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Paper 7
Entered: January 24, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COMOTOMO INC. AND COMOTOMO CORPORATION,
Petitioner,

v.

MAYBORN (UK) LIMITED,
Patent Owner.

IPR2022-01325
Patent 10,952,930 B2

Before ULRIKE W. JENKS, MICHAEL L. WOODS, and CYNTHIA M. HARDMAN, *Administrative Patent Judges*.

WOODS, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Comotomo Inc. and Comotomo Corporation (collectively, "Petitioner") filed a Petition (Paper 2, "Pet.") for *inter partes* review of claims 1–20 (the "Challenged Claims") of U.S. Patent No. 10,952,930 B2 (Ex. 1001, "the '930 patent"). Mayborn (UK) Limited ("Patent Owner") filed a Preliminary Response (Paper 6, "Prelim. Resp.").

Under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a), we have authority to institute an *inter partes* review if "the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a). After considering the Petition, the Preliminary Response, and the evidence of record, we determine the information presented shows a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of at least one of the Challenged Claims of the '930 patent. Accordingly, we institute an *inter partes* review of claims 1–20 of the '930 patent on the grounds asserted in the Petition.

II. BACKGROUND

A. Real Parties-in-Interest

Petitioner identifies Comotomo Inc. and Comotomo Corporation as real parties-in-interest. Pet. 1–2. Patent Owner identifies Mayborn (UK) Limited, Mayborn USA, Inc., and Mayborn Group Limited as real parties-in-interest. Paper 5, 2.

B. Related Matters

The parties identify the following court proceedings relating to the '930 patent: *Mayborn (UK) Limited, et al. v. Comotomo Inc., et al.*, Case No. 1:22-cv-00694 (S.D.N.Y.) and *Nanobebe US Inc. v. Mayborn (UK) Limited et al.*, Case No. 1:21-cv-08444 (S.D.N.Y.). *See* Pet. 2; *see also* Paper 5, 2.

Petitioner also identifies a related *inter partes* review, with a petition filed concurrently with the Petition in this proceeding, challenging U.S. Patent No. 11,207,244 B2. Pet. 2. This related *inter partes* review has been assigned number IPR2022-01326.

C. Overview of the '930 Patent

The '930 patent is titled "Baby Bottle with Flexible Nipple Regions." Ex. 1001, code (54). The '930 patent purports to describe "a drinking vessel with a nipple, in particular a baby bottle having a nipple of increased flexibility and functionality." *Id.* at 1:21–23. To illustrate an embodiment of the described baby bottle, we reproduce Figure 4 of the '930 patent, below:

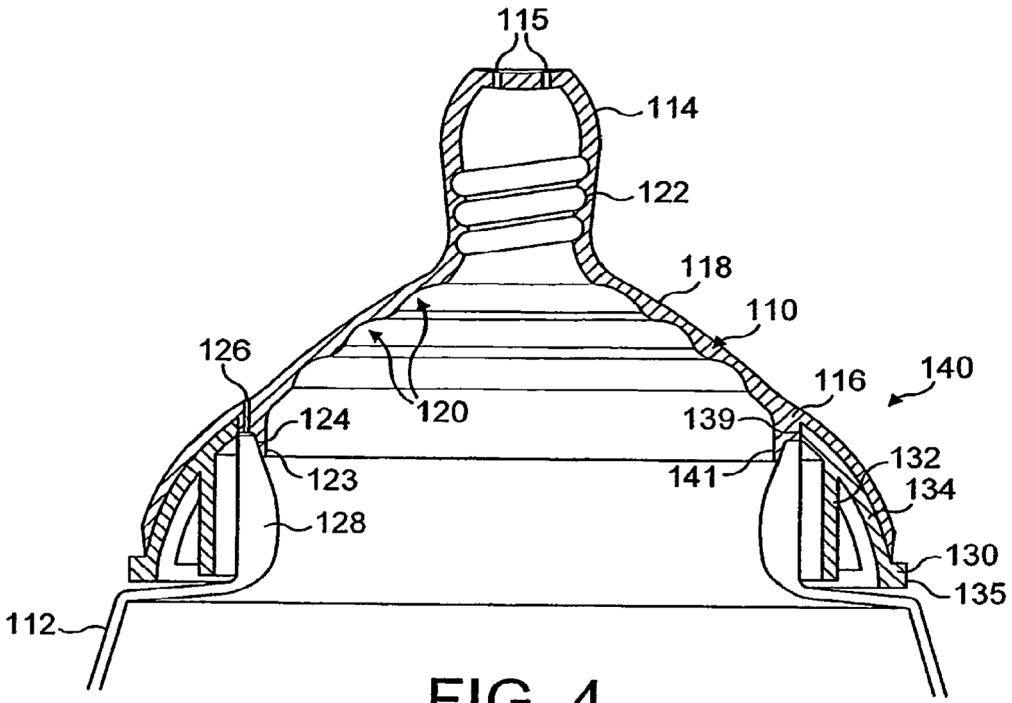


FIG. 4

Figure 4 "is a cross-sectional side view of a teat and vessel according to" an aspect of the '930 patent. *Id.* at 2:37–38. In particular, Figure 4 depicts teat assembly 140 mounted on infant drinking vessel 112. *Id.* at 3:57–59. Teat assembly 140 includes teat 110 with areola region 118 and teat portion 114 forming a nipple having drink apertures 115 at its upper end. *Id.* at 3:59–62. Base portion 116 is mountable on drinking vessel 112. *Id.* at 3:61–62. Teat 110 is formed from an elastomer with walls of decreasing thickness from base portion 116 to teat 114, thereby "providing a more realistic flexing characteristic." *Id.* at 4:13. Areola portion 118 further includes undulating grooves 120 forming, in cross-section, a wavy profile on the inner surface of areola portion 118 and extending circumferentially. *Id.* at 4:15–18. A tight-pitch helical groove 112 is formed around the inner cylindrical vertical surface of teat portion 114 "to form a flow passage even when the teat portion is collapsed." *Id.* at 4:36–38. The figure further depicts vent passage 126. *Id.* at 6:14. When an infant drinks from the vessel, the

resulting pressure differential pulls lip valve 123 away from the inner face of neck 128, and vent passage 126 permits venting to reduce the risk that the infant encounters colic, or distress. *See id.* at 6:10–15.

