

United States Patent and Trademark Office
Before the Patent Trial and Appeal Board

AdvanCell Pty Ltd.

(Petitioner)

v.

Sciencons AS and ARTBIO, Inc.,

(Patent Owner)

Post Grant Review

No. PGR2025-00040 | U.S. Patent No. 12,249,437

Petitioner's Presentation

Claim Construction

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Construction of “fluidly coupled” in Limitation 1c

'437 Patent, Claim 1

[1c]

wherein the solid precursor isotope source is configured to be fluidly coupled to a volume including a collector surface with a gas tight seal,

EX1001, Claim 1

Petitioner’s Position

A. “fluidly coupled”

“Fluidly coupled” appears in limitation 1c. The parties and Board agree that “two structures that have gas flow therebetween are fluidly coupled to each other.”

D.I., 11-12; POR, 8.

DI at 11-12, POR at 8, Reply at 1

Construction of “gas tight seal” in Limitation 1c

'437 Patent, Claim 1

[1c]

wherein the solid precursor isotope source is configured to be fluidly coupled to a volume including a collector surface with a gas tight seal,

EX1001, Claim 1

Petitioner’s Position

meanings. Therefore, the plain and ordinary meaning of “seal” *includes* a component that can be used to perform the act of sealing whether or not the component is currently configured to perform that act. *See* EX1024; EX1023,

Reply at 3

Construction of “gas tight seal” in Limitation 1c

'437 Patent, Claim 1

[1c]

wherein the solid precursor isotope source is configured to be fluidly coupled to a volume including a collector surface with a gas tight seal,

EX1001, Claim 1

Institution Decision

the gas tight seal can be a valve. At this stage of the proceeding, we understand that a gas tight valve is a gas tight seal regardless of whether the valve is closed (preventing gas flow) or open (allowing gas flow) position.

Institution Decision at 12

Construction of “gas tight seal” in Limitation 1c

'437 Patent, Claim 1

[1c]

wherein the solid precursor isotope source is configured to be fluidly coupled to a volume including a collector surface with a gas tight seal,

EX1001, Claim 1

- The Board's and Petitioner's construction reflects the plain meaning



seal¹ (sēl) *n.* **1a.** A device or material that is used to close off or fasten an opening or connection, especially to prevent the escape of a liquid or gas; *used caulk as a seal around the window.* **b.** An airtight closure; a door that lacks a tight seal. **c.** Something, such as a piece of tape, that is

Reply at 3

Construction of “gas tight seal” in Limitation 1c

'437 Patent, Claim 1	
[1c]	wherein the solid precursor isotope source is configured to be fluidly coupled to a volume including a collector surface with a gas tight seal,

EX1001, Claim 1

- The Board’s and Petitioner’s construction reflects the plain meaning



Q. Okay. So with respect to the object priced \$7.54, what is that object, sir?

A. That object is the national multipurpose seal.

Q. Do you think that's an accurate description of the object?

A. I have no idea.

Q. Do you have any reason to believe that that's not an accurate description of the object that's on sale for \$7.54?

A. I don't know why Home Depot would try to be committing fraud upon me or anyone else because it seems reasonable.

Reply at 3, EX1024 at 1, EX1023 at 151:24-152-20

Construction of Limitation 1c

'437 Patent, Claim 1

[1c]

wherein the solid precursor isotope source is configured to be fluidly coupled to a volume including a collector surface with a gas tight seal,

EX1001, Claim 1

- The Board's and Petitioner's construction is consistent with the '437 patent specification

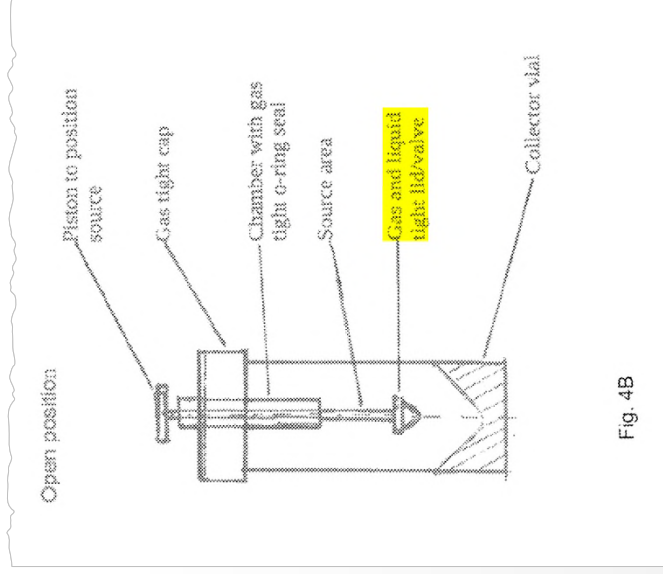


Fig. 4B

24. Moreover, as the D.I. at 12 correctly recognizes, Figure 4B labels a valve in an open position as a “Gas and liquid tight lid/valve.” EX1001, Fig. 4B. The

Reply at 4

EX1001, Fig. 4B, D.I. at 12, Reply at 4

Construction of Limitation 1c

'437 Patent, Claim 1

[1c]

wherein the solid precursor isotope source is configured to be fluidly coupled to a volume including a collector surface with a gas tight seal,

EX1001, Claim 1

- **Patent Owner's position: lexicography**

The materials used may be of glass (including quartz), polymer, metal, ceramic or other suitable materials for pharmaceutical containers. The rod in FIG. 2 (piston in FIGS. 4A-4B) slides in a tube with o rings or similar at the top to secure gas tight seal. The valve at the bottom of the rod is gas and liquid tight in the closed position for the unit.

EX1001, 18:19-24

- **This is not definitional**

POR at 9; Reply at 4

Construction of Limitation 1c

'437 Patent, Claim 1

[1c]

wherein the solid precursor isotope source is configured to be fluidly coupled to a volume including a collector surface with a gas tight seal,

EX1001, Claim 1

Petitioner's Position

This limitation is ambiguous because it is not clear whether the phrase “with a gas tight seal” corresponds to “configured to,” “fluidly coupled,” or “volume.”

Thus, there are three possible constructions:

- The entire volume has a gas tight seal (with the precursor isotope source inside the volume),
- Just the collector surface, not the entire volume, has a gas tight seal (when the precursor isotope source is inside the collector), or
- The system is configured to selectively couple, using a gas tight seal, a volume with the solid precursor isotope source and a volume with a collector surface.

'437 Petition at 5

Construction of Limitation 1c

'437 Patent, Claim 1

[1c]

wherein the solid precursor isotope source is configured to be fluidly coupled to a volume including a collector surface with a gas tight seal,

EX1001, Claim 1

Institution Decision

Pet. 5. Petitioner asserts that there are three possible constructions for what has to be “with a gas tight seal”, namely:

- (1) the volume (“wherein the solid precursor isotope source is configured to be fluidly coupled to a *volume* including a collector surface *with a gas tight seal*”);
- (2) the collector surface (“wherein the solid precursor isotope source is configured to be fluidly coupled to a volume including *a collector surface with a gas tight seal*”); or
- (3) the fluidly coupling (“wherein the solid precursor isotope *source is configured to be fluidly coupled* to a volume including a collector surface *with a gas tight seal*”).

