

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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TROVE BRANDS, LLC,  
Petitioner,

v.

CAMELBAK PRODUCTS, LLC,  
Patent Owner.

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IPR2025-00146  
Patent 10,165,879 B2

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Before LINDA E. HORNER, CARL M. DEFranco, and  
JAMES A. WORTH, *Administrative Patent Judges*.

HORNER, *Administrative Patent Judge*.

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

## I. INTRODUCTION

Trove Brands, LLC (“Petitioner”) filed a Petition to institute *inter partes* review of claims 1, 3, 5–8, and 10–19 of U.S. Patent No. 10,165,879 B2 (Ex. 1001, “the ’879 patent”). Paper 1 (“Pet.”). CamelBak Products, LLC (“Patent Owner”) filed a Preliminary Response. Paper 8 (“Prelim. Resp.”).

Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the petition and the preliminary response shows “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

Upon consideration of the Petition and the Preliminary Response, and for the reasons explained below, we determine that Petitioner has not shown a reasonable likelihood that it would prevail with respect to at least one of the challenged claims. Thus, we deny the Petition and do not institute an *inter partes* review of claims 1, 3, 5–8, and 10–19 of the ’879 patent.

### A. *Real Parties in Interest*

Trove Brands, LLC identifies itself as the real party in interest for the Petitioner. Pet. 1. CamelBak Products, LLC identifies itself and Vista Outdoor Inc. as the real parties in interest for the Patent Owner. Paper 3, 2.

### B. *Related Matters*

The parties identify the following related matter involving the ’028 patent: *Trove Brands, LLC v. CamelBak Products, LLC*, No. 5:23-cv-04267 (N.D. Cal.). Pet. 1; Paper 3, 2.

### C. *The ’879 Patent*

The ’879 patent is titled “Drink Containers.” Ex. 1001, code (54). The ’879 patent describes that “[s]ome conventional drink bottles include a

threaded or other neck from which a user drinks liquid contained in the drink bottle after removal of the cap,” and others “include a spout, or nozzle, from which the drink liquid may be drawn from the drink bottle without removing the cap.” *Id.* at 1:32–37. The ’879 patent discloses a liquid container and a cap assembly having “a mouthpiece assembly that is adapted to be selectively configured between a dispensing configuration, in which drink liquid may be selectively dispensed from the liquid container, and a stowed configuration, in which drink liquid is restricted from being dispensed from the liquid container.” *Id.* at 1:44–49.

Figure 7 of the ’879 patent, reproduced below, is an isometric view of an exemplary drink container having a selectively-configurable mouthpiece assembly in its dispensing configuration. *Id.* at 2:26–30.

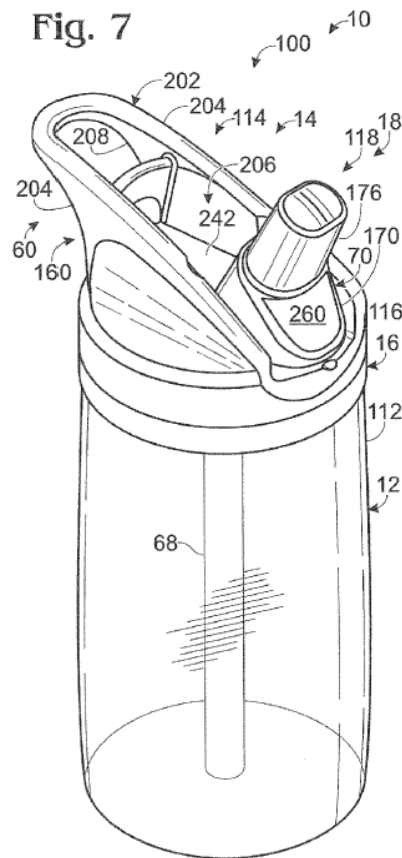


Figure 7 of the '879 patent shows drink bottle 100 including liquid container 12 and cap assembly 114 having mouthpiece assembly 118 and straw 68. *Id.* at 11:11–18, 14:15–18. A portion of mouthpiece assembly 118 is adapted to selectively pivot between a dispensing configuration, as shown, and a stowed configuration. *Id.* at 11:18–23.

Figure 11 of the '879 patent, reproduced below, is an exploded view of cap assembly 114. *Id.* at 2:38–39.

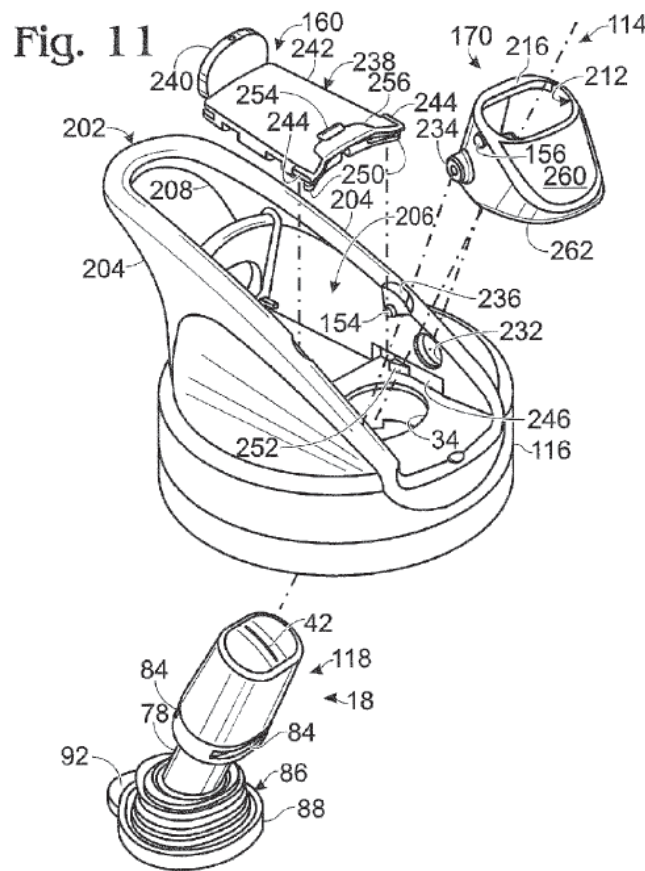


Figure 11 shows the main component parts of cap assembly 114, including base 116, mouthpiece assembly 118, rigid collar member 170, and user release mechanism 160. *Id.* at 11:24–27, 11:48–50, 12:57–61. Mouthpiece assembly 118 includes bite-actuated mouthpiece 176 (numbered in Figure 7), tube 78, and anchor portion 86, which, together, define a liquid

passage. *Id.* at 10:36–42. Tube 78 and a portion of bite-actuated mouthpiece 176 extend through opening 212 of rigid collar member 170. *Id.* at 11:50–57. Rigid collar member 170 is pivotally-coupled to base 116 via a hinge formed by cylindrical depressions 232 in lateral guards 204 of handle 202 engaging cylindrical protrusions 234 of rigid collar member 170. *Id.* at 12:21–28. Lateral guards 204 at least partially define stowing region 206, which is adapted to receive bite-actuated mouthpiece 176 and a portion of tube 78 when mouthpiece assembly 118 is in a stowed configuration. *Id.* at 11:28–34. To retain mouthpiece assembly 118 in the stowed configuration, lateral guards 204 have first catch structures (cylindrical depressions 154) that mate with second catch structures (hemispherical protrusions 156) of rigid collar member 170. *Id.* at 12:37–44.

Figures 12 and 13 of the '879 patent, reproduced below, are cross-sectional side views of cap assembly 114 showing mouthpiece assembly 118 in dispensing and stowed configurations, respectively. *Id.* at 2:40–45.

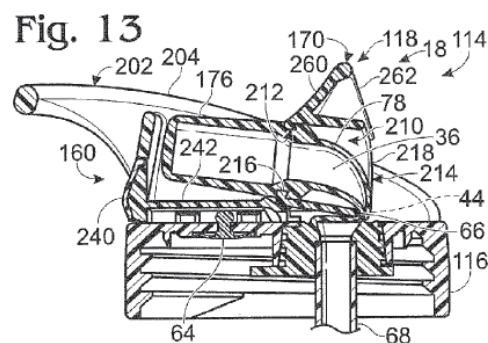
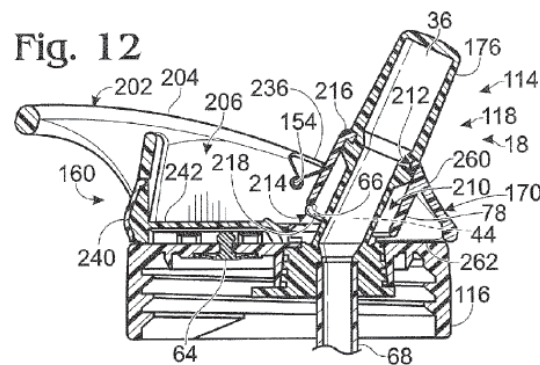


Figure 12 (top image) depicts mouthpiece assembly 118 in a dispensing configuration, and Figure 13 (bottom image) depicts mouthpiece assembly 118 in a stowed configuration with rigid collar member 170 pivoted such that crimping portion 66 engages and crimps tube 78 to restrict liquid flow. *Id.* at 12:2–8. User release mechanism 160 releases mouthpiece assembly 118 from the stowed configuration to the dispensing configuration. *Id.* at 12:57–61. In particular, a user actuates user engagement pad 240 of sliding member 238 (*see id.* at Fig. 11), which slides relative to base 116 and causes collar engagement portion 254 (*see id.*) to engage rim 216 of rigid collar member 170 and force disengagement of the first and second catch structures. *Id.* at 12:61–13:7, 13:29–32. In addition, or alternatively, rigid collar member 170 may include user engagement portion 260, to which a user can apply force that pivots mouthpiece assembly 118 and disengages the first and second catch structures. *Id.* at 13:47–59.