D. Challenged Claims

Petitioner challenges claims 1–20 of the '930 patent. Pet. 1. Claims 1, 13, and 14 are independent. Ex. 1001, 6:61–9:7. We reproduce claim 1, below:

1. A feeding bottle comprising:

a) a vessel having:

a cylindrical neck comprising an open top with a first diameter and threads on an outer surface of said neck, and

a body with a second diameter,

the body being connected with said neck, and the first diameter of the open top being less than the second diameter of the body;

b) an internally threaded collar having:

an outermost surface comprising a downwardly domed portion beginning at an upper end of the collar and extending outwardly and downwardly therefrom and disposed at least partially above said internal threads;

c) a nipple having:

a teat portion having a variable wall thickness including an aperture,

a base portion disposed adjacent to said collar and comprising an outermost surface comprising a downwardly sloping portion between said teat portion and the upper end of the collar that, together with said collar, defines a substantially continuous outermost

surface between said teat portion and a bottom of said downwardly domed portion of said collar,

an areola portion between the teat portion and the base portion, wherein said areola portion has a flex region on its inner surface comprised of a plurality of thinned regions,

a flange depending from the base portion,

an air valve extending through said nipple and disposed (i) radially inwardly from the collar and (ii) above the flange, and

the flange being arranged to seal with the vessel;

d) the nipple being secured to the collar by sealingly capturing an inner edge of the collar between the base portion and the flange; and,

e) the nipple being secured to the vessel by capturing the flange of the nipple between the collar and the open top of the vessel.

Id. at 6:62–7:34.

E. Asserted Grounds of Unpatentability

Petitioner asserts that the Challenged Claims are unpatentable based on the following grounds (Pet. 1):

Claims Challenged	35 U.S.C. §[1]	References
1–9, 12–14, 16, 17, 19, 20	103	Hakim[2]
10, 11, 15, 18	103	Hakim, Kobayashi[3]

[1] The pre-AIA version of 35 U.S.C. applies to this proceeding. *See* Pet. 3 (confirming the same).
[2] PCT WO 2004/013001 A2, published Feb. 12, 2004 (Ex. 1005, "Hakim").
[3] JP 3,209,271, published Sept. 17, 2001 (Ex. 1006, "Kobayashi"), and its English-language translation (Ex. 1007).

Petitioner also relies on the Declaration of Mr. Jim Goldman (Ex. 1003). *See, e.g.*, Pet. ix (referencing the declaration of Mr. Goldman).

III. ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art at the time of the invention ("POSITA")

> would have had a bachelor's degree in mechanical engineering or a related field, with at least two years of professional experience working in bottle manufacturing. With more education, such as additional graduate degrees or study, less professional experience is needed to attain the ordinary level of skill. Similarly, with more experiential knowledge of bottle manufacturing, less professional experience is needed to attain the ordinary level of skill.

Pet. 7–8 (citing Ex. 1003 ¶ 25).

Patent Owner does not dispute Petitioner's definition of a POSITA. *See generally* Prelim. Resp.

For purposes of this Decision, we adopt Petitioner's assessment of the level of ordinary skill in the art as it appears consistent with the '930 patent and the asserted prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

B. Claim Construction

In this *inter partes* review, we apply the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b). In applying this standard, we generally give claim terms their ordinary and customary meaning as would be understood by a

person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc).

Neither Petitioner nor Patent Owner proposes formal construction of any term. *See* Pet. 7; *see also generally* Prelim. Resp.

For purposes of this Decision, we need not and do not formally construe any claim term. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (stating that "we need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy'" (quoting Vi*vid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

C. Principles of Law

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented 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. Patentability shall not be negatived by the manner in which the invention was made.

35 U.S.C. § 103(a). 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 ordinary skill in the art; and (4) when in evidence, objective indicia of non-obviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

D. Ground I: Claims 1–9, 12–14, 16, 17, 19 and 20 as Obvious over Hakim

Petitioner submits that claims 1–9, 12–14, 16, 17, 19 and 20 are unpatentable as obvious over Hakim. Pet. 16.

1. Hakim (Ex. 1005)

Hakim is an International Patent Publication titled, "No-Spill Drinking Products." Ex. 1005, code (54). Hakim discloses that its no-spill drinking products include "baby bottle nipples and their associated baby bottles." *Id.* at 4. To illustrate an embodiment of Hakim's no-spill drinking product, we reproduce Figure 10c, below:

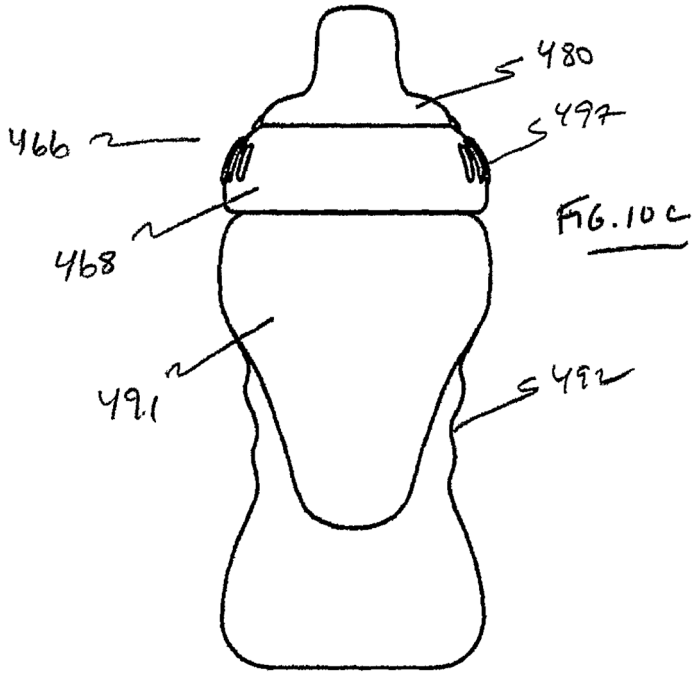


Figure 10c depicts the back view of a drinking product. *See id.* at 8. In particular, Figure 10c depicts drinking vessel 491, screw ring 468, soft lid 480, and cap 466 as a cover for drinking vessel 491. *See id.* at 12, 37. Screw ring 468 and nipple 480 collectively form cap 466. *See id.* at 37. We next reproduce Hakim's Figure 4e, below:

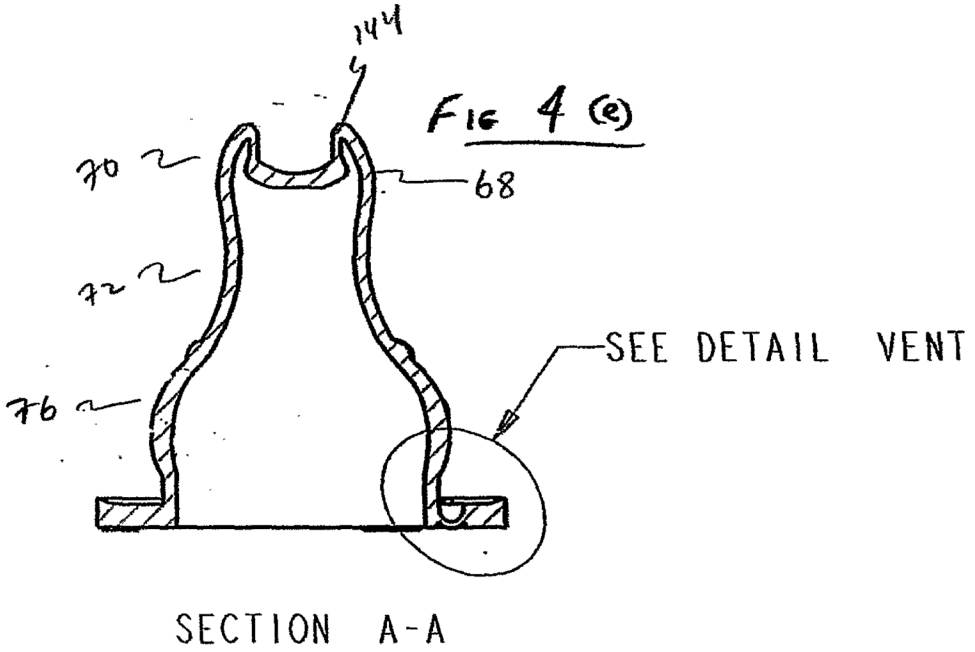


Figure 4e depicts a no-spill baby bottle nipple. *Id.* at 7. In particular, Figure 4e depicts tip 70 of a baby bottle nipple. *Id.* at 20. Tip 70 "preferably includes a slightly widened diameter portion (a bulge on the outer wall) 68." *Id.* Tip 70 of the nipple leads downward to neck 72, which leads downward to base portion 76, as seen from the figure. *Id.*

2. Independent Claim 1

We address each of the limitations of claim 1 as partitioned by Petitioner. *See* Pet. 16–32.

a. "A feeding bottle comprising"

Petitioner submits that Hakim discloses a "feeding bottle," citing Hakim's disclosure that Hakim's "no-spill products are provided for feeding infants [including] young children." Pet. 16 (citing Ex. 1005, 4).

At this stage of the proceeding, and without determining whether the preamble is limiting, Petitioner has shown a reasonable likelihood that Hakim discloses a "feeding bottle."

> b. *"a) vessel having: a cylindrical neck comprising an open top with a first diameter and threads on an outer surface of said neck, and a body with a second diameter, the body being connected with said neck, and the first diameter of the open top being less than the second diameter of the body"*

Petitioner submits that Hakim discloses the recited "vessel having" the structure recited in limitation (a). *See* Pet. 19 (citing Ex. 1003 ¶ 66).

Petitioner cites to Hakim's Figure 10C (*id.* at 16–17), which we reproduced above. According to Petitioner, Hakim's Figure 10C depicts "vessel" 491. *Id.* at 16 (citing Ex. 1005, 37). Petitioner further submits that this vessel is "usually cylindrical in shape." *See id.* at 17 (citing Ex. 1005 11, 22–23). Petitioner further submits that the "vessel includes a bottle neck (to which screw ring 468 is screwed . . .)." *Id.* (citing Ex. 1005, 17, 28–29, 38, 39–40).

To illustrate the recited "bottle neck," Petitioner submits an *annotated* version of Hakim's Figure 12B, encircling the "bottle neck" in red. *See* Pet. 17–18. We reproduce annotated Figure 12B, below:

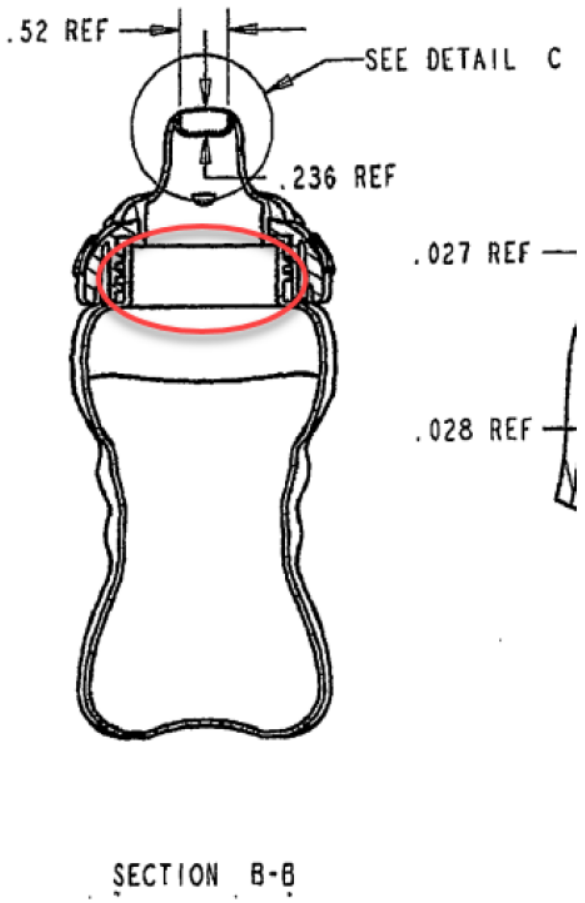


FIG. 12B

According to Petitioner, Figure 12B depicts a cross-sectional view of the bottle shown in Figure 10C. *Id.* at 17. Petitioner submits that the "neck of the drinking vessel includes threads on its outer surface that 'mate' with the threads on the inner surface of the screw ring so the ring can screw onto the vessel." *Id.* at 18 (citing Ex. 1005, 12, 30, 37–38). Petitioner explains,

> The drinking vessel also includes a body. The body is shown in Figure 10c (and 12b), above, and includes cup 491 and grip 492. . . . The body is connected to the neck, which in Figure 10c, is underneath the screw ring 468 and is circled in Fig. 12b, above.