Pet. 5 (citing Ex. 1002 ¶ 36) (emphasis added).

Institution Decision at 13

Construction of Limitation 1c

'437 Patent, Claim 1

[1c]

wherein the solid precursor isotope source is configured to be fluidly coupled to a volume including a collector surface with a gas tight seal,

EX1001, Claim 1

Patent Owner's Position

POR

While it is not Patent Owner's burden to construe claim terms in the first instance, the plain meaning of the claim language indicates that the term "with a gas tight seal" refers to the term it immediately follows in the claim: "a collector surface." In other words, the language requires that there be a gas tight seal on the collector surface. EX2002, ¶46.

POR at 16-17

PO's Sur-reply

² Petitioner claims Patent Owner adopted a new construction for limitation 1c, construing "with" to mean "on." Reply, 5. Not so. Such a replacement would result in the phrase "collector surface on a gas tight seal," which no party has proposed.

PO Sur-reply at 6, FN 2

Construction of Limitation 1c

'437 Patent, Claim 1

[1c]

wherein the solid precursor isotope source is configured to be fluidly coupled to a volume including a collector surface with a gas tight seal,

EX1001, Claim 1

Patent Owner's Position

collector surface with a gas tight seal

a gas tight seal on the collector surface

PO Sur-reply at 6, FN 2

Construction of Limitation 1c

Patent Owner's Construction is Wrong

Patent Owner's Construction Excludes Fig. 4

- Mr. Conroy admitted that the cap in Fig. 4 is in contact with the outside surface of the vial, not on the collector surface

Q. Is the cap in contact with the outside portion of the top of the collector vial or the inside portion of the top of the collector vial?

A. I believe that would be outside.

EX1023 (Conroy Depo. Tr.) at 212:17-22, Reply at 5-6

Construction of Limitation 1c

Patent Owner's Construction is Wrong

Petitioner's Reply

- Patent Owner's Construction Excludes Fig. 4.
- There is no seal on the collector surface.

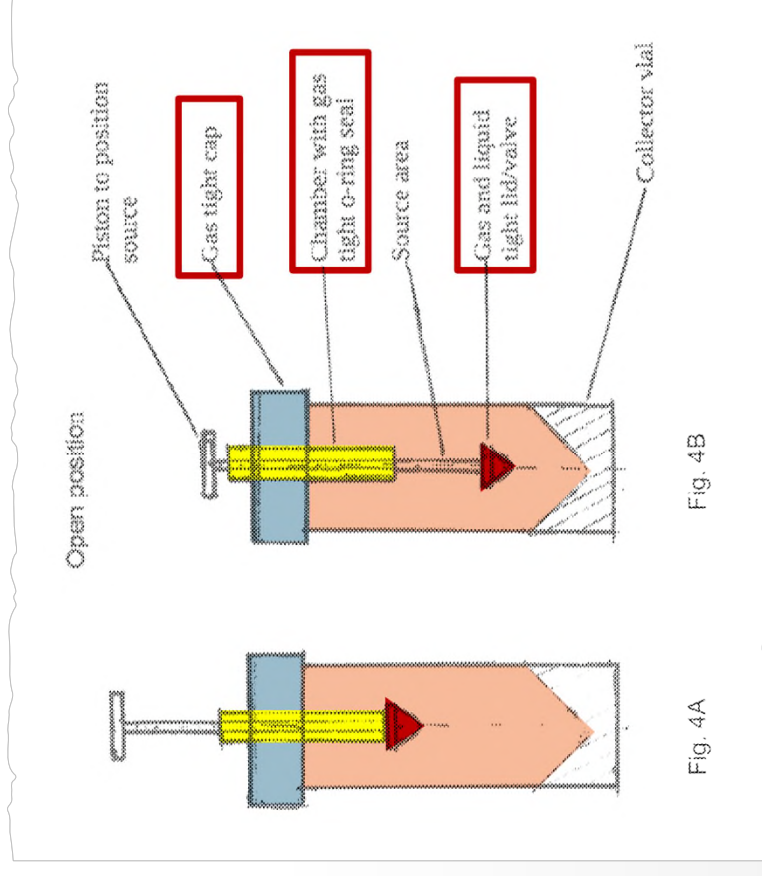


Fig. 4A

Fig. 4B

Reply at 5-7; EX1001 at Fig. 4 (annotated)

Construction of Limitation 1c

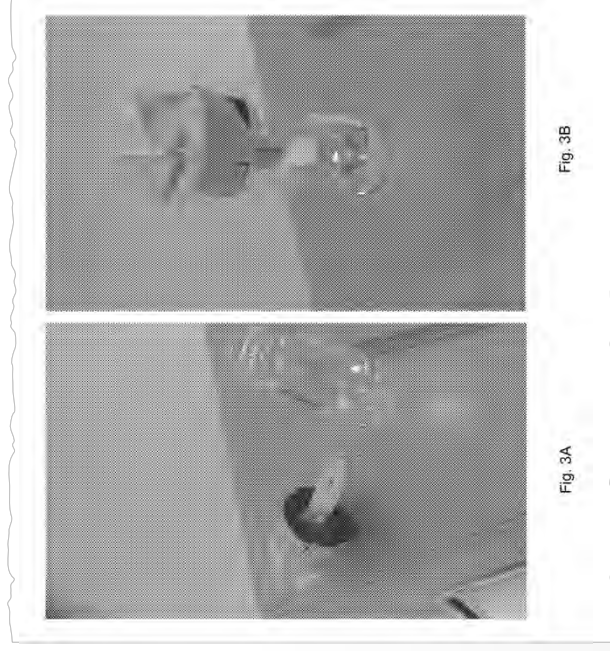
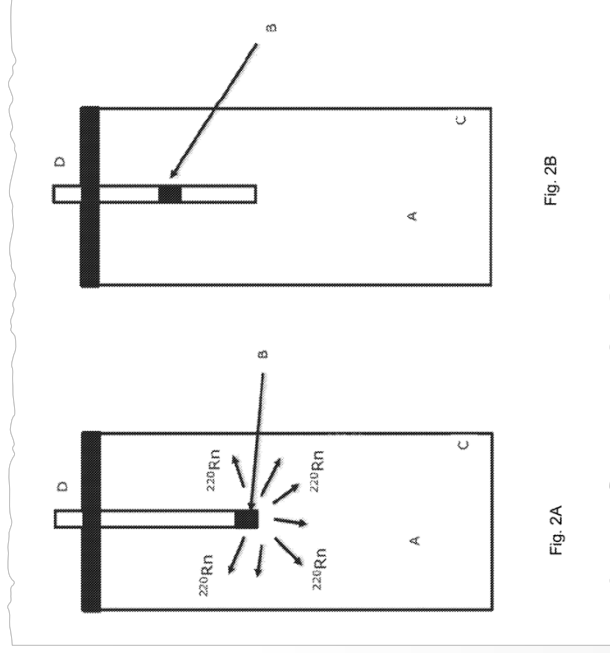
Patent Owner's Construction is Wrong

