

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
Patent 11,851,250 B2

Before LINDA E. HORNER, HYUN J. JUNG, and CARL M. DeFRANCO,
Administrative Patent Judges.

DeFRANCO, *Administrative Patent Judge.*

JUDGMENT
Final Written Decision
Determining Some Challenged Claims Unpatentable
35 U.S.C. § 318(a)

CamelBak Products, LLC (“CamelBak”) is the owner of U.S. Patent No. 11,851,250 B2 (Ex. 1001, “the ’250 patent”). Trove Brands, LLC (“Trove”) filed a Petition for *inter partes* review of claims 1–18 of the ’250 patent. *See* Paper 1 (“Pet.”). We instituted *inter partes* review of all claims as challenged in the Petition. Paper 14 (“Inst. Dec.”). In due course, CamelBak filed a Patent Owner Response. Paper 19 (“PO Resp.”). Trove followed with a Reply. Paper 24 (“Pet. Reply”). And CamelBak filed a Sur-Reply. Paper 27 (“PO Sur-Reply”). We held an oral hearing, a transcript of which is in the record. Paper 33 (“Hrg. Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons discussed below, we determine that Trove demonstrates that claims 1–6 of the ’250 patent are unpatentable as obvious under 35 U.S.C. § 103, but fails to demonstrate that claims 7–18 are unpatentable as obvious.

I. BACKGROUND

A. Related Matters

The ’250 patent is the subject of a parallel district court action: *Trove Brands, LLC d/b/a The Blender Bottle Company v. CamelBak Products, LLC*, No. 5:23-cv-04267 (N.D. Cal. Aug. 21, 2023). *See* Pet. 1; Paper 3, 2. That case is currently stayed pending final outcome of this *inter partes* review.

The application that led to the ’250 patent relates back through a chain of continuity to U.S. Patent Application No. 16/035,418, now U.S. Patent No. 10,676,255 (Ex. 1001, code (63)), the claims of which were challenged in an earlier PTAB proceeding—IPR2024-01137 (“the 1137 IPR”). There, we issued a Final Written Decision (Ex. 2023), which determined none of

the challenged claims to be unpatentable and is currently on appeal to the U.S. Court of Appeals for the Federal Circuit. *See* 1137 IPR, Paper 35 (Petitioner's Notice of Appeal).

B. Real Parties-in-Interest

Trove identifies itself as the real party-in-interest. Pet. 1. CamelBak identifies itself and Vista Outdoor Inc. as real parties-in-interest. Paper 3, 2.

C. Overview of the '250 Patent

The '250 patent "relates generally to drink bottles, and more particularly to drink bottles with bite-actuated mouthpieces." Ex. 1001, 1:25–27. Annotated Figures 1 and 2 of the '250 patent, reproduced below, are perspective views of a bite-actuated drink bottle according to the present invention. *Id.* at 1:48–51.

Fig. 1

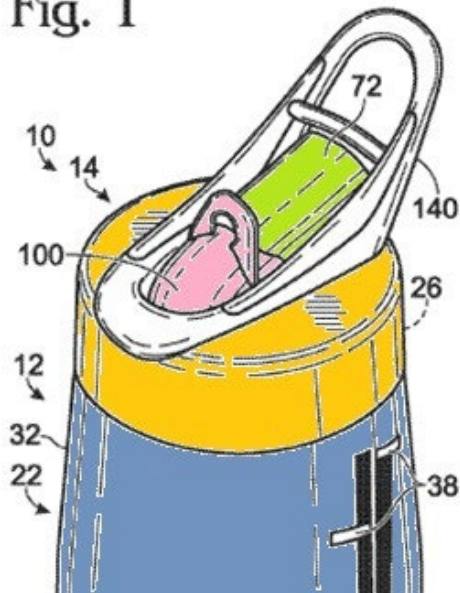
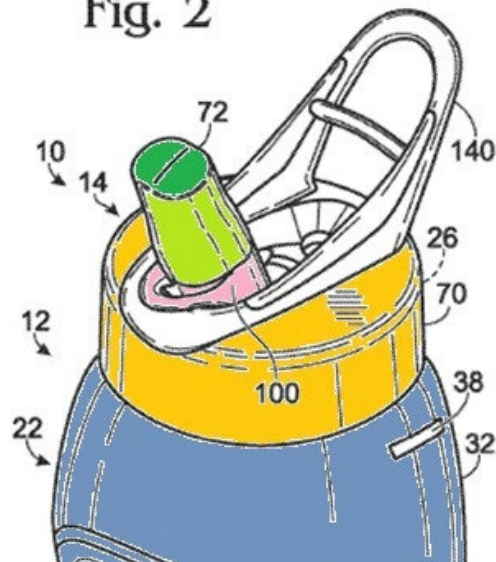


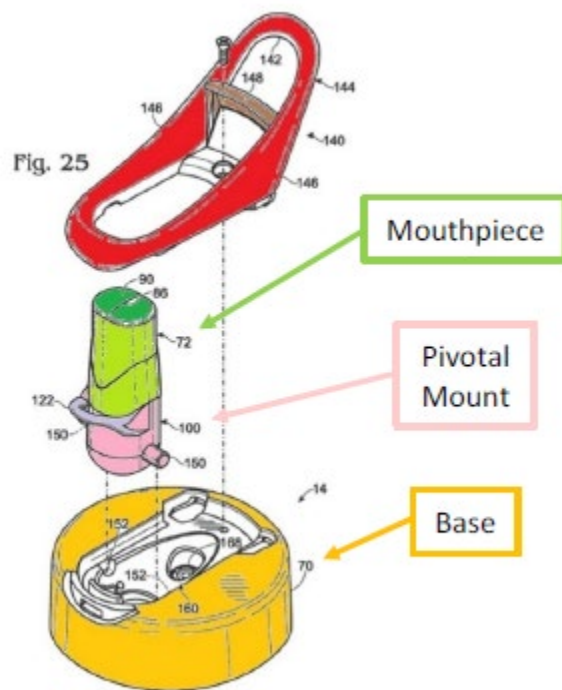
Fig. 2



As shown, the drink bottle includes fluid container 12 (blue) provided with cap assembly 14 that includes resilient, bite-actuated mouthpiece 72 (green) and pivotal mount 100 (pink) to which the mouthpiece is attached for pivotal movement between a stowed position (Figure 1) and a dispensing

position (Figure 2). *Id.* at 2:57–61, 3:11–27. In the dispensing position, “the mouthpiece is oriented in a suitable position from which a user may draw drink fluid from the drink bottle through mouthpiece 72 *when the user bites upon the mouthpiece.*” *Id.* at 3:14–18 (emphasis added).

More specifically, annotated Figure 25 of the '250 patent, reproduced below, illustrates a “pivotal mounting mechanism” for mouthpiece 72 and pivotal mount 100 to which the mouthpiece is attached. *Id.* at 16:50–51.



Annotated Figure 25 is an exploded isometric view of the cap assembly. *Id.* at 2:41–42. As shown, pivotal mount 100 (pink) includes a pair of lateral projections 150 that are received into a pair of corresponding sockets 152 defined by portions of base 70 (yellow) and handle 140 (red) of the cap assembly. *Id.* at 16:52–54. Notably, the pair of lateral projections “are *rotatable* within the sockets, and thereby function as *rotatable* supports, or axles,” about which the pivotal mount and attached mouthpiece “may be

pivotally moved relative to the base of the cap assembly.” *Id.* at 16:54–60 (emphases added).

D. Challenged Claims

Of the challenged claims, claims 1, 7 and 13 are independent. According to the parties, these claims share the same basic structure, with claim 7 reciting all the limitations of claim 1 while adding a limitation for “the dust cover” (Ex. 1001, 20:53–58) and claim 13 being identical to claim 7 but substituting a “dispensing guard” for the dust cover (*id.* at 22:9–15).

Claim 1, reproduced below, is illustrative of the claimed subject matter (with emphasis added for limitations in dispute and bracketed nomenclature added for clarity¹).

1. [preamble] A drink container comprising:

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

[1[b]] a cap assembly removably coupled to the fluid container to cover the opening, wherein the cap assembly defines a fluid conduit for drink fluid to flow from the fluid container and through the cap assembly to a user, wherein the fluid conduit includes an inlet through which drink fluid from the fluid container may enter the fluid conduit, and a dispensing outlet through which drink fluid in the fluid conduit may be dispensed from the cap assembly to a user, and further wherein the cap assembly comprises:

[1[b][1]] a cap assembly base removably coupled to the neck of the fluid container, wherein the cap assembly base is configured to be selectively and repeatedly decoupled from and re-coupled to the neck of the fluid container;

¹ The bracketed nomenclature tracks the nomenclature assigned to the claim limitations in the petition. *See* Pet. 10–12.

[1[b][2]] *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, the pivotal mount defining a hollow passage, the hollow passage having a mount outlet on a distal end of the pivotal mount;*

[1[b][3]] *a mouthpiece coupled to the mount outlet of the pivotal mount for pivotal movement with the pivotal mount relative to the cap assembly base;*

[1[b][3][i]] wherein the mouthpiece defines a portion of the fluid conduit, including the dispensing outlet;

[1[b][3][ii]] wherein the mouthpiece and the pivotal mount are configured to be selectively pivoted between a stowed position and a dispensing position,

[1[b][3][iii]] wherein the mouthpiece is at least partially covered by a dust cover when the mouthpiece and pivotal mount are in the stowed position,

[1[b][3][iv]] and wherein the dispensing outlet is positioned further away from the cap assembly base when the mouthpiece and the pivotal mount are in the dispensing position than when the mouthpiece and the pivotal mount are in the stowed position; and

[1[b][4]] an on/off valve having a closed configuration, in which the on/off valve obstructs the fluid conduit to restrict drink fluid from flowing between the inlet and the dispensing outlet, and an open configuration, in which the on/off valve permits drink fluid to flow through the fluid conduit from the inlet to the dispensing outlet;

[1[b][4][i]] wherein the on/off valve includes a flexible tube that defines a portion of the fluid conduit;

[1[b][4][ii]] wherein when the on/off valve is in the closed configuration, the tube is crimped to obstruct the flow of drink fluid through the fluid conduit; and

[1[b][4][iii]] wherein when the on/off valve is in the open configuration, the tube is not crimped and does not obstruct the flow of drink fluid through the fluid conduit.

Ex. 1001, 19:2–57 (emphasis and bracketed nomenclature added).

