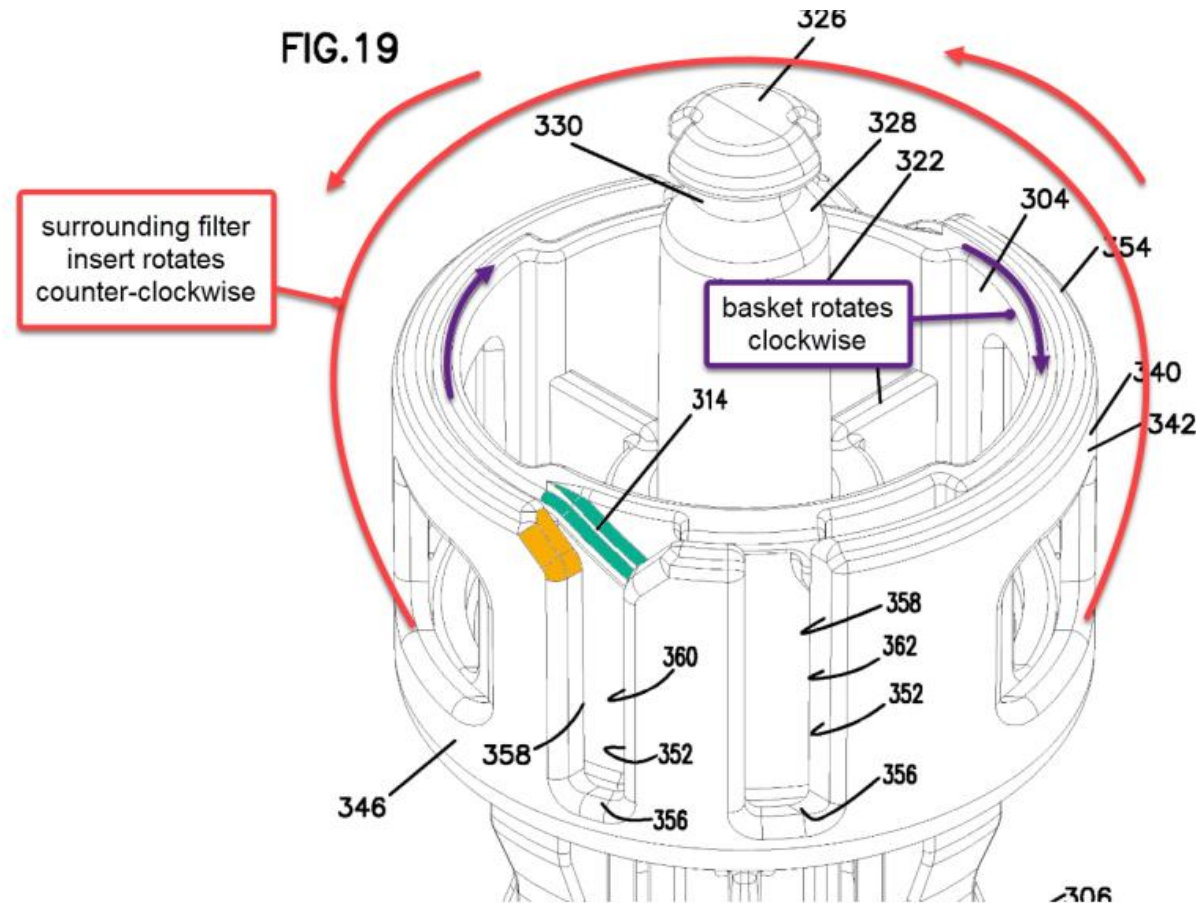
- **PO:** Honermann’s filter insert does not rotate, it is the basket that rotates *POR 44-47*
- Honermann’s filter insert rotates into the basket’s groove before the basket rotates

“As I show via annotations to Figure 19 below, Honermann’s filter insert has protrusions that slide along a slide surface 314 into a slide channel 358 having a tapered opening to allow a protrusion to enter the slide channel 358. The protrusion begins at the left-most side of the slide surface 314 and tapered opening. Because the opening of the slide channel 358 is wider than the protrusion, the protrusion will slide rightward, causing the filter insert to rotate counter-clockwise. When the protrusion contacts the right side of the slide channel 358, the protrusion has nowhere further to go and thus as it continues sliding down the slide surface 314, it will enter the slide channel 358 and cause the basket to rotate clockwise, as Honermann describes.”