Patent Owner's Construction Excludes Figures 2, 3 and 5

- Gasket in Fig. 5B is between top of bottle and cap, not on the collector surface, Reply at 7-8; EX2004, 106:7-107:16
.....
- It is not clear whether a gasket or cap contacts top of bottle in Fig. 3, Reply at 8
.....
- Nothing in Fig. 2 indicates seal on collector surface, Reply at 8

Construction of Limitation 1c

Patent Owner's Construction is Wrong



EX1001 at Figs. 2, 3A – 3B, 5B

Construction of Limitation 1c

Patent Owner's Construction is Wrong

Patent Owner's Last Antecedent Argument Fails

'437 Patent, Claim 1	
[1c]	wherein the solid precursor isotope source is configured to be fluidly coupled to a volume including a collector surface with a <u>gas tight seal</u> ,
EX1001, Claim 1	
'437 Patent, Claim 16	
[16c]	fluidly coupling a volume including a collector surface to the solid precursor isotope source <u>using a gas tight seal</u> ; and
EX1001, Claim 16; Reply at 9	

Construction of Limitation 1c

Patent Owner's Construction is Wrong

Patent Owner's Last Antecedent Argument Fails

“ I shot an elephant in my pajamas ”



“Doctrine of last antecedent does not apply when there are good indications that a contrary interpretation is the better one”

Nefflix, Inc. v. DivX, LLC, 166 F.4th 1341, 1347 (Fed. Cir. 2026),
Reply at 9

Construction of Limitation 1c

Petitioner's First Construction

“with a gas tight seal” modifies volume

Institution Decision

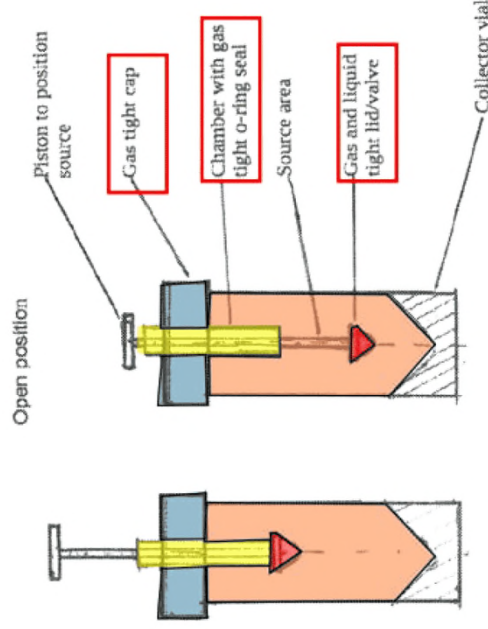


Fig. 4B

Fig. 4A

EX. 1001 at Fig. 4A-4B (annotated)

Petitioner also explains that under its first “volume” construction (i.e., where the “gas tight seal” modifies “a volume”), the sealed volume includes both the volume where the source is located and the volume corresponding to the collector surface. Pet. Reply 4 (citing Pet. 5–6). Petitioner asserts that, as an example, the sealed volume in Figure 4B includes the yellow volume of the tube, the blue volume of the cap, and the beige volume of the container. *Id.* Petitioner further asserts that this “entire volume” includes a collector surface and has a gas tight seal provided by the combination of the both the “gas tight o-ring seal” as well as the “gas tight cap.” *Id.* at 4–5.

Institution Decision at 14

Construction of Limitation 1c

Petitioner's First Construction

“with a gas tight seal” modifies volume

- Mr. Conroy admitted that the cap in Fig. 4 is in contact with the outside surface of the vial, not on the collector surface

Q. Is the cap in contact with the outside portion of the top of the collector vial or the inside portion of the top of the collector vial?

A. I believe that would be outside.

EX1023 (Conroy Depo. Tr.) at 212:17-22, Reply at 5-6

**Result: Petitioner's first construction reads on
Figure 4 embodiment**

POR at 11-12; Institution Decision at 20

Construction of Limitation 1c

Petitioner's First Construction

“with a gas tight seal” modifies volume

Petitioner's first construction also reads on embodiments of Figures 2, 3 and 5

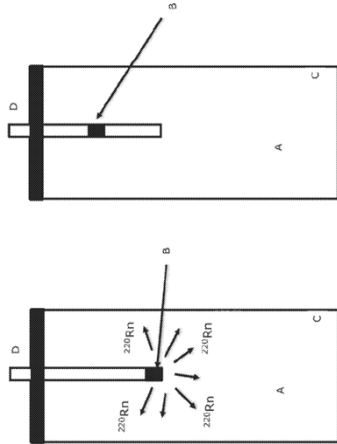


Fig. 2A

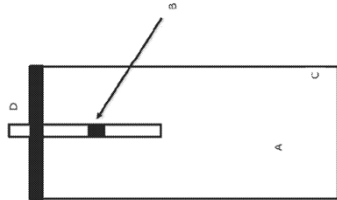


Fig. 2B



Fig. 3A

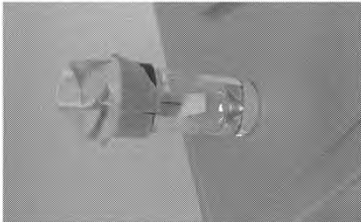


Fig. 3B



Fig. 5A



Fig. 5B

EX1001 at Figs. 2A-B, 3A-B, 5A-B
POR at 11

Construction of Limitation 1c

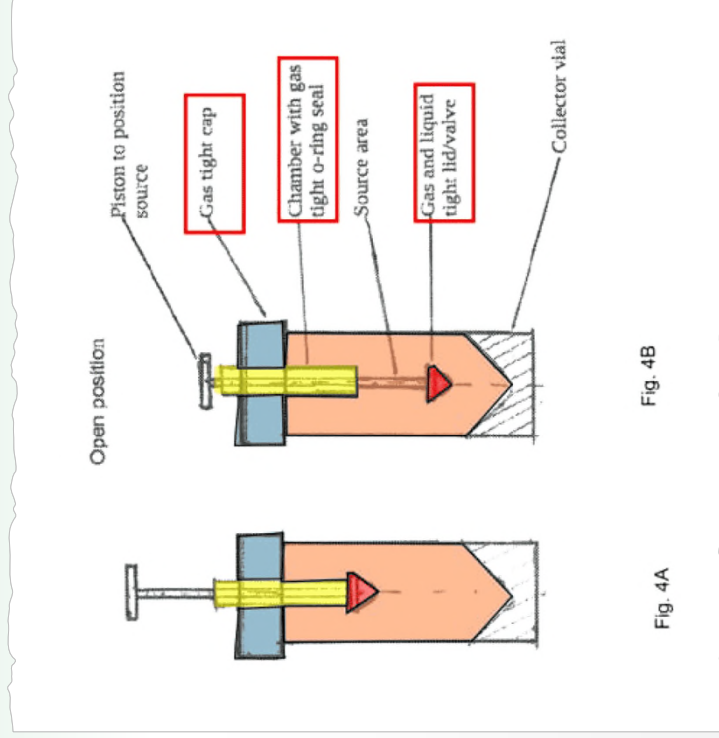
Petitioner's Third Construction

“with a gas tight seal” modifies “configured to be fluidly coupled”

Institution Decision

Petitioner asserts that under *the third construction* (“*the third ‘fluidly coupled’ limitation*”), the system is configured to selectively couple, using a gas tight seal, a volume with the solid precursor isotope source and a volume with a collector surface. Pet. 5; *see also id.* at 21–22 (identifying Hassfjell-Hoff’s gate valve as a gas tight seal that selectively fluidly couples the isotope source to the volume that has a collector surface).