Id. at 18–19 (citing Ex. 1005, 37, Fig. 10c, Fig. 12b; Ex. 1003 ¶ 64). Petitioner further submits that Figure 12B depicts that "the diameter of the

drinking vessel's neck may be smaller than the diameter of its body." *Id.* at 19 (citing Ex. 1005, 38; Ex. 1003 ¶ 65).

Based in part on this disclosure, Petitioner submits that

> Hakim [] discloses a feeding bottle (*i.e.*, a no-spill drinking product) comprising a vessel (*i.e.*, drinking vessel, such as cup 491) having: a cylindrical neck comprising an open top with a first diameter and threads on an outer surface of said neck and a body with a second diameter, the body being connected with said neck, and the first diameter of the open top being less than the second diameter of the body.

Id. (citing Ex. 1003 ¶ 66).

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that Hakim discloses the

> vessel having [] a cylindrical neck comprising an open top with a first diameter and threads on an outer surface of said neck, and a body with a second diameter, the body being connected with said neck, and the first diameter of the open top being less than the second diameter of the body,

as recited in claim 1. Ex. 1001, 6:62–7:34.

> c. *"b) an internally threaded collar having: an outermost surface comprising a downwardly domed portion beginning at an upper end of the collar and extending outwardly and downwardly therefrom and disposed at least partially above said internal threads"*

Petitioner submits that Hakim discloses the "internally threaded collar" having the structure recited in claim 1. *See* Pet. 21 (citing Ex. 1003 ¶ 70).

Petitioner submits that "[t]he outer surface of the screw ring 468 of Figures 10c and 12b . . . is dome-shaped." *Id.* at 21 (citing Ex. 1003 ¶ 69). Petitioner further submits that the "domed shape begins at the upper end of the screw ring and extends outwardly and downwardly . . . [and that the]

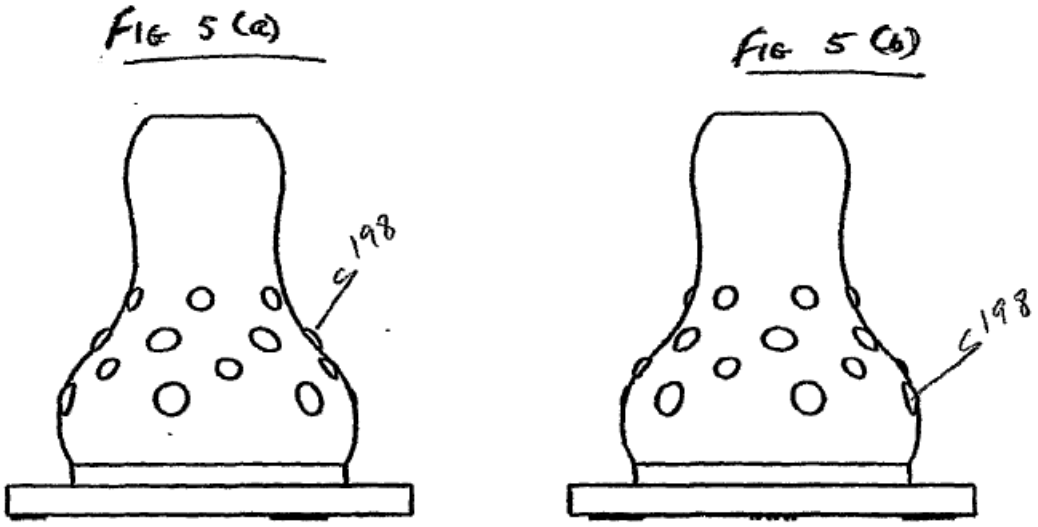
threads are internal to the screw ring and the domed outer surface is located at least partially above the internal threads." *Id.* (citing Ex. 1005, 12, 28, Figs. 10c, 12b; Ex. 1003 ¶ 69).

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that Hakim discloses "an internally threaded collar having [] an outermost surface comprising a downwardly domed portion beginning at an upper end of the collar and extending outwardly and downwardly therefrom and disposed at least partially above said internal threads," as recited in claim 1.

> d. *"c) a nipple having: a teat portion having a variable wall thickness including an aperture, a base portion disposed adjacent to said collar and comprising an outermost surface comprising a downwardly sloping portion between said teat portion and the upper end of the collar that, together with said collar, defines a substantially continuous outermost surface between said teat portion and a bottom of said downwardly domed portion of said collar, an areola portion between the teat portion and the base portion, wherein said areola portion has a flex region on its inner surface comprised of a plurality of thinned regions"*

Petitioner submits that Hakim discloses the limitation recited above. Pet. 22.

Regarding the "nipple having . . . an areola portion [having] a flex region on its *inner surface* comprised of a plurality of thinned regions," Petitioner cites to Hakim's Figures 5a and 5b (*id.* at 23), copies of which we reproduce, below:



Hakim's Figure 5a (left) and Figure 5b (right) are front and side views, respectively, of a baby bottle nipple with "bumps 198 [that] can be placed on the nipple." Ex. 1005, 34.

> Petitioner argues, and Petitioner's expert testifies, that
>
> > The surface where the bumps or depressions are formed will have a different thickness than the surrounding area of the areola, leading to regions thinner than others in the areola portion. For example, each bump has a surface thicker than the surrounding portions of the areola region, which are thinner.

Ex. 1003 ¶ 75; Pet. 25–26 (citing Ex. 1003 ¶ 75).

Patent Owner points out that claim 1 recites its areola portion has a *flex region on its inner surface* comprising a plurality of thinned regions. *See* Prelim. Resp. 25–26. Patent Owner contends that Hakim's bumps 198 are located on the *outer surface* of Hakim's nipple in order to facilitate a baby's teething. *See id.* at 26 (citing Ex. 1005, 35–36).

