Filed: November 7, 2024

On behalf of **Trove Brands, LLC**
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TROVE BRANDS, LLC
Petitioner
v.

CAMELBAK PRODUCTS, LLC
Patent Owner

IPR2025-00155
Patent 11,684,187

PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 11,684,187

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OTHER AUTHORITIES

TABLE OF EXHIBITS

Exhibit No.	Description
1001	U.S. Patent No. 11,684,187 ("the '187 patent")
1002	Order on Stipulation and Joint Motion to Amend the Case Schedule in Trove Brands, LLC v. CamelBak Products, LLC, et al., No. 5:23-cv-04267-PCP (N.D. Cal. June 18, 2024)
1003	Declaration of Glenn E. Vallee, Ph.D.
1004	United States Patent No. 6,279,773 to Kiyota ("Kiyota")
1005	United States Patent Application Publication No. 2007/0039959 to Choi, et al. ("Choi")
1006	Certified English Translation of Korean Patent Publication No. KR 200282506 Y1 ("Park")
1007	Translation Certificate for Korean Patent Publication No. KR 200282506 Y1 to Park
1008	Korean Patent Publication No. KR 200282506 Y1 to Park
1009	Certified English Translation of International Publication No. WO 2004/063042 to Ribarits ("Ribarits")
1010	Translation Certificate for International Publication No. WO 2004/063042 to Ribarits
1011	International Publication No. WO 2004/063042 to Ribarits

Petitioner Trove Brands, LLC ("Petitioner") requests *inter partes* review of claims 1, 3-9, 11-17, and 19 ("challenged claims") of U.S. Patent No. 11,684,187 ("the '187 patent"), which lists CamelBak Products, LLC ("PO" or "Patent Owner") as assignee.

I. MANDATORY NOTICES

A. Real Party-In-Interest (37 C.F.R. §42.8(b)(1))

Trove Brands, LLC is the real party-in-interest.

B. Related Matters (37 C.F.R. §42.8(b)(2))

Petitioner has filed a suit against PO seeking a declaratory judgment of noninfringement of the '187 patent by Petitioner's Owala Flip (For Kids) product. *Trove Brands, LLC v. CamelBak Products, LLC et al*., No. 5:23-cv-04267 (N.D. Cal.). PO has counterclaimed for infringement of the '187 patent.

Petitioner has filed an IPR challenging related U.S. Patent No. 9,782,028 (IPR2024-01501). The petition was filed September 30, 2024.

Petitioner has also filed an IPR challenging related U.S. Patent No. 10,165,879 (IPR2025-00146). The petition was filed November 5, 2025.

Petitioner is not aware of any other judicial or administrative matter that would affect, or be affected by, a decision in this proceeding.

C. Lead and Backup Counsel (37 C.F.R. §42.8(b)(3))

Petitioner provides the following designation of counsel, all of whom are included in Customer No. 20,995 identified in Petitioner's Power of Attorney.

Lead Counsel	Back-up Counsel
Ali S. Razai (Reg. No. 60,771) Postal and Hand-Delivery Address: Knobbe, Martens, Olson & Bear, LLP 2040 Main Street, 14th Floor Irvine, CA 92614 Telephone: (949) 760-0404 Facsimile: (949) 760-9502	Joseph F. Jennings (Reg. No. 40,664) Cheryl Burgess (Reg. No. 55,030) Postal and Hand-Delivery Address: Knobbe, Martens, Olson & Bear, LLP 2040 Main Street, 14th Floor Irvine, CA 92614 Telephone: (949) 760-0404 Facsimile: (949) 760-9502

D. Service Information (37 C.F.R. §42.8(b)(4))

Please address all correspondence to lead counsel and back-up counsel at the addresses shown above. Petitioner also consents to electronic service by email to BoxTrove5@knobbe.com.

E. Payment of Fees (37 C.F.R. §42.103)

The fee for this petition has been paid. Any additional fees may be charged to Deposit Account 11-1410.

F. Grounds for Standing (37 C.F.R. §42.104)

Petitioner certifies that the '187 patent is available for IPR and that Petitioner is not barred or estopped from requesting IPR. This petition is being filed within

one year of service of Patent Owner's counterclaim (filed November 8, 2023) alleging infringement of the '187 patent.

II. INTRODUCTION

The '187 patent discloses and claims drink containers having a removable cap assembly that generally includes three elements:

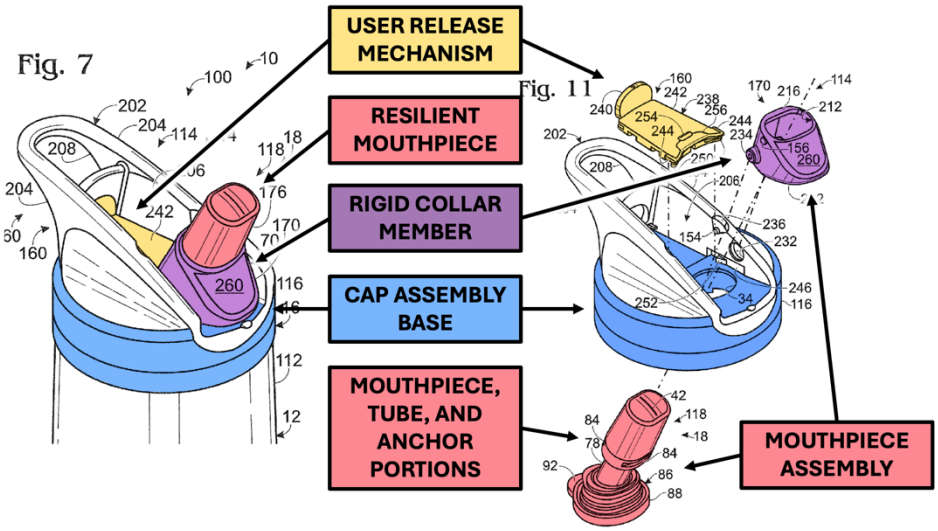
(1) **a base** for coupling the cap assembly to a container;

(2) **a mouthpiece assembly** for dispensing liquid, which is configured to move between a stowed (closed) position and a dispensing (open) position; and

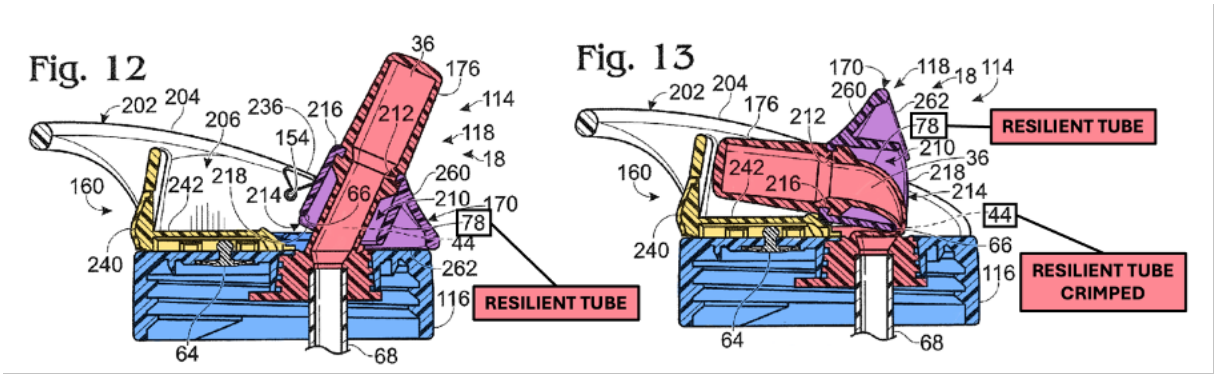
(3) **a user release mechanism** for disengaging catch structures that retain the mouthpiece assembly in the stowed position, allowing the mouthpiece to move to its dispensing position.

The mouthpiece assembly defines a liquid passage and is biased to a dispensing configuration. It also includes a rigid collar member pivotally coupled to the base and a mouthpiece portion extending from the collar member.

An embodiment of the '187 patent is depicted below in Figure 11, which provides an exploded view of the cap assembly.



(Ex 1001, Figs. 7, 11)[1]. The same embodiment, fully assembled, is shown below in its dispensing (Fig. 12) and stowed (Fig. 13) positions. In the stowed position the resilient tube of the mouthpiece assembly is crimped to prevent the passage of liquid.

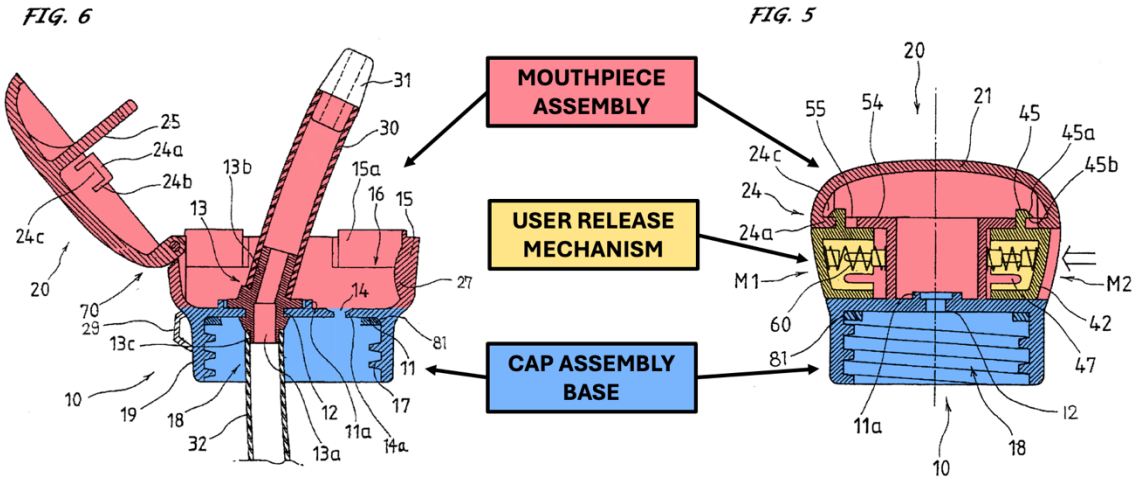


[1] Although part of the mouthpiece assembly, the rigid collar member is shaded purple to show its relationship to adjacent elements.

(*Id.,* Figs 12, 13).

III. BACKGROUND

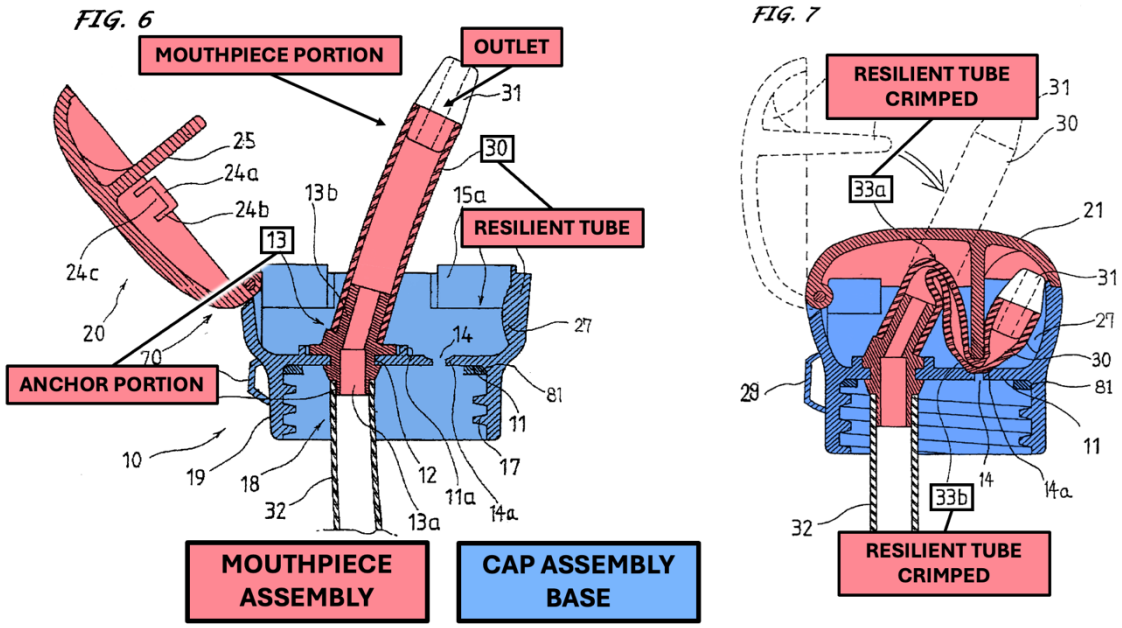
Drink containers with cap assemblies having the features claimed in the '187 patent have been known since well before the '187 Patent's priority date. (Ex. 1003, ¶43). For example, Kiyota (Ex. 1004), issued in 2001, disclosed a drink container with removeable cap assembly including a base, a mouthpiece assembly, and a user release mechanism.[2] The cap assembly is shown below. Figure 6 is cross-section in the open configuration and Figure 5 is another cross-section in the closed configuration.



(Ex. 1004, Figs. 5, 6). The mouthpiece assembly includes a mouthpiece portion with an outlet, a resilient tube, which is crimped to prevent passage of liquid when

[2] Kiyota was never cited during the examination of the '187 Patent.

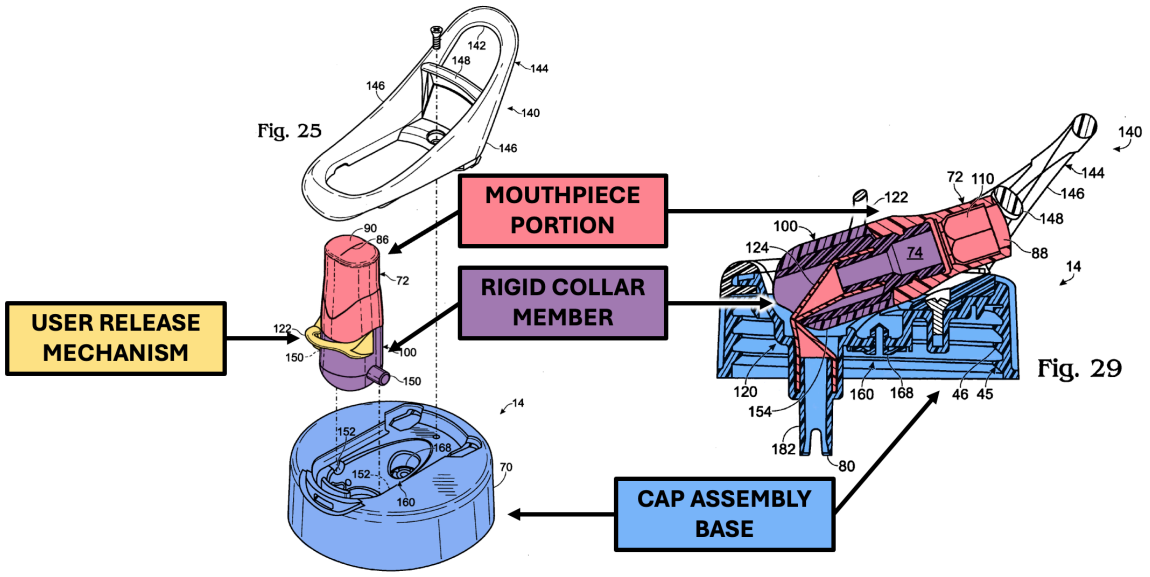
the mouthpiece assembly is stowed, and an anchor portion that holds the assembly in place.



(*Id.*, Figs. 6, 7)

Choi (Ex. 1005), which published in 2007, disclosed a drink container with a removeable cap assembly including a base, a mouthpiece assembly, a rigid collar member, and a user release mechanism, an embodiment of which is depicted below.[3]

[3] Choi was never cited during the examination of the '187 Patent.



(Ex. 1005, Figs. 25, 29).

Choi's mouthpiece includes a tube extending into, and a mouthpiece portion extending out of, a pivoting rigid collar that both controls the position of the mouthpiece portion and crimps the tube to prevent passage of liquid when the mouthpiece is stowed. Choi's mouthpiece assembly also includes a user release mechanism—a flange the user can press to move the mouthpiece assembly to its open configuration.

