

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MPL BRANDS NV, INC.,

Petitioner,

v.

BUZZBALLZ, LLC,

Patent Owner.

PGR2024-00035

Patent 11,932,441 B1

Before KEN B. BARRETT, ERIC C. JESCHKE, and
CYNTHIA M. HARDMAN, *Administrative Patent Judges*.

HARDMAN, *Administrative Patent Judge*.

JUDGMENT

Final Written Decision

Determining All Challenged Claims Unpatentable

35 U.S.C. § 328(a)

I. INTRODUCTION

This is a Final Written Decision in a post-grant review challenging the patentability of claims 1–20 of U.S. Patent No. 11,932,441 B1 (“the ’441 patent,” Ex. 1001). We have jurisdiction under 35 U.S.C. § 6.

Petitioner has the burden of proving unpatentability of the challenged claims by a preponderance of the evidence. 35 U.S.C. § 326(e). Having reviewed the parties’ arguments and cited evidence, for the reasons we discuss below, we find that Petitioner has demonstrated by a preponderance of the evidence that claims 1–20 are unpatentable as obvious over the cited prior art.

A. Procedural History

Petitioner MPL Brands NV, Inc. filed a Petition requesting post-grant review of claims 1–20 of the ’441 patent. Paper 1 (“Pet.”), 1. Patent Owner BuzzBallz, LLC filed a Preliminary Response. Paper 7. With our authorization, the parties filed additional briefing. Papers 8, 9.

In view of the then-available record, we instituted a post-grant review. Paper 10 (“Dec.”).

After institution, Patent Owner filed a Response to the Petition. Paper 17 (“PO Resp.”). Petitioner filed a Reply. Paper 22 (“Reply”). Patent Owner filed a Sur-reply. Paper 25 (“Sur-reply”).

On September 17, 2025, we held an oral hearing, the transcript of which is of record. Paper 38 (“Tr.”).

B. Real Parties in Interest

Petitioner identifies MPL Brands NV, Inc., which does business as Patco Brands, as the real party in interest. Pet. 1. Patent Owner identifies

BuzzBallz, LLC as the real party in interest. Paper 6 (Patent Owner Mandatory Notices), 2.

C. Related Matters

The parties identify as related the following matters involving the '441 patent: (i) *MPL Brands NV, Inc. v. BuzzBallz, LLC*, 3:24-cv-01282 (N.D. Cal.), filed March 1, 2024; (ii) *BuzzBallz, LLC et al. v. MPL Brands NV, Inc.*, No. 2:24-cv-00548 (D. Nev.), filed March 20, 2024; and (iii) IPR2024-01000. Pet. 1–2; Paper 6, 2.

We also note IPR2024-01098, pending between the same parties.

D. The '441 Patent (Ex. 1001)

The '441 patent, titled “Container,” issued on March 19, 2024, from U.S. Application 18/506,811, which was filed on November 10, 2023. Ex. 1001, codes (21), (22), (45), (54). The '441 patent claims priority, as a continuation, to a design patent application (U.S. Patent Application No. 29/824,813, filed January 27, 2022 (the “’813 Design Application”) and to two utility patent applications, the earliest of which was filed on April 19, 2010. *Id.* at code (63).

The '441 patent relates to a container for storing a liquid or solid, having a body formed from plastic (such as polyethylene terephthalate (“PET”) resin) and a lid formed from metal. *Id.* at code (57), 1:17–20, 3:4–15. The container body may include a vertical neck and a lip, and the bottom wall may include a depression. *Id.* at code (57).

We reproduce below Figure 1 of the '441 patent:

Container Shape

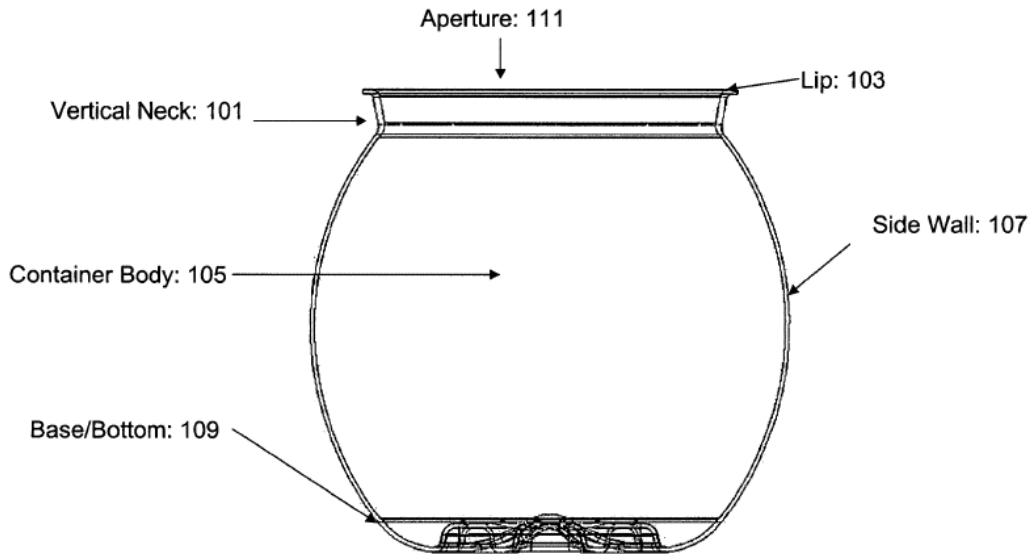


Figure 1

Figure 1, reproduced above, is a side view of hollow container body 105 having convex side wall 107 extending radially around a periphery of the container body. *Id.* at 2:22–29. The distal end of container side wall 107 is connected to base/bottom wall 109 to seal the first end of container body 105. *Id.* at 2:30–32. The proximate end of container side wall 107 is connected to substantially vertical neck 101 around the periphery of container side wall 107. *Id.* at 2:32–35. Aperture 111 extends through vertical neck 101 to provide access to a liquid or a solid within container body 105. *Id.* at 2:35–37.

The container's metal lid includes a pull top arm, which pivots and cooperates with a weakened area to provide access to the container body's interior. *Id.* at code (57). We reproduce below Figure 4 of the '441 patent:

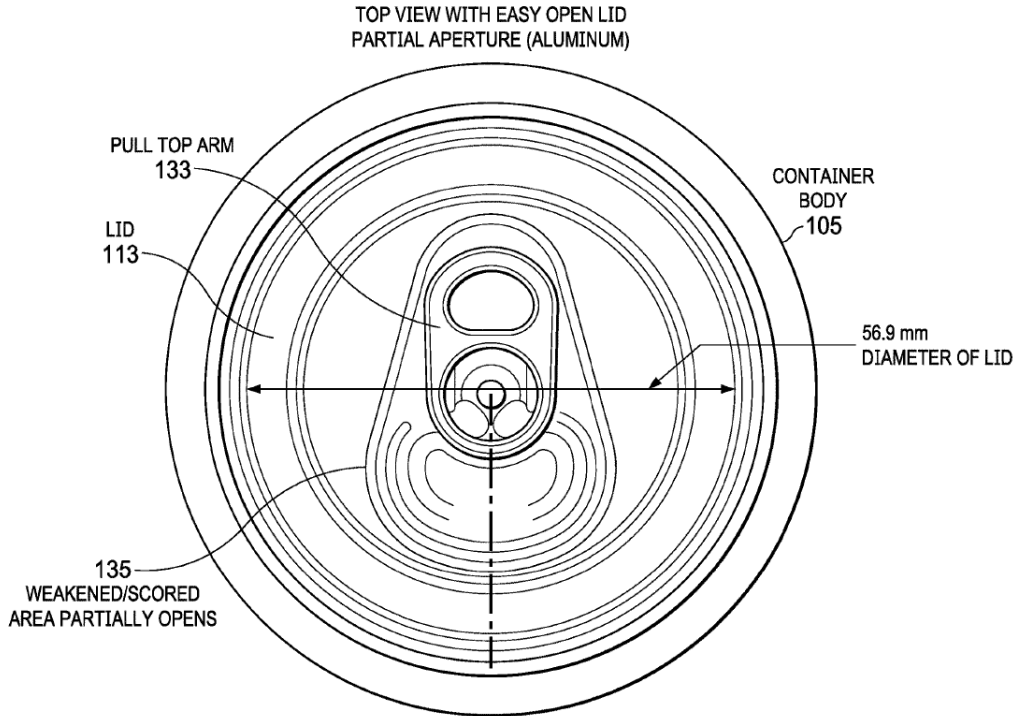


Figure 4

Figure 4, reproduced above, is a top view of deformable container lid 113. *Id.* at 3:31–34. When pull top arm 133 is pivoted by a user's finger through an aperture of pull top arm 133, deformable area 135 provides an opening for access to the contents in container body 105. *Id.* at 3:36–39.

The bottom wall of the container body may include a center protrusion, a depression, and a radially-extending depression. *Id.* at code (57). We reproduce below Figure 3 of the '441 patent:

Bottom of Container

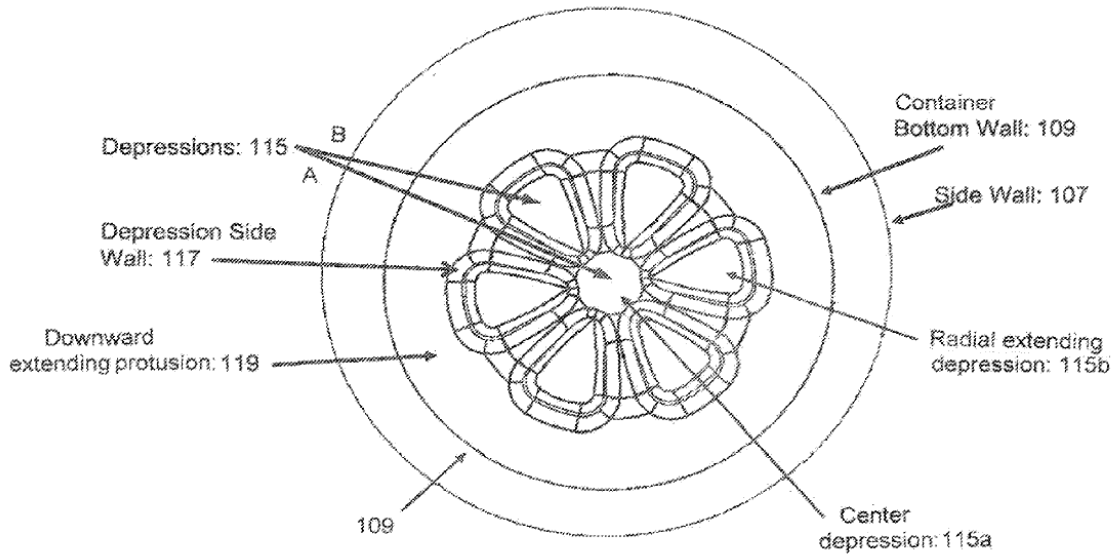


Figure 3

Figure 3, reproduced above, shows container side wall 107 extending radially outwards and bottom wall 109 having a multitude of radially-extending depressions 115, which increase in width as the radial distance from the center increases. *Id.* at 3:20–25. Depression 115 is defined by depression side wall 117 extending around the periphery of depression 115. *Id.* at 3:25–27. Bottom wall 109 includes downward extending protrusion 119 centered with respect to depressions 115 and bottom wall 109. *Id.* at 3:27–30.

E. The Challenged Claims

Petitioner challenges all claims (1–20) of the '441 patent. Claims 1 and 15 are independent. Claim 1 is illustrative and is reproduced below with bracketed notations added:¹

1. [1.Pre] A container, comprising:
 - [1.A] a container body, the container body defining a first opening to an interior of the container body; and
 - [1.B] a lid connected to the container body and covering the first opening to the interior of the container body;
 - [1.C] wherein the container body is made out of a resin;
 - [1.D] wherein the lid is made out of a metal;
 - [1.E] wherein the container body comprises a container side wall and a base portion connected to the container side wall;
 - [1.F] wherein the base portion comprises a bottom and a first depression formed therein, the first depression extending upwardly from the bottom;
 - [1.G] wherein the first depression at least partially defines a first outline;
 - [1.H] wherein the base portion further comprises a center element centered with respect to the first outline at least partially defined by the first depression;
 - [1.I] wherein each of the center element, and the first outline at least partially defined by the first depression, is centered with respect to the container side wall;
 - [1.J] wherein each of the center element, and the first outline at least partially defined by the first depression, is centered with respect to the base portion;
 - [1.K] wherein a cross-sectional diameter of the first opening to the interior of the container body is less than a cross-sectional diameter of a middle portion of the container side wall;

¹ For ease of reference, we use the same notations Petitioner uses in the Petition. *See, e.g.*, Pet. 15–67, 256–59.

- [1.L] wherein the base portion defines a diameter that is less than the cross-sectional diameter of the middle portion of the container side wall;
- [1.M] wherein a lower portion of the container side wall extends downwardly from the middle portion of the container side wall to the base portion of the container body, the lower portion along its entirety being greater in diameter than the base portion, including the bottom, thereby rendering the container body stemless;
- [1.N] wherein the container body further comprises a circular neck extending from the container side wall so that the container side wall extends between the circular neck and the base portion;
- [1.O] wherein an upper edge of the container side wall is adjacent to the circular neck of the container body;
- [1.P] wherein the container body further comprises a lip at an end of the circular neck opposite the upper edge of the container side wall;
- [1.Q] wherein the circular neck is adjacent to the lip;
- [1.R] wherein a first portion of the lid is above the lip of the container body;
- [1.S] wherein the first portion of the lid defines a first circular shape;
- [1.T] wherein the first portion of the lid further defines a second circular shape around which the first circular shape circumferentially extends;
- [1.U] wherein the second circular shape defined by the first portion of the lid is concentric with the first circular shape defined by the first portion of the lid;
- [1.V] wherein the first circular shape defined by the first portion of the lid is radially positioned between the container side wall and the second circular shape defined by the first portion of the lid;
- [1.W] wherein a second portion of the lid extends horizontally and is positioned so that the second circular shape is radially positioned between the second portion of the lid and the first circular shape;

- [1.X] wherein the second portion of the lid defines a total area across which the second portion of the lid extends horizontally;
- [1.Y] wherein the second portion of the lid comprises a weakened or scored area;
- [1.Z] wherein the weakened or scored area is less than the total area across which the second portion of the lid extends horizontally;
- [1.AA] wherein the lid further comprises an arm connected to the second portion of the lid and radially positioned within the second circular shape;
- [1.AB] wherein the arm comprises opposing first and second end portions;
- [1.AC] wherein the arm is pivotable from a first position, in which the arm extends horizontally and the weakened or scored area is not deformed, to a second position, in which the arm does not extend horizontally and the weakened or scored area is deformed to provide a second opening to the interior of the container body;
- [1.AD] wherein an upper portion of the container side wall extends upwardly from the middle portion of the container side wall to the upper edge of the container side wall, the upper portion along its entirety being greater in diameter than the first opening to the interior of the container body;
- [1.AE] wherein the container body contains a liquid therewithin;
- [1.AF] wherein the lid cooperates with the lip to provide a seal so that the liquid contained within the container body is sealed against leaking out from between the container body and the lid;
- [1.AG] wherein, when the arm of the lid is in the first position and the weakened or scored area is not deformed:
 - the first end portion of the arm is not positioned above the weakened or scored area of the second portion of the lid; and
 - at least a portion of the second end portion of the arm is positioned above the weakened or scored area of the second portion of the lid;

[1.AH] wherein the container side wall extends between the circular neck and the base portion so that:
the upper portion of the container side wall defines a first angle:
between the upper portion of the container side wall
and the bottom of the base portion, and
with respect to the bottom of the base portion;
the middle portion of the container side wall defines a second angle:
between the middle portion of the container side wall and the bottom of the base portion, and
with respect to the bottom of the base portion;
the lower portion of the container side wall defines a third angle:
between the lower portion of the container side wall and the bottom of the base portion, and
with respect to the bottom of the base portion;
the first angle is an acute angle; the third angle is an obtuse angle;
the second angle is greater than the first angle; and
the third angle is greater than the second angle;
and
[1.AI] wherein the interior of the container body extends continuously across the cross-sectional diameter of the middle portion at a height midway between the circular neck and the base portion so as to be interrupted, if at all, only by the liquid contained within the container body.

Ex. 1001, 4:7–6:3.

F. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–20 are unpatentable on the following four grounds:

Ground	Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1	1–8	103	PCAN, ² AAPA ³
2	9–20	103	PCAN, Protais ⁴
3	1–20	103	Metzger, ⁵ Protais, Kaminski ⁶
4	1–20	103	Gardiner, ⁷ Pedmo, ⁸ Brown ⁹

Pet. 3–4. Petitioner supports its contentions with declarations from Nathan J. Delson, Ph.D. (Exs. 1002, 1019) and Joseph T. Norris (Exs. 1005,

² According to the Petition, Coca-Cola PET Can (“PCAN”) is a beverage container with a plastic body and an aluminum lid manufactured and sold from 1985–86, as allegedly evidenced by, e.g., newspaper articles (Exs. 1015, 1016), Coca-Cola marketing material (Ex. 1006), and the declaration of Joseph T. Norris (Ex. 1005). *See, e.g.*, Pet. 13–15.

³ AAPA stands for applicant-admitted prior art. *See* Pet. i, 67 (citing Ex. 1001, 1:36–37, 2:49–52, regarding blow molding).

⁴ Protais et al., U.S. Patent 8,524,349 B2, issued September 3, 2013 (Ex. 1008). Although the Petition additionally lists AAPA as part of Ground 2 (*see* Pet. 3, 69), the substantive arguments for this ground do not mention AAPA. *See* Pet. 69–96; Dec. 46 n.23. Accordingly, we do not list AAPA as part of Ground 2.

⁵ Metzger et al., U.S. Patent 8,141,741 B2, issued March 27, 2012 (Ex. 1010).

⁶ Kaminski et al., U.S. Patent 4,465,204, issued August 14, 1984 (Ex. 1011).

⁷ Gardiner, U.S. Patent 6,729,495 B2, issued May 4, 2004 (Ex. 1012).

⁸ Pedmo et al., U.S. Patent 6,585,123 B1, issued July 1, 2003 (Ex. 1013).

⁹ Brown, U.S. Patent 4,024,981, issued May 24, 1977 (Ex. 1014).

1020), among other evidence. Patent Owner supports its contentions with declarations from Richard D. Kirkpatrick (Ex. 2001) and Folkers Eduardo Rojas, Ph.D. (Ex. 2028), among other evidence.

II. ANALYSIS

A. *Level of Ordinary Skill in the Art*

Petitioner contends that a person of ordinary skill in the art (sometimes abbreviated herein as “POSITA”), “as of either the alleged April 2010 priority date or the ’441 patent’s November 2023 filing date,” would have had

(i) an associate’s or bachelor’s degree in mechanical, industrial or manufacturing engineering and (ii) at least two to three years of practical experience with designing or manufacturing mechanical products such as food or beverage packaging. A POSITA could substitute additional education for industry experience and vice versa.

Pet. 13 (citing Ex. 1002 ¶ 14). Patent Owner does not dispute Petitioner’s proposal, or otherwise address the applicable level of skill in the art. *See generally* PO Resp.

We adopt Petitioner’s proposed level of ordinary skill in the art because it is consistent with the cited prior art and is undisputed on this record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (indicating that the prior art itself may reflect an appropriate skill level).

B. *Claim Construction*

In AIA proceedings, we interpret a claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.200(b). Under this standard, we construe the claim “in accordance with the ordinary and

customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.*

Neither party proposes that any claim term requires an express construction. *See* Pet. 12; PO Resp. 3. We find it unnecessary to construe any claim term to resolve the disputed issues in this proceeding. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

C. Post-Grant Review Eligibility

The post-grant review provisions of the America Invents Act (“AIA”) apply to “any application for patent, and to any patent issuing thereon, that contains or contained at any time”:

(A) a claim to a claimed invention that has an effective filing date as defined in section 100(i) of title 35, United States Code, that is on or after [March 15, 2013]; or

(B) a specific reference under section 120, 121, or 365(c) of title 35, United States Code, to any patent or application that contains or contained at any time such a claim.

Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), § 3(n)(1). Petitioner bears the burden of demonstrating that the challenged patent is eligible for post-grant review. *See US Endodontics, LLC v. Gold Standard Instruments, LLC*, PGR2015-00019, Paper 17, 11–12 (PTAB Jan. 29, 2016).

Petitioner argues that the ’441 patent is eligible for post-grant review for two independent reasons, i.e., because (1) claims 9, 10, 15, and 16 of the ’441 patent have a November 10, 2023, priority date; and (2) the ’441

patent claims priority under 35 U.S.C. § 120 to the '813 Design Application, which contained a claim to an invention that has an effective filing date after March 15, 2013. *See* Pet. 4–8.¹⁰ Patent Owner disputes both of Petitioner's asserted reasons for eligibility. *See* PO Resp. 3–15.

We address each of Petitioner's reasons in turn.

1. Whether Claims 9, 10, 15, and 16 Have a November 10, 2023, Priority Date

Petitioner asserts that the '441 patent is eligible for post-grant review under AIA § 3(n)(1)(A) because claims 9, 10, 15, and 16 “do not find written description support in any prior filed applications, and have a priority date of no earlier than November 10, 2023—the filing date of the '441 patent.” Pet. 7. According to Petitioner, these claims recite that a “depression [at the bottom of the container] is visible through at least a portion of the container body,” and thus require the container body to be transparent, but the '441 patent specification “fails to explain whether transparent resins are used.” *Id.* (quoting claims 9, 10, 15). Petitioner further asserts that “the limitation requiring ‘the container body to contain a liquid therewithin’ (EX-1001, 5:30, 8:19) necessitates a transparent/translucent liquid in the container to make the depression visible through the container body, which again, is not described in the '441 patent.” *Id.*

A written description analysis occurs “as of the filing date sought.” *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563–64 (Fed. Cir. 1991); *see also* Dec. 14 n.11. Here, however, the parties limit their written description

¹⁰ The Petition discusses post-grant review eligibility with citations to the Manual of Patent Examining Procedure § 2159. *See* Pet. 4–8. We instead cite the corresponding statutory requirements found in AIA §§ 3 and 6.

analysis to disclosure in the '441 patent specification as issued, without meaningfully analyzing disclosure in any of the priority applications, and without analyzing the effect, if any, of the design patent application that appears within the priority chain (i.e., U.S. Patent Application No. 29/824,813, filed January 27, 2022) on the continuity of disclosure. *See* Pet. 7–8 (mentioning “prior filed applications” but limiting analysis to the '441 patent specification); PO Resp. 9, 15 n.1 (mentioning Figures 1 and 2 of U.S. Patent Application No. 12/762,934, but not analyzing the figures' disclosure). Given the parties' arguments, we likewise focus our analysis on disclosure in the '441 patent specification.

Contrary to Petitioner's arguments, we find adequate description in the '441 patent specification for a transparent container body. As both parties acknowledge, the '441 patent teaches that the container body may be made of PET resin. *See* Pet. 7; PO Resp. 9; Ex. 1001, 2:43–52, 3:9–15. The record reflects that PET is transparent. *See* Ex. 1017, 39 (“PET films” can be “***translucent***, opaque or colored (with additives)”) (emphasis added), 28–29 (“In this amorphous state, PET is transparent and can be used as . . . overhead projector transparency, photographic film, etc.”), 23 (PET “can be transparent, in its amorphous state; or translucent in its semi-crystalline state.”). Petitioner's declarant Mr. Norris describes the PCANs, which were made of PET, as “clear,” “allow[ing] the product to be seen through the container.” Ex. 1005 ¶ 11. Petitioner's declarant Dr. Delson states that “it was well known to a POSITA that PET could be translucent or transparent.” Ex. 1002 ¶¶ 109, 247. Other patents of record indicate PET is transparent. *See* Ex. 2005, 1:35–38; Ex. 2006, 3:14–17; Ex. 2007, 5:52–57; PO Resp. 10. Patent Owner additionally establishes that “the other

exemplary materials recited in the [’441 patent] specification are also transparent,” such as polyamide and polycarbonate. *See* Ex. 1001, 2:43–49; Ex. 2028 ¶ 60; Ex. 2008, 5:72–6:2; Ex. 2009 ¶ 1; Ex. 2010 ¶ 30; Ex. 2011, 1:59–60.

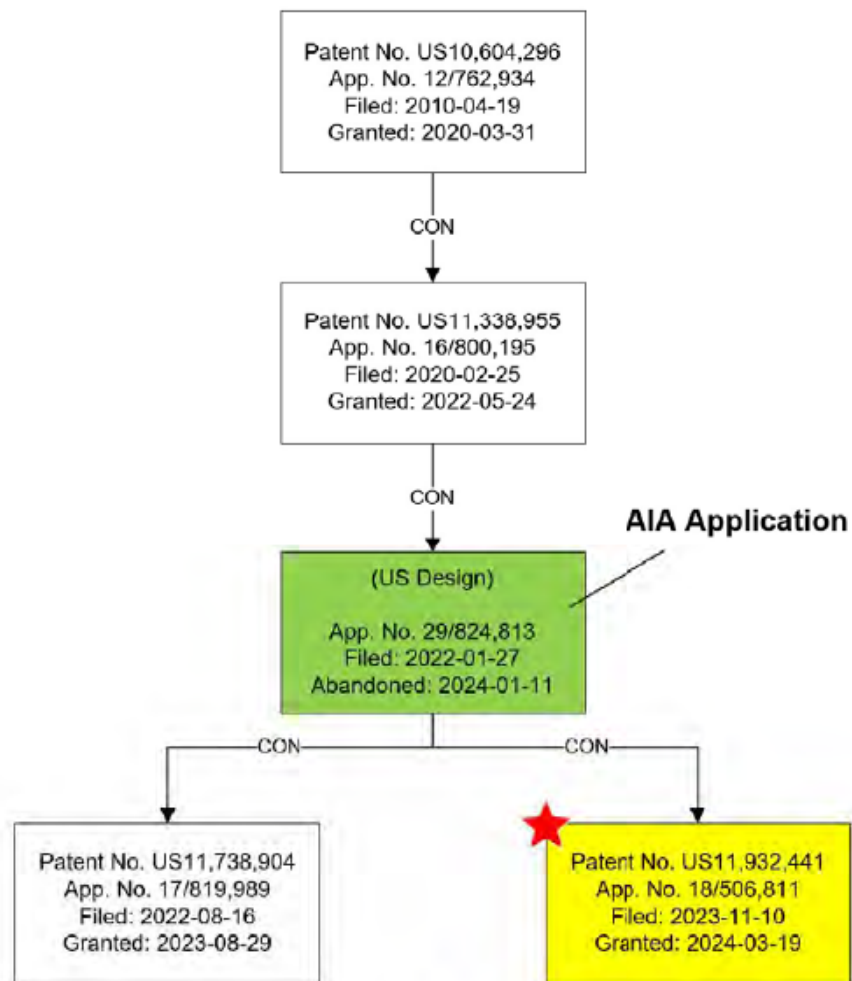
We also find adequate description in the ’441 patent specification for transparent liquids. The ’441 patent mentions beer and soda, which are “typically see-through, or translucent.” PO Resp. 13; Ex. 1001, 1:25–27; Ex. 2012 ¶ 24 (noting “transparent liquid (e.g. beer, table water, mineral water, wine etc.)”); Ex. 2013 ¶ 8 (noting “translucent to transparent liquids such as water, soda, juice, or the like”)); Ex. 2028 ¶ 63.¹¹

In view of the evidence discussed above, we find that the ’441 patent specification provides adequate written description support for a transparent container body and transparent liquids, thus permitting a depression in the container base to be “visible through at least a portion of the container body,” as recited in claims 9, 10, 15, and 16. Accordingly, Petitioner has not demonstrated that claims 9, 10, 15, and 16 include subject matter having a November 10, 2023, priority date and thus has not demonstrated that the ’441 patent is eligible for post-grant review under AIA § 3(n)(1)(A).

¹¹ For completeness, we note Patent Owner’s reliance on Figures 1 and 2 of the ’441 patent as purportedly showing “side views of the claimed container filled with a liquid/solid in which the depression is visible through the side walls.” PO Resp. 13–15. We do not rely on these Figures because Patent Owner has not pointed us to disclosure in the ’441 patent confirming that these Figures depict “filled” containers. *See* Dec. 16 n.12.

2. *Whether the '813 Design Application Contained a Claim Having an Effective Filing Date After March 15, 2013*

Petitioner contends that the '441 patent is eligible for post-grant review under AIA § 3(n)(1)(B) because upon filing, the '813 Design Application contained a claim to an invention having an effective filing date after March 15, 2013. To provide context for our discussion, we reproduce below Petitioner's graphic showing the '441 patent's family tree:



'441 Patent's Family Tree

Pet. 5. As shown in the graphic above, the family tree comprises five applications. Relevant here, the applicant filed the '441 patent (yellow box) as a continuation of the '813 Design Application (green box).

Petitioner argues that Figure 2 of the '813 Design Application as initially filed depicted a can pop-top that “was not supported by the earlier filed applications,” and

[b]ecause “the drawings are the claims to the patented subject matter” of a design application (*see Hupp v. Siroflex of Am., Inc.*, 122 F.3d 1456, 1464 (Fed. Cir. 1997)), the '813 application, as initially filed on January 27, 2022, contained a claim that was not supported by the earlier filed applications, and was examined under the AIA provisions.

Pet. 6–7. According to Petitioner, “[t]he '441 patent, a continuation of the '813 [Design A]pplication, is therefore also subject to the AIA provisions, and thus eligible for PGR [post-grant review].” *Id.* at 7.

Patent Owner responds that “Fig. 2 of the '813 [Design] Application is supported by the earlier-filed application and, therefore, the '441 Patent is not eligible for PGR.” PO Resp. 4. According to Patent Owner, “the Petition fails to provide *any* evidence indicating that a POSITA would find Figure 2 of the '813 [Design] Application lacked written description support.” *Id.* Patent Owner asserts that a “simple comparison” of the relevant figures “shows that the inventor was in possession of the ‘design as a whole,’” and any differences simply reflect different choices in drafting strategy. *Id.* at 7 (quoting *David’s Bridal, Inc. v. Jenny Yoo Collection*,

Inc., PGR2016-00041, Paper 11,¹² 15 (PTAB Feb. 22, 2017); Ex. 2028 ¶ 48), 8 (citing Ex. 2001 ¶¶ 10–32).

For the reasons discussed below, we agree with Petitioner that the '813 Design Application as filed contained a claim that was not supported by the prior application, and thus had an effective filing date after March 15, 2013, and was properly examined under the AIA provisions. The '441 patent, which is a continuation of the '813 Design Application, is thus also subject to the AIA provisions, rendering it eligible for post-grant review.

We begin by reviewing the relevant prosecution history of the '813 Design Application.

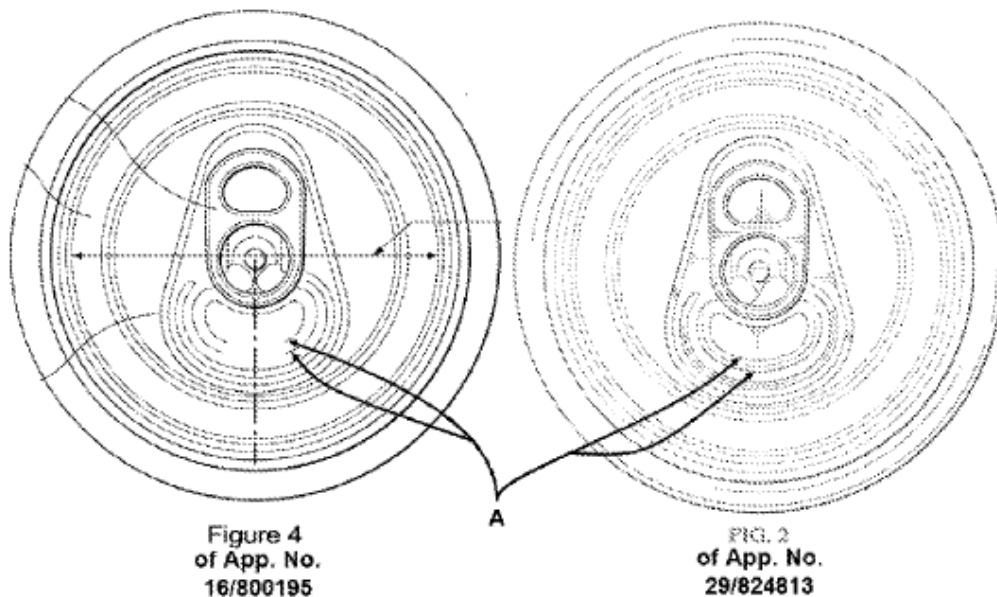
a. Relevant Prosecution History of the '813 Design Application

The '813 Design Application as filed claimed “[t]he ornamental design for a CONTAINER as shown and described” in Figures 1–3 included with the application. Ex. 1003, 183–88. The applicant designated the '813 Design Application as a continuation of U.S. Application No. 16/800,195 (the “'195 Application”). *Id.* at 183.

The Examiner objected to the “continuation” designation because the disclosure of the '195 Application “fails to provide adequate written description support” for a claim (Figure 2) of the '813 Design Application. *Id.* at 107. The Examiner provided an annotated graphic, reproduced

¹² Patent Owner repeatedly cites to *David's Bridal* at Paper 9, but Paper 9 was expunged. *See* Dec. 24 n.15. We instead cite the Board's Decision Denying Institution at Paper 11.

below, which compares Figure 4 of the '195 Application with Figure 2 of the '813 Design Application:



Id. The graphic above shows Figure 4 of the '195 Application on the left and Figure 2 of the '813 Design Application on the right. Both figures depict a can lid having a pop-top. The Examiner added lines (labelled “A”) pointing to an area of the pop-top on each figure, and stated that the “[s]hape of bottom contour of tear strip portion of [the] pop-top has been changed,” and “[w]ithout additional directions or guidance in the prior-filed application, a design that includes the above feature could not have been recognizable upon filing of the earlier application.” *Id.* at 108.

The Examiner advised that “to overcome the objection,” the applicant could (1) “keep the changed tear strip appearance” and change the application status from “Continuation” to “Continuation-In-Part;” or (2) “[c]onvert the tear strip appearance in Fig. 2 to that which was shown in the parent application” and “keep the Continuation status.” *Id.* The Examiner indicated that the '813 Design Application was being examined pursuant to the AIA provisions. *Id.* at 107.

The applicant stated that it traversed the Examiner's objection, but did not articulate reasoning why. *See id.* at 70.¹³ Instead, it "submitted Replacement Sheets . . . that include an amended FIG. 2, which addresses this objection." *Id.* We reproduce below replacement Figure 2:

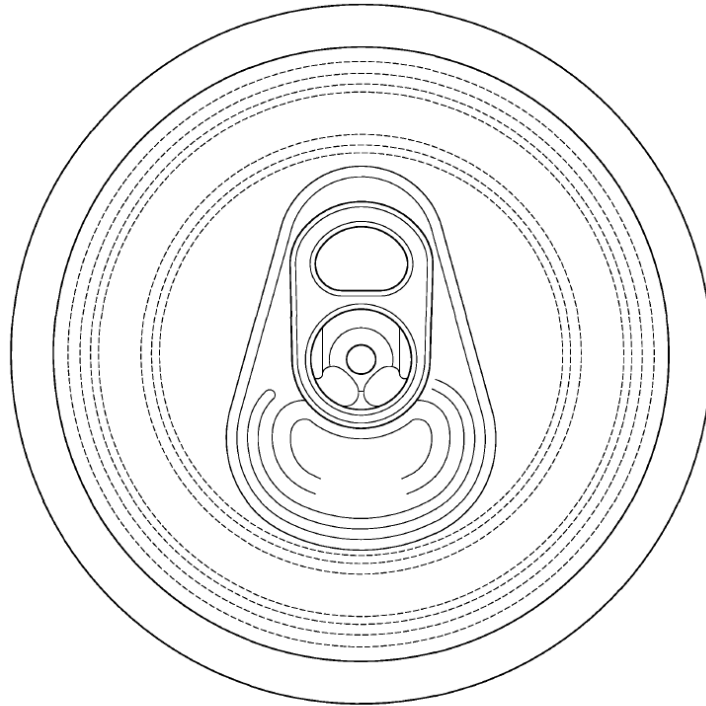


FIG. 2

See id. at 76–77, 70, 102. Replacement Figure 2 above depicts a can lid having a pop-top, where the shape of the lines under the pop-top tab was reverted to match that in Figure 4 of the '195 Application.

In response to Replacement Figure 2, the Examiner withdrew the objection. *See id.* at 51. The Examiner nevertheless maintained that the application was being examined pursuant to the AIA provisions. *See id.* at 51, 11.

¹³ The applicant's response appears in an Amendment dated January 5, 2023. *See Ex. 1003*, 76. The pages of this Amendment are scattered throughout Exhibit 1003, appearing at pages 76–77, 101–03, and 70–75.

b. Analysis

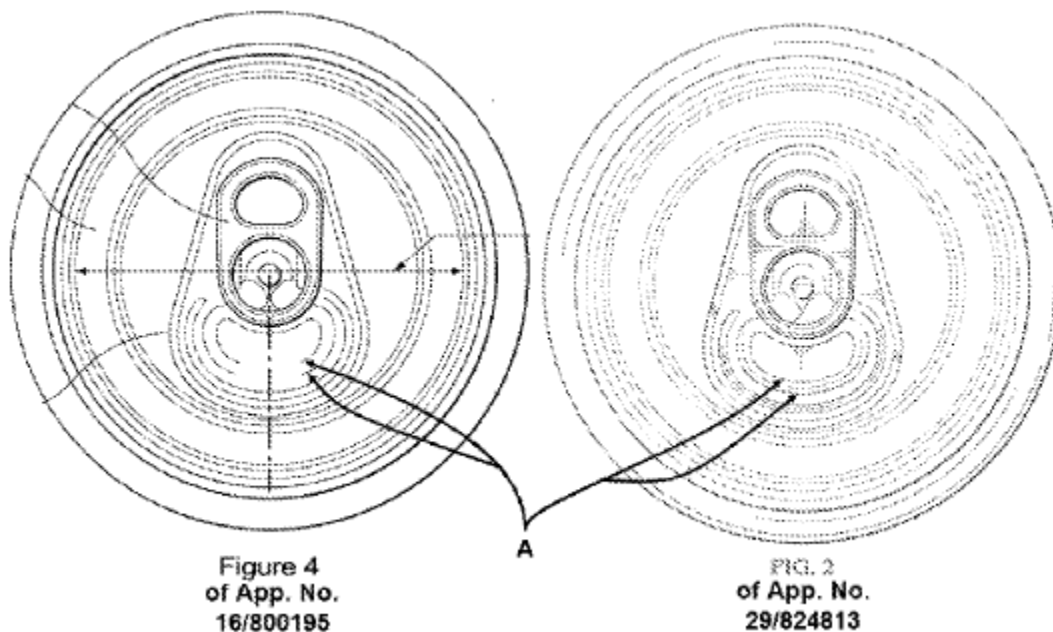
“The test for sufficiency of the written description, which is the same for either a design or a utility patent, has been expressed as ‘whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.’” *In re Owens*, 710 F.3d 1362, 1366 (Fed. Cir. 2013) (quoting *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc)). “In the context of design patents, the drawings provide the written description of the invention.” *Id.* “Thus, when an issue of priority arises under § 120 in the context of design patent prosecution, one looks to the drawings of the earlier application for disclosure of the subject matter claimed in the later application.” *Id.*

In the design patent context, the Federal Circuit has “interpreted a ‘person of ordinary skill in the art to which the invention pertains’” as a “designer of ordinary skill who designs articles of the type involved.” *LKQ Corp. v. GM Global Tech. Operations LLC*, 102 F.4th 1280, 1299 (Fed. Cir. 2024) (en banc). In this case, the parties do not distinguish between a person of ordinary skill in the art and a designer of ordinary skill. Indeed, the applicable level of skill in the art encompasses practical experience with designing food or beverage packaging (*see supra* Section II.A), and thus, like the parties, we treat a person of ordinary skill in the art and a designer of ordinary skill as one and the same.