E. Asserted Challenges

Claims Challenged	35 U.S.C. §	Basis
1, 2, 4–6	103	Nakajima ²
1, 2, 4–8, 10–14, 16–18	103	Ribarits, ³ Panicci ⁴
3, 9, 15	103	Ribarits, Panicci, Hughes ⁵

In further support of these challenges, Trove relies on the declaration testimony of Glenn E. Vallee, Ph.D. *See* Exs. 1002, 1015. CamelBak, in turn, relies on the declaration testimony of Michael Jobin. *See* Ex. 2016. The parties also submit cross-examination testimony from each of these expert witnesses. *See* Ex. 1013 (cross of Mr. Jobin); Exs. 2021, 2022 (cross of Dr. Vallee).

II. ANALYSIS

A. Level of Ordinary Skill in the Art

Trove contends that a person of ordinary skill in the art “would have had an undergraduate degree in mechanical engineering or equivalent coursework, and a year or more of experience in designing, prototyping, and/or manufacturing fluid containers or similar products” and that “[m]ore work experience may substitute for a lower level of education, and vice versa.” Pet. 15 (citing Ex. 1002 ¶ 25). While CamelBak offers “a similar, though slightly different level,” it nonetheless “discerns no material difference between the definitions provided by the parties for purposes of the Board’s decision in this proceeding.” PO Resp. 27. That being the case, we adopt Trove’s proposed definition of the level of skill in the art, as it is

² JP 2002-211613A, published July 31, 2002 (Ex. 1004, “Nakajima”).

³ WO 2004/063042 A2, published July 29, 2004 (Ex. 1006, “Ribarits”).

⁴ US 4,485,963, issued Dec. 4, 1984 (Ex. 1007, “Panicci”).

⁵ US 6,523,711 B1, issued Feb. 25, 2003 (Ex. 1008, “Hughes”).

reasonable and consistent with what is reflected in the asserted prior art and the specification of the '250 patent.

B. Claim Construction

In its petition, Trove does not propose construing any particular claim term. *See* Pet. 15. CamelBak, in turn, proposes constructions for several claim terms that are common to independent claims 1, 7, and 13, namely:

- “mouthpiece;”
- “two joints that define a pivotal axis for pivotal movement of the pivotal mount;” and
- “a mouthpiece [coupled to the mount outlet of]/[disposed on] the pivotal mount for pivotal movement with the pivotal mount.”

PO Resp. 28–52.

In the Institution Decision, the panel preliminarily construed the first two of these terms, while inviting the parties to continue briefing all three terms in their post-institution papers. *See* Inst. Dec. 11. We now address each claim term below with the added benefit of the parties’ comprehensive briefing.

1. “mouthpiece”

At institution, we adopted CamelBak’s proffered dictionary definition of “mouthpiece” as “a part (as of an instrument) that goes in the mouth *or* to which the mouth is applied.” Inst. Dec. 12 (citing Ex. 2005⁶) (emphasis added). In doing so, we explained that this dictionary definition is consistent

⁶ Exhibit 2005 consists of pages from the online *Merriam-Webster.com Dictionary*, <https://www.merriam-webster.com/dictionary/mouthpiece>, accessed March 13, 2025. Ex. 2005, 4. Neither party contends that this online definition would have been different before the critical date of the challenged '250 patent.

with both the plain and ordinary meaning of the term and the Specification's use of the term. *Id.* (citing Ex. 1001, 8:45–49). CamelBak's expert likewise agrees. Ex. 2016 ¶ 125 (“I agree that ‘this definition is consistent with the plain and ordinary meaning of the term . . .’ and that ‘this definition is consistent with the Specification,’ as found by the Board.”). Indeed, the Specification supports the alternative meanings of mouthpiece as set forth in the dictionary definition (Exhibit 2005) by explaining that “[w]hen the user desires to drink from the positioned drink bottle, the user may bite upon the mouthpiece (and/or *optionally squeeze a fluid container that is designed to be collapsed during use*) to commence the flow of drink fluid through the mouthpiece to the user.” Ex. 1001, 10:9–13 (emphasis added). That is, the Specification describes not only an embodiment in which the user applies their teeth to the mouthpiece in order to commence fluid flow, but also an embodiment in which the user simply inserts the mouthpiece in the opening of their mouth and squeezes the bottle to commence fluid flow. Thus, we maintain our construction of “mouthpiece” as “a part (as of an instrument) that goes in the mouth or to which the mouth is applied.”

Despite our adoption of CamelBak's proffered dictionary definition as indicating the correct construction of “mouthpiece,” CamelBak now urges a narrower construction in its Patent Owner Response. *See* PO Resp. 28–31. According to CamelBak, “mouthpiece” should be construed as “a part designed for a user *to put his or her mouth on* to draw liquid from the container.” *Id.* at 28, 31 (emphasis added). As to what constitutes “on” the mouth, CamelBak explains in its Response that it means “a piece (or part) that goes *in* the mouth.” *Id.* at 28; *see also id.* at 29 (quoting the Specification's disclosure that “[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 . . ."). That construction corresponds to our construction in the Institution Decision that "mouthpiece" means "a part (as of an instrument) that *goes in the mouth* or to which the mouth is applied."

However, upon seeing Trove's agreement with our construction as supported by the dictionary definition (Pet. Reply 4–5), CamelBak now argues for a narrower construction of "mouthpiece," namely, a piece that requires physical "contact" with some portion of the user's mouth while excluding one that is simply inserted or hovered in the opening of the user's mouth. *See* PO Sur-Reply 6 ("The reference to a mouthpiece 'go[ing] in the mouth' did not allow for a hovering of the mouthpiece in the mouth with no mouth contact, contrary to Petitioner'[s] suggestion."); *see also id.* at 23 ("[A] mere fluid conduit and dispensing outlet that can be placed near *or even within the mouth* (i.e., hovering) to dispense fluid into the mouth without having a part designed for the user to put his or her mouth on reads out the separately claimed 'mouthpiece' and is insufficient." (emphasis added)). However, a construction that requires physical contact with the mouth ignores the first half of our construction of "mouthpiece" as a part that simply "goes in the mouth," and, instead, focuses exclusively on the second half of our construction as a part "to which the mouth is applied."

With that in mind, we asked CamelBak during the hearing to explain why the full dictionary definition of "mouthpiece," as proffered by CamelBak and adopted by us at institution, should not also encompass the user simply placing it *in* their mouth as opposed to *on* their mouth. *See* Hrg. Tr. 39:3–8. In response, CamelBak denied that the first part of that definition is saying something different than direct contact with the mouth:

[CamelBak's Counsel]: So this is what I've called their hovering theory, that somehow, if you can place something into

the mouth without actually contacting any part of it, that that somehow makes it a mouthpiece. Because maybe conceivably you could -- if you consider the mouth as being like an interface, and you somehow insert the drinking spout . . . past the interface of the mouth and you hover it in there, does that somehow now make it a mouthpiece?

So the Merriam-Webster's definition [Ex. 2005] talks about a part as of an instrument that goes in the mouth or to which the mouth is applied. So first, I think they're reading a lot into this definition to suggest that somehow the first part is saying that something that goes in the mouth *but never is able to contact the mouth* is still a mouthpiece. I don't think that's -- the definition is saying that. I think that what the definition is saying [is] that this is something you put the mouth on.

Id. at 39:9–22 (emphasis added). In other words, CamelBak urges us to construe mouthpiece as a device that comes into physical contact with some portion of the user's mouth, such as their teeth, tongue, or lips, while excluding a device that is simply inserted in the opening of the user's mouth.

We will not bite. CamelBak's original assertion—that the plain and ordinary meaning of the constituent parts of “mouth” and “piece” is “a piece (or part) that goes *in the mouth*”—underscores the fallacy of CamelBak's additional physical contact requirement. PO Resp. 28 (emphasis added). Indeed, in support of that earlier assertion, CamelBak pointed to the very dictionary definition that we relied on at institution in construing “mouthpiece” as a part that either “goes in the mouth *or* to which the mouth is applied.” *See id.* at 31 (citing Ex. 2005 (emphasis added)). Even the original testimony of CamelBak's own expert confirms that one skilled in the art “would understand that the term ‘mouthpiece’ is commonly known in the art as a part designed *for a user's mouth*,” without any requirement for physical contact with the mouth. Ex. 2016 ¶ 58 (citing Ex. 2005) (emphasis added)). And nothing in the Specification limits that common

understanding. Although, indisputably, the Specification contemplates an embodiment where the user physically contacts the mouthpiece with their teeth (i.e., a bite-actuated mouthpiece), it also contemplates an embodiment where the user simply inserts the bottle in their mouth and commences fluid flow by squeezing it. *See* Ex. 1001, 10:9–13. That disclosure supports a meaning of “mouthpiece” that simply requires placement in the opening of the user’s mouth without necessarily incurring physical contact with some portion of the mouth, such as the teeth, tongue, or lips. Indeed, had CamelBak wished to premise the meaning of “mouthpiece” on some sort of physical contact with the mouth, it knew how to do so. For instance, the independent claims of CamelBak’s earlier ’255 patent, which is the subject of the related 1137 IPR, are limited in just such a manner, as they recite “wherein the resilient mouthpiece is adapted to resiliently compress responsive to compressive forces applied to the resilient mouthpiece *by a user’s teeth.*” Ex. 2023, at 20–25 (emphasis added).

Thus, we reject CamelBak’s attempt to narrow our construction of “mouthpiece” to something other than “a part (as of an instrument) that goes in the mouth *or* to which the mouth is applied.” Neither the intrinsic nor extrinsic evidence supports the narrower construction proposed by CamelBak.

Finally, we disagree with CamelBak’s belated assertion that, in our Institution Decision, “the Board determined that mouth contact was required.” *See* PO Sur-Reply 6. In the course of construing “mouthpiece,” nowhere do we say that the proper meaning of “mouthpiece” involves “mouth contact.” *See* Inst. Dec. 11–12 (construing “mouthpiece”). In fact, we clearly noted that, “although the Specification refers to bite-actuation of the mouthpiece, for example in the field of the disclosure and certain

embodiments (e.g., Ex. 1001, 1:25–27), the independent claims do not require bite-actuation.” *Id.* at 12. That said, when addressing Trove’s Ribarits-based grounds, we did say “on this *preliminary* record, we preliminarily determine that Petitioner [i.e., Trove] does not adequately explain how the end portion of item 2 [in Ribarits] functions as a mouthpiece where it does not contact the mouth.” *Id.* at 37 (emphasis added). But, in doing so, we were speaking of contact in general terms as passing through the mouth’s opening, and not necessarily as physically touching some portion of the mouth’s structure, such as the user’s teeth, tongue, or lips.⁷ In other words, we were warning Trove to elaborate further at trial as to how one skilled in the art would have understood Ribarits’s drinking spout to be positioned relative to the mouth. And, indeed, both parties heeded our warning for further explanation, as discussed below with respect to Grounds 2 and 3.

