

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TROVE BRANDS, LLC,

Petitioner

v.

CAMELBAK PRODUCTS, LLC,

Patent Owner

IPR2025-00140
U.S. Patent 11,851,250

**PATENT OWNER'S RESPONSE
PURSUANT TO 37 C.F.R. § 42.107**

TABLE OF CONTENTS

I.	Introduction.....	1
II.	The ‘250 Patent	2
A.	Claims	3
B.	Specification	3
C.	Prosecution History.....	7
1.	Examination of the ‘250 Patent	8
2.	<i>Ex Parte</i> Reexamination of Parent ‘255 Patent.....	9
III.	Petitioner’s Grounds and Cited References	15
A.	Nakajima.....	16
B.	Ribarits.....	22
IV.	Level of Ordinary Skill in the Art.....	27
V.	Claim Construction	28
A.	“mouthpiece” (claims 1, 7, 13)	28
B.	“two joints that define a pivotal axis for pivotal movement of the pivotal mount” (claims 1, 7, 13)	31
C.	“a mouthpiece [coupled to the mount outlet of]/[disposed on] the pivotal mount for pivotal movement with the pivotal mount” (claims 1, 7, 13).....	38
VI.	Petitioner Has Failed to Prove Unpatentability of Any of the Challenged Claims by a Preponderance of the Evidence.....	53
A.	Ground 1 Fails Because Nakajima Does Not Disclose the <i>Mouthpiece’s</i> Required <i>Pivotal Movement with the Pivotal Mount</i> of the Claims ...	53
1.	Nakajima Does Not Disclose the <i>Mouthpiece’s</i> Required <i>Pivotal Movement with the Pivotal Mount</i>	53

2.	Given the Deficiencies in Nakajima, Petitioner Cannot Prevail on Any Claim as to Ground 1	72
B.	Grounds 2 and 3 Fail Because Ribarits Does Not Disclose or Render Obvious a <i>Mouthpiece</i> or the Required Relationship Between the <i>Mouthpiece</i> and <i>Pivotal Mount</i>	73
1.	Ribarits Does Not Disclose a “Mouthpiece” That Defines the “Dispensing Outlet”.....	73
2.	Ribarits Does Not Disclose the Required Relationships Between the <i>Mouthpiece</i> and the <i>Pivotal Mount</i>	77
3.	Given the Deficiencies in Ribarits, Petitioner Cannot Prevail on Any Claim as to Grounds 2 and 3	81
4.	Claims 3, 7-15, and 16-18 Should Be Confirmed Based on the Failure of Grounds 2 and 3 Alone	82
VII.	Conclusion	82

PATENT OWNER’S UPDATED EXHIBIT LIST

Exhibit No.	Description
2001	Declaration of Michael Jobin, dated March 14, 2025 in Support of Patent Owner Preliminary Response (“Jobin POPR Decl.”)
2002	File History from <i>Ex Parte</i> Reexamination Control No. 90/015,192 regarding U.S. Patent No. 10,676,255
2003	Japanese Patent App. Pub. No. 2001-294252 to Toudou
2004	<i>Curriculum Vitae</i> of Michael Jobin
2005	Merriam-Webster Dictionary - “mouthpiece”
2006	Institution Decision in IPR2024-01137 regarding U.S. Patent No. 10,676,255
2007	American Heritage Dictionary – “pivot”
2008	Cambridge Dictionary – “pivot”
2009	Oxford Concise English Dictionary – “pivot”
2010	McGraw-Hill Dictionary of Scientific and Technical Terms – “pivot”
2011	Merriam-Webster Dictionary – “pivot”
2012	Science Facts – “Rotational Motion”
2013	Halliday & Resnick – Fundamentals of Physics Textbook
2014	U.S. Patent No. 10,676,255 (“the ’255 patent”)
2015	U.S. Patent Application Publication No. 2005/0029271 to McDonough (“McDonough”)
2016	Declaration of Michael Jobin, dated September 16, 2025, in Support of Patent Owner’s Response (“Jobin POR Decl.”)
2017	Merriam-Webster Dictionary - “with”
2018	Transcript of Deposition of Dr. Glenn Vallee (IPR2024-01137), dated April 4, 2025

2019	Young & Freedman – University Physics Textbook, 15th Edition (Excerpt)
2020	Sciencing – “Rotational Motion (Physics): What Is It & Why It Matters”
2021	Transcript of Deposition of Dr. Glenn Vallee (IPR2025-00140), dated September 12, 2025

I. INTRODUCTION

Petitioner challenges claims 1–18 of U.S. Patent No. 11,851,250 (“the ’250 patent”), based on two primary references: Nakajima and Ribarits. The ’250 patent is generally directed to drink containers having a “cap assembly” that includes a mouthpiece coupled to (or disposed on) a pivotal mount for “*pivotal movement with the pivotal mount.*” Nakajima fails to disclose this limitation. Further, the claims require a “mouthpiece” that defines “the dispensing outlet” and that is either “coupled to” or “disposed on” the pivotal mount. Ribarits fails to disclose these limitations.

First, Ground 1 relies solely on Nakajima as allegedly disclosing the mouthpiece’s claimed requirement of “pivotal movement with the pivotal mount,” which itself must be coupled to the cap assembly base “at two joints that define a pivotal axis for pivotal movement of the pivotal mount.” Nakajima fails to disclose a mouthpiece that satisfies this requirement. The alleged *mouthpiece* of Nakajima identified by Petitioner does not move pivotally with the pivotal mount about its pivotal axis defined by the joints. Nakajima’s alleged *mouthpiece* does not pivotally move with the pivotal mount, because it only rotates about a different axis and does not rotate about the claimed “pivotal axis” about which the pivotal mount rotates. Instead, Nakajima’s mouthpiece moves translationally, not pivotally (i.e., rotationally) relative to the “pivotal axis,” just like the McDonough prior art that was

distinguished by Patent Owner during reexamination of a parent patent to the '250 patent as not moving pivotally about a pivotal axis because it moves translationally upward and downward relative to the alleged axis. In addition, Nakajima's alleged *mouthpiece* also does not pivotally move "with" the pivotal mount because it rotates in a direction opposite to that of the alleged pivotal mount, which is away from and not "with" the pivotal mount. All of Petitioner's challenges under Ground 1 fail on this basis.

Second, Grounds 2 and 3 also fail. First, the structure in Ribarits that allegedly defines the "dispensing outlet" is not a "mouthpiece" because it is not designed for a user to put his or her mouth on it to draw liquid from the container and, thus, not a "mouthpiece." Second, Ribarits's alleged "mouthpiece" is neither "coupled to the mount outlet of the pivotal mount" as required by claim 1 nor "disposed on the pivotal mount" as required by claims 7 and 13. All of Petitioner's challenges under Grounds 2 and 3 fail on these bases.

For all these reasons, and as further explained below, Patent Owner respectfully requests that the Board affirm the patentability of the challenged claims.

II. THE '250 PATENT

The '250 patent is titled "Drink Bottles" and is generally directed to drink bottles having cap assemblies including mouthpieces attached to a pivotal mount, such that the mount may be pivoted from a stowed to a dispensing position. Ex.1001

at Abstract, 3:4-10, 6:32-36; *see also, id.* at claims 1, 7, and 13. In some embodiments, the patent describes the cap assembly including a dust cover, which at least partially covers the mouthpiece and pivotal mount in the stowed position. *See id.* at Abstract, 17:1-11. The patent describes drink containers with removable cap assemblies that define a fluid conduit, including a mouthpiece coupled to a pivotal mount, and an on/off valve to selectively restrict the flow of drink fluid when the mouthpiece and pivotal mount are in a stowed position. *See id.* at Abstract, 3:2-14, 6:29-39.

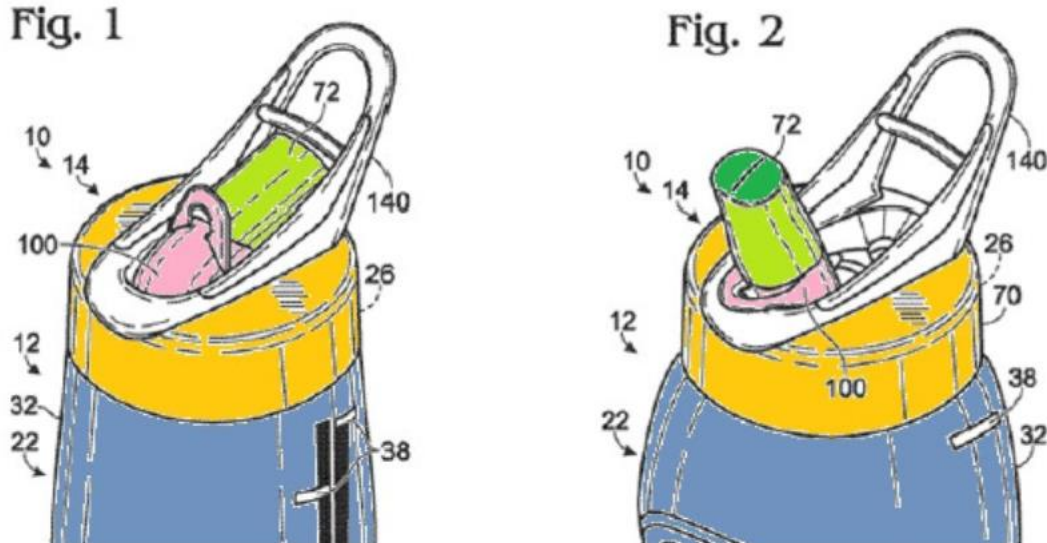
A. Claims

The '250 patent has 18 claims. Ex.1001 at 19:1–22:57. Petitioner challenges claims 1–18, with claims 1, 7, and 13 being the only independent claims. In relevant part, independent claim 1 requires “**a pivotal mount coupled to the cap assembly base at two joints that define a pivotal axis for pivotal movement of the pivotal mount**” and “**a mouthpiece coupled to the mount outlet of the pivotal mount for pivotal movement with the pivotal mount.**”

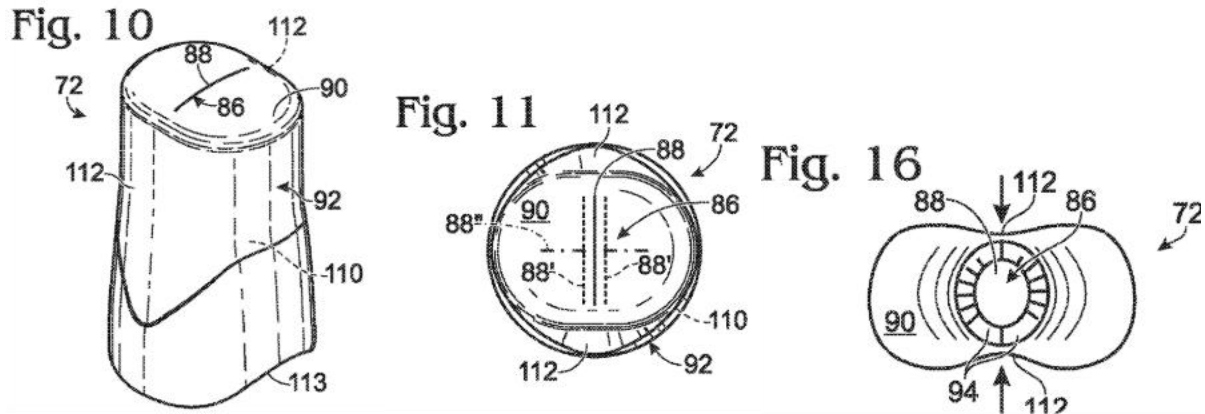
B. Specification

The '250 patent discloses various embodiments of drink containers. For example, the '250 patent describes a drink bottle 10 (blue) with a cap assembly 14 having a base 70 (orange) that includes a pivotal mount 100 (pink) having a

mouthpiece 72 (green), as shown below. Ex.1001 at 2:57–61, 3:2–10, 6:59-62, Figs. 1–2.

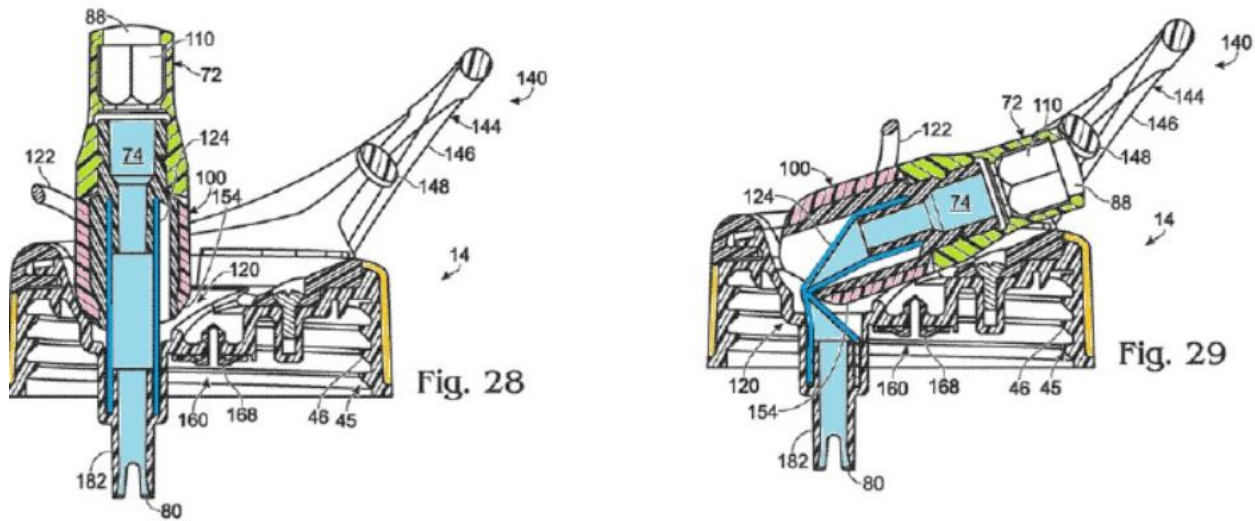


Ex.1001, Figs. 1–2 (annotated); Pet. at 9. The pivotal mount 100 and mouthpiece 72 can pivot together between: i) a stowed position (shown in Figure 1) in which the mouthpiece is not suitably positioned for a user to drink from it, and ii) a dispensing position (shown in Figure 2) in which the mouthpiece is oriented in a suitable position for the user to drink fluid from the bottle. Ex.1001 at 3:11-20, 7:18–41. In some embodiments, the mouthpiece may have an opening, such as a slit, that is biased to a closed configuration but that may be opened to a dispensing configuration by a user biting on it to deform it so that fluid can flow through the opening. Ex.1001 at 8:7-12, 8:44–67, Figs. 10–16.



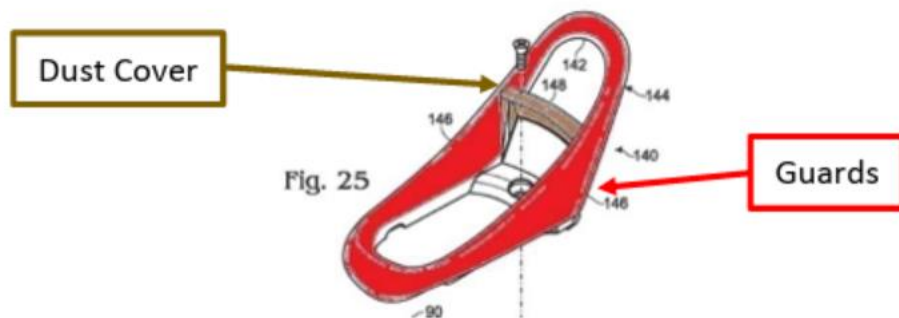
Ex.1001, Figs. 10, 11 & 16. A benefit of this mouthpiece, in certain embodiments, is that the bottle may be positioned to a desired drinking orientation without any fluid being dispensed until the user bites the mouthpiece. Ex.1001 at 10:4–21.

Some embodiments include a flow-restricting, on/off or shutoff valve in addition (or as an alternative) to such a mouthpiece. Ex.1001 at 10:21–45. This on/off valve can be selectively configured between: i) a closed configuration in which the fluid conduit is obstructed to prevent fluid from flowing from the fluid container to the face of the mouthpiece, and ii) an open configuration in which fluid flows to the face of the mouthpiece and may be selectively dispensed through the mouthpiece. Ex.1001 at 10:46–11:5, 11:32–37. The annotated versions of Figures 28 and 29 below illustrate this open configuration (left) and this closed configuration (right), respectively, of an on/off or shutoff valve implemented using a flexible tube 124 that is crimped when in the stowed configuration and reopened when in the dispensing configuration. Ex.1001 at 18:14–29, Figs. 28–29.



Ex.1001, Figs. 28–29 (annotated); Pet. at 9.

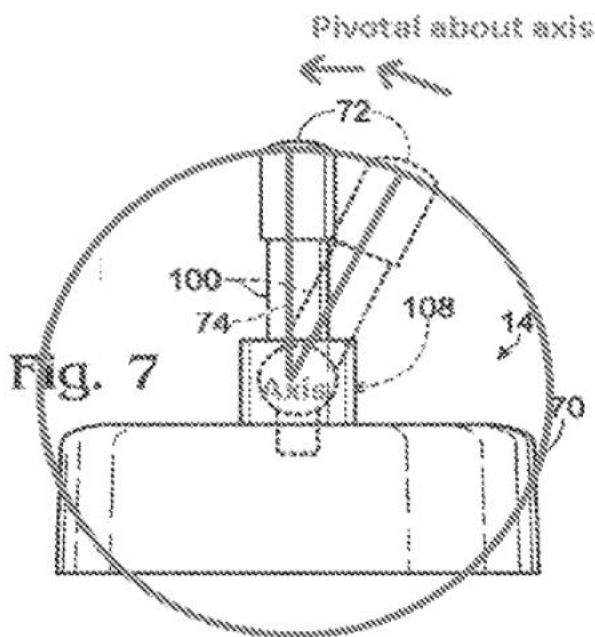
As shown in the annotated version of Figure 25 below, in some embodiments, the pivotal mount 100 includes lateral guards 146 (red) and a dust cover 148 (brown) which at least partially covers the dispensing outlet. Ex.1001 at 17:1-11, Fig. 25.



Ex.1001, Fig. 25 (annotated); Pet. at 10.

Claims 1, 7 and 13 each recite that “a pivotal mount coupled to the cap assembly base at two joints that define a pivotal axis for pivotal movement of the pivotal mount relative to the cap assembly base,” and that the mouthpiece is

“coupled to the mount outlet of the pivotal mount” or “disposed on the pivotal mount” for “pivotal movement *with the pivotal mount* relative to the cap assembly base.” The patentee stated during a reexamination of the parent of the ’250 patent, the ’255 patent, that this limitation is shown, for example, in Figure 7 of the ’255 patent and provided the below annotated version of Figure 7:



Ex.2002 at 179. In describing this figure, the patentee explained that “the mouthpiece 72 is pivotal about an axis defined by the pair of lateral projections as they rotate,” and (labeling the adjustable/pivotal joint 108 as the “axis”) illustrated how the mouthpiece 72 and pivotal mount 100 are pivotal *together* about this common axis. *Id.* (underline in original).

C. Prosecution History

The '250 patent issued from U.S. Patent Application No. 17/565,354 (“the '354 application”) and claims priority through a chain of continuation applications to the application that issued as U.S. Patent No. 7,533,783 and that was filed December 20, 2005. One of the applications in the chain of continuations leading to the '250 patent issued as U.S. Patent No. 10,676,255 (the “'255 patent”) (Ex.2014). This parent patent, the '255 patent, was the subject of Ex Parte Reexamination Request No. 90/015,192 (“the '192 reexamination”), which was filed January 18, 2023. Ex.2002. The '250 patent also claims priority to both U.S. Provisional Application No. 60/706,700, filed August 8, 2005, and U.S. Provisional Application No. 60/670,828, filed April 11, 2005. Ex.1001 at (63), (60). The '250 patent shares a common specification with the '255 patent.

1. Examination of the '250 Patent

The '354 application that matured into the '250 patent was filed on December 29, 2021. Ex.1001 at (22). All claims were rejected as anticipated by McDonough (U.S. Pat. Pub. No. 2005/0029271 (Ex.2015)). Ex.1009 at 5. In response, the Applicant amended claim 1 to require: i) that the mouthpiece be “coupled to the mount outlet” of the pivotal mount, and ii) the pivotal mount “defining a hollow passage, the hollow passage having a mount outlet on the end of the pivotal mount.” Ex.1009 at 15. The Applicant amended claims 7 and 13 to require that the dust cover or dispensing guard “remains stationary when the mouthpiece and the pivotal mount

are selectively pivoted between the stowed position and the dispensing position.” Ex.1009 at 17, 19. The Applicant then argued that these amended limitations of claims 1, 7, and 13 were not disclosed or suggested by McDonough. Ex.1009 at 22-30. In response to the amendment, the Examiner issued a notice of allowance. Ex.1009 at 31.