#### *D. Illustrative Claims*

The Petition challenges claims 1, 3, 5–8, and 10–19. Pet. 1. Of these, claim 1 is the sole independent claim. Ex. 1001, 21:24–22:22. Claim 1, reproduced below with the preamble and limitation identifiers referenced in the Petition (*see* Pet. 16–18), is illustrative of the claimed subject matter.

1. [preamble] A drink container, comprising:

[A] a liquid container having a neck with an opening and having an internal compartment sized to hold a volume of potable drink liquid; and

[B] a cap assembly removably coupled to the liquid container, the cap assembly comprising:

[1] a base removably coupled to the neck of the liquid container and including a through-passages;

[2] a first catch structure coupled to the base;

[3] a mouthpiece assembly extending through the through-passage of the base and defining a liquid passage through which drink liquid from the liquid container may selectively flow, and further defining an inlet through which drink liquid in the internal compartment may enter the liquid passage and an outlet through which drink liquid from the internal compartment of the liquid container is selectively dispensed; wherein the mouthpiece assembly is configured to be selectively configured between a dispensing configuration, in which the liquid passage permits drink liquid to flow from the internal compartment at least into the liquid passage, and a stowed configuration, in which drink liquid is restricted from being dispensed from the liquid container through the liquid passage; wherein the mouthpiece assembly is biased to the dispensing configuration; and wherein the mouthpiece assembly comprises:

[a] a tube portion that defines at least a portion of the liquid passage for drink liquid to flow from the internal compartment to the outlet of the mouthpiece assembly; wherein the tube portion includes a crimping region constructed of a resiliently deformable material and adapted to prevent the flow of drink liquid through the liquid passage when the mouthpiece assembly is in the stowed configuration; wherein the crimping region includes opposing walls that are in contact with each other to seal the liquid passage within the crimping region when the mouthpiece assembly is in the stowed configuration;

[b] a rigid collar member that is pivotally coupled to a portion of the cap assembly and through which the tube portion at least partially extends; and

[c] a second catch structure adapted to be selectively engaged with the first catch structure to retain the mouthpiece assembly in the stowed configuration; and

[4] user release mechanism adapted to automatically disengage the first and second catch structures upon actuation of the user release mechanism and thereby release the mouthpiece assembly to move via its bias from the stowed configuration to the dispensing configuration;

[C] wherein the cap assembly defines a stowing region sized to receive at least a portion of the mouthpiece assembly when the mouthpiece assembly is in the stowed configuration;

[D] wherein the user release mechanism includes a sliding member with a user engagement pad; wherein the user release mechanism is biased to urge the sliding member away from a position where the sliding member disengages the first and second catch structures; and wherein the sliding member is configured to slide relative to the base of the cap assembly to selectively disengage the first and the second catch structures.

Ex. 1001, 21:24–22:22.

*E. Prior Art and Asserted Grounds*

Petitioner asserts that the challenged claims are unpatentable based on the following grounds (Pet. 19):

| <b>Claim(s) Challenged</b> | <b>35 U.S.C. §<sup>1</sup></b> | <b>Reference(s)/Basis</b>                                       |
|----------------------------|--------------------------------|-----------------------------------------------------------------|
| 1, 3, 5–8, 10–19           | 103(a)                         | Kiyota <sup>2</sup> , Choi <sup>3</sup> , Ribarits <sup>4</sup> |

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<sup>1</sup> The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 285–88 (2011), revised 35 U.S.C. §§ 102, 103 effective March 16, 2013. Because the challenged patent has an effective filing date before March 16, 2013, we refer to the pre-AIA version of § 103.

<sup>2</sup> U.S. Patent No. US 6,279,773 B1, issued Aug. 28, 2001 (Ex. 1004, “Kiyota”).

<sup>3</sup> U.S. Patent Application Publication No. US 2007/0039959 A1, published Feb. 22, 2007 (Ex. 1005, “Choi”).

<sup>4</sup> World Intellectual Property Organization, International Publication No. WO 2004/063042 A2, published July 29, 2004 (Ex. 1011). Petitioner provides an English-language translation (Ex. 1009, “Ribarits”) and a copy of the translator’s certification statement (Ex. 1010).

| Claim(s) Challenged     | 35 U.S.C. § <sup>1</sup> | Reference(s)/Basis           |
|-------------------------|--------------------------|------------------------------|
| 1, 3, 5–8, 10–13, 15–19 | 103(a)                   | Park <sup>5</sup> , Ribarits |
| 14                      | 103(a)                   | Park, Ribarits, Kiyota       |

Petitioner relies on the declaration testimony of Glenn E. Vallee, Ph.D. (Ex. 1003) in support of the asserted grounds. Patent Owner relies on the declaration testimony of Michael Jobin (Ex. 2001) to support its Preliminary Response.

## II. PATENTABILITY ANALYSIS

### A. Legal Standards

Petitioner’s asserted grounds of unpatentability are based on obviousness under 35 U.S.C. § 103(a).

Section 103(a) forbids issuance of a patent when “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.”

*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 ordinary skill in the art; and (4) when available, objective evidence, such as commercial success, long felt but unsolved needs, and failure of others.<sup>6</sup> *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

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<sup>5</sup> Korean Patent Publication No. KR 20-0282506 Y1, published July 22, 2002 (Ex. 1008). Petitioner provides an English-language translation (Ex. 1006, “Park”) and a copy of the translator’s certification statement (Ex. 1007).

<sup>6</sup> Patent Owner does not direct us to any objective evidence of non-obviousness in the current record.

In an *inter partes* review, a petition must identify “with particularity, each claim challenged, the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge to each claim.” 35 U.S.C. § 312(a)(3); *see also* 37 C.F.R. § 42.104(b) (requiring a petition for *inter partes* review to identify how the challenged claim is to be construed and where each element of the claim is found in the prior art patents or printed publications relied upon).

*B. Level of Ordinary Skill in the Art*

In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995).

Petitioner contends that a person of ordinary skill in the art (POSITA) would have “an undergraduate degree in mechanical engineering or equivalent coursework, and a year or more of experience in designing, prototyping, and/or manufacturing fluid containers or similar products” and that “[m]ore work experience may substitute for a lower level of education, and vice versa.” Pet. 20 (citing Ex. 1003 ¶ 29).

Patent Owner argues that a POSITA would have “a bachelor’s degree in mechanical engineering or the equivalent coursework and approximately one year of experience with liquid-containing devices, with more work experience substituting for less education and vice versa.” Prelim. Resp. 26 (citing Ex. 2001 ¶ 65). Patent Owner also states that it “discerns no material difference between the definitions provided by the parties for purposes the Board’s decision on whether to institute this proceeding.” *Id.*

We agree that there appears to be no material difference in the parties' definitions of the level of ordinary skill in the art. For the purposes of this Decision, we apply Petitioner's definition of the level of ordinary skill in the art. We determine that this definition is consistent with the prior art of record and the skill reflected in the Specification of the '879 patent, based on our review of the limited record. Moreover, the prior art itself may be sufficient to demonstrate the level of skill in the art at the time of the invention. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (explaining that specific findings regarding ordinary skill level are not required "where the prior art itself reflects an appropriate level and a need for testimony is not shown") (quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985)).

### *C. Claim Construction*

Petitioner and Patent Owner propose constructions for the term "user release mechanism," as recited in claim 1. Pet. 20–23; Prelim. Resp. 27–30. Patent Owner also proposes constructions for "automatically disengage the first and second catch structures," as recited in claim 1. Prelim. Resp. 30–32. For purposes of this particular Decision, we determine that no term requires construction to decide whether to institute inter partes review of the '879 patent. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) ("The Board is required to construe 'only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.'") (alteration in original) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

*D. Ground 1: Alleged Obviousness Over Kiyota, Choi, and Ribarits*

The Petition presents Ground 1 as challenging claims 1, 3, 5–8, and 10–19 as unpatentable over Kiyota, Choi, and Ribarits. Pet. 19, 24. The analysis of claims 1, 3, 5–8, 18, and 19 under this ground, however, relies on only Kiyota and Choi. *See id.* at 31–54, 66–70. The Petition applies the combination of Kiyota, Choi, and Ribarits only to claims 10–17. *See id.* at 54–66. We first address the challenge to claims 1, 3, 5–8, 18, and 19 based on Kiyota and Choi, and then address the challenge to claims 10–17.

*1. Claims 1, 3, 5–8, 18, and 19*

Petitioner contends that Kiyota and Choi render obvious the subject matter of independent claim 1, and claims 3, 5–8, 18, and 19 depending therefrom. Pet. 31–54, 66–70. For the reasons discussed below, Petitioner has failed to establish a reasonable likelihood that a POSITA would have had a reason to combine the teachings of Kiyota and Choi, as proposed in the Petition. We provide below a brief overview of the cited references and a discussion of the deficiency in Petitioner’s assertion of unpatentability.