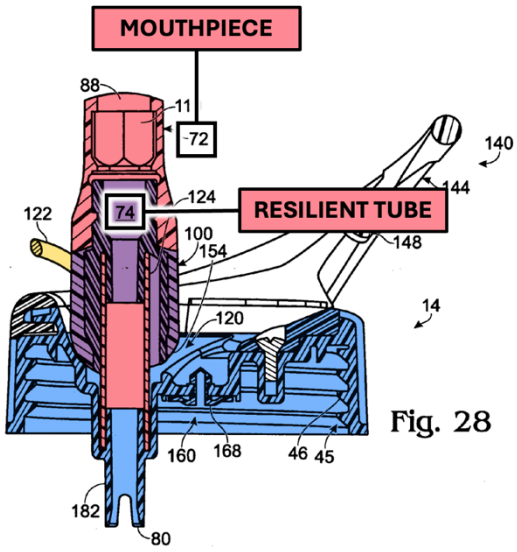


Fig. 28

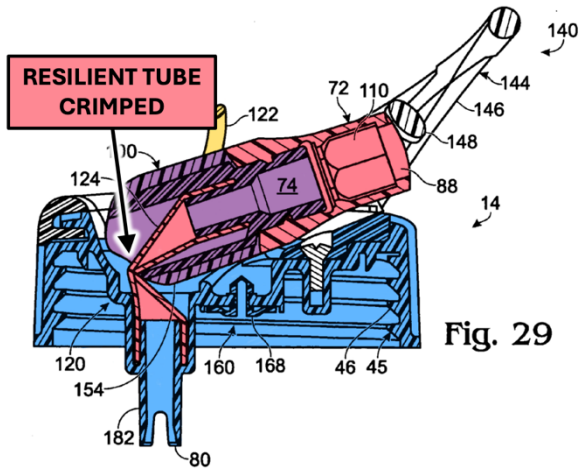
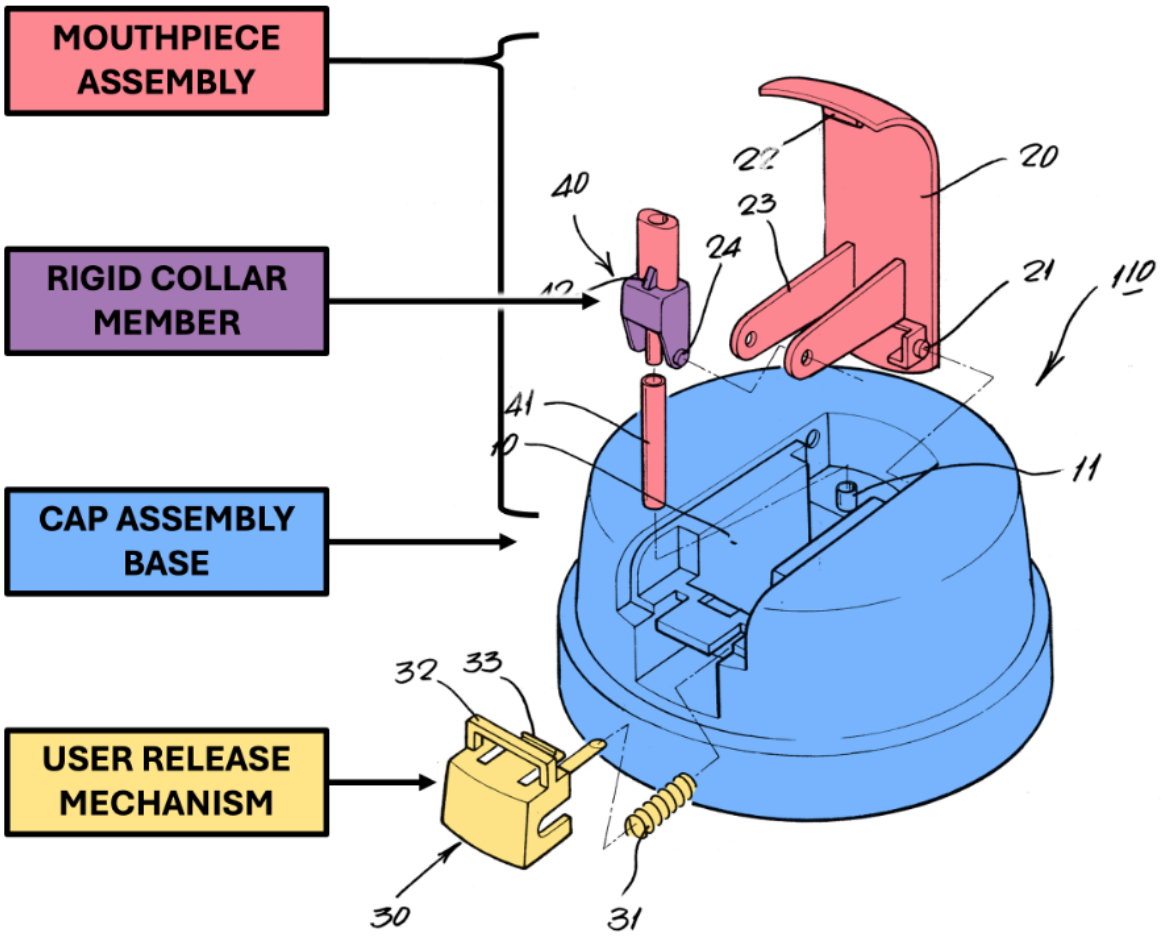


Fig. 29

(*Id.*, Figs. 28, 29).

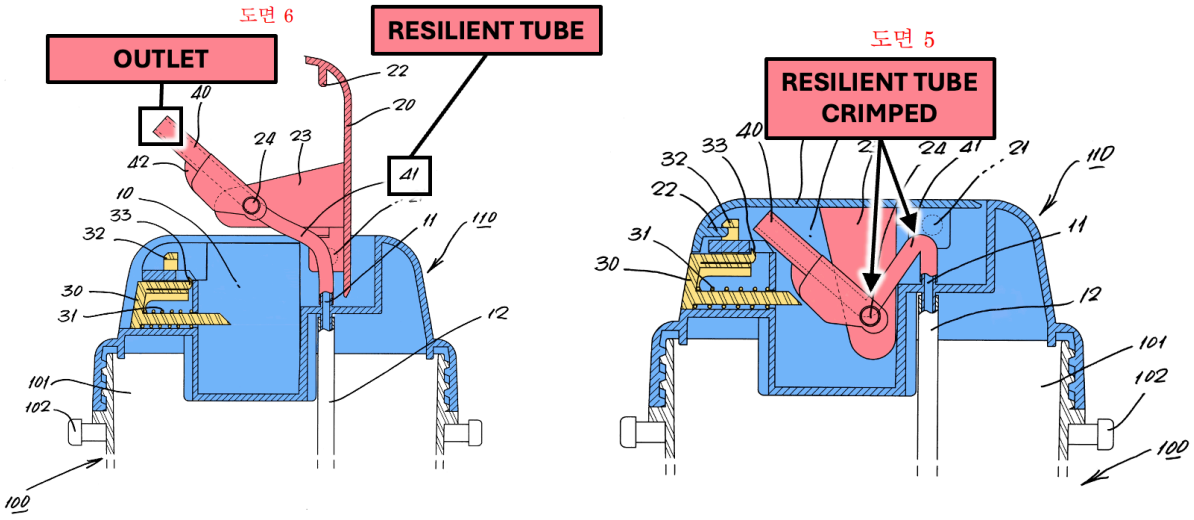
Park (Ex. 1006), which published in 2002, discloses a water bottle with a removeable cap assembly that includes a mouthpiece assembly and a user release mechanism.[4] Below is an exploded view of Park's cap assembly ("lid 110"):

[4] Park was never cited during examination of the '187 Patent.



(Ex. 1006, Fig. 3).

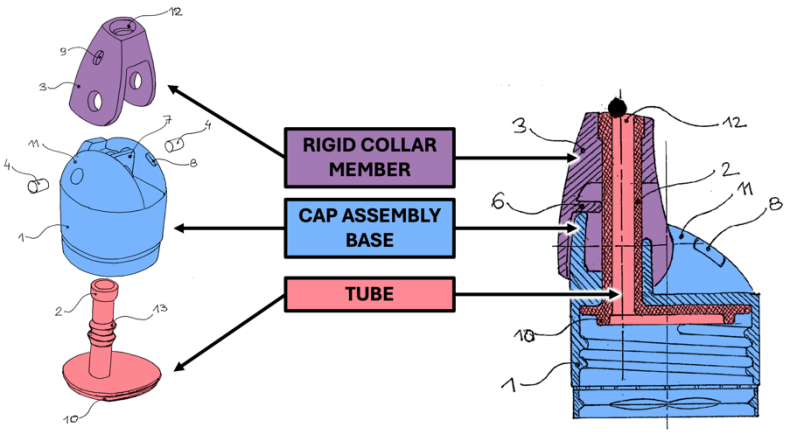
Park's cap assembly includes a mouthpiece assembly and user release mechanism. The mouthpiece assembly pivots between stowed and dispensing configurations:



(*Id.*, Figs. 5-6). When stowed, the mouthpiece assembly tube is crimped to prevent fluid flow.

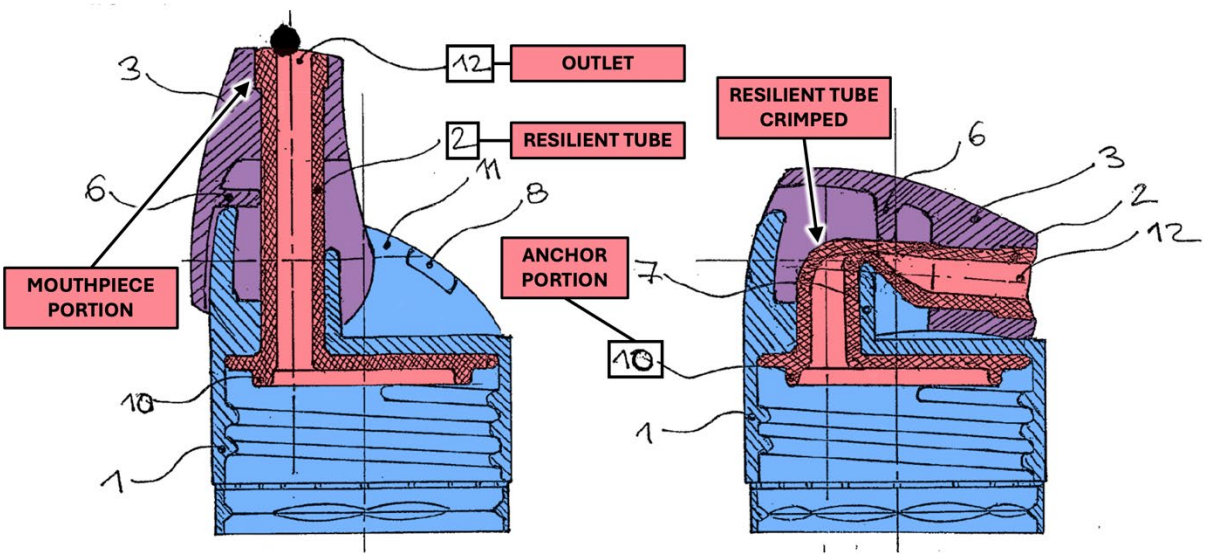
Ribarits (Ex. 1009), which published in 2004, disclosed a drink container with removeable cap assembly including a base and a mouthpiece assembly with a rigid collar member.[5]

[5] Ribarits was never cited during examination of the '187 Patent.



(Ex. 1009, Figs. 2, 3).

The Ribarits mouthpiece assembly includes a mouthpiece having an outlet, a resilient tube, which is crimped when it is stowed, and a rigid collar member through which the mouthpiece tube extends.

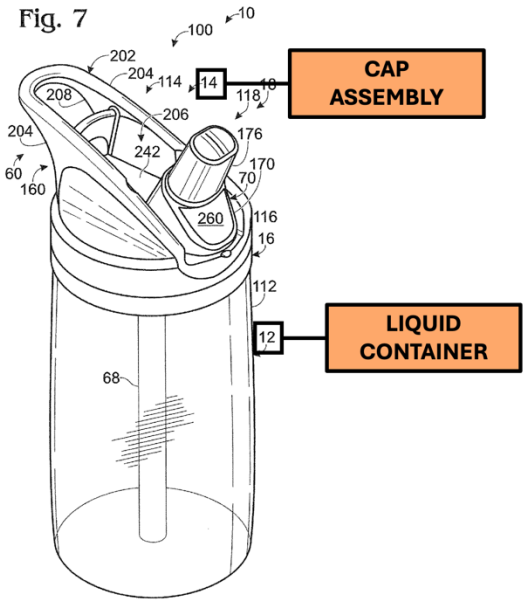


(*Id.*, Fig. 3).

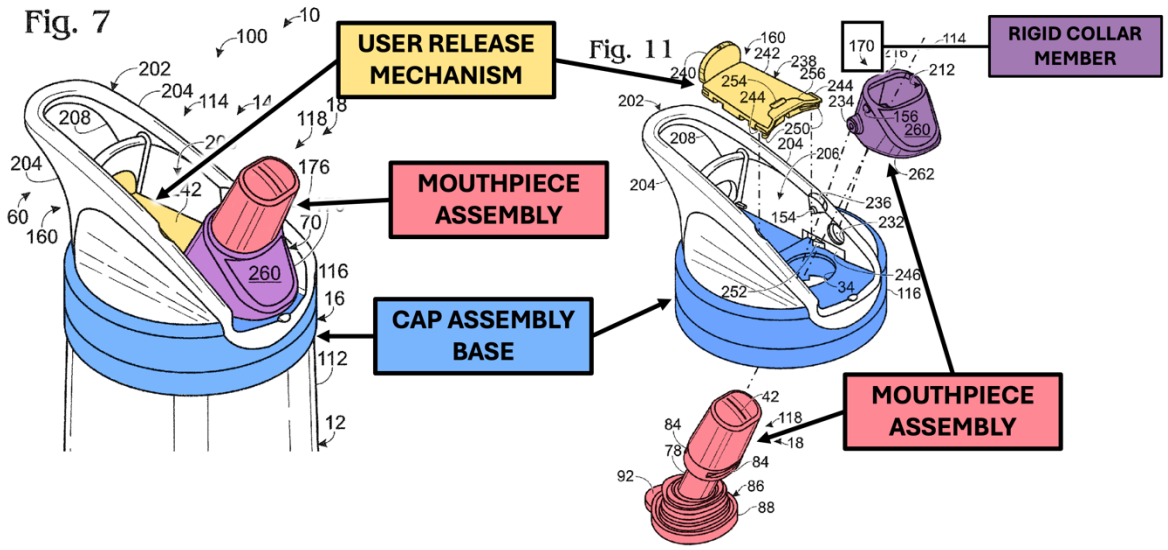
IV. THE '187 PATENT

A. Overview

The '187 Patent discloses and claims drink containers that include a liquid container and a cap assembly removably coupled to the liquid container. (Ex. 1001, 4:11-12). Figure 7 shows the '187 Patent's liquid container and cap assembly.

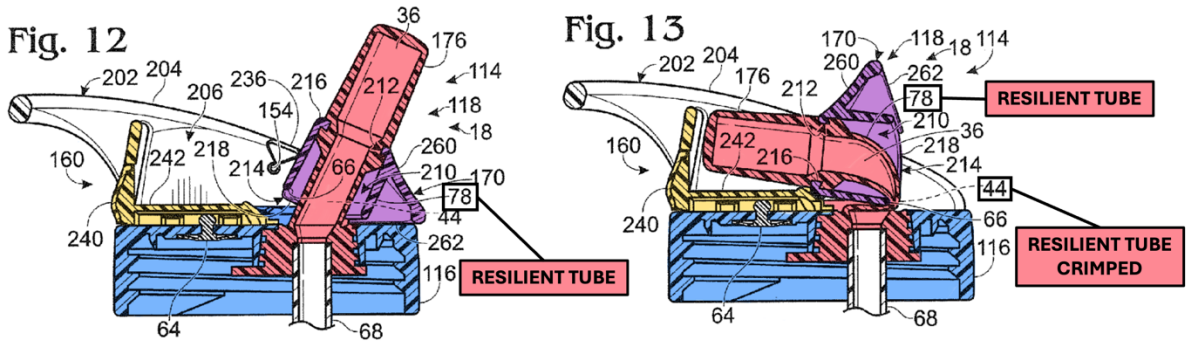


(*Id*. Fig. 7). The cap assembly includes a base, a mouthpiece assembly, and a user release mechanism, shown below in Figures 7 and 11.



(*Id*. Figs. 7, 11).

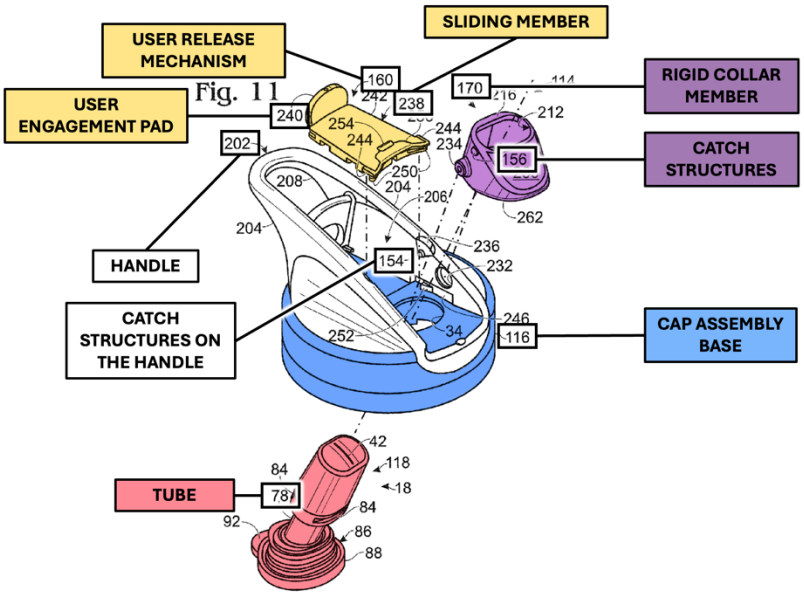
As shown below in Figures 12 (mouthpiece assembly open) and 13 (mouthpiece assembly closed), the '187 Patent's mouthpiece assembly includes a tube 78 that passes through rigid collar member 170. In the stowed configuration, the tube is crimped by the rigid collar to restrict the flow of drink liquid.



