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Paper 33
Entered: December 3, 2018

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SHENZHEN KEAN SILICONE PRODUCT CO., LTD.,
Petitioner,

v.

PKOH NYC, LLC,
Patent Owner.

Case IPR2017-01327
Patent 7,959,036 B2

Before MITCHELL G. WEATHERLY, JAMES A. TARTAL, and ROBERT L. KINDER, *Administrative Patent Judges.*

KINDER, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a); 37 C.F.R. § 42.73

Shenzhen Kean Silicone Product Co., Ltd. ("Petitioner") filed a Petition (Paper 1, "the Petition" or "Pet.")[1] to institute an *inter partes* review of claims 1–7, 10–15, 20–32, and 35–38 of U.S. Patent No. 7,959,036 B2 (Ex. 1001, "the '036 patent"). PKOH NYC, LLC ("Patent Owner") filed a Preliminary Response (Paper 11, "Prelim. Resp.").

Applying the standard set forth in 35 U.S.C. § 314(a), which requires demonstration of a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim, we instituted an *inter partes* review, but not as to all challenged claims or as to all alleged grounds of unpatentability. (Paper 14, "Dec.," 44).

During the trial, Patent Owner filed a Patent Owner Response (Paper 18, "PO Resp."), and Petitioner filed a Reply to the Patent Owner Response (Paper 24, "Pet. Reply"). An oral hearing was held on August 29, 2018, and a copy of the transcript has been made part of the record. Paper 32 ("Tr.").

On April 24, 2018, the Supreme Court determined that a decision to institute under 35 U.S.C. § 314 may not institute review of fewer than all claims challenged in the petition. *SAS Inst. Inc. v. Iancu*, 138 S.Ct. 1348, 1359–60 (2018). On April 26, 2018, the Office issued Guidance on the Impact of *SAS* on AIA Trial Proceedings, which states that "if the PTAB institutes a trial, the PTAB will institute on all challenges raised in the petition." https://www.uspto.gov/patents-application-process/patent-trial-

[1] *See* Decision on Institution, Paper 14, 2–4 (determining that we only consider those grounds and arguments presented in the original Petition (Paper 1) and expunging the First Amended Petition and the Second Amended Petition from the proceeding as unauthorized filings).

and-appeal-board/trials/guidance-impact-sas-aia-trial. Subsequently, on April 30, 2018, we issued an Order modifying the Decision on Institution "to institute on all of the challenged claims and all of the grounds presented in the Petition." Paper 19, 2.

Pursuant to our authorization (Paper 21), the parties thereafter filed a "Joint Motion to Limit Proceeding" (Paper 22), requesting that we "limit[] the *inter partes* review proceeding IPR2017-01327 to the grounds and claims instituted on December 6, 2017, in the Decision on Institution (Paper 14)." Paper 22, 2. Specifically, the parties requested that the proceeding be limited to the following claims and grounds:

Reference	Basis	Claim(s)
Cho	§ 103	1, 2, 14, 21, 22, 24, and 26
Cho and Mueller	§ 103	1, 3–6, 10–13, 20, and 28–32
Cho, Mueller, and Rohr	§ 103	31, 32, and 35–38
Cho and Raja	§ 103	7
Cho and Trecek	§ 103	24 and 26

Paper 22, 4; *see also* Paper 14, 44. On May 24, 2018, we granted the Parties' Joint Motion to Limit Proceeding. Paper 23, 2. Accordingly, this Decision addresses only the claims and grounds set forth above.

We have jurisdiction under 35 U.S.C. § 6. This Decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of the claims for which we instituted trial. Based on the final trial record, we determine that Petitioner has shown, by a preponderance of the evidence, that claims 1, 2–7, 10–13, 20–22, 24, 26, 28–32, and 35–38 of the '036 patent are unpatentable. Petitioner has not shown that claim 14 is unpatentable.

I. BACKGROUND

A. The '036 Patent (Ex. 1001)

The '036 patent is titled "Elastomeric Dispensing Container" and is directed to "[a]n elastomeric dispensing container for a fluid." Ex. 1001, [54], [57]. The invention "relates broadly to containers for storing and dispensing fluids, [and] specifically to such containers of the type utilizing an elastomeric receptacle and a dispensing cap." *Id.* at 1:17–19. As explained by the '036 patent, "it is an object and advantage of the present invention to provide an elastomeric dispensing container comprising an elastomeric receptacle and a dispensing cap in secure and substantially fluid-tight engagement which also facilitates attachment and detachment of the cap." *Id.* at 1:53–57. The elastomeric receptacle defines an internal chamber and has "an integrally formed gasket extending radially from an opening formed on a lower end and a receptacle neck providing communications between the chamber and the opening." *Id.* at 1:66–2:4. A cap having a lid covers the receptacle opening. *Id.* at 2:4–10.

The "flexible and resilient" receptacle 200, depicted below in Figure 2B, is described as being made of an "elastomeric material," "preferably silicone for its favorable mechanical properties and chemical inertness, although any other suitable elastomeric material could be used." *Id.* at 2:55–57.

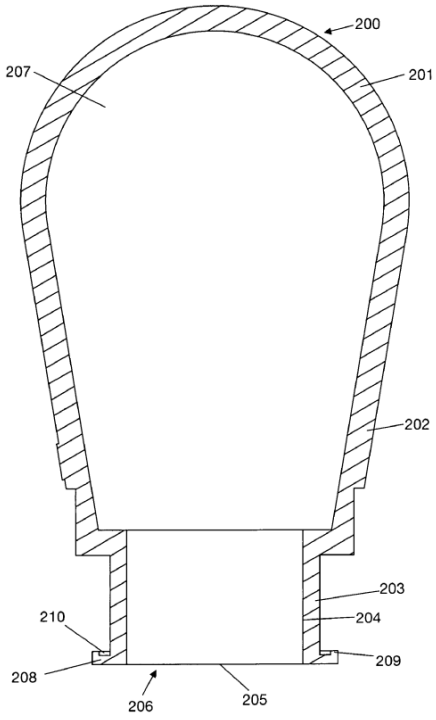


FIG. 2B

Figure 2B is a side cross-sectional view of an elastomeric receptacle. The elastomeric wall portion of the receptacle is configured to be "resiliently deformable and which has a predetermined, non-deformed configuration." *Id.* at 5:9–20; *see also id.* at 2:59–63 ("The elastomeric material is . . . of an appropriate durometer . . . to make the squeeze bulb 200 substantially deformable yet resilient"). The wall portion returns to the "predetermined, non-deformed" configuration after being compressed by the user. *Id.* at 5:9–20

B. Illustrative Claim

Claims 1 and 31 are independent and claim 1 is illustrative of the claims at issue:

> 1. An elastomeric dispensing container for a fluid comprising:
>
> a flexible and resilient receptacle composed of an elastomeric material defining a chamber therein;

> opposite upper and lower ends of the receptacle with the receptacle having a central, longitudinal axis extending between the opposite ends thereof and a predetermined axial length of the receptacle between the opposite ends,
>
> an integral gasket of the receptacle extending radially from an opening formed at the receptacle lower end;
>
> a receptacle neck extending up from the receptacle lower end for providing communications between the chamber and the opening, wherein the integral gasket and the receptacle are fabricated as a single piece from the elastomeric material,
>
> a discrete sleeve composed of a substantially rigid material and having opposite upper and lower ends, with the sleeve being disposed concentrically about the receptacle neck having a sleeve neck with a lower face at the sleeve lower end and which is disposed adjacent to the integral gasket,
>
> a cap having a lid covering the receptacle opening and the integral gasket with a dispensing orifice formed therein and a cap neck extending from the lid disposed concentrically about the sleeve neck, the cap having open and closed positions,
>
> engaging means formed on the sleeve neck and the cap neck providing removable attachment therebetween wherein the engaging means secures the integral gasket in a compressed and substantially fluid-tight state between the lid and the sleeve lower face; and
>
> a wall portion of the receptacle that is configured to be resiliently deformable and which has a predetermined, non-deformed configuration, the wall portion extending about the chamber and upwardly from the sleeve upper end to the receptacle upper end so that the entirety of the receptacle exposed above the substantially rigid sleeve is available to be compressed to pressurize fluid in the chamber for expelling the fluid from the receptacle chamber through the cap orifice with the cap in the open position and to allow air to be drawn into the receptacle chamber as the wall portion resiliently returns to the predetermined, non-deformed configuration thereof.

Ex. 1001, 4:45–5:20.

C. Related Proceedings

There are currently no pending related matters. Paper 4, 2.

D. References Relied Upon

Petitioner relies upon the following prior art references:

International Publication No. WO 2005/004788 A1 published Jan. 20, 2005 ("Cho") (Ex. 1002);

U.S. Patent No. 6,112,951, issued on Sept. 5, 2000 ("Mueller") (Ex. 1003);

U.S. Patent No. 5,271,531, issued Dec. 21, 1993 ("Rohr") (Ex. 1004);

U.S. Patent No. 7,207,467 B1, issued on Apr. 24, 2007 ("Raja") (Ex. 1005);

U.S. Patent No. 3,504,067, issued Mar. 31, 1970 ("Trecek") (Ex. 1006); and

Petitioner also relies on the testimony of James Goldman (Exs. 1014, 1021). Patent Owner relies on the testimony of Timothy P. Fletcher (Ex. 2008).

E. Instituted Grounds of Unpatentability

As noted above, the proceeding has been limited to the following grounds and claims:

Reference(s)	Basis	Claim(s)
Cho	§ 103	1, 2, 14, 21, 22, 24, and 26[2]
Cho and Mueller	§ 103	1, 3–6, 10–13, 20, and 28–32
Cho, Mueller, and Rohr	§ 103	31, 32, and 35–38
Cho and Raja	§ 103	7
Cho and Trecek	§ 103	24 and 26

II. CLAIM CONSTRUCTION

Claims in an *inter partes* review are given the "broadest reasonable construction in light of the specification of the patent in which [they] appear[]." 37 C.F.R. § 42.100(b) (2016); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2136 (2016).

Petitioner proposes claim constructions for the terms "elastomeric material" and "resiliently deformable." Pet. 11–13. Patent Owner, in response, does not provide a specific proposal for interpreting any claim term. *See generally* PO Resp. Below, we address these two limitations together.

[2] Petitioner's Reply erroneously asserts that claims 1, 3–6, 10–13, 20, 28–32, and 35–38 are rendered obvious over Cho. Pet. Reply 2, 19. This assertion is contrary to the agreed upon scope of this proceeding as being limited to whether claims 1, 2, 14, 21, 22, 24, and 26 are rendered obvious over Cho. Paper 23, 2.