*a) Overview of Kiyota*

Kiyota is a U.S. patent titled “Lid Body of Beverage Container.” Ex. 1004, code (54). Kiyota relates “to a lid body with a cap comprising the lid body and a cap connectable with the lid body and storing a suction tube for sucking a beverage within a beverage container connectable with a mouthpiece tube provided in the lid body.” *Id.* at 1:11–15. Kiyota explains that an object of the invention is “to provide a lid body of a beverage container which is easily handled such that the mouthpiece tube is stored within the main body portion with lid-closing operation of the openable lid

by one touch, and is released and standing from the storing portion with lid-opening operation of the openable lid by one touch.” *Id.* at 2:50–55.

Figure 1 of Kiyota, reproduced below, illustrates a perspective view of a lid body of a beverage container. *Id.* at 4:52–53.

**FIG. 1**

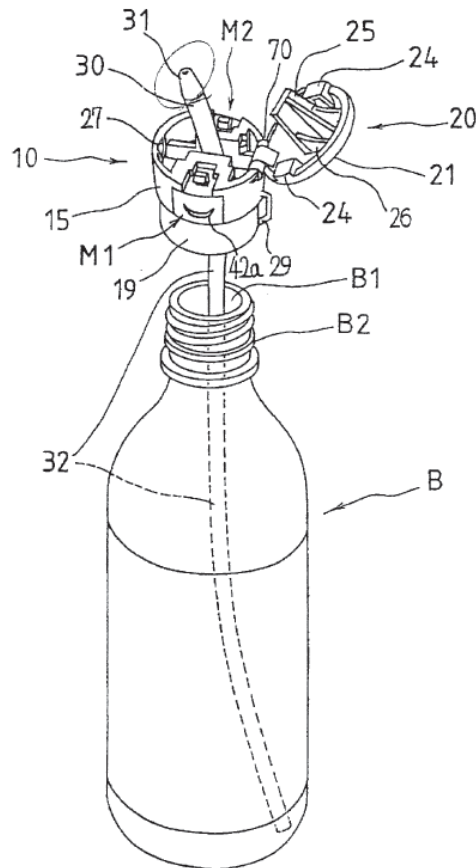


Figure 1 of Kiyota shows a lid body having main body portion 10, openable lid 20 mounted to main body portion 10 via hinge portion 70, and mouthpiece tube 30 with mouthpiece portion 31. *Id.* at 4:54–58, 5:45–47. Main body portion 10 is threaded onto mouth portion B1 of beverage container B. *Id.* at 4:54–58. Switching devices M1 and M2 are arranged in opposing positions in peripheral wall portion 15 of main body portion 10 and are used to control opening and closing of openable lid 20. *Id.* at 5:58–

64. Figure 2 of Kiyota, reproduced below, is an exploded view of the lid body. *Id.* at 4:15–16.

**FIG. 2**

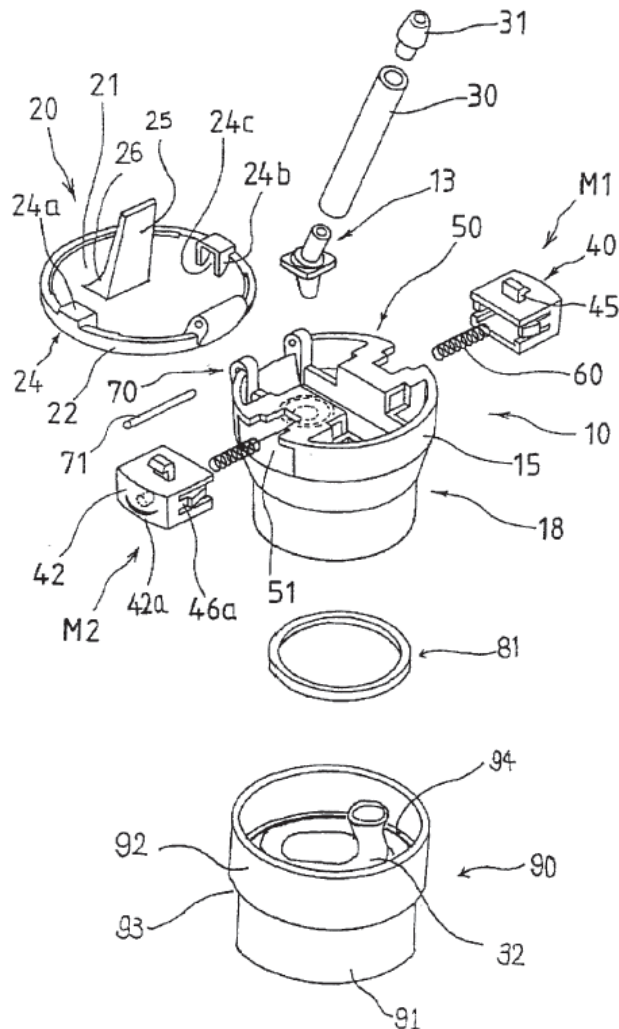
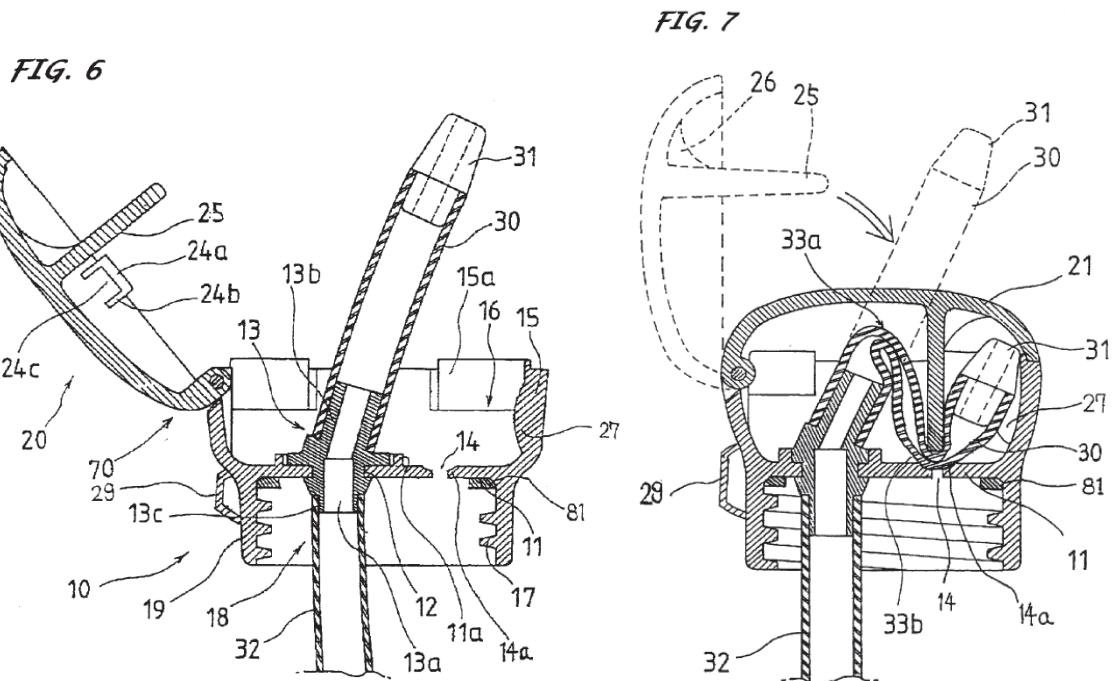


Figure 2 of Kiyota shows switching devices M1 and M2, each including lock release button 40 movably-fixed within socket 50. *Id.* at 5:61–6:2. Lock release buttons 40 include hook-like stopper pieces 45, which attach to corresponding connecting portions 24 included on peripheral portion 22 of top board 21 of openable lid 20. *Id.* at 6:34–38, 7:25–27. Upon closing openable lid 20, springs 60 apply energizing force on lock

release buttons 40 so that stopper pieces 45 are fitted and connected in connecting portions 24. *Id.* at 7:43–59.

Figures 6 and 7 of Kiyota, reproduced below, are cross-sectional illustrations of the lid body in different configurations. *Id.* at 4:28–35.