(*Id*., Figs 12, 13).

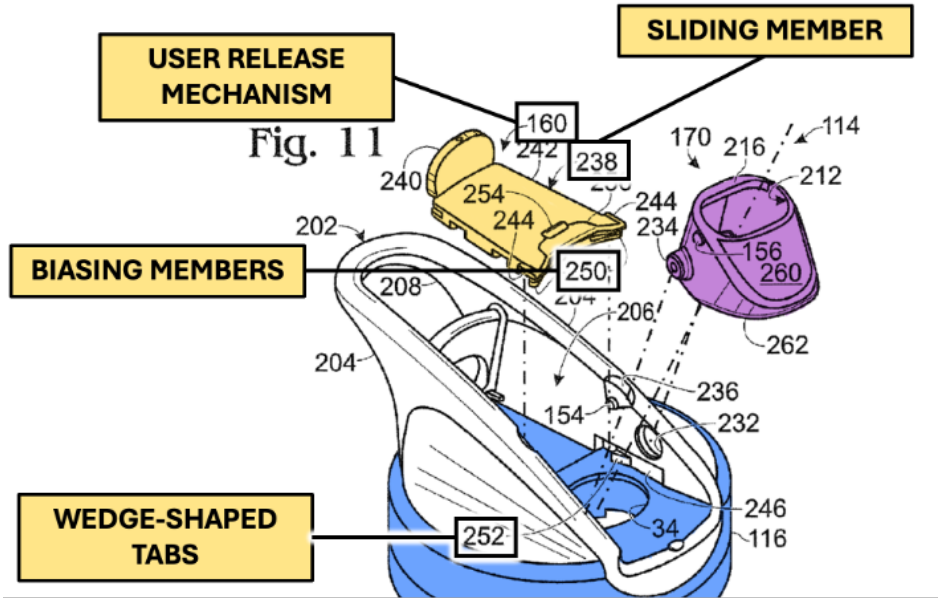
The ’187 Patent discloses two embodiments of its user release mechanism. The first embodiment, user release mechanism 160, is highlighted below.[6] In this embodiment, the mouthpiece is held in its closed configuration by catch structures (protrusions 156) on rigid collar member 170 which engage with catch structures (depressions 154) on handle 202. (*Id*. at 12:22-37). Pressing user engagement pad 240 on sliding member 238 forces the sliding member between base 116 and rigid collar member 170, urging the collar upwards to disengage catch structures 154 and 156. (*Id*. at 13:15-25). With the catch structures disengaged, the mouthpiece pivots into its dispensing configuration due to the bias created by tube 78. (*Id*. at 12:50 – 13:39).

[6] In the second embodiment, a user can press the mouthpiece assembly directly at engagement portion 260 on collar 170 to disengage the catch structures. This embodiment does not include a sliding member as recited in the claims and hence also does not perform the claimed function of biasing the sliding member away from engaging the catch structures. (Ex. 1003, ¶36).



(*Id*., Fig. 11).

Sliding member 238 includes biasing members 250 which bias sliding member 238 away from the position where it disengages the first and second catch structures. Biasing members 250 "may be described as springs or leaf springs," (*id*. at 13:11), and create bias by being compressed against wedge-shaped tabs 252 when the user release mechanism is activated. (*Id*. at 13:8-21).



(*Id*., Fig. 11).

B. The Challenged Claims

The '187 Patent issued with 19 claims. Only claim 1 is independent, which is set forth below with limitations labeled for reference and the main elements bolded. (Ex. 1001, Claims).

Claim 1	
Preamble	A drink container, comprising:
1[A]	**a liquid container** having a neck with an opening and having an internal compartment sized to hold a volume of potable drink liquid; and
1[B]	**a cap assembly** removably coupled to the liquid container, the cap assembly comprising:

Claim 1	
1[B][1]	**a base** removably coupled to the neck of the liquid container and including a through-passage extending through the base;
1[B][2]	**a first catch structure** coupled to the base;
1[B][3]	**a mouthpiece assembly** defining a liquid passage through which drink liquid from the liquid container may selectively flow, the mouthpiece assembly being configured to be selectively positioned between a dispensing configuration, in which the liquid passage permits drink liquid to flow from the internal compartment into at least the liquid passage, and a stowed configuration, in which drink liquid is restricted from being dispensed from the liquid container through the liquid passage, wherein the mouthpiece assembly is biased to the dispensing configuration and wherein the mouthpiece assembly comprises:
1[B][3][a]	**a rigid collar member** that is pivotally coupled to a portion of the cap assembly;
1[B][3][b]	**a mouthpiece portion** extending from the rigid collar member and including an outlet, wherein the rigid collar member extends around at least a portion of the mouthpiece portion; and
1[B][3][c]	**a second catch structure** adapted to be selectively engaged with the first catch structure to retain the mouthpiece assembly in the stowed configuration; and
1[B][4]	**a user release** mechanism adapted to automatically disengage the first and second catch structures upon actuation of the user release mechanism and thereby release the mouthpiece assembly to move via its bias from the stowed configuration to the dispensing

Claim 1	
	configuration, wherein the user release mechanism comprises a displacement mechanism with a user engagement pad, wherein the displacement mechanism is configured to displace the first catch structure to selectively disengage the first and the second catch structures, and wherein the user release mechanism is biased to urge the displacement mechanism away from a position where the displacement mechanism disengages the first and second catch structures.

V. STATEMENT OF RELIEF REQUESTED

A. IPR Grounds

IPR is requested for the following grounds of unpatentability:

Ground	Claims Challenged	35 U.S.C. §	References
1	1, 3-9, 11-17, and 19	103	Kiyota + Choi + Ribarits
2	1, 3-9, 11-17, and 19	103	Park + Ribarits
3	15	103	Park + Ribarits + Kiyota

B. The ’187 Patent Is Subject to the pre-AIA Prior Art Provisions of the Patent Statute.

The ’187 patent claims priority to Application No. 12/357,114, filed on January 21, 2009, which is the earliest effective filing date for the challenged claims. The patent is therefore subject to pre-AIA prior art provisions.

C. The Asserted References Are Prior Art

This Petition relies on the following prior art references:

Exhibit	Reference	Date	pre-AIA Art Type
1004	Kiyota	Issued Aug 28, 2001	§ 102(b)
1005	Choi	Published: Feb. 22, 2007	§ 102(b)
1006	Park	Published: July 22, 2002	§ 102(b)
1009	Ribarits	Published: July 29, 2004	§ 102(b)

This Petition is also supported by the expert declaration of Glenn E. Vallee, Ph.D. (Ex. 1003).

VI. LEVEL OF ORDINARY SKILL

Based on the relevant factors, *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995), a person of ordinary skill in the art ("POSITA") 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. (Ex. 1003, ¶29). More work experience may substitute for a lower level of education, and vice versa. (*Id.*).

This Petition does not turn on this specific definition of the level of ordinary skill. The Claims are anticipated and/or would been obvious from the perspective of a POSITA under any reasonable definition. (*Id.,* ¶30).

VII. CLAIM CONSTRUCTION

A. "User Release Mechanism"

Claim 1[B][4] recites that the cap assembly comprises "a user release mechanism," which also includes "a displacement mechanism." This term is governed by 35 U.S.C. §112, paragraph 6 because it recites a nonce "mechanism" for performing claimed functions without reciting sufficient structure for performing those functions. *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348-49 (Fed. Cir. 2015) (quotation omitted). A POSITA would not have understood the term "user release mechanism" to have a sufficiently definite meaning as the name for a structure that performs the claimed functions. (Ex. 1003, ¶40).

"Mechanism" is often found to be a non-structural generic term that invokes §112(f). *See, e.g.*, *Welker Bearing Co. v. PHD, Inc.*, 550 F.3d 1090, 1096 (Fed. Cir. 2008) ("colorant selection mechanism"); *Toro Co. v. Deere & Co.*, 355 F.3d 1313, 1325 (Fed. Cir. 2004) ("control mechanism"); *Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1373 (Fed. Cir. 2015) ("compliance mechanism"). The "user release mechanism" here does not recite sufficient structure for performing the claimed functions. (Ex. 1003, ¶40). The modifier "user release" is not structural; it merely describes, at a high level, the function

performed by the mechanism. The Board should therefore construe "user release mechanism" as a means-plus-function limitation.

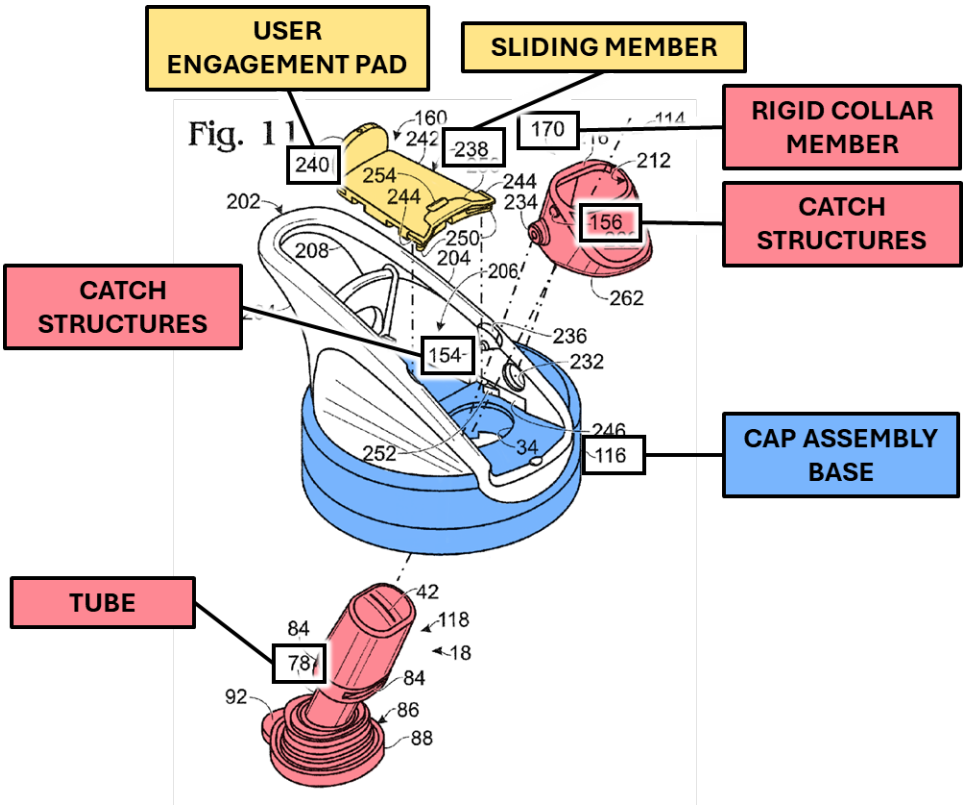
Means-plus-function claims are construed using a two-step process. First, the "function" is identified. *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1375 (Fed. Cir. 2003). Next, the patent specification structure corresponding to the recited function is identified. *Id.*

The recited functions of the "user release mechanism" are (i) to "automatically disengage the first and second catch structures upon actuation of the user release mechanism and thereby release the mouthpiece assembly to move via its bias from the stowed configuration to the dispensing configuration" and (ii) being "biased to urge the displacement mechanism away from a position where the displacement mechanism disengages the first and second catch structures." (Ex. 1001, 21:59-64, 22:3-6).

The disclosed structure for performing these functions includes sliding member 238 (and its component parts), as shown below. The mouthpiece is held in its closed configuration by catch structures 156 on rigid collar member 170 which engage with catch structures 154 on handle 202. A user can press engagement pad 240 to force the sliding member 238 to wedge between base 116 and rigid collar member 170, which disengages catch structures 154 and 156. (*Id.,*

12:50-13:25). The mouthpiece then pivots to its dispensing configuration due to the bias of the tube 78. (*Id.,* 13:29-33).

The structure that urges the sliding member away from the position where it disengages the first and second catch structures is biasing member 250 (springs or leaf springs), which is compressed against wedge-shaped tabs 250 when the user release mechanism is activated. (*Id*. at 13:8-21).



(*Id*., Fig. 11).

In the district court action Patent Owner contends "user release mechanism is not governed by §112, paragraph 6, and instead covers all structures for performing the recited functions. Either way, the claims are invalid as described herein.

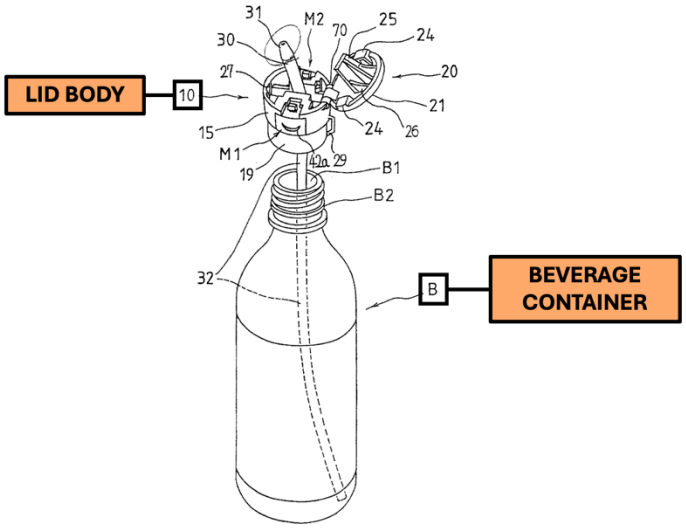
No other claim term requires construction to resolve the invalidity challenges here. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Ltd. Matal*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

VIII. GROUND 1: CLAIMS 1, 3-9, 11-17, AND 19 WOULD HAVE BEEN OBVIOUS IN VIEW OF KIYOTA, CHOI, AND RIBARITS

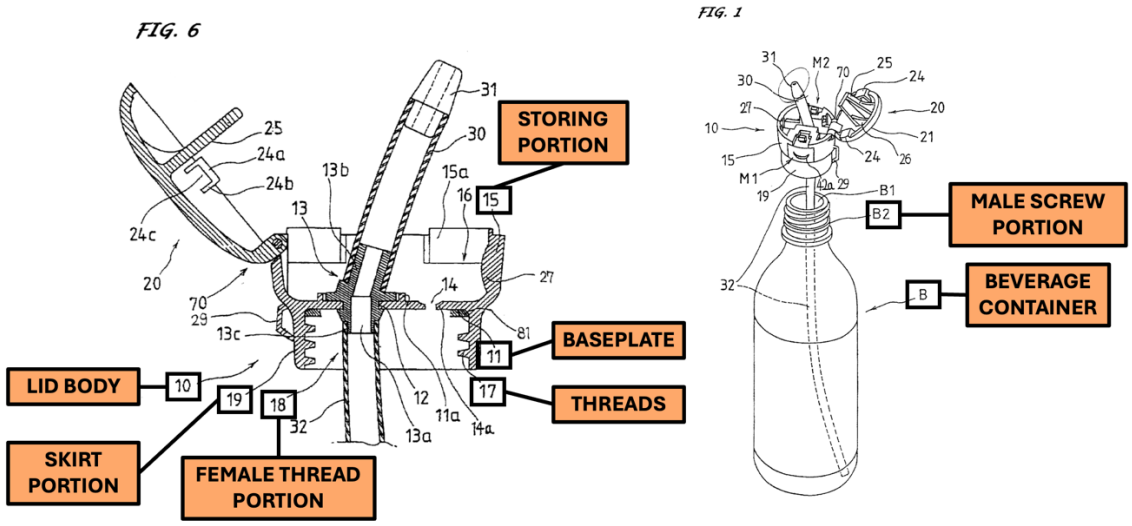
A. Overview of Kiyota

Kiyota discloses a lid body for a beverage container. (Ex. 1004, Abstract, Title, 1:4-7; Ex. 1003, ¶44).