2. “*two joints that define a pivotal axis for pivotal movement of the pivotal mount*”

At institution, we adopted CamelBak’s proposed construction that “two joints that define a pivotal axis for pivotal movement of the pivotal mount” means “two joints that define an axis of rotation for rotational motion of the pivotal mount about the axis.” Inst. Dec. 13. That construction, we decided, is consistent with the Specification, which repeatedly describes pivoting in the context of rotational motion. *See* Ex. 1001, 5:9–17, 7:47–53, 12:13–21, 16:50–60, Figs. 1, 2, 25, 29. For

⁷ Indeed, per CamelBak’s own admission, “the ‘mouth’ is the ‘opening’ through which fluid or liquid passes and not merely the surface of the lips.” PO Sur-Reply 25 (citing “<https://www.merriam-webster.com/dictionary/mouth>”). That definition indicates that inserting something through the mouth’s opening amounts to contact with the mouth.

example, when describing the pivotal axis for the pivotal mount, the Specification explains that “[t]he projections are *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.” *See* Ex. 1001, 16:54–60 (emphases added). Thus, consistent with the intrinsic evidence, we maintain that the claim limitation “a pivotal axis for pivotal movement of the pivotal mount” means “an axis of rotation for rotational motion of the pivotal mount about the axis.”

CamelBak also requests that we refine our initial construction of this limitation to require that “rotational motion” means that all points of the mouthpiece “maintain[] a constant distance/radius to the axis of rotation such that it moves in a circular path about the axis.” PO Resp. 32; *see also id.* at 36–38 (arguing same). Trove replies that, although pivotal movement encompasses rotational motion, “nothing in the claims—or anywhere else—requires pivotal movement to be a rigid body tracing a constant-radius arc around a single, fixed axis.” Pet. Reply 6 (citing Ex. 1015 ¶¶ 7–14, 18).

At the institution stage, we opted not to reach CamelBak’s request for further refinement of this limitation. *See* Inst. Dec. 13–14. We continue to believe that the construction we adopted at institution need not be refined, especially given that our construction of the next limitation in dispute resolves the question of the Nakajima-based ground in which this claim construction issue arises.

3. “*a mouthpiece coupled to [disposed on] . . . the pivotal mount for pivotal movement with the pivotal mount*”

While the preceding claim limitation recites that the pivotal mount engages in “pivotal movement” about a “pivotal axis” defined by “two

joints,” this limitation, also common to the independent claims, requires that the mouthpiece engage in “pivotal movement *with* the pivotal mount.” Ex. 1001, 19:21–28, 20:36–41, 21:51–56 (emphasis added). CamelBak argues that “pivotal movement *with* the pivotal mount” means that the mouthpiece “moves with rotational motion about the same axis of rotation defined by the two joints as the pivotal mount” and “in the same direction as the pivotal mount.” PO Resp. 38–39 (emphases added). CamelBak also argues that this limitation means “the pivotal movement of the mouthpiece *mirrors* the pivotal movement of the pivotal mount” about the axis defined by the two joints. *Id.* at 40 (emphasis added).

Trove does not dispute that this limitation “encompasses the mouthpiece and pivotal mount engaging in ‘rotational motion about the same axis of rotation . . . in the same direction.’” Pet. Reply 9. But, according to Trove, “nothing in the claims—or anywhere else requires that the mouthpiece ‘mirror[]’ the pivotal mount’s pivotal movement or that it ‘not [be] away from’ that movement.” *Id.*; *see also id.* at 12 (“Nothing in that definition requires mirrored motion, nor does it exclude movement that includes some local component not strictly ‘in the direction of.’”). Instead, Trove argues, this limitation also encompasses “local rotation” or “local movements” of the mouthpiece about a different axis that simply accompany the movements of the pivotal mount. *Id.* at 10–12. In support, Trove relies heavily on extrinsic evidence, i.e., the testimony of its expert and a broad definition of “with,” neither of which we find persuasive or consistent with the intrinsic record. *See id.* at 9–13 (citing Ex. 1015 ¶¶ 8–18; Ex. 2017).

As discussed below, we find that the intrinsic record more amply supports CamelBak’s proposed construction. One skilled in the art, reading the claim language in light of the Specification, would reasonably

understand that the mouthpiece mirrors the movement of the pivotal mount by rotating about the same two joints as the pivotal mount and in the same direction as the pivotal mount.

First, the claim language itself informs the meaning of “for pivotal movement with the pivotal mount” by reciting that the pivotal movement is about the “pivotal axis” defined by the “two joints” that couple the pivotal mount to the cap assembly base. Ex. 1001, 19:21–24, 20:36–39, 21:51–54. Aside from those two joints, nowhere do the claims define any other pivotal axis for the pivotal mount. Importantly, the very next limitation recites that the mouthpiece is “*coupled to*⁸ the mount outlet of the pivotal mount for pivotal movement *with* the pivotal mount.” *Id.* at 19:27–29 (emphases added). That the claims recite that the mouthpiece be “coupled to” the pivotal mount “for pivotal movement with the pivotal mount” reasonably informs us that the mouthpiece’s rotational motion is about the pivotal axis defined by the two joints, rather than rotational motion about a different, undefined axis. Thus, the claim language reinforces that the mouthpiece’s movement is not simply contemporaneous motion, but rather is rotational motion about the same axis and in the same direction as the pivotal mount.

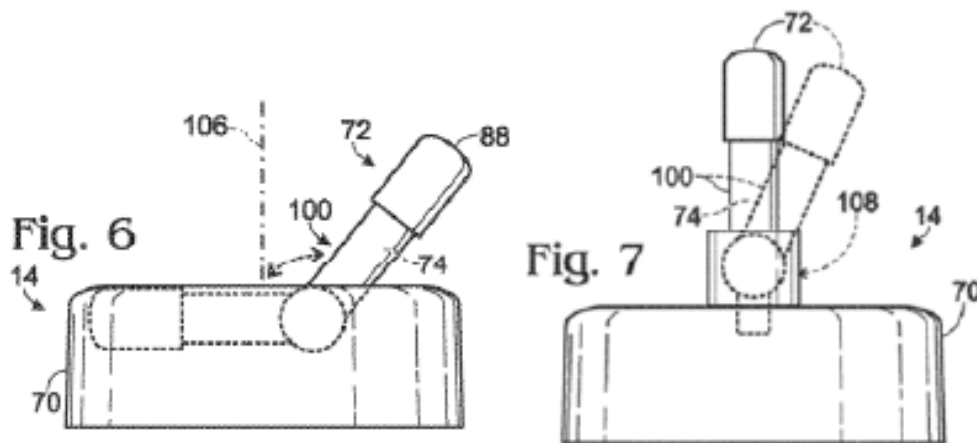
Indeed, that understanding of the claim language is consistent with the Specification’s description and depiction of every embodiment where the pivotal mount carries the mouthpiece. More specifically, the Specification repeatedly describes the mouthpiece in terms of being mounted on or attached to the pivotal mount. *See, e.g.*, Ex. 1001, 3:11–27 (“pivotal mount 100 to which the mouthpieces are mounted . . . in a dispensing

⁸ Independent claims 7 and 13 recite “disposed on” rather than “coupled to.” Ex. 1001, 20:40–42, 21:51–54.

configuration”); 7:18–32 (“the mount and attached mouthpiece are shown pivoted from the dispensing configuration . . . to a stowed configuration”); 7:42–53 (“the mouthpiece, and at least a portion of the mount, may be coupled to the base of the cap assembly by a joint”); 15:66–16:11 (“mouthpiece 72 that is mounted on mount 100 and is in fluid communication therewith”). The Specification also makes clear that the mouthpiece and pivotal mount rotate together within a range of positions—

[M]ount 100 may be adjustably positionable relative to the base of the cap assembly, *thereby permitting the orientation of the bite-actuated mouthpiece to be adjusted within a range of positions, or configurations, that are defined at least in part by the mount*. This adjustable positioning of the mouthpiece, when provided for in a particular embodiment, may permit a user to adjust the orientation of the mouthpiece to a user-selected drinking orientation. An example of an adjustably positionable mount 100 is shown in dashed lines in FIG. 6, in which the mount and attached mouthpiece are shown pivoted from the dispensing configuration shown in solid lines to a stowed configuration.

Id. at 7:19–30. Consistent with that description, Figures 6 and 7 of the ’250 patent, reproduced below, illustrate the manner in which the mouthpiece and pivotal mount rotate together about the same axis of rotation.



As illustrated in Figure 6 (above left) and Figure 7 (above right), “the mount [100] and attached mouthpiece [72] are shown pivoted from the

dispensing configuration shown in solid lines to a stowed configuration [shown in dashed lines].” *Id.* at 28–30. “[T]he mouthpiece, and at least a portion of the mount, may be coupled to the base [70] of the cap assembly by a joint (and/or valve) 108, such as may take the form of a pivotal joint, a ball joint, or other suitable structure that provides for adjusting the angular and/or rotational orientation of the mount relative to the base of the cap assembly.” *Id.* at 7:47–53. Thus, as shown and described, the embodiments of Figures 6 and 7 reasonably indicate that the mouthpiece mirrors the movement of the pivotal mount.

But Figures 6 and 7 are not the only embodiments in which the mouthpiece mirrors the movement of the pivotal mount. Annotated Figures 1 and 2 of the ’250 patent, reproduced below, illustrate yet another embodiment in which mouthpiece 72 and pivotal mount 100 rotate together about the same axis, while annotated Figure 25, also reproduced below, illustrates how such mirror-like movement is achieved.