On the current record, Petitioner adequately demonstrates that the ’813 Design Application as filed on January 27, 2022, contained a claim (Figure 2) that was not supported by the earlier-filed application, and thus was properly examined under the AIA provisions. Pet. 7. As a result, we

find that the '441 patent, which claims priority to the '813 Design Application, is eligible for post-grant review under AIA § 3(n)(1)(B). Our reasoning follows.

For ease of reference, we again reproduce the Examiner's side-by-side comparison of Figure 4 of the '195 Application and Figure 2 of the '813 Design Application:



Ex. 1003, 107. The figures above depict can lids with pop-tops. The lines under the pop-top tab plainly differ in the figures. As seen in Figure 4 of the '195 Application on the left, the two sets of lines under the pop-top tab do not connect, whereas these same lines in Figure 2 of the '813 Design Application on the right connect. The connected lines in Figure 2 of the '813 Design Application form a kidney-bean shape that is absent from Figure 4 of the '195 Application. Because the figures on their face convey different ornamental pop-top designs, we agree with the Examiner that the '195 Application does not contain a written description sufficient to convey to an ordinary designer that the inventor possessed the subject matter of

Figure 2 of the '813 Design Application as of the filing date of the '195 Application.

Patent Owner argues that Petitioner's written description arguments are attorney argument only, and "the Petition fails to provide *any* evidence indicating that a POSITA would find Figure 2 of the '813 Application lacked written description support." PO Resp. 4–5. Citing testimony from its own declarants, Patent Owner argues that "the only evidence of record regarding a POSITA's understanding establishes that the inventor was in possession of the subject matter." Sur-reply 8–9 (citing Ex. 2028 ¶¶ 40–54; Ex. 2001 ¶¶ 10–32). These arguments are unavailing.

First, Petitioner does not rest merely on attorney argument. It relies on the prosecution history of the '813 Design Application. *See* Pet. 5–7; Reply 2. As discussed, the Examiner found a lack of adequate written description, and the applicant did not refute the objection but instead replaced Figure 2 to obviate it. *See* Ex. 1003, 70; Reply 2. The applicant also did not object to the Examiner's repeated indication that the '813 Design Application was being examined under the AIA. *See, e.g.,* Ex. 1003, 11, 51. Thus, under the circumstances here, we find that Petitioner's reliance on the prosecution history in support of its written description argument is reasonable.¹⁴

¹⁴ In its Sur-reply, Patent Owner argues that "an examiner's designation is not dispositive, particularly where the examiner also applied the wrong standard." Sur-reply 6. These arguments are insufficiently developed. Patent Owner neither identifies what "designation" it refers to, nor explains how the Examiner allegedly "applied the wrong standard." Additionally, Patent Owner forfeited these arguments by not presenting them in the Patent Owner Response. *See* Dec. 50; Paper 11, 9.

Second, the Federal Circuit has “recognized that some cases involve technologies and prior art that are simple enough that no expert testimony is needed.” *Intercontinental Great Brands LLC v. Kellogg N. Am.*, 869 F.3d 1336, 1348 (Fed. Cir. 2017); *see also Wyers v. Master Lock Co.*, 616 F.3d 1231, 1242 (Fed. Cir. 2010) (“[E]xpert testimony is not required when the references and the invention are easily understandable.”); *see also* Reply 2–3. This is such a case. The written description question here is resolved by a straightforward visual comparison of the ornamental design of a pop-top in two figures. *See, e.g., In re Salmon*, 705 F.2d 1579, 1582 (Fed. Cir. 1983) (“The determination whether particular differences in designs are sufficiently significant to produce different designs is largely a matter of aesthetics.”). This question is frequently resolved without expert testimony. *See, e.g., In re Owens*, 710 F.3d at 1368 (affirming Board’s determination that design of mouthwash bottle in continuation application was not adequately disclosed in parent application; no expert testimony cited); *In re Berkman*, 642 F.2d 427, 430 (CCPA 1981) (disagreeing that one skilled in the art would recognize later-claimed storage-case insert in earlier design application figures; no expert testimony cited).

Patent Owner disputes that the technology here is simple, citing a purported admission from Petitioner’s declarant Dr. Delson. *See* Sur-reply 6 (citing Ex. 2034, 42:1–6 (Dr. Delson testifying that “[t]he selection of the contour lines and the contour height involves *a relatively sophisticated analysis*”); Ex. 1019 ¶ 17). Patent Owner takes this testimony out of context. Dr. Delson was discussing the analysis needed to “design[] a lid to function properly.” *See* Ex. 2034, 41:10–13 (“When one is designing a lid to function properly, one has to take all of those into

consideration, and the contour lines are an important element to that.”). Dr. Delson did not say that ornamental lid designs involve complex technology. *See* Tr. 7:25–8:5.

Third, we find that the testimony of Patent Owner’s declarants (Dr. Rojas and Mr. Kirkpatrick) regarding the figures is entitled to little weight. Dr. Rojas asserts that the relevant lines in Figure 4 of the ’195 Application depict an angled ridge that is “more steeply inclined at the top and gradually flatten[s] toward the bottom,” and “[t]his same feature is shown by the lines being connected in the ’813 Application.” Ex. 2028 ¶ 50. Mr. Kirkpatrick agrees, and asserts that the differences between the figures merely “reflect the variance in drawing conventions and choices between skilled draftspersons, not a different design.” Ex. 2001 ¶¶ 21, 32.

As an initial matter, Mr. Kirkpatrick is a patent illustrator, not a person or designer of ordinary skill in the art. *See* Reply 7; Ex. 2001 ¶ 5. Patent Owner asserts that Mr. Kirkpatrick’s testimony is nevertheless relevant because it “informs the opinion of expert witnesses who do qualify as POSITAs” (i.e., Dr. Rojas). PO Resp. 4–5. But the level of ordinary skill in the art as defined here does not mention patents or patent drawings, and Patent Owner has not explained why or in what capacity a person of ordinary skill in the art would have consulted with a patent illustrator.¹⁵ For these reasons, we accord no weight to Mr. Kirkpatrick’s opinions on how a person of ordinary skill in the art would have viewed the figures. *See*

¹⁵ Dr. Rojas states that “[a] POSITA would be very familiar with technical drawings, including patent drawings,” but we give the reference to “patent drawings” no weight because the level of skill here does not mention patents or patent drawings, and Dr. Rojas does not explain the relevance of patent drawings to a skilled artisan’s skill set. Ex. 2028 ¶ 48.

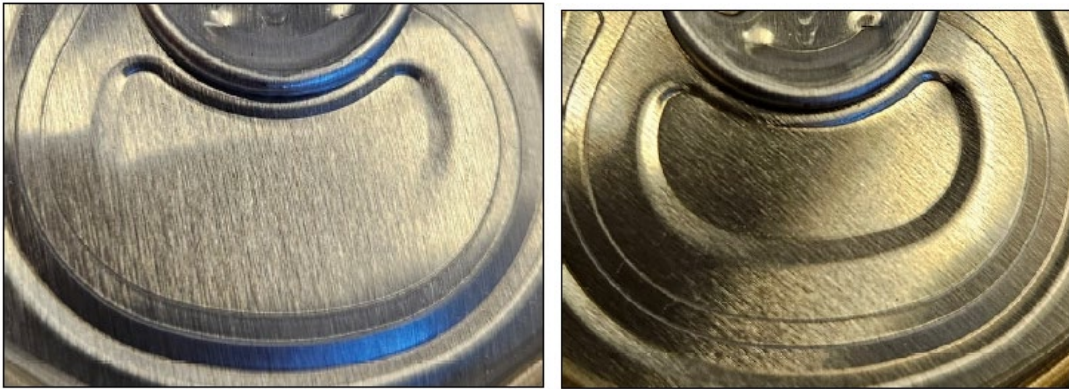
Kyocera Senco Indus. Tools Inc. v. Int’l Trade Comm’n, 22 F.4th 1369, 1376–77 (Fed. Cir. 2022) (“To offer expert testimony from the perspective of a skilled artisan in a patent case . . . a witness must at least have ordinary skill in the art. Without that skill, the witness’ opinions are neither relevant nor reliable.”). But even assuming, *arguendo*, Mr. Kirkpatrick’s testimony were relevant, our conclusion regarding lack of adequate written description would not change, as discussed below.

Mr. Kirkpatrick and Dr. Rojas attribute the differences between the figures in the ’195 Application and ’813 Design Application to “choices in drafting strategy of the respective illustrators.” *See, e.g.*, Ex. 2001 ¶ 19; Ex. 2028 ¶¶ 51–52. However, there is no evidence of record indicating that the figures in the two applications were created by different illustrators. *See* Dec. 29. And even if different illustrators employed different drafting strategies, this did not absolve the applicant’s responsibility to not add new matter during the course of prosecution.

Additionally, we accord little weight to Dr. Rojas’s opinions on how a person of ordinary skill in the art would have viewed the figures. He opines that “[t]he two lines forming the shape within the tear strip in Figure 4 of the ’195 Application illustrate that the slope of the surface forming the ridge shown by these lines is more steeply inclined at the top and gradually flatten toward the bottom.” Ex. 2028 ¶ 50. But he does not explain how or why he concluded that the lines depict a sloping surface or a ridge. *See* Reply 6 (noting that Dr. Rojas “offers no legitimate explanation why” the respective figures purportedly “show the same design”). “Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.” 37 C.F.R. § 42.65(a); *see*

also Xerox Corp. v. Bytemark, IPR2022-00624, Paper 9, 16 (PTAB 2023) (precedential)).

We further find that the testimony of Petitioner’s declarant Dr. Delson undermines Dr. Rojas’s opinion that the “same feature” is shown in the two different figures (Ex. 2028 ¶ 50). Dr. Delson demonstrates that the differences in the figures are instead consistent with “actual differing lid designs.” Reply 3. We reproduce two photographs from Dr. Delson’s declaration:



Ex. 1019 ¶ 15. The photographs above show two different ornamental lid designs. The photograph on the left shows “contour lines like those depicted in Fig. 4 of the ’195 patent application, where the contour lines do not connect.” *Id.* ¶ 13. The photograph on the right shows “contour lines like those depicted in Fig. 2 of the [’813 Design A]pplication, where the contour lines do connect.” *Id.* ¶ 14. We agree with Dr. Delson that the differences shown in these photographs are “not a matter of lighting or viewing angle,” but instead “are actual differences in the structure of the lids.” *Id.* ¶ 15. These photographs, like the relevant patent figures, show different ornamental pop-top designs, e.g., the photo on the right shows a kidney-bean shape that is absent from the photo on the left. This undermines Dr. Rojas’s testimony that the differences between Figure 4 of

the '195 Application and Figure 2 of the '813 Design Application are “mere shading or contour lines” that show the “same feature.” Ex. 2028 ¶ 50.

Patent Owner argues that this analysis from Dr. Delson’s Reply Declaration is improperly incorporated by reference and is also improper new reply evidence. Sur-reply 6–7. We disagree. The portions of the Delson Reply Declaration we discuss herein are adequately discussed in the Reply, such that they are not improperly incorporated by reference. *See, e.g.*, Reply 3–6 (discussing paragraphs 13–15 of Dr. Delson’s Reply Declaration). Additionally, we find that Dr. Delson appropriately responds to Patent Owner’s declarants, who assert that the relevant patent figures depict the “same design.” *See Anacor Pharms., Inc. v. Iancu*, 889 F.3d 1372, 1380–81 (Fed. Cir. 2018) (“[T]he petitioner . . . may introduce new evidence after the petition stage if the evidence is a legitimate reply to evidence introduced by the patent owner.”).

Patent Owner also relies on several Board cases, but all are distinguishable. *See* PO Resp. 20–22. In *Skechers U.S.A., Inc. v. Nike, Inc.*, IPR2016-00871, Paper 8, 20 (PTAB Sept. 29, 2016), the Board rejected the petitioner’s arguments asserting a lack of adequate written description because the design differences the petitioner identified “were so minute that they could only be observed through magnification.” *See* Reply 7. Here, in contrast, “the differences between the originally-filed, full page-sized figures can be easily observed without embellishment or magnification.” *See id.* at 7–8; *Skechers*, IPR2016-00871, Paper 8, 14–15, 17, 21.

In *David’s Bridal*, the Board found that all aspects of the figures in the divisional application had adequate written description support via combinations of figures in the parent application. *See David’s Bridal*,

PGR2016-00041, Paper 9, 17–18. Here, there is no argument that other figures in the priority application support the design change.

Ex Parte Asano, 201 U.S.P.Q. 315 (BPAI 1978) is inapposite because it “does not address changes between figures in parent and child applications.” Reply 8.

Finally, Patent Owner argues that “Petitioner has never addressed whether the disclosure of the original, pre-AIA ’934 Application ‘reasonably conveys’ to a POSITA ‘that the inventor had possession of the claimed subject matter as of the filing date.’”¹⁶ Sur-reply 9 (quoting *In re Owens*, 710 F.3d at 1366). This argument is unavailing. As discussed above, we find that the ’813 Design Application as filed contained a claim that was not supported in the prior application, thus breaking the priority chain. *See, e.g., Arthrex, Inc. v. Smith & Nephew, Inc.*, 35 F.4th 1328, 1343 (Fed. Cir. 2022) (“[T]o gain the benefit of the filing date of an earlier application under 35 U.S.C. § 120, each application in the chain leading back to the earlier application must comply with the written description requirement of 35 U.S.C. § 112.”). The claim in the ’813 Design Application as filed thus had an effective filing date of January 27, 2022, i.e., the date the ’813 Design Application was filed. *See* 35 U.S.C. § 100(i)(1)(A). This circumstance renders the ’441 patent eligible for post-grant review under AIA § 3(n)(1)(B), because the ’441 patent claims the benefit under 35 U.S.C. § 120 to the ’813 Design Application, which contained at one time a claim having an effective filing date after March 15,

¹⁶ The ’934 Application is U.S. Application No. 12/762,934, filed on April 19, 2010.

2013. It is thus irrelevant whether the '934 Application supports Figure 2 of the '813 Design Application.¹⁷

In sum, there is no dispute that there are differences in the figures between the '813 Design Application and the '195 Application. *See, e.g.*, Tr. 66:2 (Patent Owner's counsel stating, "We don't dispute that there's differences in the drawings."). The Examiner found, and we agree, that because of the differences, the '195 Application fails to provide adequate written description support for an original claim in the '813 Design Application, rendering the '813 Design Application an AIA application and ultimately rendering the '441 patent eligible for post-grant review. We disagree with Patent Owner that expert testimony is needed to address what the differences in the figures convey to a person of ordinary skill in the art, and in any event, find that the testimony of Dr. Rojas and Mr. Kirkpatrick on this issue is entitled to little weight.

*c. Conclusion on Post-Grant Review Eligibility Under
AIA § 3(n)(1)(B)*

As discussed above, the '813 Design Application as initially filed contained a claim that was not supported by the '195 Application. Accordingly, the '813 Design Application contained a claimed invention that has an effective filing date of January 27, 2022 (the filing date of the '813 Design Application). Because this date is after March 15, 2013, the '813 Design Application is subject to the AIA provisions. *See* AIA

¹⁷ Even if the disclosure of the '934 application were relevant, we agree with Petitioner that this application "has completely different figures of the lid, which do not support Figure 2 of the '813 application." Reply 9 n.1; *see* Ex. 1021, 17 (Figures 4 and 6 of the '934 application depicting different lid designs than Figure 2 of the '813 application).

§ 3(n)(1)(A); 35 U.S.C. § 100(i)(1)(A). Under AIA § 3(n)(1)(B), the '441 patent, which claims priority to the '813 Design Application (via 35 U.S.C. § 120), is therefore also subject to the AIA provisions and thus eligible for post-grant review.

3. *Whether the Petition for Post-Grant Review is Timely*

“A petition for a post-grant review may only be filed not later than the date that is 9 months after the date of the grant of the patent.” 35 U.S.C. § 321(c). The '441 patent issued on March 19, 2024 (*see* Ex. 1001, code (45)), and the present Petition was accorded a filing date of June 7, 2024 (*see* Paper 4). Accordingly, the Petition was filed less than nine months after the '441 patent issued, and is thus timely. Patent Owner does not argue otherwise. *See generally* PO Resp.

4. *Conclusion on Post-Grant Review Eligibility*

For the above reasons, we find that '441 patent is eligible for post-grant review. We now turn to an analysis of Petitioner's grounds of alleged unpatentability.

D. *Petitioner's Grounds of Alleged Unpatentability*

Petitioner asserts four different obviousness grounds. For the reasons discussed below, we determine that Petitioner has demonstrated by a preponderance of the evidence that every challenged claim is unpatentable under at least one of the asserted grounds.

Before addressing each of Petitioner's grounds, we first set forth the governing legal principles of obviousness and provide overviews of the asserted prior art.

1. Principles of Obviousness Law

In a post-grant review, “the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016). The petitioner ultimately bears the burden of persuasion to prove unpatentability of each challenged claim by a preponderance of the evidence. 35 U.S.C. § 326(e). This burden never shifts to the patent owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

Under 35 U.S.C. § 103, a claim is unpatentable as obvious if the differences between the claimed invention and the prior art are such that the claimed invention, as a whole, would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. 35 U.S.C. § 103; *see also KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved based on underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) any objective indicia of nonobviousness.¹⁸ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

An obviousness determination requires finding a reason to combine accompanied by a reasonable expectation of achieving what is claimed in the challenged patent. *See Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367 (Fed. Cir. 2016). “[A]ny need or problem known

¹⁸ Patent Owner does not presently assert any objective indicia of nonobviousness. *See generally* PO Resp.

in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.”

KSR, 550 U.S. at 419–20.

2. Overview of Asserted Prior Art

A. PCAN

Petitioner alleges that PCAN¹⁹ “is a beverage container with a plastic body and an aluminum lid that was manufactured and publicly sold from 1985–1986.” Pet. 13 (citing, *e.g.*, Ex. 1005, newspaper articles from 1985 (Exs. 1015, 1016), and Coca-Cola advertisement/marketing material (Ex. 1006)). We reproduce below a photograph of a set of PCANs that Petitioner alleges it purchased from an online website:



Pet. 13–14. Petitioner’s photograph above shows, from left to right, cans of Sprite, Diet Coke, Coca-Cola Classic, and Coke, where each can is

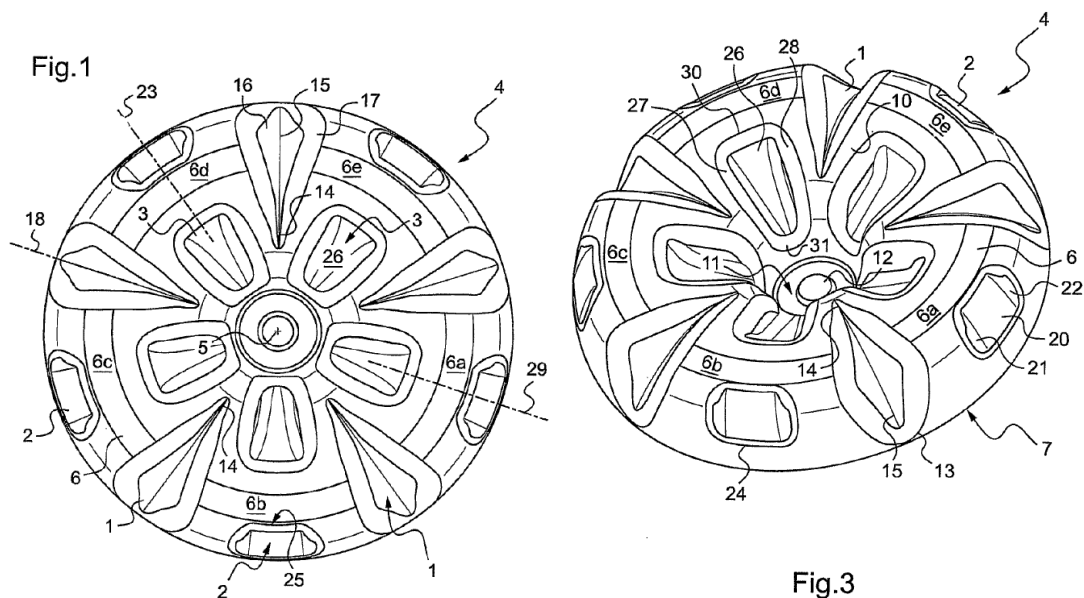
¹⁹ Patent Owner’s briefing sometimes refers to the PCAN as a “Sprite Can.” See, *e.g.*, PO Resp. 15–16. We use the terms PCAN, Sprite Can, and PET Can interchangeably herein.

purportedly “made from polyethylene terephthalate with an aluminum lid.”
Id. at 14.