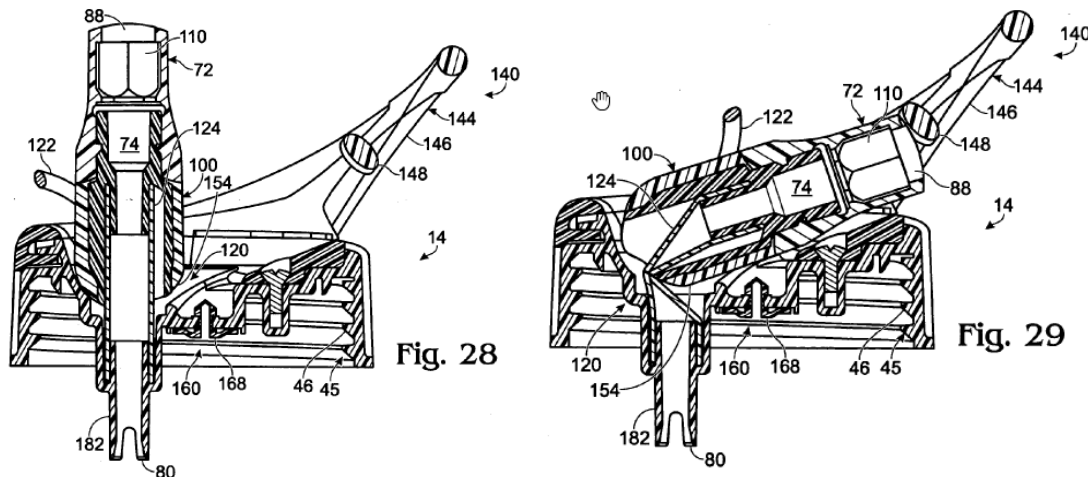
Figures 6 and 7 of Kiyota depict the lid body with openable lid 20 in an open configuration and a closed configuration, respectively. *Id.* Main body 10 includes baseplate 11 having air hole 14 and communicating hole 12, to which coupling tube 13 is detachably fixed. *Id.* at 5:21–23, 5:29–33. Coupling tube 13 includes first coupling tube 13b, to which mouthpiece tube 30 is detachably fixed, and second coupling tube 13c, to which suction tube 32 is detachably connected. *Id.* at 5:40–44. Mouthpiece tube 30 and suction tube 32 are formed of elastic and flexible resin material, such as polyurethane or silicon resin. *Id.* at 5:47–50. With openable lid 20 in the closed configuration, as shown in Figure 7, mouthpiece tube 30 is pushed and folded by presser piece 25 and stored in storing portion 16. *Id.* at 10:13–

16. The elasticity of mouthpiece tube 30 puts upward force on presser piece 25 and, thereby, strongly couples receiving pieces 24a of connecting portions 24 with lower edge portions 45a of stopper pieces 45. *Id.* at 10:33–38. To open openable lid 20 and release mouthpiece tube 30, a user presses lock release buttons 40, which move stopper pieces 45 such that lower edge portions 45b slip away from depressions 24c and stopper pieces 45 separate from connecting portions 24. *Id.* at 7:60–8:2, 9:4–7. Mouthpiece tube 30 pushes upward on top board 21 via its elastic force to open openable lid 20. *Id.* at 9:7–13.

*b) Overview of Choi*

Choi is a published U.S. patent application titled “Drink Bottles With Bite-Actuated Mouthpieces.” Ex. 1005, code (54). Choi explains that “[b]ite-actuated mouthpieces are deformable mouthpieces which are urged from a closed, sealed configuration to a dispensing configuration when a user bites upon the mouthpiece” and are “resiliently biased to automatically return to the closed configuration.” *Id.* ¶4. Choi describes that “[i]n some embodiments, the bottles include a manual on/off valve that is adapted to prevent drink fluid from being dispensed regardless of the configuration of the bite-actuated mouthpiece.” *Id.*

Figures 28 and 29 of Choi, reproduced below, illustrate partial cross-sectional, side elevational views of a cap assembly in different configurations. *Id.* ¶ 32, 33.



Figures 28 and 29 depict cap assembly 14 with mount 100 shown in dispensing and stowed configurations, respectively. *Id.* ¶ 85. Mount 100 defines a portion of fluid conduit 74 through which drink fluid may selectively flow from the drink container through inlet 80 of the fluid conduit, and thereafter through outlet 104 (not numbered in Figures 28 and 29) of mount 100 into internal chamber 110 of bite-actuated mouthpiece 72. *Id.* ¶ 81. Cap assembly 14 includes an on/off valve 120 formed by flexible tube 124 that fluidly interconnects inlet 80 of the fluid conduit with internal chamber 110 of the mouthpiece. *Id.* ¶ 85. When mount 100 is pivoted to a stowed configuration, as shown in Figure 29, body 154 of mount 100 engages tube 124 and collapses it to obstruct the fluid conduit, thereby preventing fluid flow through the fluid conduit. *Id.* As mount 100 is pivoted from a stowed configuration to a dispensing configuration, as shown in Figure 28, a fluid conduit is reestablished. *Id.*

Choi describes that mount 100 is adjustably positionable within a range of positions relative to the base of the cap assembly to “permit a user to adjust the orientation of the mouthpiece to a user-selected drinking operation.” *Id.* ¶ 47. Choi further describes that “the on/off valve will typically not be biased to return automatically to a particular configuration.

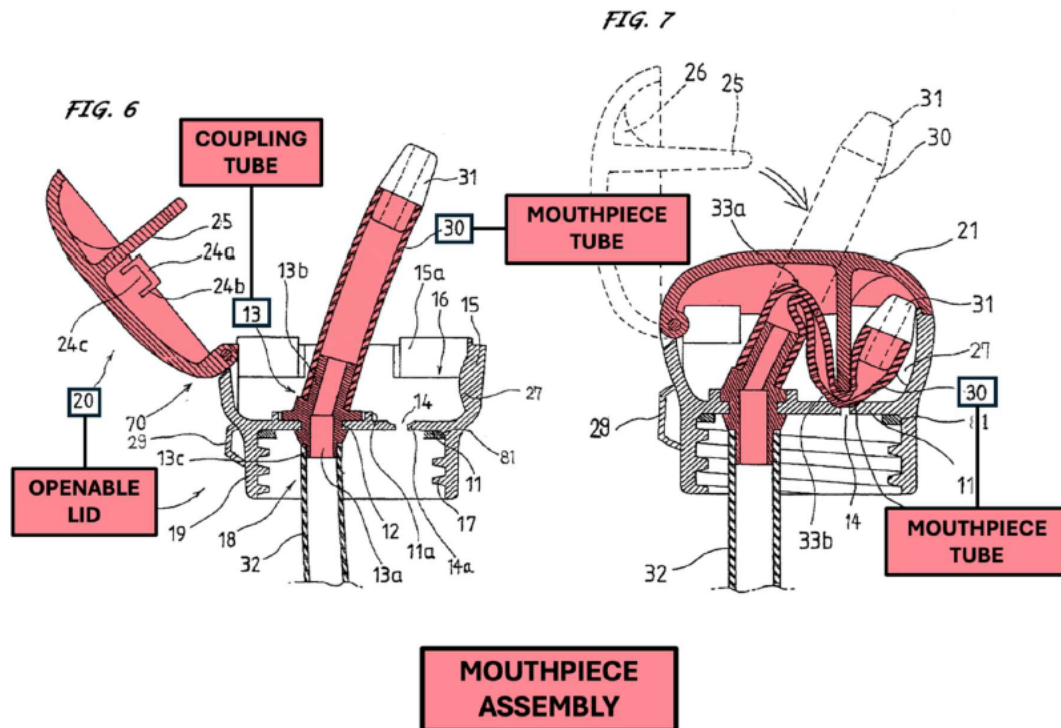
Instead, the on/off valve may be configured to remain in a user-selected orientation until reconfigured to a different orientation by a user.” *Id.* ¶ 60.

*c) Analysis*

*(1) Independent Claim 1*

Petitioner contends that Kiyota discloses a drink container comprising liquid container B having neck B2 with an opening and a cap assembly having base 10 removably coupled to the neck of liquid container B and through-passage 12 as claimed. Pet. 31–33 (citing Ex. 1003 ¶¶ 63, 65, 67, 69; Ex. 1004, 1:4–5, 4:59–62, 4:66–5:12, 5:21–23, Figs. 1, 5–7). Petitioner further contends that Kiyota’s cap assembly comprises a first catch structure (hook-like stopper piece 45) on each lock release button 40. *Id.* at 33–34 (citing Ex. 1003 ¶ 72; Ex. 1004, 6:1–56, Figs. 2, 5).

Petitioner asserts, with reference to Figures 6 and 7 of Kiyota reproduced below with Petitioner’s annotations, that Kiyota discloses the claimed mouthpiece assembly, including mouthpiece tube 30, coupling tube 13, and openable lid 20, which function together to allow a user to drink liquid from the container in a dispensing configuration and seal the mouthpiece assembly in a stowed configuration. *Id.* at 34–35 (citing Ex. 1003 ¶¶ 74, 75; Ex. 1004, 9:4–17, 9:34–46, 11:23–31, Figs. 6, 7).



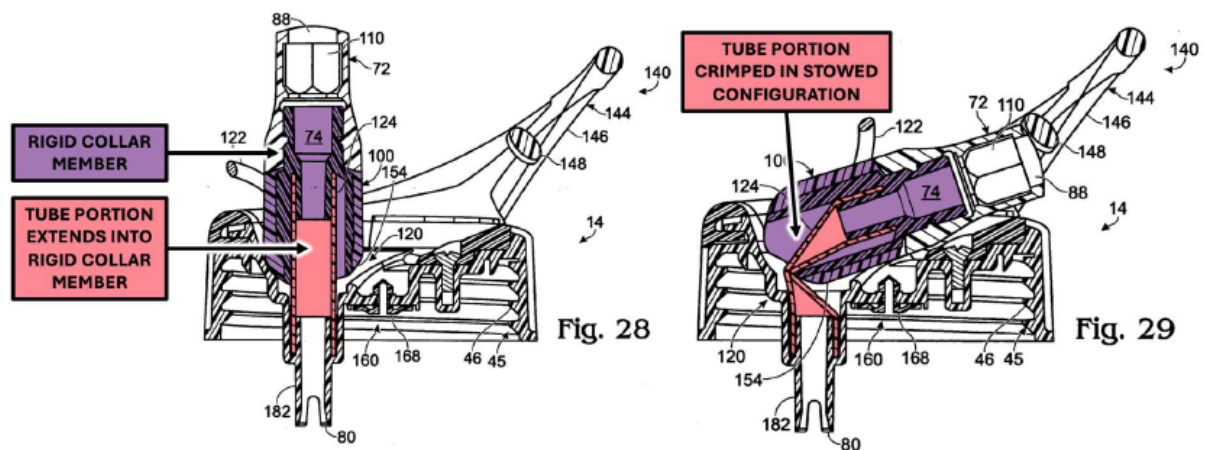
Figures 6 and 7 reproduced above depict Kiyota's cap assembly in the dispensing and stowed configurations, respectively, with the annotations added to identify coupling tube 13, mouthpiece tube 30, and openable lid 20, highlighted in red, which collectively constitute the mouthpiece assembly.