FIG. 1



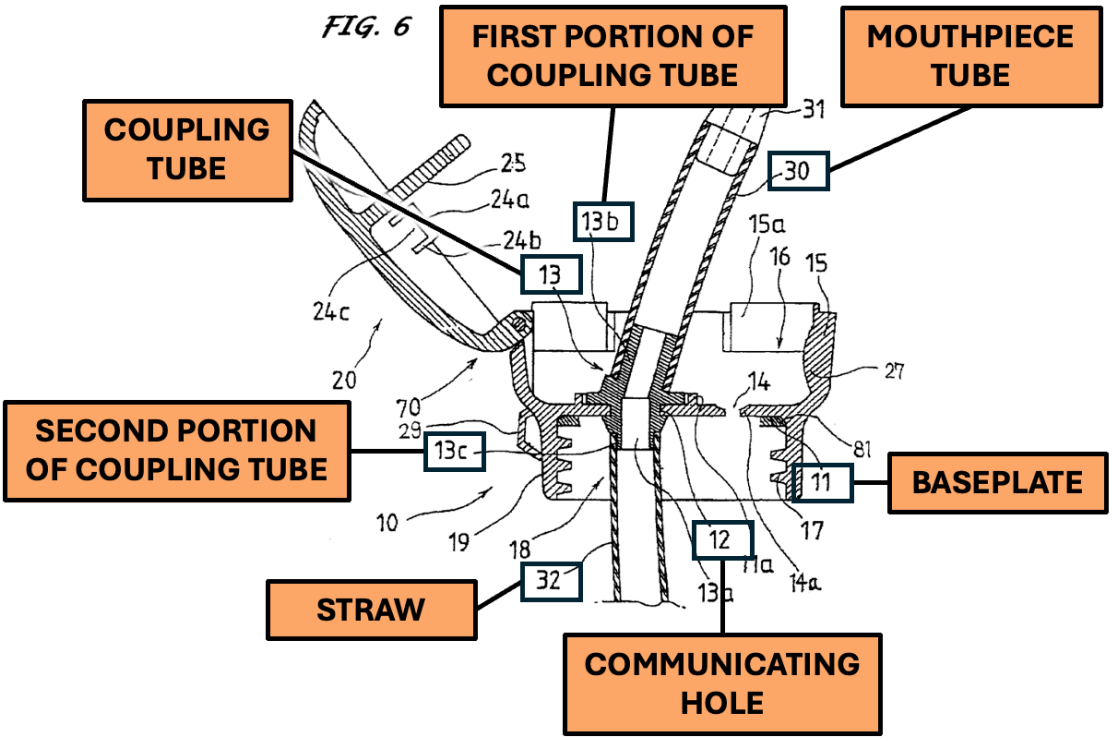
(Ex. 1004, Fig. 1). The lid includes main body 10, which is divided by baseplate 11 into storing portion 16 (above baseplate 11), and thread portion 18 (below). (*Id.,* 4:66-5:1). A skirt portion 19 extends from the periphery of the baseplate 11. The skirt portion 19 includes threads for mating with beverage container B. (*Id.,* 8:58-64).



(*Id*., Figs 1, 6).

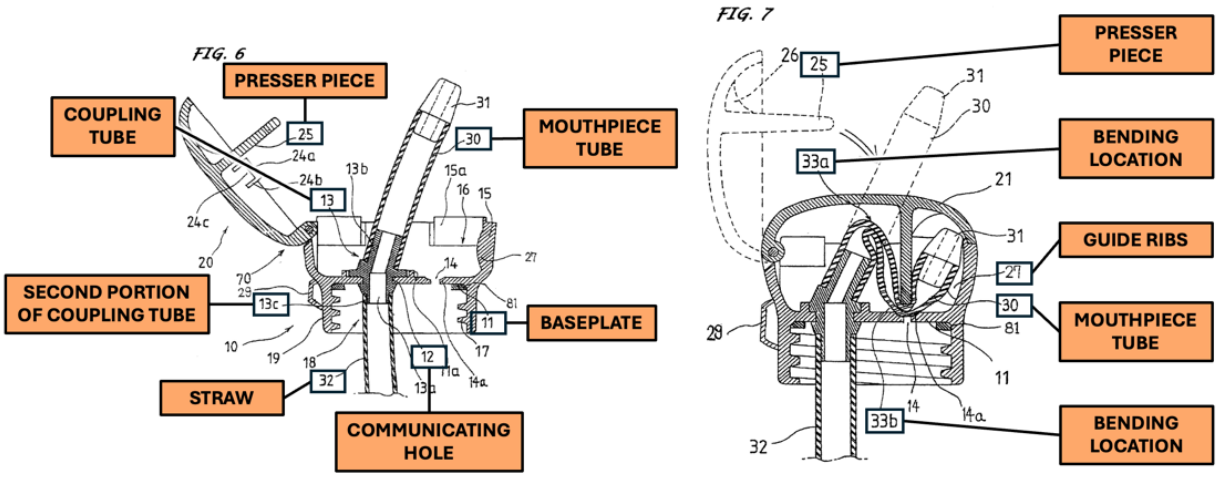
The lid permits a user to drink from the beverage container and stores the mouthpiece when the mouthpiece assembly is closed. More specifically, the lid includes a coupling tube 13 that extends through baseplate 11 both upwardly, into storing portion 16, and downwardly, into thread portion 18. The coupling tube 13 includes flanges that secure it in the through-passage (communicating hole 12) of baseplate 11. Coupling tube 13 also includes a first coupling portion 13b for connecting to a mouthpiece tube 30 from which a user may drink the beverage and

a second coupling portion 13c for connecting to a straw or suction tube 32 extending into the beverage container. (*Id.,* 5:29-44).



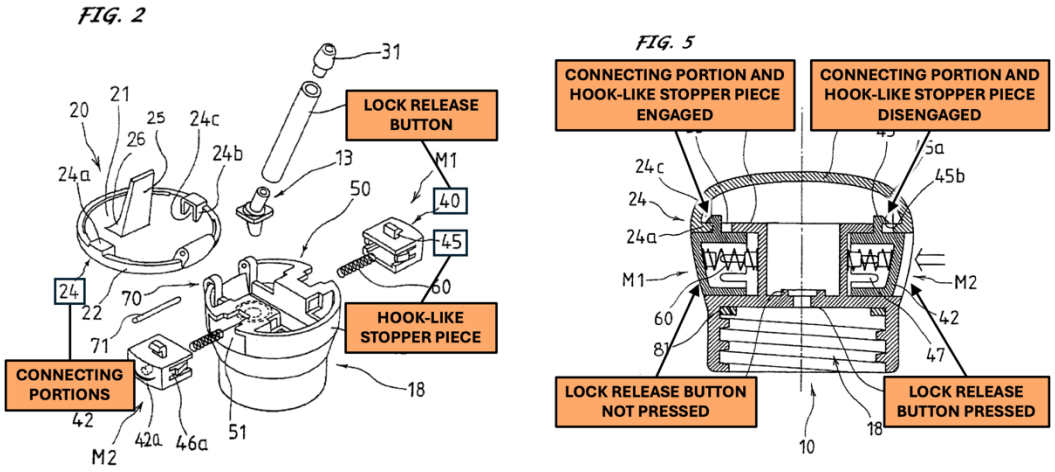
(*Id*., Fig. 6)

The lid also includes lid portion 20 that includes presser piece 25 that works with the mouthpiece tube 30 to close the tube for storage. Specifically, as depicted in Figures 6 and 7 below, presser piece 25 presses mouthpiece tube 30 downwardly as the lid body is closed. The mouthpiece is thus pressed against baseplate 11 when it is closed and placed in its stored position. In this stored position the mouthpiece tube 30 is crimped at bending locations 33a and 33b. (*Id.,* 10:6-12). Guide ribs 27 guide the mouthpiece tube into its stored. (*Id.,* 8:6-8)



(*Id*., Figs. 6, 7).

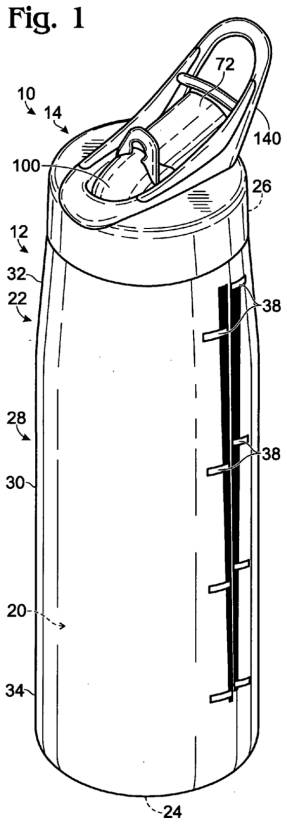
The lid includes catch structures (connecting portions 24) to maintain the lid and mouthpiece tube in a closed, stored position. Specifically, when the lid is closed the connecting portions 24 catch on hook-like stopper pieces 45 (shown below in Figure 2). The hook-like stopper pieces 45 are on the upper surface of lock release buttons 40. (*Id*. at 9:51-57; 10:33-38). When a user presses the buttons the connecting portions and hook-like stopper pieces disengage and the lid 20 is released. This allows the mouthpiece tube 30 to return to its dispensing position. (*Id.,* 7:60-8:2; 9:4-13). The buttons are biased away from disengaging the catch structures by springs 60. (*Id*., 7:3-4).

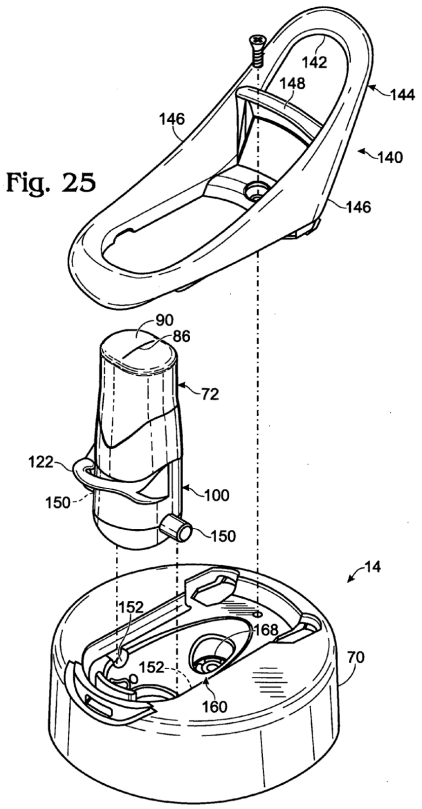


(*Id.*, Figs. 2, 5).

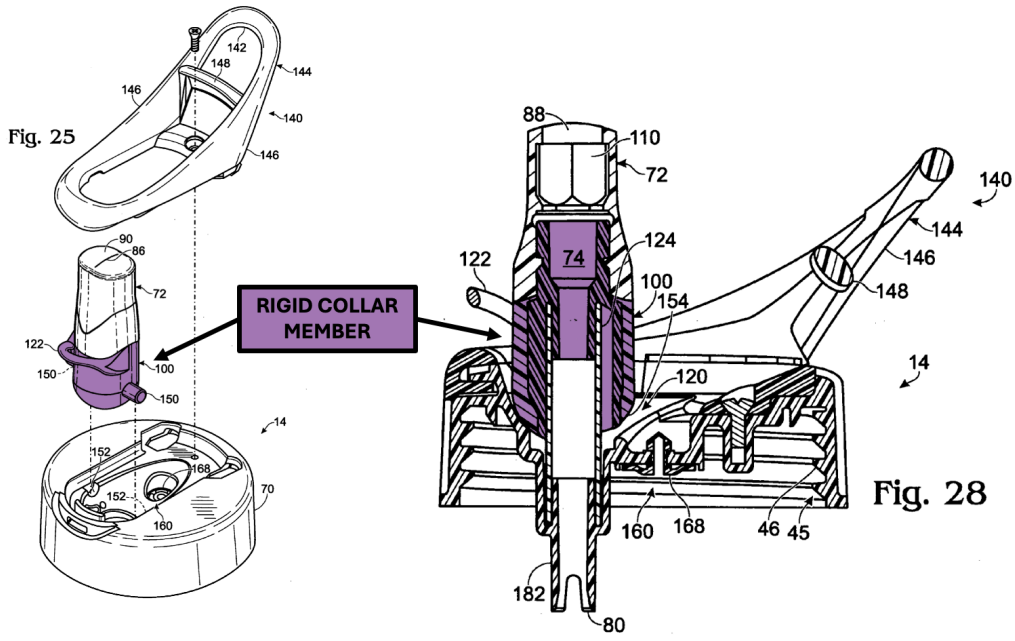
B. Overview of Choi

Choi (Ex. 1005) discloses a drink cap assembly with a bite-activated mouthpiece extending from a rigid collar that pivots between a dispensing and a stowed position. (Ex. 1005, ¶0062).





(*Id*., Figs. 1, 25). Like the '187 Patent, Choi discloses a pivoting mouthpiece assembly including a rigid collar member (mount 100) which "may be pivotally moved relative to the base…" (*Id*., ¶0047).



(*Id*., Figs. 25, 28).

Choi further discloses a flexible tube 124 that extends into the rigid collar. "[T]he on/off valve includes a flexible tube, or conduit 124 [that] fluidly interconnects the inlet 80 of the fluid conduit with the internal chamber 110 of the mouthpiece." (*Id*., ¶0085). When the rigid collar member is in its stowed configuration, tube 124 is crimped, sealing the valve.

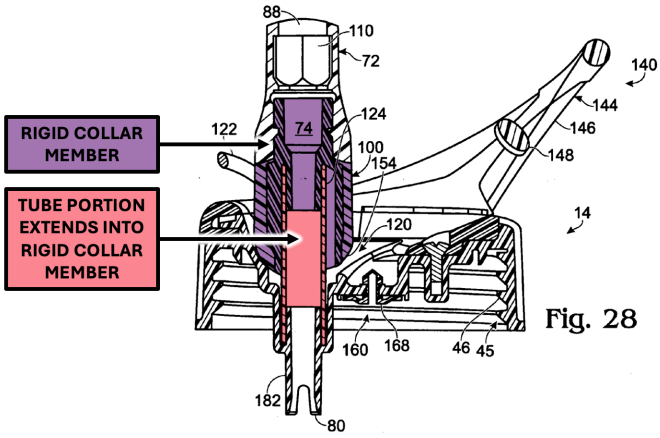


Fig. 28

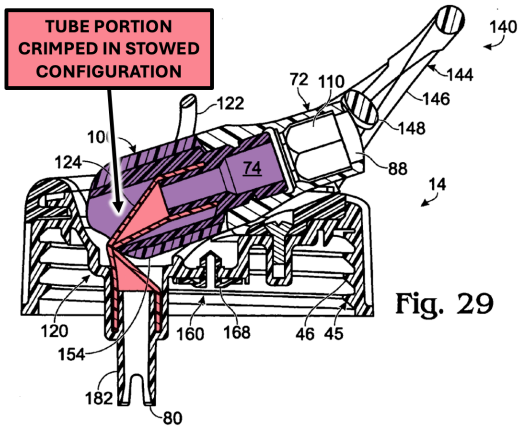


Fig. 29

(*Id*., Figs. 28, 29).

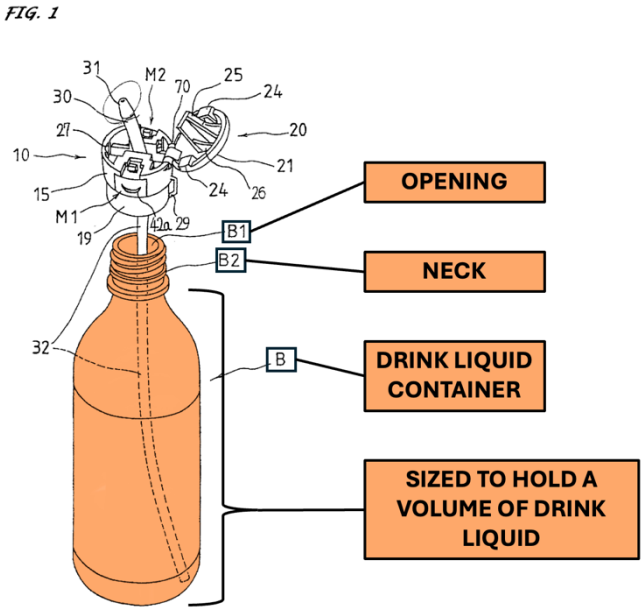
C. Claim 1

As described below, Kiyota, in combination with Choi, discloses a drink container having all the limitations recited in claim 1 and therefore renders the claim obvious. (Ex. 1003, ¶63).

1. Preamble and Limitation 1[A]: Liquid Container

Kiyota discloses a drink container according to the preamble and limitation 1[A], namely "[a] drink container, comprising: a liquid container having a neck with an opening and having an internal compartment sized to hold a volume of potable drink liquid." (Ex. 1003, ¶¶64-67).

Kiyota beverage container B includes a neck (screw portion B2) with an opening (mouth portion B1). (Ex. 1004, 4:59-62).



(*Id*., Fig. 1).

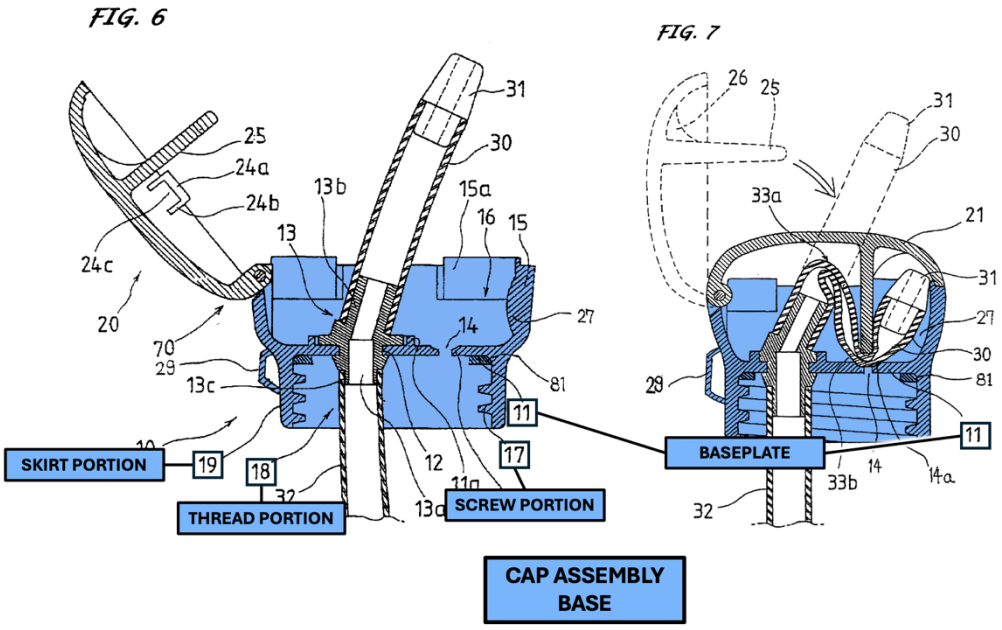
2. 1[B] Cap Assembly

Limitation 1[B] recites: "a cap assembly removably coupled to the liquid container." Kiyota discloses this limitation. (Ex. 1003, ¶¶68-69; Ex. 1004, 1:4-5).