Petitioner contends that the term "elastomeric material" is "used widely throughout the prior art to describe materials having at least some degree of stretch, or flexibility," and an elastomer means "'any material, such as natural or synthetic rubber, that is able to resume its original shape when a deforming force is removed.'" *Id.* at 12 (quoting Ex. 1018, 2). According to Petitioner, the '036 patent discloses silicone as an elastomeric material. *Id.* (citing Ex. 1001, 2:54–56). Petitioner argues that "the claims do not limit 'elastomeric material' to elastomers with a particular range of flexibility or resistance threshold." *Id.* Thus, according to Petitioner, "even those materials having minimal flexibility (e.g., certain plastics and harder rubbers) are classified as 'elastomeric material' within the art and the '036 patent because they return to their original shape after being deformed at least to some extent." *Id.* (citing Ex. 1014 ¶ 17).

Petitioner contends that "[t]he term 'resiliently deformable' should be construed consistently with 'elastomeric material,' to mean any material that is capable of returning to its original shape after a deforming force is removed." *Id.* at 13; *see also* Ex. 1014 ¶ 26.

Patent Owner notes that the surrounding claim language suggests that a "resiliently deformable" material "deforms when pressure is applied to the receptacle walls 201," but also "returns to its original shape when pressure is removed." PO Resp. 5; *see also* Tr. 36:9–37:14 (discussing the distinction in "resiliently deformable" claim language between claims 1 and 31).

The Specification of the '036 patent describes "[t]he elastomeric material is . . . of an appropriate durometer, such as 40 Shore A, to make the squeeze bulb 200 substantially deformable yet resilient," and the elastomeric material is preferably silicone. Ex. 1001, 2:54–63. Only the claimed wall

portion of the receptacle is claimed to be "resiliently deformable." *Id.* at 5:9–10. Nothing in the claim, however, precludes or requires any other portion of the receptacle (comprised of elastomeric material) from also being resiliently deformable. *Id.* at 4:47–48. Notably, the receptacle is claimed to be "flexible and resilient." *Id.* Although the "flexible and resilient" receptacle and its wall being "resiliently deformable" are not necessarily identical, this distinction appears to be minor considering the written description of the '036 patent. Based on the foregoing, we give each of these claim terms their plain and ordinary meaning as understood by a person or ordinary skill in the art. The surrounding claim language for each claim limitation focuses the scope of these terms such that any interpretation we could provide would not be as helpful in understanding the terms as the surrounding claim language.

We determine that no terms require express construction for the purposes of this Decision. *See Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011) ("[C]laim terms need only be construed '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)).

III. ANALYSIS

Petitioner bears the burden of proving unpatentability of the challenged claims, and the burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail, Petitioner must establish the facts supporting its challenge by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

A. Principles of Law

1. Obviousness

A claim is unpatentable under § 103(a) if "the differences between the [claimed] subject matter [] and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of 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 skill in the art; and (4) where in evidence,[3] secondary considerations. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966).

B. Person of Ordinary Skill in the Art

Petitioner's expert, Mr. Goldman, proposes that a person of ordinary skill in the bottle/container field as of the time of the filing of the application that became the '036 patent "would have a bachelor's degree (or equivalent) in mechanical engineering and at least one or two years' experience developing container technology." Ex. 1014 ¶ 4. Patent Owner does not dispute Petitioner's proposal, and based on the final record, we adopt it for purposes of this Decision.

C. Obviousness of Claims 1, 2, 14, 21, 22, 24, and 26 over Cho

Petitioner contends that claims 1, 2, 14, 21, 22, 24, and 26 are obvious in view of Cho. Pet. 23, Paper 23, 2. Patent Owner challenges Petitioner's assertions for both claim 1 and several dependent claims. *See* PO

[3] Neither party has addressed secondary considerations in this proceeding. Tr. 33:4–12.

Resp. 1–21, 49–60. For the reasons that follow, Petitioner has proven by a preponderance of the evidence that claims 1, 2, 21, 22, 24, and 26 are unpatentable over Cho, but not claim 14.

1. Overview of Cho (Ex. 1002)

Cho is titled "Silicon Baby Bottle," and it is directed to a silicone[4] baby bottle with a bottle coupler that is fitted and coupled onto an outer peripheral surface of a silicone baby bottle. Ex. 1002, (54), Abst. (57). Cho states that "[t]he present invention relates to a silicon[e] baby bottle, and more particularly to a silicon[e] baby bottle made of a silicon[e] material." *Id.* at 1:4–6. As depicted in Figure 2 below, Cho discloses bottle body 110 made of a silicone material. *Id.*, Fig. 2.

[4] Cho uses the term "silicon" throughout its disclosure. Based upon the totality of the record, we determine that the use of "silicon" was in error and that Cho is referring to the material commonly known as "silicone." Tr. 8:3–9:16 ("JUDGE KINDER: Could silicon, which is like the naturally-occurring element that can be refined and used on computer chips; is that something that is used in these types of manufacturing processes? MR. WOLFGRAM: Our expert didn't think so."); Ex. 1014 ¶¶ 13, 16–18, 25, 29, 30 ("In my opinion, the cylindrical container walls in Cho and Shu can certainly be composed of an elastomeric, flexible silicone substance in light of the patent's specification and claims, longstanding industry practice, and the prior art of baby bottles."). Patent Owner's expert, Mr. Fletcher, explains that he proceeds with his analysis "as if the prior art [Cho] disclosed silicone," and he recognizes that "[s]ilicon is a chemical element that is characteristically hard and brittle crystalline solid, and could not be deformable." Ex 2008, 29, n.1. The bottle described in Cho is not hard and brittle, and thus, Cho must be referring to "silicone" and not "silicon." *See* Ex. 1002, 1:24–26 ("The nipple 13 is made of a soft material (silicon).").

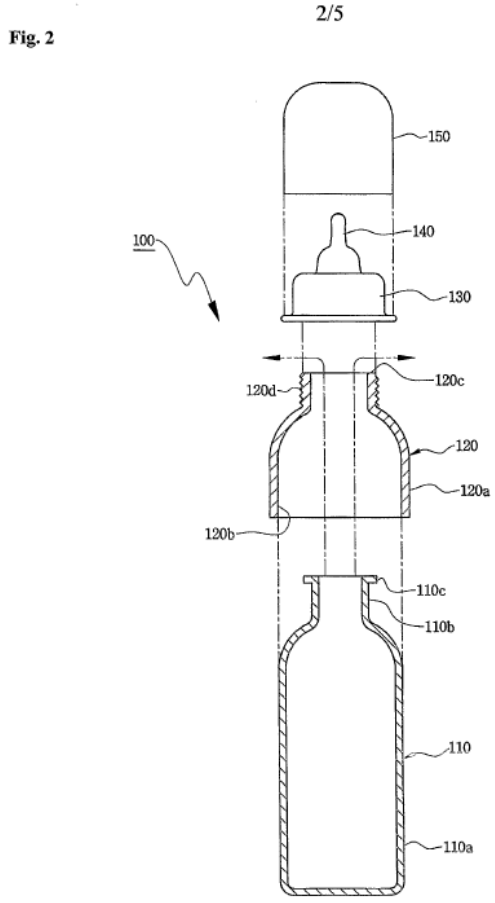


Figure 2 is an exploded perspective view showing a silicone baby bottle 100.

The bottle body includes a container neck and receptacle opening 110b with protrusion portion 110c formed thereon. *Id.* at 4:12–5:4. Bottle coupler 120 is coupled onto bottle body 110. *Id.* Nipple cap 130 is coupled onto bottle coupler 120, which includes body portion 120a adapted to receive a portion of bottle body 110 therein. *Id.* "[U]pper insertion opening 120c is formed in an upper portion of the body portion 120a and adapted to guide the protrusion portion 110c of the bottle body 110, which has been inserted into the body portion 120a so that it protrudes to the outside." *Id.* at 4:27–5:3. Threaded groove 120d is formed on an outer peripheral surface of insertion opening 120c. "The nipple 140 is made of a

silicon[e] material and is provided with a nipple aperture 140a so that an infant can suck milk." *Id.* at 5:10–11. The liquid is transferred from bottle body 110, "which is made of silicon[e], through the nipple 140, which is also made of silicon[e], into the infant's mouth." *Id.* at 6:1–3.

2. Discussion

Petitioner provides analysis as to how Cho teaches the limitations of claims 1, 2, 14, 21, 22, 24, and 26. Pet. 23–27, 45–53. Petitioner also provides a claim chart (Pet. 45–53, Chart 1) and further supports its analysis with testimony of Mr. Goldman (Exs. 1014 and 1021). Patent Owner challenges whether Cho teaches certain limitations of these claims and Patent Owner supports its analysis with testimony of Mr. Fletcher (Ex. 2008). *See* PO Resp. 2–4 (summarizing arguments).

a. Claim 1—Uncontested Limitations

We previously instructed Patent Owner that "any arguments for patentability not raised in the [Patent Owner Response] will be deemed waived." Paper 15, 6; *see also* 37 C.F.R. § 42.23(a) ("Any material fact not specifically denied may be considered admitted."); *In re NuVasive, Inc.*, 842 F.3d 1376, 1379–82 (Fed. Cir. 2016) (holding patent owner waived an argument addressed in the preliminary response by not raising the same argument in the patent owner response). Additionally, the Board's Patent Trial Practice Guide states that the Patent Owner Response "should identify all the involved claims that are believed to be patentable and state the basis for that belief." Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012).

With the complete trial record before us, we note that we have reviewed arguments and evidence advanced by Petitioner to support its

unpatentability contentions where Patent Owner chose not to address certain limitations in its Patent Owner Response. In this regard, the record now contains persuasive arguments and evidence presented by Petitioner, many of which are unrebutted, regarding the manner in which the asserted prior art teaches corresponding limitations of the claims against which that prior art is asserted. Based on the preponderance of the evidence before us, we conclude that the prior art identified by Petitioner teaches all uncontested limitations of claim 1. Below, we discuss a few of the uncontested limitations followed by a detailed analysis of the contested limitations of claim 1.