B. Protais (Ex. 1008)

Protais, titled “Bottom of Hollow Ware Obtained by the Blow Moulding or Stretch-Blow Moulding of a Thermoplastic Hollow Ware Preform Having Such a Bottom,” issued on September 3, 2013, from a PCT application filed on July 13, 2007. Ex. 1008, codes (54), (45), (22). Protais “relates to the technical field of hollow bodies made of thermoplastic material, particularly containers such as jars or bottles . . . obtained by blowing or stretching then blowing an injected preform made of thermoplastic material (injection-blowing).” *Id.* at 1:6–13.

Protais describes a container bottom “capable of recovering its initial shape after being dropped and subsequent deformation.” *Id.* at 3:11–18. We reproduce below Protais’s Figures 1 and 3:



Figures 1 and 3 above depict a bottom view and a perspective view, respectively, of the bottom of a hollow body, such as a bottle. *Id.* at 4:35–40. Bottom 4 includes five radial ribs 1, five reinforcing notches 2, and five

reinforcing grooves 3. *Id.* at 4:41–44. According to Protais, the bottom “will have a better strength under vacuum” and “can be produced with less material than most previously known bottoms.” *Id.* at 3:19–25.

C. Metzger (Ex. 1010)

Metzger, titled “Vacuum Container with Protective Features,” issued on March 27, 2012, from an application filed on April 4, 2008. Ex. 1010, codes (54), (45), (22). Metzger relates “to food containers capable of maintaining a vacuum with features to protect the integrity of the sealed container and/or to provide improved container structure.” Ex. 1010, 1:17–21.

According to Metzger, “the container may be formed from any material, including metals, various plastics, and glass,” and “[t]he container end may be made of metals, such as steel or aluminum, metal foil, plastics, composites, or combinations of these materials.” *Id.* at 3:56–58, 3:49–51.

We reproduce below Metzger’s Figures 1 and 2:

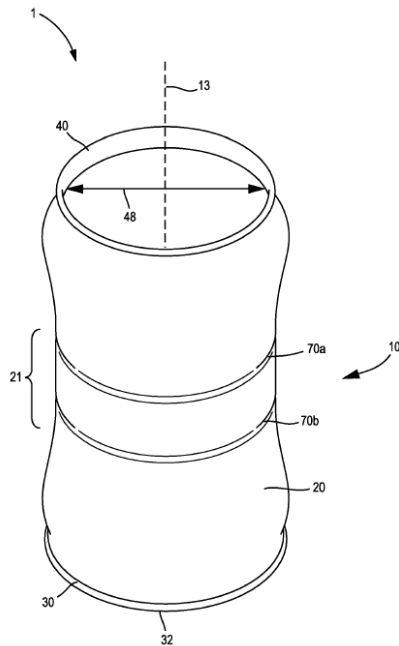


FIG. 1

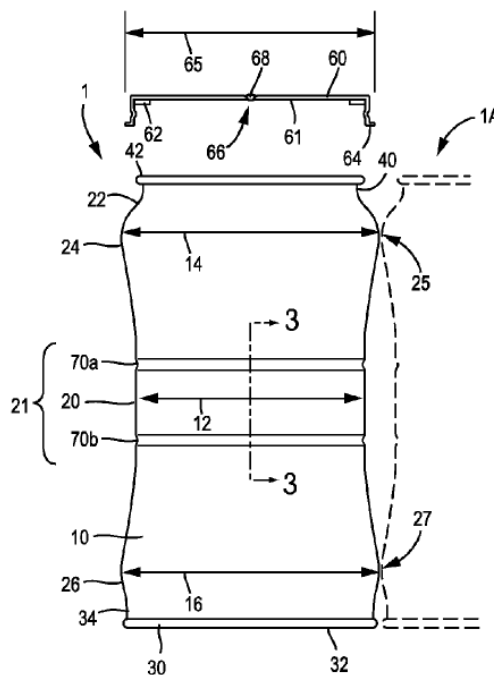


FIG. 2

Figures 1 and 2 above depict a perspective view and side view, respectively, of container 1. Ex. 1010, 3:59; 4:12. Container 1 includes generally cylindrical body 10 having sidewall 20 and bottom end wall 32. *Id.* at 3:61–62. Vertical axis 13 forms a right angle with bottom end wall 32. *Id.* at 3:65–67. Container end closure 60 possesses maximum container end width 65 and is provided with closure bottom ring 64 for mechanically coupling closure 60 to neck edge 42. *Id.* at 4:29–31, 8:39–49.

D. Kaminski (Ex. 1011)

Kaminski, titled “Pull Tab for Easy Open End,” issued on August 14, 1984, and “is directed to a pull tab for a metallic beverage-type can end or the like, and more particularly to a pull tab which is retained to the can end after opening.” Ex. 1011, codes (45), (54), 1:5–8.

Kaminski describes an “easy open can end having a retained tear strip extending diametrically partly across the can end defined by a score line, and a graspable pull tab adjacent and outside the open end of the score line.” *Id.* at code (57).

We reproduce below Kaminski’s Figure 1:

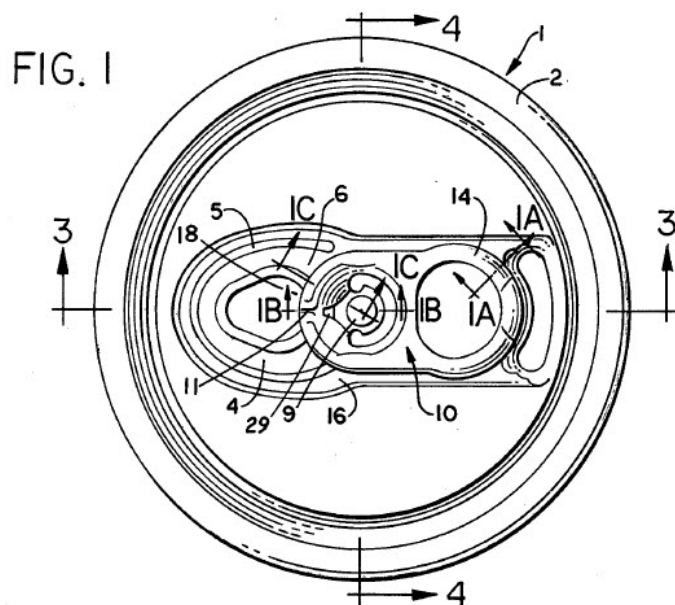


Figure 1 above depicts a top plan view of an easy open can end incorporating a pull tab. Ex. 1011, 2:27–28. The can end includes retained tear strip 4, raised edge 2, U-shaped score or tear line 5, open end 6, integral rivet 9, graspable ring-like pull tab 10, nose portion 11, finger end 14, recessed portion 16, open end 18, and coined V-shape 29. *Id.* at 3:5–3:36. Can end 1 includes circumferentially extending raised edge 2 for attaching can end 1 to a suitable cylindrical beverage can 3. *Id.* at 2:67–3:1.

Can end 1 is “manufactured of a relatively ductile metal, such as aluminum, . . . but may be made from plastic or other materials.” *Id.* at 3:2–3:4.

E. Gardiner (Ex. 1012)

Gardiner, titled “Beverage Container,” issued on May 4, 2004, and “relates to a beverage container having a cap . . . arranged with a ring of countersink adjacent to its peripheral . . . able to withstand normal internal pressure exerted on the cap when the container is filled with a carbonated drink.” Ex. 1012, codes (45), (54), 1:15–22.

We reproduce below Gardiner’s Figure 2:

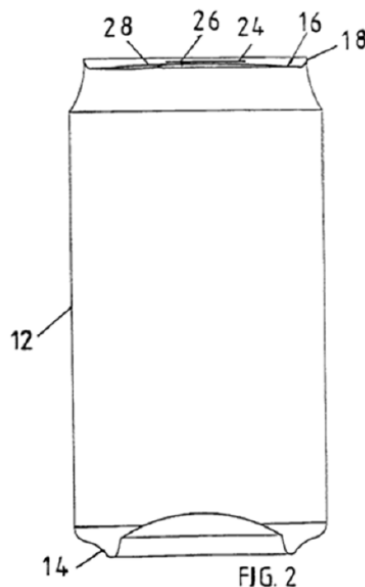


Figure 2 above depicts a section view of a beverage container. Ex. 1012, 3:36–39. The beverage container includes aluminum alloy, steel, or plastic tubular body member 12, end member 14, cap member 16 “sealingly fixed to the periphery of the top open end by seaming,” rim 18 formed at the seam, tab portion 24, and exterior surface 28. *Id.* at 4:44–48, 4:54, 4:67.

We reproduce below Gardiner’s Figure 13:

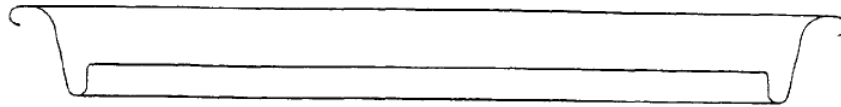


FIG. 13

Figure 13 above depicts a schematic view of a cap member, which is “shaped to be positioned . . . over an open end of a can body and seamed thereat to join to the can body for forming a rim of the can.” *Id.* at 3:55–67, 5:43–46.

F. Pedmo (Ex. 1013)

Pedmo, titled “Bottle Base,” issued on July 1, 2003, and “relates to a hollow plastic bottle with an improved base.” Ex. 1013, codes (45), (54), 1:4–5. Pedmo discloses a “plastic bottle . . . with improved strength properties in the base . . . which is easy to prepare and . . . aesthetically pleasing.” *Id.* at 1:24–29. “The plastic bottle is desirably blow molded, desirably biaxially oriented, and polyethylene terephthalate is a preferred material.” *Id.* at 1:48–50.

We reproduce below Pedmo's Figure 5:

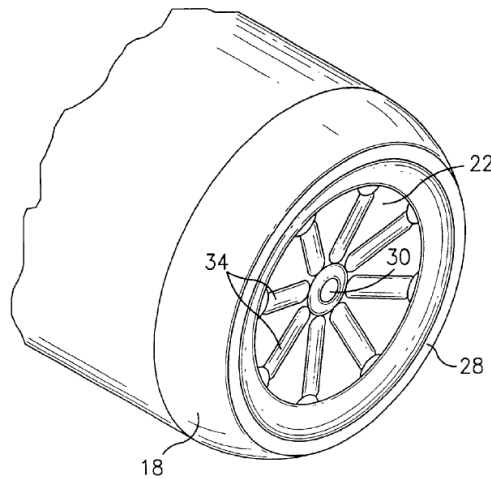


FIG. 5

Figure 5 above depicts a perspective view of the base of a bottle. Ex. 1013, 2:10–11. Base 18 includes struts 34 extending radially from the central portion of base or hub 30 towards annular rim 28. *Id.* at 2:39, 2:46–47.

G. Brown (Ex. 1014)

Brown, titled “Easy-Open Ecology End,” issued on May 24, 1977, and discloses

an improved easy opening end wall having a retained tab member operative to form an opening in the end wall by rupture of a tear opening, the ruptured tear portion or panel being retained by a retaining strip, the end structure having bead formations on the end wall and panel and a deformation in the panel to assist in progressive rupture of the scoreline.

Ex. 1014, codes (45), (54), 1:6–14.

We reproduce below Brown's Figure 8:

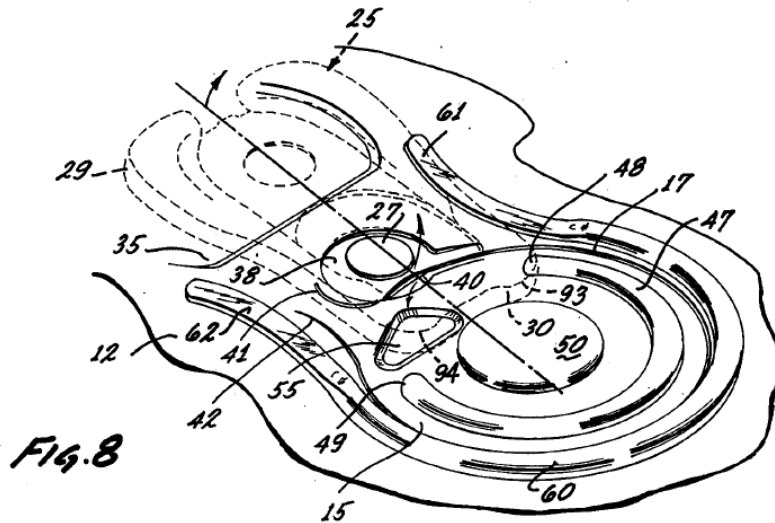


Figure 8 above depicts a fragmentary view of an end structure during an initial pop phase of the end structure's opening sequence. Ex. 1014, 7:15–18. The end structure includes central wall or panel portion 12 having tab 15 dotted in and pour panel 15 at least partially circumscribed by scoreline 17, which is ruptured initially at portion 40 to form a pour opening in the end structure. *Id.* at 7:36–40.

3. Ground 1 – Alleged Obviousness Over PCAN and AAPA

Petitioner asserts that claims 1, 2, and 4–8 are unpatentable as obvious over PCAN, and that claim 3 is unpatentable as obvious over PCAN and AAPA. Pet. 13–68. Patent Owner does not dispute the merits of Petitioner's showing as to how the PCAN (and AAPA for claim 3) teaches or suggests each limitation of claims 1–8. Rather, Patent Owner argues that Ground 1 fails because Petitioner has not “authenticated” the PCAN or shown that it was publicly available. PO Resp. 15–36.

For the reasons discussed below, we find that Petitioner has demonstrated by a preponderance of the evidence that claims 1–8 are unpatentable as obvious over PCAN (and AAPA for claim 3), for the

reasons set forth in the Petition. *See* Pet. 15–68. We focus on the disputed issues regarding the PCAN. We begin by discussing our findings regarding the prior art status of the PCAN. We then address Patent Owner’s arguments regarding whether Petitioner “authenticated” the PCAN or showed that it was publicly available.

A. Petitioner Demonstrates by a Preponderance of the Evidence that the PCANs Relied Upon in the Petition are Prior Art

Petitioner argues that the PCAN analyzed in the Petition “is a beverage container with a plastic body and an aluminum lid that was manufactured and publicly sold from 1985-1986” by The Coca-Cola Company. Pet. 13. In support, Petitioner cites the declaration of Mr. Norris (Ex. 1005); newspaper articles from 1985 (Exs. 1015, 1016); and a Coca-Cola advertisement (Ex. 1006). *Id.* at 13–15.

After considering all of the arguments and cited evidence of record (including Patent Owner’s arguments, discussed below), we find that Petitioner demonstrates by a preponderance of the evidence that PCANs “with the design, shape, and composition of those presented in its Petition, were publicly sold in western Georgia and eastern Alabama in 1985,” and thus are prior art. Reply 11. Petitioner presents three key pieces of evidence—Mr. Norris’s testimony, newspaper articles, and a Coca-Cola advertisement—which we discuss in turn below.

First, Petitioner presents the testimony of Mr. Norris, who was a packaging engineer for The Coca-Cola Company from 1977–90. Ex. 1005 ¶ 5. He “took over as project manager of PCAN in 1984.” *Id.* ¶ 11. In this role, he “was responsible for package engineering and commercialization of

Coca-Cola's PET products, including bottles and cans, closures for those products and labeling or decoration systems for those products.” *Id.* ¶ 5.

Mr. Norris explains that

[o]ur goal for the PCAN project was to mimic the design and shape of Coca-Cola's 12oz aluminum cans that were on the market at the time using PET for the body of the can instead of aluminum, while maintaining an aluminum top. The differentiator was that these cans were clear and allowed the product to be seen through the container.

Id. ¶ 11. He establishes that PCANs with four products—Coca-Cola Classic, New Coke, Diet Coke, and Sprite—were publicly available for about six months starting in October 1985. *Id.* ¶¶ 10, 26, 28.

Mr. Norris explains that the Coca-Cola Company partnered with Petainer S.A. to manufacture the PET cans in a facility in Dongen, Netherlands. *Id.* ¶ 13. Mr. Norris visited the Dongen facility every two weeks, staying for two weeks each visit. Ex. 2014, 22:18–23:7; Ex. 1005 ¶ 18. Petainer “appl[ied] the PVC shrink sleeve that was put over the clear PET body to identify the type of Coca-Cola product that would be sold in these containers.” Ex. 1005 ¶ 17. Petainer would then ship the PET can bodies to Coca-Cola's canning line in Columbus, Georgia, where they were filled. *Id.* ¶¶ 19–20. In the Georgia facility, Mr. Norris “overs[aw] completion of the finished product before it was distributed for sale to the public.” *Id.* ¶ 19.

Mr. Norris establishes that “[t]he PET cans were distributed via route trucks to retailers in Western Georgia and Eastern Alabama,” and were stocked in supermarkets like Winn Dixie and Piggly Wiggly and in convenience stores in the region. *Id.* ¶¶ 20, 28. Mr. Norris avers that he “personally saw the[] four Coca-Cola products in PET cans available for

purchase at grocery stores in Columbus, Georgia,” and “was a frequent visitor to stores to inspect the cans and the in-store displays for any performance related issues.” *Id.* ¶ 28.

Mr. Norris testifies that he possesses a collection of “Coca-Cola PET cans that were manufactured and sold during the, around, six-month period that these products were publicly available in 1985 and 1986.” *Id.* ¶ 32. Based on his review of these cans, he testifies that “[e]ach PET can filled and assembled in the Columbus, Georgia facility bore” the following four markings:

(1) labeling stating: “CANNED UNDER THE AUTHORITY OF THE COCA-COLA COMPANY, ATLANTA GA. BY COLUMBUS COCA-COLA BOTTLING COMPANY, COLUMBUS, GA 31908;”

(2) labeling stating: “CONSUMER/RECYCLING INFORMATION CALL 1-800-GET-COKE (438- 2053);”

(3) labeling bearing a bar code unique to the beverage being sold; and

(4) a mark on the pushup portion of the base that identified Petainer S.A. as the manufacturer of the PET can body and containing patent information, as shown in the image reproduced below:



Id. ¶¶ 16, 33–34. According to Mr. Norris, the image above “is a photo of the bottom of a Coke PET can that was sold by Coke in 1985,” showing markings that read “PETAINER®” and “PAT 4,405,546 AND OTHERS.” *Id.* ¶ 16 n.3.

Mr. Norris testifies that Petitioner’s counsel showed him several Coca-Cola PET cans, including Sprite, Diet Coke, Coca-Cola Classic, and New Coke cans, which counsel indicated were purchased on eBay. Ex. 1005 ¶ 35; Ex. 2014, 21:13–16; Ex. 1020 ¶¶ 6–7; *see also* Pet. 13. Mr. Norris evaluated these cans via videoconference and photographs, and compared counsels’ cans to the PCANs cans in his personal collection. Ex. 1005 ¶ 35, ¶ 16 n.3, ¶ 24 n.4. He indicates that counsel’s cans bear the same Petainer/patent marking language as the cans in his collection, as well as the same flange and seal between the lid and can body that resulted from the double-seaming manufacturing process. *Id.* ¶ 35, ¶ 16 n.3, ¶ 24 n.4. Mr. Norris testifies:

Based on the markings of the PET can products in possession of MPL and a comparison of these products to the ones in my possession, I can verify that the Coca-Cola PET cans that I understand were submitted as prior art in this PGR proceeding by MPL are the same products that were commercialized by Coca-Cola in 1985 and 1986 and were publicly available to consumers for purchase. These cans have the same shape and markings that I describe above, which confirms that they were filled and assembled in Coca-Cola's Columbus, Georgia facility from 1985 to 1986.

Id. ¶ 36. We find Mr. Norris's testimony detailed and persuasive, and that he establishes by a preponderance of the evidence that the PCANs relied upon in the Petition were publicly available in the mid-1980's.