2. *Ex Parte* Reexamination of Parent ’255 Patent

The ’192 reexamination of the parent ’255 patent was ordered in response to a third-party reexamination request that was assigned a filing date of January 18, 2023. Ex.1002; Ex.2002 at 1-114. The request relied on two primary references, McDonough¹ and Toudou², in asserting fifteen substantial new questions of patentability (“SNQs”). Ex.2002 at 22–25. In response to the request, reexamination was ordered as to all requested claims with regard to all SNQs. *Id.* at 551–561. A rejection of the claims subject to reexamination was issued. *Id.* at 585. The claims were rejected as being: i) either anticipated by McDonough or obvious over McDonough in view of other references, and ii) obvious over Toudou in view of other references. *Id.* at 116-124.

¹ U.S. Patent App. Pub. No. 2005/0029271 to McDonough (Ex.2015).

² Japanese Patent App. Pub. No. 2001-294252 to Toudou (Ex.2003).

In response, the patentee amended claim 1 to require that the pivotal mount comprise “a mount outlet” and to require that the resilient mouthpiece be “engaged with the mount outlet” and also be “removably coupled to” the pivotal mount, as shown by the underlined text in the claim amendment below:

a pivotal mount coupled to the cap assembly base for pivotal movement relative to the cap assembly base, the pivotal mount comprising a mount outlet, wherein the pivotal mount includes a pair of lateral projections, wherein the cap assembly base defines a pair of sockets into which the pair of lateral projections extend;

a resilient mouthpiece engaged with the mount outlet and removably coupled to the pivotal mount for pivotal movement with the pivotal mount relative to the cap assembly base, wherein the resilient mouthpiece is pivotal about an axis defined by the pair of lateral projections as the pair of lateral projections rotate within the pair of sockets;

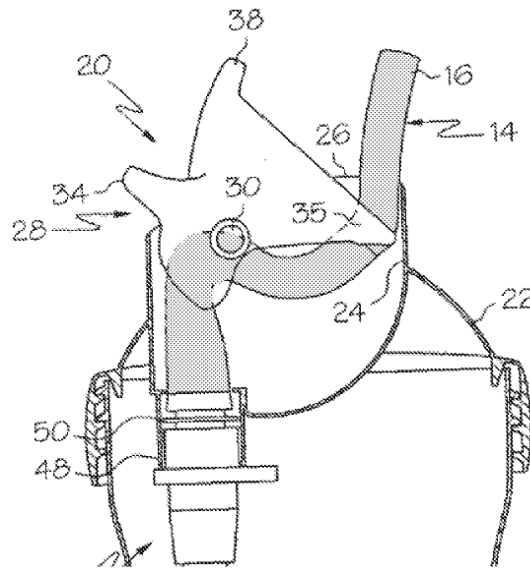
Id. at 168. As discussed above, the patentee also added independent claim 20 with the same language, as well as the additional limitation directed to the “dust cover.”

Id. at 172-173.

The patentee then distinguished McDonough from the amended claim language in two primary ways.

First, the patentee distinguished McDonough by arguing that it did not disclose a resilient mouthpiece that is engaged with a mount outlet of a pivotal mount or a resilient mouthpiece that is removably coupled to the pivotal mount, as required by the amended limitations. *Id.* at 176–179. The Examiner had mapped the claimed “pivotal mount” to the “straw positioning mechanism 20” of McDonough and had

mapped the claimed “mouthpiece” to the first end 16 of the flexible straw 14 of McDonough, which are each shown in the version of Figure 2, as annotated by the patentee (shown below). *Id.* at 178.



Ex.2015, Fig. 2 (annotated); see Ex.2002 at 178. The patentee argued that neither straw 14 nor its end 16 (the alleged mouthpiece) are coupled or removably coupled to the straw positioning mechanism 20 (the alleged pivotal mount), because the straw is merely inserted and “passes through the straw positioning mechanism 20,” rather than being coupled or removably coupled to it. Ex.2002 at 636. The patentee similarly argued that the end 16 of straw 14 is not “engaged with any outlet of the straw positioning mechanism 20,” and, thus, that McDonough failed to disclose a mouthpiece “engaged with a mount outlet” of the pivotal mount, as required by the amended claim language. *Id.*

Second, the patentee argued that McDonough also failed to disclose that the mouthpiece is “pivotal about an axis defined by the pair of lateral projections as the pair of lateral projections rotate within the pair of sockets.” Ex.2002 at 179–181. The Examiner had mapped the claimed “lateral projections” to the “axle projections 30” of McDonough about which the straw positioning mechanism 20 rotates. *Id.* at 131. As illustrated in the below annotated versions of Figure 2 and 3 provided by patentee during the reexamination, the straw’s end 16 (mapped to the mouthpiece) “is not pivotal about an axis defined by the pair of lateral projections” but instead is merely “pulled downwards” with the straw 14. *Id.* at 180 (emphasis in original).

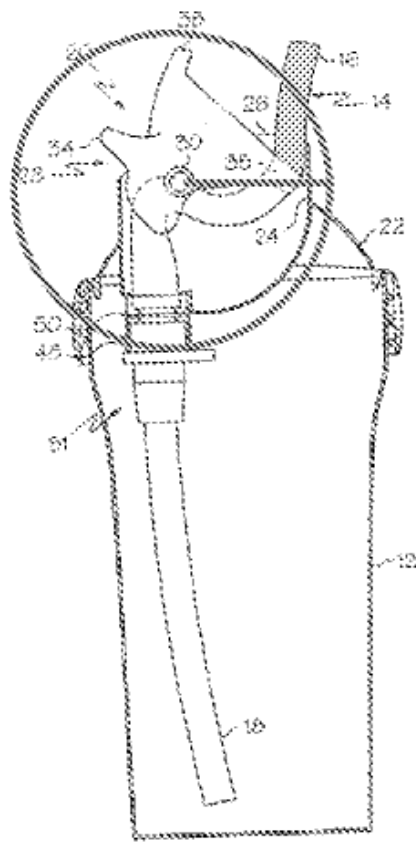


FIG. 2

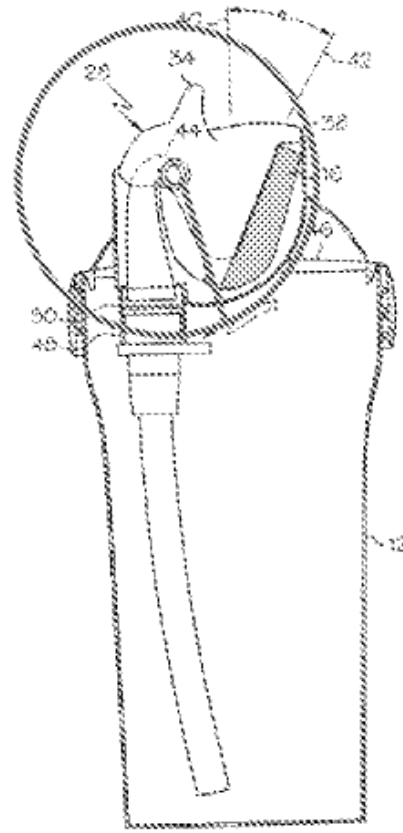
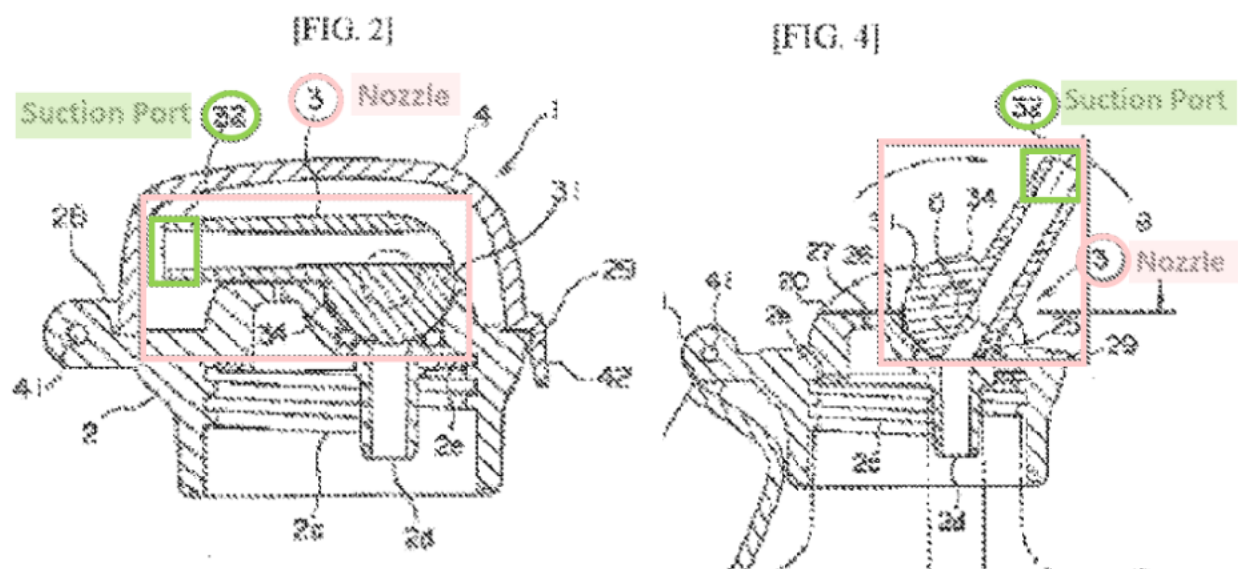


FIG. 3

Id. at 180.

The patentee then distinguished Toudou from the independent claims by arguing, *inter alia*, that it, too, failed to disclose the amended claim limitations. *Id.* at 183-187. The Examiner had mapped the claimed “pivotal mount” to Toudou’s pivoting nozzle 3 (pink below) and had mapped the “mouthpiece coupled to the pivotal mount” to the suction port 32 (green below) at the end of nozzle 3, as shown

in the below annotated versions of Figures 2 and 4 that patentee submitted during the reexamination.³ *Id.* at 183-184.



Id. at 642. The patentee then distinguished Toudou because the suction port 32 of Toudou is an integral part of its nozzle 3 that forms the end of the nozzle—specifically, the patentee argued that Toudou failed to disclose: i) any “mount outlet” of nozzle 3 that is distinct from the “mouthpiece” (mapped to suction port 32) itself, or ii) a “mouthpiece” (suction port 32) that is “engaged with a mount outlet” on the nozzle 3 and that is “removably coupled to” the nozzle 3 (pivotal mount), rather than

³ The annotated figures in the reexamination file history are in black-and-white but Patent Owner has overlaid color for clarity.

just a mouthpiece (suction port 32) that merely “forms an integral portion of the nozzle [i.e., pivotal mount].” *Id.*

The Examiner then issued a Notice of Intent to Issue Reexamination Certificate and explained in a “Statement of Reasons for Patentability and/or Confirmation” that the amendments made by patentee distinguished both McDonough and Toudou. *Id.* at 193-195.

III. PETITIONER’S GROUNDS AND CITED REFERENCES

Petitioner asserts that the challenged claims would have been obvious based on three (3) grounds—specifically, Petitioner argues that: claims 1, 2, and 4-6 are obvious over Nakajima⁴ in view of the knowledge of a POSITA (Ground 1); claims 1, 2, 4-8, 10-14, and 16-18 are obvious over Ribarits⁵ in view of Panicci⁶ and/or the knowledge of a POSITA (Ground 2); and claims 3, 9, and 15 are obvious over

⁴ Japanese Patent Publication No. 2002-211613 to Nakajima (Ex.1004) (English translation).

⁵ International Publication No. WO 2004/063042 to Ribarits et al. (Ex.1006) (English translation).

⁶ U.S. Patent No. 4,485,963 to Panicci (Ex.1007).

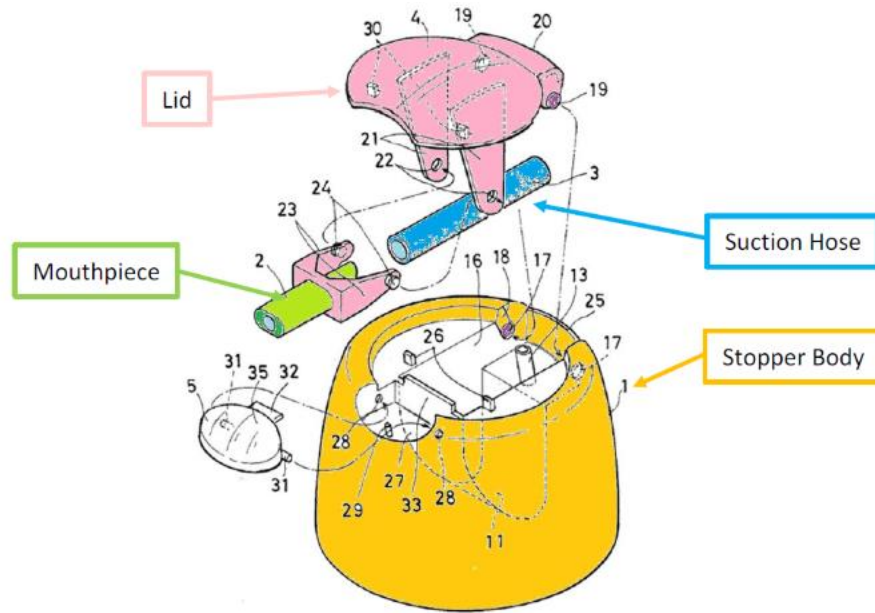
Ribarits in view of Panicci and/or the knowledge of a POSITA, in further view of Hughes⁷ (Ground 3).

A. Nakajima

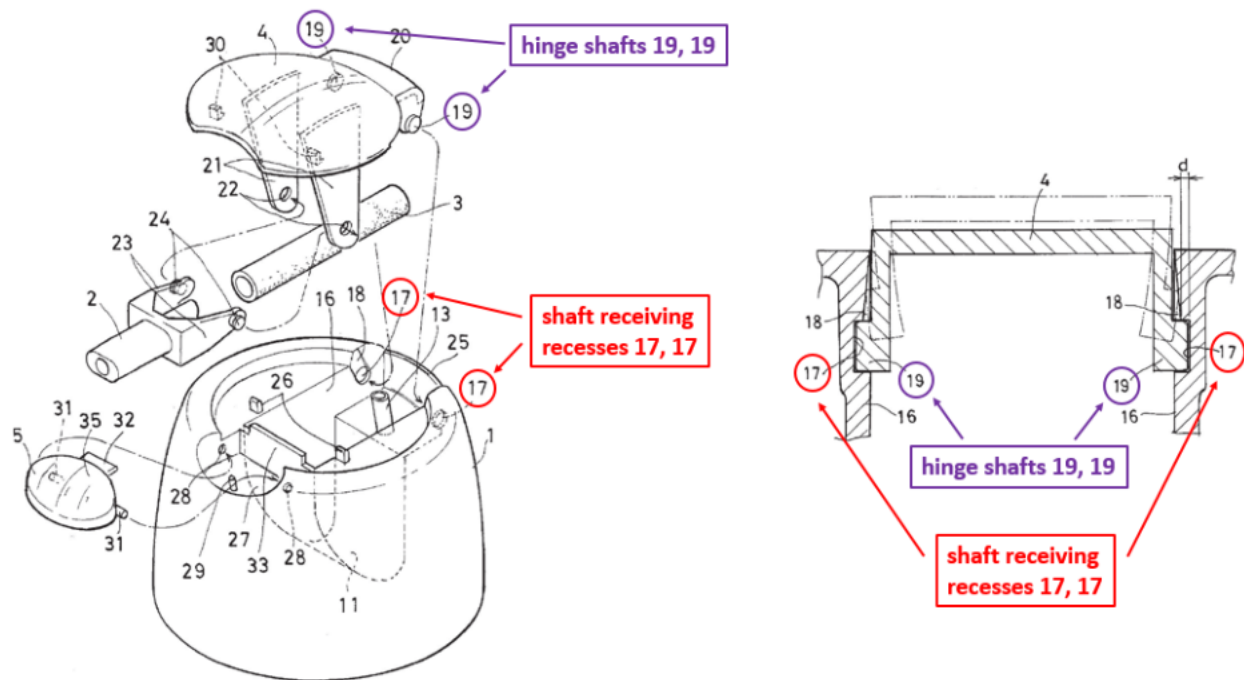
Japanese Patent Publication No. 2002-211613 to Nakajima (Ex.1004) (“Nakajima”) was published on July 31, 2002. Nakajima is directed to a stopper for a liquid container, where the stopper includes a mouthpiece. Ex.1004 at Title, Abstract. The stopper includes a lid attached by a hinge to the stopper where the lid can be removed from the stopper to simplify the process of cleaning the lid. *Id.* at Abstract, [0025], [0028]. For example, the lid can be removed for cleaning by simply applying a slight bending force or horizontal twisting force to detach the lid at the hinge from the stopper. *Id.* ¶¶[0025], [0027]–[0028].

As shown in the below annotated version of Figure 1 of Nakajima from the Petition, Nakajima’s stopper includes a stopper body 1 (orange), a mouthpiece 2 (green), a suction hose 3 (blue), a lid 4 (pink) having a hinge portion 20, and a button 5 that serves as a disengaging means (not colored). Ex.1004 ¶¶[0012], [0016], Fig. 1.

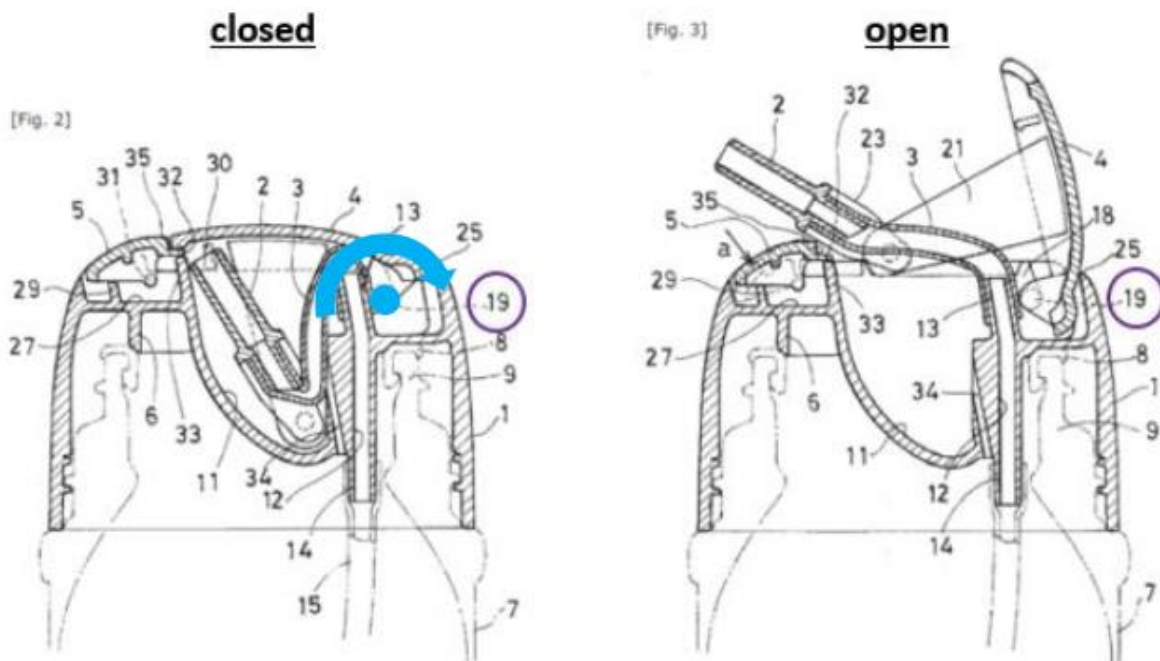
⁷ U.S. Patent No. 6,523,711 to Hughes (Ex.1008).



Pet. at 20 (citing and annotating Ex.1004, Fig. 1). The lid 4 is attached to the stopper body 1 via a hinge that is comprised of: i) the lid 4's hinge shafts 19, 19 (circled purple below) that are “rotatably fitted into” ii) each of the shaft receiving recesses 17, 17 (circled red below) of the stopper body 1, as shown in the annotated version of Figures 1 and 4 below. Ex.1004 ¶¶[0015]–[0016], Fig. 1, Fig. 4.

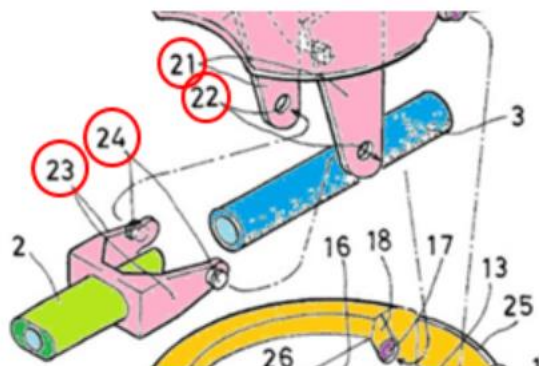


Ex.1004 at Fig. 1 (annotated), Fig. 4 (annotated). As can be seen in Figures 2 and 3 below, this hinge formed from the hinge shafts 19, 19 rotating within the shaft receiving recesses 17, 17 allows the lid 4 to close (Fig. 2, left, below) and open (Fig. 3, right, below) by pivoting about the axis defined by the hinge shafts 19, 19 (purple below) rotating within the shaft receiving recesses 17, 17. Ex.1004 ¶¶[0016]–[0018], [0020], [0022]–[0024], Figs. 1–3. This pivotal movement by the lid about the hinge shafts 19, 19 is shown by the blue arrow below.