Petitioner's analysis demonstrates where each unchallenged limitation of claim 1 is taught by Cho. Pet. 23–32, 45–53. Claim 1 is directed to "[a]n elastomeric dispensing container for a fluid." Ex. 1001, 4:45–5:20. The claim first requires "a flexible and resilient receptacle composed of an elastomeric material defining a chamber therein," and Petitioner relies persuasively on Cho's disclosure of a bottle formed of a silicone material, which a person of ordinary skill in the art would understand to be a flexible and resilient elastomeric material as used in Cho's bottle. Pet. 29, 30, 45; Ex. 1014 ¶¶ 13–25. Petitioner shows how Cho's "protrusion portion 110c" that extends radially from the "pouring opening 110(b)" at the receptacle lower end discloses the claimed "integral gasket of the receptacle." Pet. 46. Petitioner establishes persuasively that the claimed "receptacle neck extending up from the receptacle lower end" limitations are taught by Cho's "upper outer portion of the bottle body 110," which "extends upwards from the receptacle lower end for providing communications between the chamber and the opening." *Id.* (citing Ex. 1002, 4, Figs. 2–3).

Claim 1 further requires "a discrete sleeve composed of a substantially rigid material," which Petitioner persuasively maps to Cho's bottle coupler 120 made of a rigid plastic material. Pet. 47; Ex. 1002, 6:4. Petitioner also explains how the bottle coupler has upper and lower ends and the lower end further has a sleeve neck with a lower face as depicted in Cho Figure 2. *Id.* Petitioner sufficiently shows on the final record that Cho teaches the remaining unchallenged limitations of claim 1, including "a cap having a lid covering the receptacle opening and the integral gasket with a dispensing orifice formed therein"[5] as being taught by Cho's "nipple cap 130" fitted to, and covered by, "bottle cap 150." Pet. 48.

Having now considered the evidence in the complete record established during trial, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that the uncontested limitations of claim 1 are taught by Cho. The limitations that Patent Owner contests in the Patent Owner Response are addressed below.

b. Claim 1—Contested Limitations

Pertinent for our analysis, claim 1 requires "a wall portion of the receptacle that is configured to be resiliently deformable and which has a predetermined, non-deformed configuration." 1001, 5:9–12. Petitioner contends that "[i]n Cho, the walls of bottle body 110 (wall portion of the

[5] Petitioner's claim chart and analysis (Pet. 50) provide an alternative basis as to how this limitation is met based on the combination of Cho and Mueller, which we address below. Patent Owner has not challenged whether Cho alone teaches the dispensing cap limitation. *See generally* PO Resp. For example, Petitioner alleges, and Patent Owner does not refute, that when Cho's bottle cap 150 closes over the nipple cap 130 to produce a fluid-tight seal, the cap has "open and closed positions." Pet. 48.

receptacle) are formed from a 'silicone material,'" and "a POSA would understand that this silicone material can include a soft, flexible silicone (e.g., silicone rubber) that retains its shape after being squeezed or deformed." Pet. 52 (citing Ex. 1002, Abst. (57); Ex. 1014 ¶¶ 34, 35, 36).

Petitioner relies on Cho's teachings of an elastomeric silicone dispensing container for fluid. Pet. 45 (citing Ex. 1002, 4:15–19; Abst.). According to Petitioner, Cho's silicone based elastomer would be "a flexible and resilient receptacle" that holds liquid as required by claim 1. Petitioner relies on the knowledge of a person of ordinary skill in the art to appreciate that the silicone disclosed in Cho could be a soft silicone material. *Id.*

Petitioner points out that Cho also discloses the use of soft silicone: "[t]he nipple 13 is made of a soft material (silicon[e])." *Id.* at 29 (quoting Ex. 1002, 1:24–25). Petitioner reasons that a person of ordinary skill in the art would take this teaching of using soft silicone and apply it to the bottle body because "Cho makes no distinction between the grade of silicon[e] comprising the nipple 140 and bottle body 110." *Id.* at 30. For example, Petitioner relies on a sentence in Cho that infers both the bottle body and nipple could be made from the same soft silicone: "'The powdered milk contained in the bottle body 110 is transferred from the bottle body 110, *which is made of silicon[e],* through the nipple 140, *which is also made from silicon[e],* into the infant's mouth.'" *Id.* (quoting Ex. 1002, 6:1–4) (emphasis by Petitioner). Thus, according to Petitioner and Mr. Goldman, "one would logically infer that the bottle body 110 is made from the same soft silicone as the nipple 140, especially in light of the extensive prior art of elastomeric baby bottles." Pet. 30; Ex. 1014 ¶ 30. Petitioner also argues that "a POSA would understand that this silicone material can include a soft,

flexible silicone (e.g., silicone rubber) that retains its shape after being squeezed or deformed." Pet. 52; Ex. 1014 ¶¶ 34–36.

Petitioner also relies on expert testimony and several secondary references to support its contention that a person of ordinary skill in the art would understand to use soft silicone for the body of a baby bottle as disclosed in Cho. *See id.* at 29–34 (Ex. 1014 ¶ 34; Ex. 1018, 2; Ex. 1010, 1:11–12; 2:55–63; Figs. 2, 4; Ex. 1011, 2:5–8, Fig. 5; Ex. 1012, Abst., ¶ 5 (disclosing a "thin silicon[e]" outer wall 2 to "reduce suction of air similarly to breast milk")).

Patent Owner asserts that Cho fails to teach the "resiliently deformable" limitation of claim 1. PO Resp. 14–30. Patent Owner relies on the prosecution history of the '036 patent wherein the Office previously considered Cho. *Id.* at 15. Patent Owner contends "that baby bottles featuring nipples, like those disclosed in Cho, regulate flow via the baby's suction and would therefore not have flexible and resilient receptacles with resiliently-deformable walls, which would [] forc[e] additional fluid into the baby's mouth [upon] compression." *Id.* at 16. Patent Owner offers testimony from its expert as to why Cho's baby bottle should not be squeezable and "that a bottle should not be held by the baby, rather by the person feeding." *Id.* at 17 (citing Ex. 2008 ¶¶ 86–88).

Patent Owner recognizes that Cho discloses silicone but contends this is not enough because "Cho does not discuss the physical properties or firmness of the silicon[e] baby bottle receptacle." PO Resp. 19. Patent Owner relies on "the traditional design of baby bottles and nipples, the longstanding tenets of proper infant feeding/nursing," and "Cho's specification" to argue "that the baby bottle would be constructed of hard,

not soft, silicone." *Id.* Patent Owner also argues "that the prior art *teaches away from* flexible and resilient receptacles with resiliently deformable walls in a baby bottle." *Id.* at 21.

Patent Owner also relies on the prosecution history of the '036 patent. PO Resp. 11–15. Patent Owner contends that during prosecution of the '036 patent, "the Examiner agreed that Cho did not disclose, teach, or suggest a flexible and resilient elastomeric receptacle with resiliently deformable walls." *Id.* at 15 (citing Ex. 2003, 253 (Notice of Allowability)). Patent Owner's attorney arguments made during prosecution, such as how it would be undesirable for liquid to be forced into an infant's mouth by squeezing the cylindrical wall of a baby bottle, mirror the arguments made in this proceeding. We find these arguments unpersuasive for the reasons set forth below.

On the record before us, Petitioner demonstrates persuasively that Cho teaches "a flexible and resilient receptacle" and "a wall portion of the receptacle that is configured to be resiliently deformable and which has a predetermined, non-deformed configuration" as required by claim 1.

Both parties, and their experts, spend considerable effort in trying to persuade us how a normal baby bottle should feel and work—Petitioner arguing that silicone baby bottles may be soft and resiliently deformable and Patent Owner arguing that silicone baby bottles similar to Cho must be hard to prevent a baby from choking. *Compare* Pet. Reply 11–14 ("soft baby bottles mimic the actual breastfeeding experience more accurately than rigid bottles"); Ex. 1021 ¶¶ 13–18, *with* PO Resp. 17 ("Thus, designing a baby bottle that would permit an infant to increase the fluid-flow through squeezing the bottle's sidewalls while already engaging in its natural

sucking action, and thereby forcing additional fluid into a baby's mouth, would present clear and obvious choking dangers"); Ex. 2008 ¶ 87. *See also* Tr. 40:10–42:5. Both parties cite to evidence,[6] much of which we find either unpersuasive or unnecessary to determine what Cho teaches. Further, the parties' focus on silicone baby bottles generally misses the core issue—considering Cho as a whole, would a person of ordinary skill in the art understand that Cho teaches a liquid container made from a resiliently deformable (silicone) material as claimed in the '036 patent. As explained below, we rely primarily on the teachings of Cho in order to answer the question before us.

Cho describes the use of "soft" silicone for the nipple of the bottle. Ex. 1002, 1:24. Cho also suggests that the same soft silicone used for the nipple could be used in the body of the bottle. Cho states: "The powdered milk contained in the bottle body 110 is transferred from the bottle body 110, *which is made of silicon[e]*, through the nipple 140, which *is also made from silicon[e]*, into the infant's mouth." *Id.* at 6:1–3 (emphases added).

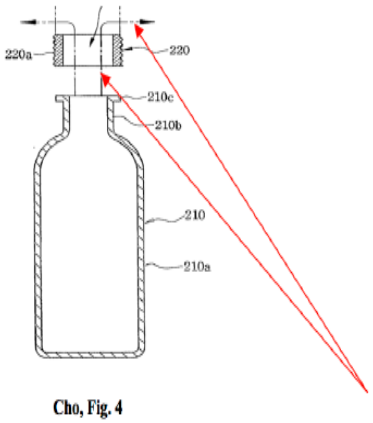
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[6] In our decision, we give little weight to Petitioner's evidence of "scores of popular baby bottles *currently* on the market," because the design of these new bottles does not indicate the state of the art at the time the '036 patent was filed. Further, Petitioner has failed to provide any corroborating testimony related to these new bottles—recent advertisements do not convince us of what a person of skill in the art would have considered at the time of filing. *See* Pet. Reply 11 (emphasis added) (citing Exs. 1022, 1023, 1024). We likewise give little weight to Petitioner's uncorroborated article (Ex. 1026) from Wikipedia concerning "Baby bottle." The record before us does not establish the origin and scientific basis for this evidence, and thus, we weigh Mr. Goldman's testimony (Ex. 1021 ¶ 13) based on this evidence in a similar manner. *See* 37 C.F.R. § 42.65(a); Office Patent Trial Practice Guide, 77 Fed. Reg. at 48,763 ("Affidavits expressing an opinion of an expert must disclose the underlying facts or data.").