Patent Owner's argument is persuasive. Petitioner fails to adequately explain how Hakim's outer surface bumps 198 satisfy the claim language requiring "said areola portion ha[ving] a *flex region on its inner surface* comprised of a plurality of thinned regions." *See* Pet. 25–26; Ex. 1001,

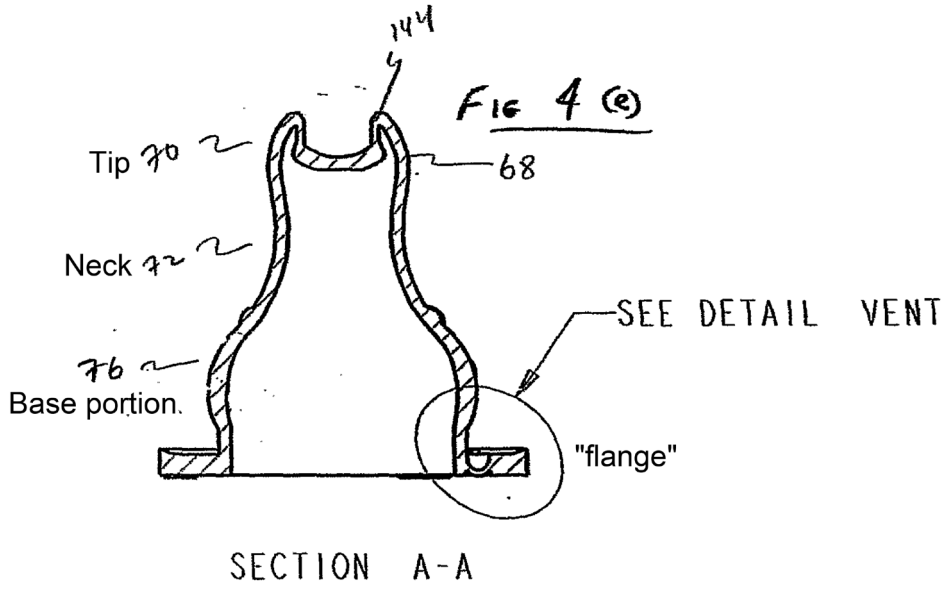
7:20–23. Absent any explanation, we do not see how bumps located on the outer surface satisfy a "flex region on its inner surface."

Accordingly, Petitioner fails to show a reasonable likelihood that Hakim discloses an "areola portion ha[ving] a flex region on its inner surface comprised of a plurality of thinned regions," as recited in claim 1.

e. "a flange depending from the base portion"

Petitioner submits that Hakim discloses "a flange depending from the base portion," citing in-part Hakim's Figure 4e. *See* Pet. 29–30.

We reproduce an annotated version of Hakim's Figure 4e, below:

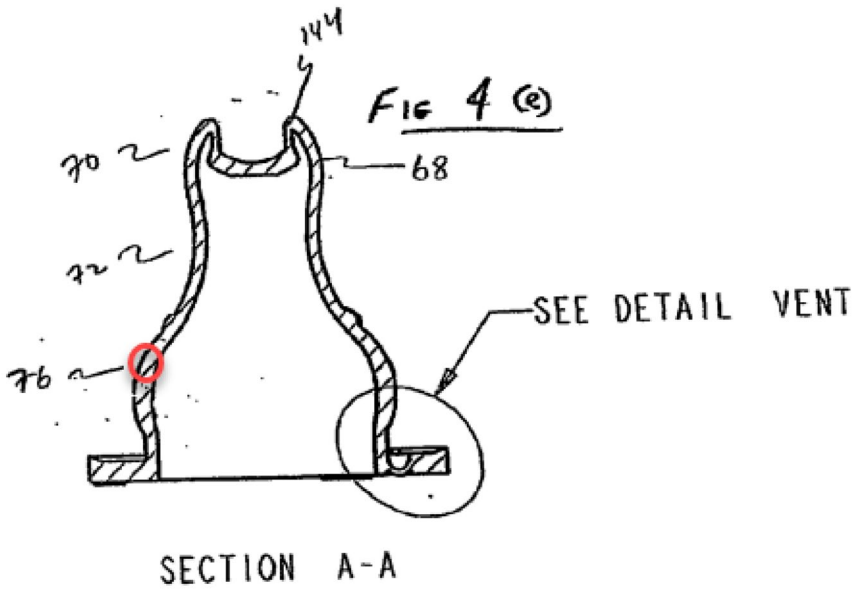


As shown by our annotations (which add labels to identify features of the figure), Figure 4e depicts Hakim's nipple including tip 70, neck 72, base portion 76, and flange. *See* Pet. 22 (referencing the same); *see also id.* at 12 (noting that the circle encompasses Hakim's "flange").

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that Hakim discloses "a flange depending from the base portion," as recited in claim 1.

f. "an air valve extending through said nipple and disposed (i) radially inwardly from the collar and (ii) above the flange"

Petitioner refers to an annotated version of Hakim's Figure 4e and reasons that a skilled artisan would have had reason to modify Hakim by *relocating* its "air valve" to satisfy the limitation that it be "disposed (i) radially inwardly from the collar and (ii) *above the flange*." *See* Pet. 28–29 (emphasis added). We reproduce Petitioner's annotated Figure 4e (*id.* at 28), below:



As described above, Petitioner submits that Hakim's Figure 4e depicts teat portion including tip 70, neck 72, base portion 76, and flange. *See* Pet. 22 (referencing the same); *see also id.* at 12 (noting that the circle encompasses Hakim's "flange"). Petitioner annotates the figure to include a red circle

near lead line 76 to depict where "it would have been obvious to place the air valve." *Id.* at 28 (citing Ex. 1003 ¶ 81).

In support of this proposed modification, Mr. Goldman testifies that

> [I]t would have been obvious to place the air valve, for example, at the red circle on base portion 76 because this location is "at the bottom of the baby bottle nipple." . . . This position is outside where the baby will contact during drinking which allows the air valve to function without interference. Positioning the air valve on the teat, in contrast, which is to be inside the baby's mouth, would prevent air from entering the valve and would defeat the purpose of the air valve.

Ex. 1003 ¶ 81 (citing Ex. 1005, 13).

In response, Patent Owner argues that Petitioner's proposed modification is not supported. *See* Prelim. Resp. 14–17. Patent Owner contends that the law requires "specific reasoning for why the person of skill would have been motivated to make that change," and "the Petition is fundamentally flawed" for failing to provide any reasoning. *Id.* at 14.

We agree with Patent Owner.