Institution Decision at 17



EX. 1001 at Fig. 4A-4B (annotated)

Construction of Limitation 1c

Petitioner's Third Construction

“with a gas tight seal” modifies “configured to be fluidly coupled”

Institution Decision

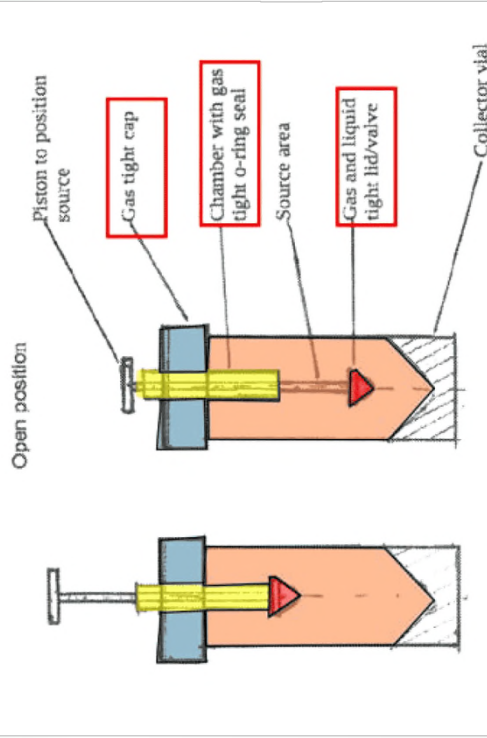


Fig. 4A

Fig. 4B

EX. 1001 at Fig. 4A-4B (annotated)

In its Reply Brief, Petitioner asserts that this construction aligns particularly with Figures 4A and 4B of the '437 patent. Pet. Reply 2–3 (citing Ex. 1001, Fig. 4). Petitioner asserts that this embodiment has three gas tight seals (the vial cap, the o-rings, and the lid/valve) annotated in red and three distinct spaces, annotated in yellow, blue, and beige. *Id.* The vial cap and the o-rings provide the gas tight seal and the lid/valve fluidly couple the isotope source to the volume. *See id.* at 3. Petitioner asserts that the precursor isotope located in the yellow volume is fluidly coupled to the beige and blue volumes, which include a collector surface vial, when the lid/valve is open as shown in Figure 4B. *Id.* The yellow volume is not fluidly coupled to the beige or blue volumes when the gas and liquid tight lid/valve is closed as depicted in Figure 4A.

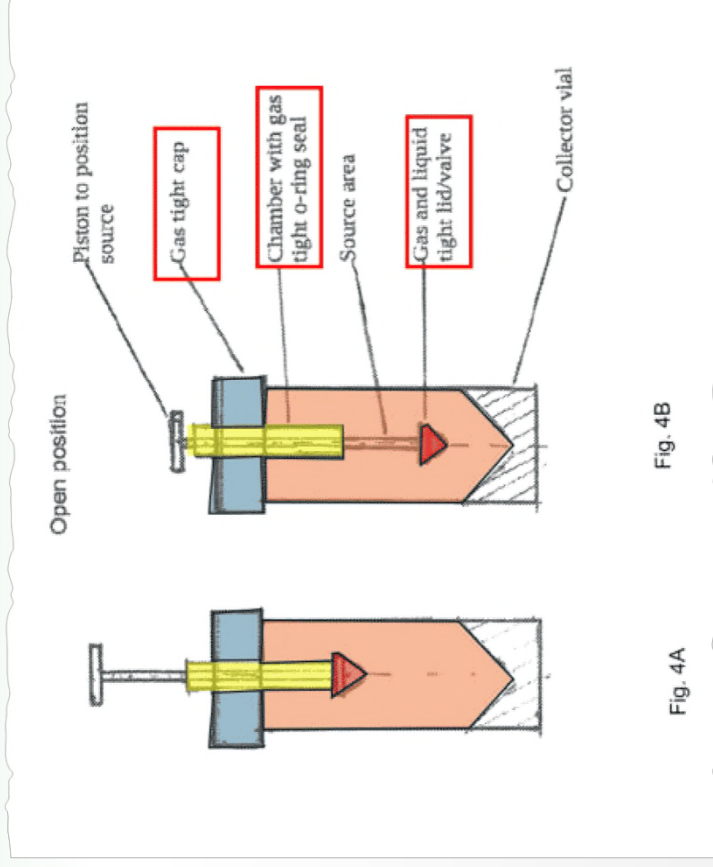
Institution Decision at 18

Construction of Limitation 1c

Petitioner's Third Construction

“with a gas tight seal” modifies “configured to be fluidly coupled”

Petitioner's third construction reads on Figure 4 embodiment



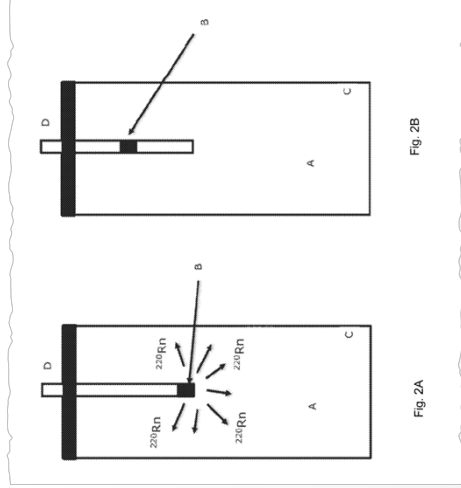
EX. 1001 at Fig. 4A-4B
(annotated); POR at 11;
Institution Decision at 21-23

Construction of Limitation 1c

Petitioner's Third Construction

“with a gas tight seal” modifies “configured to be fluidly coupled”

Petitioner's third construction also reads on embodiments of Figures 2, 3 and 5



EX1001 at Figs. 2A-B, 3A-B, 5A-B
POR at 11

Construction of Limitation 1c

Petitioner’s Second Construction

“with a gas tight seal” modifies “collector surface”

'437 Patent, Claim 1	
[1c]	wherein the solid precursor isotope source is configured to be fluidly coupled to a volume including a collector surface with a gas tight seal,

EX1001, Claim 1

'437 Patent, Claim 16	
[16c]	fluidly coupling a volume including a collector surface to the solid precursor isotope source using a gas tight seal;

EX1001, Claim 16
Reply at 12

Construction of Limitation 1c

Petitioner's Second Construction

“with a gas tight seal” modifies “collector surface”

Second construction does not read on any embodiment

Institution Decision

We agree with Petitioner that the embodiments of Figures 3 and 5 of the '437 patent meet this construction, because the interior surface of the vials (i.e., the collector surface of the volume) form a gas tight seal when the vial is sealed with a screw cap. Ex. 1001, Figs. 3, 5. The fact that this construction reads upon an embodiment in the '437 patent tends to support that this construction may be correct.