This sentence, standing alone, supports Mr. Fletcher's conclusion that "an elastomeric, flexible silicone" could be used in the body of Cho's bottle. *See* Ex. 1014 ¶ 30.

Further, we find persuasive Petitioner's arguments, supported by the testimony of Mr. Fletcher, that "silicone is primarily known for its elastic properties, and has been widely used in medical applications, including implants and storage containers, due to its chemical inertness, high heat resistance, flexibility and resistance for at least 60 years." Pet. 30 (citing Ex. 1014 ¶ 34). Petitioner also supports its argument as to the suitability of silicone in consumer products, including in baby bottles, with a 1991 New York Times article that explains the elastomeric properties of silicone. Pet. 12; Ex. 1018, 2 (describing "rubbery silicone"), *id.* at 3 ("When baby gets a bottle these days, the nipple is a rubbery version of silicone."). The fact that silicone could also possess other properties, or hardness, does not dissuade us from the determination that Cho, as a whole, teaches using a soft, resilient silicone in the body of the bottle.

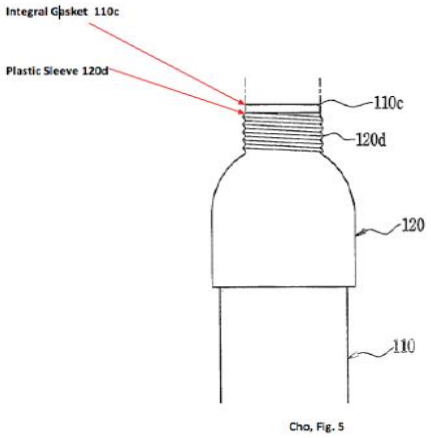
We also find persuasive Petitioner's position that the bottle body of Cho must be resiliently deformable in order for the integral gasket 210c to flex, or squeeze, inwards to allow the plastic sleeve 220 to fit over it as depicted in Petitioner's annotated Figures 4 and 5 below. *See* Pet. Reply 8–10; Ex. 1021 ¶¶ 10–11.



Cho, Fig. 4

protrusion portion 210c is compressed inwards to fit underneath plastic sleeve 220 and, and then bounces back to its original shape.

Petitioner's annotated portion of Figure 4 of Cho shows the plastic sleeve 220 before being fit over the integral gasket 210c.



Cho, Fig. 5

Petitioner's annotated Figure 5 of Cho depicts plastic sleeve 120d fitted under integral gasket 100c. We also find persuasive Petitioner's argument that the body of the bottle, of which gasket 110c is a part, must be deformable enough to enable plastic sleeve 120d to fit over the gasket 110c and resilient so that gasket 110c regains its shape after sleeve 120d is in position. *See* Pet. Reply 8–10. Figure 5 depicts plastic sleeve 120d fit below integral gasket 110c and the gasket is in alignment with the top of plastic sleeve 120d. Bottle coupler 120 "is made of a plastic material," which Petitioner contends is not as flexible as silicone. Ex. 1002, 6:4;

Tr. 9:17–10:10. This fitting arrangement further supports Mr. Goldman's testimony that the body of Cho is resiliently deformable because protrusion portion 210c (in Fig. 4) must move, or flex, underneath the plastic sleeve and then outwards. Ex. 1021 ¶ 11.

We have considered Patent Owner's arguments and evidence, including Exhibit 2007, which is a pamphlet that describes the choking hazards faced by newborn babies. *See* Ex. 2008 ¶ 86 (discussing Ex. 2007). This educational pamphlet for new parents addresses feeding newborn babies and provides recommendations for holding a bottle. The concerns raised by the pamphlet over newborn babies lessen when considering designs of bottles for older children. *See* Tr. 40:1–41:5 (debating whether choking is even a concern for older babies). Regardless, we do not find this article, and Mr. Fletcher's testimony based on this article, persuasive as to whether an ordinarily skilled artisan would have found it obvious to make Cho's container of resiliently deformable silicone.

Considering Cho as a whole, Petitioner has established that a person of ordinary skill in the art would read Cho as suggesting a liquid container made from a resiliently deformable (silicone) material. *See* Ex. 1014 ¶¶ 32–35. Based on the arguments and evidence in the final record, Petitioner establishes by a preponderance of the evidence that claim 1 of the '036 patent would have been obvious over Cho.

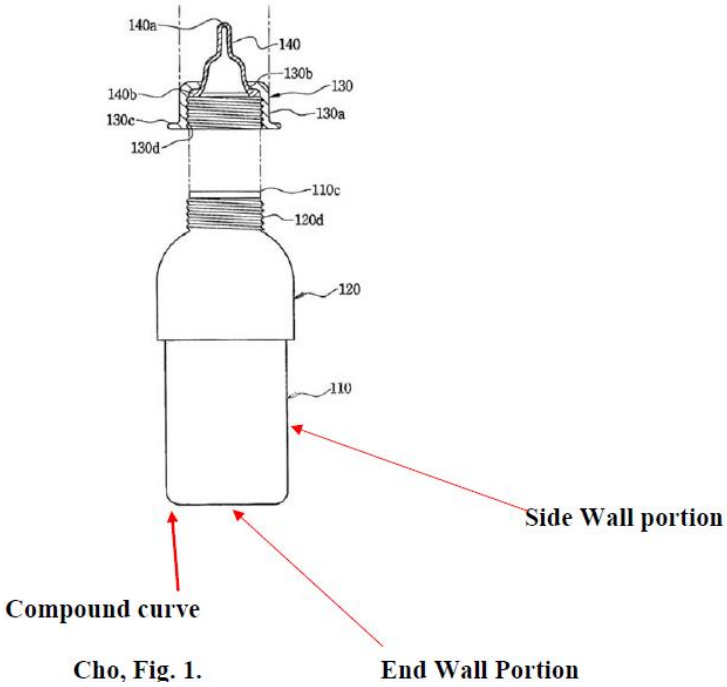
3. Discussion of Claims 2, 21, and 22

Claim 2 depends from claim 1 and further requires "wherein the receptacle is configured as a flexible and resilient squeeze bulb." Ex. 1001, 5:21–22. The Specification describes the squeeze bulb design as having "a main body which is generally spherical in shape, passing into a tapered

portion." *Id.* at 2:43–45. Claim 21 depends from claim 1 and similarly requires that "the side wall portion having a compound curved configuration to increase the resiliency thereof for the resilient return of the receptacle wall portion to the predetermined, non-deformed configuration after being resiliently deformed." *Id.* at 6:30–32. Claim 22 depends from claim 21 and additionally requires "the end wall portion has a substantially convex configuration for ease in compression thereof to expel fluid from the chamber." *Id.* at 6:34–36.

Petitioner contends that a person of ordinary skill in the art could "slightly modify the bottle body 110 of Cho to create a 'squeeze bulb'" and they would do so for "aesthetic reasons." Pet. 53 (citing Ex. 1014 ¶ 79 [should be ¶ 80]). *See also id.* at 64. Petitioner also contends the modification would have the "well-known advantage" of reducing the amount of force necessary to compress the side walls and force liquid from the receptacle. *Id.*

As depicted below, Petitioner alleges that the body corner of Cho's bottle teaches "a compound curved configuration" as required by claim 21. *See* Pet. 63.



Cho, Fig. 1.

Petitioner's annotated Figure 1 of Cho (Pet. 63) depicts a compound curve at the bottom left of the figure where the end wall transitions to the side wall. Further, with respect to claim 22's requirement that "the end wall portion has a substantially convex configuration," Petitioner again argues that a person of ordinary skill in the art "would slightly modify the design of the bottle body 110 to include a 'substantially convex' end wall for aesthetic purposes, ease of compression, and to increase the capacity of the receptacle." Pet. 64; Ex. 1014 ¶ 80; *see also* Tr. 27:7–16 (counsel for Petitioner arguing "it is an insignificant design change of Cho's receptacle").

In its Reply, Petitioner argues that "[a]dding a convex wall to Cho's soft bottle design to create a 'squeeze bulb' is a minor design choice not

afforded patentable weight." Pet. Reply 31[7] (citing Ex. 1021 ¶ 38). Petitioner also suggests that "simply modifying the baby bottle in Cho by reducing the thickness of the bottom wall and rounding it off to create a 'squeeze bulb' is well within a POSITA's skill and body of knowledge." *Id.* at 33. As for "the side wall portion having a compound curved configuration" of claim 21, Petitioner further contends "the claim language is unclear where the sidewall ends and the end wall portion 'extending upwardly from the sidewall' begins." *Id.* at 34. Petitioner again argues that the claim requirement that "the main portion of the sidewalls [] curve outwards, is a minor design change from Cho's bottle body not afforded patentable weight." *Id.* at 35. Petitioner argues that a person of ordinary skill in the art would modify Cho to have "bulging sidewalls," in order "to expand the volume of the receptacle, and provide a tighter fit in the user's hand." *Id.*

Patent Owner argues that because a squeezable baby body presents a choking hazard, Cho would not be modified as proposed. PO Resp. 50. Patent Owner, relying on the testimony of Mr. Fletcher, contends "that the primary design criterion for baby bottle construction is infant safety, with material/design costs and product utility as the next most significant factors." *Id.* Thus, according to Patent Owner, a person of ordinary skill in the art would not modify Cho to assume a bulb shape, or to have a side wall

[7] In Reply, Petitioner relies on the "Tinukim" baby bottle to show a baby bottle with a "squeeze bulb" design. *See* Ex. 1031 (undated Amazon webpage print out). We give this this Amazon webpage little weight in our analysis. The page does not indicate what a person of ordinary skill in the art would have considered at the time of filing of the '036 patent. Further, the page itself has no corroborating testimony as to origin of the product.

portion with a compound curved configuration, without considering the impact of that design on safety—Patent Owner argues the modified design "would lend itself to unsafe operation." *Id.* at 50–51 (emphasis omitted). Notably, apart from challenging the combination for baby bottle safety reasons, Patent Owner does not persuasively address whether the proposed modifications would be a matter of simple design choice for a liquid container as Petitioner and Mr. Goldman contend. *See id.*

Regarding the "side wall portion having a compound curved configuration" element of Claim 21, Patent Owner points out that the claim requires that the side wall portion itself have the compound curve, not that the compound curve adjoins the side wall portion and the end wall. *Id.* at 56. Patent Owner relies on Petitioner's annotated Figure 1 of Cho (depicted above) and Patent Owner contends "Figure 1 of Cho shows no curvature at all along the side wall portion." *Id.* at 57 (citing Pet. 63).