Fig. 1

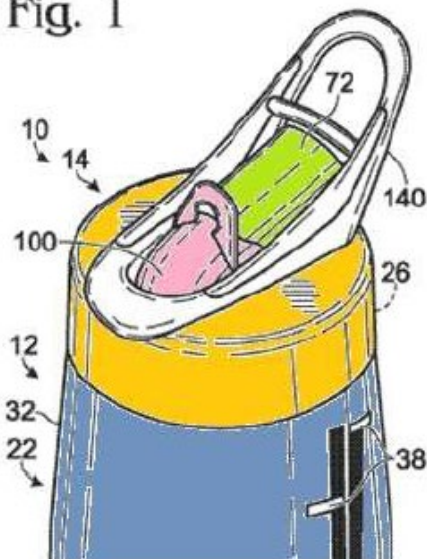
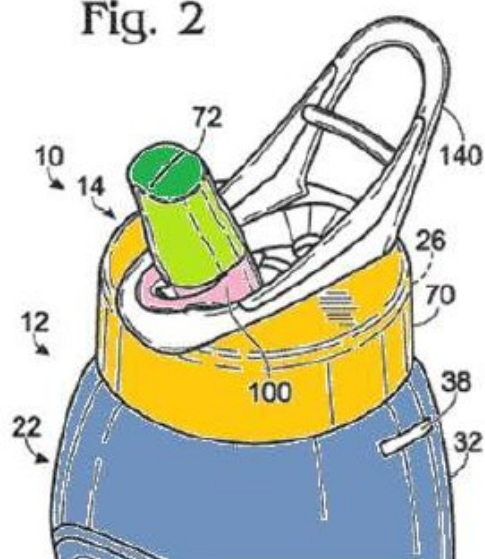
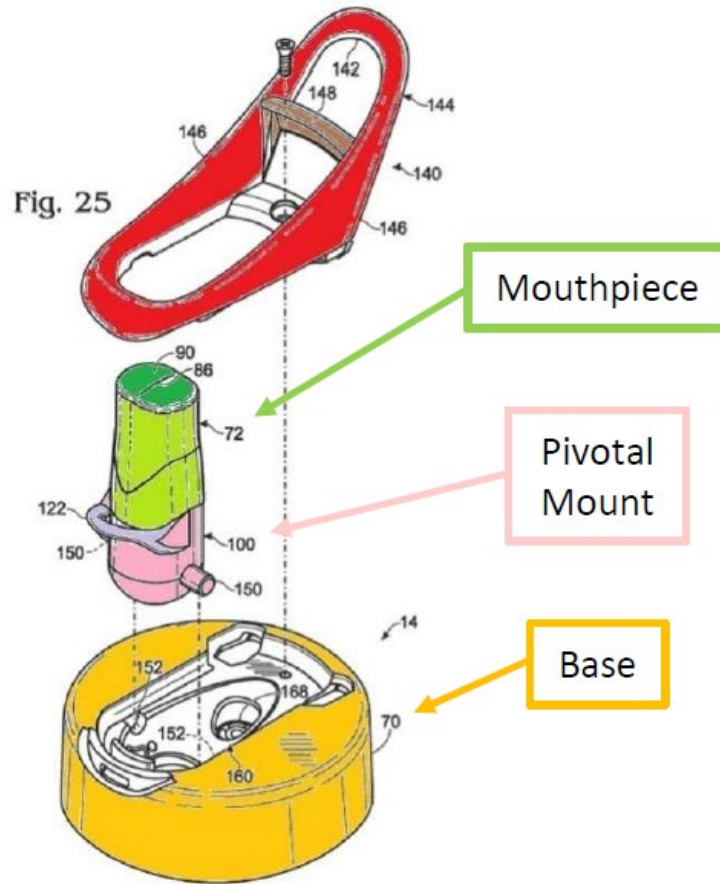


Fig. 2





As shown above in annotated Figures 1 and 2, pivotal mount 100 (pink) and attached mouthpiece 72 (green) rotate together between a stowed position (Fig. 1) and a dispensing position (Fig. 2) relative to base 70 (yellow) of the cap assembly. And, as shown above in annotated Figure 25, lateral projections 150 on pivotal mount 100 are received into sockets 152 on base 70. “The projections are 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.* at 16:50–60 (emphasis added). Figures 23, 24, and 26–29 similarly depict the mouthpiece mirroring the movement of the pivotal mount.

Those descriptions show that, in every embodiment depicting the claimed “two joints” for rotation of the pivotal mount—i.e., the “pivotal joint” in Figures 6 and 7 and the “rotatable supports” in Figures 1, 2, and 23–29—the mouthpiece rotates about the same pivotal axis as the pivotal mount and in the same direction as the pivotal mount such that the mouthpiece mirrors the pivotal movement of the pivotal mount. Thus, the intrinsic evidence, i.e., the claim language and the Specification of the ’250 patent, demonstrates that the proper construction of “a mouthpiece coupled to [disposed on] . . . the pivotal mount for pivotal movement with the pivotal mount” is that the mouthpiece rotates about the same two joints as the pivotal mount and mirrors the rotational movement of the pivotal mount.

C. Grounds 2 and 3—Obviousness Based on Ribarits, Panicci, and Hughes

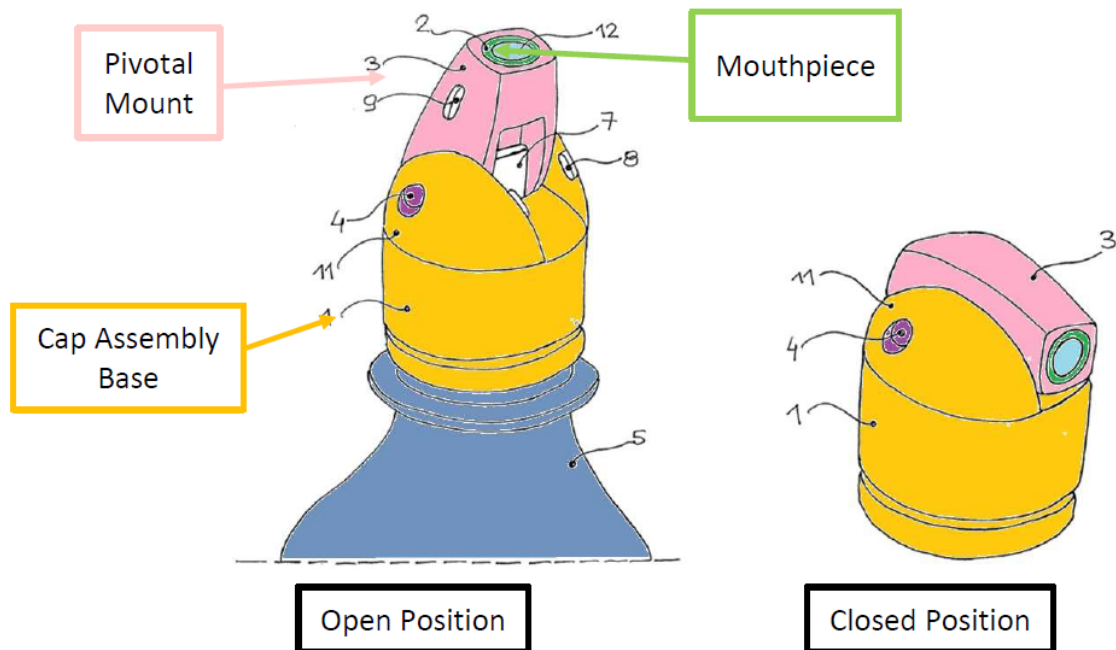
We begin with Grounds 2 and 3, as they are dispositive. For these grounds, Trove argues that claims 1, 2, 4–8, 10–14, and 16–18 are unpatentable as obvious over Ribarits and Panicci (Pet. 38–63) and that claims 3, 9, and 15 are unpatentable as obvious over that same combination plus Hughes (*id.* at 63–67).

In response, CamelBak disputes Trove’s showing with respect to various limitations of independent claims 1, 7, and 13, in particular, the recitation in claim 1 of “a mouthpiece” that includes “the dispensing outlet” and is “coupled to” the pivotal mount” and the similar recitation in claims 7 and 13 of “a mouthpiece” that includes “the dispensing outlet” and is “disposed on” the pivotal mount. *See* PO Resp. 73–81; PO Sur-Reply 22–25. More specifically, according to CamelBak, Grounds 2 and 3 fail because, *first*, “the structure in Ribarits that allegedly defines the ‘dispensing outlet’ is not a ‘mouthpiece’” and, *second*, “Ribarits’s alleged ‘mouthpiece’

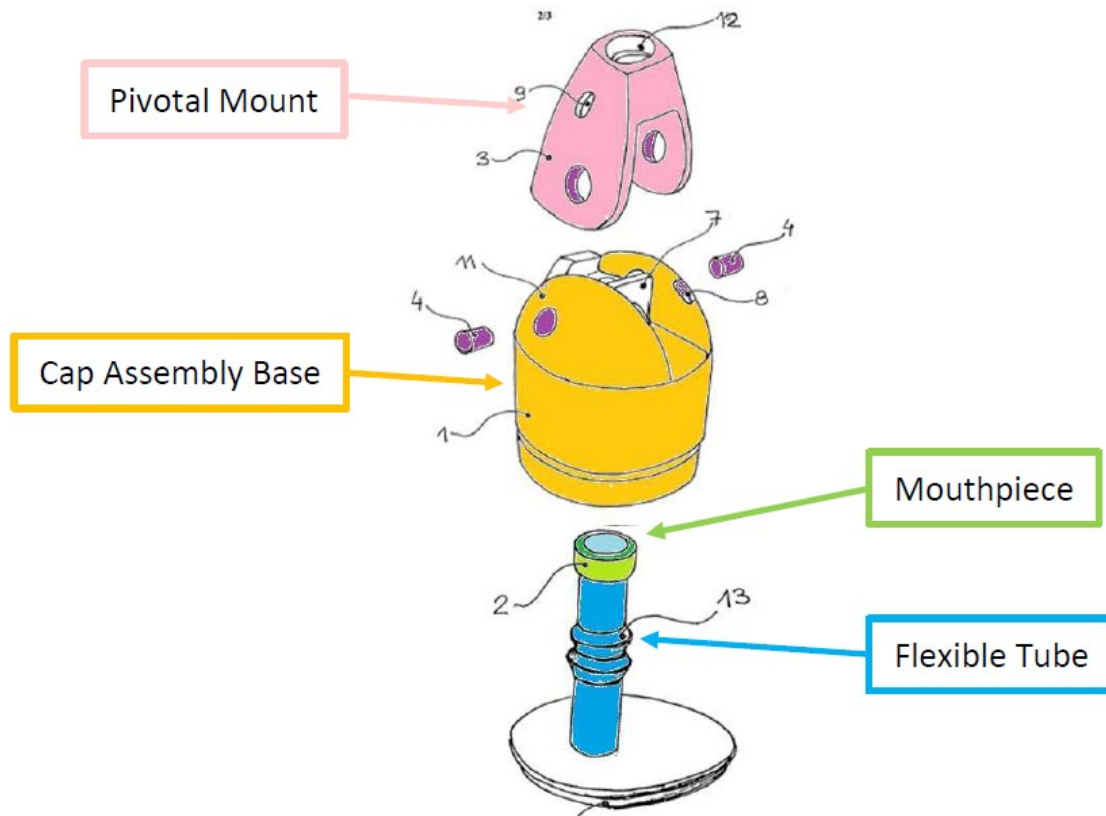
is neither ‘coupled to the mount outlet’ nor ‘disposed on the pivotal mount,’” as required by claims 1, 7, and 13. PO Resp. 73. We address each of these arguments in turn.

1. “a mouthpiece . . . wherein the mouthpiece defines a portion of the fluid conduit, including the dispensing outlet” (Claims 1, 7, and 13)

To show that Ribarits satisfies the “mouthpiece” limitation of claims 1, 7, and 13, Trove annotates Figures 1 and 2 of Ribarits, reproduced below, to illustrate how Ribarits’s drinking bottle (blue) includes a “cap assembly base” (yellow) having a “pivotal mount” (pink) with a “mouthpiece” (green) coupled to the distal end of the pivotal mount. *See* Pet. 38–39, 44–45 (citing Ex. 1006, 2, Figs. 1, 2).