Petitioner gives no reason why a skilled artisan would have relocated Hakim's air valve from the lower right corner (*see* Ex. 1005, Fig. 4e (depicting "vent" at the lower right corner)) to the location in Petitioner's annotated figure, reproduced above and circled in red. We agree with Patent Owner that "Petitioner does not explain why its cherry-picked located marked by a red circle is consistent with Hakim's directive to locate the air valve 'at the bottom of the bottle nipple.'" Prelim. Resp. 15 (citation omitted); *see also* Ex. 1005, 13, 28. Although Mr. Goldman provides a reason why a skilled artisan would not have located the valve at the top of the teat (Ex. 1003 ¶ 81), Mr. Goldman provides no reason for relocating the

valve to its proposed location. We further agree that the proposed location would appear to

> promote leaking by transplanting the air valve—'a slit or cross-cut' in a shallow surface depression . . . from a protected location at the 'bottom rim,' which is 'covered by the hard portion of [a] screw cap,' . . . to an exposed location amongst Hakim's teething bumps, where the valve would be susceptible to inadvertent actuation by an infant squeezing or gnawing on the nipple.

Prelim. Resp. 17 (citing Ex. 1005, 29–30).

Accordingly, Petitioner fails to show a reasonable likelihood that a skilled artisan would have had reason to modify Hakim by relocating its vent valve to satisfy an "air valve extending through said nipple and disposed (i) radially inwardly from the collar and (ii) above the flange," as recited in claim 1.

g. "the flange being arranged to seal with the vessel"

Petitioner submits that Hakim discloses its "flange" as "being arranged to seal with the vessel." *See* Pet. 29.

Hakim discloses, "When the hard cap having the nipple attached thereto is screwed onto the baby bottle, the bottom rim of the nipple is compressed between the top of the bottle and the bottom of the hard cap to further secure the nipple in the cap." Ex. 1005, 12; *see also* Pet. 29 (quoting the same).

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that Hakim discloses its "flange [as] being arranged to seal with the vessel," as recited in claim 1.

h. "d) the nipple being secured to the collar by sealingly capturing an inner edge of the collar between the base portion and the flange"

Petitioner submits that Hakim's nipple is "secured to the collar by sealingly capturing an inner edge of the collar between the base portion and the flange." *See* Pet. 30–31 (citing Hakim, 12, 30, 38, Figs. 12b, 4e).

Hakim discloses that its nipple is attached to a hard screw ring to form a cap for a baby bottle, with the nipple protruding through the hole in the screw ring. Ex. 1005, 12; *see also* Pet. 30 (citing the same). As explained above, Hakim further discloses that "[w]hen the hard cap having the nipple attached thereto is screwed onto the baby bottle, the bottom rim of the nipple is compressed between the top of the bottle and the bottom of the hard cap to further secure the nipple in the cap." Ex. 1005, 12.

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that Hakim discloses its "nipple [as] being secured to the collar by sealingly capturing an inner edge of the collar between the base portion and the flange," as recited in claim 1.

i. "e) the nipple being secured to the vessel by capturing the flange of the nipple between the collar and the open top of the vessel"

Petitioner submits that Hakim discloses that "[w]hen the hard cap having the nipple attached thereto is screwed onto the baby bottle, the bottom rim of the nipple is compressed between the top of the bottle and the bottom of the hard cap to further secure the nipple in the cap." Pet. 31 (quoting Ex. 1005, 12). Petitioner explains that the "nipple is therefore secured to the drinking vessel because the screw ring 'presses against it

tightly' and forms 'a secure seal' when screwed onto the drinking vessel's neck." *Id.*; *see also* Ex. 1003 ¶ 87 (testifying in support of the same).

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that Hakim discloses its "nipple [as] being secured to the vessel by capturing the flange of the nipple between the collar and the open top of the vessel," as recited in claim 1.

j. Summary of Claim 1

Upon review of the parties' arguments and supporting evidence, we determine that *Petitioner has not shown a reasonable likelihood* that claim 1 would have been obvious over Hakim.

3. Independent Claim 13

a. "A feeding bottle"

Petitioner submits that Hakim discloses this limitation, citing its analysis of claim 1. *See* Pet. 39.

At this stage of the proceeding, and without determining whether the preamble is limiting, Petitioner has shown a reasonable likelihood that Hakim discloses a "feeding bottle."

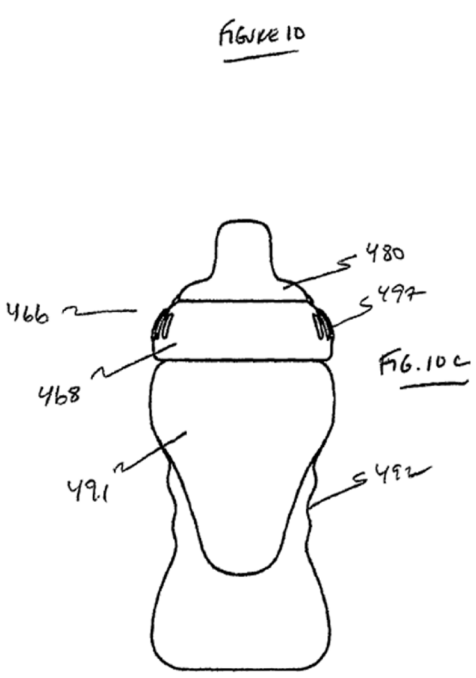
b. "a) a vessel having: an open top with a first diameter, and a body with a second diameter, the body being connected with the open top, and the first diameter of the open top being less than the second diameter of the body"

Petitioner submits that Hakim discloses the recited "vessel," referencing its challenge of independent claim 1. *See* Pet. 40.