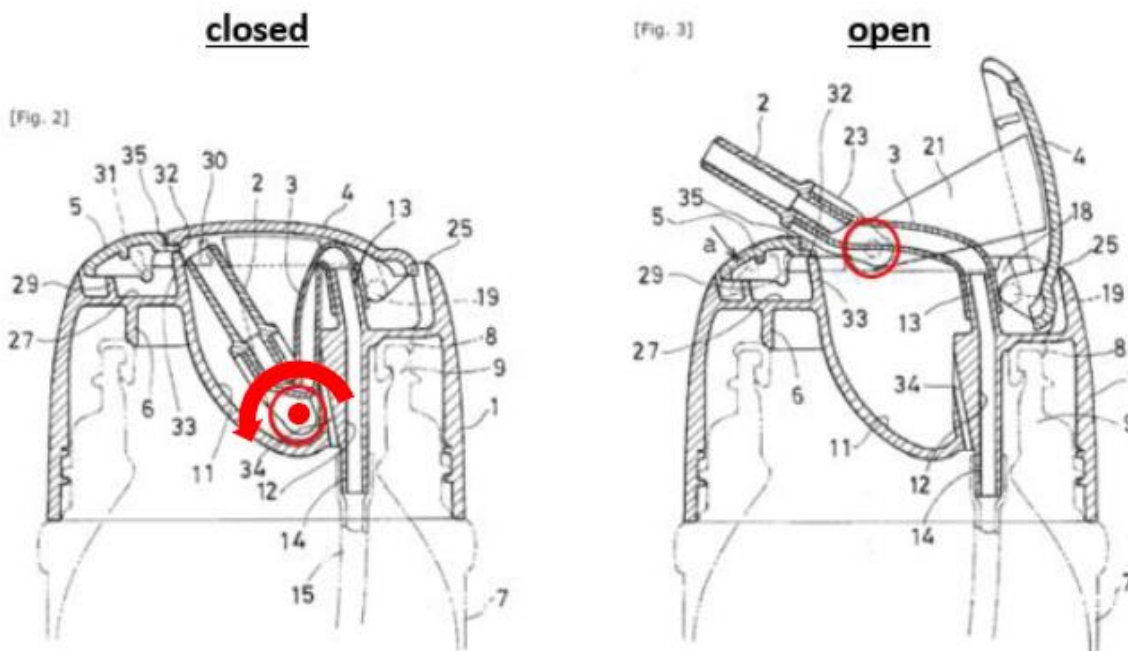


Ex.1004, Figs. 2–3 (annotated).

The mouthpiece 2 includes arms 23 having protrusions 24 that are “rotatably fitted into” holes 22 at the bottom of leg pieces 21 provided on the underside of the lid 4, as shown in the below annotated excerpt of Figure 1, with these components circled in red. Ex.1004 ¶[0016].

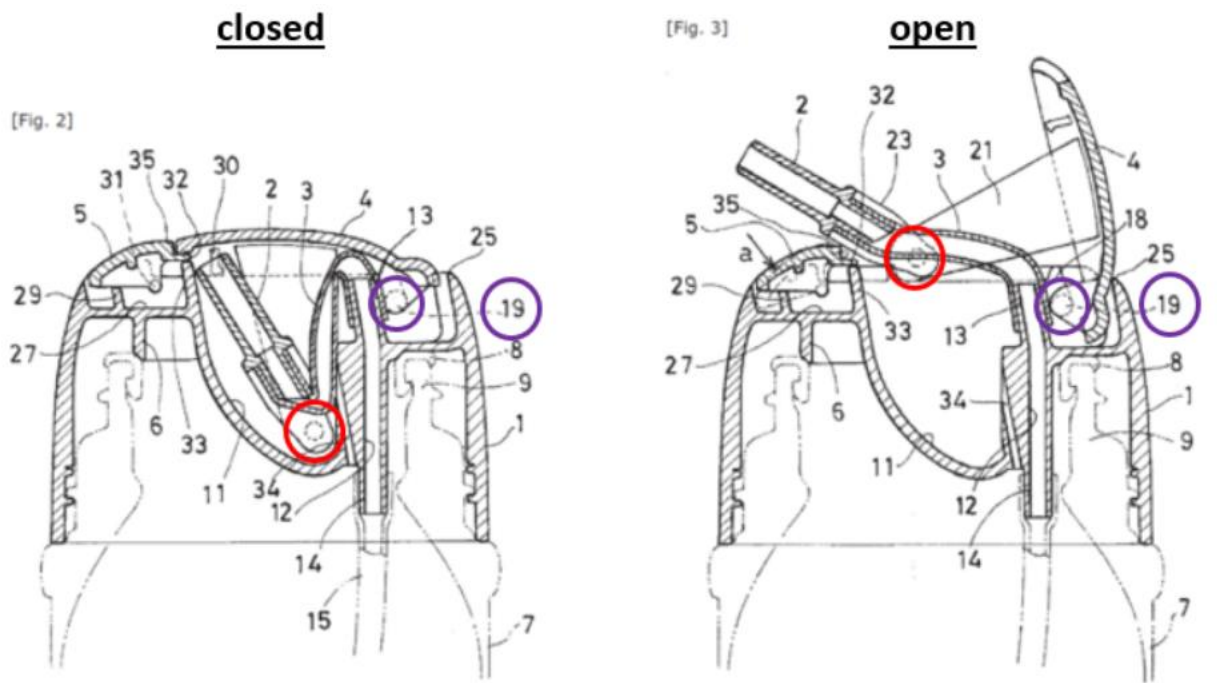


Ex.1004, Fig. 1 (annotated). This configuration causes the mouthpiece to pivot about the axis defined by the protrusions 24 (circled in red below) as they rotate within the holes 22 when the lid 4 is opened and closed—specifically, as shown in Figure 2 below, the mouthpiece pivots clockwise about this axis as the mouthpiece is “pulled in” and “folded into the storage recess 11” as the lid is closed, and, as shown in Figure 3 below, the mouthpiece pivots counterclockwise about this axis (shown by red arrow below) until the mouthpiece “protrudes above the button 5” when the lid is opened. Ex.1004 ¶¶[0018], [0022]–[0024], Figs. 2–3.

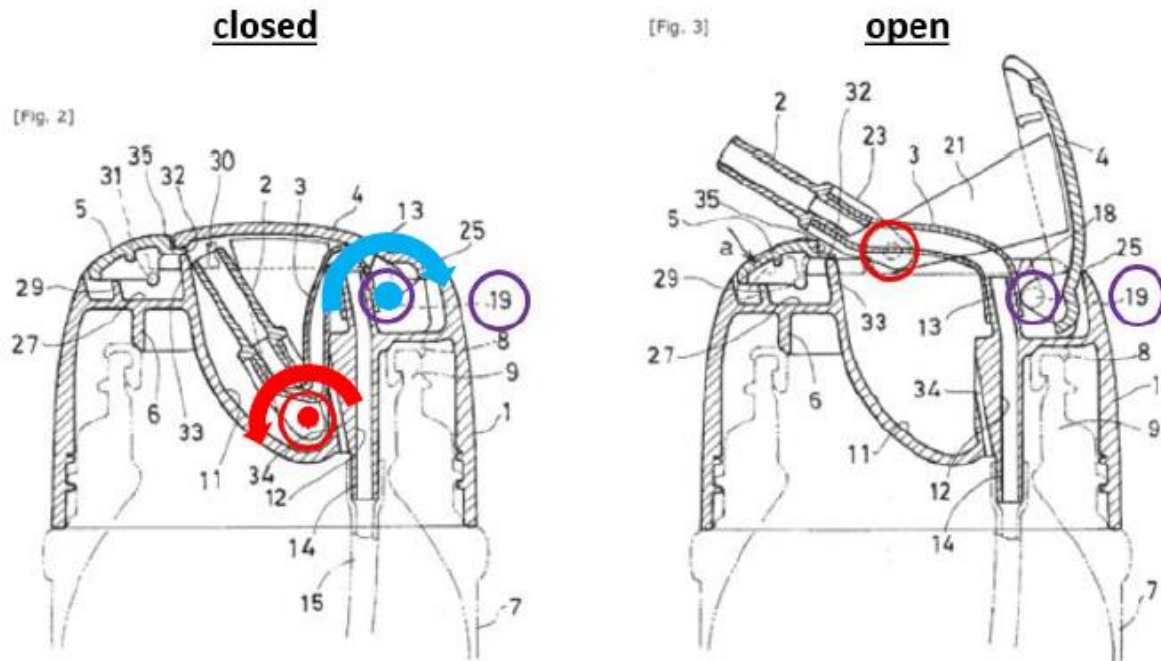


Ex.1004, Figs. 2–3 (annotated). As shown below, the mouthpiece 2 pivots about the axis defined by the protrusions 24 (circled in red below) and does *not* pivot about the axis defined by the hinge shafts 19 (circled in purple below). This is because the

mouthpiece is in contact with the wall of the storage recess 11 during opening and closing and because the mouthpiece is not rigidly attached to lid 4. This prevents the mouthpiece 2 from moving in alignment with the lid 4, thereby preventing it from pivoting about the axis defined by the hinge shafts 19, about which the lid pivots. Ex.1004, Figs. 2–3.



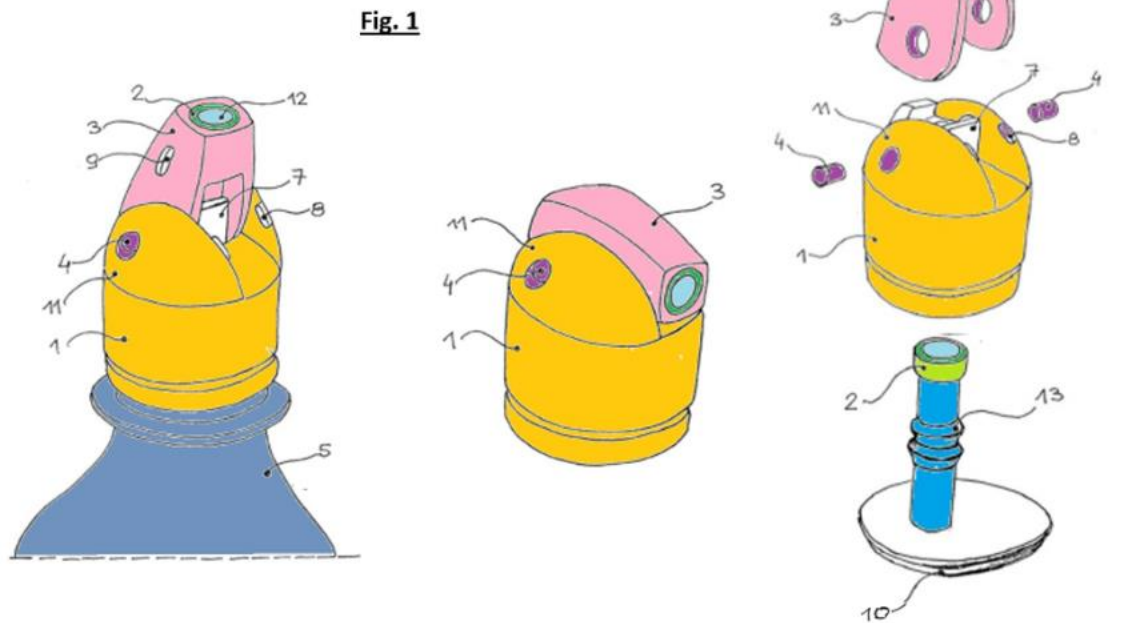
Ex.1004, Figs. 2–3 (annotated). Further, as shown by the annotations below, the lid moves from the closed position to the open position by pivoting in a clockwise direction about the axis defined by the hinge shafts 19 (shown by blue arrow below). As this happens, the mouthpiece 2 pivots in a counterclockwise direction about a different axis, which is defined by the protrusions 24 (shown by the red arrow below).



Ex.1004, Figs. 2–3 (annotated).

B. Ribarits

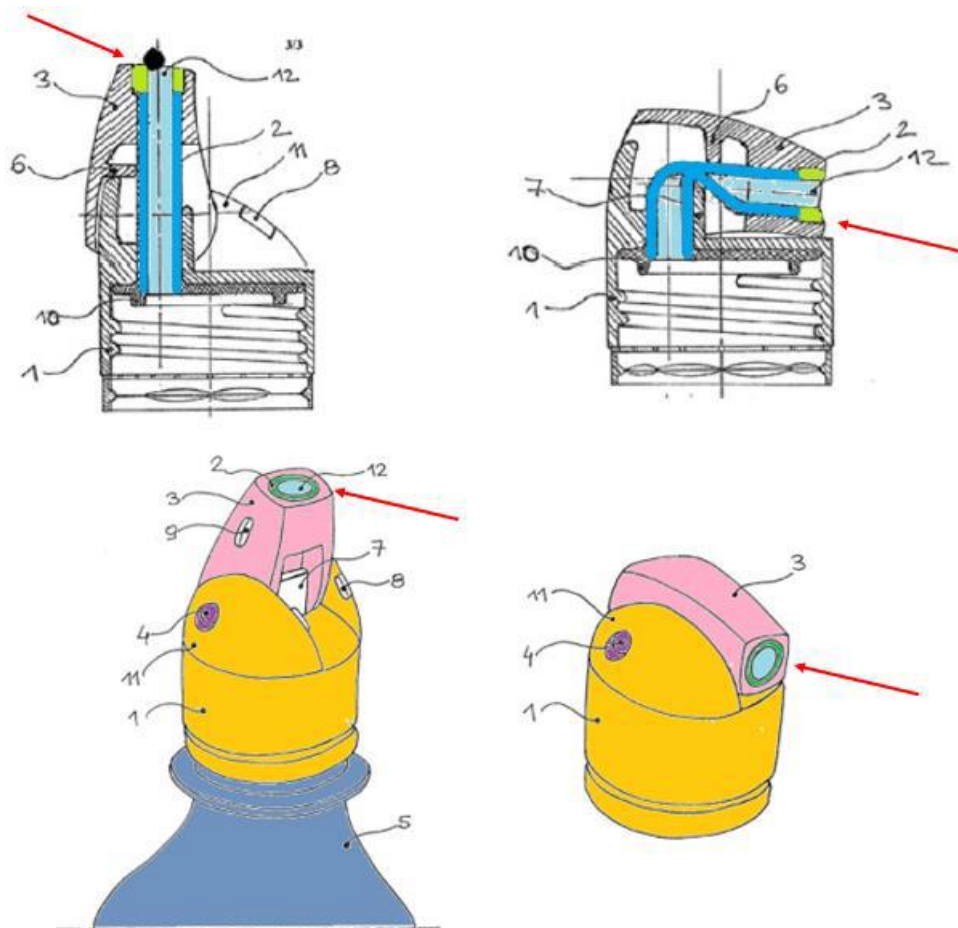
International Publication No. WO 2004/063042 to Ribarits et al. (“Ribarits”) was published on July 29, 2004. Ribarits is generally directed to a drinking device that is designed such that it can be opened and closed with one hand. Ex.1006 at Abstract, 2. The drinking device includes a closing cap 1 (orange), a drinking spout 3 (pink) that rotates about two axial pins 4 (purple), a bottle 5 (dark blue), and a tubular element 2 (light blue & green) that is “inserted into said cap” and also “inserted” in the drinking spout, as shown in the annotated versions of Figures 1 and 2 below. *Id.* at Abstract, 2, claim 1, Fig. 1.



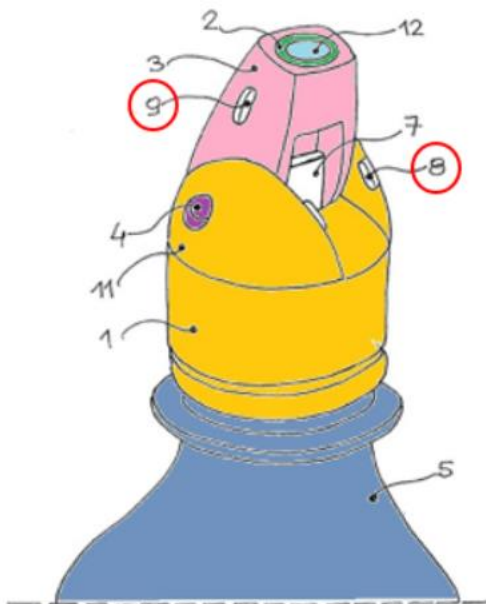
Ex.1006, Figs. 1–2 (annotated). As shown above, the drinking spout 3 can be in an open position (Fig. 1 at left) or in a closed position (Fig. 1 at right). Ex.1006 at 2, Fig. 1. As shown in the annotated version of Figure 2 below, the tubular element 2 is inserted into the cap 1 and drinking spout 3. Ex.1006 at Abstract, 2 (“[A] sealed tubular element of rubber or latex is inserted in both these parts When the drinking spout is pivoted open, the elastic tube inserted therein is straightened and the opening is thus released.”), claim 1 (“the sealed tubular element (2) is inserted into the drinking spout (3)”), Fig. 2.

sealing surface, one or several projecting sealing rings(10)'). The pressure of screwing the cap onto the bottle provides the required tightness to hold the inserted tubular element 2 in place. The tubular element can be made of "rubber, "latex," or "plastics." Ex.1006 at 2, claim 4.

As shown by the red arrows in the annotated versions of Figures 1 and 3 below, the opening (green) of the tubular element 2 is flush with and does not extend beyond the drinking spout 3; and, thus, because the drinking spout 3 shields the tubular element 2, a user is not able to apply force to the tubular element 2 using the user's teeth. Ex.1006, Figs. 1 & 3.



Ex.1006, Figs. 1 & 3 (annotated). As shown below, the cap 1 also includes two knobs 8 that can snap into two recesses 9 on the sides of the drinking spout 3 when the spout is in the closed position as a “securing mechanism” to “prevent an accidental opening of the drinking spout.” Ex.1006 at Abstract, 2, claim 1, Figs. 1–2.



Ex.1006, Fig. 1 (excerpt) (annotated).

IV. LEVEL OF ORDINARY SKILL IN THE ART

A person having ordinary skill in the art would have had 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. Ex.2016, ¶49. Petitioner sets forth a similar, though slightly different, level of ordinary skill in the art. Pet., 15. However, Petitioner fails to show a reasonable likelihood of prevailing on any claim even under the level of ordinary skill in the art Petitioner sets forth, and, thus, Patent Owner discerns no material difference between the definitions provided by the parties for purposes of the Board's decision in this proceeding. Petitioner admits as much when

it suggests that its “Petition does not turn on [its] specific definition of the level of ordinary skill.” Pet., 15.