Second, Petitioner presents two newspaper articles addressing the PCAN project. *See* Pet. 15 (citing Exs. 1015, 1016). Exhibit 1015 is an article from the Los Angeles Times dated October 15, 1985. *See* Ex. 1015. It states that during the week of October 15, 1985, The Coca-Cola Company will begin testing 12-ounce clear plastic cans with aluminum tops, containing Coca-Cola, Coca-Cola Classic, Diet Coke, and Sprite in Columbus, Georgia, and references Petainer's involvement. *Id.* Exhibit 1016 is an article from the New York Times dated October 15, 1985. *See* Ex. 1016. It similarly states that during the week of October 15, 1985, The Coca-Cola Company will begin test-marketing 12-ounce clear plastic cans containing Coca-Cola, Coca-Cola Classic, Diet Coke, and Sprite. *Id.*

We find that these articles corroborate Mr. Norris's testimony establishing the public availability of the PCANs. The information in the articles is fully consistent with Mr. Norris's testimony regarding the timing of the market trial, the relevant geographic area, the products involved, and

the can configuration (clear plastic body with aluminum lid). *See, e.g.*, Ex. 1005 ¶¶ 17, 20, 26, 28. Additionally, The LA Times article includes an image of the Coca-Cola plastic can that matches the image of the can in the Petition. *Compare* Ex. 1015, *with* Pet. 14; Reply 11.

Third, Petitioner presents a paper advertisement from The Coca-Cola Company, bearing a copyright date of 1985, that describes the PCAN products. *See* Pet. 15 (citing Ex. 1006). Mr. Norris testifies that he possesses a copy of this same advertisement, and confirms that it “was produced by Coca-Cola in 1985 as part of an educational campaign about the PCAN project.” Ex. 1005 ¶¶ 37, 38. He explains that “it was produced and distributed to help explain to consumers what the PET can technology was, the functionality of the PET can and whether it is recyclable.” *Id.* ¶ 37. He further explains that this advertisement was “publicly available during the around six-month period that Coca-Cola’s PET can products were sold,” and “[i]n some grocery stores, these pamphlets would be included in a display next to the PET cans for sale so that consumers could take a pamphlet and read about the PET can.” *Id.* The advertisement reflects the shape of the cans, bears a 1985 copyright date, and discusses the can configuration (translucent plastic body), all of which is consistent with Mr. Norris’s testimony. We find that this advertisement also corroborates Mr. Norris’s testimony establishing the public availability of the PCANs.

For the above reasons, and after considering Patent Owner’s arguments addressed below, we find that Petitioner demonstrates by a preponderance of the evidence that PCANs with the design, shape, and composition of those presented in the Petition were publicly available in 1985–86. We now turn to an analysis of Patent Owner’s arguments.

B. Analysis of Patent Owner's Arguments

Patent Owner argues four reasons why Petitioner has allegedly “failed to establish the Sprite Can relied upon in the Petition is prior art,” i.e.,

Petitioner has not (1) shown that Mr. Norris observed the four features he indicates authenticate Petitioner’s Sprite Can, (2) provided any evidence corroborating the four features as indicative of an authentic can, (3) established plastic cans were publicly available in the time-period alleged, or (4) established Petitioner’s Sprite Can or the cans in Mr. Norris’s possession are part of the allegedly publicly distributed plastic cans.

PO Resp. 36.

As an initial matter, it is unclear whether Patent Owner is arguing a lack of authenticity under Federal Rule of Evidence (FRE) 901. Patent Owner’s Response uses the term “authenticated” (or variations thereof) nearly fifty times, and also expressly invokes FRE 901 (*see* PO Resp. 34). Despite this, Patent Owner contends that it is not arguing a lack of authentication under the FRE, but rather is arguing that Petitioner has not sufficiently proven the “public availability and prior art status” of the PCAN. *See* Sur-reply 20; *see also* Tr. 37:15–24, 43:10–13.

Patent Owner’s briefs lack clarity on this point, but to the extent Patent Owner is arguing that Petitioner has not met its burden to show the PCANs depicted in the Petition or in Mr. Norris’s collection are what they say they are—i.e., were among the PCANs sold during The Coca-Cola Company’s PCAN market trial in the mid-80’s—we find that Patent Owner waived those arguments. Such arguments go to the authentication or identification of evidence under FRE 901. *See* FRE 901(a) (“To satisfy the requirement of authenticating or identifying an item of evidence, the

proponent must produce evidence sufficient to support a finding that the item is what the proponent claims it is.”). We agree with Petitioner that Patent Owner waived any challenge to the cans’ authenticity under the FRE by failing to timely file objections to evidence. *See* Reply 9; *see also* 37 C.F.R. § 42.64; TPG²⁰ 78–79; Tr. 35:26–36:6 (Patent Owner’s counsel acknowledging that it did not timely file any objections to evidence).

However, even treating Patent Owner’s arguments as attacking the sufficiency of Petitioner’s evidence regarding the “public availability and prior art status” of the PCANs, we find that Patent Owner does not undermine Petitioner’s showing that the PCANs relied upon in the Petition were public availability in the mid-80’s. We address each of Patent Owner’s arguments in turn below. We also address Patent Owner’s argument that Petitioner improperly “uses its Reply to back-fill . . . evidentiary holes.” Sur-reply 13.

1. Whether Petitioner’s PCANs Have the Authenticating Features Identified by Mr. Norris

Patent Owner argues that Mr. Norris identified four features as necessary to authenticate a PCAN (i.e., (1) a canning label, (2) a recycling label, (3) a product-specific bar code, and (4) a Petainer mark), but the images in Mr. Norris’s declaration “do not show the four authenticating features he identified.” PO Resp. 17, 19. Patent Owner argues that the images in the declaration and Petition show, at best, “a single, unclear photograph of the Petainer Mark” and a barcode, which is “common to nearly every product sold anywhere in world and hardly authenticates

²⁰ Consolidated Trial Practice Guide, Nov. 2019 (“TPG”), *available at* <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

Petitioner's cans." *Id.* at 21–22. As such, Patent Owner contends that "Mr. Norris's testimony, on its face, cannot reliably authenticate the Sprite Can."

To the extent Patent Owner is questioning authenticity of the PCANs depicted in the Petition, that argument is waived, as discussed above. To the extent Patent Owner is arguing something else (e.g., Mr. Norris's alleged lack of credibility), we disagree with Patent Owner's arguments.

First, we disagree with Patent Owner that the photograph of the Petitioner mark in Mr. Norris's declaration is "unclear." PO Resp. 21. We are able to read it. *See* Ex. 1005 ¶ 16. Additionally, Petitioner provides an enlargement of the photograph, which clearly states "PETAINER®" and "PAT 4,405,546 AND OTHERS," as Mr. Norris indicates. Reply 12; Ex. 1005 ¶ 16.

Second, Mr. Norris clarifies that in preparing his initial declaration, he had inspected Petitioner's PCANs through both photographs and during videoconferences. Ex. 1020 ¶¶ 6–7. Accordingly, although the photographs in the Petition and in Mr. Norris's declaration may not show all four markings, this does not mean that Mr. Norris did not observe them in forming his opinions in his opening declaration. Additionally, "[t]o respond to Patent Owner's argument that the images in [his] declaration do not show the four markings," Mr. Norris "again inspected the cans in the possession of [Petitioner's] counsel via video conference," and Petitioner's counsel also shipped him the cans. Ex. 1020 ¶ 10. He testifies that "[t]hese additional inspections merely confirmed my prior conclusion that these are four authentic PET cans sold by the Coca-Cola Company in 1985." *Id.* Indeed, Mr. Norris provides additional photos of the cans, and based on

these photos, we agree with him that “[a]ll four cans bear all the markings that Patent Owner asserted were not shown in the images in [his] opening declaration.” *Id.* ¶ 11.

Third, Mr. Norris’s declaration did not rely solely on the can markings to identify Petitioner’s cans as PCANs from the 1985–86 market trial. He additionally confirmed that Petitioner’s PCANs (i) have the correct shape (Ex. 1005 ¶ 36); (ii) bear “shrink Sleeves” of the type placed by Petitioner, that identify the four types of products sold during the trial (i.e., Coke, New Coke, Diet Coke, and Sprite) (*id.* ¶¶ 17–18); and (iii) have a characteristic flange and seal at the top of the PET can body that resulted from the double seaming process (*id.* ¶ 24).

In sum, based upon the arguments and evidence of record, we find Mr. Norris’s testimony persuasive, such that Petitioner has demonstrated by a preponderance of the evidence that the PCANs in the Petition are Coca-Cola PCANs sold in 1985–86. Patent Owner’s arguments regarding alleged shortcomings in Mr. Norris’s testimony do not undermine this finding.

*2. Whether Mr. Norris Provided Any Evidence
Corroborating the Four Features as Indicative of an
Authentic Can*

Patent Owner argues that “Mr. Norris has not provided any corroboration for his assertion that these four features [the canning label, recycling label, bar code, and Petitioner mark] can reliably indicate an authentic can.” PO Resp. 22. Patent Owner contends that Mr. Norris’s testimony is thus “unsupported” and should be “given little weight” under 37 C.F.R. § 42.65(a) and *Xerox Corp.*, IPR2022-00624, Paper 9 at 16. *Id.*

This argument is unavailing. Rule 42.65(a) and the *Xerox* case both relate to expert testimony. Here, we agree with Petitioner that “Mr. Norris

provided *factual* testimony, based on his personal knowledge as project manager of Coca-Cola's PCAN project in 1984." Reply 14. We further agree with Petitioner that Mr. Norris "provided extensive factual bases for his opinion, which was further corroborated by the Coca-Cola brochure and the newspaper articles." *Id.*

Patent Owner also argues that during Mr. Norris's deposition, two discrepancies were brought to light regarding the label markings. PO Resp. 22. First, Mr. Norris stated in his declaration that the recycling label recited "the phone number 1-800-GET-COKE (438-2053)," but while looking at a Sprite PCAN from his collection during his deposition, he stated, "I'm looking at the can, and the correct number is 438-2653." *See* Ex. 1005 ¶ 33 (emphasis added); Ex. 2014, 34:20–35:2 (emphasis added). Second, while looking at a Coke Classic PCAN from his collection during his deposition, he noted that the can recites the "1-800-GET-COKE" phone number, but lacks the translation of "GET COKE" in digits. *See* Ex. 2014, 35:11–20. Patent Owner contends that these discrepancies render it "impossible to determine the authenticity" of the cans in the Petition and in Mr. Norris's possession.

We disagree. The typographical error in the telephone number ("438-2053" instead of "438-2653") is an understandable mistake when transposing the "O" in "COKE" to a digit (0 versus 6). *See* Ex. 2014, 34:17–35:10; Ex. 1020 ¶ 13. Mr. Norris also explained that "while all the cans list the recycling phone number '1-800-GET-COKE,' only the Sprite can includes translation into digits, '(438-2653).'"²¹ Reply 13 (citing

²¹ The Sprite Can was the focus of the Petition and Mr. Norris's opening declaration. *See* Pet. 13; Ex. 1020 ¶ 12.

Ex. 2014, 35:11–24). This is consistent with the photographs of the recycling labels on the Coke Classic, New Coke, Diet Coke, and Sprite cans included in Mr. Norris’s Reply Declaration. *See* Ex. 1020 ¶¶ 11, 13. Thus, we agree with Petitioner that these “minor errors do not render Mr. Norris’s testimony inconsistent or unreliable.” Reply 13.

Patent Owner also argues that Mr. Norris “likely admitted that he is not qualified to select which specific features of a vintage Coca-Cola product distinguish a genuine example from a replica.” PO Resp. 24 (citing Ex. 2014, 31:21–22 (referring to his collection as “somewhat minor”), 32:8–12 (explaining that he does not keep “any documentation of the items in [his] collection”), 33:3–12 (acknowledging that he is “not aware” of “any fake versions of Coca-Cola products or memorabilia” and he “do[es]n’t have any knowledge of that.”)).

Patent Owner appears to be suggesting that the PCANs in the Petition may be counterfeit, but nothing in this record indicates that the PCANs were ever counterfeited. Nor is there any indication that more than one type of PCAN was issued during the market trial. *See* Tr. 38:18–21. In contrast to Patent Owner’s mere speculation about “replica[s],” Mr. Norris has demonstrated extensive and specific personal knowledge about the PCAN project, including regarding the project goals, manufacturing locations and equipment used, equipment specifications, the manufacturing and filling process, product distribution specifications and channels, sale locations, shape of the cans, labeling, etc. *See generally* Ex. 1005. Mr. Norris’s depth of knowledge is unsurprising, given that he split his time between Petainer’s manufacturing facility in Dongen, Netherlands, and Coca-Cola’s canning line in Columbus, Georgia, overseeing the PCAN

project. *See, e.g., id.* ¶¶ 18–19; Ex. 2014, 22:18–23:7. We are satisfied that Mr. Norris possesses the personal knowledge needed to identify an authentic PCAN sold during the 1985–86 market trial, and has adequately done so on this record.

3. Whether Petitioner Established that PCANs Were Publicly Available in 1985–86

Patent Owner argues that, even if “Mr. Norris’s testimony was taken to be true, Petitioner has not made a sufficient showing that the Sprite Can specifically photographed and relied upon in the Petition was publicly available.” PO Resp. 25. Patent Owner contends that, “[b]ased on past Board decisions,” Petitioner’s evidence, which comprises Mr. Norris’s testimony, the newspaper articles, and the Coca-Cola advertisement, is insufficient to show that “the Sprite Can was publicly available.” *Id.* at 25.

We disagree. For the reasons discussed above, we find that Petitioner has sufficiently shown that the PCANs discussed in the Petition (including the Sprite Can) were publicly available in 1985–86, including based on Mr. Norris’s testimony, the newspaper articles, and the Coca-Cola advertisement. The Board decisions Patent Owner cites are both non-binding and distinguishable.

Patent Owner cites *AQ Textiles, LLC v. Arun Agarwal*, PGR2017-00042, Paper 10 at 13–15 (PTAB Feb. 7, 2018), where witness testimony regarding the alleged prior art was corroborated with sales invoices and lab reports. PO Resp. 25–26. Patent Owner asserts that here, Petitioner has provided neither “any sales invoice predating the priority date showing any sale of the PCAN,” nor “any evidence of the development, design, and testing of the PCAN.” *Id.* at 26. This argument overlooks that Mr. Norris’s testimony extensively discusses the development and design of the PCANs,

and that the newspaper articles and Coca-Cola advertisement—like the sales invoices and lab reports in *AQ Textiles*—corroborate his testimony.

Patent Owner also cites *Pelican Biothermal, LLC v. Va-Q-Teq AG*, PGR2021-00085, Paper 9 at 61–63 (Dec. 17, 2021). PO Resp. 27–28. The petitioner in *Pelican* had submitted sales records for a product bearing the part number “2-98830,” photographs of a 98830-type product, and witness testimony. *See Pelican*, Paper 9 at 61–63. The Board found insufficient basis to establish that “the ‘2-98830’ product sold before the critical date includes the features shown in the product photos,” in part because it had concerns about the witness testimony, given that both witnesses were “interested” employees of the petitioner. *Id.* at 62–63. Patent Owner contends that, like the product in *Pelican*, “the photographs of the Sprite Can provided by Petitioner do not show any self-corroborating date,” and “no sales invoices have been provided.” PO Resp. 28.

Pelican is distinguishable. Here, Mr. Norris is an uninterested witness who is a former employee of the party that manufactured and sold the prior art products. *See, e.g.*, Ex. 1005 ¶¶ 2, 5. As discussed above, his testimony adequately links the products in the Petition to those sold during the PCAN market trial, and his testimony is corroborated by the newspaper articles and Coca-Cola advertisement.

Patent Owner attacks the newspaper articles by arguing that “they only state that Coca-Cola **planned** to test market the PCAN—not that Coca-Cola ever actually sold a plastic can.” PO Resp. 26 (citing Ex. 1015 (“Coca-Cola **plans to** test market a plastic container”); Ex. 1016 (“Coca-Cola U.S.A. said today that it **will begin** testing a plastic soft-drink can this week”)). This argument is unavailing. As discussed above, the information

in the articles is consistent with Mr. Norris’s testimony regarding the timing and geographic area of the market trial and the products involved. Beyond pointing to the prospective verb tense, Patent Owner offers no indication that the market trials *did not* go forward as planned. Indeed, Mr. Norris testifies that he “personally saw these four Coca-Cola products in PET cans available for purchase at grocery stores in Columbus, Georgia.” Ex. 1005 ¶ 28.

Patent Owner attacks the Coca-Cola advertisement by arguing that “[t]he only date found on the paper advertisement is a copyright date indicating 1985,” but “a copyright date on prior art itself is alone ‘insufficient, without other persuasive evidence’ that the product was on sale.” PO Resp. 27 (quoting *Telebrands Corp. v. Tinnus Enters., LLC*, PGR2016-00030, Paper 16 at 21–22 (PTAB Feb. 21, 2017); citing *Wright Med. Tech., Inc. v. Biomed. Enters. Inc.*, IPR2015-00786, Paper 7 at 9–10 (PTAB Aug. 10, 2015)). Patent Owner overlooks that beyond the Coca-Cola advertisement, this case presents such “other persuasive evidence that the product was on sale,” e.g., the newspaper articles and Mr. Norris’s testimony regarding both the authenticity of the Coca-Cola advertisement and the actual sales of the product. *See, e.g.*, Ex. 1005 ¶¶ 28, 37; Reply 11 n.2.

For the above reasons, we find that Petitioner has sufficiently shown that the PCANs photographed and relied upon in the Petition were publicly available in 1985–86.

4. *Whether the PCANs in the Petition or Those in Mr. Norris's Possession are Part of the Allegedly Publicly Distributed PCANs*

Patent Owner contends that “[a] petition must . . . demonstrate that the specific sample relied upon is, in fact, of the same group of products that was publicly available,” but “Petitioner has provided practically no evidence regarding the origin or chain of custody of the Sprite Can or the cans in Mr. Norris’s possession” so “there is no way of knowing whether the Sprite Can [depicted in the Petition] is an example of the products allegedly sold in 1985 and 1986.” PO Resp. 29. Patent Owner argues that chain-of-custody documentation “is critical to establishing real evidence as authentic and reliable.” *Id.* at 31–32 (citing *China Lithium Battery Tech. Co. v. Contemp. Amperex Tech. Co.*, PGR2022-00008, Paper 8 (PTAB June 6, 2022); *Albany Int’l Corp. v. Kimberly-Clark Worldwide, Inc.*, PGR2021-00019, Paper 18 at 2 (PTAB Mar. 22, 2021)).

We disagree. For the reasons already discussed above, we are satisfied that the PCANs depicted in the Petition are examples of the PCANs sold in 1985 and 1986. We also credit Mr. Norris’s testimony that he obtained the PCANs in his collection from the market trial. *See* Ex. 2014, 34:3–16; Ex. 1005 ¶ 32; Ex. 1020 ¶ 14. The cases Patent Owner relies on to demand chain-of-custody documentation are inapposite.

In *China Lithium Battery*, the Board found that the petitioner had not shown the alleged prior art batteries met a claim limitation relating to an “OI value,” given evidence of record that the batteries could have deteriorated in ways that affected the OI value. *See China Lithium Battery*, PGR2022-00008, Paper 8, 14. There is no such issue here. That is, there is no argument that the PCANs depicted in the Petition have (or could have)

materially changed since the priority date in a manner that affects whether they map to the challenged claims. *See, e.g.*, Reply 16 (“PO fails to identify any feature that might have changed over time and impacted the invalidity analysis.”).

Patent Owner’s other cited case, *Albany International*, is similarly inapposite. In that case, the Board found that the petitioner had not adequately demonstrated that the alleged prior art (certain fabrics) embodied the claim limitations because the fabrics showed delamination and adhesive failure, such that it was unclear whether they accurately represented the fabric that was sold as of the relevant priority date. *Albany Int’l*, PGR2021-00019, Paper 18 at 28–30. Again, there is no argument here that the cans do not meet limitations of the claims, or that deterioration of the cans is an issue.

For the above reasons, we find that Petitioner had demonstrated by a preponderance of the evidence that the PCANs in the Petition and those in Mr. Norris’s possession are part of the PCANs that were publicly available in 1985–86.