As explained above in connection with claim 1, and at this stage of the proceeding, Petitioner has shown a reasonable likelihood that Hakim discloses a "vessel having [] an open top with a first diameter, and a body with a second diameter, the body being connected with the open top, and the first diameter of the open top being less than the second diameter of the body," as recited in claim 13.

c. *"b) a collar having: an internally threaded portion, and a downwardly extending outer domed portion connected to the internally threaded portion, wherein most of the domed portion extends radially away from an inner edge of the collar"*

Petitioner submits that Hakim discloses the recited "collar," citing Hakim's Figures 10c and 12b. *See* Pet. 40–41. We reproduce Hakim's Figures 10c and 12b, below:



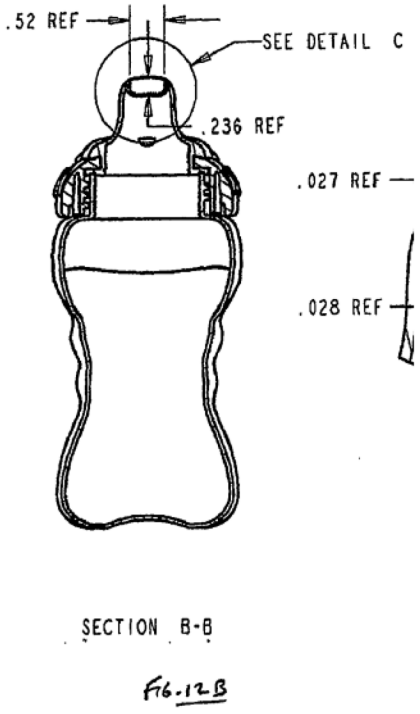


Figure 10c (left) depicts a cap attached to a drinking vessel. Ex. 1005, 8. Figure 12b (right) "is a cross-sectional view of the product of Figure 10b. . . showing the details of the upper valve of the spout." *Id.* Petitioner submits that these figures disclose that the "outer surface of the screw ring 468 of Figures 10c and 12b, above, is dome-shaped" and that "[t]he domed outer surface of the screw ring extends downwardly and is connected to the internal threads." Pet. 41 (citing Ex. 1005, 12, 37–38; Ex. 1003 ¶¶ 109, 110.)

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that Hakim discloses "a collar having [] an internally threaded portion, and a downwardly extending outer domed portion connected to the internally threaded portion, wherein most of the domed portion extends radially away from an inner edge of the collar," as recited in claim 13.

> a. *"c) a nipple having: a teat portion having a variable wall thickness including an aperture, a base portion having a wall thickness, an areola portion between the teat portion and the base portion"*

Petitioner submits that Hakim discloses the recited "nipple," referencing its challenge of independent claim 1. *See* Pet. 42.

Although we disagree with Petitioner's assertion that Hakim's exterior "bumps" 198 satisfy a "flex region on its inner surface," as recited in claim 1 (*see supra* § III.D.2.d), claim 13 *does not* recite this structure. *Compare* Ex. 1001, 7:20–23 (claim 1), *with id.* at 8:39–51 (claim 13). For purposes of institution, we agree with Petitioner that Hakim's exterior bumps 198 (*see* Ex. 1005, Figs. 5a, 5b) result in a "teat portion having a variable wall thickness," as recited in claim 13. For example, Hakim's Figure 4e, which Petitioner cites (Pet. 42), discloses this feature. We further note that Patent

Owner does not present any arguments specific to this particular limitation. *See generally* Prelim. Resp.

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that Hakim discloses "a nipple having [] a teat portion having a variable wall thickness including an aperture, a base portion having a wall thickness, [and] an areola portion between the teat portion and the base portion," as recited in claim 13.

b. "a flange depending from the base portion"

Petitioner submits that Hakim discloses this limitation, referencing its challenge to claim 1. *See* Pet. 43.

As explained above in connection with claim 1, and at this stage of the proceeding, Petitioner has shown a reasonable likelihood that Hakim discloses "a flange depending from the base portion," as recited in claim 13.

c. "a vent passage extending through the base portion and spaced inwardly from the collar, and a valve portion in communication with the vent passage and projecting from the base portion"

Petitioner submits that Hakim discloses this limitation. Pet. 43. Petitioner explains that

> Hakim describes a "channel" that "extends from the bottom air valve" through 'the outer surface of the nipple wall." . . . The channel may extend "to where the screw cap meets the outer wall of the nipple," meaning the channel is spaced inwardly from the screw cap and its screw ring.

Id. (citing Ex. 1005, 31; Ex. 1003 ¶ 114).

Patent Owner argues "the 'vent passage' and the 'valve portion' have a defined relationship with 'the base portion' of the nipple" and that

"Petitioner disregards this relationship . . . and thus fails to establish obviousness." Prelim. Resp. 21–22. Patent Owner argues that "Petitioner admittedly cannot reach the claim 13 limitation where the 'vent passage' is extending through the base." *Id.* at 24. In support of this argument, Patent Owner cites Petitioner's challenge of claim 1, in which Petitioner proposes to *relocate* Hakim's vent valve, and submits that "any attempt by Petitioner later in the proceeding to salvage its case-in-chief on claim 13 through a proposed modification of Hakim would constitute an improper shift from the Petition." *See id.* at 22.

Patent Owner's argument is not persuasive. By referencing Petitioner's challenge of claim 1, Patent Owner conflates Petitioner's challenge of that claim with claim 13. Unlike Petitioner's challenge of claim 1, Petitioner does not propose to relocate Hakim's valve in its challenge of claim 13.

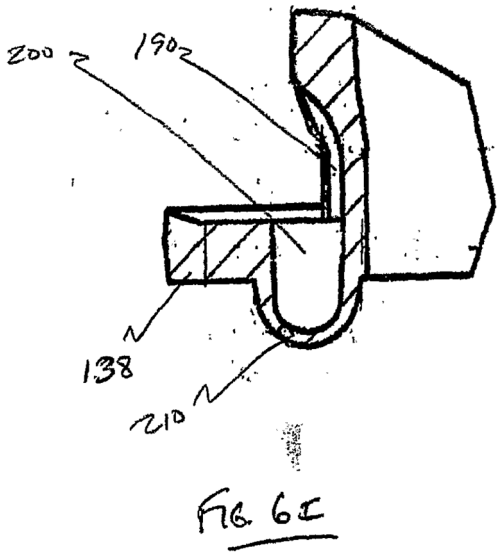
As distinguished from claim 1, claim 13 does not recite "an air valve . . . disposed . . . above the flange." *Compare* Ex. 1001, 7:25–27 (claim 1), *with id.* at 8:15–16 (claim 13). In this respect, claim 13 is broader than claim 1. We presume Petitioner does not propose to relocate Hakim's valve in its challenge of claim 13 (*see* Pet. 43), because relocating the valve is unnecessary to satisfy the relatively broad language of claim 13.