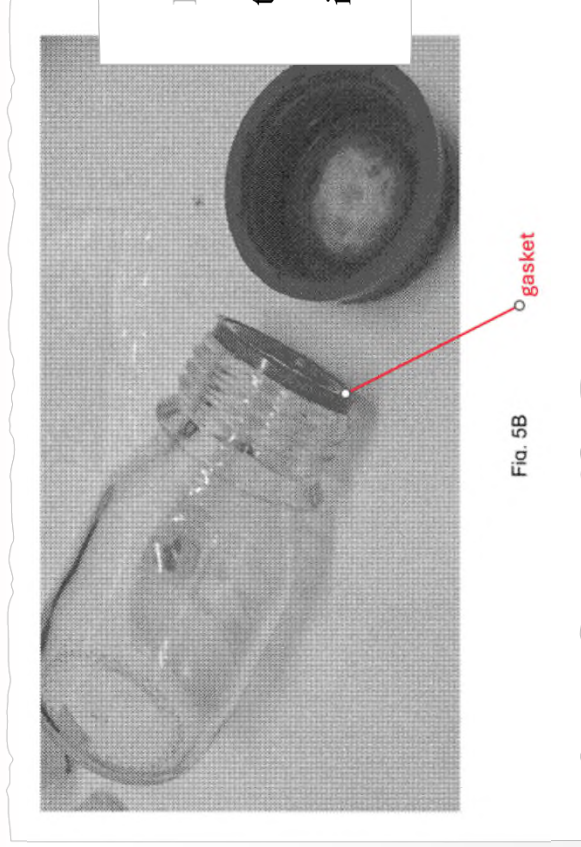
Institution Decision at 19

Construction of Limitation 1c

Petitioner's Second Construction

“with a gas tight seal” modifies “collector surface”

Second construction does not read on any embodiment



EX. 1001 at Fig. 5B (annotated); Reply at 14

EX1001, Fig. 5B. As shown in Figure 5B, there is some volume that exists above the glass container where the gasket extends past the glass and also there is volume inside the cap that is above the glass container. This construction does not read on

Reply at 14

Construction of Limitation 1c

Petitioner's Second Construction

“with a gas tight seal” modifies “collector surface”

Second construction does not read on any embodiment

Dr. Mirzadeh

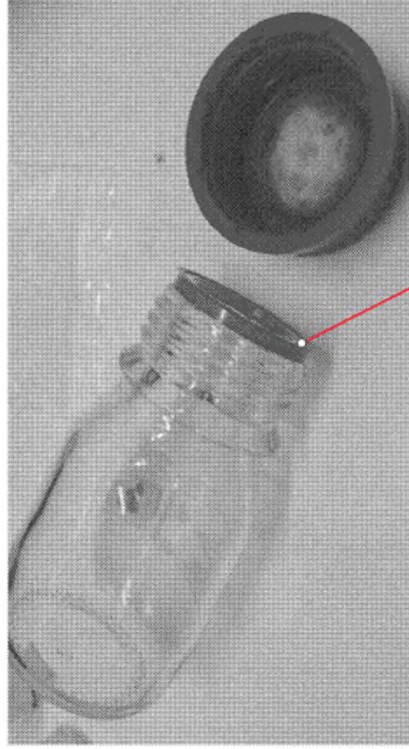


Fig. 5B

EX. 1001 at Fig. 5B (annotated); Reply at 14

- Q. What is shown at the top of the glass bottle in Figure 5A of the '437 patent --
A. **It is some kind of gaskets that seals against the cap.**

* * *

- Q. The area inside the bottle of Figure 5 does include slightly more than the collector surface, correct?
A. **Correct.**
Q. For Figure 3, does the area inside the bottle include slightly more than just the collector surface as well?
A. **Yes.**
Q. In your opinion, would a person of ordinary skill in the art, looking at Figures 3 and 5, believe that they satisfy your second construction?
A. **Yes, they cover the same.**

EX2004 (Mirzadeh Depo. Tr.) at 105:20-24; 107:2-16, Reply at 13-14

Grounds 1 and 2: First or Third Construction

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

First and Third Constructions of Limitation 1c

The Patent Owner Response Does Not Address Unpatentability Under the First or Third Construction For Grounds 1 and 2

Patent Owner's Response

1. Hassfjell-Hoff has not been shown to teach “wherein the solid precursor isotope source is configured to be fluidly coupled to a volume including a collector surface with a gas tight seal” [Element 1c]

As discussed above in §III.C, this limitation requires that there be a gas-tight seal on collector surface. This corresponds to Petitioner’s second construction (without the negative limitation Petitioner added). However, Petitioner did not

Patent Owner's Response at 22

Result: Petitioner has waived all arguments for Grounds 1 and 2 under Petitioner’s first and third constructions

Reply at 15-16

Ground 3: First Construction

First Construction of Limitation 1c

The Patent Owner Response Does Not Address Unpatentability Under the First Construction For Ground 3

Patent Owner's Response

As a threshold matter, the petition improperly relies on what the petition admits are two separate embodiments in Norman: the generators depicted in Figs. 1 and 2. Pet., 51-54; *see* EX1007, 2:40-45 (“FIG. 1 is sectional view of a diffusion

POR at 27

Petitioner's Position

1. [1pre] “A radioisotope generator comprising:”
Norman discloses the preamble. EX1007, Abstract (“A method and generator for preparing the radioisotope of lead, ^{212}Pb ”).

Petition at 49

First Construction of Limitation 1c

The Patent Owner Response Does Not Address Unpatentability Under the First Construction For Ground 3

Patent Owner's Response

As a threshold matter, the petition improperly relies on what the petition admits are two separate embodiments in Norman: the generators depicted in Figs. 1 and 2. Pet., 51-54; *see* EX1007, 2:40-45 (“FIG. 1 is sectional view of a diffusion

POR at 27

Petitioner's Position

2. [1a] “a solid precursor isotope source configured to emanate one or more gaseous progeny isotopes”

Norman discloses this limitation. The combination of the ^{228}Th in a matrix, is a *solid precursor isotope source*. EX1007, 3:53-56 (“ ^{228}Th compounds can be ground into super fine particles which are dispersed into a matrix”). Norman discloses that the matrix is a solid. EX1007, 3:53-56 (“graphite particles, alumina, and inert ceramic”). The ^{228}Th in the matrix is *configured to emanate one or more gaseous progeny isotopes*. EX1007, Abstract (“ ^{228}Th , in a closed chamber, is allowed to decay into gaseous ^{220}Rn which is then readily separated from the thorium and other decay products by diffusing the ^{220}Rn gas into a second chamber”). EX1002, ¶126.

Petition at 50-51

First Construction of Limitation 1c

The Patent Owner Response Does Not Address Unpatentability Under the First Construction For Ground 3

Patent Owner's Response

As a threshold matter, the petition improperly relies on what the petition admits are two separate embodiments in Norman: the generators depicted in Figs. 1 and 2. Pet., 51-54; *see* EX1007, 2:40-45 (“FIG. 1 is sectional view of a diffusion

POR at 27

Petitioner's Position

3. [1b] “the solid precursor isotope source comprising a precursor isotope; and”

Norman discloses this limitation. The combination of the ^{228}Th in a matrix, (i.e., *solid precursor isotope source*) includes the precursor isotope ^{228}Th . *See* §VI(B)(2) (limitation 1a). EX1002, ¶127.