5. *Whether Petitioner’s Reply Arguments are Improper*

Patent Owner argues that Petitioner “uses its Reply to back-fill . . . evidentiary holes,” and specifically cites Mr. Norris’s Reply Declaration (Exhibit 1020), wherein Mr. Norris allegedly “changed the list of authenticating features,” “waved off the mistakes in his original authenticating features as typos,” “physically inspected Petitioner’s cans for the first time,” and “provided full photographs of the cans.” Sur-reply 13. Patent Owner contends that the alleged lack of authentication information in the Petition “left Patent Owner with *no* way of verifying the truth of

Mr. Norris’s statements and is prejudicial to Patent Owner.” *Id.* at 13–14. It further contends that Petitioner’s Reply evidence “is relied upon in an effort to ‘make out a prima facie case of unpatentability’ and could have been presented with the Petition.” *Id.* (quoting TPG 73). Patent Owner requests that we disregard Mr. Norris’s Reply Declaration and the corresponding Reply arguments, if not the entire Reply. *Id.* at 14.

These arguments are unavailing. First, Patent Owner’s assertion that it had “**no** way of verifying the truth of Mr. Norris’s statements” (Sur-reply 13–14) is plainly wrong. At a minimum, Patent Owner had the opportunity to—and did—depose Mr. Norris. *See* Ex. 2014 (Norris deposition transcript). Second, we find that Petitioner’s Reply and Mr. Norris’s Reply Declaration appropriately respond to Patent Owner’s arguments that the PCANs were allegedly not authenticated. *See, e.g., United Therapeutics Corp. v. Liquidia Techs., Inc.*, No. 2023-1805, 2023 WL 8794633, at *3 (Fed. Cir. Dec. 20, 2023), *cert. denied*, 145 S. Ct. 352 (2024) (finding Board did not err in considering arguments made in reply that were responsive to patent owner’s attack on the status of the petitioner’s asserted prior art).

We disagree that Petitioner relies on this evidence to make out a prima facie case of unpatentability. The asserted invalidating prior art in the Petition is the PCAN, and remains so in the Reply. Neither Petitioner’s obviousness theory nor its mapping of the asserted prior art to the claims changed between the Petition and Reply. The reply arguments and evidence do not proceed in a new direction with a new approach compared to the Petition. *Cf.* TPG 74–75 (discussing impermissible reply evidence, such as “newly raised rationale to combine the prior art references” and

“newly cited prior art references intended to ‘gap-fill’ by teaching a claim element that was not present in the prior art presented with the petition”). Accordingly, we disagree with Patent Owner that the Reply is improper.

C. Conclusion – Ground 1

In sum, after considering the arguments and evidence of record, we find that Petitioner has demonstrated by a preponderance of the evidence that claims 1–8 would have been obvious over PCAN (and AAPA for claim 3), for the reasons set forth in the Petition. *See* Pet. 15–68.

4. Ground 2 – Alleged Obviousness Over PCAN and Protais

For Ground 2, Petitioner asserts that claims 9–20 are unpatentable as obvious over PCAN and Protais. Pet. 69–96. In general, claims 9–20 include limitations directed to the base of the can, and Petitioner cites Protais for these limitations. *See id.*

After considering the arguments and evidence of record, we find that Petitioner has demonstrated by a preponderance of the evidence that claims 9–14 are unpatentable as obvious over PCAN and Protais, but has not demonstrated the same for claims 15–20.

As an initial matter, we note that Patent Owner applies the same arguments regarding lack of authentication/public availability of the PCAN discussed above for Ground 1 to Ground 2. *See, e.g.,* PO Resp. 15–16, 36. Our analysis of these arguments in connection with Ground 1 applies equally to Ground 2. We now turn to the parties’ additional arguments specific to Ground 2. We first address claims 9–14, then turn to claims 15–20.

A. Analysis of Claims 9–14

For dependent claims 9–14, we find that Petitioner demonstrates by a preponderance of the evidence that the PCAN and Protais teach or suggest each limitation of these claims. *See* Pet. 70–82 (claim chart). Patent Owner does not dispute the merits of Petitioner’s showing as to how the PCAN and Protais teach or suggest each limitation of claims 9–14.

Patent Owner instead focuses on the Petitioner’s proffered motivation to combine PCAN and Protais. Petitioner asserts that a person of ordinary skill in the art would have been motivated to combine PCAN’s body and lid with Protais’s bottom to “achieve [the] increased strength and resistance to deformation” afforded by Protais’s bottom. *See* Pet. 69–70. Petitioner also explains that the PCAN was “slightly taller than standard soft drink aluminum cans,” and that a person of ordinary skill in the art “would have recognized that use of Protais’ base would have allowed making the Coca-Cola PCAN shorter and about the same height as the standard cans, while still providing enough strength to resist deformation of the first depression and allowing the use of standard filling and packaging equipment.” *Id.* at 70 (citing Ex. 1005 ¶ 21; Ex. 1002 ¶¶ 104–06).

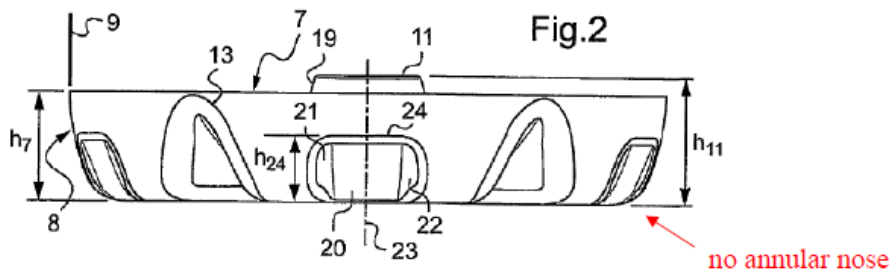
Patent Owner responds that “Petitioner’s reasoning overlooks several intended functions provided by the specific design features of the Sprite Can base,” which “would be lost if replaced with the Protais base.” PO Resp. 37. These design features include an “annular nose” at the base of the PCAN, which interlocks with the lid of a can below it, and a domed bottom that “creates the necessary space to accommodate the pull-tab of another can,” both of which allow the PCANs to be nested for stable

stacking. *Id.* at 38–41 (citing, *e.g.*, Ex. 2028 ¶¶ 71–75; Ex. 2016, 4:41–42, 5:22–27, 8:24–28, Fig. 3; Ex. 2017, 1:41–42, 3:39–42, Figs. 2, 3).

Patent Owner argues that “replacing the bottom of the PCAN with the bottom described by Protais, as Petitioner suggests, would take away these features providing the stackability of the Sprite Can.” PO Resp. 41 (citing Ex. 2028 ¶ 76). Patent Owner provides a graphic, reproduced below, that compares the bottom of the PCAN and Protais’s bottom:



Pet., 16 (cropped and annotated)



Protais, Fig. 2 (annotated)

PO Resp. 42. The graphic above shows a cropped photograph of a PCAN from page 16 of the Petition. Patent Owner added an arrow pointing to the bottom of a PCAN, and an annotation that reads, “annular nose shaped to interlock with outer rim of lid.” The graphic also shows Figure 2 of Protais, which is a side view of the container bottom. *See* Ex. 1008, 4:38. Patent Owner added an arrow pointing to Protais’s bottom, and an annotation that reads, “no annular nose.”

Patent Owner alleges that Protai's bottom does not include an annular nose or adequate space to accommodate the pull-tab, which would impair stacking. PO Resp. 42–44 (citing Ex. 2028 ¶¶ 76–78). Patent Owner argues that Petitioner's proposed reasons for the modification (i.e., allowing for increased strength and a shorter can, *see* Pet. 70) would be “far outweighed by either a significantly greater risk of falling if PCANs were stacked or significantly increased complexity of storage and transportation if the PCANs could not be stacked.” PO Resp. 44 (citing Ex. 2028 ¶ 79). Additionally, Patent Owner suggests that a shorter can provides no benefits, because Mr. Norris testified that “[t]he minor changes” between the PCAN and standard aluminum cans “did not materially affect the filling and assembly process.” *Id.* (citing Ex. 1005 ¶ 22; Ex. 2028 ¶ 79).

Finally, Patent Owner argues that as discussed in an article by Han et al. (Exhibit 2026), “the dome shaped base of standard cans is not only adequate, but superior for resisting internal pressure and conserving material used.” PO Resp. 44–45 (citing Ex. 2028 ¶ 80; Ex. 2026, 306 (Fig. 3b), 310 (Fig. 10a)). According to Patent Owner,

[g]iven that the design of the Sprite Can's bottom is already adequately strong against internal pressure from carbonation while also preserving the interlocking features important for stacking, storing, and transporting, a POSITA would not have been motivated to modify the PCAN base to one of presumably equal strength but sacrificing interlocking features when stacked.

Id. at 45 (citing Ex. 2028 ¶ 81).

After considering the arguments and cited evidence of record, we find that Petitioner has demonstrated an adequate motivation to combine by a preponderance of the evidence. Petitioner's assertion that a skilled artisan

would have combined PCAN's body and lid with Protais's bottom to "achieve [the] increased strength and resistance to deformation" afforded by Protais's bottom is supported by Protais itself. *See* Pet. 69–70. Protais teaches that the various ribs, notches, and/or grooves in its base achieve "a strength that exceeds that of most currently know bottoms, and allow[] it to recover its shape after deformation." Ex. 1008, 3:14–25; *see also id.* at 6:20–27, 6:47–48, 6:56–61. Petitioner demonstrates that these teachings would have provided a person of ordinary skill in the art motivation to make the combination. *See* Ex. 1002 ¶¶ 103–06; Pet. 69–70.

Patent Owner's assertion that using Protais's base would impair stackability and thus "far outweigh" the anticipated benefits of the combination is not sufficiently supported on this record. Instead, Petitioner demonstrates that Protais's bottom is arched upward, which "would provide sufficient room for the tab of the lower can." Reply 18; Ex. 1008, Fig. 3, 3:38 (describing the "concave inner wall" of the container bottom); Ex. 1019 ¶ 22. And even if Protais's bottom did not provide sufficient room for the tab of the lower can, we agree with Petitioner that it was within the level of skill in the art to adjust the size and angle of Protais' bottom as needed to provide sufficient space for a tab. *See* Reply 18–19; Ex. 1019 ¶ 21.

Petitioner also demonstrates that an annular nose is not necessary to stably stack cans. As Dr. Delson testifies, "[t]he BuzzBallz cans do not have such an annular nose, but I have observed the cans stacked in both advertisements and in liquor stores that I visited." Ex. 1019 ¶ 23. In support of this statement, Dr. Delson provides the photograph reproduced below:



The photograph above depicts BuzzBallz products stacked on top of each other. Because these products lack an annular nose (Ex. 1019 ¶ 23) yet are stacked, Patent Owner has not adequately demonstrated that an annular nose is required to allow one can to “nest[] within the can top so that the cans are stable when stacked.”²² PO Resp. 38.

We also find that Patent Owner has not adequately supported its argument that a skilled artisan would have lacked motivation to use Protais’s bottom based on Han’s teaching that “the dome shaped base of standard cans is . . . superior.” PO Resp. 44–45. As Petitioner correctly notes, “Han concerns shape optimization for an *aluminum* bottom.” Reply 19 (citing Ex. 2026, 1). Thus, because “Han does not address the

²² At the oral hearing, Patent Owner appeared to assert that interlocked cans would be more stably stacked than nested cans. *See, e.g.*, Tr. 48:8–49:5. This argument was raised for the first time at the oral hearing, and thus comes too late. Patent Owner’s briefs discuss “nested” cans and do not distinguish between nested and interlocked cans. *See, e.g.*, PO Resp. 38, 40; Sur-reply 21. In any event, to the extent Patent Owner suggests that interlocked cans are more stable than nested cans, this is attorney argument only, and is not supported with citation to persuasive evidence of record.

best shape for plastic,” we agree with Petitioner that Han “is irrelevant to proposed combination.” *Id.*; *see also* Ex. 1019 ¶ 25 (“There are significant differences between the manufacturing process of aluminum beverage containers and plastic beverage containers. Accordingly, the optimal shape for an aluminum beverage bottom and a plastic beverage bottom are likely to be significantly different.”).

We find that Petitioner’s proposed motivation for a stronger base is sufficient to support the combination of PCAN and Protais. For completeness, we address Petitioner’s additional proposal that “use of Protais’ base would have allowed making the Coca-Cola PCAN shorter and about the same height as the standard cans, . . . allowing the use of standard filling and packaging equipment.” Pet. 70 (citing Ex. 1002 ¶¶ 104–06). We find this reason unpersuasive, because as Patent Owner correctly notes, Mr. Norris testified that “[t]he minor changes” between the PCAN and standard aluminum cans “did not materially affect the filling and assembly process.” PO Resp. 44; Ex. 1005 ¶ 22.

For the above reasons, we determine that Petitioner has established by a preponderance of the evidence that claims 9–14 are unpatentable as obvious over PCAN and Protais.

B. Analysis of Claims 15–20

Patent Owner argues that the Petition fails to adequately map claims 15–20 to the asserted prior art with particularity. PO Resp. 46–48. We agree.

A post-grant petition must identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim.” 35 U.S.C. § 322(a)(3). As Patent Owner correctly notes, “[i]ndependent claim

15 includes multiple limitations (at least limitations [15.E]-[15.J] and [15.L]-[15.M]) that recite a container bottom with various features.” PO Resp. 46; *see also* Pet. 261–64 (claims listing). Although Ground 2 purports to rely on Protais for its teachings regarding the container bottom (*see, e.g.,* Pet. 69–70), “[f]or each of these limitations, Petitioner provides no analysis explaining how its proposed combination of the Sprite Can with **Protais**’ bottom renders the claim limitations obvious. Instead, the Petition only includes citations to the claim 1 analysis.” PO Resp. 46. Claim 1, however, is not challenged under Ground 2. Accordingly, it is unclear what analysis Petitioner intends to cross-reference in the Petition.

Petitioner concedes that it make an error in the cross-references in the Petition. *See* Tr. 14:3–22. Nevertheless, Petitioner argues that “given the labeling of images in claims 9 and 11, which are cross-referenced by the mapping in claim 15, the Petition shows with sufficient particularity where each limitation can be found on Protrais’ [sic] bottom.” Reply 20. We disagree.

The Petition’s analysis of claim 15 cross-references the claim 9 and 11 analyses for four limitations ([15.AL], [15.AM], [15.AN], [15.AO], *see* Pet. 90), but not for the other limitations identified by Patent Owner ([15.E]-[15.J] and [15.L]-[15.M], *see* Pet. 83–84) for which Petitioner seeks to rely on Protais. *See also* Sur-reply 22. “[I]t is of the utmost importance that petitioners in the IPR proceedings adhere to the requirement that the initial petition identify ‘with particularity’ the ‘evidence that supports the grounds for the challenge to each claim.’” *Intelligent Bio-Sys.*, 821 F.3d at 1369 (citing 35 U.S.C. § 312(A)(3)). It is not reasonable for Petitioner to put the onus on Patent Owner and the Board to search through the Petition

to find arguments regarding disclosure in Protais that might match up with the limitations of claim 15.

Thus, we agree with Patent Owner “that the internal references [in the Petition] for at least limitations [15.E]-[15.J] and [15.L]-[15.M] are not sufficiently clear to meet the requirement that a petition identify ‘with particularity . . . the evidence that supports the grounds for the challenge to each claim.’” PO Resp. 47–48 (quoting 35 U.S.C. § 322(a)(3)). Accordingly, we agree with Patent Owner that under Ground 2, Petitioner has not demonstrated the obviousness of claim 15, or of claims 16–20 which depend therefrom, by a preponderance of the evidence.

C. Conclusion – Ground 2

In sum, after considering the arguments and evidence of record, we find that Petitioner has demonstrated by a preponderance of the evidence that claims 9–14 are unpatentable as obvious over PCAN and Protais for the reasons set forth in the Petition (*see* Pet. 69–82), but has not demonstrated the same for claims 15–20.

5. Ground 3 – Alleged Obviousness Over Metzger, Protais, and Kaminski

For Ground 3, Petitioner asserts that claims 1–20 are unpatentable as obvious over Metzger, Protais, and Kaminski. Pet. 69–167. In brief, Petitioner proposes a combination using “Metzger’s container body with Protais’ improved container base” and Kaminski’s lid configuration. *See id.* at 99. Petitioner asserts that a person of ordinary skill in the art “would have been motivated to use the features of Protais’s base, including some or all of its ribs, notches, and grooves, to increase the strength and resistance to deformation of the container taught by Metzger.” *Id.* at 100 (citing Ex. 1008, 3:14–25, 6:20–27, 6:47–48, 6:56–61; Ex. 1002 ¶ 178). Petitioner

further asserts that Metzger “listed suitable container ends (Metzger, 3:43–47) but did not provide details,” and thus a person of ordinary skill in the art “would have found it obvious to look to Kaminski, which provided details about a pull-tab lid for a beverage container” and taught various benefits of that lid, such as ecological and safety benefits due to the tab being retained, and providing an easy-open lid using less metal. *Id.* at 100–01 (citing Ex. 1011, 1:5–8, 1:14–17, 1:27–31; Ex. 1002 ¶ 179). Petitioner, supported by Dr. Delson, argues that the proposed combination teaches or suggests each limitation of claims 1–20. *See id.* at 101–67 (claim chart).

Patent Owner responds with three principle arguments. First, Patent Owner argues that Metzger does not disclose that the “container body is made out of a resin” as required by limitations [1.C] and [15.C], and “the Petition does not provide any reason or motivation to specifically select a resin-based plastic.” PO Resp. 48, 51–52. Second, for claims 2, 5, 6, and 8, which recite that “the resin is a polyethylene terephthalate (PET) resin,” Patent Owner argues that “constructing Metzger’s container from PET would render it unsuitable for its intended purpose,” because PET cannot withstand the thermal retort process taught in Metzger. *Id.* at 52, 53. Third, Patent Owner argues that Protais’s base “does not partially define[] a first outline,” as required by limitations [1.G] and [15.G]. *Id.* at 55, 61.

After considering the arguments and evidence of record, we credit Patent Owner’s first argument (regarding lack of a reason to select a “resin”), but otherwise find that Petitioner has met its burden on this ground. Thus, as will be discussed below, we find that Petitioner has demonstrated by a preponderance of the evidence that claims 2, 5, 6, 8, and 15–20 are unpatentable as obvious over Metzger, Protais, and Kaminski,

but has not demonstrated the same for claims 1, 3, 4, 7, and 9–14 (which recite that the “container body is made out of a resin”).

A. Analysis of Claims 2, 5, 6, 8, and 15–20

After considering the arguments and evidence of record, we find that Petitioner has demonstrated by a preponderance of the evidence that claims 2, 5, 6, 8, and 15–20 would have been obvious over Metzger, Protais, and Kaminski, for the reasons discussed in the Petition. *See* Pet. 149–51, 158–67. We find that Petitioner adequately demonstrates that Metzger, Protais, and Kaminski teach or suggest each limitation of these claims. *See id.* We also find that Petitioner adequately demonstrates a motivation to combine these references with a reasonable expectation of success. *See id.* at 100–01; Ex. 1002 ¶¶ 176–79. We address Patent Owner’s three arguments below.

First, Patent Owner argues that Metzger does not disclose that the “container body is made out of a resin” as required by limitation [15.C], and “the Petition does not provide any reason or motivation to specifically select a resin-based plastic.” PO Resp. 48, 51, 52. Patent Owner argues that because claims 16–20 depend from claim 15, they are also not rendered obvious for the same reason. *Id.* at 52.

This argument is not persuasive for claim 15.²³ Patent Owner overlooks that for claim 15, Petitioner does not rely solely on Metzger’s teaching regarding resin. Limitation [15.AK] recites “wherein the resin is a polyethylene terephthalate (PET) resin,” and for this limitation, Petitioner

²³ As will be discussed in the next subsection, we find that Patent Owner’s argument that Metzger does not disclose that the “container body is made out of a resin” undermines Petitioner’s showing for claims 1, 3, 4, 7, and 9–14.

relies on Protais’s teaching of PET. *See* Pet. 162, which cross-references Pet. 149–50 (relying on Protais’s teaching of PET). We find that Petitioner adequately demonstrates that based on Protais’s teaching, a person of ordinary skill in the art would have been motivated to use PET as the resin for the container body, as required by claim 15.