Petitioner contends that Kiyota's mouthpiece assembly extends through the through-passage, defines a liquid passage with an inlet and an outlet, and is biased to its dispensing configuration by its elasticity. *Id.* at 35–37 (citing Ex. 1004, 9:29–32, 10:17–23, 11:8–28, Figs. 6, 7). Petitioner also asserts that Kiyota's mouthpiece tube 30 defines at least a portion of the liquid passage and is made of a resiliently deformable material such that it is crimped in the stowed configuration to prevent fluid flow through the liquid passage. *Id.* at 37–39 (citing Ex. 1003 ¶ 79; Ex. 1004, 9:66–67, 10:22–24, Figs. 6, 7). According to Petitioner, Kiyota's mouthpiece assembly also includes a second catch structure (i.e., connecting portions 24) that

selectively engages first catch hook-like stopper pieces 45 to retain the mouthpiece assembly in the stowed configuration. *Id.* at 44 (citing Ex. 1003 ¶ 92; Ex. 1004, 10:33–38, Figs. 2, 5).

Petitioner also contends that Kiyota’s cap assembly includes a user engagement member including a biased sliding member with a user engagement pad (*i.e.*, lock release buttons 40), and a stowing region sized to receive at least a portion of the mouthpiece assembly when in the stowed configuration. *Id.* at 44–48 (citing Ex. 1003 ¶¶ 95, 98–100, 103, 105, 106; Ex. 1004, 4:66–67, 6:1–3, 7:3–4, 7:60–64, 8:66–9:13, 10:13–16, Figs. 4, 5).

Petitioner relies on Choi to teach the claimed “rigid collar member that is pivotally coupled to a portion of the cap assembly and through which the tube portion at least partially extends.” *Id.* at 39–41 (citing Ex. 1003 ¶¶ 83, 84; Ex. 1005 ¶¶ 47, 85, Figs. 25, 28, 29). Specifically, Petitioner contends that Choi’s mount 100, which “may be pivotally moved relative to the base,” is the claimed rigid collar member. *Id.* at 39 (quoting Ex. 1005 ¶ 47). Petitioner also asserts, with reference to Figures 28 and 29 of Choi reproduced below with Petitioner’s annotations, that Choi discloses flexible tube 124 that extends into the rigid collar (*i.e.*, mount 100) and that forms part of Choi’s on/off valve. *Id.* at 40–41 (citing Ex. 1003 ¶ 84, Ex. 1005 ¶ 85, Figs. 28, 29).



Figures 28 and 29 reproduced above depict Choi's cap assembly in the dispensing and stowed configurations, respectively, with the annotations added to identify rigid collar member (mount 100) highlighted in purple, and flexible tube 124 highlighted in red. The annotations of Figure 28 identify where tube 124 extends into rigid collar member 100. The annotations of Figure 29 identify the portion of tube 124 that is crimped in the stowed configuration.

Petitioner asserts that it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kiyota to substitute "Choi's mouthpiece assembly" for "Kiyota's mouthpiece assembly." *Id.* at 43 (citing Ex. 1003 ¶¶ 90, 91). But Petitioner has failed to clearly describe this proposed substitution in the Petition.

Based on Petitioner's definition of Kiyota's mouthpiece assembly to include lid 20, the proposed modification would *not* result in the subject matter of claim 1. The Petition defines Kiyota's mouthpiece assembly as comprising Kiyota's coupling tube 13, mouthpiece tube 30, and openable lid 20. *Id.* at 35. Petitioner's proposed modification would replace Kiyota's mouthpiece assembly (i.e., all three of the mouthpiece assembly

components, including lid 20) with Choi's mouthpiece assembly. If the proposed substitution involves elimination of Kiyota's openable lid 20, then the combination would no longer include the claimed second catch structure 24, which is disposed on Kiyota's lid.

Even were one to interpret the Petition to propose substituting Choi's mount 100, bite-actuated mouthpiece 72, and flexible tube 124 in place of Kiyota's coupling tube 13 and mouthpiece tube 30, Petitioner's reasons for such a modification do not demonstrate a reasonable likelihood of unpatentability for several reasons.

First, Petitioner's reason to modify Kiyota "to provide the advantage of a bite actuated mouthpiece" (Pet. 42) does not explain why one would use Choi's mount 100. Petitioner has not clearly established that to use a bite-actuated mouthpiece requires mount 100. Choi describes that "cap assembly 14 may include a mount 100 to which the bite-actuated mouthpiece is removably mounted, or secured." Ex. 1005 ¶ 46. This description suggests that mount 100 is not a required component for a bite-actuated mouthpiece. Our understanding is supported by Patent Owner's expert, who testified that using Choi's mount as a "rigid collar member" in Kiyota's mouthpiece assembly does not require combining its bite-actuated valve because "the bite-actuated portion has nothing to do with the alleged rigid collar member portion." Ex. 2001 ¶ 119 (citing Ex. 1005 ¶ 46); *see also* Prelim. Resp. 55. Thus, Petitioner has not adequately supported this first reason to modify Kiyota to use Choi's mount 100.

Second, the Petition fails to address how Kiyota's lid 20, and in particular presser piece 25, would interact with the substituted mouthpiece of Choi. We agree with Patent Owner that the proposed substitution would create potential leakage due to presser piece 25 of Kiyota's lid 20 applying

undesired compressive forces to, and thereby inadvertently opening, the bite-actuated mouthpiece. Prelim. Resp. 56 (citing Ex. 2001 ¶ 120). The slit in a bite-actuated mouthpiece is opened by compressing the sidewalls to deform the mouthpiece. Ex. 1005 ¶ 52. Kiyota's presser piece 25 is designed to push mouthpiece tube 30 into storing portion 16 Kiyota's cap. Ex. 1004, 10:1–4. Thus, replacing Kiyota's mouthpiece assembly with Choi's to include a bite-actuated mouthpiece would likely result in the presser piece 25 on lid 20 compressing the sides of the bite-actuated mouthpiece and opening the valve. Ex. 2001 ¶ 120. Any "improved leak protection" (Pet. 43) achieved by Choi's bite-actuated valve could be defeated when such a valve is used in Kiyota's cap assembly.

Third, Petitioner's proffered reason to use Choi's pivotable rigid collar member for "more precise control over the orientation of Kiyota's mouthpiece portion" (*id.*) creates a critical disadvantage of eliminating Kiyota's one-touch operation, which fundamentally changes Kiyota's principle of operation. Ex. 1004, 2:50–55 (describing an object of the invention is to provide a lid openable "by one touch"). Kiyota's elastic, biased tube 30 automatically opens lid 20 and returns the mouthpiece to its deployed orientation when a user presses lock release buttons 40 to unfasten switching devices M1, M2. *Id.* at 3:11–12, 9:4–13, 11:18–23. As noted by Patent Owner's expert, substituting Choi's manually positionable mount 100 in place of Kiyota's elastic, biased tube 30 negates Kiyota's one-touch operation. Ex. 2001 ¶¶ 115–118, 121; *see also* Prelim. Resp. 56. The Petition does not address the loss of Kiyota's one-touch deployment, or explain persuasively how the proposed modification that results in loss of this one-touch deployment would be viewed by a POSITA as an improvement.

Also, Petitioner's proffered reason to use Choi's pivotable rigid collar member for "more precise control over the orientation of Kiyota's mouthpiece portion" relies on a misreading of Kiyota. Specifically, Petitioner's expert mistakenly asserts that "Kiyota relies on the weight of 'mouthpiece portion 31,' an optional component, to achieve the most comfortable angle. Ex. 1003 ¶ 85 (citing Ex. 1004, 9:18–24). The cited portion of Kiyota describes that when the mouthpiece portion 31 is inserted on the end of mouthpiece tube 30, the tube is slightly bent by the weight of the mouthpiece portion 31, so that the portion 31 can be easily taken in the mouth. Ex. 1004, 9:18–24. Kiyota also describes, however, that "even if there is no mouthpiece portion 31, sucking and drinking is not inconvenient." *Id.* at 9:22–24. We do not read Kiyota to rely on optional piece 31 for orientation of the mouthpiece. Instead, Kiyota relies on the tilt of first coupling tube 13a and the elastic bias of mouthpiece tube 30 for the proper orientation of the mouthpiece. *Id.* at 5:39–41 (describing tilt of first coupling tube 13b), 9:13–16 ("Since the first coupling tube 13b is tilted in the direction apart from the hinge portion 70 at the open end, the end portion of the mouthpiece tube 30 is projected at the position far from the openable lid 20 (FIG. 6)").