Petition at 51

First Construction of Limitation 1c

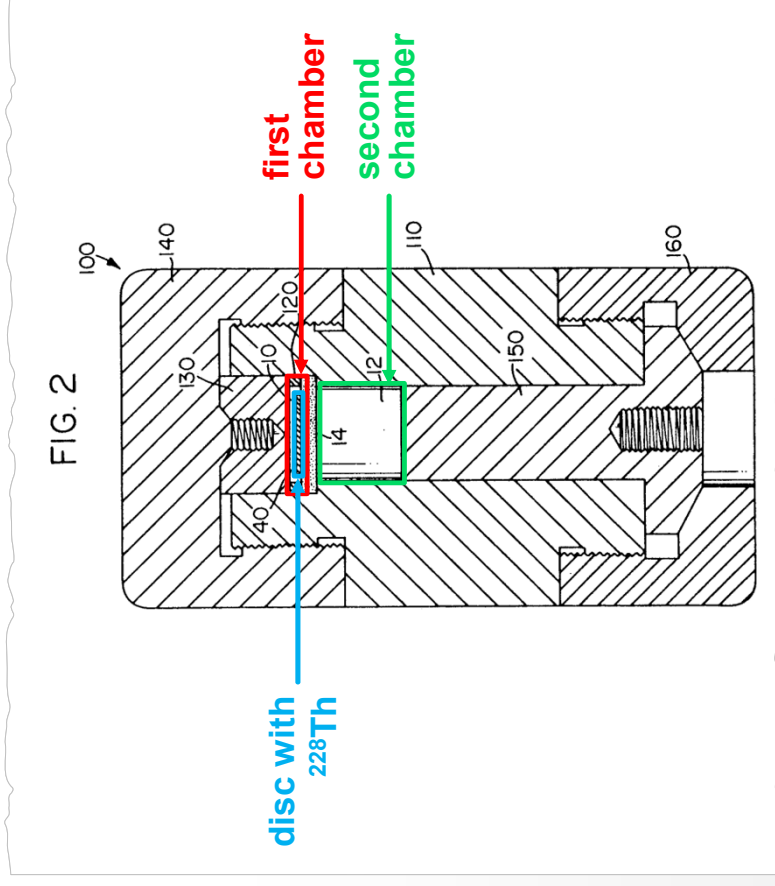
The Patent Owner Response Does Not Address Unpatentability Under the First Construction For Ground 3

Patent Owner's Response

As a threshold matter, the petition improperly relies on what the petition admits are two separate embodiments in Norman: the generators depicted in Figs. 1 and 2. Pet., 51-54; see EX1007, 2:40-45 (“FIG. 1 is sectional view of a diffusion

POR at 27

Norman



EX. 1007 at Fig. 2 (annotated);
Petition at 15

First Construction of Limitation 1c

The Patent Owner Response Does Not Address Unpatentability Under the First Construction For Ground 3

Patent Owner's Response

As a threshold matter, the petition improperly relies on what the petition admits are two separate embodiments in Norman: the generators depicted in Figs. 1 and 2. Pet., 51-54; *see* EX1007, 2:40-45 (“FIG. 1 is sectional view of a diffusion

POR at 27

Petitioner's Position

4. [1c] “wherein the solid precursor isotope source is configured to be fluidly coupled to a volume including a collector surface using a gas tight seal, and”

a. **First and Second Constructions**

Norman discloses this limitation under either the **first** or second constructions of limitation 1c. *See* §§III(D)(1), (2) (constructions of “fluidly coupled” and limitation 1c). As shown in Figure 2, the solid precursor isotope source 40 is fluidly coupled to the second chamber 12 (a *volume*) through gas permeable membrane 14.

Petition at 51

First Construction of Limitation 1c

The Patent Owner Response Does Not Address Unpatentability Under the First Construction For Ground 3

Patent Owner's Response

As a threshold matter, the petition improperly relies on what the petition admits are two separate embodiments in Norman: the generators depicted in Figs. 1 and 2. Pet., 51-54; *see* EX1007, 2:40-45 (“FIG. 1 is sectional view of a diffusion

POR at 27

Petitioner's Position

A POSITA would have understood that Norman discloses that the embodiment of Figure 2 has the solid precursor isotope source (*i.e.*, ²²⁸Th encapsulated in a matrix) configured to be fluidly coupled to a volume including a collector surface (via the gas permeable membrane 14) using a gas tight seal (*i.e.*, by which the escape of radon from the generator is prevented). EX1007, 7:65-8:24 (discussing various “seal” elements in figure 2), Fig. 2. EX1002, ¶131.

Petition at 53-54

First Construction of Limitation 1c

The Patent Owner Response Does Not Address Unpatentability Under the First Construction For Ground 3

Patent Owner's Response

As a threshold matter, the petition improperly relies on what the petition admits are two separate embodiments in Norman: the generators depicted in Figs. 1 and 2. Pet., 51-54; see EX1007, 2:40-45 (“FIG. 1 is sectional view of a diffusion

POR at 27

Petitioner's Position

5. [1d] “wherein the solid precursor isotope source and the collector surface are configured such that the one or more gaseous progeny isotopes deposit one or more solid progeny isotopes on the collector surface.”

Norman discloses this limitation. EX1007, Abstract (“A method and

generator for preparing the radioisotope of lead, ^{212}Pb , whereby ^{228}Th , in a closed chamber, is allowed to decay to gaseous ^{220}Rn which is then readily separated from the thorium and other decay products by diffusing the ^{220}Rn gas into a second chamber, where it decays to ^{212}Pb which can then be collected from the second chamber.”), 2:65-3:11 (“the process and generator of the present invention involve the decay of a parent isotope, such as ^{228}Th , within a first closed chamber to yield a gaseous decay product, such as ^{220}Rn ... Decay of ^{220}Rn to ^{212}Pb (via very short lived polonium-216) causes recoils which tend to embed the lead in the open porosity porous medium as well as in any other solid exposed to the radon.”). EX1002, ¶134.

Petition at 55

Ground 3: Third Construction

Third Construction of Limitation 1c

The Patent Owner Response Does Not Address Unpatentability Under the Third Construction For Ground 3

Patent Owner's Response

As a threshold matter, the petition improperly relies on what the petition admits are two separate embodiments in Norman: the generators depicted in Figs. 1 and 2. Pet., 51-54; *see* EX1007, 2:40-45 (“FIG. 1 is sectional view of a diffusion

POR at 27

Petitioner's Position

volume that includes a collector surface. Norman discloses using a stopcock (*i.e.*, valve) that can be opened to allow the solid precursor isotope source to emanate gaseous progeny isotopes from the first chamber 10 to the second chamber 12. EX1007, 8:33-41 (“it is apparent that the reactor could be designed such that the two chambers are physically separated from each other and connected by a passageway through which the gaseous product could diffuse without permitting transfer of any solid material, e.g., a stopcock. Thus, when the stopcock is opened, the gaseous ^{220}Rn diffuses from parental chamber 10 into the collection chamber 12.”). When the (gas tight seal) stopcock is closed, the solid precursor isotope