Ex. 1016 (Nranian Supp. Decl.) at ¶32; Reply 27

Ground 3/Claims 1 and 15: “rotating the ring filter insert”

- **PO:** Honermann’s filter insert does not rotate, it is the basket that rotates *POR 44-47*
- Honermann:



Ground 3/Claims 1 and 15: “rotating the ring filter insert”

- Petitioner’s combination expressly has the filter insert rotate via the nose/plane:

“Beyond Cline, an eccentric drain valve is also disclosed in Deschamps and Brisson. For example, Deschamps discloses a “pin 10” that “is aligned coaxially flush with the channel 11,” and that the pin engages with the channel to form a seal as a filter insert rotates in the filter housing via a “guide element 15” (i.e. a protruding nose) “slid[ing] along guid contour 14” (i.e. an inclined plane).” Ex. 1010, ¶35.”

“Deschamps also discloses that its blocking element and eccentric opening are engaged as a protruding nose slides along an inclined plane, as shown above. This is precisely what is claimed in the ’203 patent and a POSITA would have been motivated by such disclosures to incorporate Cline’s similar eccentric blocking element/opening with Honermann’s similar inclined plane and nose guiding mechanism.”

Ex. 1003 (Nranian Decl.) at ¶¶169-70; Pet. 75-76

“Moreover, 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.”

Ex. 1003 (Nranian Decl.) at ¶¶213; Pet. 97

Ground 3: Honermann-Cline Render Obvious “First Positioning Means” (Claims 1 and 15)

Ground 3/Claims 1 and 15: “first positioning means”

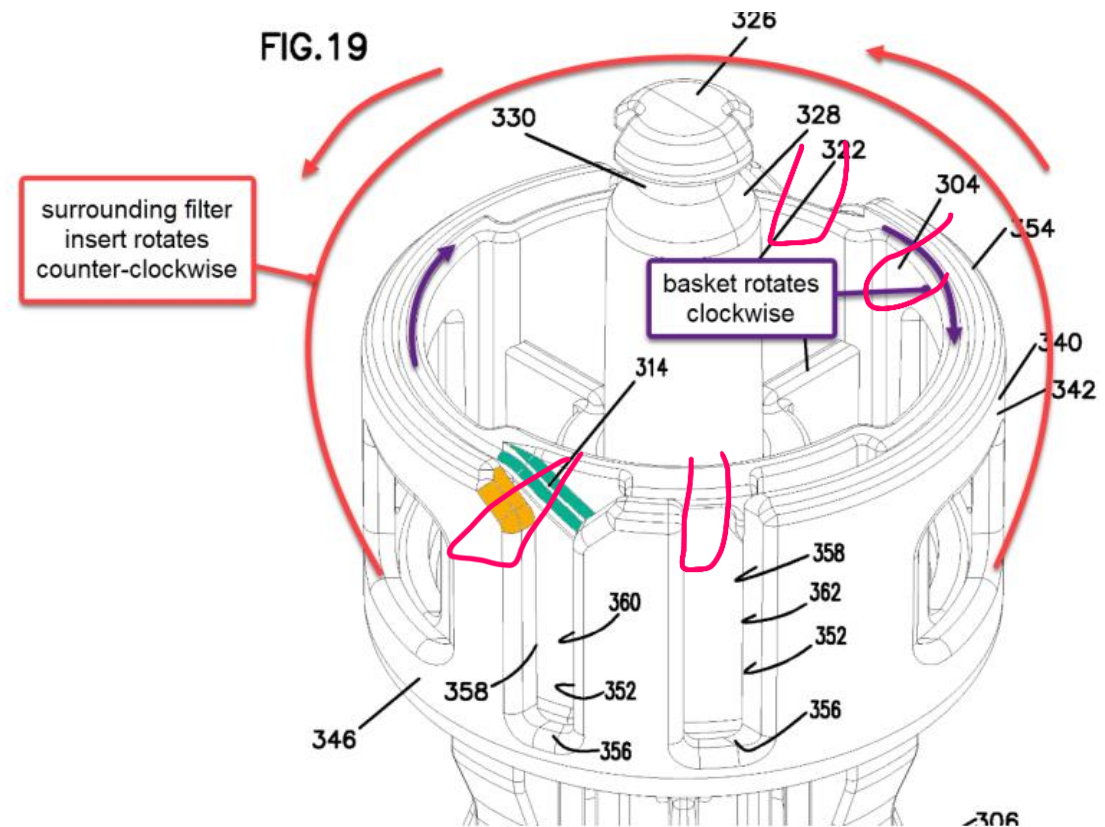
- PO: Honermann’s protrusions do not cause Cline’s valve mechanism to be properly oriented *POR 47-50*
- PO is **incorrect**
 - Honermann’s protrusions / inclines cause its filter insert to be rotated into proper orientation of Clive’s valve