Having now considered the evidence in the complete record established during trial, we are persuaded that Petitioner has provided a persuasive rationale for making design changes to Cho. Varying dimensional limitations for a device that does not perform and operate any differently from the prior art will typically not result in a finding of nonobviousness. *See Gardner v. TEC Sys., Inc.*, 725 F.2d 1338, 1349 (Fed. Cir. 1984); *In re Dailey*, 357 F.2d 669, 672–73 (C.C.P.A. 1966) (finding "claims 27 and 28 to distinguish only in reciting a 'less than a hemisphere' configuration," and agreeing "that the configuration of the container is a 'mere matter of choice' not significantly novel over Matzen" because "Appellants have presented no argument which convinces us that the particular configuration of their container is significant or is anything more

than one of numerous configurations a person of ordinary skill in the art would find obvious for the purpose of providing mating surfaces in the collapsed container of Matzen.").

Petitioner provides a persuasive rationale why a person of ordinary skill in the art would modify the shape of the existing design of Cho to be a squeezable bulb (claim 2), a side wall portion having a compound curved configuration (claim 21), or an end wall with a substantially convex configuration (claim 22). Mr. Goldman's testimony establishes that these design modifications are a matter of mere design choice and could be made for aesthetic reasons because such modifications were known in the art "to create more storage capacity, reduce the resistance required to squeeze the sidewall, and to create a more modern, distinctive design." *See* Ex. 1021 ¶ 36. Mr. Goldman's testimony provides adequate support that squeeze bulb shapes, container sidewalls with compound curved configurations, and convex end walls, were all known design options in the art at the time of filing of the '036 patent. *Id.* ¶¶ 36–38 ("would be easy to accomplish from a manufacturing standpoint and an obvious design choice to a POSA"), ¶¶ 41–45.

Petitioner also establishes that modifying the design would achieve the known benefit of reducing the amount of force necessary to compress the side walls for the liquid container. Ex. 1014 ¶ 80; Ex. 1021 ¶ 38. Mr. Goldman's testimony related to decreasing force is logical and Patent Owner seemingly agrees that this modification is known, but Patent Owner argues such a modification would be dangerous for a baby bottle. *See* PO Resp. 50–51 (arguing that making the walls squeezable would create an "apparent hazard"). Mr. Goldman explains adequately why a person of

ordinary skill in the art would seek to modify Cho's liquid container to ease liquid removal from the receptacle. *See* Ex. 1014 ¶ 80. Petitioner has persuasively established why a person of ordinary skill in the art would want to change the existing design of Cho to resemble the claimed structures required by claims 2, 21, and 22. Patent Owner has not presented an argument which convinces us that the particular configuration of their container (in claims 2, 21, and 22) is significant or is anything more than one of numerous configurations a person of ordinary skill in the art would find obvious.

Accordingly, for the reasons discussed above, Cho suggests the additional limitations of dependent claims 2, 21, and 22, which depends from claim 21. Petitioner has established by a preponderance of the evidence that claims 2, 21, and 22 are unpatentable as obvious based on Cho.

4. Discussion of Claim 14

Claim 14 also depends from claim 1 and requires that the container have "an annular rib formed on the sleeve lower face and an annular channel formed on the integral gasket facing the sleeve lower face adapted to receive the annular rib." Ex. 1001, 5:54–57.

Petitioner first contends that Cho teaches an annular rib as claimed in claim 14 and that Cho also "inherently discloses an annular channel formed underneath the protrusion portion 110c." *See* Pet. 58. Petitioner then further argues that:

> to the extent Cho does not explicitly describe the limitation, it would be obvious for a POSA to include an annular rib formed on the sleeve that engages with an annular channel formed on the protrusion portion 110c to provide a tighter seal between the sleeve and the receptacle body.

Id. In Reply, Petitioner further argues that "a 'tighter seal' between the soft receptacle body—which necessarily includes the gasket—and plastic sleeve would prevent the gasket from deforming and shifting out of place." Pet. Reply 37 (citing Ex. 1002, 3:1–3, which states that the bottle is assembled by fitting and coupling the bottle coupler onto an outer peripheral surface). Petitioner contends that "fitting and coupling" means "that the bottle neck and deformable gasket are seamlessly combined with and connected to the plastic sleeve to prevent the milk from spilling," thus, a person of ordinary skill in the art would understand that Cho could adopt a design with an annular rib and annular channel because this would have been a simple and obvious design choice. *Id.* at 37–39.

Patent Owner argues that Cho fails to teach the annular rib limitation, and especially an annular rib in the position required by claim 14. PO Resp. 52–54. Patent Owner notes that the annular rib and channel "serve to help hold the resiliently deformable gasket of the receptacle portion from flexing and moving out of position." *Id.* at 52. Patent Owner contends that "the purpose of the annular rib and channel is to prevent the receptacle's gasket from deforming and slipping through the bottle coupler," thus, "they play absolutely no role in providing a 'tighter seal,'" as alleged by Petitioner. *Id.* at 55. Thus, according to Patent Owner, "both Petitioner's claim that Cho discloses or suggests an annular rib and annular channel, as well as Mr. Goldman's conclusory assertion that it would be obvious for a POSITA to modify Cho to include these features are unsupported, baseless, and erroneous." *Id.*

Having now considered the evidence in the complete record established during trial, we are not persuaded that Petitioner has

demonstrated by a preponderance of the evidence that claim 14 would have been obvious over Cho. As explained below, Cho does not teach an annular rib and channel as claimed. Further, based on the final trial record before us, we do not find persuasive Petitioner's contention that "it would be obvious for a POSA to include an annular rib formed on the sleeve that engages with an annular channel formed on the protrusion portion 110c to provide a tighter seal between the sleeve and the receptacle body." Pet. 58.

Petitioner and Mr. Goldman hypothesize that Cho could have an annular rib and channel, but Cho does not teach or suggest this design feature. Tr. 26:1–9 ("So your expert is hypothesizing that it could be accomplished with a rib and channel, but there's nothing there in Cho to actually show that. MR. WOLFGRAM: Not that particular configuration. Not in the Cho reference. Correct."). We do not find persuasive Mr. Goldman's testimony that because Cho's integral gasket is depicted as seamlessly fit with the plastic sleeve, this configuration "*would likely be* accomplished by an attachment mechanism such as an annular rib and channel." Ex. 1021 ¶ 46 (emphasis added). As admitted by Petitioner, the configuration in Cho does not use a rib and channel and Mr. Goldman's speculation that such a configuration would be used, as opposed to numerous other potential designs, is not based on objective evidence.

Even if we were to credit Mr. Goldman's testimony, he fails to offer any opinion as to locations and placement of the annular rib and the annular channel, both of which are specified by claim 14. *See* Tr. 25:14–22 ("JUDGE WEATHERLY: So paragraph 46 doesn't address the locations, really, of an annular rib and channel at all, beyond describing the rib as being annular, and your expert doesn't really cite any objective evidence to

support his testimony. Right? MR. WOLFGRAM: No."); *see also* Ex. 1001, 5:54–57 (claim 14 requiring "an annular rib *formed on the sleeve lower face* and an annular channel *formed on the integral gasket facing the sleeve lower face*") (emphasis added).

Petitioner has not established by a preponderance of the evidence that the subject matter of claim 14 would have been obvious over Cho.

5. Discussion of Claims 24 and 26

Claim 24 depends from claim 1 and additionally requires "the receptacle wall portion further includes opposite side tapered portions that are inclined relative to the receptacle longitudinal axis to taper between the sleeve upper end and the receptacle upper end for more than half the predetermined axial length of the receptacle wall portion." Ex. 1001, 6:44–49. Claim 26 depends from claim 24. *Id.* at 6:62.

Petitioner has persuasively established that Cho alone suggests the limitations of claim 24. Claim 24 requires "the receptacle wall portion further includes opposite side tapered portions that are inclined relative to the receptacle longitudinal axis to taper between the sleeve upper end and the receptacle upper end for more than half the predetermined axial length of the receptacle wall portion." Ex. 1001, 6:44–49. Petitioner notes that "Cho does not specifically disclose the tapered body wall design," but Petitioner contends that a person of ordinary skill in the art considering Cho would have adopted such a design for aesthetic purposes. Pet. 70 (citing Ex. 1014 ¶ 47).

Patent Owner contends that a person of ordinary skill in the art "would be disinclined and discouraged from modifying Cho's baby bottle to add such a detrimental and non-utilitarian design change," because, as

Mr. Fletcher explains, "a tapered-wall baby bottle would further complicate feeding because such a design would cause the remaining milk to pool towards the base of the bottle." PO Resp. 62.

Based on the final trial record before us, Petitioner has persuasively established that Cho alone suggests the limitations of claim 24, specifically, the "opposite side tapered portions" requirement. Mr. Goldman persuasively opines that tapering the walls of a cylinder was common in the container industry and a known design alternative for liquid cylindrical containers. Ex. 1014 ¶¶ 65, 76. Thus, Petitioner's contention that the "opposite side tapered portions" limitation is an aesthetic design choice is supported on the record before us.

Claim 26 further requires that "the receptacle has a varying width thereacross orthogonal to the receptacle longitudinal axis," which Petitioner likewise establishes would be an obvious matter of design choice with no non-obvious advantage associated with the change. Pet. 71–72; Ex. 1014 ¶¶ 64–65. Petitioner persuasively argues that "it would be an obvious aesthetic design choice to simply taper the side walls of the bottle body 110 of Cho." *Id.* at 72. As explained by Mr. Goldman, a "[r]eceptacle having side walls that taper from the top to the bottom of the receptacle are extremely common in the container industry," and "[t]apered walls are principally an aesthetic design choice without significant utility." Ex. 1014 ¶ 65.

Petitioner has established by a preponderance of the evidence that the subject matter of claims 24 and 26 would have been unpatentable as obvious in view of Cho.

D. Obviousness of Claims 1, 3–6, 10–13, 20, and 28–32 over Cho and Mueller

Petitioner contends that claims 1, 3–6, 10–13, 20, and 28–32 are obvious based on Cho and Mueller. Pet. 23, 45–69. For the reasons set forth above, Petitioner's contentions are persuasive as to claim 1 being obvious based on Cho alone. We have reviewed Petitioner's contentions and supporting evidence, and we are persuaded that Petitioner has established that claims 1, 3–6, 10–13, 20, and 28–32 of the '036 patent are obvious based on Cho and Mueller. We begin our analysis with a brief summary of Mueller, and then address Petitioner's and Patent Owner's contentions.