V. CLAIM CONSTRUCTION

Petitioner does not propose constructions in the Petition for any claim terms in the ’250 patent. *See* Pet., 15; Paper 14, at 10. Nevertheless, as shown below, the Petition relies on an improperly broad understanding of “mouthpiece” and “pivotal movement with the pivotal mount” where “two joints . . . define a pivotal axis for pivotal movement of the pivotal mount.” Patent Owner, therefore, requests that the Board construe these terms, as set forth below:

A. “mouthpiece” (claims 1, 7, 13)

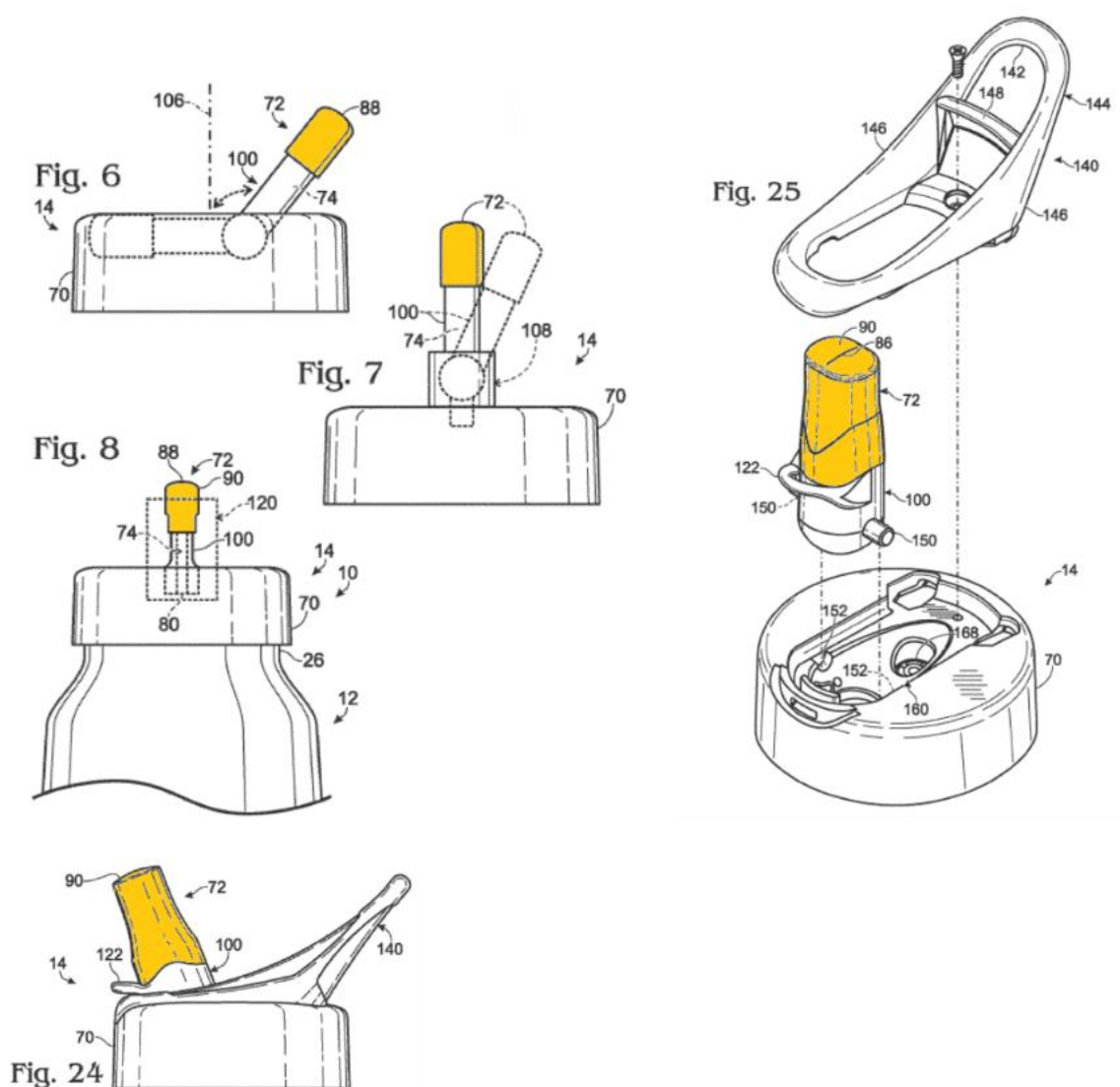
The term “mouthpiece” appears in independent claims 1, 7, and 13 and several dependent claims. Patent Owner requests that the term “mouthpiece” be construed to mean “a part designed for a user to put his or her mouth on to draw liquid from the container.” This claim construction is consistent with the intrinsic and extrinsic evidence.

The plain language of the claims supports this construction. Indeed, the word itself supports the first part of the construction; “mouthpiece”—a compound of “mouth” and “piece”—is a piece (or part) that goes in the mouth. Meanwhile, the text of related limitations supports the second part of the construction. As recited by claims 1, 7, and 13, the claimed “mouthpiece” “defines a portion of the fluid conduit,

including the dispensing outlet.” Ex.1001, 19:30–31, 20:43–44, 21:58–59; Pet., 11. The dispensing outlet is the outlet “through which drink fluid in the fluid conduit may be dispensed from the cap assembly to a user.” *Id.*, 19:12–14, 20:27–29, 21:42–44.

The specification of the ’250 patent further supports this construction. For example, it describes the “mouthpiece” as a portion of the overall cap assembly where the liquid is dispensed to a user drinking the liquid from the drink container. Ex.1001, 3:14–20 (“the mouthpiece is oriented in a suitable position from which a user may draw drink fluid from the drink bottle through mouthpiece 72”). The ’250 patent also describes embodiments of mouthpieces including “a bite-actuated mouthpiece, or valve assembly, 72 upon which a user may bite to configure the mouthpiece from a closed configuration to a dispensing configuration.” *Id.*, 3:4–10. In all embodiments described, the mouthpiece is where a user puts his or her mouth to drink the liquid. *See id.*, 8:45–53 (“[i]n use, the mouthpiece is adapted to be configured to the dispensing configuration by a user placing the mouthpiece in the user’s mouth . . .”), 5:17–24 (describing the user “drinking from the mouthpiece”), Fig. 2, 6:59–62 (describing drink fluid being dispensed through mouthpiece 72), 7:23–26 (discussing “adjustable positioning of the mouthpiece” to “permit a user to adjust the orientation of the mouthpiece to a user-selected drinking orientation”).

In each of these examples of mouthpieces, a POSITA would have understood that a user would be putting their mouth on it to draw liquid from the container. Ex.2016, ¶¶57-62. Further, the figures of the '250 patent consistently depict the mouthpiece (72) as being a straw-like structure designed to allow a user to place their mouth to draw or drink liquid from it. Ex.1001, Figs. 6–8, 24, 25; Ex.2016, ¶61.



Ex.1001, Figs. 6–8, 24, 25 (annotated). The intrinsic evidence thus uniformly supports that the ordinary meaning of “mouthpiece,” in the context of the ’250 patent, is a “part designed for a user to put his or her mouth on to draw liquid from the container.” Ex.2016, ¶¶57-62.

This is further supported by the dictionary definition of “mouthpiece.” At institution, the Board adopted Patent Owner’s proffered dictionary definition from Meriam-Webster, which defines a “mouthpiece” as “a part (as of an instrument) that goes in the mouth or to which the mouth is applied.” Paper 14, 12 (citing Ex.2005). The Board noted that “this definition is consistent with the plain and ordinary meaning of the term which is a compound of ‘mouth’ and ‘piece’” and that “this definition is consistent with the Specification.” *Id.* As such, the extrinsic evidence is consistent with the intrinsic evidence’s usage: a “mouthpiece” would have been understood by a POSITA to be “a part designed for a user to put his or her mouth on to dispense liquid from the container.” Ex.2016, ¶¶57-62.

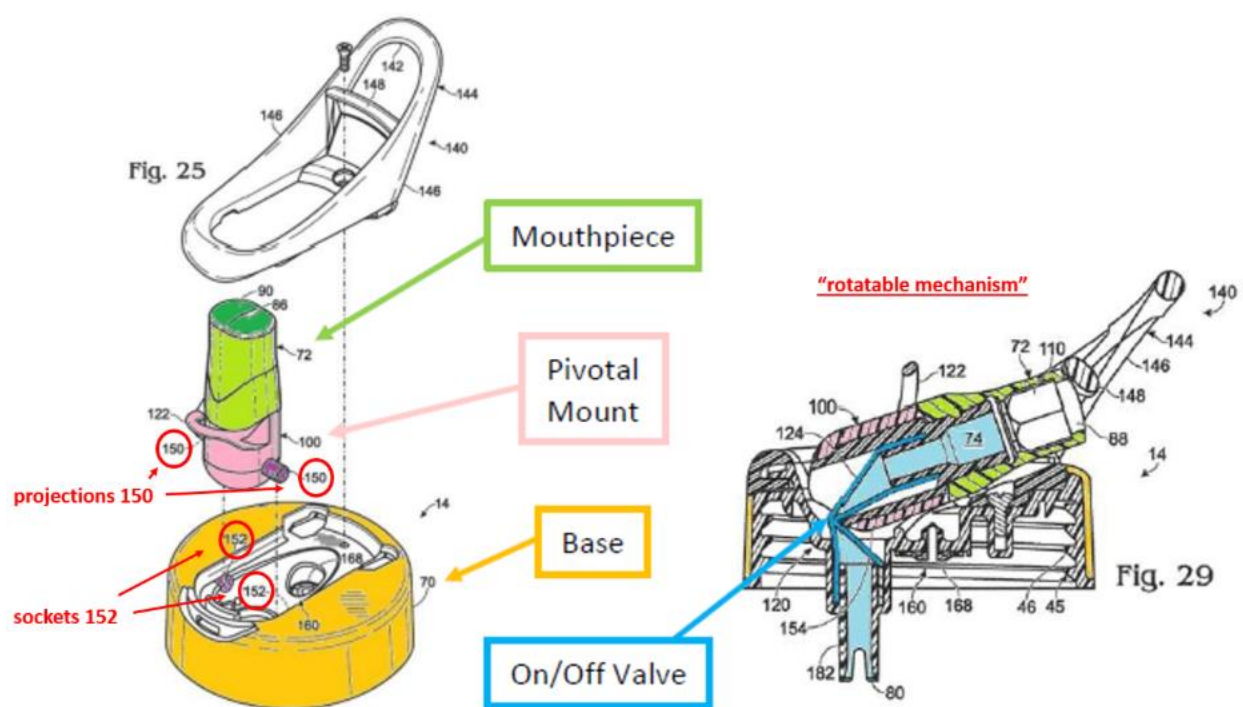
B. “two joints that define a pivotal axis for pivotal movement of the pivotal mount” (claims 1, 7, 13)

At institution, the Board adopted Patent Owner’s proposed construction of this limitation to mean “two joints that define an axis of rotation for rotational motion of the pivotal mount about the axis” and agreed that “[t]his construction is consistent with the Specification, which describes pivoting in the context of rotating” *See* Paper 14, 13. The Board, however, did not acknowledge that “rotational motion,” as

understood by a POSITA from its definition in physics, itself requires a rigid body that maintains a constant distance/radius to the axis of rotation such that it moves in a circular path about the axis because the Board found Patent Owner did not “explain whether a ‘rigid body’ is required here.” *Id.*; Ex.2016, ¶¶69-70. Because the pivotal mount and mouthpiece coupled thereto would be understood to be sufficiently rigid to be a “rigid body” by a POSITA, as explained further below, and because the Board has already found rotational motion is required, the Board should add to its construction to clarify that, as a matter of physics, the requirement of rotational motion means that “a constant distance/radius from the pivotal mount to the axis is maintained.”

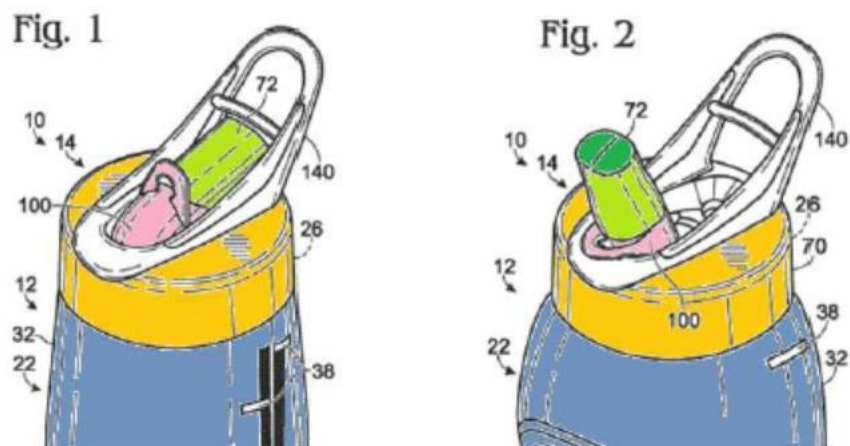
The specification confirms that a pivotal axis for pivotal movement provides for rotational motion about an axis of rotation. Ex.2016, ¶¶64-68. Specifically, the specification describes the “*rotational* position” of the bite-actuated valve assembly, Ex.1001, at 5:9-17, and further describes the ability to adjust the “*rotational* orientation” of the pivotal mount via a pivotal joint that couples the pivotal mount to the cap assembly. *Id.* at 7:47-53. The specification also describes that the on/off valve can be provided via a “*rotatable* mechanism” in which “a portion of the fluid conduit upstream . . . is selectively obstructed until the mouthpiece . . . is *rotated* to a position in which the obstruction no longer prevents drink fluid from passing.” *Id.*, at 12:13-21.

The specification describes that the joints for coupling the pivotal mount to the base may be lateral projections on the mount that are received into and are “*rotatable* within” sockets defined by the base so as to “function as *rotatable supports, or axles*, upon which the mount and any attached mouthpiece may be pivotally moved relative to the base.” *Id.* at 16:50-60. Consistent with this, Petitioner’s annotated versions of Figures 25 and 29 below (with additional annotations in red by Patent Owner) depict the mouthpiece 72 (green) and pivotal mount 100 (pink) being rotatably supported at the joint created by the mount’s projections 150 (red) rotating within the sockets 152 (red) of the base (yellow):



Pet., 3; Ex. 1001, at Figs. 25 & 29 (annotated). As shown in Petitioner's annotated versions of Figures 1 and 2 below, the mouthpiece 72 and pivotal mount 100 rotate

together about the joint created by the projections rotating within the sockets between a closed position (Fig. 1) and an open position (Fig. 2):



Pet., 9; Ex.1001, Figs. 1-2 (annotated). The specification is replete with description of rotational motion about the joint that couples the pivotal mount to the base, and the figures also consistently depict the pivotal mount and mouthpiece engaging in rotational motion together about an axis of rotation. Ex.2016, ¶¶64-68.

This construction is also consistent with the plain and ordinary meaning of the base term “pivot” as revealed by common and technical dictionaries, which all support that a “pivot” is a point about which something rotates or turns. *See* Ex.2016, ¶¶69-70; *see also* Ex.2007 (“A short rod or shaft on which a related part rotates or swings The act of turning on or as if on a pivot. . . . To cause to rotate, revolve or turn.”); Ex.2008 (“a fixed point supporting something that turns or balances . . . to turn or twist”); Ex.2009 (“the central point, pin, or shaft on which a mechanism turns or oscillates”); Ex.2010 (“A short, pointed shaft forming the center and fulcrum

on which something turns, balances, or oscillates”); Ex.2011 (“a shaft or pin on which something turns”).

A POSITA reviewing the ’250 patent would have likewise understood that the claim “pivotal axis for pivotal movement of the pivotal mount” where the pivotal axis is defined by the claimed “two joints” means that the claimed pivotal mount engages in rotational motion about an axis of rotation defined by the two joints. Ex.2016, ¶¶64-68. The concept of rotational motion, which occurs about an axis of rotation, would have been a well understood concept to a POSITA from the basic principles of physics, such as those taught in an undergraduate physics course—a prerequisite to a bachelor’s degree in mechanical engineering degree or equivalent, as set forth above in Section IV (Level of Ordinary Skill). Ex.2016, ¶69. A POSITA would have understood that rotational motion is a type of motion in which all points of a rigid body maintain a constant distance from an imaginary axis (i.e. an axis of rotation) and rotate in circular paths about a common axis with a common velocity. Ex.2016, ¶70 (citing Ex.2012, at 1 (“[R]otational motion . . . is a type of motion in which all points of a rigid body maintain a constant distance from an imaginary axis and rotate in circulate paths about a common axis with a common velocity”)); Ex.2013, at 259 (describing rotation about an “axis of rotation” as requiring that “every point of the body moves in a circle whose center lies on the axis of rotation, and every point moves through the same angle during a particular time interval”).

While the Board at institution construed this limitation as requiring that the pivotal mount engage in rotational motion about an axis of rotation defined by the joints and noted Patent Owner's argument that rotational motion requires a rigid body maintain a constant distance/radius to the axis, the Board found that Patent Owner had not explained that a rigid body was required here. Paper 14, at 13. Because the Board's preliminary construction requires rotational motion about an axis of rotation, a "rigid body" would indeed be required because rotational motion, as defined in physics and understood by a POSITA, requires that a "rigid body" maintains a constant distance from an axis of rotation such that it maintains a circular path about the axis. Ex.2016, ¶¶71-72. A POSITA would have understood that the pivotal mount and mouthpiece in the '250 patent constitute such a "rigid body." For example, the pivotal mount would be understood by a POSITA to be a rigid component, because it is claimed as having structural "joints" that define a pivotal axis and these joints are described as being projections rotating within sockets such that the mount "extends in a fixed orientation" relative to the base. Ex.2016, ¶71; Ex.1001, 16:50-63, Fig. 25, 7:5-9. This fixed orientation allows the mount to be pivoted between a stowed and dispensing configuration. Ex.2016, ¶71; Ex.1001, 15:67-16:15, Figs. 21-27. Therefore, a POSITA would have understood the pivotal mount to be a rigid structural component that maintains its shape sufficiently to allow

it to be deemed a “rigid body” such that the definition of rotational motion from physics applies. Ex.2016, ¶¶71-72.

Further, with regard to the mouthpiece coupled to the pivotal mount, in the absence of external force from the user to compress the mouthpiece, the mouthpiece is, indeed, a “rigid body” that maintains its shape such that the definition of rotational motion from physics also applies to it. Ex.2016, ¶¶71-72. This is because, as confirmed by Petitioner’s expert, the mouthpiece is described as automatically returning to and maintaining its original shape without permanent deformation. Ex.2021, 21:22-22:2 (“[T]he mouthpiece is constructed to automatically return to a closed or sealed configuration.”); *see also* Ex.2016, ¶¶71-72; Ex.1001, at 8:50-51, 8:64-9:6. The ’250 patent explains that “the mouthpiece is constructed to automatically return to its closed, or sealed, configuration when the compressive forces, such as may be applied by a user’s teeth or mouth, are no longer applied” and that “unless forces are being exerted to the mouthpiece to deform the mouthpiece to a dispensing configuration, the mouthpiece will be in its closed, or sealed, configuration.” Ex.1001, at 8:50-51, 8:64-9:6. Because the mouthpiece maintains its shape absent application of force from the user, it can be assumed to be a “rigid body” such that the definition of rotational motion from physics applies, and it, therefore, maintains a constant radius from the axis of rotation. Ex.2016, ¶¶71-72.

Therefore, this rigid body assumption would apply to the mouthpiece, because the mouthpiece is, indeed, “a rigid body,” Ex.2016, ¶¶71-72.

Furthermore, a POSITA would have understood rotational motion, “in which an object turns about an axis,” to be distinct from translational motion, “in which an object moves along a straight or curved line.” Ex.2016, ¶70 (citing Ex.2013 at 258). If a rotating body does not maintain a constant distance from the axis of rotation, then its path will cease to be circular and its motion will be translational, not rotational. Ex.2016, ¶70; *id.* at ¶73.

Therefore, the Board should construe this limitation to mean “two joints that define an axis of rotation for rotational motion of the pivotal mount about the axis such that a constant distance/radius from the pivotal mount to the axis is maintained.”

C. “a mouthpiece [coupled to the mount outlet of]/[disposed on] the pivotal mount for pivotal movement with the pivotal mount” (claims 1, 7, 13)

Patent Owner requests that this term be construed to mean “a mouthpiece [coupled to the mount outlet of]/[disposed on] the pivotal mount that moves with rotational motion about the same axis of rotation defined by the two joints as the pivotal mount in the same direction as the pivotal mount such that a constant distance/radius from the mouthpiece to the axis is maintained.” At institution, the Board noted that “construction of this limitation may be helpful in deciding the

issues of unpatentability” but “determine[d] that the construction of this term would benefit from further briefing during the trial phase of this proceeding.” Paper 14, at 14. The Board further encouraged the parties to brief the construction of the term “with” in this limitation. Paper 14, at 28. Patent Owner’s construction is the proper construction of this limitation. Ex.2016, ¶¶74-88.

While the preceding limitation discussed at Section V.B, *supra*, specifies that the pivotal mount engages in “pivotal movement” about a “pivotal axis” defined by the two joints, this limitation is directed to how the *mouthpiece* coupled to or disposed on the pivotal mount engages in “pivotal movement.” Ex.2016, ¶77. Specifically, the plain claim language indicates that the mouthpiece engages in “pivotal movement *with* the pivotal mount.” Because, as construed above in Section V.B, the “pivotal axis for pivotal movement of the pivotal mount” means “an axis of rotation for rotational motion of the pivotal mount about the axis such that a constant distance/radius from the pivotal mount to the axis is maintained,” the mouthpiece also must move with rotational motion about the same axis of rotation as the pivotal mount in the same direction as the pivotal mount in order to engage in “pivotal movement *with* the pivotal mount.” *See supra* Sec. V.B. And, as discussed above, rotational motion, as defined in physics and as understood by a POSITA, requires maintaining a constant distance/radius from the mouthpiece to the axis of rotation. *See supra* Sec. V.B.

First, the claim language supports this construction. As noted, the claims recite a “pivotal axis for pivotal movement of the pivotal mount.” Ex.1001, 19:21–24, 20:36–41, 21:51–54. And the “pivotal axis” is defined by the “two joints” at which the “pivotal mount [is] coupled to the cap assembly base.” *Id.* No other pivotal axis for pivotal movement is described in the claims. In addition, the claims also recite “a mouthpiece [coupled to the mount outlet of]/[disposed on] the pivotal mount for *pivotal movement with* the pivotal mount.” Ex.1001, 19:27–29, 20:40–42, 21:51–54 (emphasis added). The claim language thus requires that the pivotal movement of the mouthpiece mirrors the pivotal movement of the pivotal mount, which must occur about the “pivotal axis.” Ex.2016, ¶78.