For these reasons, Petitioner fails to show a reasonable likelihood that a POSITA would have a reason to combine the teachings of Kiyota and Choi in the manner proposed in the Petition. Accordingly, Petitioner has not met its burden to show a reasonable likelihood that claim 1 is unpatentable as obvious over Kiyota and Choi.

(2) *Dependent Claims 3, 5–8, 18, and 19*

Petitioner’s additional arguments and evidence regarding claims 3, 5–8, 18, and 19, which depend from claim 1, do not remedy the deficiency in Petitioner’s arguments for claim 1. *See id.* at 48–54, 66–70. Accordingly, for the same reasons discussed above in our analysis of claim 1, Petitioner fails to show a reasonable likelihood that any of claims 3, 5–8, 18, and 19 are unpatentable as obvious over Kiyota and Choi.

(3) *Claims 10–17*

Petitioner contends that claims 10–17, which depend from claim 1, would have been unpatentable as obvious over Kiyota, Choi, and Ribarits. Pet. 54–66. Petitioner’s additional arguments and evidence do not remedy the deficiencies in the combination of Kiyota and Choi discussed above in connection with claim 1. Accordingly, for the same reasons discussed above, Petitioner fails to show a reasonable likelihood that any of claims 10–17 would have been unpatentable as obvious over Kiyota, Choi, and Ribarits.

*E. Ground 2: Alleged Obviousness Over Park and Ribarits*

Petitioner contends that independent claim 1, and claims 3, 5–8, 10–13, and 15–19 depending therefrom, would have been obvious over Park and Ribarits. Pet. 70–119. For the reasons discussed below, Petitioner has failed to establish a reasonable likelihood that a POSITA would have had a reason to combine the teachings of Park and Ribarits, as proposed in the Petition. We provide below a brief overview of the cited references and a discussion of the deficiency in Petitioner’s assertion of unpatentability.

*1. Overview of Park*

Park is titled “Portable water bottle with a straw.” Ex. 1006, code (54). Park relates to a water bottle having a button that a user presses to open the lid and automatically protrude a straw. *Id.* at 1. Figure 2 of Park, reproduced below, illustrates a water bottle according to one embodiment. *Id.* at 4.

FIG. 2

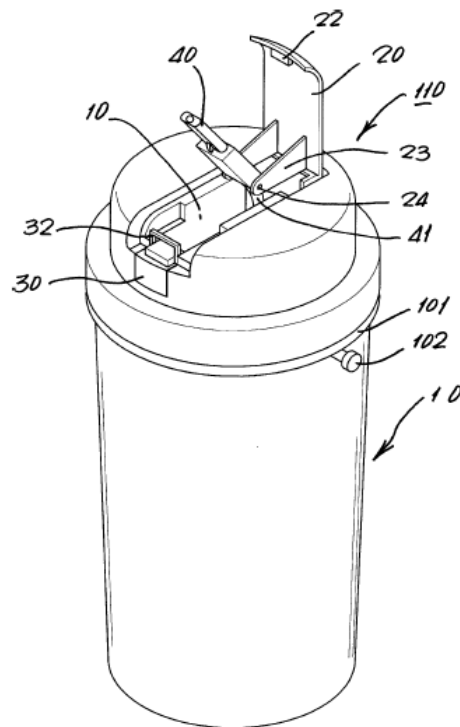


Figure 2 of Park depicts water bottle 100 having inlet 101 and lid 110 screwed onto inlet 101. *Id.* Cover 20, which is hinged, opens and closes over operating chamber 10 formed on the upper side of lid 110. *Id.* at 3–4. Cover 20 includes protrusion 22 formed at the lower part of the front surface. *Id.* at 4. A locking means includes operating button 30 having hook 32 that engages with protrusion 22 for locking and unlocking cover 20. *Id.*

Figure 3 of Park, reproduced below, is an exploded view of lid 110.

FIG. 3

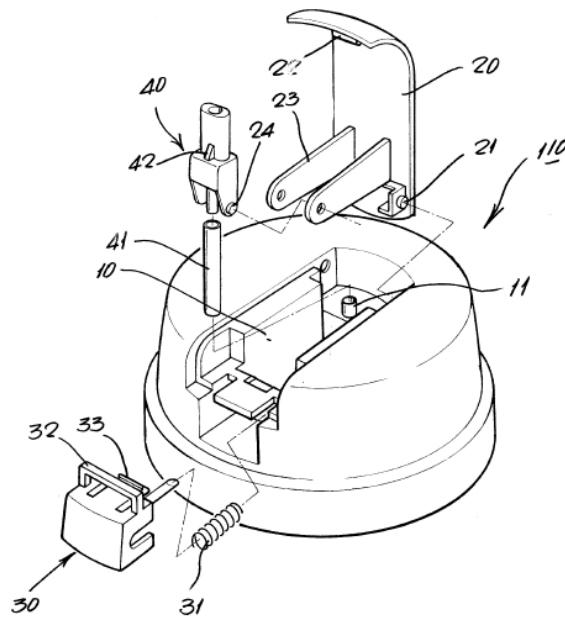


Figure 3 depicts rigid straw 40 and connecting hose 41, which is formed of a flexible, soft, elastic material. *Id.* Connecting hose 41 connects on one end to discharge hole 11 and on the other end to straw 40. *Id.*

Figures 5 and 6 of Park, reproduced below, are views of lid 110 in different configurations.

FIG. 5

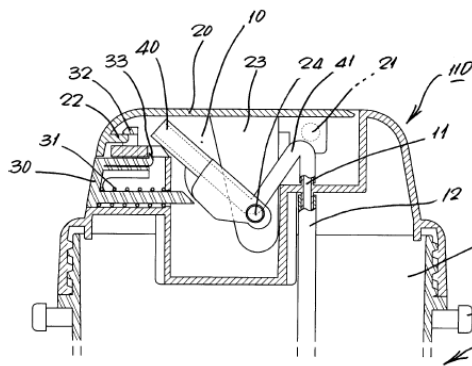


FIG. 6

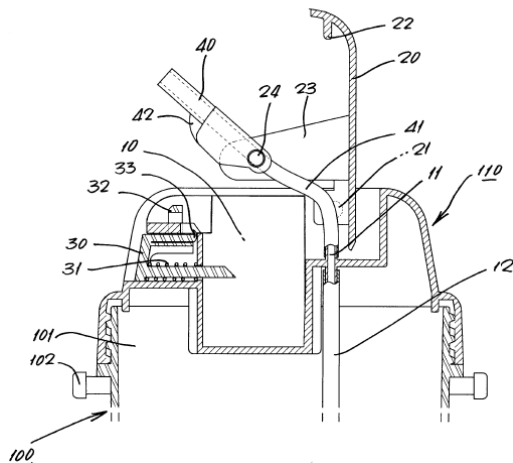


Figure 5 (left) shows lid 110 with cover 20 closed, and Figure 6 (right) shows cover 20 open. When hook 32 is disengaged from protrusion 22, the elastic force of connecting hose 41 causes cover 20 to open and straw 40 to protrude, as shown in Figure 6. *Id.* at 4–5.

## 2. Overview of Ribarits

Ribarits is titled “Drinking Device” and “relates to a drinking device which enables a drink to be drunk in a pleasant, hygienic manner, and can be both opened and closed with one hand.” Ex. 1009, codes (54), (57).

Ribarits’s drinking device includes pivoting spout 3. *Id.* at 2–3. Figure 1 of Ribarits, reproduced below, provides perspective views of a drinking device for a bottle. *Id.*

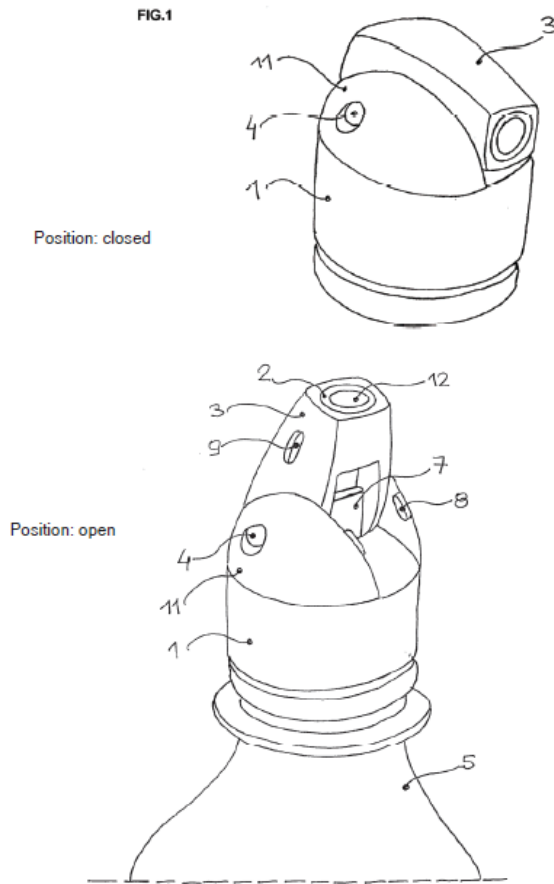


Figure 1 of Ribarits reproduced above provides two views of a drinking device showing drinking spout 3 in a closed position (top) and an open position (bottom). *Id.* at 2–3. The drinking device also includes closing cap 1 having threads for screwing onto a bottle and sealed tubular element 2 made of rubber or latex. *Id.* Closing cap 1 includes lateral parts 11, to which drinking spout 3 is movably fixed by two axial pins 4. *Id.* at 3.