In support of Petitioner's challenge, Mr. Goldman testifies

> Hakim describes a "channel" that "extends from the bottom air valve" through "the outer surface of the nipple wall." . . . The channel may extend "to where the screw cap meets the outer wall of the nipple," meaning the channel is spaced inwardly from the screw cap and its screw ring. . . . This facilitates unimpeded air flow. Hakim therefore discloses the nipple including a vent passage extending through the base portion and spaced inwardly from the collar, and a valve

> portion in communication with the vent passage and projecting from the base portion.

Ex. 1005 ¶ 114 (citing Ex. 1005, 31). Page 31 of Hakim references Figures 6i and 6f of Hakim, Figure 6i of which we reproduce below:



Hakim discloses that

> [A]s shown in Figure[] 6i . . . , channel 190 extends from the bottom air valve 200 on the nipple's bottom rim 138 (which is under the screw cap) up the outer surface of the nipple wall, as a groove in that wall. The channel extends up to where the screw cap meets the outer wall of the nipple (the outer sidewall), channeling air from the outer wall of the nipple (outside the screw cap) under the screw cap to the air valve. Further preferably, the channel extends above the height of the screw cap.

Ex. 1005, 31; *see also id.* at Figs. 6d, 6f (depicting alternate views of valve 200 relative to the base portion). Hakim further discloses,

> As with the valve in the tip of the nipple, the bottom wall 210 of the air valve 200 has an opening therein. Any desired opening can be used; however, in the preferred embodiments of the air valve of the nipple and drinking product with soft spout, the opening in the air valve is a slit.

Id. at 32.

Upon reviewing Hakim's disclosure with the language recited in claim 13, and at this stage of the proceeding, Petitioner has shown a reasonable likelihood that Hakim discloses a "vent passage extending through the base portion and spaced inwardly from the collar, and a valve portion in communication with the vent passage and projecting from the base portion."

d. "the flange being arranged to seal with the vessel"

Petitioner submits that Hakim discloses this limitation, referencing its challenge to claim 1. *See* Pet. 43.

As explained above in connection with claim 1, and at this stage of the proceeding, Petitioner has shown a reasonable likelihood that Hakim discloses its "flange being arranged to seal with the vessel," as recited in claim 13.

e. "wherein an outer surface of the teat portion has a first texture and an outer surface of the areola portion has a second, different texture"

Petitioner submits that Hakim discloses this limitation, referencing its challenge to claim 1. *See* Pet. 43.

Hakim discloses a relatively smooth outer surface of the "teat portion" as having a "first texture" and bumps 198 on the outer surface of the "areola portion" as having a "second, different texture." *See, e.g.*, Ex. 1005, Figs. 5a, 5b; *see also* Pet. 25–26 (referencing the same).

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that Hakim discloses that the "outer surface of the teat portion has a first texture and an outer surface of the areola portion has a second, different texture," as recited in claim 13.

f. "d) the nipple being secured to the collar by sealingly capturing the inner edge of the collar between the base portion and the flange"

Petitioner submits that Hakim discloses this limitation, referencing its challenge to claim 1. *See* Pet. 44.

As explained above in connection with claim 1, and at this stage of the proceeding, Petitioner has shown a reasonable likelihood that Hakim discloses that its "nipple [is] secured to the collar by sealingly capturing the inner edge of the collar between the base portion and the flange," as recited in claim 13.

g. "e) the nipple being secured to the vessel by capturing the flange of the nipple between the collar and the open top of the vessel"

Petitioner submits that Hakim discloses this limitation, referencing its challenge to claim 1. *See* Pet. 44.

As explained above in connection with claim 1, and at this stage of the proceeding, Petitioner has shown a reasonable likelihood that Hakim discloses its "nipple [as] being secured to the vessel by capturing the flange of the nipple between the collar and the open top of the vessel," as recited in claim 13.

h. Summary of Independent Claim 13

Upon review of the parties' arguments and supporting evidence, we determine that *Petitioner has shown a reasonable likelihood* that claim 13 would have been obvious over Hakim.

4. Independent Claim 14

Independent claim 14 is similar to independent claim 1, and Petitioner cites to its challenge of claim 1 in its challenge of claim 14. *Compare* Ex. 1001, 6:62–7:34, *with id.* at 8:29–57; *see also* Pet. 44–49. As with independent claim 1, Petitioner proposes to relocate Hakim's air vent, citing the same annotated Figure 4e discussed above. *See* Pet. 47–48.

As with claim 1, Petitioner has not shown a reasonable likelihood that a skilled artisan would have relocated Hakim's air valve. *See supra* § III.D.2.f. For this reason, *Petitioner has not shown a reasonable likelihood* that independent claim 14 would have been obvious over Hakim.

5. Dependent Claims 2–9, 12, 16, 17, 19, and 20

Petitioner submits that dependent claims 2–9, 12, 16, 17, 19, and 20 are unpatentable as obvious over Hakim. *See* Pet. 16. In challenging these claims, Petitioner relies on the same reasoning discussed above in connection with independent claims 1 and 14. *See id.* at 32–39, 49–51.

For the same reasons that Petitioner has not shown a reasonable likelihood that independent claims 1 and 14 would have been obvious over Hakim, *Petitioner has not shown a reasonable likelihood* that dependent claims 2–9, 12, 16, 17, 19, and 20 would have been obvious over Hakim.

E. Ground II: Claims 10, 11, 15, and 18 as Obvious over Hakim in view of Kobayashi

Claims 10, 11, 15, and 18 depend from either independent claim 1 or 14. *See* Ex. 1001, 7:54–9:7. Petitioner relies on Kobayashi for addressing features recited in these dependent claims, but otherwise relies on the

findings and reasoning presented in its challenge of independent claims 1 and 14. *See* Pet. 51–57.

For the same reasons that Petitioner has not shown a reasonable likelihood independent claims 1 and 14 would have been obvious over Hakim, *Petitioner has not shown a reasonable likelihood* that dependent claims 10, 11, 15, and 18 would have been obvious over Hakim in view of Kobayashi's teachings.

IV. CONCLUSION

After considering the evidence and arguments presented in the Petition and Preliminary Response, we determine that the information presented shows a reasonable likelihood that Petitioner would prevail in establishing that claim 13 would have been obvious over Hakim.

Because we institute *inter partes* review as to claim 13, we also institute *inter partes* review of claims 1–12 and 14–20. *See SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

V. ORDER

Accordingly, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is instituted for claims 1–20 of the '930 patent on the unpatentability grounds asserted in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial, which commences on the entry date of this decision.

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