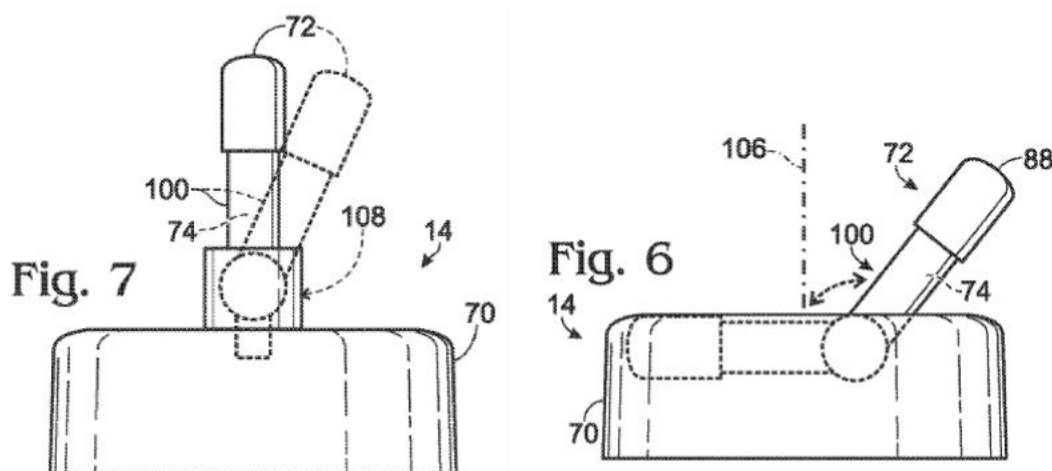
Thus, to move pivotally “with” the pivotal mount, the mouthpiece must also engage in rotational motion about the same axis of rotation, i.e., the claimed “pivotal axis” that is “defined by” the two joints, in the same direction. Ex.2016, ¶78. This is further supported by the dictionary definition of “with.” In this context, Meriam-Webster defines “with” as meaning “*in the direction of*” and “to indicate a participant in an action, transaction, or arrangement.” Ex.2017. The extrinsic evidence is therefore consistent with the intrinsic evidence’s usage: “a mouthpiece [coupled to the mount outlet of]/[disposed on] the pivotal mount for pivotal movement with the pivotal mount” would have been understood by a POSITA to be “a mouthpiece [coupled to the mount outlet of]/[disposed on] the pivotal mount that

moves with rotational motion about the same axis of rotation defined by the two joints as the pivotal mount in the same direction as the pivotal mount such that a constant distance/radius from the mouthpiece to the axis is maintained.” Ex.2016, ¶79. Accordingly, the term “with” reinforces that a POSITA would interpret the claim to require rotational motion of the mouthpiece *and* the pivotal mount about the same axis in the same direction, rather than independent or unrelated motion. *Id.* Thus, the term “with” confirms that the mouthpiece’s motion is not merely contemporaneous motion, but rather requires rotational motion about the same axis in the same direction as the pivotal mount, consistent with the specification’s depiction of a mouthpiece carried by the pivotal mount and rotating about the mount’s same axis. *Id.*; Ex.1001, 19:27–29, 20:40–42, 21:51–54, Figs. 1-2, 6-7.

The Board has already construed “two joints that define a pivotal axis” to require rotational motion about an axis of rotation. Paper 14, at 14. Consistent with that construction and the specification, “with” should be construed to mean “about the same axis in the same direction,” not merely motion that happens at the same time. This construction conforms to ordinary usage of “with” to denote participation in the same action and in the same direction. *See* Ex.2017. As such, to move pivotally “with” the pivotal mount, the mouthpiece must engage in rotational motion in the same direction as (not away from) the pivotal mount, because moving in an opposite

direction away from the pivotal mount would not be moving pivotally “with” the rotational mount. Ex.2016, ¶80.

The '250 specification further supports Patent Owner’s proposed construction. *Id.* Indeed, in every embodiment, the pivotal mount and the mouthpiece pivot together in the same direction about the same pivotal axis defined by the two joints. *See, e.g.*, Ex.1001, at 7:47–53; *see also id.*, at 3:11–13, 7:18–23, 7:59–62, 9:30–33. The figures likewise depict in every embodiment that the pivotal mount and mouthpiece engage in rotational motion together about the same axis in the same direction.



Id., Fig. 7 (showing mouthpiece 72 and pivotal mount 100 rotating about the same pivotal axis defined by joint 108 in the same direction); Fig. 6.

Fig. 1

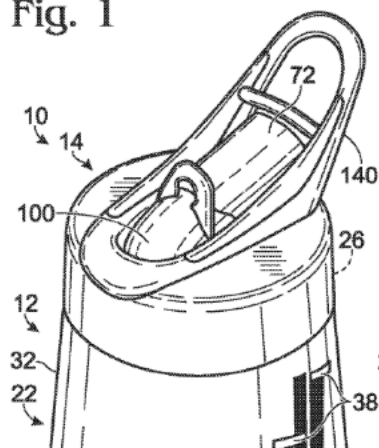
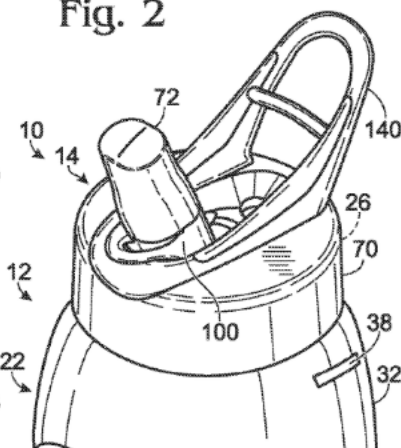


Fig. 2



Id., Figs. 1-2 (showing mouthpiece 72 and pivotal mount 100 rotating together in the same direction about the same joint where mount 100 attaches to cap).

Fig. 21

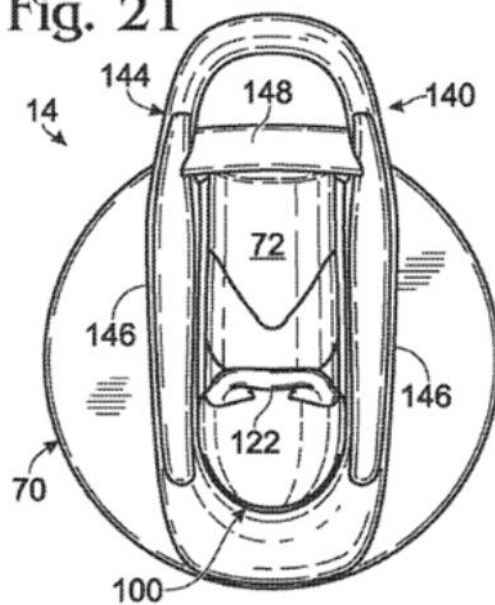
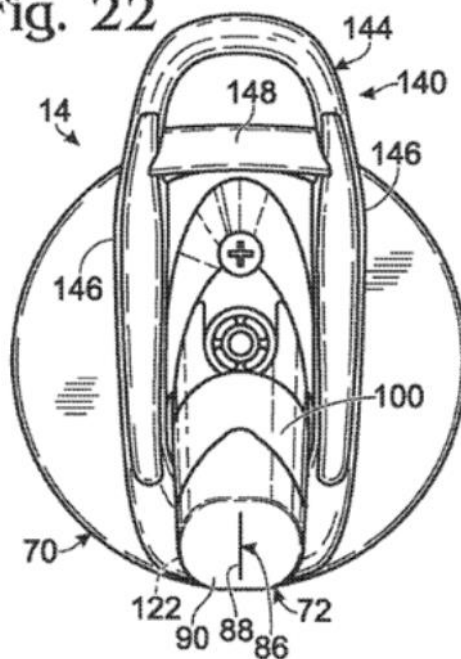
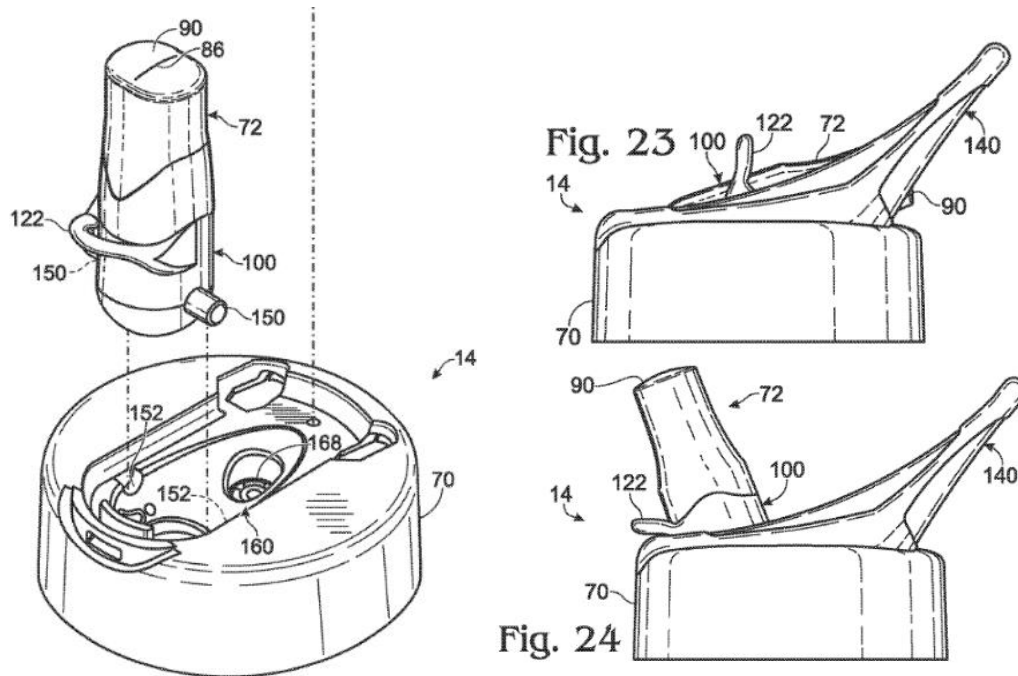


Fig. 22





Id., Figs. 21–25; *see also id.*, Figs. 26–29.

Furthermore, the specification describes every embodiment as comprising a “mouthpiece” coupled to or disposed on a “pivotal mount” that rotates together with the “pivotal mount” in the same direction. Ex.2016, ¶82. For instance, the ’250 patent states that the pivotal mount is “*rotatable* within the sockets, and thereby function as rotatable supports, or axles, upon which the mount and any attached mouthpiece may be pivotally moved relative to the base of the cap assembly, such as between stowed and dispensing configurations.” *Id.*, 16:54–60 (emphasis added).

This construction is further supported by the prosecution history of a parent patent to the ’250 patent—specifically, the ’192 reexamination history of the ’255 patent. Ex.2016, ¶83. Patent Owner’s arguments overcoming the rejection of claim

1 over McDonough during the parent '255 patent reexamination support this construction. In particular, Patent Owner distinguished the up-and-down translational movement of McDonough's alleged "mouthpiece" from the pivotal movement required by the claims. *See* Ex.2002 at 638; *see also id.* at 588-89 (setting forth ground of rejection for claim 1); Ex.2016, ¶83. As shown below, a POSITA would have understood from Patent Owner's arguments that the mouthpiece and the pivotal mount rotate together about the same axis of rotation in the same direction, rather than engaging in up and down translational movement. Ex.2016 ¶83.

Referring to the annotated figures (below) from McDonough, Patent Owner argued that "portion 16 of the straw" of McDonough—mapped to the mouthpiece by the Reexamination Specialist and highlighted by Patent Owner's annotations—"is not pivotal about an axis defined by the pair of lateral projections." Ex.2002 at 638. The Specialist had mapped the pivotal axis to the "axle projections 30" of McDonough about which the straw positioning mechanism 20 rotates. *Id.* at 588-89. As illustrated in the below annotated versions of Figure 2 and 3 provided by patentee during the reexamination, the straw's end 16 (mapped to the mouthpiece) "is not pivotal about an axis defined by the pair of lateral projections," as argued by Patent Owner. *Id.* at 638 (emphasis in original).

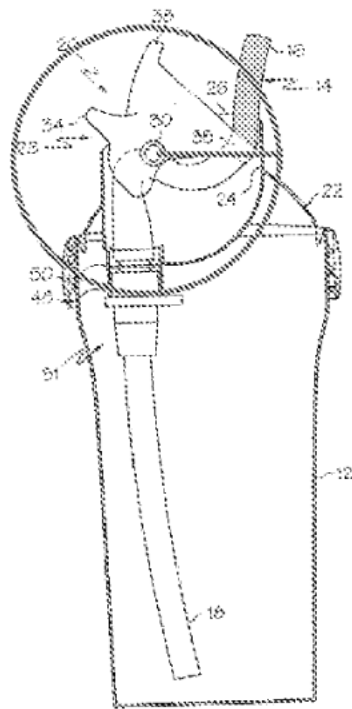


FIG. 2

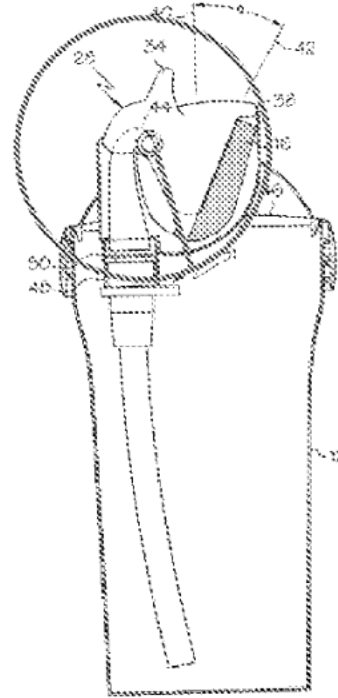


FIG. 3

Ex.2002 at 180.

Instead, the Patent Owner argued that “when the straw positioning member 20 is pivoted about a pivotal axis [i.e. axes 30], the portion 16 of straw 14 is pulled downwards.” *Id.* (underline added). Thus, Patent Owner was distinguishing the upward and downward translational movement of the alleged mouthpiece (i.e., portion 16 of the straw) in McDonough from the claimed pivotal movement about an axis, which would have required rotational movement of the mouthpiece about the alleged pivotal axis (i.e., axes 30), not mere upward and downward translational movement. Ex.2016 ¶¶83-85.

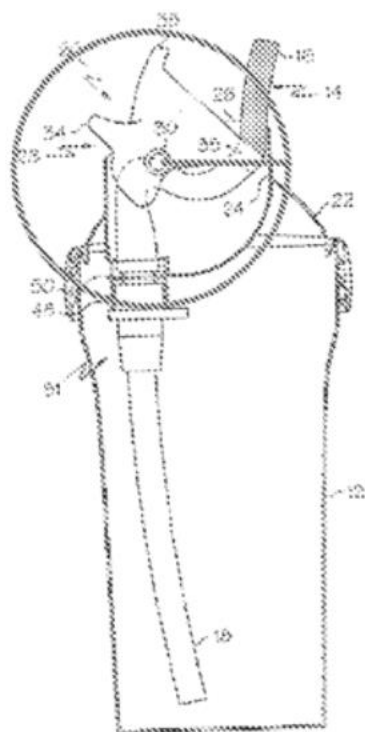


FIG. 2

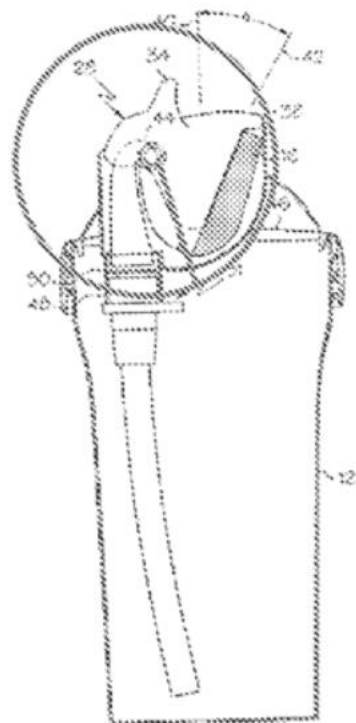


FIG. 3

Ex.2002 at 638; *see* Ex.2015, Figs. 2–3. The below annotated version of Figures 2 and 3 of McDonough, which provides a clearer reproduction of its reference numerals, shows that the alleged *mouthpiece* (upper portion 16 of the straw) merely engages in up and down translational motion (red arrows), rather than rotational motion about the axis defined by the axes 30. Ex.2016 ¶85.

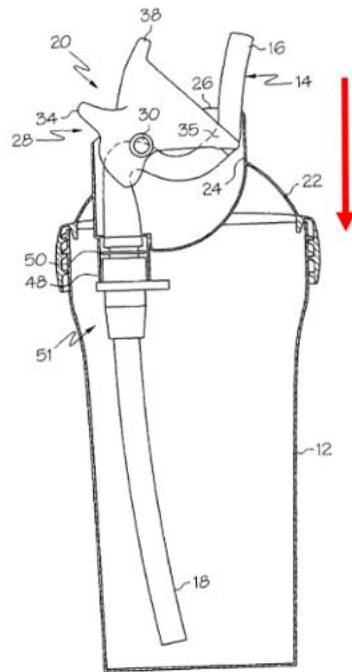


FIG. 2

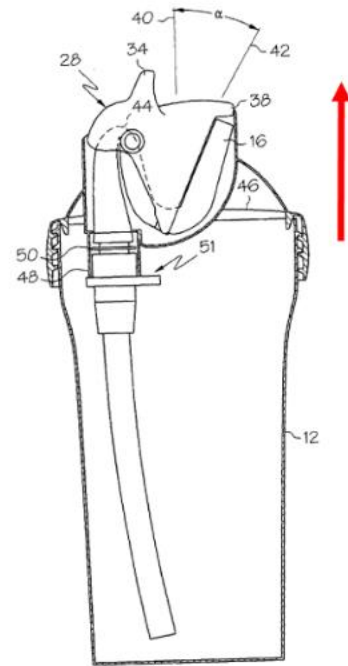


FIG. 3

Ex.2015, Figs. 2–3 (annotated). Thus, Patent Owner’s arguments distinguished the identified *mouthpiece*—straw portion 16—as not having pivotal movement about the same identified *pivotal axis* as the element mapped to the *pivotal mount*—straw positioning member 20—which rotates about the axles 30 (alleged *pivotal axis*).

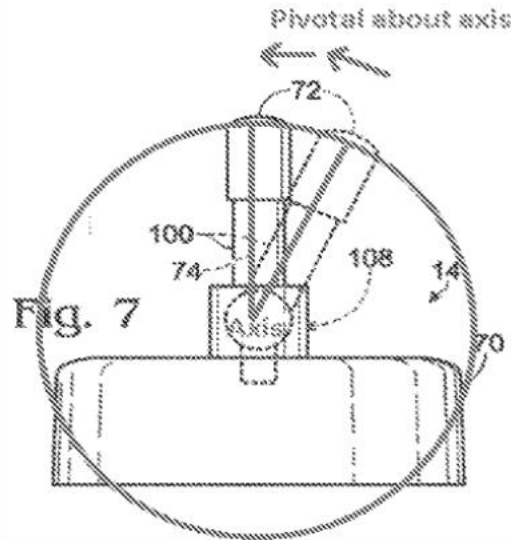
Ex.2016 ¶85. A POSITA would have understood from these arguments distinguishing McDonough that the *mouthpiece* must exhibit the same kind of pivotal movement about the same *pivotal axis* as the *pivotal mount*. *Id.* That is, the mouthpiece must rotate about the same axis of rotation as the pivotal mount, and it is not enough for the mouthpiece to have mere translational movement relative to the axis of rotation of the pivotal mount. *Id.*

Patent Owner's statements during reexamination, therefore, further demonstrate that "pivotal movement with the pivotal mount" requires the mouthpiece to move with rotational motion about the same axis of rotation as the pivotal mount, and this rotational motion requires a circular path of constant radius/distance to the axis and does not encompass motion that has a translational component relative to the axis. *Fenner Investments, Ltd. v. Cellco Partnership*, 778 F.3d 1320, 1323 & 1325 (Fed. Cir. 2015) ("Any explanation, elaboration, or qualification presented by the inventor during patent examination is relevant, for the role of claim construction is to 'capture the scope of the actual invention' that is disclosed, described, and patented."); *CVI/Beta Ventures, Inc. v. Tura LP*, 112 F.3d 1146, 1158 (Fed. Cir. 1997) ("[T]hrough statements made during prosecution **or reexamination** an applicant for a patent or a patent owner, as the case may be, may commit to a particular meaning for a patent term, which meaning is then binding in litigation."); *see also Univ. of Massachusetts v. L'Oreal S.A.*, 36 F.4th 1374, 1379 (Fed. Cir. 2022) ("The prosecution history, in particular, may be critical in interpreting disputed claim terms, and **even where prosecution history statements do not rise to the level of unmistakable disavowal, they do inform the claim construction.**") (internal quotations omitted).

At institution, the Board noted that "it is difficult to draw definitive conclusions from this prosecution history because Patent Owner does not argue for

a prosecution history disclaimer.” Paper 14, 15. Indeed, Patent Owner is not relying on lexicography or disclaimer. Patent Owner merely seeks to give the term “pivotal movement with the pivotal mount” its full plain and ordinary meaning in light of the intrinsic evidence of requiring rotational motion of the mouthpiece *and* the pivotal mount about the same axis of rotation in the same direction. Ex.2016, ¶¶86-87. Patent Owner does not rely on any deviation from this full plain meaning through any alleged lexicography or disavowal. Instead, under *Phillips*, Patent Owner’s construction correctly captures the plain meaning of this term in light of all of the intrinsic and extrinsic evidence. Ex.2016, ¶¶86-87.