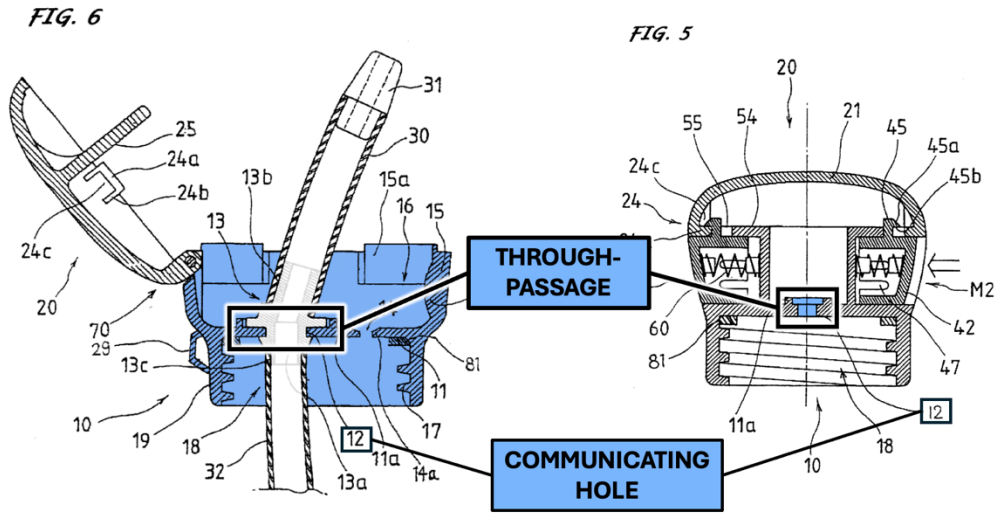
a. 1[B][1] Base

Limitation 1[B][1] recites that the cap assembly comprises "a base removably coupled to the neck of the liquid container and including a through-passage." Kiyota discloses this limitation. (Ex. 1003, ¶70-72).

Kiyota discloses a base (main body portion 10). (Ex. 1004, 4:66-5:12).



(*Id*., Figs. 6, 7). Kiyota's base includes a through-passage (communicating hole 12), (*Id.,* 5:21-23), as shown below.



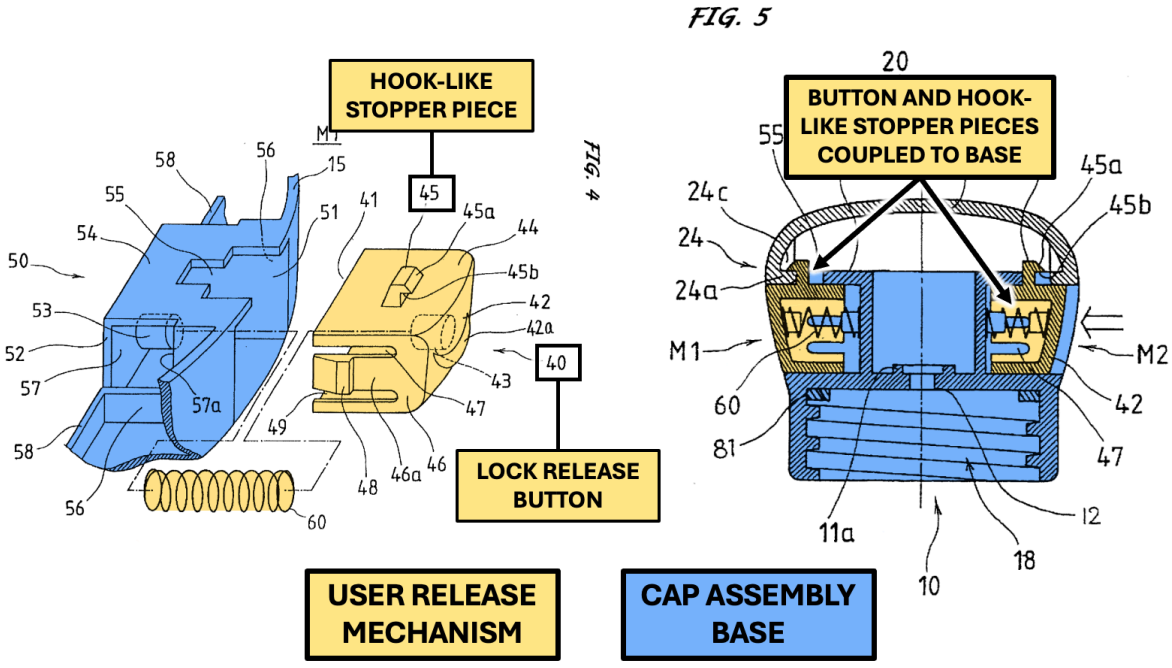
(*Id*., Figs. 5, 6).

b. 1[B][2] First Catch Structure

Limitation 1[B][2] recites that the cap assembly comprises: "a first catch

structure coupled to the base." Kiyota discloses this limitation. (Ex. 1003, ¶¶73-75).

Kiyota discloses two lock release buttons 40, each of which have a first catch structure (hook-like stopper piece 45). (Ex. 1004, 6:28-37). As shown below, spring 60 mates with protrusions 53 on the buttons and protrusions 43 on the base to couple buttons 40 to the base. (*Id.*, 6:20-56). Additionally, stopper protrusions 48 couple buttons 40 to the base by engaging notched windows 57. (*Id.*, at 6:1-19).



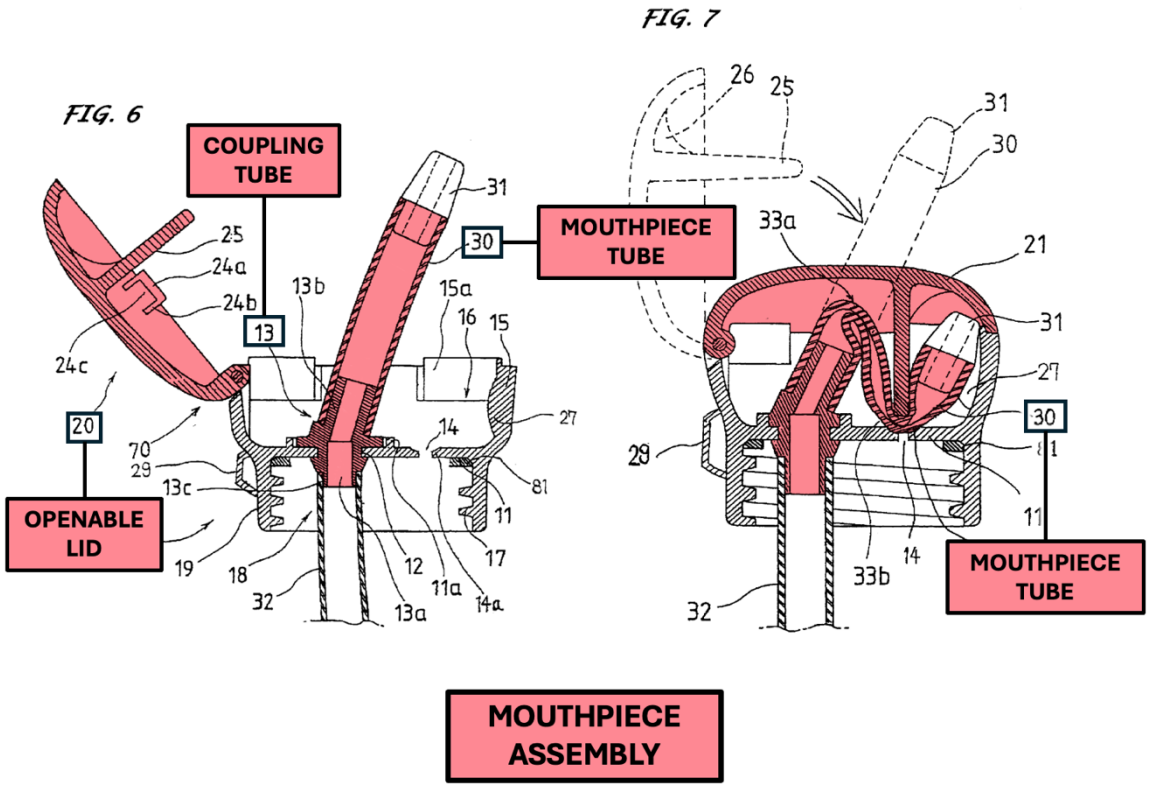
(*Id.*, Figs. 4, 5).

c. 1[B][3] Mouthpiece Assembly

Limitation 1[B][3] is directed to the mouthpiece assembly. The term

"assembly" encompasses a number of parts assembled together. Kiyota discloses the mouthpiece assembly as recited. (Ex. 1003, ¶¶76-80).

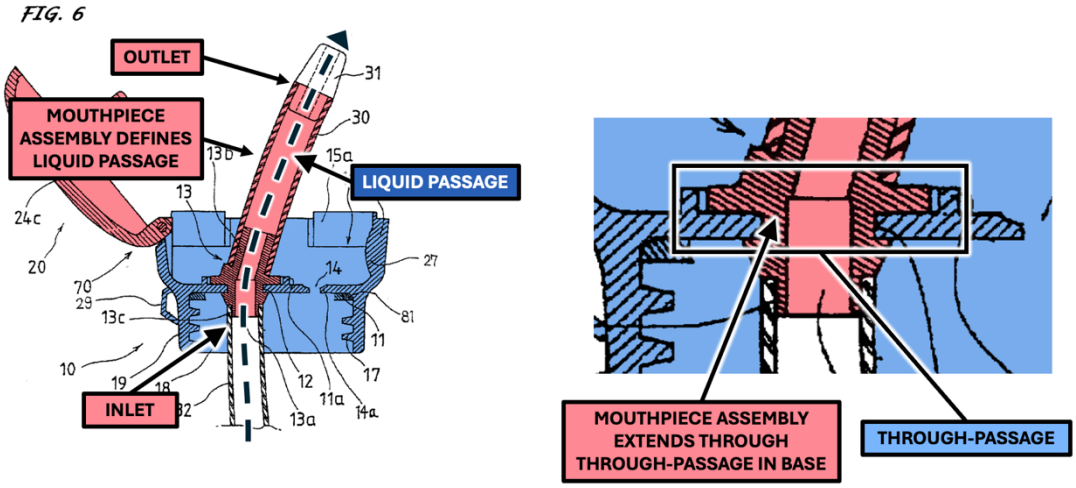
Kiyota's mouthpiece assembly includes, *inter alia*, mouthpiece tube 30, coupling tube 13, and openable lid 20, which function together to allow a user to drink liquid from the drink container (dispensing configuration) and seal the mouthpiece assembly (stowed configuration). (Ex. 1003, ¶77; Ex. 1004, 9:4-17; 9:34-46; 11:23-31).



(Ex. 1004, Figs. 6, 7).

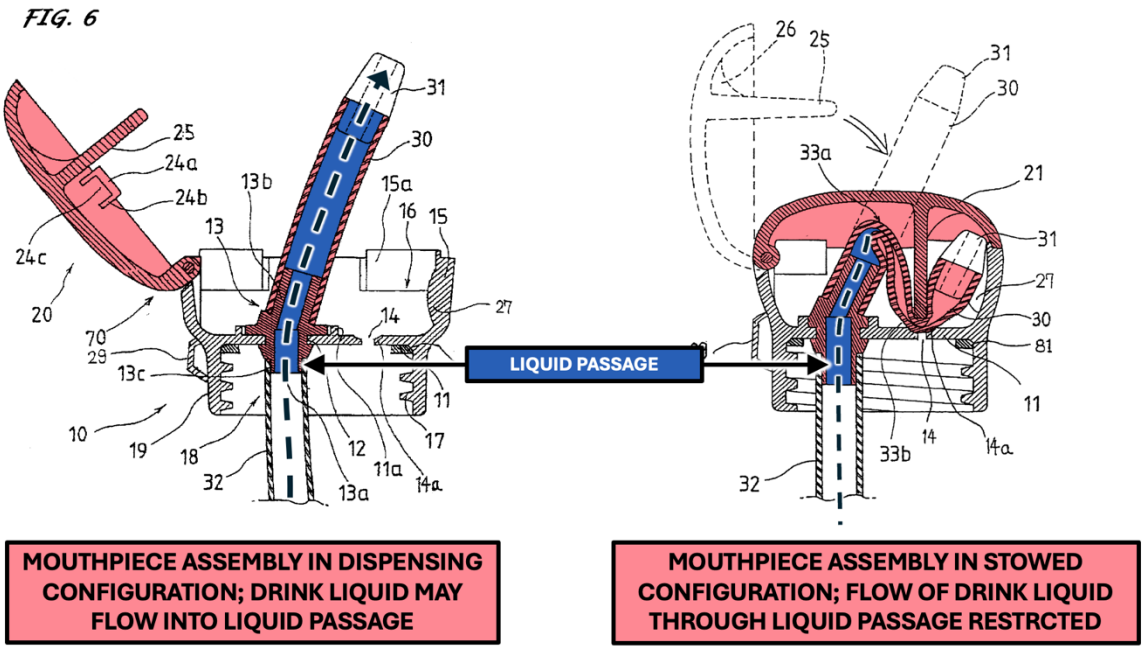
As shown below, Kiyota's mouthpiece assembly extends through a through-

passage (communicating hole 12) and defines a liquid passage with an inlet and an outlet.



(*Id*., Fig 6).

In the dispensing configuration, the liquid passage permits drink liquid to flow from the internal compartment at least into the liquid passage. In the stowed configuration drink liquid is restricted from being dispensed from the liquid container through the liquid passage. (*Id.,* 9:29-32; 10:17-23; 11:8-18;).



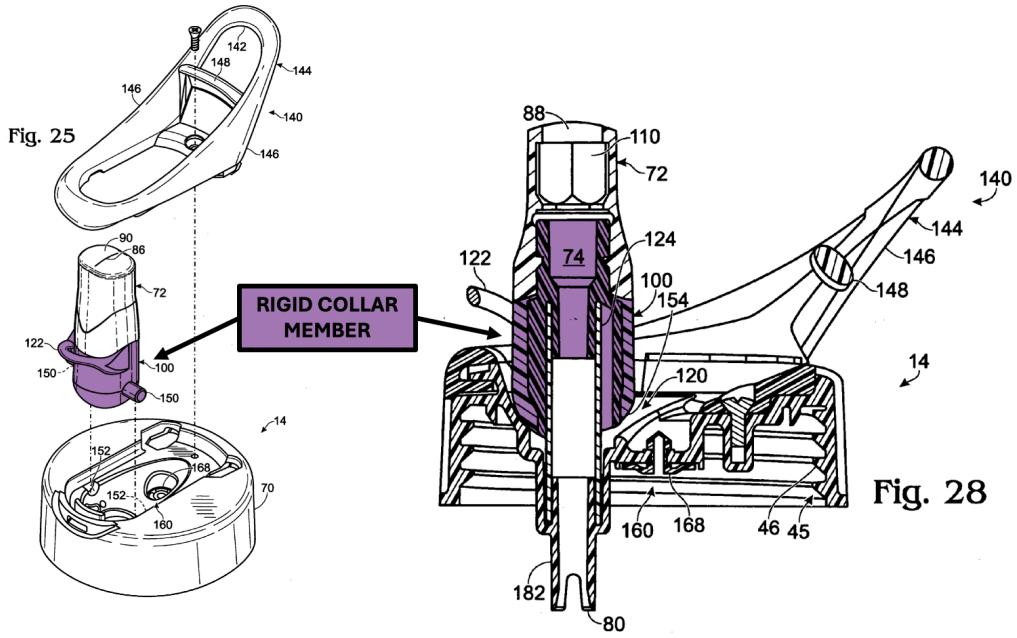
(*Id*., Figs. 6, 7).