1. Overview of Mueller (Ex. 1003)

Mueller discloses a hinged cap and is titled a "One-Piece Dispensing System and Method for Making the Same." Ex. 1003, (54), (57). Mueller discloses a hinged cap compatible with a "squeezable," resilient dispensing container "having a flexible wall or walls." *Id.* at 7:38–45. As depicted in Figure 1 of Mueller below, the cap includes lid 48 and seal post 90 that interacts with dispensing valve 54 to produce a tight seal when lid 48 is in a closed position. *Id.* at 1:9–14; Figs. 1, 2)

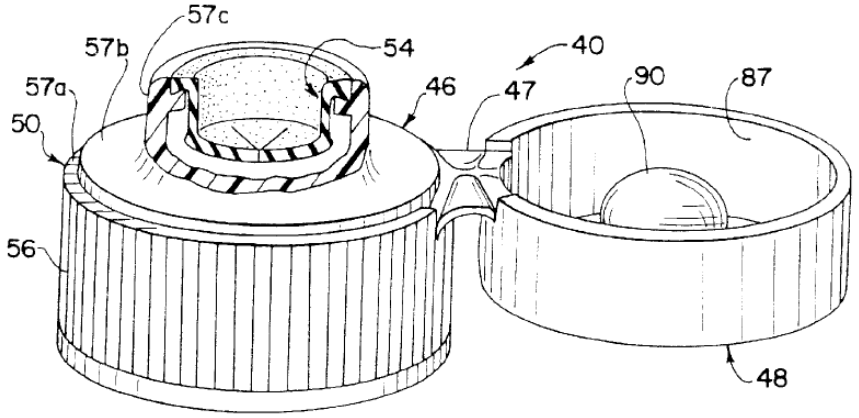


FIG. 1

Figure 1 of Mueller is a perspective view of a dispensing system shown incorporated in a closure with an open lid.

Mueller describes lid 48 moving in an open/closed position via hinge 47. *Id*. at 7:48–58. As depicted above and in Figure 2 below, "dispensing valve 54" includes "face 64" having cross-cut "slits 66." *Id*. at 8:53–65.

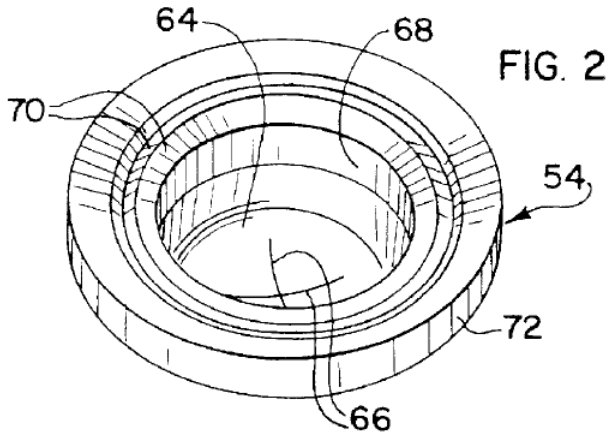


Figure 2 of Mueller is a perspective view of a pressure-openable, slit-type valve.

2. Discussion

We have reviewed the information provided by Petitioner, including the relevant portions of the supporting Declaration of Mr. Goldman, and are persuaded, based on the final record, that Petitioner has proven, by a preponderance of the evidence, that claims 1, 3–6, 10–13, 20, and 28–32 are obvious based on the combination of Cho and Mueller. *See* Pet. 32–38, 44–69; Ex. 1014 ¶¶ 47–75.

a. Uncontested Limitations

With the complete trial record before us, we note that we have reviewed arguments and evidence advanced by Petitioner to support its unpatentability contentions related to claims 1, 3–6, 10–13, 20, and 28–32 as obvious over Cho and Mueller. *See* Pet. 45–80. Patent Owner chose not to

address most limitations in its Patent Owner Response.

In this regard, the record now contains persuasive arguments and evidence presented by Petitioner, most of which are unrebutted, regarding the manner in which the asserted prior art teaches corresponding limitations of claims 1, 3–6, 10–13, 20, and 28–32 against which that prior art is asserted. For example, Petitioner claims it would have been obvious to simply add a protruding lip to the cap of Mueller in order to open the cap easier, which satisfies the requirement of claim 31 of "a protruding lip of the cover." Pet. 40, 77; Ex. 1001, 7:54. Patent Owner does not challenge this position. Based on the preponderance of the evidence before us, we conclude that the prior art identified by Petitioner teaches or suggests all uncontested limitations of claims 1, 3–6, 10–13, 20, and 28–32.

b. Contested Limitations

Patent Owner argues that Cho does not teach the "resiliently deformable" wall limitation for this ground, as well as for all grounds, based on Cho. PO Resp. 14. For example, independent claim 31 is similar in scope to claim 1, and claim 31 requires "a resiliently deformable wall portion of the receptacle extending from the substantially rigid sleeve to the receptacle upper end for being squeezed to pressurize fluid in the receptacle." Ex. 1001, 7:32–36. Patent Owner has challenged this limitation with the same arguments addressed above for claim 1. *See* PO Resp. 14 (arguing claims 1 and 31 together). For the reasons set forth above, we find Patent Owner's contentions with respect to Cho's teaching of the "resiliently deformable" wall limitation unpersuasive.

As to the combination of Cho with Mueller, Petitioner relies on Mueller's hinged cap design integrated with Cho's container. Pet. 33

("Mueller discloses a hinged cap compatible with a 'squeezable,' resilient dispensing container 'having a flexible wall or walls.'" (citing Ex. 1003)). Petitioner contends that a "POSA would simply apply the cap design of Mueller to the bottle coupler 120 (discreet sleeve) in Cho to create a general usage dispensing container capable of storing viscous fluid in an inverted position, similar to the '036 Patent." Pet. 34–35 (citing Ex. 1014 ¶¶ 48, 49). Petitioner relies on the combination of Cho and Mueller in the event that "the Board is not satisfied that use of a hinged cap on the receptacle container of Cho would not have been obvious outright, it should apply the cap of Mueller to the receptacle container of Cho." *Id.* According to Petitioner, "the '036 Patent simply modified the baby bottle in Cho by substituting the nipple cap 130 for a basic hinged bottle cap to create an inverted dispensing container for home products." *Id.* at 35 (citing Ex. 1014 ¶¶ 48, 49). Petitioner reasons that "[o]ne only has to screw Mueller's hinged cap onto Cho's bottle coupler 120 (discrete sleeve)—without making any alterations to these elements—to produce the same receptacle disclosed in the '036 Patent." *Id.* (emphasis omitted).

Petitioner also contends that "a POSA would be motivated to apply the basic hinged cap in Mueller to the design in Cho because of the commonly understood design problems and manufacturing processes of baby bottles and ordinary dispensing containers." *Id.* at 36–37 (citing Ex. 1014 ¶ 50). Petitioner, relying on the testimony of Mr. Goldman, goes on to explain that "[t]here are many industry standard finish designs that allow caps or nipples manufactured by numerous suppliers to be applied to containers manufactured by multiple suppliers," but "it is common for different closing devices, such as a nipple or a hinged cap, to be used with a

single primary container to address different market needs without the expense of a new set of container molds." *Id.* at 37 (quoting Ex. 1014 ¶ 50 (emphasis omitted)). Petitioner quotes Mr. Goldman: "while an industrial designer may use colors and embossed graphics to make the container attractive as a baby bottle, the reality is that it is a reusable storage container fit for many uses compatible with multiple closing devices." *Id.* (quoting Ex. 1014 ¶ 52). Petitioner concludes that because "the nipple cap and the hinged cap are interchangeable on the container because of their standardized threading design, a POSA would be motivated to attach the hinged cap in Mueller to the receptacle of [] Cho [] to maximize the utility and profitability of the container." *Id.* at 37–38.

Patent Owner contends that a person of ordinary skill in the art would not be motivated to combine the baby bottle disclosed in Cho with the cap disclosed in Mueller. PO. Resp. 32–40. According to Patent Owner, "such a combination would be illogical, unsuitable, and potentially dangerous for the problems addressed by Cho." *Id.* at 33. Patent Owner also contends that Mueller is non-analogous art unrelated to the field of endeavor of Cho. *Id.* at 36. Patent Owner argues that Mueller's invention is meant for a dispenser for personal care products, "with a dispensing valve suitable for 'squeeze-type' containers." *Id.* at 33. Patent Owner alleges that Petitioner fails to provide "any reasoning as to exactly *why* a POSITA would be *motivated* to combine Cho's baby bottle with the cap of Mueller to allegedly arrive at the '036 Patent." *Id.* at 35.

Patent Owner also contends that "Mueller is non-analogous art and unrelated to the field of endeavor of Cho (e.g., mitigating toxins from plastic baby bottles), but rather is directed toward a dispensing valve and cap

intended for a squeeze-type container particularly well-suited for dispensing viscous liquid." *Id.* at 36. Patent Owner admits that "both Cho and Mueller generally relate to the field of dispensing containers," but Patent Owner contends that Petitioner's "conclusory assertions lack any identification or explanation of what specific problem(s) found in Cho's baby bottle would cause a POSITA to look to the cap in Mueller for a solution, and how the teachings of Mueller solve the stated problem(s)." *Id.* (citing Ex. 2008 ¶ 173).

At the outset, Mueller is analogous art and Patent Owner's arguments to the contrary flip the analysis from focusing on the problem faced by the inventor of the '036 patent to the "specific problem(s) found in Cho's baby bottle." First, Cho and Mueller are in the same field of endeavor as the claimed invention—dispensing containers—as admitted by Patent Owner. *See* PO Resp. 36. We need not address the second portion of the analogous art test, which focuses on whether the prior art "is reasonably pertinent to the problem with which the inventor was concerned." *In re Kahn*, 441 F.3d 977, 986–87 (Fed. Cir. 2006). We do note, however, that the parties have both misapplied this second portion of the analysis. This analysis is focused on the problem faced by the inventor of the '036 patent, not necessarily the problems addressed in the prior art references. Because neither party sufficiently addresses the problems faced by the inventor of the '036 patent, and because Mueller and Cho are in the same field of endeavor as the claimed invention, we need not address the second portion of the analogous art test.