Patent Owner’s construction is confirmed by all of the intrinsic evidence, including: 1) the plain claim language, which uses the terms, “pivotal movement” and “with,” 2) the specification, which describes the motion as “rotational” and all of whose embodiments depict motion in a circular path (i.e. constant radius) about the same axis in the same direction, and 3) the reexamination history, in which the patentee annotated the ’255 patent’s Figure 7 (below) with a circular path (i.e., constant radius) and labeled it “pivotal about an axis” while distinguishing that from McDonough’s upward and downward translational movement. Ex.2016, ¶¶86.



Ex.2002, at 637.

Patent Owner respectfully submits that it has applied the claim language itself when annotating pivotal movement about an axis on Figure 7 (above) and then using the exact claim language to distinguish the upward/downward movement in McDonough as *not* being “pivotal about an axis.” Ex.2016, ¶¶86-87. Patent Owner merely argues that the reexamination statements confirm the plain meaning of “pivotal movement with the pivotal mount” as reflected in the claim language and specification. *See, e.g., Fenner Investments*, 778 F.3d at 1323 & 1325; *CVI/Beta Ventures*, 112 F.3d at 1158; *Univ. of Massachusetts*, 36 F.4th at 1379 (Fed. Cir. 2022). Importantly, the prosecution history can inform the meaning of claim terms without constituting a disclaimer of claim scope. *Id.*

The Board also appeared to discount the argument made distinguishing McDonough because they were among “multiple arguments.” Paper 14, at 15. That

Patent Owner made other arguments distinguishing McDonough, however, does not prevent Patentee's arguments that McDonough's mouthpiece was not "pivotal about an axis" from indicating the proper meaning of that term. *Fenner Investments*, 778 F.3d at 1325 ("[T]he interested public has the right to rely on the inventor's statements made during prosecution, without attempting to decipher whether the examiner relied on them, or how much weight they were given."); *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473, 1477 (Fed. Cir. 1998) (that a prior art reference was distinguished "on several other grounds . . . is not relevant to our analysis of the prosecution history, for even if [the prior art] was distinguished on multiple grounds, any of those grounds may indicate the proper construction of particular claim terms"). As the Board noted at institution, "[t]he Board may nonetheless consider the prosecution history as part of the totality of the intrinsic record." Paper 14, at 15.

Accordingly, "a mouthpiece [coupled to the mount outlet of]/[disposed on] the pivotal mount for pivotal movement with the pivotal mount" recited in claims 1, 7, and 13 means "a mouthpiece [coupled to the mount outlet of]/[disposed on] the pivotal mount that moves with rotational motion about the same axis of rotation defined by the two joints as the pivotal mount in the same direction as the pivotal mount such that a constant distance/radius from the mouthpiece to the axis is maintained."

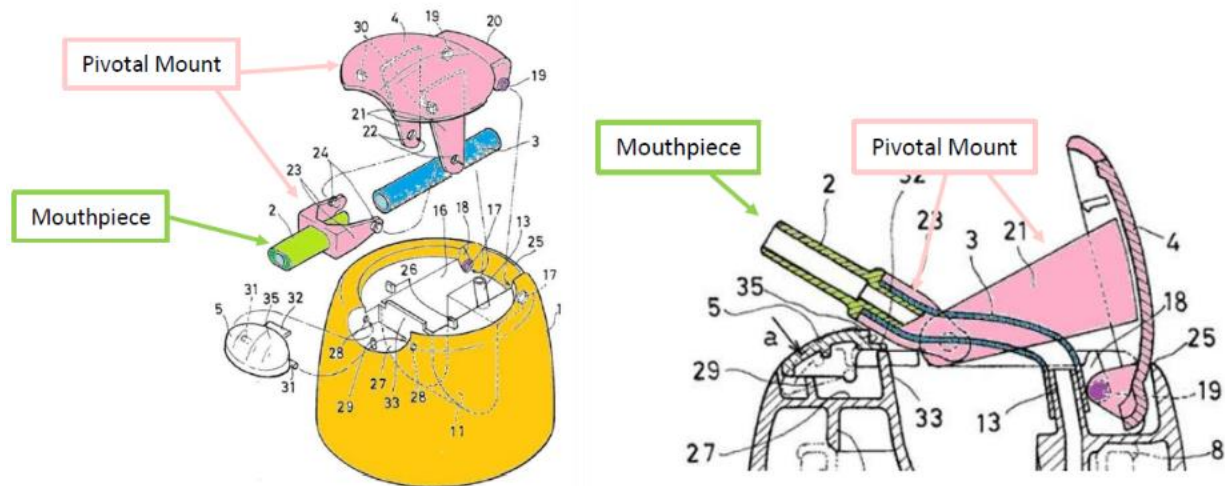
VI. PETITIONER HAS FAILED TO PROVE UNPATENTABILITY OF ANY OF THE CHALLENGED CLAIMS BY A PREPONDERANCE OF THE EVIDENCE

A. Ground 1 Fails Because Nakajima Does Not Disclose the Mouthpiece's Required Pivotal Movement with the Pivotal Mount of the Claims

Petitioner cannot prevail on Ground 1 because Nakajima does not disclose the *mouthpiece's* required *pivotal movement with the pivotal mount* where the *pivotal mount* engages in *pivotal movement* about a *pivotal axis* that is defined by the two joints, as required by claim 1. Under Patent Owner's constructions, Nakajima's alleged *mouthpiece* never moves with rotational motion about the same axis as the *pivotal mount* in the same direction as the *pivotal mount* such that a constant distance/radius from the *mouthpiece* to the axis is maintained. *See supra* Secs. V.B-C.

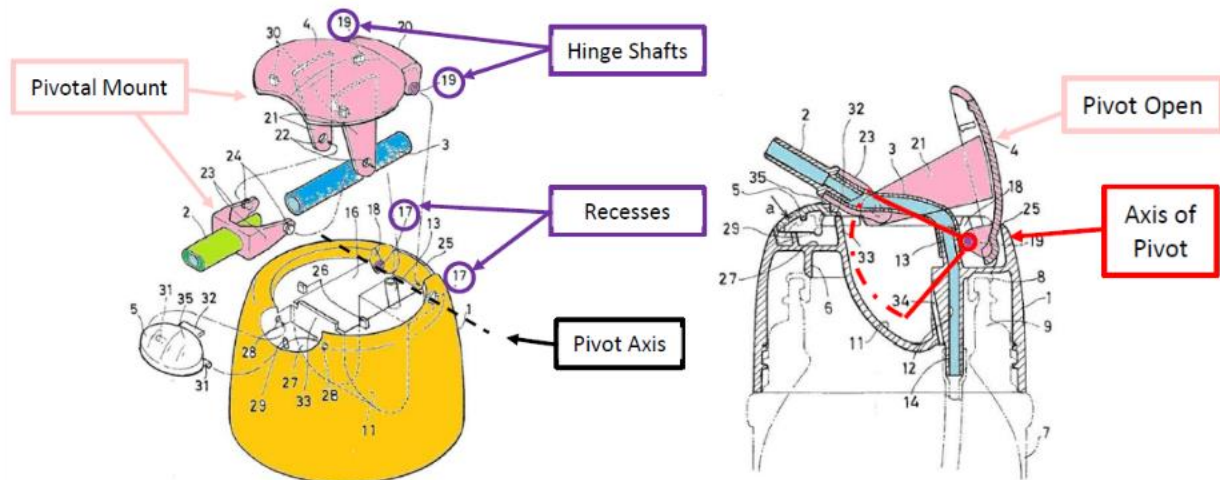
1. Nakajima Does Not Disclose the Mouthpiece's Required Pivotal Movement with the Pivotal Mount

Petitioner contends the *mouthpiece* of the claim is disclosed by one particular portion of Nakajima's "mouthpiece 2." Ex.2016, ¶91; *see* Pet., 24–26. As shown below, Petitioner contends that the green annotated portion of Nakajima's "mouthpiece 2" is the claimed *mouthpiece*. *Id.*, 24–26. Petitioner further identifies the arms 23 and their protrusions 24 of Nakajima's "mouthpiece 2" as being part of the *pivotal mount*, along with "lid 4" (collectively annotated pink), not part of the claimed *mouthpiece* (annotated green). Pet., 21.



Pet., 21 (citing Ex.1004, Fig. 1, [0003]; Ex.1002 ¶74); *id.*, 25 (citing Ex.1004, Fig. 3). Petitioner argues that the pink annotated portion of Nakajima’s “mouthpiece 2,” which includes “arms 23” and “protrusions 24,” is part of the *pivotal mount* to which the *mouthpiece* must be coupled. *Id.*, 23; *see id.*, 25. Thus, Petitioner maps part of “mouthpiece 2” to the claimed *mouthpiece* and part of it to the claimed *pivotal mount*.

Petitioner maps the alleged *pivotal axis* to the axis defined by the hinge shafts 19 (annotated purple below) rotating within the recesses 17 in Nakajima’s lid 4. Pet., 22-23. Petitioner labels this alleged *pivotal axis* defined by the hinge shafts 19 as “Pivot Axis” (in black) in Figure 1 and as “Axis of Pivot” (in red) in Figure 3:



Pet., 22-23 (citing Ex.1004, Figs. 1 & 3).

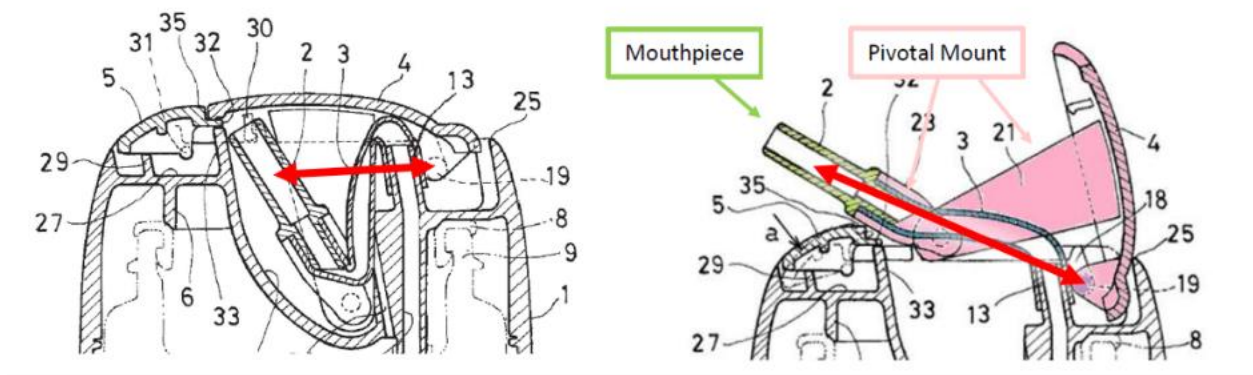
As construed, the claimed “two joints that define a pivotal axis for pivotal movement of the pivotal mount” recited in claims 1, 7, and 13 mean “two joints that define an axis of rotation for rotational motion of the pivotal mount about the axis” for the reasons set forth above. *See supra* Sec. V.B. At institution, the Board adopted Patent Owner’s proposed construction of this limitation. Paper 14, 13. Further, the limitation of “a mouthpiece [coupled to the mount outlet of]/[disposed on] the pivotal mount for pivotal movement with the pivotal mount” recited in claims 1, 7, and 13 means “a mouthpiece [coupled to the mount outlet of]/[disposed on] the pivotal mount that moves with rotational motion about the same axis of rotation defined by the two joints as the pivotal mount in the same direction as the pivotal mount such that a constant distance/radius from the mouthpiece to the axis is maintained.” *See supra* Sec. V.C.

As explained below, Nakajima fails to satisfy these constructions because its alleged *mouthpiece* does not: i) move with rotational motion about the same axis of rotation as the pivotal mount because it does not maintain a constant distance/radius to that alleged axis (hinge shaft 19), nor does it ii) move with rotational motion in the same direction as the pivotal mount. Ex.2016, ¶103. As such, Nakajima fails to disclose a mouthpiece “for pivotal movement with the pivotal mount,” as demonstrated by the proper express claim constructions set forth in Sections V.B and V.C, *supra*.

First, as construed, for Nakajima’s alleged *mouthpiece* to engage in “pivotal movement with the pivotal mount,” Nakajima’s alleged *mouthpiece* must move with rotational motion about the same axis of rotation defined by the two joints as the pivotal mount in the same direction as the pivotal mount. But Nakajima’s alleged *mouthpiece* does not. Specifically, Nakajima’s *mouthpiece* does not move with rotational motion about the same axis of rotation as the pivotal mount and, thus, does not exhibit the claimed “pivotal movement with the pivotal mount,” as construed. Ex.2016, ¶104. As set forth above, Nakajima’s alleged *mouthpiece* (the green portion of the mouthpiece 2) does not engage in rotational motion about the same axis of rotation as the alleged *pivotal mount* (i.e., about hinge shafts 19). *Id.* As explained in Section V.B, *supra*, a POSITA would have understood that rotational motion about a rotational axis requires that all points of a rigid body maintain a

constant distance from an imaginary axis (i.e. an axis of rotation) and rotate in circular paths about a common axis with a common velocity. *id.* (citing Ex.2012, at 1; Ex.2013, at 259). If they do not, then the motion will be translational, rather than rotational. *id.*

The green alleged *mouthpiece* does not engage in rotational motion about the hinge shafts 19 about which the lid rotates, because, as discussed, rotational motion requires maintaining a constant distance between the rotating body and the axis of rotation, and the green alleged *mouthpiece* never maintains a constant distance from the axis of rotation defined by the hinge shafts 19 about which the alleged pivotal mount rotates. Ex.2016, ¶106. As discussed, a POSITA would have understood, as a matter of physics, that a constant distance must be maintained for the motion to constitute rotational motion about an axis of rotation. Ex.2016, ¶106. Otherwise, the motion is not rotational and is instead translational motion, which is not pivotal movement about a pivotal axis (such as confirmed by Patent Owner's argument distinguishing McDonough's up and down translational motion). Ex.2016, ¶106. This is illustrated by the below annotations showing how the distance changes between the alleged *mouthpiece* and the alleged *pivotal axis* and is not constantly maintained. Ex.2016, ¶106. Because a constant distance is not maintained, the alleged *mouthpiece* does not move with rotational motion about the alleged *pivotal axis* and instead moves translationally relative to that *pivotal axis*. Ex.2016, ¶106.



Ex.1004, Figs. 2-3 (annotated); Ex.2016, ¶106. Thus, a POSITA would have understood that the alleged *mouthpiece* is merely engaged in translational upward and downward motion relative to the hinge shafts 19 (not rotational motion about the hinge shafts 19 as an axis of rotation), like the McDonough reference that the Patent Owner distinguished as not disclosing pivotal movement about a pivotal axis. Ex.2016, ¶107. At institution, the Board also reiterated Petitioner’s concession that “due to its engagement with the pivotal mount, Nakajima’s mouthpiece ‘moves up and down in conjunction with the opening and closing of the lid.’” Paper 14, 24 (quoting Pet. 26) (internal citations omitted).

Finally, in deposition, Petitioner’s expert, Dr. Vallee, appeared to take the position that the claimed mouthpiece (and thus Nakajima’s alleged *mouthpiece*) need only have a “rotational component” to be “pivotal about an axis” and that, thus, only a “component of the motion of the object must be at a fixed radius” such that “you can rotate in a noncircular manner” and can “rotate around but not in a fixed – fixed radius.” Ex.2018 at 60:18-22, 62:5-64:7. As such, Dr. Vallee contended that “you

could have a rotational component and a translational component,” *id* at 64:8-19, though he agreed the rotational component must have a “fixed radius” to be rotational, rather than translational. *Id.* at 64:4-18; *see also* Ex.2016, ¶108. He also conceded that a noncircular path would require a combination with at least “some translation.” *Id.* at 114:17-115:3. While it is correct that it is possible to have “combined rotation and translation” when “the axis of rotation moves,” “every possible motion of a rigid body can be represented as a combination of *translational motion of the center of mass* and *rotation about an axis through the center of mass.*” Ex.2016, ¶108; Ex.2019, at 308. A tossed baton whose center of mass translates in a parabola and which also rotates about its center of mass (shown in Figure 10.11 below) is an example, while a rolling ball or wheel (shown in Figure 10.13 below) is another. Ex.2016, ¶109; Ex. 2019, at 308-310.

Figure 10.11 The motion of a rigid body is a combination of translational motion of the center of mass and rotation around the center of mass.

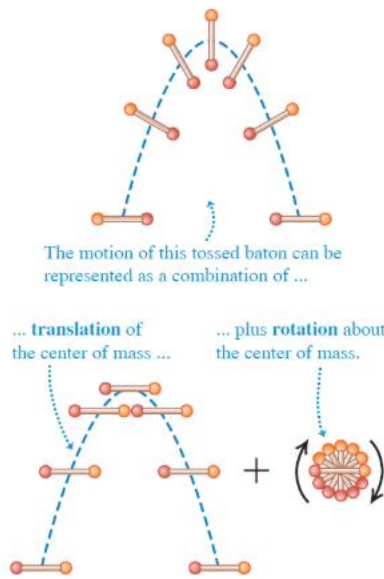
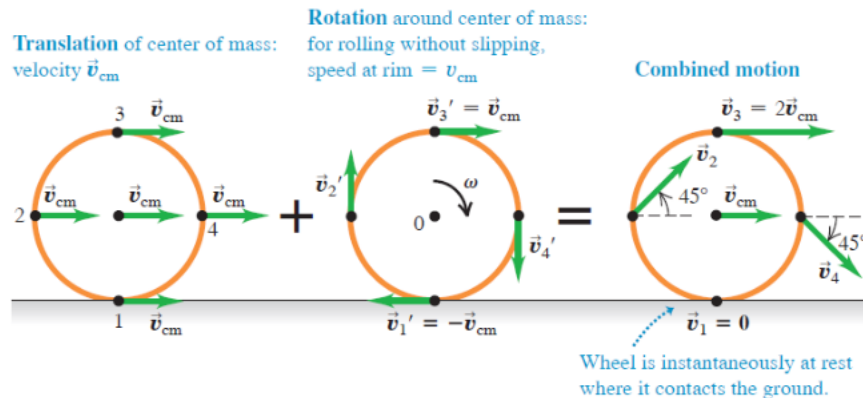


Figure 10.13 The motion of a rolling wheel is the sum of the translational motion of the center of mass and the rotational motion of the wheel around the center of mass.



Ex.2016, ¶109; Ex. 2019, at 308-310. Thus, even in combined translation and rotation, any rotational component must still have a fixed radius to the axis of rotation to be considered rotational, as Dr. Vallee conceded. Ex.2016, ¶109; Ex. 2019, at 308; Ex.2018 at 64:4-18. Such combined motion, therefore, such as the rolling motion of a wheel “is a combination of purely translational and purely

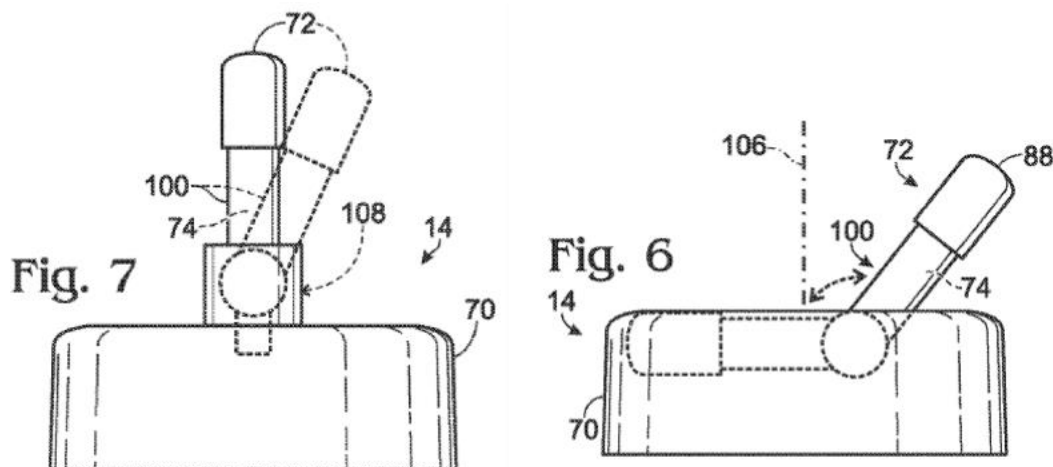
rotational motions,” where “pure rotation” requires that “every point of the body moves in a circle whose center lies on the axis of rotation, and every point moves through the same angle during a particular time interval.” Ex.2016, ¶109; Ex.2013, at 296; Ex.2020 (“Rotational motion . . . has to be circular An object can be rotating while also experiencing linear motion Scientists consider these kinds of motion separately because separate equations (but again, tightly analogous) are required to interpret and explain them.”).