Figure 3 of Ribarits, reproduced below, provides cross-sectional and top-down views of the drinking device. *Id.* at 2.

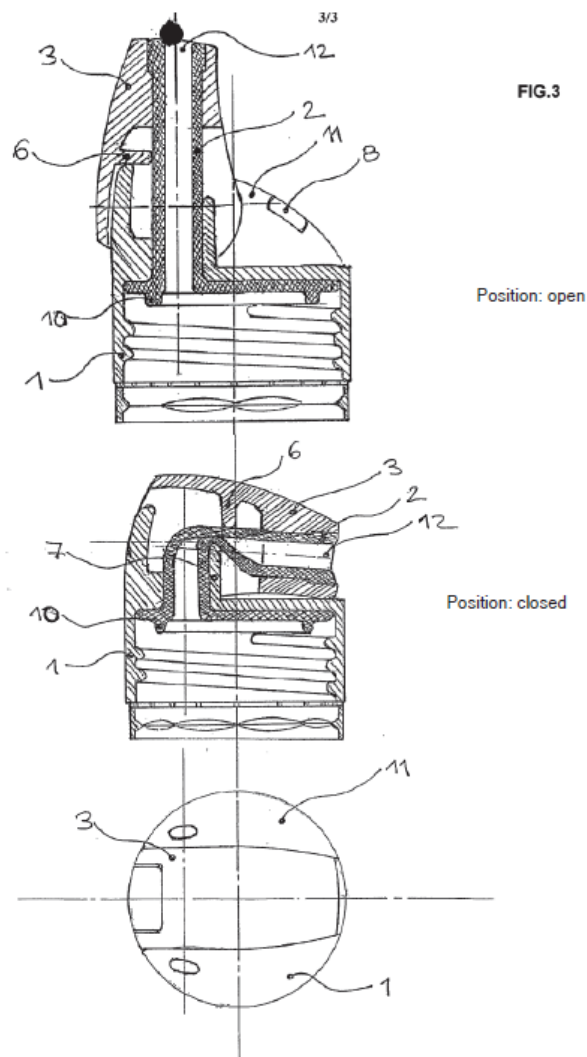


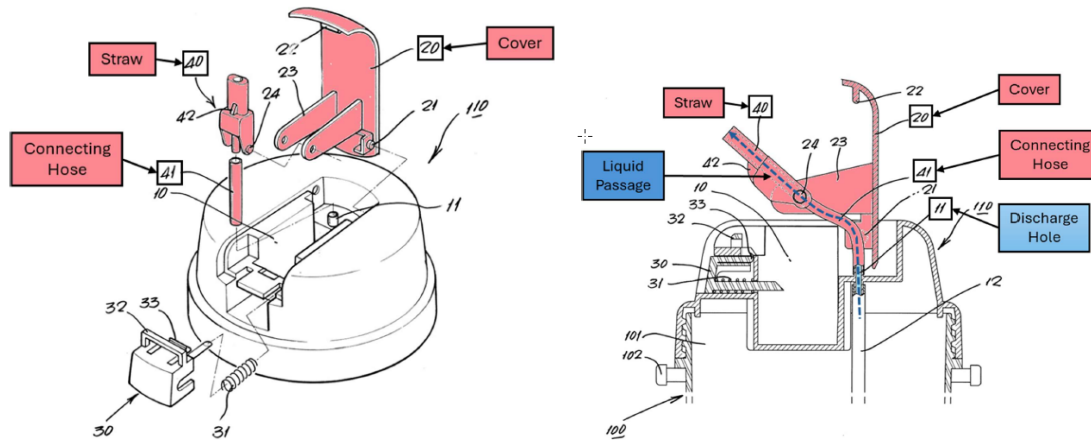
Figure 3 of Ribarits shows three vertically-aligned views of the drinking device, including cross-sectional views of drinking spout 3 in an open position (top), a closed position (middle), and a top-down perspective view (bottom). *Id.* With drinking spout 3 in the open position, sealed tubular element 2 is straightened so that liquid can be withdrawn from the bottle. *Id.* Pivoting drinking spout 3 downward to the closed position bends sealed tubular element 2 to prevent liquid from exiting the bottle. *Id.* To prevent accidental opening, the drinking device also includes a securing mechanism in the form of knobs 8 on lateral parts 11 of closing cap 1 that engage corresponding recesses 9 in drinking spout 3. *Id.* at 2–3.

### 3. Analysis

#### a) Independent Claim 1

Petitioner contends that Park discloses a liquid container 100 having a neck 101 and a cap assembly 110 with a base removably coupled to the neck and including a through-passage (i.e., discharge hole 11) as claimed. Pet. 78–80 (citing Ex. 1003 ¶¶ 210, 213, 217; Ex. 1006, code (57) (Abst.), 4, Figs. 1, 3, 4). Petitioner further contends that Park’s cap assembly comprises a first catch structure (i.e., hook 32) and a second catch structure (i.e., protrusion 22) and a user-release mechanism (i.e., sliding, spring-biased operating button 30). *Id.* at 82–84, 93–96 (citing Ex. 1003 ¶¶ 220–223, 258–259, 262–265; Ex. 1006, 4–5, Figs. 3, 5, 6).

Petitioner asserts, with reference to Figures 3 and 6 of Park, reproduced below with Petitioner’s annotations, that Park discloses a mouthpiece assembly, including straw 40, connecting hose 41, and cover 20, which define a liquid passage. *Id.* at 84–86 (citing Ex. 1003 ¶¶ 229; Ex. 1006, 4, Figs. 3, 6).



Figures 3 (left) and 6 (right) depict an exploded view of Park's cap assembly and a view of the cap assembly in the dispensing configuration, respectively, with annotations added to identify cover 20 and connecting hose 41, straw 40, and discharge hole 11 and a liquid passage defined by these components.

Petitioner acknowledges that Park’s mouthpiece assembly does not extend through the through-passage (i.e., discharge hole 11). *Id.* at 86 (citing Ex. 1003 ¶ 230). Petitioner contends, with reference to Ribarits’s Figures 2 and 3, reproduced below, that Ribarits’s mouthpiece assembly includes drinking spout 3 and sealed tubular element 2, which extends through a through-passage to define a liquid passage from the container to the user. *Id.* at 86–87 (citing Ex. 1009, 2, Figs. 2, 3).

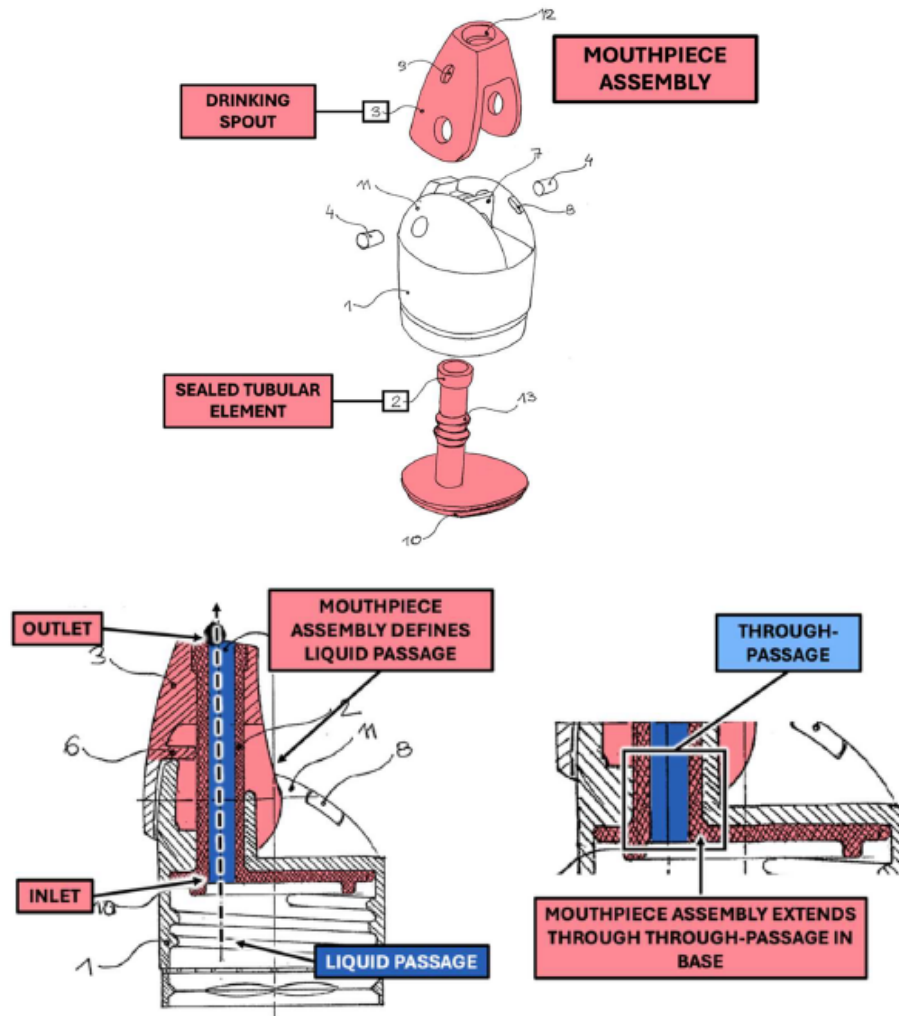


Figure 2 (top) depicts an exploded view of Ribarits's cap assembly with the annotations added to identify drinking spout 3 and sealed tubular element 2 highlighted in red that Petitioner asserts collectively form a mouthpiece assembly. Figure 3 depicts a cross-sectional view (bottom left) and an enlarged cross-sectional view of the through-passage (bottom right) of Ribarits's cap assembly in a dispensing configuration, with annotations added to depict how tubular element 2 defines a liquid passage, highlighted in blue.