Petitioner provides a persuasive rationale, based on the final record, for modifying Cho's cap as taught by Mueller to achieve a fluid container

capable of being stored in an inverted position. As to Patent Owner's contention that Petitioner failed to explain why a person of ordinary skill in the art would be motivated to combine the bottle of Cho with the cap of Mueller, we disagree because Petitioner, and Mr. Goldman provided several rationales for why such a combination would be made. For example, Mr. Goldman states that

> [g]iven the well-known advantages of elastomeric silicone fluid dispensers, it would be obvious for a POSA to modify the Cho . . . reference[] in view of the Mueller reference by employing an ordinary hinged cap, such as that used on a ketchup bottle, to produce a chemically safe silicone fluid dispenser that can be stored in an inverted position.

Ex. 1014 ¶ 51.

We have considered Patent Owner's arguments that the purpose of Cho was to produce "a safe, nontoxic, chemically-inert and heat-resistant baby bottle," and modifying Cho to add Mueller's cap would "render the baby bottle completely inoperable and unsuitable for nursing/feeding." PO Resp. 37 (citing Ex. 2008 ¶¶ 177, 178). Patent Owner argues that Mueller's plastic is not chemically-inert and that

> the proposed combination would create an immediate danger to an infant, as it would no longer be able control the bottle's fluid flow by sucking at the now-removed nipple, but rather, the fluid would leak out from Mueller's dispensing valve and cap into the infant's mouth and/or onto its face at an undetermined rate.

Id. at 38.

Patent Owner's arguments ignore the desirable properties taught by Mueller and consider Cho's bottle for only the purpose of feeding a newborn infant. As our reviewing court has held, if a proposed modification would render the prior art invention being modified unsatisfactory for its intended

purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984). Based on the record before us, Cho, although designed as a baby bottle, would also be understood as a liquid dispensing container to a person of ordinary skill in the art. Ex. 1014 ¶ 48 ("baby bottles and general purpose dispensing containers are structurally similar"). The device produced from the combination of Cho and Mueller is not inoperable, but would instead work to dispense fluid as described in Mueller with the additional benefit of inverted liquid storage. *See* Ex. 1003, 1:42–67; Ex. 1014 ¶ 51.

The Federal Circuit has clarified that the "inoperable device" analysis of *In re Gordon* considers first whether references "are combinable," and if so, a person of ordinary skill in the art may then consider the loss of a benefit taught by one reference weighed against the "motivat[tion] to pursue the desirable properties taught by" another reference. *In re Urbanski*, 809 F.3d 1237, 1243–44 (Fed. Cir. 2016) ("As the Board properly found, one of ordinary skill would have been motivated to pursue the desirable properties taught by Wong, even if that meant foregoing the benefit taught by Gross. And Urbanski's claims do not require Gross's benefit that is arguably lost by combination with Wong."). In this instance, as explained by Mr. Goldman, Mueller provides a sound rationale for modifying Cho's container to serve as squeeze-type container for dispensing liquid. Ex. 1003, 1:9–13; Ex. 1014 ¶ 48; Ex. 1021 ¶¶ 29, 30. Although the advantages of Cho as a baby bottle may be diminished, Mueller's desired goal of dispensing liquid as a squeeze-type container, and storing liquid in an inverted position, is gained by simply replacing Cho's existing cap. *See id.*; Ex. 1014 ¶ 48 ("it would be obvious for an ordinary person skilled in the art to simply screw the cap in Mueller

onto the plastic sleeve in Cho [] to produce a dispensing container"), ¶ 51. Further, Petitioner has established Mueller's hinged cap is an interchangeable element meant to fit on any similarly threaded or flanged container and that modifying Cho with Mueller's "hinged cap dramatically increases the utility and market potential of the silicone container body with little or no additional cost." Ex. 1021 ¶¶ 29, 30.

Having now considered the evidence in the complete record established during trial, we are persuaded that, based on this record, Petitioner establishes by a preponderance of the evidence that claims 1, 3–6, 10–13, 20, and 28–32 of the '036 patent would have been obvious over Cho and Mueller.

E. Obviousness of Claims 31, 32, and 35–38 over Cho, Mueller, and Rohr

Petitioner contends that claims 31, 32, and 35–38 are obvious based on Cho, Mueller, and Rohr. Pet. 23, 72–87. We have reviewed Petitioner's contentions and supporting evidence, as well as Patent Owner's arguments and supporting evidence, and we are persuaded that Petitioner has established by a preponderance of the evidence that claims 31, 32, and 35–38 of the '036 patent are obvious based on Cho, Mueller, and Rohr. We begin our analysis with a brief summary of Rohr and then address Petitioner's and Patent Owner's contentions.

1. Overview of Rohr (Ex. 1004)

Rohr is titled "Dispensing Closure with Pressure-Actuated Flexible Valve." Ex. 1004, (54). Like Mueller, Rohr discloses a hinged cap tailored for a "squeeze-type container," with the addition of a protruding lip on the lid 120J, as depicted below in Figure 34.

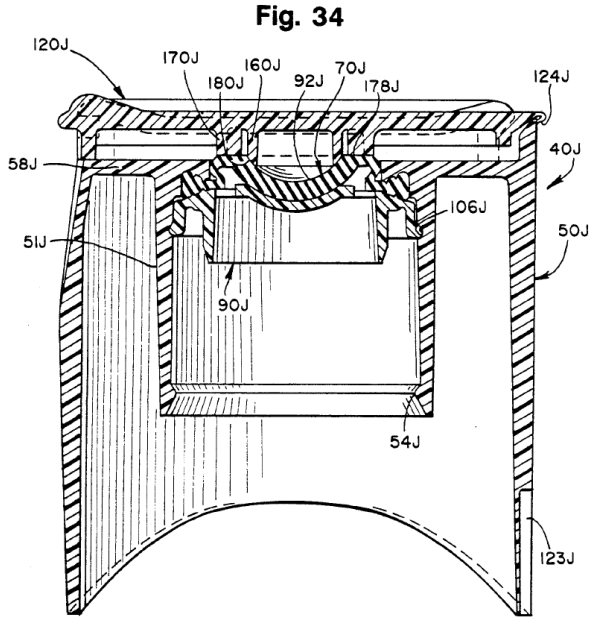


Figure 34 of Rohr depicts a fully closed lid.

2. Discussion

We have reviewed the information provided by Petitioner, including the relevant portions of the supporting Declaration of Mr. Goldman and are persuaded, based on the final record, that Petitioner has proven its obviousness challenge for this ground based on the combination of Cho, Mueller, and Rohr. *See* Pet. 44, 72–87; Ex. 1014 ¶¶ 47–75.

Independent claim 31 is similar in scope to claim 1, but additionally requires "a detent between the cover and the lid to releasably keep the cover in the closed position," and "a protruding lip of the cover configured for being engaged by a user to apply force to the cover sufficient to overcome the detent to pivot the cover to an open position." Ex. 1001, 7:52–59. Petitioner relies on Mueller as teaching the detent as well as the protruding lip—Patent Owner did not challenge this assertion. Pet. 77–82. Petitioner relies alternatively on Rohr's disclosure of a hinged cap, including a valving means, detent and a protruding lip. *Id.*

Petitioner contends that "it would be obvious to a POSA to simply attach the hinged cap in Mueller to the receptacle body disclosed in Cho," but

> [t]o the extent that it would not be obvious to simply add a protruding lip to the cap of Mueller to make it easier for the user to open the cap, a POSA would apply the radially protruding lip disclosed in Rohr to the design of Mueller for the same reasons.

Pet. 40 (citing Ex. 1014 ¶ 54). Petitioner identifies the claimed "cover and lid have a bi-stable living hinge therebetween configured to keep the cover in the pivoted open position" of claim 35 as being taught by Mueller's "'hinge 47' disposed between the lid 48 (cover) and the top surface of the body 50 (lid)." Pet. 83. Claims 36–38 require specific dimensional relationships such as diameter and Petitioner contends these features are either taught by Mueller and Cho or would have been an obvious design variation. *Id*. at 83–87. Patent Owner has not challenged these assertions. Having now considered the evidence in the complete record established during trial, we find Petitioner's contentions for each challenged claim persuasive on the final record.

Patent Owner challenges the combination of Rohr with Cho and Mueller for the same reasons Patent Owner challenged the combination of Cho and Mueller. PO Resp. 41. Specifically, Patent Owner contends "a POSITA would lack any motivation to combine the baby bottle disclosed in Cho, which address problems regarding contamination and plastic toxicity, with a dispensing bottle cap of Mueller. For the very same reasons, a POSITA would lack the motivation to further combine the cap of Rohr." *Id.* Similarly, Patent Owner contends that "Rohr is non-analogous art and

unrelated to the field of endeavor of Cho (e.g., mitigating toxins from plastic baby bottles), but rather is directed toward a 'squeeze-type container dispensing closure.'" *Id.* For the reasons set forth above, and based on the final trial record, we find these contentions unpersuasive. Petitioner articulates persuasive rationales, supported by the final record, for combining Rohr with Cho and Mueller. *See* Pet. 40 (ease of opening the cap), 81, 82 ("It would be obvious for a POSA to apply the radially protruding lip of Rohr to the teaching of Mueller to make it more convenient for a user to grasp and open the cap."); Ex. 1014 ¶¶ 54, 69.

Having now considered the evidence in the complete record established during trial, we are persuaded that, based on this record, Petitioner has persuasively shown that claims 31, 32, and 35–38 of the '036 patent would have been obvious over Cho, Mueller, and Rohr.

F. Obviousness of Claim 7 over Cho and Raja

Petitioner contends that claim 7 is obvious based on Cho and Raja. Pet. 23, 69–70. We have reviewed the parties' contentions and supporting evidence, and we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that claim 7 of the '036 patent is obvious based on Cho and Raja. We begin our analysis with a brief summary of Raja, and then address Petitioner's and Patent Owner's contentions.

1. Overview of Raja (Ex. 1005)

Raja is titled "Identifying Devices for the Visually Handicapped" and it discloses a dispensing container, including indicia (18, 20) for a product contained in a receptacle 10. Ex. 1005, (54), Abst. (57), Figs. 2, 3. According to Raja, "[t]he visually readable indicia allow a sighted person to

correctly associate the device with the proper item to be identified." *Id.* at Abst. (57).

2. Discussion of Claim 7

Claim 7 requires "the container of claim 1, further including indicia for a fluid contained in the receptacle." Ex. 1001, 5:36–37. The claim language requires only that the container include the indicia without any further condition as to the relationship of the indicia to the container.