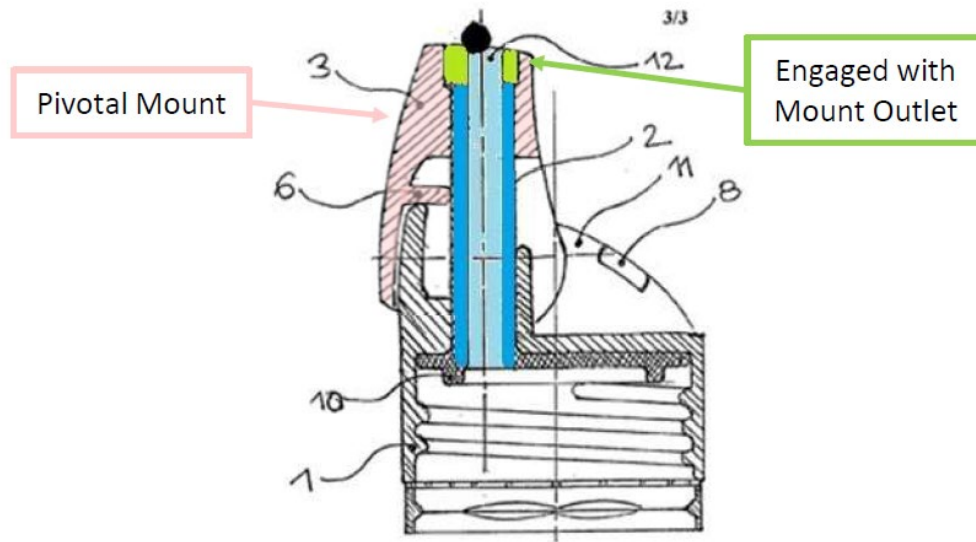
Ex. 1006, Fig. 1 (annotated).



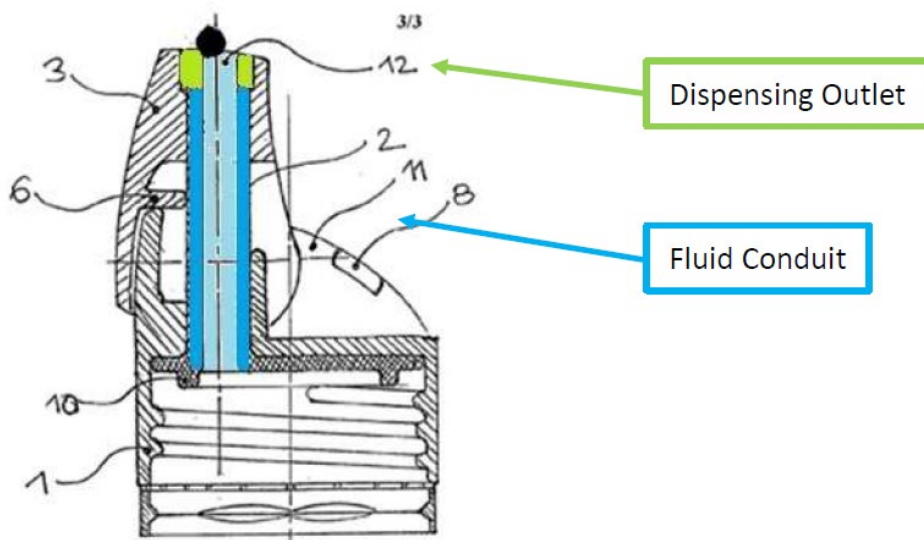
Id., Fig. 2 (annotated).

Annotated Figure 1 is a perspective view of Ribarits's drinking bottle in an open position (left-side figure) and a closed position (right-side figure), while annotated Figure 2 is an exploded view of the various parts of Ribarits's cap assembly. According to Trove, as shown in those figures, "[t]he mouthpiece of Ribarits is the *end portion* of the 'tubular element of rubber or latex'" whereby the tubular element (blue) is inserted through the pivotal mount (pink) such that "the mouthpiece portion couples with the mount outlet to hold the tubular element in place." Pet. 46 (citing Ex. 1006, 2, Fig. 2) (emphasis added).

Trove annotates Figure 3 of Ribarits, reproduced below, to further illustrate how "the mouthpiece is coupled to the mount outlet of the pivotal mount." *See id.* at 47 (citing Ex. 1006, 2, Fig. 3).



Annotated Figure 3 is a cross-sectional view of the mouthpiece (green) engaged with the mount outlet of the pivotal mount (pink).⁹ Trove further annotates Ribarits’s Figure 3 to illustrate how “the mouthpiece defines a portion of the fluid conduit” that includes “a dispensing outlet through which drink fluid in the fluid conduit may be dispensed from the cap assembly to a user,” as also required by the claims. Pet. 48 (citing Ex. 1006, 2, Fig. 3).



⁹ The black dot in the figure appears to be a printing error in the original published patent. See Ex. 1006, Fig. 3.

As shown above, Trove identifies flexible tube 2 (blue) as corresponding to the claimed “fluid conduit” and the distal end 12 of the fluid conduit as corresponding to the claimed “dispensing outlet” through which fluid is dispensed to a user. *Id.*

In response to Trove’s showing, CamelBak argues that the end portion (green) of Ribarits’s tube (blue) that Trove identifies as the claimed “mouthpiece” is not a mouthpiece because it is not “a part designed for a user to put his or her *mouth on* to draw liquid from the container.” PO Resp. 74–75 (emphasis added). Instead, according to CamelBak, that end portion (green) of Ribarits’s tube “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.” *Id.* at 75–76. As such, CamelBak surmises that, rather than understanding that the user puts their mouth on the end portion of Ribarits’s tube, one skilled in the art would have understood that the user puts their mouth on Ribarits’s drinking spout 3, which Trove identifies as corresponding to the claimed “pivotal mount.” *Id.* at 76 (citing Ex. 2016 ¶¶ 128–130).

We disagree. CamelBak’s argument rests on its incorrect construction of “mouthpiece” as being “a part designed for a user to put his or her mouth on to draw liquid from the container.” As discussed above, CamelBak’s construction of “mouthpiece” is too narrow in view of the intrinsic evidence. *See supra* § II.B.1. When properly construed, “mouthpiece” is a part that “goes in the mouth” or “to which the mouth is applied.” *Id.* In other words, as claimed, “mouthpiece” is not limited to a part that touches some physical tissue within the mouth, such as the teeth or lips; it also encompasses a part that is simply inserted in the mouth’s opening. As such, CamelBak’s first

argument fails for the simple reason that it ignores the full meaning of “mouthpiece.”

Once the proper claim construction is applied, there is no dispute that Ribarits discloses this limitation. The end portion of Ribarits’s drinking spout, which includes the dispensing outlet, goes into the user’s mouth, and is, thus, a “mouthpiece” regardless of whether it actually touches the user’s teeth or lips. As discussed above, CamelBak admits that the mouth’s cavity is part of the mouth—“the ‘mouth’ is the ‘opening’ through which fluid or liquid passes and not merely the surface of the lips.” PO Sur-Reply 24 (citing <https://www.merriam-webster.com/dictionary/mouth>). Indeed, during the hearing, CamelBak explained that the dictionary defines “mouth” as “an opening . . . *the mouth is the opening* and so the lips need to be open in order for the alleged mouthpiece to -- for it to be a mouthpiece.” Hrg. Tr. 38:3–10 (emphasis added); *see also* Ex. 2022, 102:21–103:4 (Trove’s expert likewise confirming “the mouth is what a POSITA would assume the mouth is. *It’s the cavity in your mouth.* There is a surface of your mouth, which is the inside. There were the lips, which close the mouth, so they’re all parts of the mouth.” (emphasis added)).

So given that the mouth’s opening or cavity is indisputably part of the mouth, all that is required to meet the claimed “mouthpiece” is that the end portion of Ribarits’s drinking spout has the capability to be received within the opening of the mouth for dispensing fluid to the user. To that end, CamelBak admits that Ribarits’s drinking spout “can hover inside a user’s mouth without ever contacting it,” but contends that ability is “irrelevant” because “the ability of a user to *contact the mouthpiece with their mouth is required.*” PO Sur-Reply 23. That reasoning falls short because, as discussed above, the correct construction of “mouthpiece” *does not require*

physical contact with some structural aspect of the mouth, such as the teeth or lips; it only requires the ability for insertion into the cavity of the mouth. *See supra* § II.B.1. Without question, Ribarits has that capability. In particular, during the hearing, CamelBak agreed that the end portion of Ribarits’s drinking spout, i.e., “the green part” that Trove identifies as the claimed “mouthpiece, passes into the user’s mouth—

[PTAB JUDGE]: Mr. Mudd, what do you think happens in Ribarits? I mean, it’s called a drinking spout. What happens as far as the mouth goes, in terms of Ribarits’ drinking spout?

[PO COUNSEL]: Yes. And I’ll show that here on Slide 68. So yeah, it’s clear in Ribarits that the user places their mouth on the pink portion, the drinking spout. I mean, that’s the term it uses, drinking spout. It’s the part that the user drinks from. The green part is not the mouthpiece.

[PTAB JUDGE]: Let me ask -- so you agree that the pink part goes in the user’s mouth, correct?

[PO COUNSEL]: Yes, that’s correct, Your Honor. And that my lips -- and the user’s lips -- . . .

[PTAB JUDGE]: *So if the pink part goes in the user’s mouth, the green part goes in the user’s mouth as well, correct?*

[PO COUNSEL]: *Hovering, yes.*

[PTAB JUDGE]: *But it’s within the mouth?*

[PO COUNSEL]: *In terms of passing the interface of the front of the mouth, I believe that’s correct, Your Honor. I think that’s a fair assumption to make from Ribarits.*

Hrg. Tr. 43:24–44:18 (emphases added).

Given that exchange and admission, we reject CamelBak’s argument that “Ribarits does not disclose how the user drinks from that -- from the bottle.” *Id.* at 38:19–20. More reasonably, that shows that one skilled in the art would have understood that Ribarits’s drinking spout is capable of being inserted and hovered within the mouth’s cavity. *See* Pet. Reply. 25–26 (citing Ex. 1015 ¶¶ 51–53 (confirming that the user-facing end portion of

Ribarits's tubular element 2 forms the fluid path that is "approached by" and "enters" the user's mouth when used as intended)).