Kiyota's mouthpiece assembly is biased to its dispensing configuration by its elasticity. (*Id.,* 11:18-22).

i. 1[B][3][a] Rigid Collar

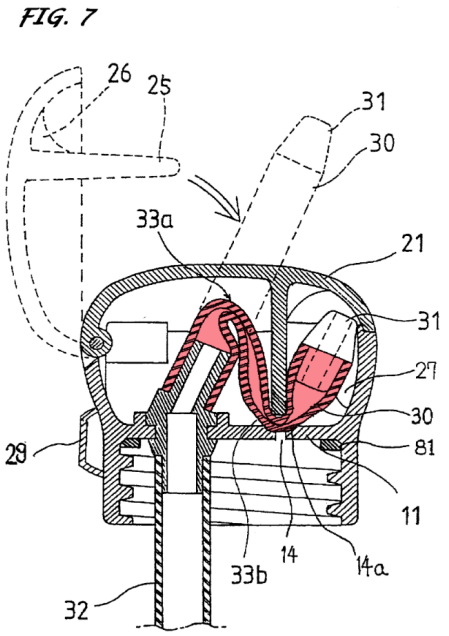
Limitation 1[B][3][a] recites that the mouthpiece assembly comprises "a rigid collar member that is pivotally coupled to a portion of the cap assembly." This limitation is obvious over Kiyota and Choi. (Ex. 1003, ¶¶81-89).

Choi discloses a rigid collar member (mount 100) which "may be pivotally moved relative to the base…" (Ex. 1005, ¶0079).



(*Id*., Figs. 25, 28).

Kiyota and Choi are closely related and disclose drink containers of substantially the same functionality. (Ex. 1003, ¶82). Specifically, both disclose drink containers having mouthpiece assemblies that pivot from a stowed to a dispensing configuration. (*Id*.).



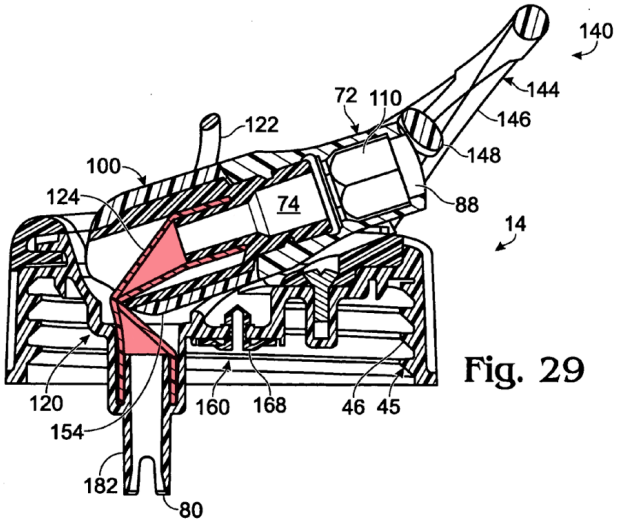


Fig. 29

(Ex. 1004, Fig. 7; Ex. 1005, Fig. 29).

Each mouthpiece assembly comprises a resilient mouthpiece portion presented to a user at an orientation convenient for drinking. A POSITA would have understood that various methods of positioning the mouthpiece could be used with the Kiyota mouthpiece assembly, including the pivoting rigid collar disclosed in Choi. (Ex. 1003 ¶87).

A POSITA would further understand that combining Choi's pivotal rigid collar member would provide the advantage of a bite-actuated mouthpiece. (*Id.*, ¶¶87-89). A POSITA would have been motivated to substitute Choi's mouthpiece and mount for Kiyota's mouthpiece for several reasons. (*Id.*, ¶87). The combined cap assembly would offer improved leak protection and mouthpiece orientation

control compared to Kiyota alone, along with Kiyota's easy cleanability and superior protection for the mouthpiece when stowed. (*Id*.).

Additionally, combining Kiyota and Choi is no more than a simple design choice between two identified, predictable solutions (Choi's mouthpiece assembly and Kiyota's mouthpiece assembly). (*Id.*, ¶88). The combination also represents the use of known techniques (using a pivoting rigid collar to control the orientation of a mouthpiece, and using a bite-actuated mouthpiece to prevent leaks) to modify or improve a similar device, namely Kiyota's mouthpiece assembly. (*Id*., ¶¶88-89).

Third, bite-actuated mouthpieces and pivoting rigid collars were well known, leading a POSITA to reasonably expect success in the combination. (*Id*., ¶88).

Finally, the combination applies known techniques (using a pivoting rigid collar to control the orientation of a mouthpiece and using a bite-actuated mouthpiece to prevent leaks) to a known device (Kiyota's mouthpiece assembly) that is ready for improvement and yields predictable results, namely fewer leaks and more precise control over the orientation of Kiyota's mouthpiece portion. (*Id*.).

ii. 1[B][3][b] Mouthpiece Portion

Limitation 1[B][3][b] recites that the mouthpiece assembly comprises "a mouthpiece portion extending from the rigid collar member and including an outlet, wherein the rigid collar member extends around at least a portion of the mouthpiece portion." This limitation is obvious over Kiyota in view of Choi and the knowledge of a POSITA. (Ex. 1003, ¶¶90-96).

Kiyota discloses a mouthpiece portion that includes an outlet. (*Id*. at ¶91). However, Kiyota does not disclose a rigid collar member. As discussed above, a POSITA would understand that Choi's mount 100 and mouthpiece 72 could be used with Kiyota's mouthpiece assembly. (*Id*. at ¶92). Choi's mount 100 does not extend around at least a portion of mouthpiece 72, rather the mouthpiece extends around the mount. However, Choi also discloses a second, optional mouthpiece portion, and its mount extends around this mouthpiece. In particular, Choi discloses an optional elongate drink tube 190 that extends fluid conduit 74 by attaching to mount 100 at one end, and to mouthpiece 72 at the other. (Ex. 1005, ¶0073). Elongate drink tube 190 can be long enough "that a user "may draw drink fluid from the drink bottle without having to hold the drink bottle." (*Id*.). Choi describes that elongate drink tube 190 can be coupled to mount 100 "by extending the corresponding end of the drink tube *within* or over an end of the mount." (*Id*.)

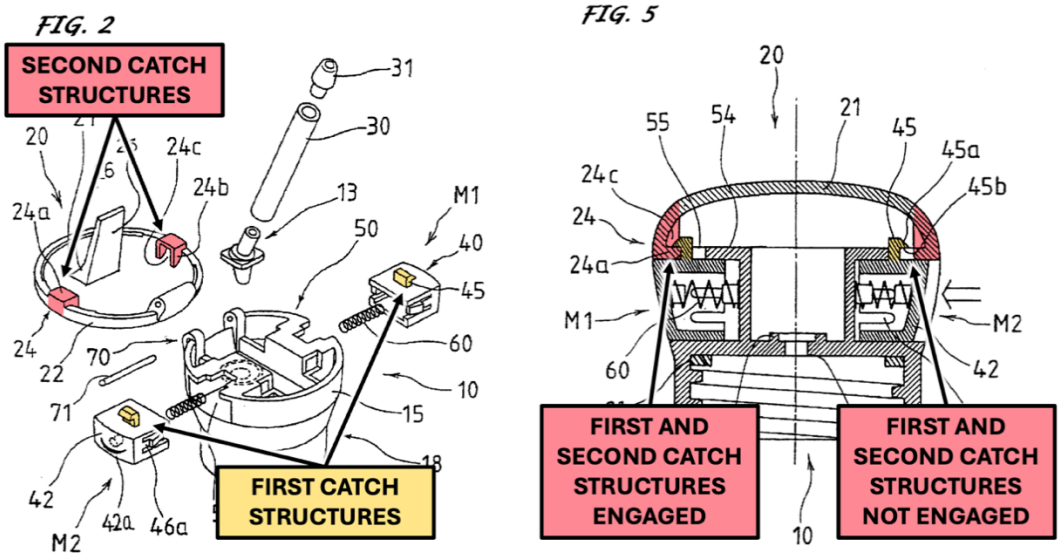
(emphasis added). A POSITA would understand that a user could draw drink liquid through elongate tube 190, either together with bite-actuated mouthpiece 72, or alone (i.e. drink tube 190 is itself the mouthpiece), and therefore understand drink tube 190, to constitute a mouthpiece portion with an outlet, and would further understand that mount 100 would extend around at least a portion of the tube when the tube was extended into the mount as described in Choi. (Ex. 1003, ¶95).

Furthermore, a POSITA would have understood, based on this disclosure, that a mouthpiece portion generally could extend fluid conduit 74 by attaching to the inside or outside of mount 100, and that therefore it would have been obvious to use any of a variety of mouthpieces that extend into mount 100, which would per force extend around the inserted portion of mouthpiece. (*Id*.).

iii. 1[B][3][c] Second Catch Structure

Limitation 1[B][3][c] recites that the mouthpiece assembly comprises "a second catch structure adapted to be selectively engaged with the first catch structure to retain the mouthpiece assembly in the stowed configuration." Kiyota discloses this limitation. (Ex. 1003, ¶¶97-98).

Kiyota discloses second catch structures (connecting portions 24) that selectively engage the first catch structures (hook-like stopper pieces 45) to retain the mouthpiece assembly in its stowed configuration. (Ex. 1004, 10:33-38)

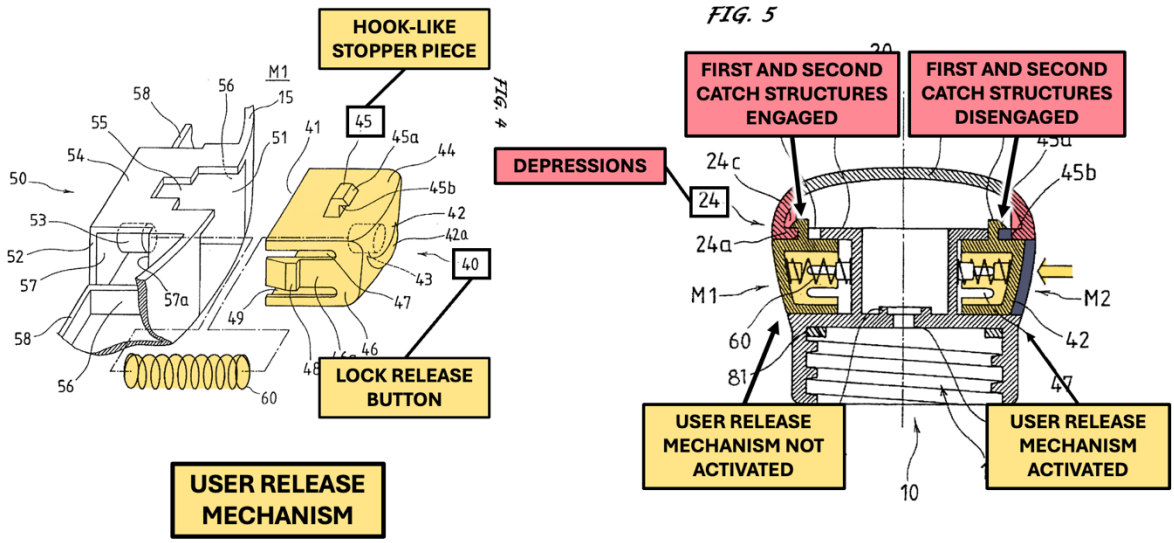


(*Id*., Figs. 2, 5).

d. 1[B][4] User Release Mechanism

As discussed above, limitation 1[B][4] is a means-plus-function limitation governed by §112, ¶6. Kiyota discloses a user release mechanism that performs the recited function, and which is equivalent to the '187 patent structure. (Ex. 1003, ¶99-106).

Specifically, lock release buttons 40, automatically disengage the first and second catch structures (hook-like stopper pieces 45 and connecting portions 24) when pressed. (Ex. 1004, 8:66-9:13). Disengaging the catch structures allows the mouthpiece assembly to move to its dispensing configuration via its bias. (*Id.,* 9:7-13).



(*Id.*, Figs. 4, 5).

The structures in Kiyota that perform the claimed user release mechanism function are equivalent to the structures of the '187 patent. (Ex. 1003, ¶103). They perform the claimed function in the same way to achieve the same result. (*Id.*). In one embodiment of the user release mechanism of the '187 patent, for example, a user pushes a sliding element forward, towards the mouthpiece assembly, to displace the first catch structure to selectively disengage the first and the second catch structures. This is substantially the same in Kiyota where a user presses buttons 40, which slide to displace the first catch structure to selectively disengage the first and the second catch structures. (*Id.*).

Further, to the extent "user release mechanism" is not governed by §112, ¶6, Kiyota certainly discloses *a* structure that performs the recited function. (*Id.,*

¶106).

D. Claim 3

Claim 3 depends from claim 1, and adds "wherein the cap assembly defines a stowing region sized to receive at least a portion of the mouthpiece assembly when the mouthpiece assembly is in the stowed configuration." Kiyota discloses this added limitation. (Ex. 1003, ¶¶108-12).

Kiyota's "main body portion 10 is divided into a storing portion 16 positioned upward from a baseplate 11…." (Ex. 1004, 4:66-67). Kiyota further discloses that "when the openable lid 20 is closed, the mouthpiece tube 30 is… stored within the storing portion 16." (*Id.,* 10:13-16).

Accordingly, claim 3 would have been obvious to a POSITA over Kiyota. (Ex. 1003, ¶12).

E. Claim 4

Claim 4 depends from claim 1, and adds "wherein the rigid collar member comprises a collar aperture and wherein the mouthpiece portion extends past the collar aperture." This limitation is obvious over Kiyota in view of Choi and the knowledge of a POSITA. (Ex. 1003, ¶¶113-17).

As discussed above, a POSITA would have been motivated to combine the rigid collar member and mouthpiece of Choi with the cap assembly of Kiyota.

Choi's rigid collar member (mount 100) includes a collar aperture, and Choi's mouthpiece would extend past that aperture when inserted into the mount as described above with respect to claim 1. (*Id.*, ¶116).

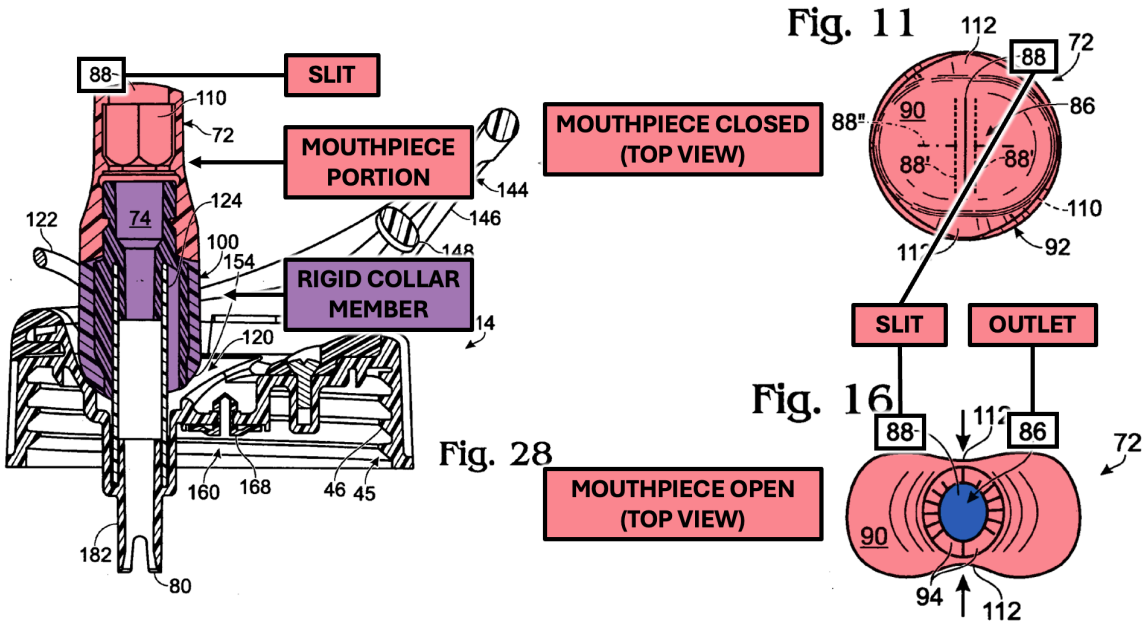
Accordingly, claim 4 would have been obvious to a POSITA over Kiyota and Choi. (*Id.*, ¶117).

F. Claim 5

Claim 5 depends from claim 1, and adds "wherein the mouthpiece portion is constructed of a resiliently deformable material." Kiyota and Choi disclose this additional limitation. (Ex. 1003, ¶¶118-23).

Kiyota discloses that its mouthpiece portion (the end of mouthpiece tube 30) is constructed of a resiliently deformable material "[M]outhpiece tube 30, for example, is a tubular member made of elastic and flexible synthetic resin" (Ex. 1004, 9:66-67).

Choi also discloses this limitation. (Ex. 1003, ¶122). Choi's bite-actuated mouthpiece 72 is resilient and deformable, (Ex. 1005, ¶¶0004, 0052), and includes an outlet. (*Id.*, ¶0081).



(Ex. 1005, Figs. 11, 16, 28).

Accordingly, claim 5 would have been obvious over Kiyota and Choi. (Ex. 1003, ¶123).

G. Claim 6

Claim 6 depends from claim 5, and adds "wherein the mouthpiece assembly includes mouthpiece-securing structure that secures the mouthpiece portion to the rigid collar member and restricts relative movement between the mouthpiece portion and the rigid collar member." This limitation is obvious over Kiyota and Choi. (Ex. 1003, ¶¶124-27).