Dr. Vallee contended that “there is a component that’s rotational in Nakajima” and specifically that “there is a pure rotational component in that assembly.” Ex.2018, 118:4-8. He testified that there is a pure rotational component in that the protrusion 24 rotates about the hinge 19 and that the alleged mouthpiece rotates about the protrusion 24. Ex.2018, 118:17-22 (“Well, direction two, yes. 24 with respect to 19, and then there's the mouthpiece with respect to 24.”). However, neither of these alleged rotational components is relevant to the claims. Ex.2016, ¶110. The rotation of the protrusions 24 (part of the alleged *pivotal mount*) (in pink) about the hinges 19 (alleged *axis*) is **not** rotation of any part of the alleged green mouthpiece about the hinges 19 (alleged *axis*). Ex.2016, ¶110. Similarly, the rotation of the alleged green *mouthpiece* about the protrusions 24 (part of the alleged *pivotal mount*) is **not** rotation about the alleged axis (hinges 19). Ex.2016, ¶110. Thus, none of the alleged rotational components of motion identified by Dr. Vallee in Nakajima

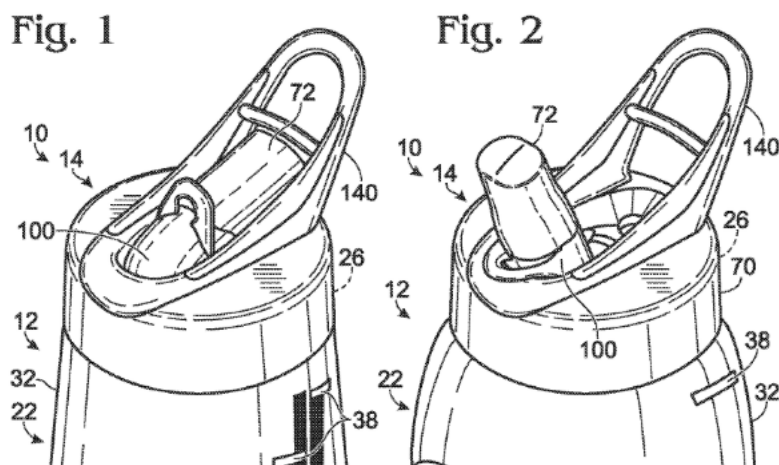
constitutes rotational motion of any portion of the alleged green *mouthpiece* about the alleged *axis* (hinges 19), which is the specific rotation required by the claims. Ex.2016, ¶110. Indeed, Dr. Vallee conceded that Nakajima’s alleged *mouthpiece* (green) never maintains a fixed radius with respect to hinge 19 (the alleged *axis*), Ex.2018, 126:7-127:2, and, thus, the alleged *mouthpiece* (green) never engages in pure rotational motion about hinge 19 (alleged *axis*). *Id.*, 115:4-116:4 (“Q. Okay. So would you agree with me, then, that the green portion of Nakajima's mouthpiece does not engage in pure rotational motion about hinge 19? . . . A. ***And that's correct.*** It pivots about 19, it rotates about 19, but because of axis – that goes through 24, it had that additional component of rotation.”). While he contended that “[i]t is still in pure rotation because it has a pure rotational component,” *id.* at 126:15-16, neither pure rotational component identified by Dr. Vallee is relevant to the claims, as discussed above, because neither constitutes rotation of the *mouthpiece* about the *axis defined by the pair of lateral projections*. Ex.2016, ¶110.

Second, as set forth above Nakajima’s alleged *mouthpiece* **never** rotates in the same direction as the pivotal mount, as also required by Patent Owner’s construction of “pivotal movement with the pivotal mount.” Ex.2016 ¶112; *see supra* Sec.V.C. Thus, Nakajima’s alleged *mouthpiece* does not engage in pivotal movement “*with*” the pivotal mount, as properly construed.

To move pivotally “with” the pivotal mount, the mouthpiece must also engage in rotational motion about the same axis of rotation, i.e., the claimed “pivotal axis” that is “defined by” the two joints. *Id.*; *see supra* Sec.V.C. A POSITA would understand the term “with” to require rotational motion of the mouthpiece **and** the pivotal mount about the same axis (i.e., about a circular path), which is not independent nor unrelated motion. Ex.2016, ¶113; *see supra* Sec.V.C. To move pivotally “with” the pivotal mount, the mouthpiece must move in the same direction as (not away from) the pivotal mount, because moving in an opposite direction away from the pivotal mount would not be moving pivotally “with” the rotational mount. Ex.2016, ¶113. In every embodiment of the ’250 specification, the pivotal mount and the mouthpiece pivot together in the same direction about the same pivotal axis defined by the two joints. *See, e.g.*, Ex.1001, at 7:47–53; *see also id.*, at 3:11–13, 7:18–23, 7:59–62, 9:30–33. The figures likewise depict in every embodiment that the pivotal mount and mouthpiece engage in rotational motion **together** about the same axis in the same direction (i.e., the mouthpiece engages in pivotal movement **with** the pivotal mount).



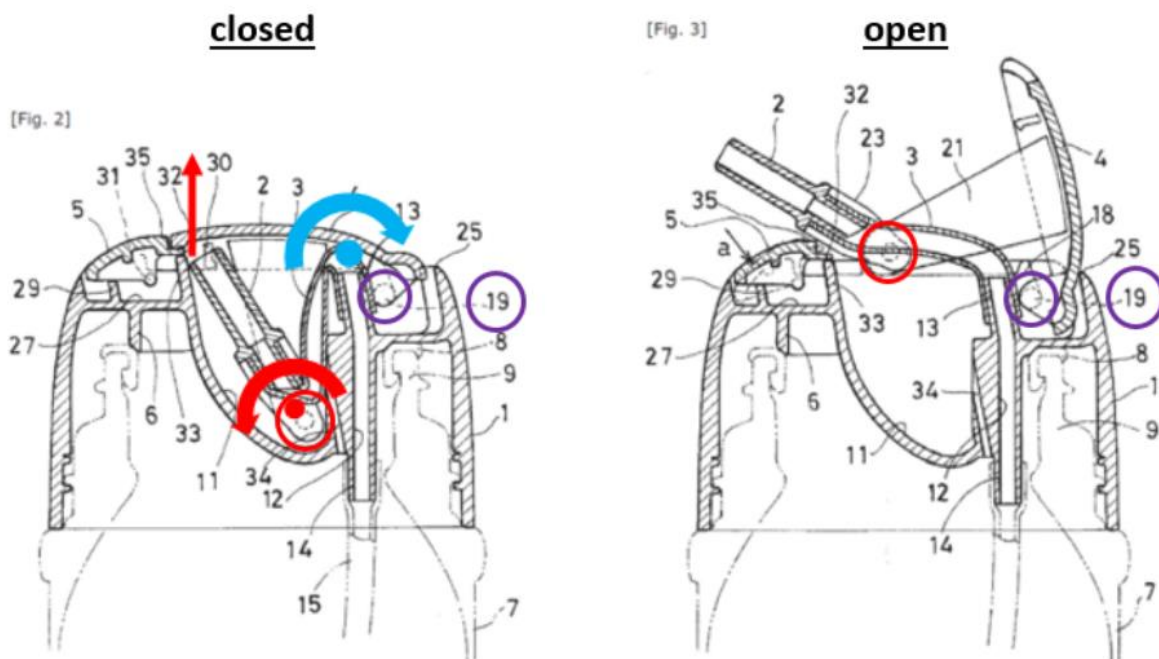
Id., Fig. 7 (showing mouthpiece 72 rotating with pivotal mount 100 about the same pivotal axis defined by joint 108 in the same direction); Fig. 6.



Id., Figs. 1-2 (showing mouthpiece 72 rotating with pivotal mount 100 in the same direction about the same joint where pivotal mount 100 attaches to cap).

Instead of rotation of the *mouthpiece* with the *pivotal mount*, as shown again below, Nakajima's alleged *mouthpiece* rotates about a different axis of rotation than the alleged *pivotal mount* in a direction opposite the direction of rotation of the

alleged *pivotal mount*, as shown by the **red** and **blue** circular arrows below. Ex.2016, ¶114.



Ex.2016 ¶114 (annotating Ex.1004, Figs. 2–3).

Therefore, Nakajima’s alleged *mouthpiece* does not ever engage in “pivotal movement with the pivotal mount,” as construed by Patent Owner. Ex.2016 ¶115.

At institution, the Board stated that “[f]or similar reasons as for IPR2024-01137, we determine that Petitioner has made an adequate showing at this stage of the proceeding that Nakajima’s mouthpiece has ‘pivotal movement with the pivotal mount relative to the cap assembly base,’ as recited in claim 1.” Paper 14, at 27 (citing Ex.2006, at 15). The Board continues by stating “Patent Owner’s argument that the center of protrusion 24 appears to potentially rotate clockwise about hinge

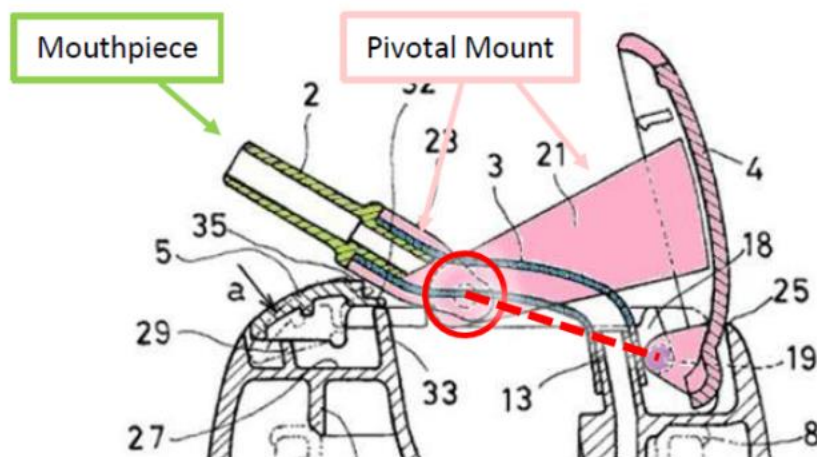
shaft 19 does not negate our preliminary finding that the mouthpiece connected to protrusion 24 also moves about hinge shaft 19 and additionally moves counterclockwise relative to lid 4.” *Id.* Patent owner respectfully submits that any movement of the *mouthpiece* connected to protrusion 24 about hinge shaft 19 is translational movement and not pivotal movement. *See* Ex.2016, ¶116. The movement of the *mouthpiece* thus cannot be considered pivotal movement (i.e., rotational motion) under the basic principles of physics, which requires rotational motion (i.e., circular motion). *See id.* at ¶117.

At institution, the Board adopted Patent Owner’s proposed construction of “two joints that define a pivotal axis for pivotal movement of the pivotal mount” to mean “two joints that define an axis of rotation for ***rotational motion*** of the pivotal mount about the axis.” *See* Paper 14, 13. A POSITA would have understood that rotational motion is a type of motion in which all points of a rigid body maintain a constant distance from an imaginary axis (i.e. an axis of rotation) and rotate in circular paths about a common axis with a common velocity. Ex.2016, ¶116 (citing Ex.2012, at 1 (“[R]otational motion . . . is a type of motion in which all points of a rigid body maintain a constant distance from an imaginary axis and rotate in circulate paths about a common axis with a common velocity”); Ex.2013, at 259 (describing rotation about an “axis of rotation” as requiring that “every point of the body moves in a circle whose center lies on the axis of rotation, and every point moves through

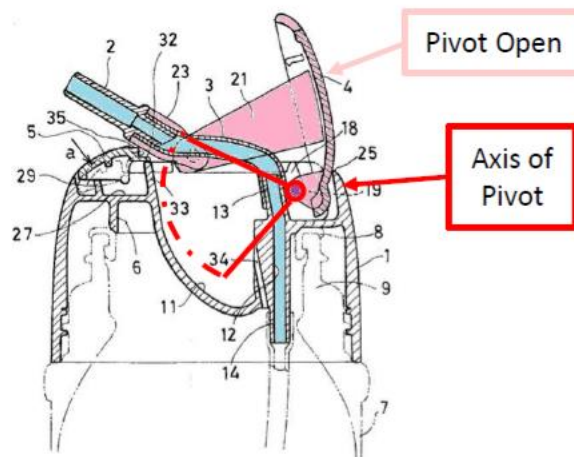
the same angle during a particular time interval”). As stated above, a “rigid body” is required for rotational motion, because a “rigid body” is necessary to maintain a constant distance from an axis of rotation and rotate in circular paths about a common axis. *See* Sec. V.B; Ex.2016, ¶116.

The Board suggested construction of a very similar claim term (e.g., similar to the claim term “two joints that define a pivotal axis for pivotal movement of the pivotal mount”) would be helpful in its Institution Decision in IPR2024-01137 regarding the ‘255 patent, which is the parent to the ‘250 patent at issue here. Ex.2006, at 14-15. In its Institution Decision in IPR2024-01137 regarding the ‘250 patent’s parent ‘255 patent, the Board stated the following: “As cited by Petitioner, from the closed position, for example, the Nakajima’s mouthpiece would appear to move based on clockwise rotation about hinge shaft 19.” Ex.2006 at 15. Here, Patent Owner believes that the Board may have been referring to the movement of Nakajima’s entire “mouthpiece 2,” including its arm 23 and protrusions 24, when making this statement. That is, Patent Owner does not believe that the Board was referring to just the portion of mouthpiece 2 that Petitioner colors green and labels as the alleged *mouthpiece* of the claims when the Board referred to “Nakajima’s mouthpiece” in that sentence, because, as discussed, Nakajima’s mouthpiece 2 includes the arm 23 and protrusions 24 that Petitioner contends are part of the claimed *pivotal mount* and not part of the claimed *mouthpiece*. If Patent Owner is

correct in its belief, then the Board may have been merely referring to the fact that the very center of the protrusions 24 appears to potentially rotate in a clockwise direction about the hinge shafts 19 when moved from the closed position. Ex.2016 ¶117.



Pet., 25 (citing Ex.1004, Fig 3 (annotated)) (with Patent Owner's annotations added in red). This movement of the very center of protrusions 24 appears to be what Petitioner attempts to convey with its somewhat confusing and inaccurate annotated version of Figure 3 showing a red arc below:

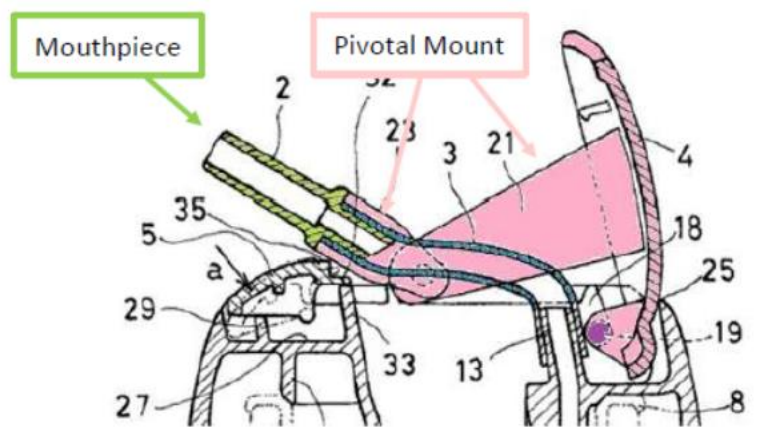


Pet., 26 (citing Ex.1004, Fig. 3); Ex.2016 ¶117. However, any such potential clockwise rotation of the very center of protrusions 24 about hinge shafts 19, as found by the Board and as illustrated with Petitioner’s red arc annotation, only shows potential *rotational motion* of the alleged *pivotal mount* about the hinge shafts 19, not the alleged *mouthpiece*. *Id.*

Furthermore, regarding the present institution, Patent Owner respectfully submits that the Board’s statement of “Patent Owner’s argument that the center of protrusion 24 appears to potentially rotate clockwise about hinge shaft 19 does not negate our preliminary find that the mouthpiece connected to protrusion 24 also moves about hinge shaft 19 and additionally moves counterclockwise relative to lid 4,” Paper 14, at 27, does not negate the fact that the *mouthpiece* does not move with rotational motion (i.e., pivotal movement) relative to the lid 4. Ex.2016, ¶118.

Thus, Petitioner’s alleged rotational movement of the protrusion 24 is irrelevant to showing whether Petitioner’s alleged green *mouthpiece* moves with

rotational motion about the axis defined by the hinge shafts 19 because the alleged *mouthpiece* does not include any of the portions of Nakajima's mouthpiece 2 colored green, including the protrusions 24. This is because Petitioner relies on only the green-colored portion of Nakajima's mouthpiece 2 as being the claimed *mouthpiece* and Petitioner relies on the protrusions 24 as being part of the claimed *pivotal mount*, as shown again below:



Pet., 25. As discussed above, the green portion of mouthpiece 2 of Nakajima only ever rotates about the axis of rotation defined by the protrusions 24 rotating within the holes 22 and never engages in *rotational motion* about the axis of rotation defined by the hinge shafts 19. Ex.2016, ¶119. Therefore, it is irrelevant whether any part of arm 23, such as the very center of protrusions 24, of mouthpiece 2 of Nakajima ever rotates about the hinge shafts 19 when opening from the closed position, as shown by Petitioner's red arc annotation above, and as noted by the Board at page 27 of the institution (as well as by the Board at page 15 of the Institution

Decision for the '255 Patent), because the arm 23 and protrusions 24 are not part of the green alleged *mouthpiece* and are instead part of the pink alleged *pivotal mount*. Ex.2016 ¶119.

Alternatively, to the extent the Board in the Institution Decision for the '255 Patent was referring to the fact that the green portion of mouthpiece 2 (that Petitioner contends is the claimed *mouthpiece*) may move translationally up and out relative to the hinge shafts 19, albeit not rotationally about the hinge shafts 19, when moved from the closed position, then this, too would be irrelevant because such translational motion does not constitute ***rotational motion*** of the *mouthpiece* about an axis of rotation, as is required by the basic principles of physics and as required under the proper construction. *See* Ex.2016, ¶120 (citing Ex.2012, at 1; Ex.2013, at 259).

Finally, at institution, to analogize Nakajima's alleged *mouthpiece's* apparent movement with the lid relative to stopper body 1, the Board stated that "[t]he movement that Patent Owner illustrates might be analogous to the movement of sun, the earth and the moon, where the earth revolves around the sun, and the moon additionally revolves around the earth." Paper 14, at 27, fn. 11. "In this analogy, the question would be whether the moon pivots 'with' the earth 'relative' to the sun." *Id.* This analogy is similar to the analogize proffered by Petitioner's expert, Dr. Vallee, in the Institution Decision for the '255 Patent. *See* Ex.2018, 124:7-125:14. Notably, Dr. Vallee answered the question posed by the Board in the present

institution (e.g., does the moon pivot “with” the earth “relative” to the sun) when Dr. Vallee admitted that the moon *never* maintains a fixed radius to the sun and, thus, *never* engages in pure rotational motion about the sun. *Id.* While Nakajima might show the *mouthpiece* moving relative to the lid (e.g., one axis at hinge shafts 19, and a different axis at protrusions 24), this movement is **not** the same-axis coordinated rotation that is required under the claims once “with” is properly construed. Ex.2016, ¶121. At most, this movement is a translational movement, which is not rotational movement. *See* Ex.2016, ¶121.

Petitioner, therefore, has failed to show the Nakajima’s alleged *mouthpiece* engages in “pivotal movement with the pivotal mount,” as required by all independent claims, whether under the plain claim language or whether under Patent Owner’s express constructions. Further, while Petitioner asserts obviousness, its only obviousness argument with regard to the mouthpiece limitations is that it would have been obvious for a POSITA to form the mouthpiece and pivotal mount components in two parts removably coupled to each other, in the event the mouthpiece and pivotal mount must be formed of two separable parts. *See* Pet., 25. Petitioner makes no obviousness argument with regard to the mouthpiece’s requirement of “pivotal movement with the pivotal mount.” Ground 1, therefore, fails.

2. Given the Deficiencies in Nakajima, Petitioner Cannot Prevail on Any Claim as to Ground 1

For all the dependent claims challenged under Ground 1, Petitioner relies on and incorporates the deficient arguments directed to claim 1 under Ground 1. Pet., 33–38. Petitioner does not assert that any obvious combination or modification cures this deficiency of Nakajima. *See generally id.* Accordingly, for the same reasons Petitioner cannot prevail on claim 1, it cannot prevail as to any of the claims challenged in Ground 1.

B. Grounds 2 and 3 Fail Because Ribarits Does Not Disclose or Render Obvious a *Mouthpiece* or the Required Relationship Between the *Mouthpiece* and *Pivotal Mount*

Petitioner cannot prevail on Grounds 2 or 3 (both based on Ribarits) as to any claim of the '250 patent. As shown below, Petitioner fails to show that Ribarits discloses “a mouthpiece” that defines the “dispensing outlet” and is “coupled to the mount outlet” of the pivotal mount (claim 1) or “disposed on the pivotal mount” (claims 7 and 13). Ex.1001 at 19:27-29, 20:40-42, 21:55-57. First, the structure in Ribarits that allegedly defines the “dispensing outlet” is not a “mouthpiece.” Second, Ribarits’s alleged “mouthpiece” is neither “coupled to the mount outlet” nor “disposed on the pivotal mount.”