Ground 3/Claims 1 and 15: “first positioning means”

- **PO:** Honermann’s locking protrusions do not cause the filter insert to rotate into proper orientation *POR 47-48*
- When Honermann’s filter insert rotates, that orients the drain mechanism in the combination:

“Moreover, 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.”

Ex. 1003 (Nranian Decl.) at ¶¶213; Pet. 97



Ground 3: Motivation to Combine Honermann and Cline

Ground 3: Motivation to Combine Honermann and Cline

- PO argues no motivation to replace Honermann's auto-drain mechanism with Cline's quick-drain mechanism *POR 50-52*
- PO is **incorrect**
 - Cline's quick-drain valve is simpler, more secure, and is less complex compared to Honermann's complicated drain mechanism

Ground 3: Motivation to Combine Honermann and Cline

- Motivation to Combine Honermann and Cline:

“In addition, a POSITA would have understood that having a drain plug / blocking element in an eccentric location is just a matter of simple design choice and just the substitution of one known element for another. This choice would depend on packaging space available as well as the surrounding area and operator/tool/hand access for assembly and disassembly for routine regular service and replacement of the filter element. For example, a POSITA would have readily recognized that vehicle engine compartments contain multiple components, and packaging these components in the limited space available is constraining. A POSITA would also have readily understood and recognized 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”). Thus it would have been a simple matter of design choice to a POSITA to have the drain plug / blocking element in an eccentric location depending on vehicle component packaging and accessibility for service.”