Petitioner asserts that each of Park's and Ribarits's cap assemblies can be selectively configured between a dispensing and a stowed configuration,

and that when in the stowed configuration, the flexible tube that defines at least a portion of the liquid passage is crimped to restrict the flow of liquid. *Id.* at 88–90 (citing Ex. 1003 ¶¶ 234–237; Ex. 1006, 2, Figs. 5, 6). Petitioner also asserts that each of Park and Ribarits discloses “wherein the mouthpiece assembly is biased to the dispensing configuration.” *Id.* at 89 (citing Ex. 1003 ¶¶ 238–240; Ex. 1006, 4–6; Ex. 1009, 2). Petitioner further contends that each of Park and Ribarits discloses a stowing region to receive at least a portion of the mouthpiece assembly in the stowed configuration. *Id.* at 96–97 (citing Ex. 1003 ¶¶ 267–270; Ex. 1006, 5, Figs. 3, 5; Ex. 1009, Fig. 1).

Petitioner relies on Ribarits to teach the claimed “rigid collar member that is pivotally coupled to a portion of the cap assembly and through which the tube portion at least partially extends.” *Id.* at 90–93 (citing Ex. 1003 ¶¶ 250–256; Ex. 1006, Figs. 1–3) (asserting that Park’s straw 40 is pivotally coupled to the cap assembly, but acknowledging that Park’s connecting hose 41 does not extend through straw 40). Specifically, Petitioner contends, “a POSITA would have understood Ribarits’ ‘drinking spout 3’ to constitute the claimed rigid collar member.” *Id.* at 93 (citing Ex. 1003 ¶ 255).

As to the combination of these prior art references, Petitioner contends that “[a] POSITA would have been motivated to modify Park to incorporate the mouthpiece assembly of Ribarits” including replacing Park’s straw 40 and connecting hose 41 with Ribarits’s rigid collar member (i.e., drinking spout 3) and a tube portion (i.e., sealed tubular member 2) to extend through both Park’s discharge hole 11 (i.e., through-passage) and the rigid collar member to define a liquid passage from the container to the user. *Id.* at 74–75 (citing Ex. 1003 ¶¶ 191–204). Specifically, Petitioner contends that “[a] POSITA would have recognized Ribarits’ one-piece construction,

as opposed to Park’s multi-component construction, to be a routine engineering choice” that would have “resulted in fewer parts, thereby improving efficiency and reducing manufacturing costs.” *Id.* at 75–76 (citing Ex. 1003 ¶ 196). Petitioner also asserts that “a POSITA would have recognized that a single piece would eliminate the connection point between Park’s straw [40] and hose [41], thereby eliminating the risk of inadvertent detachment of the straw and connecting hose during use.” *Id.* at 76 (citing Ex. 1003 ¶ 197). Petitioner asserts also that “a POSITA would have recognized that the mouthpiece assembly could be designed to fit through, and provide a tight seal with, Park’s ‘discharge hole 11’” and thus “eliminate the risk of inadvertent detachment of the connecting hose during use of the device.” *Id.* (citing Ex. 1003 ¶ 198).

Petitioner’s proposed modification to use Ribarits’s “one-piece construction” is not clear. Petitioner proposes that it would have been obvious to a POSITA to replace two pieces of Park (i.e., rigid straw 40 and flexible connecting hose 41) with two pieces of Ribarits (i.e., rigid drinking spout 3 and flexible, sealed tubular member 2). *Id.* at 74–75. However, we fail to see, and Petitioner has not adequately addressed, how any benefit of fewer parts and reduced manufacturing costs from a “one-piece construction” would be achieved from Petitioner’s proposed modification to replace two parts of Park for two parts of Ribarits. *See* Prelim. Resp. 80–81 (citing Ex. 2001 ¶ 147).

To the extent “one-piece construction” refers only to Ribarits’s sealed tubular member 2 such that Petitioner is discussing advantages, such as eliminating risk of inadvertent detachment, achieved from replacing Park’s rigid straw 40 and flexible connecting hose 41 with Ribarits’s flexible, sealed tubular member 2, these reasons fall short because Petitioner does not

adequately explain why a POSITA would have been led to make such a modification. *See* Pet. 76–77 (citing Ex. 1003 ¶ 199) (asserting that once Park’s rigid spout 40 and flexible connecting hose 41 are replaced with a single, flexible tubular member, then it would have been obvious to add Ribarits’ drinking spout 3).

Petitioner points to several asserted “benefits” achieved by adding a rigid collar member, including that: (1) the rigid spout could be molded with the same shape as the portion of Park’s straw 40 that is coupled to cover 20 to preserve overall functionality of cap assembly, (2) the rigid collar would provide support for the more flexible single-piece tube, and (3) the single-piece tube could be inserted through and removed from the rigid spout for “cleaning, maintenance, or replacement.” *Id.* at 77 (citing Ex. 1003 ¶¶ 200–202).

These reasons are not adequate to show a reasonable likelihood of unpatentability. As to the first purported benefit that the spout could be molded into a straw shape, this assertion explains how a POSITA could implement the proposed modification, but fails to explain why. *See* Prelim. Resp. 81 (citing Ex. 2001 ¶ 148) (“simply because a POSITA allegedly *could* have molded Ribarits’s drinking spout to the same shape as Park’s straw does not provide a motivation to do so”).

As to the second purported benefit that the rigid spout would provide support for the flexible straw, again the assertion explains the result of the proposed modification but fails to adequately establish that such support would be necessary or explain what would have led a POSITA to make this modification. Further, it is only because Petitioner proposed to replace Park’s rigid straw 40 and flexible tube 41 combination with a single, flexible tube that such additional support from a rigid collar for the mouthpiece is

allegedly beneficial. Thus, Petitioner proposes to add a rigid collar to solve a problem created by the proposed modification to replace Park's rigid straw 40 and flexible tube 41 combination with a single, flexible tube.

As to the third purported benefit, the Petition lacks adequate evidence to support an assertion that a POSITA would recognize Ribarits's design as providing for enhanced "cleaning, maintenance, or replacement." Petitioner cites to paragraph 202 of its expert declaration for support, but this paragraph parrots the assertion in the Petition without citing any evidence or providing an explanation to support this assertion. Ex. 1003 ¶ 202. Further, because Petitioner is replacing Park's two-piece design with Ribarits's two-piece design, a POSITA would need to disassemble the same number of components to clean and maintain the mouthpiece assembly. *See* Ex. 2001 ¶ 151 (Ribarits's "two-piece design does not offer fewer components than the two pieces in Park (the connecting hose and straw) that petitioner suggests it replace"). Indeed, as noted by Patent Owner's expert, it appears that Ribarits's design would likely be more cumbersome than Park's mouthpiece assembly to disassemble and clean because Ribarits's sealed tubular element has "several projecting sealing rings" that would require disassembly of the cap for cleaning, maintenance, or replacement of parts, while Park's straw 40 and hose 41 could be pulled apart and separated from the discharge hole 11 in the cap when the lid is raised. *Id.* (citing Ex. 1009, 3 (claim 2); Ex. 1006, Fig. 4).

For the reasons discussed above, Petitioner fails to show sufficiently that a POSITA would have had a reason to combine the teachings of Park and Ribarits, as proposed in the Petition. Accordingly, Petitioner has not met its burden to show a reasonable likelihood that claim 1 is unpatentable as obvious over Park and Ribarits.

*b) Dependent Claims 3, 5–8, 10–13, and 15–19*

Petitioner’s additional arguments and evidence regarding claims 3, 5–8, 10–13, and 15–19, which depend from claim 1, do not remedy the deficiency in Petitioner’s arguments for claim 1. *See* Pet. 100–119. Accordingly, for the same reasons discussed above in our analysis of claim 1 (*see supra* § II.F.3.a), Petitioner fails to show a reasonable likelihood that any of claims 3, 5–8, 10–13, and 15–19 are unpatentable as obvious over Park and Ribarits.

*F. Ground 3: Alleged Obviousness Over Park, Ribarits, and Kiyota*

In the remaining ground, Petitioner contends that claim 14, which depends from claim 1, would have been unpatentable as obvious over Park, Ribarits, and Kiyota. Pet. 119–121. Petitioner’s additional arguments and evidence advanced in the Petition do not cure the deficiency in the combination of Park and Ribarits discussed above in connection with the third ground. Accordingly, for the same reasons discussed above, Petitioner fails to show a reasonable likelihood that claim 14 would have been unpatentable as obvious over Park, Ribarits, and Kiyota.

### III. CONCLUSION

For the foregoing reasons, the information presented in the Petition and accompanying evidence does not establish a reasonable likelihood that Petitioner would prevail in showing the unpatentability of at least one of the challenged claims.

### IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is *denied*; and

FURTHER ORDERED that no *inter partes* review is instituted.

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Patent 10,165,879 B2

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