As discussed above, a POSITA would have been motivated to add Choi's rigid collar member (mount 100) and mouthpiece to Kiyota. A POSITA would

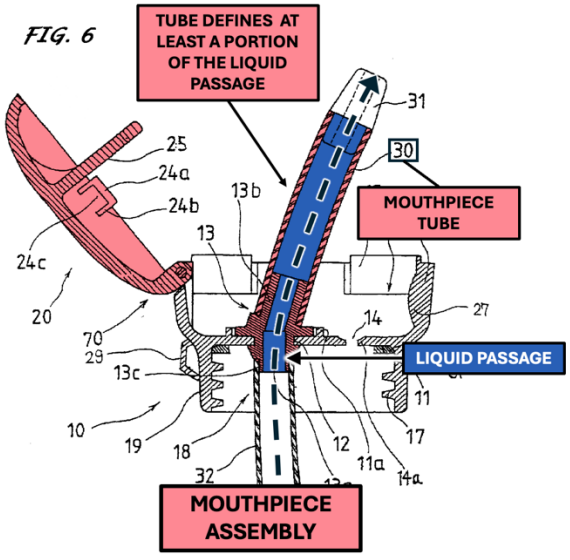
understand that when a mouthpiece is secured to the rigid collar member as described in Choi and discussed above in connection with claim 1, relative movement between the two connected components is restricted. (Ex. 1003, ¶126).

Accordingly, claim 6 would have been obvious over Kiyota and Choi. (Ex. 1003, ¶127).

H. Claim 7

Claim 7 depends from claim 5, and adds "wherein the mouthpiece assembly comprises a tube portion that defines at least a portion of the liquid passage for drink liquid to flow from the internal compartment to the mouthpiece portion." Both Kiyota and Choi disclose this additional limitation. (Ex. 1003, ¶¶128-32).

As shown below, Kiyota's mouthpiece tube 30 defines at least a portion of the liquid passage.



(Ex. 1004, Fig. 6).

Choi discloses "a flexible tube, or conduit 124 that in FIG. 28 fluidly interconnects the inlet 80 of the fluid conduit with the internal chamber 110 of the mouthpiece." (Ex. 1005, ¶0085).

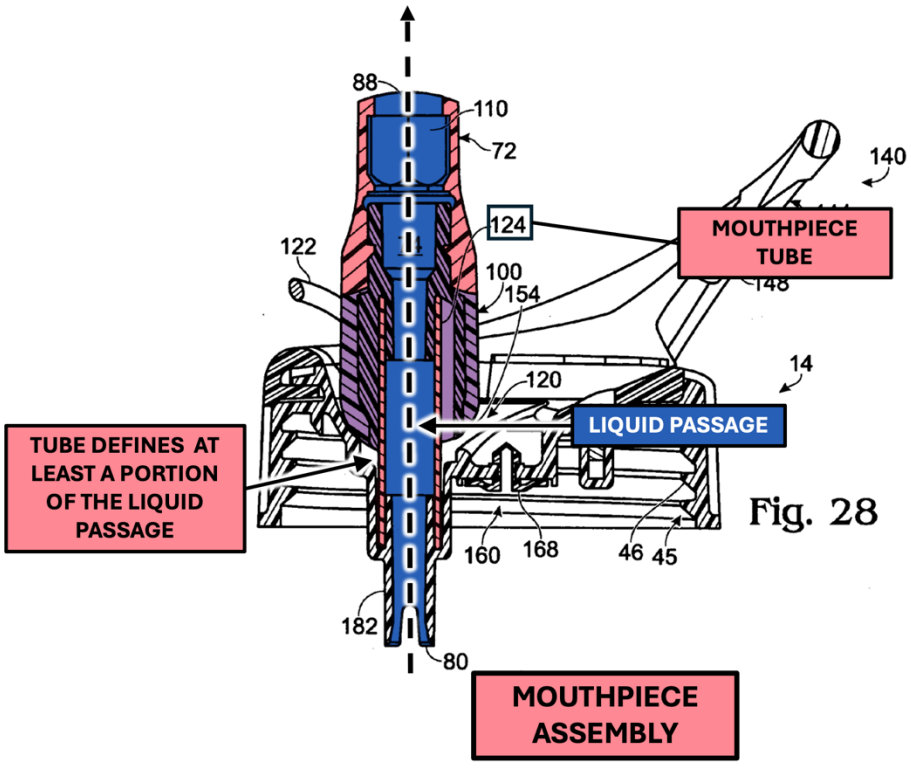


Fig. 28

(*Id*., Fig. 28.)

Accordingly, claim 7 would have been obvious over Kiyota and Choi. (Ex. 1003, ¶132).

I. Claim 8

Claim 8 depends from claim 7, and adds "wherein the tube portion includes structure for securing the tube portion to the rigid collar member and restricting

relative movement between the tube portion and the rigid collar member." This limitation is obvious over Kiyota and Choi. (Ex. 1003, ¶¶133-36).

As discussed above, a POSITA would have been motivated to add Choi's rigid collar member (mount 100) to Kiyota. Choi discloses "a flexible tube [that] fluidly interconnects the inlet 80 of the fluid conduit with the internal chamber 110 of the mouthpiece." (Ex. 1005, ¶0085). As shown below, the tube includes structure for securing the tube to the body 154 of the rigid collar member (mount 100).

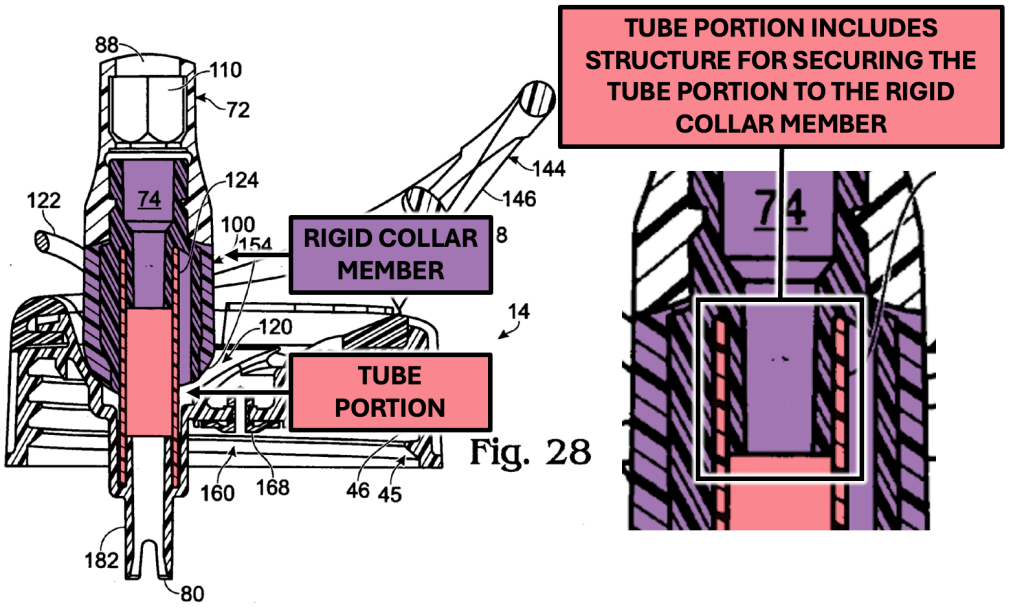


Fig. 28

(Ex. 1005, Fig. 28). While the tube is secured to the rigid collar member, relative movement between the two components is restricted. (Ex. 1003, ¶135).

Accordingly, claim 8 would have been obvious over Kiyota and Choi. (*Id.*,

¶136).

J. Claim 9

Claim 9 depends from claim 7, and adds "wherein one of the mouthpiece portion and the tube portion includes the mouthpiece-securing structure; wherein the mouthpiece-securing structure includes one or more of a channel and a depression; wherein the rigid collar member includes one or more of a lip, a flange, and a protrusion; and wherein the one or more of the channel and the depression defines a seat that engages and mates with the one or more of the lip, the flange, and the protrusion."

Choi's mouthpiece 72 includes a channel or depression that defines a seat that engages and mates with a lip, flange, or protrusion of mount 100.

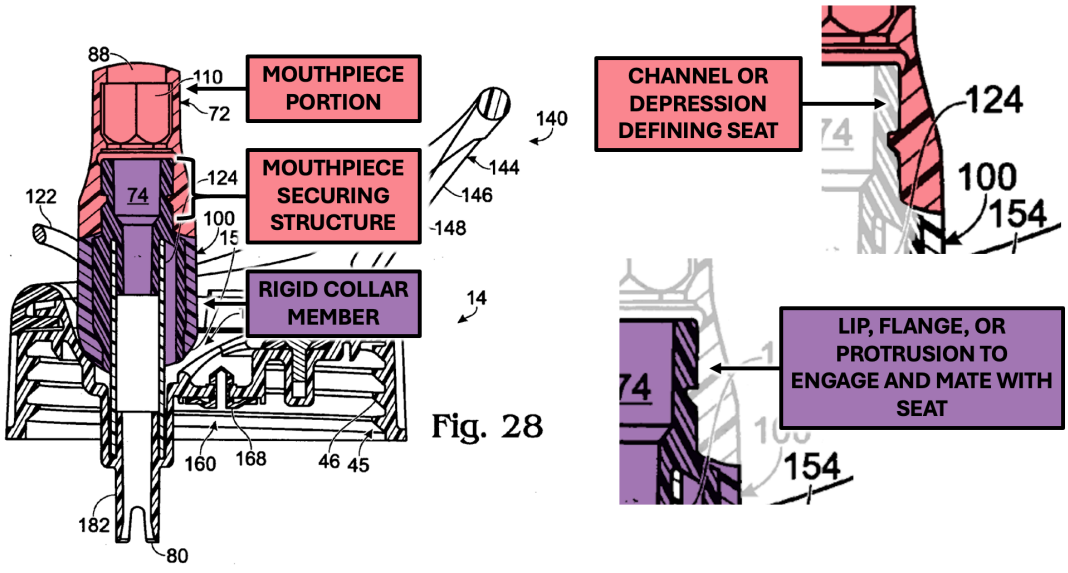


Fig. 28

(Ex. 1005, Fig. 28)

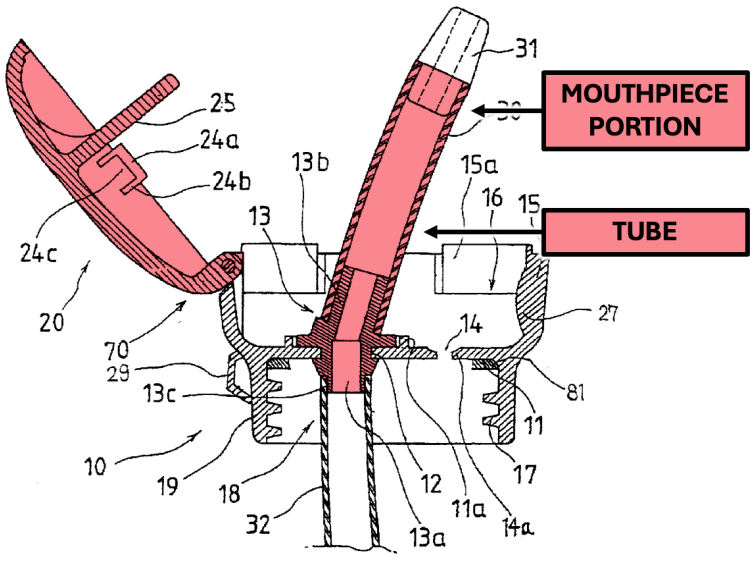
Accordingly, claim 9 would have been obvious over Kiyota and Choi. (Ex. 1003, ¶140).

K. Claim 11

Claim 11 depends from claim 7, and adds "wherein the mouthpiece portion and the tube portion are constructed as a unitary assembly of the resiliently deformable material." This limitation is obvious over Kiyota, Choi, and Ribarits. (Ex. 1003, ¶¶141-52).

Kiyota discloses a tube portion (mouthpiece tube 30) that includes a mouthpiece portion (the end of mouthpiece tube 30). Because the two portions are sections of a single tube, they are constructed as a unitary assembly.

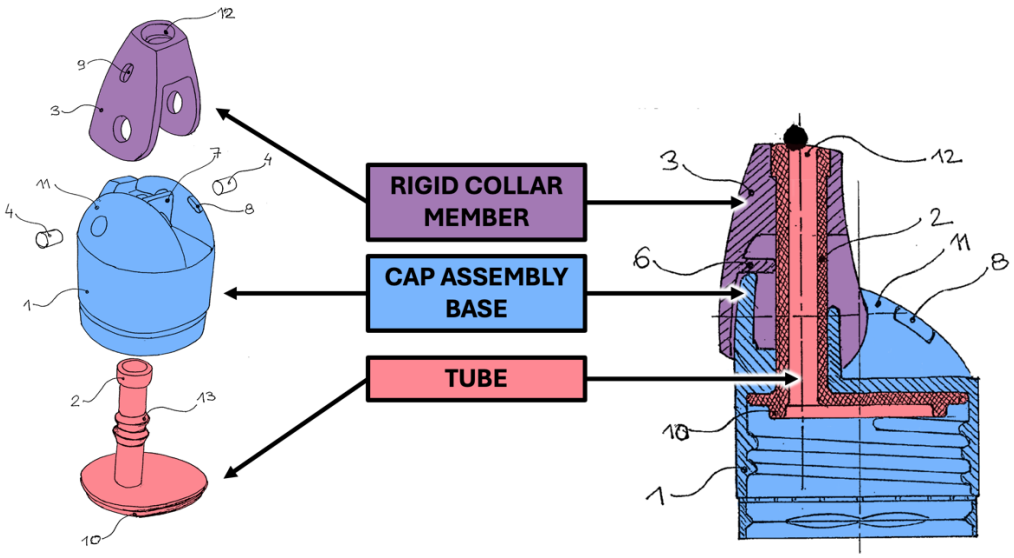
FIG. 6



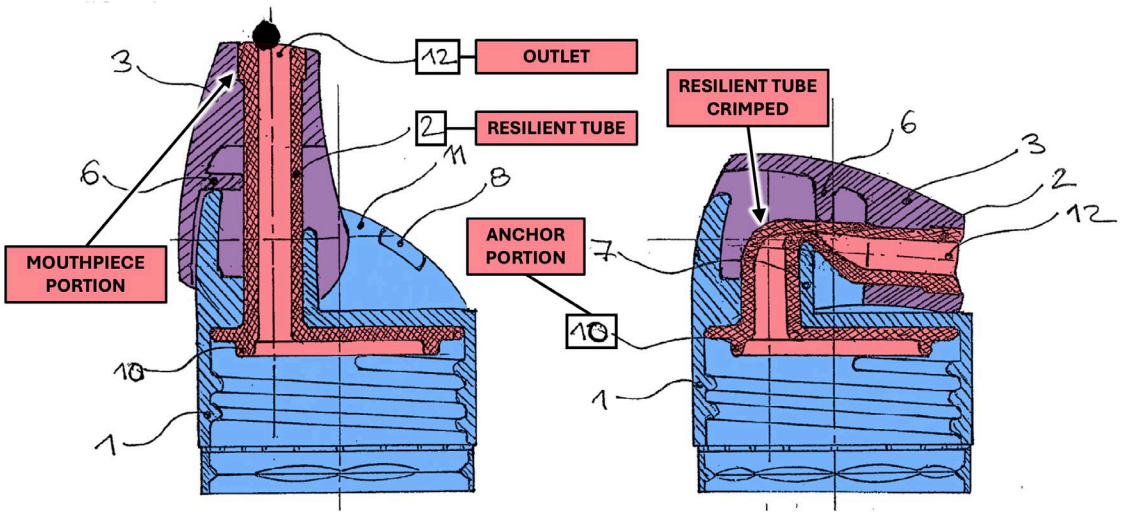
(Ex. 1004, Fig. 6).

Choi's tube portion (flexible tube 124) and mouthpiece 72 are not constructed as a unitary assembly, but it would have been obvious to use a unitary assembly when combining with Kiyota. (Ex. 1003, ¶144). The use of a unitary tube in a mouthpiece assembly with a pivoting rigid collar was known, and would have been an obvious substitution to a POSITA. For example, Ribarits discloses such a tube in a pivoting mouthpiece assembly.

Ribarits (Ex. 1009) discloses a conventionally threaded drink cap assembly that includes "a drinking spout" (spout 3, i.e. a rigid collar member) that is "pivoted" between open and closed positions. (Ex. 1009, 2). Ribarits includes sealing tube element 2, a unitary assembly of resiliently deformable material (rubber or latex), that includes a tube, mouthpiece portion, and anchor portion. (*Id*.). Sealing tube element 2 extends through spout and provides fluid communication from the drink bottle, through the cap assembly, to the user's mouth. (*Id*.).



(*Id.*, Figs. 2, 3). The tube seals when it is crimped by the drinking spout in its closed configuration.



(*Id.*, Fig.3).[7]

[7] The black dot adjacent the outlet in Figure 3 appears to be a printing error in the original published patent figure.