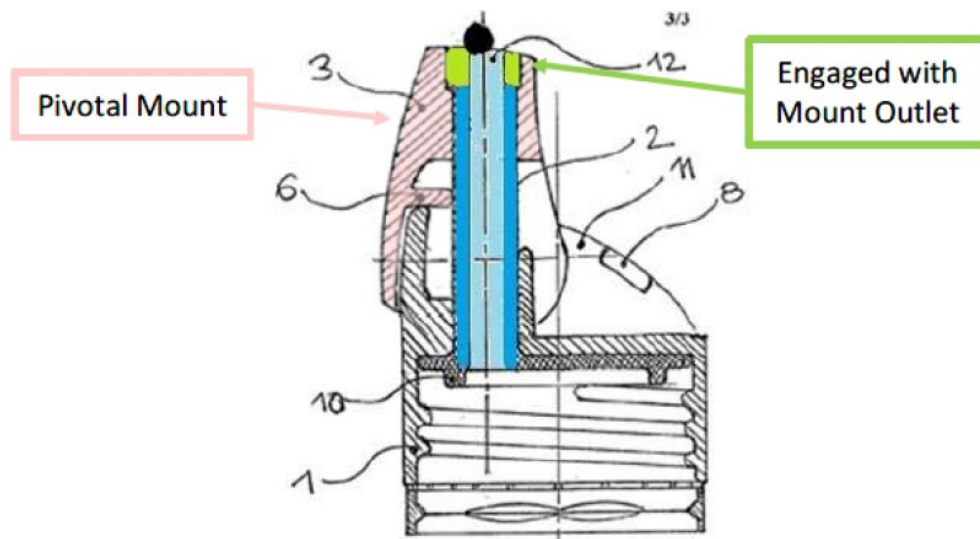
We also reject CamelBak's argument that Trove relies solely on a "kissing theory" in which the "closed lips" of the user are "pressed against" the end portion of Ribarits's drinking spout and "somehow they could open their lips and contact the mouth to that [end] portion." Hrg. Tr. 37:18–38:24. That is clearly not the case, as even CamelBak acknowledged during the hearing that Trove also relies on a "hovering theory." *Id.* at 39:9–11 ("[PO COUNSEL]: So this is what I've called their hovering theory, that somehow, if you can place something into the mouth without actually contacting any part of it, that that somehow makes it a mouthpiece."); *see also* Pet. Reply 25–26 (arguing Ribarits satisfies the claimed "mouthpiece" because "the end portion of Ribarits' tubular element 2 enters the user's mouth"). It is Trove's hovering theory that dooms CamelBak's assertion that Ribarits's does not disclose the claimed "mouthpiece." That Ribarits's pivotal mount may prevent physical contact with the mouth is irrelevant so long as one skilled in the art would have understood that the user inserts the end portion of Ribarits's drinking spout into the mouth's cavity regardless of whether it touches the user's teeth or lips. As discussed above, Trove provides ample evidence in support of that understanding.

In sum, because the end portion of Ribarits's drinking spout 3 includes a dispensing outlet that indisputably enters the user's mouth, we find that Ribarits satisfies the "mouthpiece" limitation of claims 1, 7, and 13.

2. “a mouthpiece coupled to the mount outlet of the pivotal mount”
(Claim 1)

CamelBak contends that Ribarits’s mouthpiece is not “coupled to the mount outlet of the pivotal mount,” as required by claim 1. *See* PO Resp. 77–78. According to CamelBak, 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,” Trove fails to provide any support for how Ribarits’s mouthpiece (green) “is coupled to the mount outlet.” *Id.* at 78. We disagree.

Trove annotates Ribarits’s Figure 3, reproduced below, to show how Ribarits’s mouthpiece (green) engages with the pivotal mount (pink) to hold the flexible tubular element (blue) in place. Pet. 47.



As asserted by Trove, “Ribarits’ tubular element is inserted through the cap assembly base and the mouthpiece portion couples with the mount outlet to hold the tubular element in place.” Pet. 46–47 (citing Ex. 1006, 2, Figs. 2, 3). In support, Trove’s expert notes that Ribarits’s tubular element is made of “rubber or latex” and, with that in mind, explains that one skilled in the art would have understood that the tubular element’s “wider tip”

(green), which corresponds to the claimed “mouthpiece,” “is engaged to the mount outlet and thereby coupled to the pivotal mount at the dispensing outlet.” Ex. 1002 ¶¶ 125–127. Indeed, as Trove also notes, Ribarits itself states that “in the drinking spout (3), a broadening of the outlet opening (12) enables a *snapping* of the sealed tubular element (2).” Pet. Reply 30 (citing Ex. 1006, 3, claim 7) (emphasis added). And Trove’s expert testifies that one skilled in the art would reasonably understand the “snapping” disclosure in Ribarits as describing “a conventional snap-fit connection (i.e., a securing mechanism that generates frictional retention at the interface between the tubular element 2 and the broadening of the outlet opening 12) . . . , as illustrated by the engagement geometry in [Ribarits’s] Figure 3.”¹⁰ Ex. 1015 ¶ 55. As such, we find that Trove provides sufficiently persuasive evidence of how the wider tip of Ribarits’s mouthpiece snap fits into the cavity of the Ribarits’s pivotal mount to couple these parts together. Thus, Trove demonstrates by a preponderance of the evidence that Ribarits’s mouthpiece is “coupled to” the pivotal mount, as required by claim 1.

In sum, because the end portion of Ribarits’s drinking spout 3 includes a dispensing outlet that includes a wider portion that snaps into the drinking spout, we find that Ribarits satisfies the claim limitation requiring “a mouthpiece coupled to the mount outlet of the pivotal mount,” as required

¹⁰ CamelBak contends that Trove’s reliance on the “snapping” disclosure for the first time in the Reply constitutes “new” argument that “should be disregarded.” See PO Sur-Reply 25. But Trove raised this argument in direct response to CamelBak’s argument in the Patent Owner Response that “Ribarits does not describe any friction or other means at the points of contacts between the alleged mouthpiece and mount outlet.” PO Resp. 78. Thus, Trove’s argument regarding the “snapping” disclosure is within the proper scope of a reply.

by claim 1. We have also reviewed Trove’s *uncontested* assertions in the Petition as to how the remaining limitations of claim 1 are disclosed or suggested by Ribarits and Panicci, and we find that Trove has shown that these claim limitations are met by those references and that one of ordinary skill in the art would have had sufficient reason to combine their respective teachings. Thus, Trove demonstrates, by preponderance of the evidence, that claim 1 is unpatentable as obvious over the asserted combination of Ribarits and Panicci.

CamelBak does not argue dependent claims 2–6 separately from independent claim 1, and, instead, relies on its arguments in support of claim 1. *See* PO Resp. 81–82 (“[F]or 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.”). We have reviewed Trove’s *uncontested* assertions in the Petition as to how the limitations of dependent claims 2–6 are disclosed or suggested by Ribarits, Panicci, and/or Hughes, and we find that Trove has shown that these dependent limitations are met by those references and that one of ordinary skill in the art would have had sufficient reason to combine their respective teachings. Thus, for the same reasons discussed above with respect to claim 1, Trove demonstrates by a preponderance of the evidence that (1) dependent claims 2 and 4–6 are unpatentable as obvious over Ribarits and Panicci, and (2) dependent claim 3 is unpatentable as obvious over Ribarits, Panicci, and Hughes.

3. “a mouthpiece disposed on the pivotal mount” (*Claims 7 and 13*)

CamelBak contends that Trove “provides no separate explanation” of how Ribarits satisfies the “disposed on” requirement for the mouthpiece of claims 7 and 13 apart from satisfying the “coupled to” requirement for the mouthpiece of claim 1. *See* PO Resp. 78. According to CamelBak,

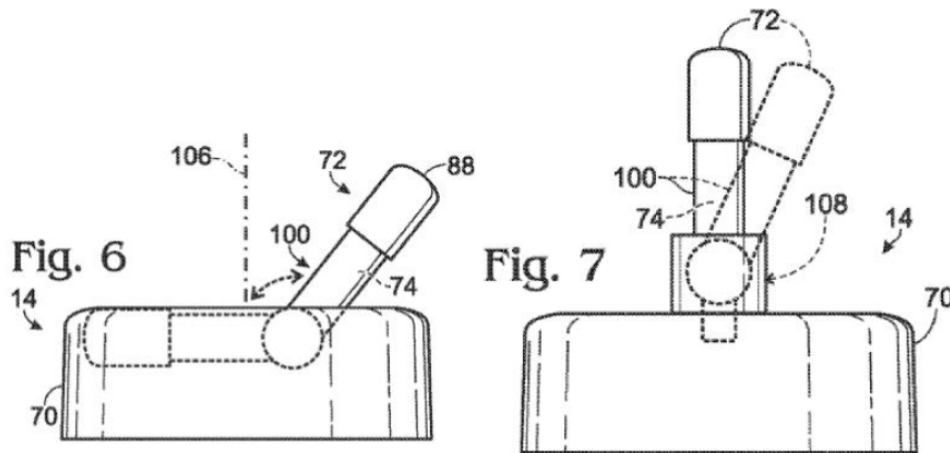
Ribarits’s “tubular element (2) is disposed *in* not *on* the drinking spout (3).” *Id.* at 79.

We agree with CamelBak that Trove falls short in meeting its initial burden. Neither Trove’s Petition nor the accompanying expert declaration provides a correlation between the “coupled to” limitation of claim 1 and the “disposed on” limitation of claims 7 and 13, let alone explain why Ribarits’s satisfaction of the “coupled to” limitation should also be attributed to the “disposed on” limitation. *See* Pet. 60–61 (discussing claim 7), 62 (discussing claim 13); Ex. 1002 ¶¶ 176, 191 (Trove’s expert referring back to his analysis of claim 1, which addresses only the “coupled to” limitation). Indeed, by stating that claims 7 and 13 “contain[] all the limitations” of claim 1” with the only difference being the addition of the “dust cover” or “dispensing guard” limitation, Trove assumes without further explanation that “disposed on” has the same meaning as “coupled to.” Pet. 60, 62. More accurately, however, the use of different words in a claim presumes they have different meanings. That difference is shown by the fact that claims 7 and 13 already use the term “coupled to” in the immediately preceding limitation, thereby indicating they have different meanings. Here, Trove’s Petition not only fails to recognize this different wording, but also fails to meaningfully explain why one skilled in the art would reasonably understand them to have the same meaning. In that regard, the Petition falls well short of meeting its initial burden.

In its Reply, Trove attempts to cure that shortcoming in its Petition by arguing that “the claim terms ‘coupled to’ and ‘disposed on’ describe the same underlying physical relationship from two complementary perspectives: the mouthpiece is connected to—and positioned on—the mount outlet in a manner that allows it to move pivotally with the pivotal

mount.¹¹ Pet. Reply 31. According to Trove, “nothing in the intrinsic record supports CamelBak’s attempt to impose separate, additional requirements for ‘disposed on.’” *Id.* We disagree.