Second, Patent Owner argues that for claims 2, 5, 6, and 8, which recite that the resin is PET,²⁴ a person of ordinary skill in the art would not have selected PET because it cannot withstand the thermal retort process taught in Metzger without softening and/or shrinking. PO Resp. 52–55 (citing, *e.g.*, Ex. 2028 ¶¶ 98–105; Ex. 2022, 202; Ex. 1008, 1:37–39; Ex. 2018, 2; Ex. 2025, 3; Ex. 1010, 11:43–49); *see also* Sur-reply 24 (arguing that Metzger’s “stated intent” is for the container to be used with “hot fill and/or thermal processes”).

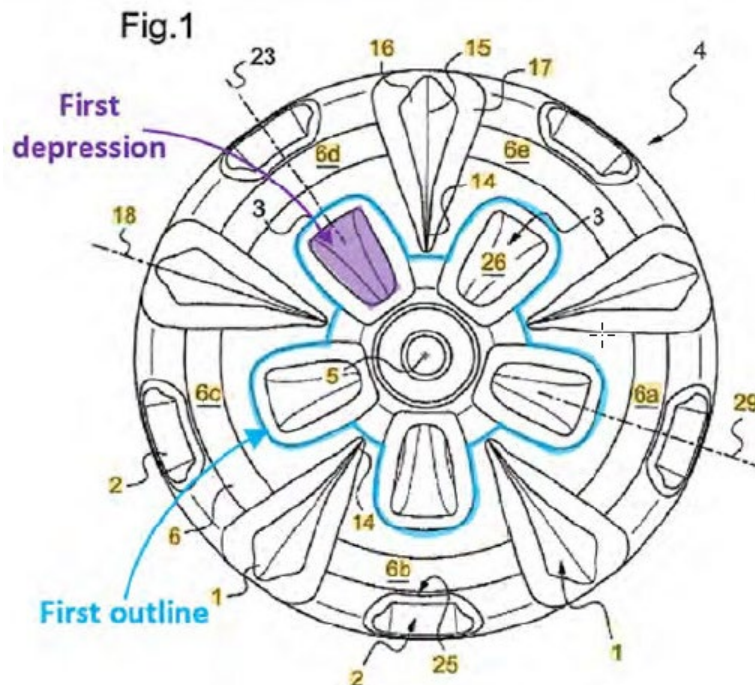
This argument is unavailing. Metzger’s thermal retort process is merely one embodiment. As Petitioner correctly notes, Metzger discloses another embodiment for “a non-thermal process,” and neither Metzger’s Abstract nor claims mention the thermal retort process. *See* Reply 27; Ex. 1010, 11:64–65, Abstr., 12:43–14:44. Thus, we agree with Petitioner that Patent Owner’s argument “is contrary to the express disclosure in Metzger.” Reply 27.

Third, Patent Owner argues that Petitioner has not adequately demonstrated that Protais teaches or suggests limitation [15.G], which recites that the container bottom has a “first depression” that “at least

²⁴ Despite claim 15 also reciting that the resin is PET, Patent Owner did not apply this argument to claim 15.

partially defines a first outline.”²⁵ PO Resp. 55, 61; Pet. 261 (limitation [15.G]). To provide context for this argument, we first address Petitioner’s arguments relating to limitation [15.G].

Petitioner relies on Protais’s container bottom as teaching limitation [15.G]. *See* Pet. 158 (cross-referencing Pet. 113–14). We reproduce below Petitioner’s annotated version of Protais’s Figure 1:

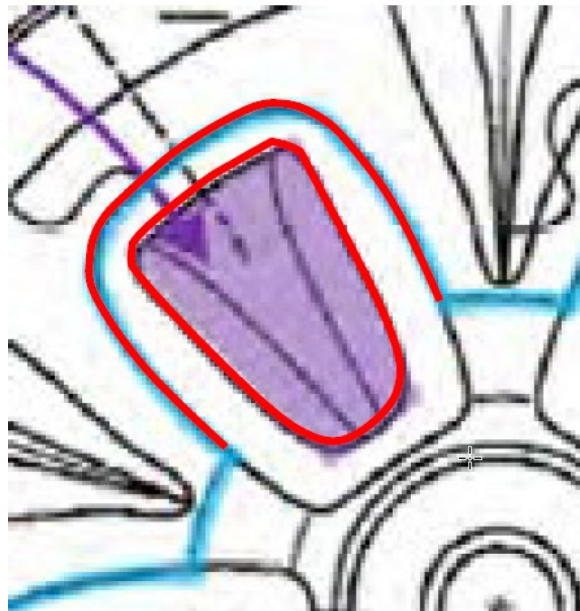


Pet. 114. Protais’s Figure 1 is a bottom view of a container bottom. *See* Ex. 1008, 4:35–37. Petitioner highlights a “first depression” in purple and a “first outline” in blue. We agree with Petitioner that “Protais disclosed a first outline because reinforcing grooves on Protais’ container bottom (first

²⁵ Patent Owner also applies this same argument to the identical claim limitation [1.G]. *See* PO Resp. 24. We address Patent Owner’s arguments regarding claim 1 in the next subsection. As will be discussed there, this argument as applied to limitation [1.G] is unavailing for the same reasons discussed here.

depression [purple]) each had an outer edge that together formed a first outline [blue] tracing these outer edges.” Pet. 113; Ex. 1002 ¶ 194.

Patent Owner disputes this conclusion, because “no portion of the outer boundary of the first depression forms or defines the first outline in any way. The shapes of the first depression and the first outline are not the same and are not based on one another.” PO Resp. 60 (citing Ex. 2028 ¶ 116). We reproduce below Patent Owner’s cropped, enlarged, and annotated version of Protais’s Figure 1:



PO Resp. 61. The graphic above enlarges a portion of Protais’s container bottom (Figure 1), and highlights two portions in red. With reference to this annotated figure, Patent Owner argues that “[e]ven the portion of the first outline around the first depression is a different shape than the first depression, as highlighted in red.” *Id.* at 60 (citing Ex. 2028 ¶ 117).

Patent Owner’s arguments are based on Protais allegedly depicting a “gap” between the first depression and the first outline. *See* Reply 27; Sur-reply 24–25 (arguing that “Petitioner’s mapping left a gap between the first

depression (a ‘reinforcing groove[]’) and the first outline such that the depression is not defined by the first outline.”). With reference to Petitioner’s annotated version of Protais’s Figure 1 reproduced above, this purported gap is the white space between the first depression (purple) and the first outline (blue). We find, however, that this portion of Protais’s bottom is not a separate space or structure, but is part of the first depression. *See* Reply 27.

Specifically, as Petitioner correctly explains, Protais discloses multiple depressions (which it calls “reinforcing grooves”) surrounded by sidewalls of the grooves. *See id.* at 28. This can be seen more clearly in Protais’s Figure 3, reproduced below:

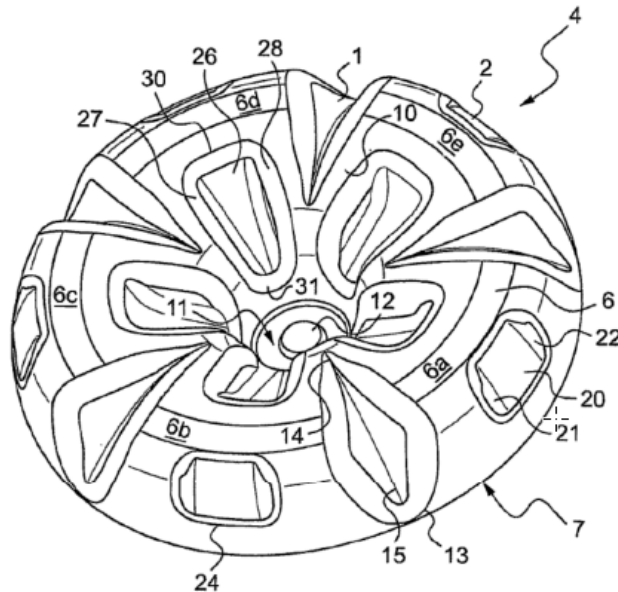
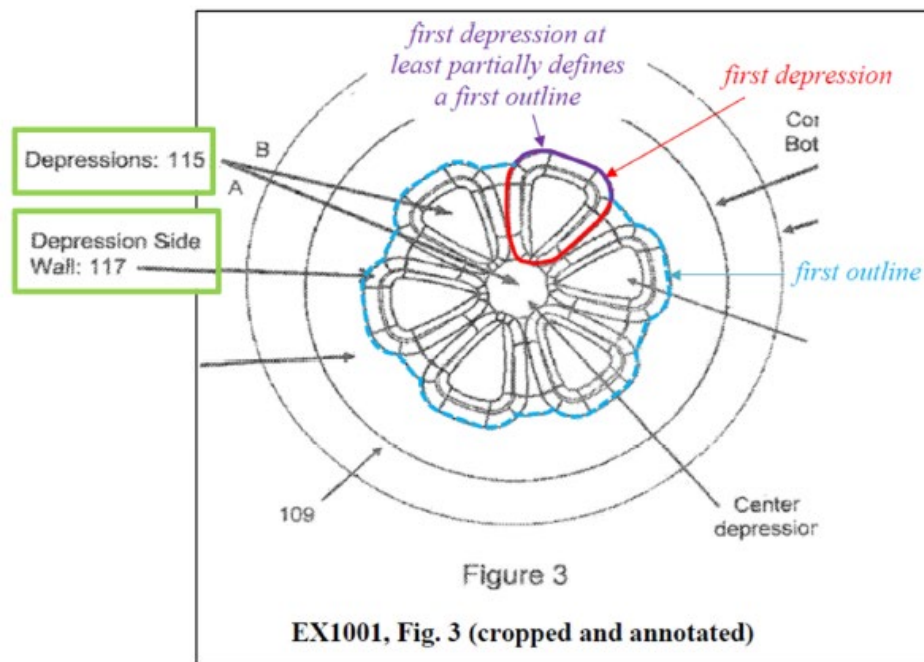


Fig.3

Protais’s Figure 3 is a perspective view of the same container bottom shown in Protais’s Figure 1. *See* Ex. 1008, 4:39–40. The alleged “gap” between the depression (i.e., groove) and the first outline is actually part of the groove. *See* Ex. 1008, 5:63–6:8 (identifying the “distal end portion end 30

of said reinforcing grooves”); *see also* Reply 29 (explaining that distal end portion end 30 is the angled sidewall of the groove). As such, we agree with Petitioner that Protais’s “first depression” (the purple groove in Petitioner’s annotated version of Protais Figure 1, reproduced above, including the groove sidewalls) “at least partially defines a first outline” (the blue portion of the annotated figure).

For completeness, we note that Petitioner’s mapping of Protais to claim limitation [15.G] is consistent with Patent Owner’s explanation of how the ’441 patent depicts claim limitation [15.G]. We reproduce below an annotated version of Figure 3 of the ’441 patent:



Reply 32. Figure 3 of the ’441 patent illustrates a bottom view of a container body. *See* Ex. 1001, 1:667–67. The above version of Figure 3 includes annotations from both Patent Owner and Petitioner. *See* Reply 30–32. The labels collectively show that the structure Patent Owner identifies as the “first depression [that] at least partially defines a first outline”

comprises both a “Depression” and “Depression Side Wall.” We agree with Petitioner that it relies on an analogous structure/relationship in Protais. *See id.* Thus, “[b]ecause Protrais [sic] discloses the same structure, a depression/groove surrounded by a depression/groove sidewall that have the same relationship to the ‘first outline,’ Protrais [sic] discloses the disputed limitation.” *Id.* at 32.

Patent Owner argues that for the first time in Reply, Petitioner attempts to rely on the combination of Protais’s groove and its side walls, whereas the Petition relied solely on the groove. *See* Sur-reply 24–25. Patent Owner contends that we should reject Petitioner’s identification of the groove sidewalls “an impermissible new argument.” *Id.* at 25. We disagree. While it would have been clearer had Petitioner colored the angled sidewalls of the groove in purple in Petitioner’s annotated version of Protais’s Figure 1 (reproduced above and on page 114 of the Petition), Protais teaches that the sidewalls are in fact part of the groove, and thus we find that Petitioner’s mapping has not changed from that presented in the Petition. *See* Ex. 1008, 5:66–6:1 (confirming that “distal end portion 30” (i.e., a sidewall) is part of the groove (i.e., the depression)). Additionally, Petitioner’s reply arguments are proper because they respond to Patent Owner’s arguments that the depression and first outline must touch each other and have the same shape.

On this last point, we agree with Petitioner that “no claim limitation requires the depression to touch the first outline; it only needs to partially define the first outline.” Reply 32. Thus, “[e]ven if the ‘first depression’ in Protrais were to exclude the groove sidewall, the first depression would still at least partially define the first outline because the first outline runs, in

part, at a slight offset from such a depression,” as shown Patent Owner’s enlarged, annotated version of Protais’s Figure 1, reproduced above. *See also* PO Resp. 61; Reply 32–33. Additionally, we see no language in the claim that requires the depression and first outline to have the same shape. We note, however, that when considering the depression’s sidewalls, the shapes of the first depression and the first outline are the same.

In sum, after considering the arguments and evidence of record, we find that Petitioner has demonstrated by a preponderance of the evidence that claims 2, 5, 6, 8, and 15–20 would have been obvious over Metzger, Protais, and Kaminski, for the reasons set forth in the Petition. *See* Pet. 100–01, 149–51, 158–67.

B. Analysis of Claims 1, 3, 4, 7, and 9–14

Two of Patent Owner’s arguments for Ground 3 are applicable to claims 1, 3, 4, 7, and 9–14. First, as noted above (*supra* n.25), Patent Owner argues that Petitioner has not adequately demonstrated that Protais teaches or suggests limitation [1.G], which recites that the container bottom has a “first depression” that “at least partially defines a first outline.” PO Resp. 55–61; Pet. 256 (limitation [1.G]). The parties’ arguments and evidence for limitation [1.G] are identical to that already discussed in the previous subsection regarding limitation [15.G]. Accordingly, our analysis discussed above applies equally here, and we find this argument unavailing.

Second, Patent Owner argues that Metzger does not disclose that the “container body is made out of a resin” as required by limitation [1.C], and “the Petition does not provide any reason or motivation to specifically select a resin-based plastic.” PO Resp. 48, 51. We agree.

Regarding limitation [1.C], the Petition states: “Metzger’s container was made of ‘various plastics.’ (Metzger, 3:56–58; Delson, ¶187). It would have been obvious to a POSITA that plastics can be made out of a resin. (Delson, ¶187; EX-1007 (defining resin as ‘any of numerous physical similar polymerized synthetics...to form plastics.)).” Pet. 108. For the reasons discussed below, this analysis is insufficient to meet Petitioner’s burden of proving unpatentability.

Metzger teaches that its container can be made of “various plastics.” Ex. 1010, 3:56–58. The parties and their declarants agree that resin is one type of plastic. *See, e.g.*, PO Resp. 50 (“not all plastics are formed from a resin”); Ex. 2028 ¶ 92; Ex. 1019 ¶ 31; Ex. 2034, 49:17–50:1; Tr. 17:17–24; Ex. 2020, 1667 (plastics include “polymers, resins, and cellulose derivatives). As such, Metzger’s disclosure of a genus of “various plastics” does not teach the species “resin.”

Petitioner cites Metzger’s teaching of “various plastics” and argues that “[i]t would have been obvious to a POSITA that plastics can be made out of a resin.” Pet. 108. In support, the Petition cites paragraph 187 of Dr. Delson’s declaration, which simply repeats this same statement from the Petition. Ex. 1002 ¶ 187.

We agree with Patent Owner that what is missing from Petitioner and Dr. Delson’s analysis is any reason *why* a person of ordinary skill in the art would have been motivated to use resin, among the available plastics. *See* PO Resp. 51. Such a reason is necessary because “obviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art.” *Belden Inc. v. Berk-Tek*, 805 F.3d 1064, 1073 (Fed. Cir. 2015); *see also KSR Int’l*

Co., 550 U.S. at 418 (“[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.”). Although a person of ordinary skill in the art may have had a reason make Metzger’s container with a resin, the Petition does not identify any such reason.

In its Reply Petitioner newly argues that “it would have been obvious to a POSITA to make a container from a resin-based plastic in view of the teachings of Metzger, Protais, and the knowledge of a POSITA,” because Protais “demonstrated the use of a resin-based plastic, PET,” and Patent Owner’s declarant “Dr. Rojas admitted that POSITAs would have been familiar with the use of PET, a plastic-based resin, for making blow-molded liquid containers.” Reply 25. Petitioner also newly argues that “liquid containers were commonly made from plastic resins.” *Id.* (citing Ex. 1002 ¶¶ 23, 36).

These arguments come too late, because the Petition did not cite Protais’s teachings regarding PET, discuss a skilled artisan’s knowledge of PET, or cite paragraphs 23 and 36 of Dr. Delson’s declaration as a reason for selecting resin for limitation [1.C]. *See* Pet. 108. Although *KSR* requires a flexible analysis and consideration of common sense and the common knowledge of a person of ordinary skill in the art (*see* Reply 25–26, citing *KSR*, 550 U.S. at 416), it is equally true that “the expedited nature of IPRs [and PGRs] bring with it an obligation for petitioners to make their case in their petition to institute.” *Intelligent Bio-Sys., Inc.*, 821 F.3d at

1369. Thus, we decline to consider Petitioner’s belated arguments regarding PET vis-à-vis limitation [1.C] made for the first time in Reply.²⁶

For completeness, we address Patent Owner’s additional argument that “Petitioner is, effectively, arguing that any disclosure of plastic inherently also discloses a resin.” PO Resp. 49. We disagree with Patent Owner that Petitioner either expressly or implicitly invoked inherency. *See id.* at 49–50. The Petition argues that resin “would have been obvious,” and Petitioner confirmed that it is not arguing inherency. Pet. 108; Reply 28; Tr. 64:5–10. Accordingly, this argument is unavailing.

For the above reasons, we find that Petitioner has not met its burden of showing obviousness of claim 1 or its dependent claims 3, 4, 7, and 9–14 under Ground 3.

C. Conclusion – Ground 3

In sum, after considering the arguments and evidence of record, we find that Petitioner has demonstrated by a preponderance of the evidence that claims 2, 5, 6, 8, and 15–20 would have been obvious over Metzger,

²⁶ The Petition’s analysis for claims 1, 3, 4, 7, and 9–14 regarding “resin” stands in contrast with the Petition’s analysis for claims 2, 5, 6, 8, and 15–20, which further recite that the resin is PET. For the latter group of claims, the Petition expressly cites Protais’s teaching of PET, and provides reasons why a person of ordinary skill in the art would have used PET. *See* Pet. 149–50 (analysis of claim 2); *id.* at 150–51 (analysis of claims 5, 6, 8 cross-referencing arguments for claim 2), 161 (for limitation [15.AK], which recites that the resin is PET, cross-referencing arguments for claim 2). This distinction further underscores that for claims 1, 3, 4, 7, and 9–14, the Petition did not present the argument regarding PET that Petitioner now proffers at Reply 24–27. This distinction also drives the different outcomes for claims 1, 3, 4, 7, and 9–14 (for which we find Petitioner did not carry its burden) versus claims 2, 5, 6, 8, and 15–20 (for which we find Petitioner did carry its burden).

Protais, and Kaminski for the reasons set forth in the Petition, but has not demonstrated the same for claims 1, 3, 4, 7, and 9–14.

6. Ground 4 – Alleged Obviousness Over Gardiner, Pedmo, and Brown

For Ground 4, Petitioner asserts that claims 1–20 are unpatentable as obvious over Gardiner, Pedmo, and Brown. Pet. 167–254. In brief, Petitioner proposes a combination using “Gardiner’s container body and lid with the teachings of Pedmo’s improved container base.” *See id.* at 170. Petitioner further asserts that although “Gardiner described a lid having a scored portion and a tab for puncturing it, Gardiner did not explicitly show the tab’s position when the puncture occurred.” *Id.* As such, Petitioner argues that a person of ordinary skill in the art “would have been guided by the teachings of Brown’s tab position both before and after it punctured a scored area of the lid, and would have found the claimed elements obvious.” *Id.*

Petitioner asserts that a person of ordinary skill in the art “would have been motivated to use the features of Pedmo’s base to improve Gardiner’s container,” because “Pedmo’s base would have imparted increased strength and improved impact properties to the combined container.” *Id.* at 172 (citing Ex. 1013, 2:46–53, 2:59–66;²⁷ Ex. 1002 ¶¶ 311–13). Petitioner further asserts that a person of ordinary skill in the art would have looked to “the teachings of Brown to understand how to operate Gardiner’s tab to open a pour aperture in Gardiner’s lid.” *Id.* (citing

²⁷ Petitioner cites Pedmo at “2:46–43” and “32:59–66.” Pet. 172. We understand these citations to contain typographical errors, and have updated them to reflect our understanding of the intended citations. *See* Dec. 48 n.24.