Petition at 54-55

First and Third Constructions of Limitation 1c

The Patent Owner Response Does Not Address Unpatentability Under the First or Third Construction For Ground 3

Patent Owner's Response

Regardless, even applying the teachings of Norman cited by Petitioner, and presuming the different embodiments of Norman would be combined, Norman has not been shown to disclose limitation 1c. Limitation 1c requires that the collection surface have a gas tight seal. Petitioner identifies the collector surface as “the sides

POR at 29

First and Third Constructions of Limitation 1c

The Patent Owner Response Does Not Address Unpatentability Under the First or Third Construction For Ground 4

Petitioner's Position

If Patent Owner argues, incorrectly, that Norman does not disclose that Figure 2 has a gas-tight seal, Norman renders obvious this limitation. It would have been obvious to a POSITA to utilize the teaching of Norman regarding having a gas tight seal for Figure 1 in the Figure 2 embodiment. A POSITA would have been motivated to make this combination at least because such embodiments are described in the same prior art reference, are fully compatible with each other, could have been combined with minimal effort to achieve predictable results, and to minimize radiation leakage. EX1002, ¶132.

Petition at 64-65

Ground 5: Patent Owner's Construction of Limitation 1c

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Ground 5 – Obviousness Under Patent Owner’s Construction of Limitation 1c

Petitioners are afforded the opportunity to show unpatentability under new constructions offered by the Board or Patent Owner

Axonics, Inc. v. Medtronic, Inc., 75 F.4th 1374, 1383 (Fed. Cir. 2023);
Apple Inc. v. Omni Medsci, Inc., 2024 WL 3084509, *5 (Fed. Cir. June 21, 2024); Reply at 15

Ground 5 – Obviousness Under Patent Owner’s Construction of Limitation 1c

The Petition explains the Hassfjell-Hoff modification in detail

To the extent that the gas-tight seal is construed as modifying the volume (See §III(D)(2) (second 1c construction)), a POSITA would have found it obvious to implement Hassfjell-Hoff such that there is a gas-tight seal around the collection container during collection as disclosed by Norman. Specifically, a POSITA would have been motivated to establish a gas-tight seal between the bottom end Hassfjell-Hoff’s tube and the neck of the polyethylene bottle when the filtering basket is lowered into the interior of the polyethylene bottle. This is because a gas-tight seal

’437 Petition at 67

Ground 5 – Obviousness Under Patent Owner’s Construction of Limitation 1c

The Petition explains the Hassfjell-Hoff modification in detail

shoulder portion of the bottle connected to the neck. For example, the opening of the polyethylene bottle in Fig. 1 of Hassfjell-Hoff has an inner diameter of 31mm while the tube has a diameter of 36mm, which enables the chamfered bottom of the tube to have an interference fit inside the opening of the polyethylene bottle when the tube is fully lowered. EX1003, Fig. 1. A POSITA would have found it obvious to configure the surface at the top of the inner neck of the polyethylene bottle to mate with the chamfered end of the tube to enhance the integrity with a gas-tight seal between the end of the tube and the bottle. In addition, the bottle is made of polyethylene, which a POSITA would have understood would not allow the radon gas to escape. EX1003, 6 (“gas-tight collection chamber”). A POSITA would have been motivated to configure the Hassfjell-Hoff system to form a gas-tight seal between the tube and the polyethylene bottle to enhance safety for the worker that is replacing the collection container, and would have had a reasonable expectation of success because such gas-tight seals are well-known. EX1002, ¶177.

Petition at 67-68

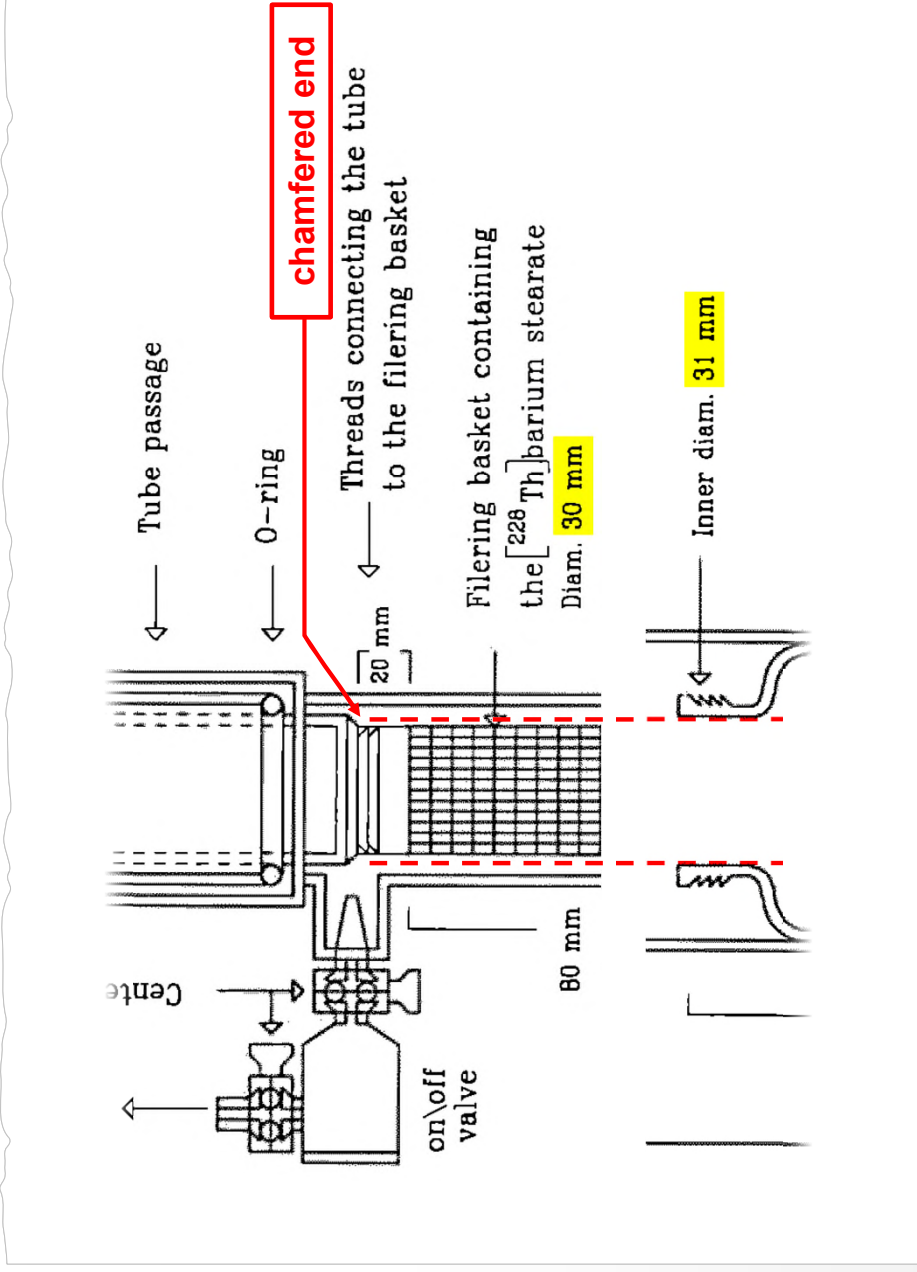
Ground 5 – Obviousness Under Patent Owner’s Construction of Limitation 1c