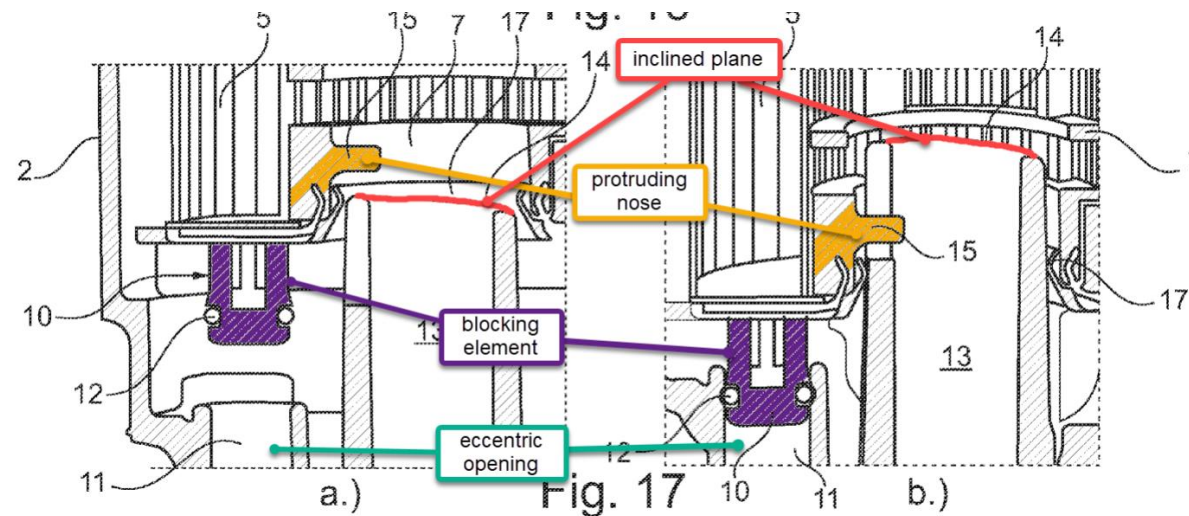
Ex. 1003 (Nranian Decl.) at ¶173; Pet. 77

Ground 3: Motivation to Combine Honermann and Cline

- Motivation to Combine Honermann and Cline:

“Deschamps also discloses that its blocking element and eccentric opening are engaged as a protruding nose slides along an inclined plane, as shown above. This is precisely what is claimed in the '203 patent and a POSITA would have been motivated by such disclosures to incorporate Cline's similar eccentric blocking element/opening with Honermann's similar inclined plane and nose guiding mechanism.”

Ex. 1003 (Nranian Decl.) at ¶¶169-70; Pet. 75-76



Ground 3: Motivation to Combine Honermann and Cline

- Motivation to Combine Honermann and Cline:

“Cline’s design uses a “flow blocker” which is “molded onto the post 64.” Ex. 1009, ¶27. Because the flow blocker is removable and replaceable, it can be made of any size or shape to better fit the quick-drain outlet. Cline’s simpler design allows for easy replacement of the blocking element.

By contrast, Honermann’s plug 244 is a complicated design which requires the use of a “valve spring to move the plug into the sealed position.” Ex. 1006, ¶188.”

Ex. 1003 (Nranian Decl.) at ¶166; Pet. 73-74

“A POSITA would have understood that Cline’s much simpler design would be more reliable and less prone to damage. Repairs would also be easier using Cline’s design due to the significant reduction in parts. Thus, given these known benefits, a POSITA would be motivated to use Cline’s flow blocker and quick-drain outlet.”

Ex. 1003 (Nranian Decl.) at ¶167; Pet. 73-74

Ground 3: Motivation to Combine Honermann and Cline

- Motivation to Combine Honermann and Cline:

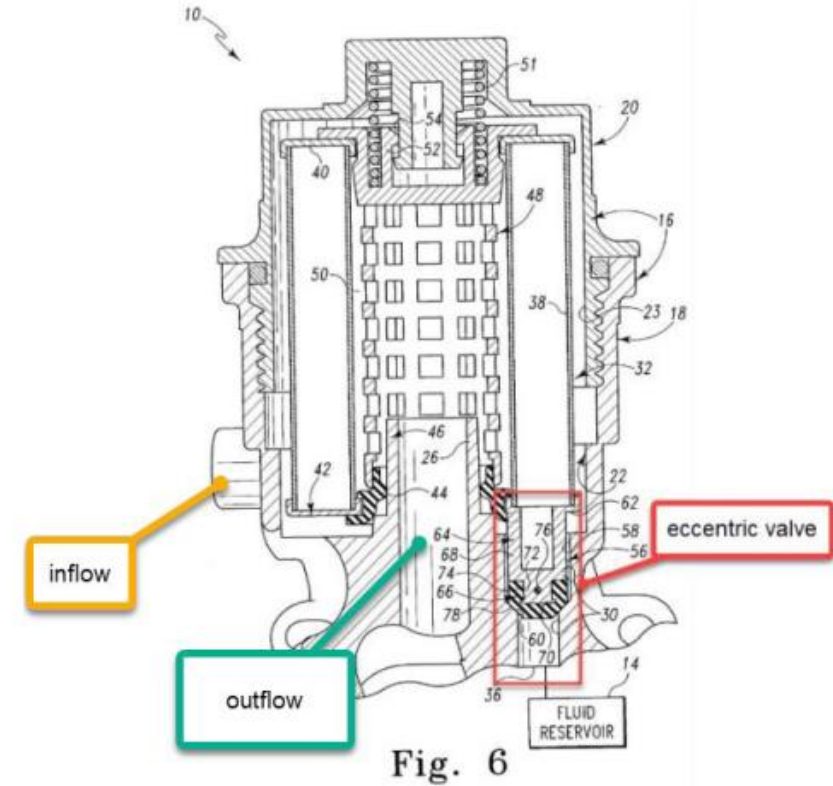
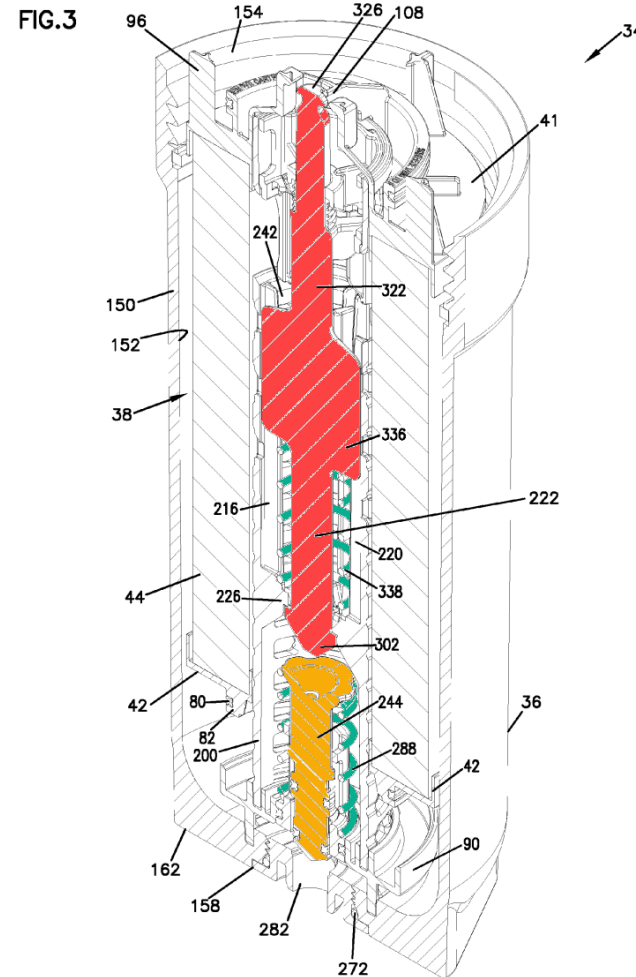
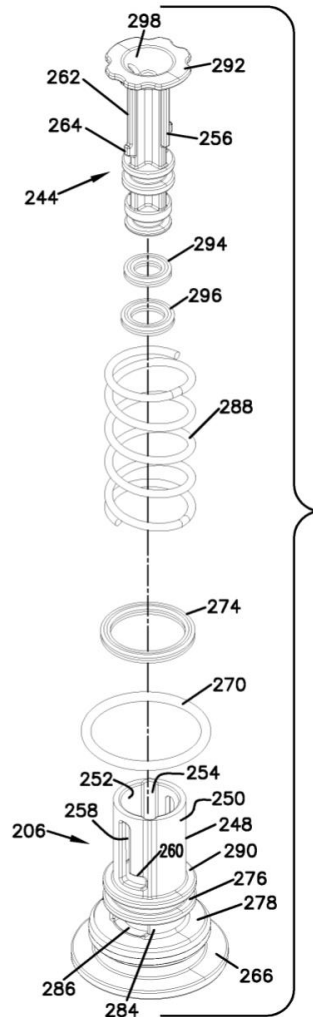
“Cline teaches a filter insert that has an eccentric “flow blocker” which blocks an eccentric quick-drain outlet for draining the filter housing, as shown in Figure 5 below. See also Ex. 1009, ¶21. While Honermann also discloses a plug and opening (though not eccentric), Honermann’s plug and opening is a complicated valve system, and a POSITA would have found it obvious to modify Honermann to use Cline’s simpler eccentric plug and opening instead.”