Petitioner contends that a "[a]lthough Cho does not expressly disclose an indicia for the fluid in the container, such an arrangement has been known in the field of dispensing containers for decades for determining the amount or type of liquid remaining in the container." Pet. 69–70 (citing Ex. 1014 ¶ 78). Petitioner then argues that "Raja discloses a dispensing container, including indicia (18, 20) for a product contained in a receptacle 10," and thus it "would have been obvious to a POSA to modify Cho in view of the teaching of Raja by employing a receptacle with indicia to indicate the type and amount of fluid in the container." *Id.* at 70.

Petitioner also provides a persuasive rationale, based on the final record, for combining Raja and Cho. Petitioner contends it "would have been obvious to a POSA to modify the Cho reference in view of the teachings of Raja by employing [indicia] on the container body or bottle coupler 120 (discrete sleeve) to allow a user to identify the contents of the receptacle, as disclosed in the abstract of Raja." Pet. 43–44.

Based on the final trial record before us, we first determine that "indicia for a fluid" broadly captures any written or other visually identifying feature on the container and, as such, the limitation falls within the printed matter doctrine. As depicted in Figure 4 of the '036 patent, the

indicia is the stamped word "SHAMPOO," which would not be entitled to patentable weight unless the indicia is functionally or structurally related to the associated physical substrate. For example, content labels providing dosage instructions and instructions for performing tests may be printed matter entitled to no patentable weight. *See AstraZeneca LP v. Apotex, Inc.*, 633 F.3d 1042, 1048 (Fed. Cir. 2010).

Patent Owner argues that because the "indicia for a fluid" appears to be molded into the actual container in one embodiment, the printed matter doctrine should not apply. PO Resp. 45. Specifically, Patent Owner contends that the "indicia" "is, indeed, functionally and structurally related to the associated physical structure of the claimed elastomeric dispensing container," because the example indicia provided in Figures 3–5 of the '036 are either formed on the container or integrally molded on the sleeve.

These examples found in the Specification do not detract from the breadth of the claim language. The claim requires only a container "including indicia for a fluid." There is no requirement that the indicia be stamped or molded. Indeed, hand writing "SHAMPOO" on the side of the container would meet this limitation. Therefore, we give no patentable weight to the "indicia for a fluid" limitation. Accordingly, Cho alone would have rendered claim 7 obvious because claim 7 does not further limit claim 1.

Second, even giving patentable weight to "indicia for a fluid," Petitioner persuasively establishes that the combination of Cho and Raja teaches the limitations of claim 7. Likewise, Petitioner provides a persuasive rationale for combining Raja's teaching of "tactile and visually readable indicia" to assist in identifying "the contents of items such as

condiment shakers *and liquid containers*," with Cho's liquid container. *See* Ex. 1005, Abst. (emphasis added); Ex. 1014 ¶ 78 (employing indicia on the container of Cho as taught by Raja would allow a user to identify the type and amount of contents in the receptacle). We have considered Patent Owner's arguments to the contrary (PO Resp. 43–45) but find them unpersuasive. For example, these arguments presume an overly narrow construction of what constitutes an "indicia for a fluid." Raja teaches applying "tactile and visually readable indicia" that aids in identifying the contents of liquid containers. Ex. 1005, Abst.

Based on the final record, Petitioner establishes that claim 7 of the '036 patent would have been obvious over Cho and Raja.

G. Obviousness of Claims 24 and 26 over Cho and Trecek

Petitioner contends that claims 24–26 are obvious based on Cho and Trecek. Pet. 23, 70–72. We have reviewed the parties' contentions and supporting evidence, and we are persuaded that Petitioner has proven by a preponderance of the evidence that claim 24–26 of the '036 patent would have been obvious over Cho and Trecek. We begin our analysis with a brief summary of Trecek, and then address Petitioner's and Patent Owner's contentions.

1. Overview of Trecek (Ex. 1006)

Trecek is titled "Method and Apparatus for Manufacturing Collapsible Flexible Plastic Container Tube" and, as depicted in Figure 2 below, it shows a dispensing container with a hinged cap and tapered body walls.

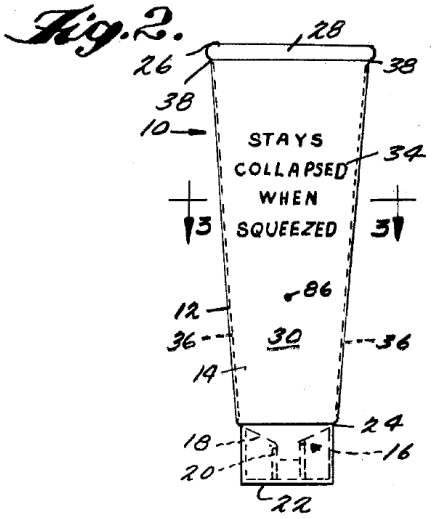


Figure 2 of Trecek is a front elevation view of a tube.

2. Discussion

We have reviewed the information provided by Petitioner, including the relevant portions of the supporting Declaration of Mr. Goldman, and are persuaded, based on the final record, that Petitioner has proven by a preponderance of the evidence that claims 24–26 would have been obvious based on the combination of Cho and Trecek. *See* Pet. 23, 43–44, 70–72; Ex. 1014 ¶¶ 65, 76. Patent Owner challenges Petitioner's contentions for this ground. PO Resp. 60–63.

Claim 24 requires in pertinent part, "the receptacle wall portion further includes opposite side tapered portions that are inclined relative to the receptacle longitudinal axis to taper between the sleeve upper end and the receptacle upper end for more than half the predetermined axial length of the receptacle wall portion." Ex. 1001, 6:44–49. Petitioner contends that "Trecek discloses a flexible silicone receptacle having tapered body walls," and as such, "[i]t would therefore be obvious for a POSA to apply the tapered body configuration of Trecek to the receptacle body of Cho to create a container that appears sleek and streamlined." Pet. 42 (citing Ex. 1014

¶¶ 65, 76). Petitioner contends that adopting Trecek's tapered shape into Cho would have been simply a matter of design choice "for aesthetic purposes." Pet. 70–71.

Patent Owner responds that aesthetics are a secondary concern for baby bottles and a person of ordinary skill in the art would not have been motivated to combine the bottle disclosed in Cho with Trecek's container. PO Resp. 47–49, 62. Patent Owner argues that because Trecek teaches "flexible plastic tubes which collapse and stay collapsed as the contained material is squeezed out," this goal conflicts with the requirement that Cho be "resiliently deformable." *Id.* at 48 (quoting Ex. 1006, 1:27–30 (emphasis omitted). Thus, according to Patent Owner, a person of ordinary skill in the art "would certainly not find Trecek as motivation to add tapered side walls to the baby bottle of Cho." *Id.* at 49. Patent Owner argues that "a baby bottle with tapered walls would complicate feeding, be unable to stably rest nipple-side up, and necessitate the attachment of a flat-topped cap so that the bottle could rest stably nipple-side down." *Id.*

In Reply, Petitioner argues that the tapered sidewall limitation should not be afforded patentable weight because the limitation amounts to a *de minimis* design change. Pet. Reply 27–28. Even if given patentable weight, Petitioner contends that Cho's bottle already has a slight tapered sidewall at the upper corners and simply incorporating Trecek's teaching to taper the entire sidewall would be desirable to a person of ordinary skill in the art "to create a sleek and modern looking inverted squeeze dispenser with a hinged cap." *Id.* at 29. Petitioner contends that tapered designs, as disclosed in Trecek, were commonplace in the packing field at the time of filing, and that

Trecek is primarily relied upon to demonstrate this common tapered shape. *Id.*; Ex. 1021 ¶¶ 34, 35.[8]

Based on the final record, Petitioner establishes that claims 24–26 of the '036 patent would have been obvious over Cho and Trecek. Because we do not understand Petitioner's proposed combination to require a bodily incorporation of Trecek's material structure into Cho, we disagree with Patent Owner's contention that the benefit of Trecek's collapsible design would be lost in the combination. Instead, Trecek is relied upon as teaching the concept of integrating tapered sidewalls into Cho's existing fluid container comprised of a resiliently deformable material (soft silicone as noted above). Mr. Goldman persuasively opines that tapering the walls of a cylinder was common in the container industry and a known design alternative for cylindrical containers. Ex. 1014 ¶¶ 65, 76. As another example, Petitioner persuasively argues that adopting the design of Trecek would allow for an aesthetically pleasing "sleek and streamlined" appearance. Pet. 42. Thus, Petitioner's reasons for adopting the tapered sidewall design of Trecek into Cho are adequately supported.

[8] In Reply, Petitioner cites to exhibits showing "tapered silicone baby bottles on the market today." Pet. Reply 21 (citing Exs. 1026, 1029, 1031). These exhibits do not establish how a person of ordinary skill in the art would have considered the combination at the time of filing. *See* Pet. Reply 29–30. These exhibits were produced arguably to counter Patent Owner's theory that it would be unsafe to use such a tapered wall design in baby bottles. *See id.* Because Patent Owner argues generally that "a baby bottle with tapered walls would complicate feeding," and create other safety concerns (PO Resp. 49), we consider these exhibits as effectively countering Patent Owner's and Mr. Fletcher's (Ex. 2008 ¶ 168) unsupported safety assertions.

Claim 26 further requires that "the receptacle has a varying width thereacross orthogonal to the receptacle longitudinal axis," which Petitioner likewise establishes would be an obvious matter of design choice with no non-obvious advantage associated with the change. Pet. 71–72; Ex. 1014 ¶¶ 64–65. Further, Trecek teaches this varying width limitation and Petitioner persuasively argues that "it would be an obvious aesthetic design choice to simply taper the side walls of the bottle body 110 of Cho—similar to the tapered container body configuration in Trecek." *Id.* at 72; Ex. 1014 ¶ 65 ("Tapered walls are principally an aesthetic design choice without significant utility.").

Based on the final record, Petitioner establishes that claims 24 and 26 of the '036 patent would have been obvious over Cho and Trecek.

IV. CONCLUSION

Petitioner has demonstrated by a preponderance of the evidence that claims 1, 2–7, 10–13, 20–22, 24, 26, 28–32, and 35–38 of the '036 patent are unpatentable under 35 U.S.C. § 103. Petitioner has not demonstrated by a preponderance of the evidence that claim 14 of the '036 patent is unpatentable under 35 U.S.C. § 103.

V. ORDER

Accordingly, it is:

ORDERED that claims 1, 2–7, 10–13, 20–22, 24, 26, 28–32, and 35–38 of the ’036 patent are unpatentable; and

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

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