The Petition explains the motivation for the modification

lowered into the interior of the polyethylene bottle. This is because a gas-tight seal between the bottom of the tube and the polyethylene bottle would limit the radioactive contamination on the outside of the polyethylene bottle, particularly the shoulder portion of the bottle connected to the neck. For example, the opening of

'437 Petition at 67

Ground 5 – Obviousness Under Patent Owner’s Construction of Limitation 1c



EX1003 at 8, Petition at 27-29 and 67-69; Reply at 22-25

Ground 5 – Obviousness Under Patent Owner's Construction of Limitation 1c

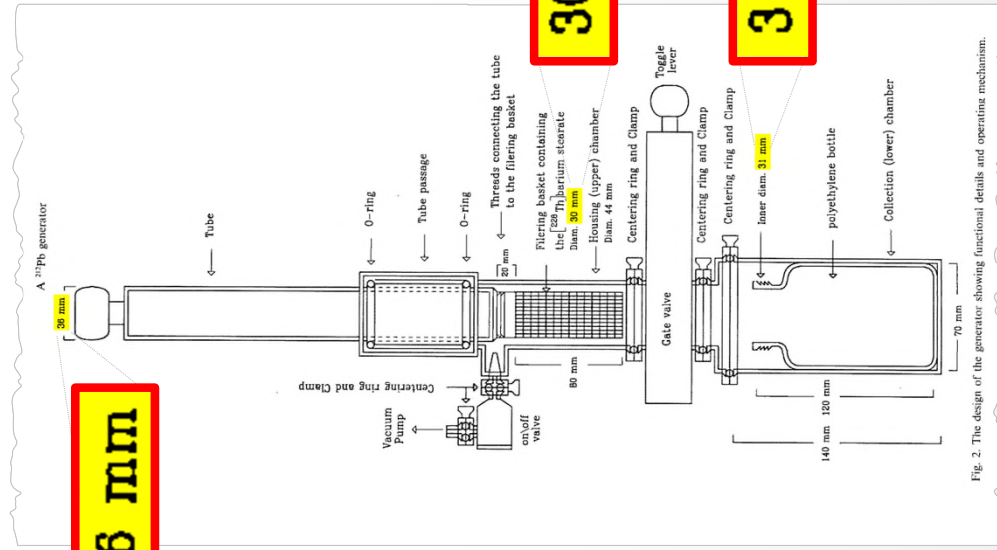


Fig. 2. The design of the generator showing functional details and operating mechanism.

EX1003 at 8, Petition at 27-29 and 67-69; Reply at 22-25

Ground 5 – Obviousness Under Patent Owner’s Construction of Limitation 1c



“The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference.”

Allied Erecting & Dismantling Co. v. Genesis Attachments, LLC, 825 F.3d 1373, 1381 (Fed. Cir. 2016); Reply at 23

Ground 5 – Obviousness Under Second Construction of Limitation 1c

As shown above and in the Petition, a POSITA would have been motivated to modify Hassfjell-Hoff to create a gas tight seal between the chamfered end of the tube and neck of the polyethylene bottle. It is undisputed that this is a “gas tight seal” that is “on the collector surface” under PO’s constructions, and that this arrangement satisfies Petitioner’s second construction of limitation 1c and satisfies limitation 16c. Accordingly, all challenged claims for Ground 5 should be found unpatentable.

Reply at 25

Indefiniteness

Patent Owner Says Every One of Petitioner's Constructions is Wrong

Petitioner alleges ambiguity based on arguing three possibilities as to what

“gas tight seal” refers to. Pet., 5. While the petition’s proffered “three possible

constructions” are themselves erroneous and unclear, the Board instituted trial to

address whether “with a gas tight seal” modifies: (1) a volume, (2) a collector surface, or (3) the precursor isotope source is configured to be fluidly coupled. DI,

POR at 11

Indefiniteness

Patent Owner is Unable to Articulate a Proper Construction

surface.” In other words, the language requires that there be a gas tight seal on the collector surface. EX2002, ¶46.

As discussed above in §III.C, this limitation requires that there be a gas-tight seal on collector surface. This corresponds to Petitioner’s second construction

² Petitioner claims Patent Owner adopted a new construction for limitation 1c, construing “with” to mean “on.” Reply, 5. Not so. Such a replacement would result in the phrase “collector surface on a gas tight seal,” which no party has proposed.

POR at 17, POR at 22, and Sur-reply at 6 n.2

Indefiniteness

PO is Unable to Articulate a Proper Construction

- “... a collector surface with a gas tight seal”
- “a collector surface with a gas tight seal”
- precursor isotope source using a gas tight seal elephant in my pajamas

Reply at 5-10, Sur-reply at 5-10

Rebuttal Slides

Patent Owner Cannot Modify Its POR Theory in Its Sur-Reply

Under the circumstances, we do not believe the Board abused its discretion. ParkerVision's patent owner response contended that a "storage element" must store non-negligible amounts of energy but failed to argue that Tayloe's capacitors did not meet that requirement, instead choosing to focus on just the energy transfer system issue. The Board thus reasonably understood ParkerVision's excluded sur-reply arguments as offering a new theory of patentability that ParkerVision should have included with its other attacks on Tayloe in its patent owner response, rather than waiting to raise it in a sur-reply.

ParkerVision, Inc. v. Vidal, 88 F.4th 969, 981 (Fed. Cir. 2023)



"We have held that in some circumstances the Board acts within its discretion when declining to consider . . . a new theory of patentability raised by patent owner in sur-reply."

Rembrandt Diagnostics, LP v. Alere, Inc., 76 F.4th 1376, 1383 (Fed. Cir. 2023)

This Panel Does Not Have Authority to De-Institute This PGR

Light & Wonder, Inc. v. Evolution Malta Ltd.

court proceeding involving the same parties as these IPRs. The Board subsequently denied the Motion, reasoning correctly that it lacked the authority to terminate these IPRs for discretionary reasons. Paper 25, 4–5 (citing Memorandum on Interim Processes for PTAB Workload Management (March 26, 2025)² at 1; Memorandum on Director Institution of AIA Trial Proceedings (Oct. 17, 2025)³).

Light & Wonder, Inc. v. Evolution Malta Ltd., IPR2025-01072 (Director June 22, 2026) (precedential)

Patent Owner Does Not Get to Choose a Construction for the Board

POR

As the POR pointed out, the Institution Decision interpreted and the POR adopted Petitioner's "second construction" without Petitioner's unjustified negative limitation ("not the entire volume," Pet., 5). POR, 14-15. Petitioner now

POR at 5

surface... has a gas tight seal." Pet., 5; DI, 19. This is the construction the POR agreed was the correct interpretation under which the claims should be reviewed in this case. POR, 16-21, 22 (limitation 1c "corresponds to Petitioner's second construction (without the negative limitation...)").²

Patent Owner agreed to apply Petitioner's second construction, as understood by the Board: the term "with a gas tight seal" refers to the term it immediately follows in the claim: 'a collector surface.'" POR, 16-17. The POR

POR at 6