Ex. 1003 (Nranian Decl.) at ¶164; Pet. 71

Ground 3: Motivation to Combine Honermann and Cline

- Motivation to Combine Honermann and Cline:

FIG.13



Ground 3: Motivation to Combine Honermann and Cline

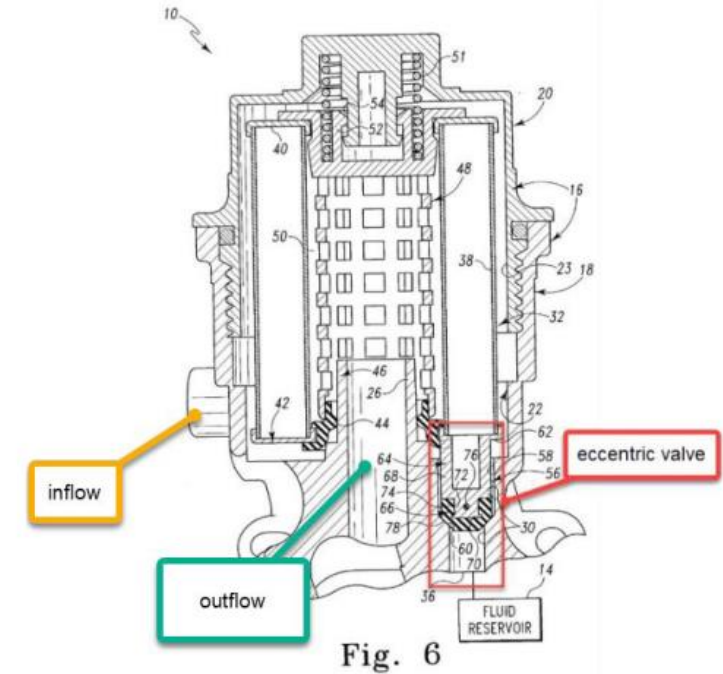
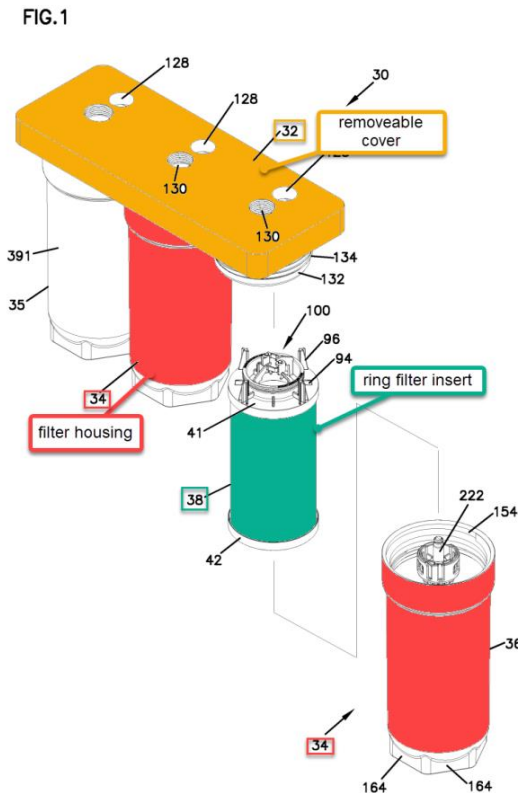
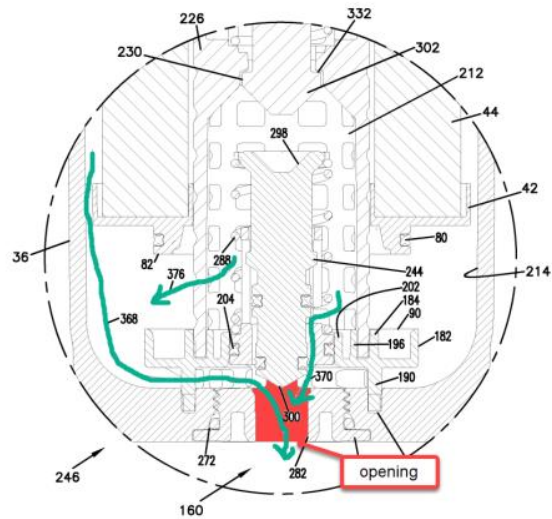
- PO argues that the combination would leak:

“[A]s evidenced by Cline and other prior art like Deschamps and Brisson, filters with eccentric draining mechanisms had no issues with leaking and draining because of the presence of various seals, and thus, neither would Honermann when its drain valve assembly is replaced with Cline’s eccentric draining mechanism, as POSITA would understand how to use seals to prevent such issues.”

Ex. 1016 (Nranian Supp. Decl.) at ¶34; Reply 31

Ground 3: Motivation to Combine Honermann and Cline

- **Surreply:** Honermann's auto-drain occurs when the filter housing is loosened, Petitioner's combination would require the oil-filled housing to be completely removed
Surreply 26-29



Ground 3: Honermann and Cline Render Obvious Claim 1

Ground 1/Claim 1: Honermann discloses claim 1 elements

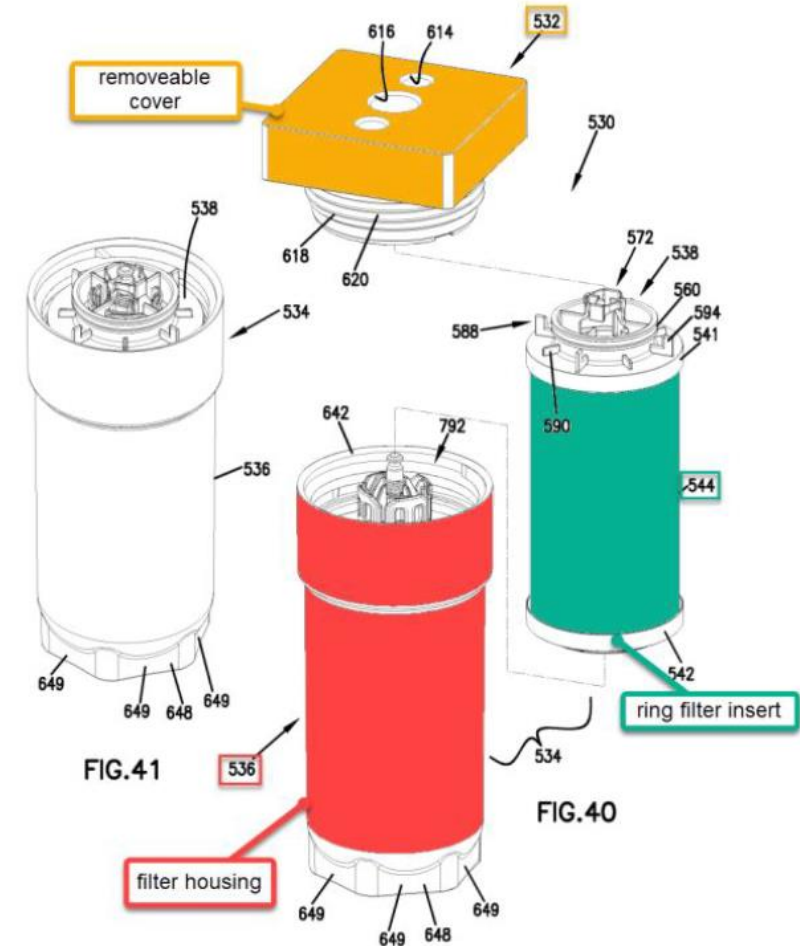
- PO argues Honermann does not disclose a “removable cover,” “inlet,” or inclines that “exclude a self-locking” *POR 52-54*
- PO is **incorrect**
 - Honermann clearly depicts a removable cover
 - Honermann’s filter housing has an opening for raw liquid
 - Honermann’s inclines do not cause the filter to be locked into place