Ex. 1012, 5:2, 4:45–53, 5:13–15, 5:27–28, Fig. 1; Ex. 1014, 5:14–21; Ex. 1002 ¶¶ 311, 314). Petitioner, supported by Dr. Delson, argues that the proposed combination teaches or suggests each limitation of claims 1–20. *See* Pet. 173–254 (claim chart).

Patent Owner responds with three principle arguments. First, it argues that none of Gardiner, Pedmo, or Brown discloses that the “container body is made out of a resin” as required by limitation [1.C], and the Petition does not provide any reason or motivation to specifically select a resin-based plastic. PO Resp. 62–63. Second, for claims 2, 5, 6, and 8, which recite that “the resin is a polyethylene terephthalate (PET) resin,” Patent Owner argues that the Petition fails to provide any reason or motivation why a person of ordinary skill in the art would have specifically selected PET. *Id.* at 63–65. Third, Patent Owner argues that “Gardiner does not disclose a circular neck, as required by limitation [1.N], or a lip as required by limitation [1.P]” and by the identical limitations [15.N] and [15.P]. *Id.* at 65, 69.

After considering the arguments and evidence of record, we credit Patent Owner’s first argument (regarding lack of a reason to select a “resin”), but otherwise find that Petitioner has met its burden on this ground. As will be discussed below, we find that Petitioner has demonstrated by a preponderance of the evidence that claims 2, 5, 6, 8, and 15–20 are unpatentable as obvious over Gardiner, Pedmo, and Brown, but has not demonstrated the same for claims 1, 3, 4, 7, and 9–14 (which recite that the “container body is made out of a resin”).

A. Analysis of Claims 2, 5, 6, 8, and 15–20

After considering the arguments and evidence of record, we find that Petitioner has demonstrated by a preponderance of the evidence that dependent claims 2, 5, 6, and 8, and independent claim 15 and its dependent claims 16–20 would have been obvious over Gardiner, Pedmo, and Brown, for the reasons discussed in the Petition. *See* Pet. 235–37, 245–54. We find that Petitioner adequately demonstrates that Gardiner, Pedmo, and Brown teach or suggest each limitation of these claims. *See id.* We also find that Petitioner adequately demonstrates a motivation to combine these references with a reasonable expectation of success. *See id.* at 170–73; Ex. 1002 ¶¶ 309–14. We address Patent Owner’s arguments applicable to these claims below.

Patent Owner first argues that for claims 2, 5, 6, and 8, which recite that “the resin is a polyethylene terephthalate (PET) resin,”²⁸ Petitioner has not provided an adequate reason why a person of ordinary skill in the art would have selected PET. PO Resp. 63–65. To provide context for this argument, we begin with Petitioner’s showing on this claim limitation.

For claim 2, Petitioner argues:

Gardiner’s container could be made out of plastic.
(Gardiner, 2:22–24). Gardiner did not explicitly disclose a PET resin.

However, Pedmo explained that PET was a material used to manufacture plastic containers. (Pedmo, 3:9–10, 4:8–9).

²⁸ Although claim 15 also recites that the resin is PET (*see* Pet. 264 (limitation [15.AK])), Patent Owner did not apply this argument to claim 15. *See* PO Resp. 63.

A POSITA would have been motivated to use PET to manufacture the Gardiner-Pedmo-Brown container based on Pedmo's teaching. (*Id.*, 3:9–10; Delson, ¶¶380–81).

Pet. 235–36. Dr. Delson adds that a person of ordinary skill in the art would have used PET “based on Pedmo’s teaching that PET was a suitable plastic for containers (Pedmo, 3:9-10), and it was well-known to use PET for making plastic bottles (Ex. 1017, 22).” Ex. 1002 ¶ 381. For claims 5, 6, and 8, Petitioner cross-references this claim 2 analysis. *See id.* at 236–37.

Patent Owner responds that

[t]he portion of Pedmo Petitioner cites as providing a motivation to combine Pedmo with Gardiner does nothing of the sort. Pedmo, 3:9–10 is a partial sentence that recites: “Preferably, the plastic is polyethylene terephthalate; however, other suitable plastics may be readily used alone or.” EX1013, 3:9–10. Pedmo, 4:8–9 is claim 4, which recites: “A hollow plastic bottle according to claim 1, wherein said bottle is polyethylene terephthalate.” EX1013, 4:8–9. Nothing about these passages provides any reasons that would motivate a POSITA to modify Gardiner’s teachings to use PET to manufacture the container.

PO Resp. 64. Patent Owner further argues that Dr. Delson’s testimony in paragraphs 380 and 381 is improperly incorporated by reference into the Petition. *Id.* at 65.

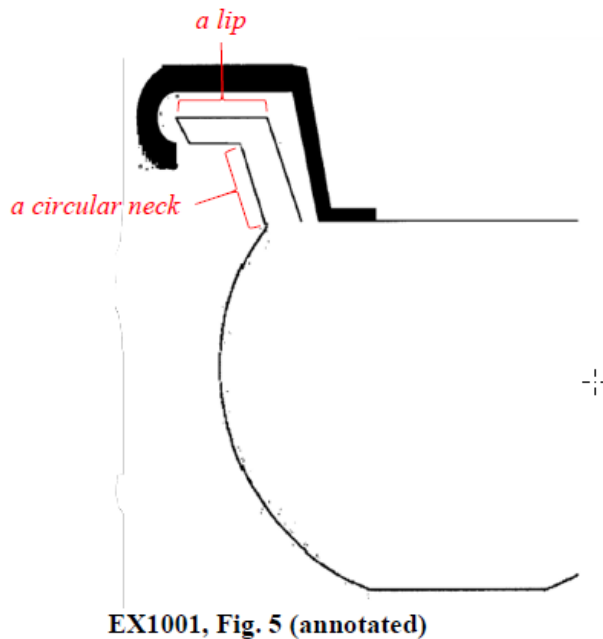
We find Petitioner’s analysis sufficient to demonstrate that a person of ordinary skill in the art would have had a reason to use PET to manufacture the Gardiner-Pedmo-Brown container. Pet. 235–36. Pedmo teaches that PET is the preferred material for manufacturing plastic containers, and specifically claims a plastic bottle made of PET. Ex. 1013, 3:9–10, 4:8–9. Dr. Delson additionally notes that it was well-known to use PET for making plastic bottles. Ex. 1002 ¶ 381. He cites The Handbook of

Engineering and Specialty Thermoplastics, which indicates that “PET is one of the most important industrial polymers because of its excellent properties as tensile impact strength, chemical resistance, processability, clarity, thermal stability and others,” and that one of the main applications of PET is for bottles. Ex. 1017, 22. We find that this provides sufficient reasoning why a person of ordinary skill in the art would have selected PET to manufacture the Gardiner-Pedmo-Brown container. We also disagree that Dr. Delson’s testimony in paragraphs 380 and 381 is improperly incorporated by reference into the Petition. To the extent any content of these two very short paragraphs in Dr. Delson’s declaration is omitted from the Petition, we find that these paragraphs are an appropriate elaboration of the arguments in the Petition, and are not so extensive as to amount to improper incorporation by reference.

Patent Owner next argues that Gardiner does not disclose limitations [15.N] and [15.P], which relate to features of the upper region of the claimed container.²⁹ PO Resp. 65, 69. In relevant part, limitation [15.N] recites, “wherein the container body further comprises a *circular neck* extending from the container side wall.” Pet. 262 (emphasis added). Limitation [15.P] recites, “wherein the container body further comprises a *lip* at an end of the circular neck opposite the upper edge of the container side wall.” *Id.* (emphasis added).

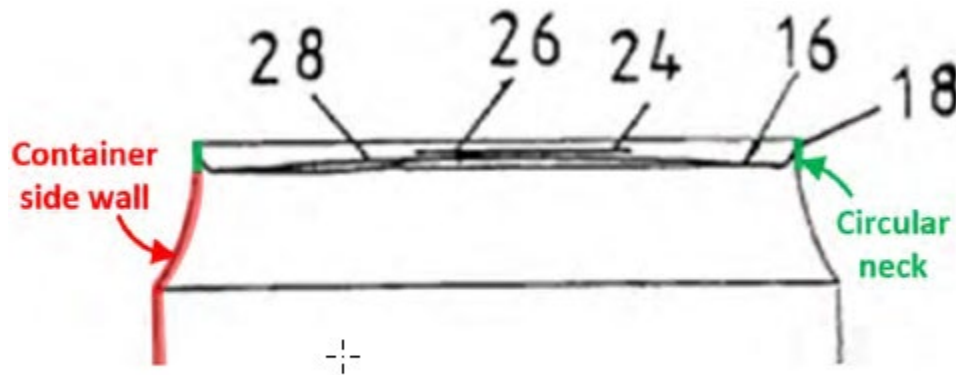
²⁹ Patent Owner also applies this same argument to the identical claim limitations [1.N] and [1.P]. See PO Resp. 65. We address Patent Owner’s arguments regarding claim 1 in the next subsection. As will be discussed there, this argument as applied to limitations [1.N] and [1.P] is unavailing for the same reasons discussed here.

Patent Owner provides an annotated figure, reproduced below, to illustrate an example of a circular neck and a lip:



PO Resp. 68; *see also id.* at 65–66. Reproduced above is a portion of Figure 5 of the '441 patent, showing “a section of the lid and lip of the container body of the present invention.” Ex. 1001, 3–4. Patent Owner adds labels indicating “a circular neck” and “a lip.”

Regarding limitation [15.N], Petitioner argues that “Gardiner depicted a circular neck by a substantially vertical section of the container body that approximately corresponded to a location of a lid sealed to the container body. This circular neck extended from the container side wall.” Pet. 200 (citing Ex. 1002 ¶¶ 340–41; Ex. 1012, Fig. 2). Petitioner provides the following annotated figure to identify the circular neck on Gardiner’s container body:



Gardiner, Fig. 2 (Cropped and Annotated)

The image above shows a portion of Gardiner’s Figure 2. The figure is cropped to focus on the upper region of Gardiner’s container. Petitioner adds labels indicating the “Container side wall” and “Circular neck.”

Patent Owner argues that “[w]hat Petitioner identifies as ‘*a circular neck*’ of ‘*the container body*’ for limitation [1.N] is, in fact, not a part of the container body in Gardiner.”³⁰ PO Resp. 66. Patent Owner argues that the structure Petitioner identifies is actually “rim 18,” which is part of the cap member, not the container body. *Id.* at 66–68 (citing Ex. 2028 ¶¶ 126–29; Ex. 1012, Abstr., 1:64–67, 5:42–46).

We disagree with Patent Owner and find that Petitioner has adequately identified a circular neck of the container body in Gardiner by pointing to the top portion of the container sidewall that extends essentially vertically and into the container lid. *See* Pet. 200; Ex. 1002 ¶ 340; Ex. 1012, Fig. 2; Reply 35. We agree with Petitioner that it “specifically stated the neck was a ‘*a substantially vertical section of the container body,*’ not the outer part of the lid.” Reply 35 (quoting Pet. 200; citing

³⁰ Limitations [1.N] and [15.N] are identical. *See* PO Resp. 69; *compare* Pet. 257, *with* Pet. 262.

PO Resp. 66). Although Gardiner's cap member (lid) and container sidewall may sit side by side (that is, Gardiner teaches that the cap member is positioned over the open end of a can body and seamed thereto, Ex. 1012, 5:42–46), Petitioner points to the container sidewall, not the cap member.

Regarding limitation [15.P], Petitioner argues that Gardiner's cap member includes “a peripheral 140,” which has a “hook-like shape” designed to be positioned over an open end of a can body and seamed thereto. Pet. 202–03 (citing Ex. 1012, Figs. 10, 13, 5:42–45). We reproduce below Petitioner's annotated version of Gardiner's Figure 13:

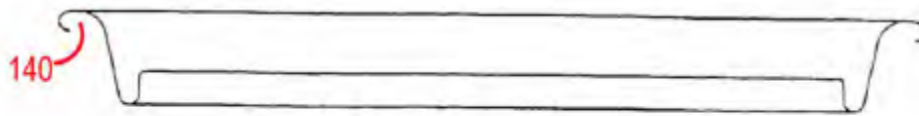


FIG. 13

Gardiner, Fig. 13 (Annotated)

Pet. 203. Figure 13 is a schematic view showing a cap member. *See* Ex. 1012, 56–59, 65–67. Petitioner adds a label indicating peripheral 140.

Petitioner argues that because the

peripheral was “shaped to be positioned” over the open end of the can body, a POSITA would have found it obvious that the can body would have a reciprocal shape (a lip) at the top of the can body, over which peripheral 140 was seamed to form a rim for the can, because this reciprocal shape would have enabled a lid to seal to the container body for beverage storage.

(Gardiner, 1:44–50 (explaining cap/can seaming that was “sufficiently strong to prevent separation by internal pressures exerted by the carbonated drinks”); Delson, ¶344). Using the lid with a lip that engaged with a container's rim was routinely done to secure the lid to the container. (Delson, ¶¶343–44).

Pet. 203–04.

Patent Owner responds that the claimed “lip” is part of the container body, not the lid, and Petitioner’s arguments thus fail because Petitioner points to Gardiner’s cap member (lid). PO Resp. 68–69. Patent Owner acknowledges Petitioner’s argument that a person of ordinary skill in the art would have understood that the can body would have a reciprocal shape (a lip) at the top of the can body, but asserts that this reciprocal shape is not explicitly disclosed in Gardiner. *Id.* at 69; *see also* Sur-reply 26 (“Petitioner attempts to use the cap to illustrate features of the container body that are not disclosed by Gardiner.”).

We find that Petitioner has adequately demonstrated that Gardiner teaches or suggests limitation [15.P]. “Petitioner points to the hook shape on the lid as the portion that will be seamed with a lip on the container to form a seal.” Reply 35. Although the reciprocal shape on the container is not expressly shown in a figure in Gardiner, we agree with Petitioner that a person of ordinary skill in the art “would have found it obvious that the can body would have a reciprocal shape (a lip) at the top of the can body,” to enable sealing. *See* Ex. 1012, 1:44–50, 5:42–45; Ex. 1002 ¶¶ 343–44; Pet. 203; *see also KSR Int’l Co.*, 550 U.S. at 421 (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”).

In sum, after considering the arguments and evidence of record, we find that Petitioner has demonstrated by a preponderance of the evidence that claims 2, 5, 6, 8, and 15–20 would have been obvious over Gardiner, Pedmo, and Brown, for the reasons set forth in the Petition. *See* Pet. 167–73, 235–37, 245–54.

B. Analysis of Claims 1, 3, 4, 7, and 9–14

Two of Patent Owner’s arguments for Ground 4 are applicable to claims 1, 3, 4, 7, and 9–14. First, as noted above (*supra* n.30), Patent Owner argues that Petitioner has not demonstrated that Gardiner discloses a circular neck or lip per limitations [1.N] and [1.P]. PO Resp. 65. The parties’ arguments and evidence for these limitations are identical to that already discussed in the previous subsection regarding limitations [15.N] and [15.P]. Accordingly, our analysis discussed above applies equally here, and we find this argument unavailing.

Second, Patent Owner argues that none of Gardiner, Pedmo, and Brown discloses that the “container body is made out of a resin” as required by limitation [1.C], and Petitioner has not “provided any reason to or motivation to specifically select a resin-based plastic.” PO Resp. 62–63. We agree.

Regarding limitation [1.C], the Petition states:

Gardiner’s container ‘can be made of any suitable material’ ***including plastic***. (Gardiner, 2:22–23, 4:30–31). It would have been obvious to a POSITA that plastics can be made out of a resin. (Delson, ¶319; *see* Ground 1, [1.C]). Because ‘[d]ifferent components of the container can be made of different ones of the materials,’ it would have been obvious to select a plastic for manufacturing the container body. (Gardiner, 2:24–25; Delson, ¶319).

Pet. 178–79. For the reasons discussed below, this analysis is insufficient to meet Petitioner’s burden of proving unpatentability.

Gardiner teaches that its container can be made of plastic. Ex. 1012, 2:22–23, 4:30–31. But as discussed in Section II.D.5.B, *supra*, resin is a type of plastic. Thus, Gardiner’s disclosure of a genus of plastic does not teach the species “resin.” Petitioner’s and Dr. Delson’s assertions that “[i]t

would have been obvious to a POSITA that plastics can be made out of a resin” (Pet. 178; Ex. 1002 ¶ 319) lack any rationale for *why* a person of ordinary skill in the art would have been motivated to use resin, among the available plastics.

In its Reply, Petitioner newly invokes Pedmo’s teachings regarding containers made of PET (a resin), and portions of Dr. Delson’s testimony relating to PET. *See* Reply 33–34 (citing Ex. 1013, 1:48–50, 3:1–15; Ex. 1002 ¶¶ 23, 36, 310, 312). But for limitation [1.C], the Petition did not mention PET or cite Pedmo or these additional portions of Dr. Delson’s declaration. *See* Pet. 178–79. Thus, Petitioner’s attempted reliance on this information comes too late in the Reply. *Intelligent Bio-Sys., Inc.*, 821 F.3d at 1369.³¹

For completeness, we note that Patent Owner’s additional argument regarding inherency (PO Resp. 62–63) is unavailing for the same reasons discussed above in Section II.D.5.B, *supra*.

³¹ The Petition’s analysis for claims 1, 3, 4, 7, and 9–14 regarding “resin” stands in contrast with the Petition’s analysis for claims 2, 5, 6, 8, and 15–20, which further recite that the “resin” is “PET.” For the latter group of claims, the Petition cites Dr. Delson’s testimony that a person of ordinary skill in the art would have been motivated to use PET based on Pedmo’s teachings and because it was commonly used for plastic bottles. *See* Pet. 235–36 (analysis of claim 2); *id.* at 236–37 (analysis of claims 5, 6, 8 cross-referencing arguments for claim 2), 249 (for limitation [15.AK], which recites that the resin is PET, cross-referencing arguments for claim 2). This distinction further underscores that for claims 1, 3, 4, 7, and 9–14, the Petition did not present the argument regarding PET that Petitioner now proffers at Reply 33–34. This distinction also drives the different outcomes for claims 1, 3, 4, 7, and 9–14 (for which we find Petitioner did not carry its burden) versus claims 2, 5, 6, 8, and 15–20 (for which we find Petitioner did carry its burden).

For the above reasons, we find that Petitioner has not met its burden of showing obviousness of claim 1 or its dependent claims 3, 4, 7, and 9–14 under Ground 4.

C. Conclusion – Ground 4

In sum, after considering the arguments and evidence of record, we find that Petitioner has demonstrated by a preponderance of the evidence that claims 2, 5, 6, 8, and 15–20 would have been obvious over Gardiner, Pedmo, and Brown for the reasons set forth in the Petition, but has not demonstrated the same for claims 1, 3, 4, 7, and 9–14.

III. CONCLUSION³²

Based on the information presented, we conclude that Petitioner has demonstrated by a preponderance of the evidence that claims 1–20 of U.S. Patent No. 11,932,441 B1 are unpatentable.

³² Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

In summary:

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–8	103	PCAN, AAPA	1–8	
9–20	103	PCAN, Protais	9–14	15–20
1–20	103	Metzger, Protais, Kaminski	2, 5, 6, 8, 15– 20	1, 3, 4, 7, 9–14
1–20	103	Gardiner, Pedmo, Brown	2, 5, 6, 8, 15– 20	1, 3, 4, 7, 9–14
Overall Outcome			1–20	

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner has demonstrated by a preponderance of the evidence that claims 1–20 of U.S. Patent No. 11,932,441 B1 are unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to this proceeding seeking judicial review of this Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

PGR2024-00035
Patent 11,932,441 B1

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