1. Ribarits Does Not Disclose a “Mouthpiece” That Defines the “Dispensing Outlet”

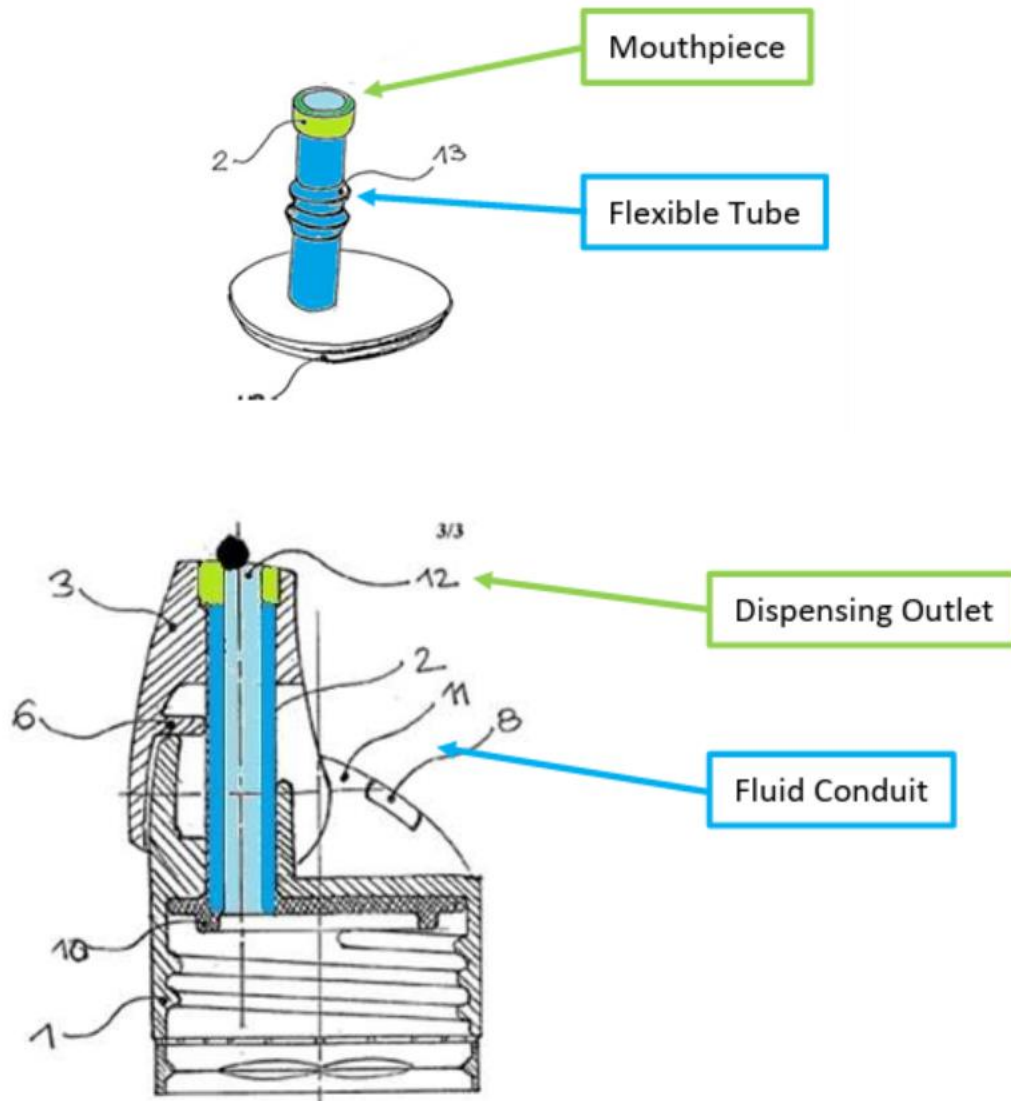
Ribarits does not disclose a “mouthpiece” that “defines a portion of the fluid conduit, including the dispensing outlet,” as recited by every independent claim of the '250 patent. Ex.1001, 19:30-31, 20:43-44, 21:58-59. The structure in Ribarits

that allegedly defines the “portion of the fluid conduit” that includes “the dispensing outlet” is not a “mouthpiece.” As discussed above, a “mouthpiece” is ““a part designed for a user to put his or her mouth on to draw liquid from the container.”

See supra § V.A.

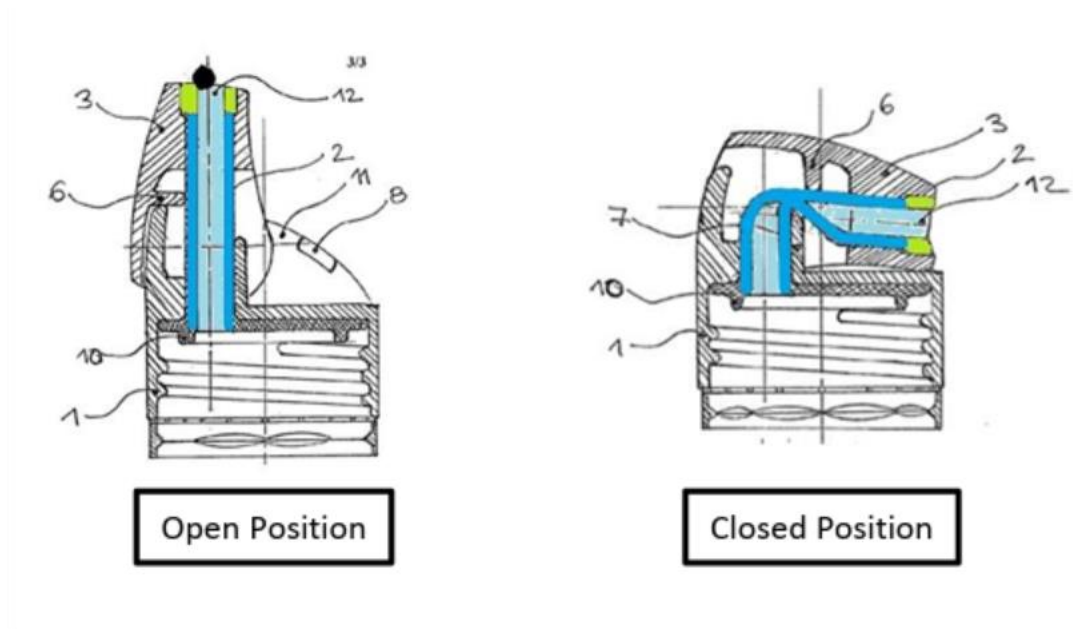
At institution, the Board adopted Patent Owner’s proffered dictionary definition from Meriam-Webster, which defines a “mouthpiece” as “a part (as of an instrument) that goes in the mouth or to which the mouth is applied.” *Id.*; Paper 14, at 12 (citing Ex.2005). The Board noted that “this definition is consistent with the plain and ordinary meaning of the term which is a compound of ‘mouth’ and ‘piece’” and that “this definition is consistent with the Specification.” *Id.* Notably, at institution, the Board determined that “Petitioner does not adequately explain how the end portion of item 2 functions as a mouthpiece where it does not contact the mouth.” Paper 14, at 37.

Petitioner identifies the end portion of Ribarits’s tube element 2 as the “mouthpiece” and contends that it “defines the portion of the fluid conduit that includes the dispensing outlet.” Pet., 46, 48. These contentions are reflected by Petitioner’s green annotations to the figures below.



Id. (annotating Ex.1006, Figs. 2, 3). The identified end portion of Ribarits’s tube element 2 (green) is not designed for a user to put his or her mouth on to draw liquid from the container. Ex.2016, ¶128. On the contrary, the alleged “mouthpiece” (again, shown below in green) is entirely surrounded by Ribarits’s drinking spout 3

and does not extend beyond it, which prevents the user from putting their mouth on it:
it:

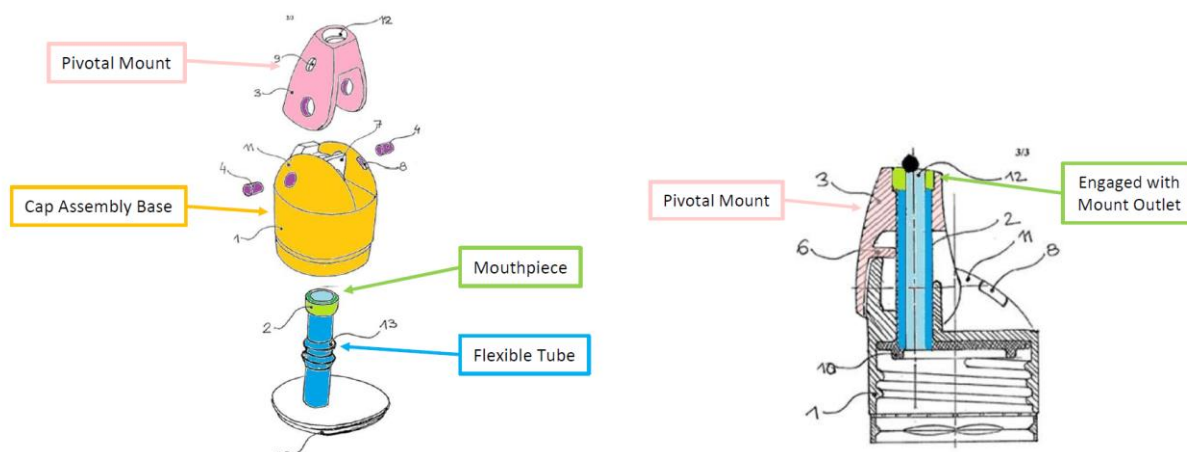


Pet., 53 (annotating Ex.1006, Fig. 3); *see* Ex.2016, ¶¶128-129. A POSITA would have understood that the indicated end portion of the tube is not designed for a user to put his or her mouth on it at all because it is surrounded by the drinking spout 3. Ex.2016, ¶¶128-129. Instead, a POSITA would have understood that, to draw liquid from the container in Ribarits’s design, a user would put his or her mouth on the drinking spout 3. *Id.* at ¶130.

Ribarits therefore fails to disclose a “mouthpiece” that “defines a portion of the fluid conduit, including the dispensing outlet,” as required by each of claims 1, 7, and 13.

2. Ribarits Does Not Disclose the Required Relationships Between the *Mouthpiece* and the *Pivotal Mount*

As discussed, Petitioner fails to show that the top, green portion of Ribarits' tube element 2 constitutes a "mouthpiece" as claimed in the '250 patent. But even if it were assumed to be a "mouthpiece," Petitioner has failed to show that it is "coupled to" or "disposed on" the pivotal mount as required by independent claim 1 or independent claims 7 and 13, respectively. Ex.1001, 20:40-42, 21:55-56; *see also* Ex.2016, ¶130. The Petition contends, with no support whatsoever, that the green mouthpiece portion of tubular element 2 "couples with the mount outlet to hold the tubular element in place." Petition, 46-47; Ex.2016, ¶132.

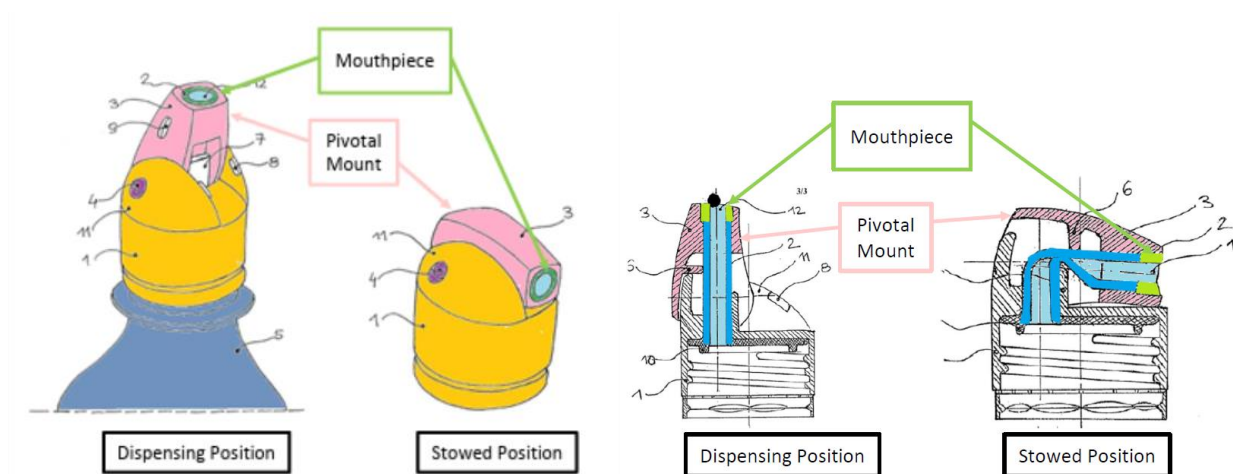


Petition, 46-47 (citing Ex.1006, Figs. 2-3 (annotated)). Petitioner's annotation recites "engaged with mount outlet" but Petitioner provides no support for how or if any such engagement between the green portion (alleged mouthpiece) and the mount outlet of the pivotal mount exists in Ribarits. Ex.2016, ¶132. Ribarits does not describe any such engagement or that the mount outlet "holds" the green mouthpiece

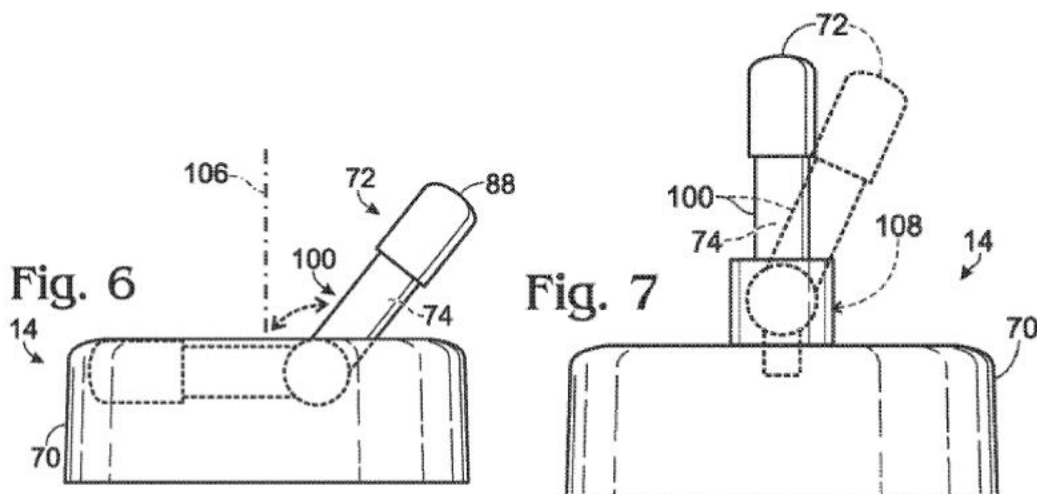
“in place” as asserted by Petitioner. *Id.* Dr. Vallee also fails to provide any such support for his opinions that the alleged mouthpiece somehow couples to the mount outlet or is held in place by or engaged by the mount outlet. Ex.1002, ¶¶125-127. Further, his observation that the alleged mouthpiece (green portion) has “a larger diameter at the end proximate the spout outlet that corresponds to a wider section of the hollow passage through the spout (i.e., mount outlet) does nothing to support his opinion that this would have resulted in a “coupl[ing]” between the wider tip (alleged mouthpiece) and the inside of the mount outlet to “maintain” it “in place.” Ex.2016, ¶132. This is because Ribarits does not describe any friction or other means at the points of contact between the alleged mouthpiece and mount outlet that holds it in place at those points of contact. *Id.* Thus, the mere change in diameter does not establish that there is any coupling occurring at those points of contact. Petitioner, therefore, has failed to show the coupling between the mouthpiece and mount outlet of the pivotal mount required by claim 1.

Further, Petitioner has also failed to show that the alleged mouthpiece in Ribarits is “disposed on” its alleged pivotal mount. Petitioner provides no separate explanation as to how this “disposed on” requirement of claims 7 and 13 is met separate and apart from the “coupled to the mount outlet of the pivotal mount” requirement of claim 1. Thus, Petitioner has failed to meet its burden of showing this limitation is met. Further, as shown below in Figure 2, the drinking spout (3) (shown

in pink) completely surrounds the sealed tubular element (2) (shown in green).
Ex.2016, ¶133. Thus, the tubular element (2) is disposed *in* not *on* the drinking spout
(3).



Pet., 49 (annotating Ex.1006, Figs. 1 & 3). In the context of the '250 patent, a POSITA would understand the phrase “disposed on” to mean an element is located *on* another element rather than completely within another element. Ex.2016, ¶133. The '250 specification describes several embodiments of the drink bottle having a cap assembly with a pivotal mount and mouthpiece, and in each of these embodiments, the mouthpiece is *attached on* the end of the pivotal mount, such that the mouthpiece and pivotal mount together pivot about the axis 106:

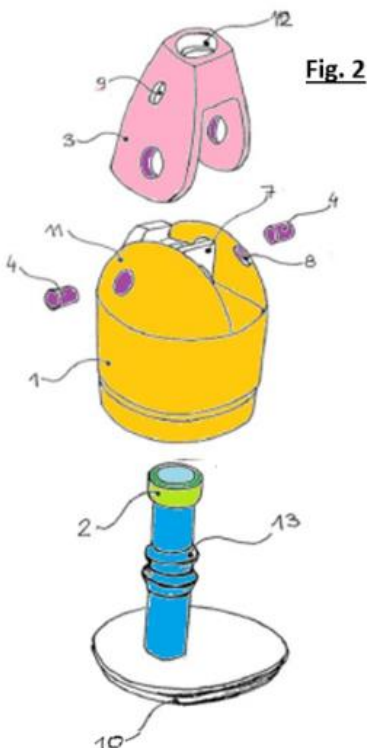


Ex.1001, Figs. 6 and 7; *see also, e.g.*, Figs. 21–24, 3:4–10, 3:14–20, 5:17–24, 7:23–26.

The specification states that “the mount and any *attached* mouthpiece may be pivotally moved relative to the base of the cap assembly.” Ex. 1001, 16:56-58; *see also id.* 7:26-30. The ’250 patent depicts no embodiments in which the mouthpiece is entirely inside of the pivotal mount rather than attached onto it nor does it ever describe such a possibility. Ex.2016, ¶134. Thus, for the mouthpiece to be disposed “on” the pivotal mount, it must be attached onto the pivotal mount rather than merely being entirely inside of it. Ex.2016, ¶134.

Conversely, Ribarits’s alleged *mouthpiece* is not disposed “on” its alleged *pivotal mount*, because the *mouthpiece* is not attached onto the *pivotal mount* and is instead inserted entirely inside of it. Ex.2016, ¶134; Ex.1006, at 2 (“[A] sealed tubular element of rubber or latex is *inserted* in both these parts”). At most, and as

shown below, Ribarits discusses *inserting* the alleged *mouthpiece* into the alleged *pivotal mount*. See Ex.1006, at 2; Ex.2016, ¶134.



Thus, Petitioner has failed to identify in Ribarits “a mouthpiece coupled to the mount outlet of the pivotal mount” as required by claim 1 or “a mouthpiece disposed on the pivotal mount” as required by claims 7 and 13, and Grounds 2 and 3 fail for this additional reason.

3. Given the Deficiencies in Ribarits, Petitioner Cannot Prevail on Any Claim as to Grounds 2 and 3

For every one of the dependent claims challenged under both Grounds 2 and 3, Petitioner relies on and incorporates the same deficient arguments it makes

regarding Ribarits for claim 1. Pet., 60, 62. Petitioner does not assert that any obviousness combination cures these deficiencies of Ribarits. *See generally id.* at 55-63, 63-66. Accordingly, for the same reasons Petitioner cannot prevail on claim 1, it also cannot prevail as to any of the claims challenged in either Ground 2 or 3.

4. Claims 3, 7-15, and 16-18 Should Be Confirmed Based on the Failure of Grounds 2 and 3 Alone

Claims 3, 7-15, and 16-18 are only challenged under Grounds 2 and 3. Thus, if Grounds 2 and 3 fail, then claim 3, 7-15, and 16-18 should be confirmed regardless of how Ground 1 is resolved.

VII. CONCLUSION

The patentability of the Challenged Claims should be confirmed.

Dated: September 16, 2025 September 16, 2025 Respectfully submitted,

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CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), the undersigned certifies that the foregoing PATENT OWNER'S RESPONSE, according to the word-processing system used to prepare the paper and not including those parts excluded by § 42.24(a)(1), has 13,957 words, which is within the type-volume limit set by § 42.24.

By: /Ryan Schletzbaum/
Ryan Schletzbaum

CERTIFICATE OF SERVICE

Pursuant to 37 CFR § 42.6(e), the undersigned certifies that on September 16, 2025 September 16, 2025, a complete and entire copy of the foregoing Patent Owner's Response and Exhibits 2016-2021 were provided via e-mail to Petitioner's counsel of record as follows:

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