Although the Specification of the ’250 patent never uses the term “disposed on” to describe the engagement of the mouthpiece with the pivotal mount, it nonetheless uses similar language to distinguish the use of the term “disposed on” the pivotal mount from “coupled to” the pivotal mount. In particular, the Specification of the ’250 patent describes several examples in which the mouthpiece is “mounted *on*” or “positioned *on*” the distal end of the pivotal mount. Ex. 1001, 9:30–32, 16:9–11. As CamelBak notes, an example of that type of engagement is shown in Figures 6 and 7, reproduced below.

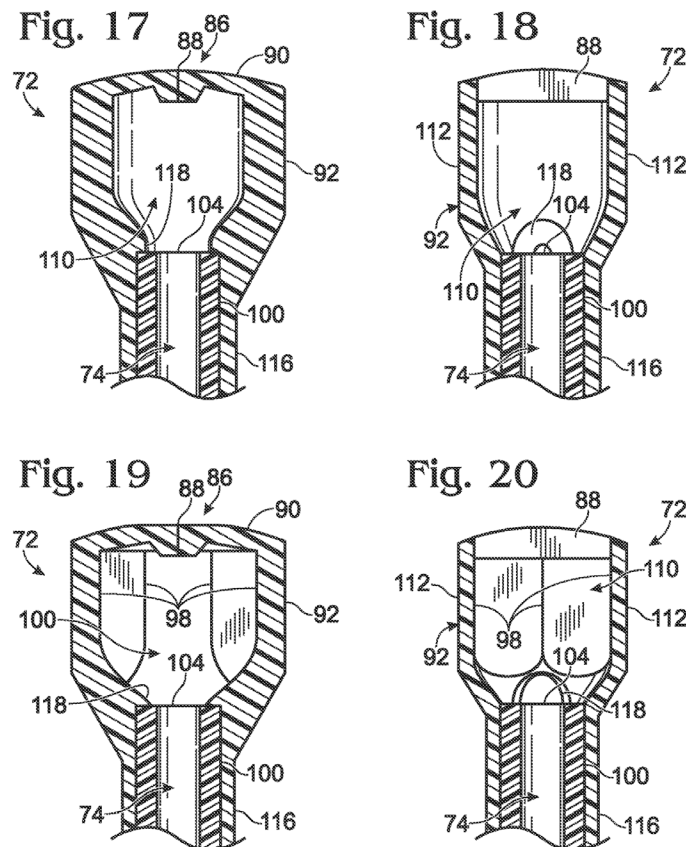


See PO Resp. 79–80 (citing Ex. 1001, Figs. 6, 7). As shown and described, because it is mounted *on* the end of the pivotal mount, the resilient mouthpiece extends outward from the pivotal mount so as to allow some

¹¹ To the extent Trove cites the Petition and accompanying expert declaration as support for this belated argument, we disagree. As discussed above, neither the Petition nor the expert declaration ever addresses the relationship between these claim terms.

portion of the mouthpiece to be “bite-actuated” as opposed to merely constituting a dispensing outlet for insertion into the mouth. *See* Ex. 1001, 7:18–30, 8:44–53.

Indeed, elsewhere the '250 patent corroborates that understanding by stating that the mouthpiece is “positioned *on*” the pivotal mount when describing “suitable configurations for bite-actuated, self-sealing mouthpieces” in the context of Figures 17–20, reproduced below. Ex. 1001, 9:27–33 (emphasis added).



As disclosed in the cross-sectional views of Figures 17–20 and the accompanying description in the '250 patent, “the mouthpieces are shown *positioned on* a mount 100 that extends into a neck region 116 of the mouthpiece and terminates at an end region 104.” *Id.* at 9:30–33; *see also id.* at 9:35–36 (describing “the fully inserted position of the mount within the

mouthpiece”). Notably, Figures 6, 7, and 17–20 are not the only figures in the ’250 patent depicting the mouthpiece as extending outward from the pivotal mount; most of the figures depict the same type of engagement between the pivotal mount and the mouthpiece. *See, e.g.*, Figs. 1, 2, 5, 24, 25. Thus, based on the description and figures in the ’250 patent as a whole, one skilled in the art would reasonably understand that “disposed on” in the context of claims 7 and 13 means that the mouthpiece extends from the end of the pivotal mount so as to be exposed for bite-actuation by the user rather than being completely recessed within the pivotal mount in a manner that prevents bite-actuation. Ex. 2016 ¶ 133 (citing Ex. 1001, Figs. 6, 7, 21–24, 3:4–10, 3:14–20, 5:17–24, 7:23–26).

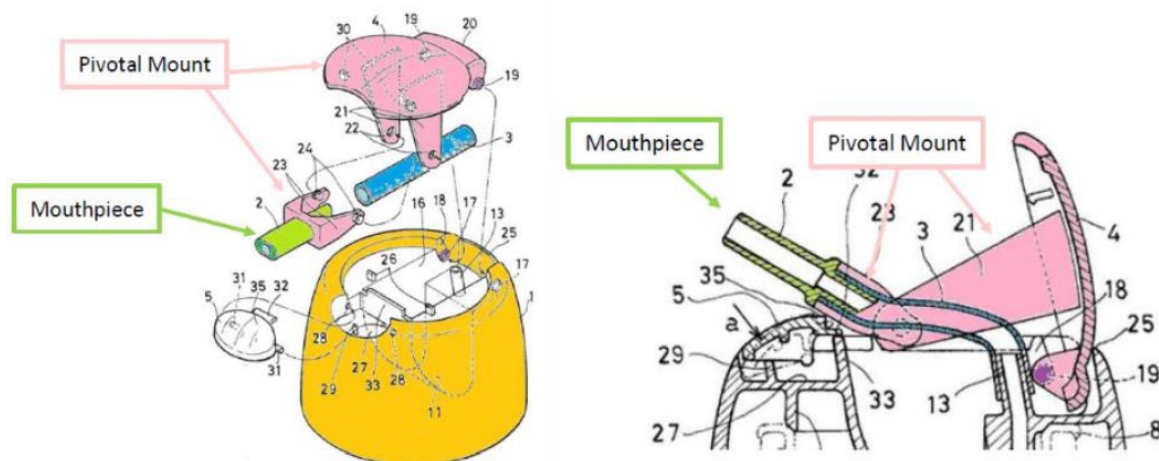
Conversely, Ribarits’s mouthpiece is not “disposed on” the pivotal mount given that the mouthpiece, instead, is inserted entirely within the pivotal mount. *See* Ex. 1006, at 2 (“[A] sealed tubular element of rubber or latex is inserted in both these parts”). Thus, we find that Trove fails to provide sufficient evidence that Ribarits’s mouthpiece is “disposed on the pivotal mount,” as required by claims 7 and 13. As such, Trove fails to demonstrate by a preponderance of the evidence that claims 7 and 13 are unpatentable as obvious over Ribarits and Panicci.

In challenging dependent claims 8–12 and 14–18, Trove relies on and incorporates the same deficient arguments it makes regarding Ribarits for claims 7 and 13. *See* Pet. 60, 62. And Trove does not argue that any of the additional references in the obviousness combinations—Panicci and Hughes—cures the deficiencies of Ribarits. *See generally id.* at 55–63, 63–66. Thus, for the same reasons Trove does not prevail in its challenge of independent claims 7 and 13, it also fails to prevail in its challenge of the claims depending therefrom.

D. Ground 1—Obviousness Based on Nakajima

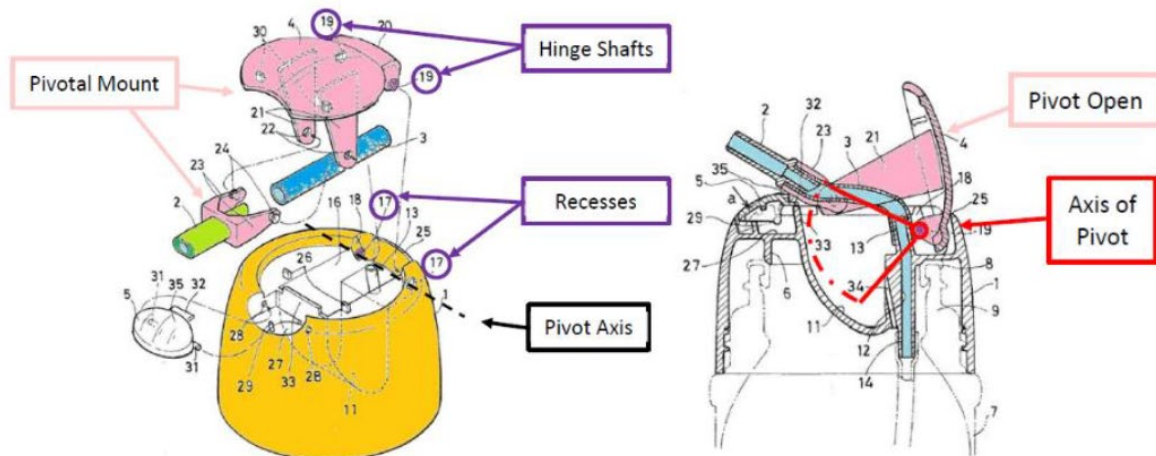
Trove argues that independent claim 1 and dependent claims 2 and 4–6 are additionally unpatentable as obvious over Nakajima. *See* Pet. 16–38. CamelBak, in turn, disputes that Nakajima discloses the limitations in claim 1 requiring: (1) that the mouthpiece be coupled to the pivotal mount “for pivotal movement with the pivotal mount,” and (2) that such pivotal movement be about “two joints that define a pivotal axis for pivotal movement of the pivotal mount.” *See* PO Resp. 53–73.

We begin with Trove’s showing for claim 1. Trove annotates Figures 1 and 3 of Nakajima, reproduced below, to illustrate how Nakajima satisfies the disputed limitations relating to the claimed “mouthpiece” and “pivotal mount.” *See* Pet. 21–26.



Annotated Figure 1 is an exploded perspective view of Nakajima’s cap assembly, while annotated Figure 3 is a cross-sectional view of Nakajima’s cap assembly. As shown, Trove contends that Nakajima’s “mouthpiece 2” (green) corresponds to the claimed “mouthpiece.” *Id.* at 24–26. Trove also contends that Nakajima’s lid 4, along with arms 21 and 23 (collectively, pink) correspond to the claimed “pivotal mount.” *Id.* at 21.

Trove again annotates Nakajima's Figures 1 and 3, reproduced below, to show how Nakajima discloses the claimed "two joints that define a pivotal axis for pivotal movement of the pivotal mount." Pet. 22–23, 26.