Ground 1/Claim 1: Honermann discloses claim 1 elements

- **PO:** Honermann's filter head is not a "removable cover" POR 52
- Honermann's filter head is expressly removable:

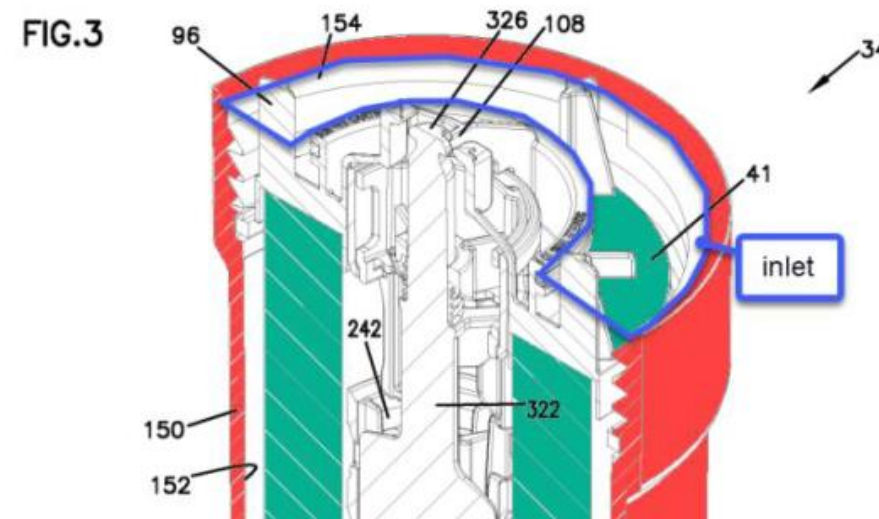
“T]he filter head 532 has been completely removed from the filter assembly 534.”

Ex. 1006 (Honermann) at ¶201; Reply 32



Ground 1/Claim 1: Honermann discloses claim 1 elements

- **PO:** Honermann's "inlet conduit" are in the filter head, not the filter assembly *POR 53*
- Honermann's filter assembly has the identified "inlet" for raw fluid:



- **Surreply:** this is an arbitrary volume, not an inlet *Surreply 30-31*
 - PO provides no reason to construe inlet to exclude this space

Ground 1/Claim 1: Honermann discloses claim 1 elements

- **PO:** Honermann's inclines do not exclude a self-locking *POR 53-54*
- Honermann's inclines do not cause the filter insert to lock:

“Honermann discloses that as the protrusions engage with the slide surfaces, the basket rotates to an “unlocked position” which allows “additional movement of the filter cartridge 38 in a downwardly axial direction toward the closed end 156.” Ex. 1006, ¶¶179-180.”

Ex. 1003 (Nranian Decl.) at ¶221; Pet. 102

- **Surreply:** user must orient the protrusions above the grooves *Surreply 31-32*
 - But that says nothing about the nature of Honermann's ***inclines*** which allow protrusions to freely slide without any self-locking