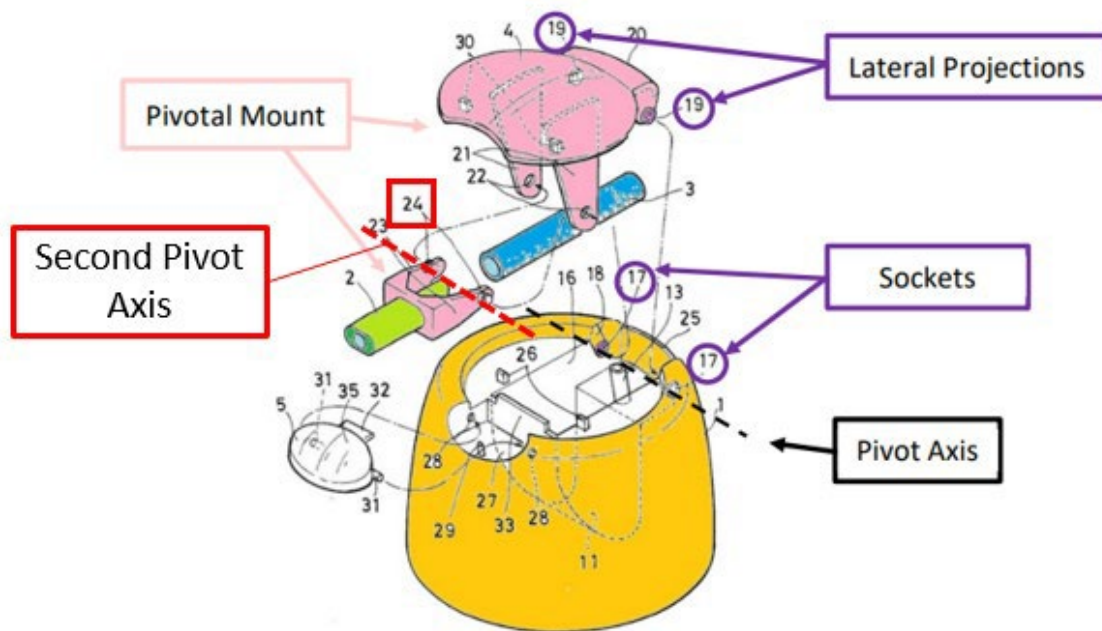


As shown in annotated Figure 1 (above left), Trove identifies the "Pivot Axis" (black dash-line) defined by Nakajima's sockets 17 and lateral projections 19 (collectively, purple), as corresponding to the claimed "two joints that define a pivotal axis." *Id.* at 21–24. Trove similarly labels that same claimed "pivotal axis" as "Axis of Pivot" (red) in annotated Figure 3 (above right). Notably, according to Trove, because Nakajima's mouthpiece "is coupled to the portion of the pivotal mount formed by 'arms 23'" and "moves up and down in conjunction with the opening and closing of the lid," it satisfies the limitation requiring that the mouthpiece be "coupled to" the pivotal mount "for pivotal movement with the pivotal mount" about "two joints that define a pivotal axis." *Id.* at 24–26 (citing Ex. 1004 ¶¶ 3, 16; Ex. 1002 ¶¶ 76–81); *see also* Pet. Reply 16–24.

We disagree. As discussed above, the proper construction of "for pivotal movement *with* the pivotal mount" requires that the mouthpiece mirror the rotational movement of the pivotal mount, i.e., rotate about the same axis as the pivotal mount and in the same direction as the pivotal

mount. *See supra* § II.B.3. But Nakajima’s mouthpiece does neither, and, thus, does not exhibit the claimed “pivotal movement with the pivotal mount” about “two joints that define a pivotal axis for . . . the pivotal mount axis,” as properly construed.

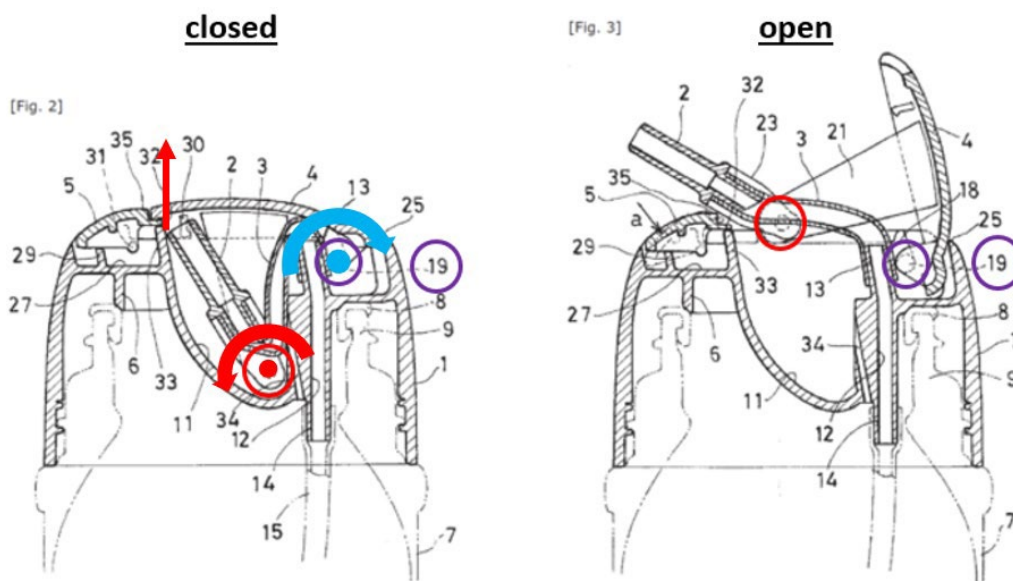
First, Nakajima’s mouthpiece does not rotate about the *same axis* of rotation as the pivotal mount, which Trove concedes is the axis defined by Nakajima’s hinge shafts 19. Rather, to the extent Nakajima’s mouthpiece rotates at all, it is solely about a different pivotal axis. In particular, CamelBak’s expert annotates (in red) Trove’s previously-annotated Figure 1 of Nakajima, as reproduced below, to illustrate this second pivot axis, which is defined by Nakajima’s protrusions 24, not Nakajima’s hinge shafts 19. *See Ex. 2016 ¶ 94.*



As shown above, the second pivot axis (red dashed line) defined by Nakajima’s protrusions 24 is the axis about which Nakajima’s mouthpiece (green) actually rotates, which is different than the pivotal axis (black) defined by Nakajima’s hinge shafts 19 and identified by Trove as the

claimed “pivotal axis” defined by “two joints.” *See id.* (citing Ex. 1004 ¶ 16; Pet. 22–23). Thus, at best, Nakajima’s mouthpiece is rotatable about a separate axis defined by Nakajima’s protrusions 24, *not* the axis defined by Nakajima’s hinge shafts 19 that Trove concedes is the claimed “pivotal axis.”

Second, Trove fails to show that Nakajima’s mouthpiece 2 (green) rotates in the same direction as the portion of Nakajima’s lid 4 that rotates about the pivotal axis defined by Nakajima’s hinge shafts 19. Instead, as disclosed and shown, Nakajima’s mouthpiece moves “diagonally upward and forward . . . when the lid 4 is opened,” meaning it rotates in a counter-clockwise direction. Ex. 1004 ¶ 14. CamelBak’s expert submits annotated versions of Nakajima’s Figures 2 and 3, reproduced below, to demonstrate that Nakajima’s mouthpiece not only rotates about a different axis than the axis of rotation defined by Nakajima’s hinge shafts 19, but also that Nakajima’s mouthpiece 2 rotates in a different direction than the portion of the pivotal mount that actually rotates about that axis. *See* Ex. 2016 ¶¶ 96–97, 114 (annotating Ex. 1004, Figs. 2–3).



As shown above, the red annotations indicate that Nakajima's mouthpiece 2 *moves in an upward path and with counter-clockwise rotation* about the axis defined by Nakajima's protrusions 24 as lid 4 opens, whereas the blue annotations indicate that lid 4 *rotates in a purely circular path of clockwise rotation* about hinge shafts 19, which Trove concedes are the claimed "two joints that define the pivotal axis" for the pivotal mount. Thus, to the extent Nakajima's mouthpiece 2 rotates at all, it is neither about the same axis nor in the same direction as the portion of the pivotal mount that rotates about Nakajima's hinge shafts 19,

In reply, Trove argues that CamelBak's "novel" construction that the mouthpiece moves with rotational motion about that same axis of rotation defined by the two joint as the pivotal mount and in the same direction as the pivotal mount "are inconsistent with the claim language's plain and ordinary meaning and find no support in the intrinsic and extrinsic record." *See* Pet. Reply 16. But, because we find that, when properly construed, the claimed "pivotal movement with the pivotal mount" about "two joints that define a pivotal axis" requires that the mouthpiece rotate about the same axis and in the same direction as the pivotal mount, we reject Trove's argument as unavailing. And, although we agree with Trove that Nakajima's mouthpiece engages in counter-clockwise rotation about a "Second Pivot Axis" when Nakajima's lid 4 is opened (*id.* at 20–22), that rotation is about a different axis—one defined by Nakajima's protrusions 24 rather than the claimed "pivotal axis" defined by Nakajima's hinge shafts 19—and in a different manner—an upward and counterclockwise path rather than the claimed "pivotal movement with the pivotal mount" defined by Nakajima's lid 4.

Finally, in an alternative theory, Trove and its expert use "image-manipulation tools" in an attempt to show that Nakajima's mouthpiece

engages in some initial “clockwise-rotation” with Nakajima’s lid as it is opened. *See* Pet. Reply 18–24. We reject that theory as entirely conjectural and unsupported by the evidence.

In sum, Trove fails to show that Nakajima’s mouthpiece engages in “pivotal movement with the pivotal mount” about a “pivotal axis” defined by “two joints,” as required by claim 1. As such, Trove fails to demonstrate by a preponderance of the evidence that independent claim 1, and challenged claims 2 and 4–6 depending therefrom, are unpatentable as obvious over Nakajima.

III. CONCLUSION

Claims	35 U.S.C. §	Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 2, 4–6	103	Nakajima		1, 2, 4–6
1, 2, 4–8, 10–14, 16–18	103	Ribarits, Panicci	1, 2, 4–6	7, 8, 10–14, 16–18
3, 9, 15	103	Ribarits, Panicci, Hughes	3	9, 15
Overall Outcome			1–6	7–18

IV. ORDER

Accordingly, it is hereby:

ORDERED that claims 1–6 of U.S. Patent No. 11,851,250 B2 have been shown to be unpatentable under 35 U.S.C. § 103;

FURTHER ORDERED that claims 7–18 of U.S. Patent No. 11,851,250 B2 have not been shown to be unpatentable under 35 U.S.C. § 103; and

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

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