Ribarits is very closely related to Kiyota and Choi. All three have cap assemblies of substantially the same functionality, namely all include mouthpiece assemblies with open and closed configurations, resilient mouthpieces. and crimpable tubes. (Ex. 1003, ¶146). They all address the same problem of an easily sealable mouthpiece assembly for use in a drink container and do so in the same way, i.e. by crimping the tube. (*Id.*). Kiyota and Ribarits both disclose a tube and mouthpiece that are constructed as a unitary assembly of a resiliently deformable material. (*Id*., ¶147). Choi and Ribarits both disclose a rigid collar member. (*Id*.). A POSITA would recognize the configurations disclosed by Kiyota, Choi, and Ribarits are interchangeable. (*Id*.).

A POSITA would have been motivated for multiple reasons to combine the unitary construction of resiliently deformable material disclosed in Kiyota with the rigid collar member disclosed in Ribarits and Choi. (*Id*., ¶148). For example, it would have been obvious to a POSITA to make Choi's multiple pieces integral because use of one-piece construction has been recognized as merely a matter of obvious engineering choice. *In re Larson*, 340 F.2d 965, 968 (CCPA 1965).

Further, a POSITA would have been incentivized to have fewer parts. A POSITA would recognize that Choi's separate tube and mouthpiece portions could be molded as a single piece of resiliently deformable material based on the

disclosure in Kiyota and Ribarits and/or the knowledge of a POSITA. (Ex. 1003, ¶149). A POSITA would have recognized that not only would this save on the number of parts to be molded, but would have provided improved safety for the drink container. (*Id*.). It has long been understood that it is best to avoid potentially small parts that could present a choking hazard if disassembled, such as potentially could occur with the mouthpiece 72 of Choi. (*Id*.). A POSITA would have recognized that a unitary assembly could be easily inserted through the rigid collar member, as in Ribarits. (*Id*.).

Additionally, the combination of Kiyota, Choi, and Ribarits involves the simple substitution of one known element for another—Choi's two-part assembly for the unitary assembly of Kiyota and Ribarits. (*Id.*, ¶150). A POSITA would have recognized that a unitary assembly would provide comparable overall functionality and also improved safety. (*Id.*). A POSITA would have recognized a drink container with a mouthpiece portion and tube constructed as a unitary assembly as disclosed in Kiyota and Ribarits would yield predictable results. (*Id.*).

A POSITA also would have reasonably expected success in combining the unitary assembly of Kiyota and Ribarits with the rigid collar member of Choi and Ribarits. (*Id.*, ¶151). For example, a POSITA would have readily understood that Ribarits had already successfully achieved such a combination. (*Id.*).

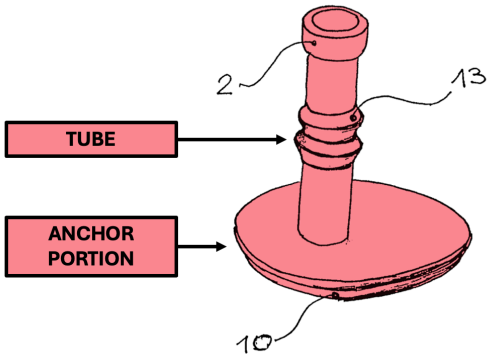
Additionally, a POSITA would have readily understood that Choi could accommodate the unitary assembly. (*Id.*). Thus, the combination would have involved no more than the routine substitution of one multi-part assembly (Choi) for another of unitary construction (Kiyota and Ribarits) to provide the same desired functionality, albeit with improved safety. (*Id.*).

Accordingly, claim 11 would have been obvious over Kiyota, Choi, and Ribarits. (*Id.*, ¶152).

L. Claim 12

Claim 12 depends from claim 7, and adds "wherein the mouthpiece assembly further includes an anchor portion that extends from the tube portion." This limitation is obvious over Kiyota, Choi, and Ribarits. (Ex. 1003, ¶¶153-56).

Ribarits discloses an anchor portion that extends from the tube portion. "[T]the sealed tubular element (2) has… projecting sealing rings (10)." (Ex. 1009, 3).



(*Id*., Fig. 2).

Accordingly, claim 12 would have been obvious over Kiyota, Choi, and Ribarits. (Ex. 1003, ¶156).

M. Claim 13

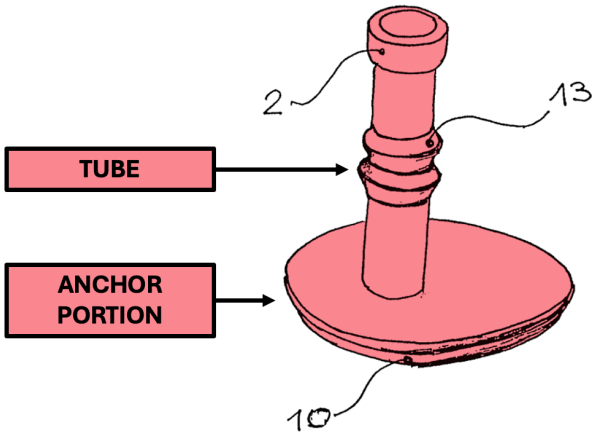
Claim 13 depends from claim 12, and adds "wherein the anchor portion has a greater exterior perimeter than the tube portion." This limitation is obvious over Kiyota, Choi, and Ribarits. (Ex. 1003, ¶157-61).

As shown above, the anchor portion of Ribarits (sealing rings 10) has a greater exterior perimeter than its tube portion (sealing tube 2). Accordingly, claim 13 would have been obvious over Kiyota, Choi, and Ribarits. (Ex. 1003, ¶161).

N. Claim 14

Claim 14 depends from claim 12, and adds "wherein the anchor portion and tube portion are constructed as a unitary assembly of the resiliently deformable material." This limitation is obvious over Kiyota, Choi, and Ribarits. (Ex. 1003, ¶162-66).

As discussed above, a POSITA would have been motivated to combine Kiyota, Choi, and Ribarits. The tube and anchor portion of Ribarits are constructed as a unitary assembly of a resiliently deformable material. (Ex. 1009, 3 (Claim 3)).



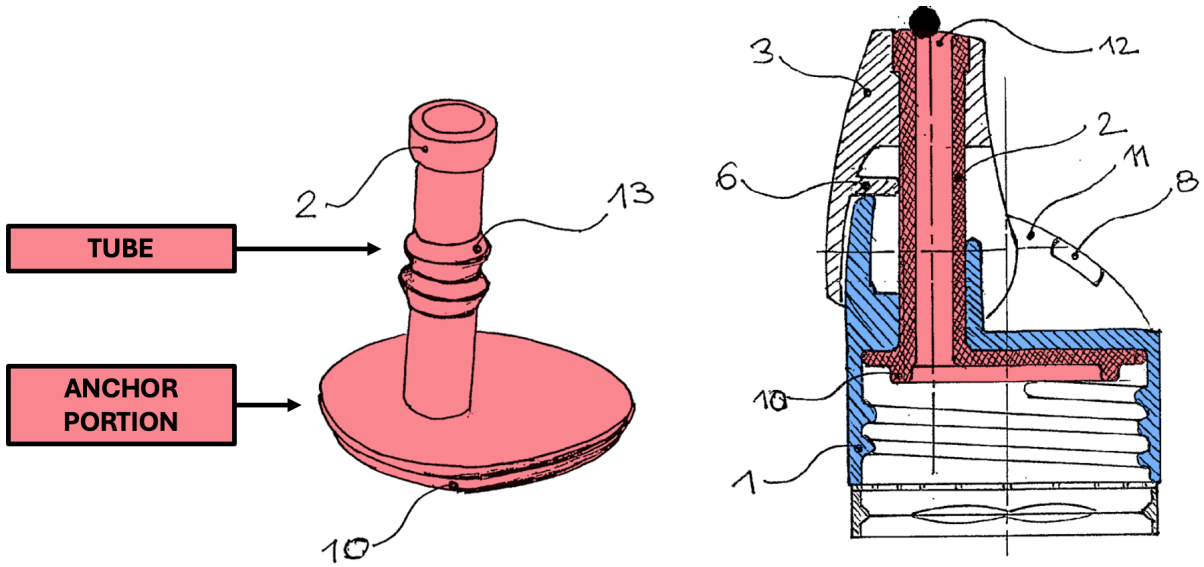
(*Id*. Fig. 2).

Accordingly, claim 14 would have been obvious over Kiyota, Choi, and Ribarits. (Ex. 1003, ¶166).

O. Claim 15

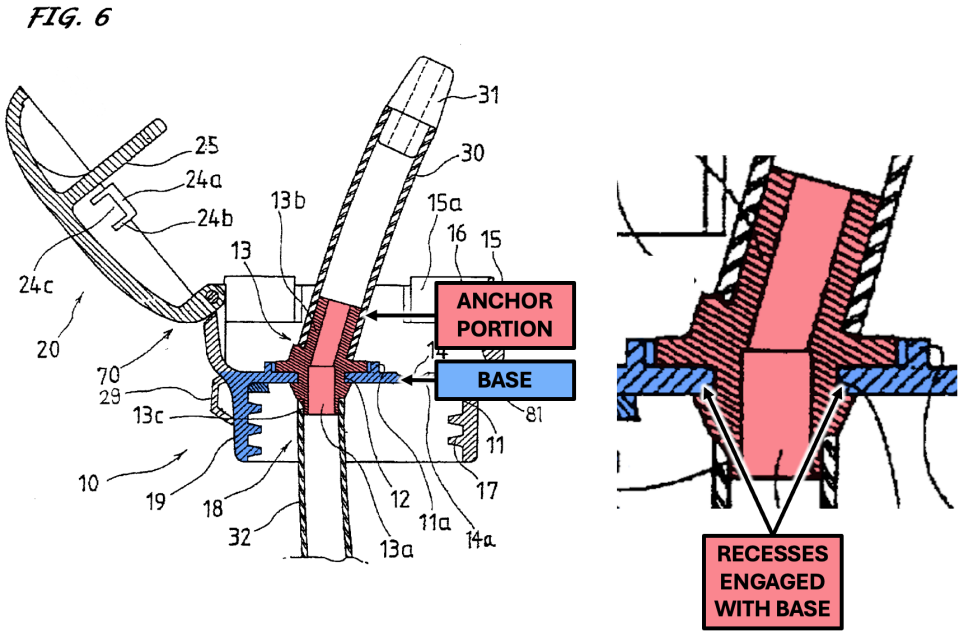
Claim 15 depends from claim 12, and adds "wherein the anchor portion defines a recess that is sized and shaped to engage and mate with corresponding structure of the base of the cap assembly." This limitation is obvious over Kiyota, Choi, and Ribarits. (Ex. 1003, ¶167-74).

As discussed above, a POSITA would have been motivated to combine the cap assemblies of Kiyota, Choi, and Ribarits. Ribarits discloses a tube with an anchor portion that, as shown below, is sized and shaped to engage and mate with the base of the cap assembly, but does not define a recess.



(Ex. 1009, Figs. 2, 3).

Kiyota discloses an anchor portion that, as shown below, defines a recess created by flanges on either side of the through-passage. The recess is sized and shaped to engage and mate with the corresponding structure of the base of the cap assembly.



(Ex. 1004, Fig. 6).

It would have been obvious to a POSITA to combine the recessed design of Kiyota's anchor portion with the unitary construction of Ribarits. Such a person would have been motivated to do so because of the additional protection against leaks that such a design would provide. First, a recess in the anchor around a corresponding structure in the base would improve the connection and seal between the tube and the base. Second, a recessed design would support the anchor portion from above and below the through-passage, preventing the anchor portion from becoming mis-aligned during use, ensuring a tight, consistent seal. (Ex. 1003, ¶172).

A POSITA also would have reasonably expected success in combining the

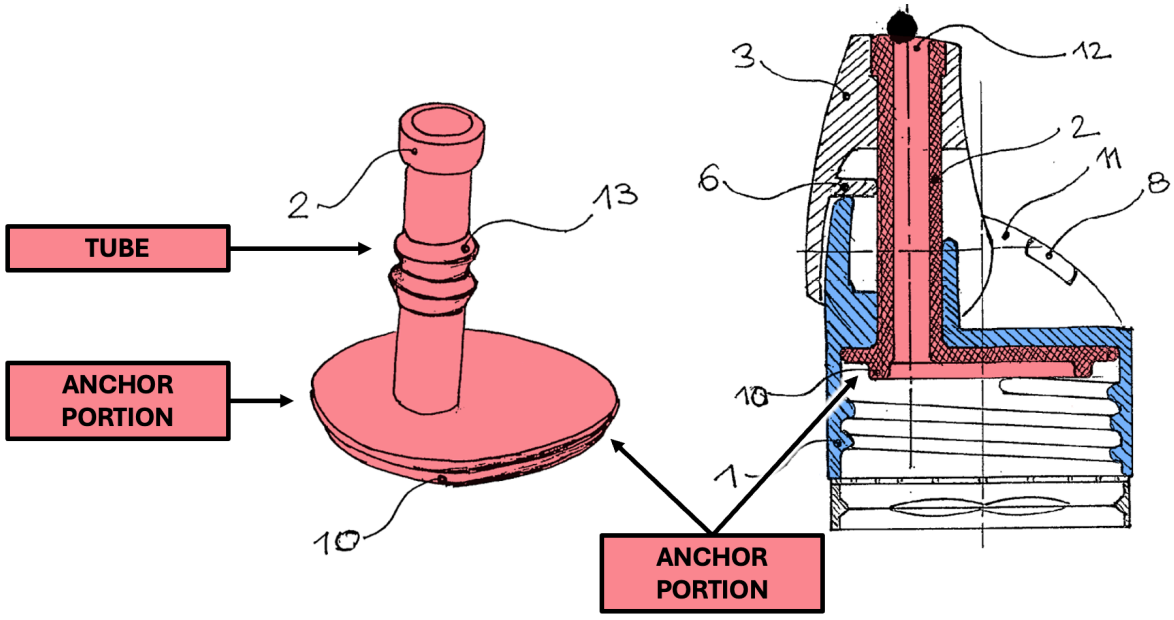
recessed design of Kiyota's portion with the anchor portion of Ribarits. For example, a POSITA would have readily understood that Ribarits could accommodate a recessed design. Thus, the combination would have involved no more than the routine substitution of an anchor portion without recesses for another with recesses to provide the same desired functionality, albeit with improved leak prevention. (*Id*., ¶173).

Accordingly, claim 15 would have been obvious over Kiyota, Choi, and Ribarits. (*Id*., ¶174).

P. Claim 16

Claim 16 depends from claim 12, and adds "wherein the anchor portion includes a projecting flange that provides a friction-fit arrangement with the through-passage of the base." This limitation is obvious over Kiyota, Choi, and Ribarits. (Ex. 1003, ¶175-79).

Ribarits discloses that its anchor portion is a projecting flange (sealing ring 10) that provides a friction-fit arrangement with the through-passage of the base. (*Id*., ¶178).



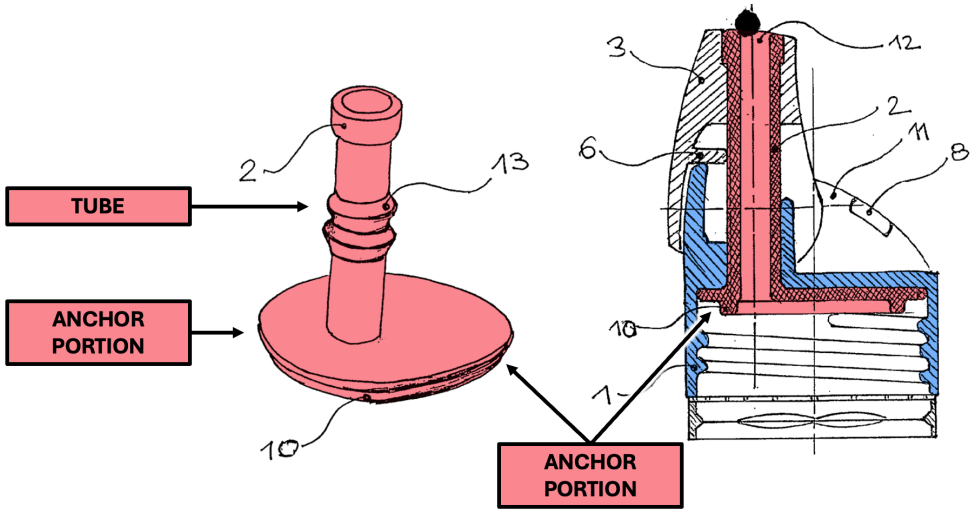
(Ex. 1009, Figs. 2, 3).

Accordingly, claim 16 would have been obvious over Kiyota, Choi, and Ribarits. (Ex. 1003, ¶179).

Q. <u>Claim 17</u>

Claim 17 depends from claim 12, and adds "wherein the anchor portion is sized to restrict passage of the anchor portion through the through-passage and thus restrict removal of the mouthpiece assembly via a top side of the cap assembly." This limitation is obvious over Kiyota, Choi, and Ribarits. (Ex. 1003, ¶¶180-84).

Ribarits discloses an anchor portion that is sized to restrict passage of the anchor portion through the through-passage and prevents the mouthpiece assembly from being removed through the top side of the cap assembly. (*Id.*, ¶183).



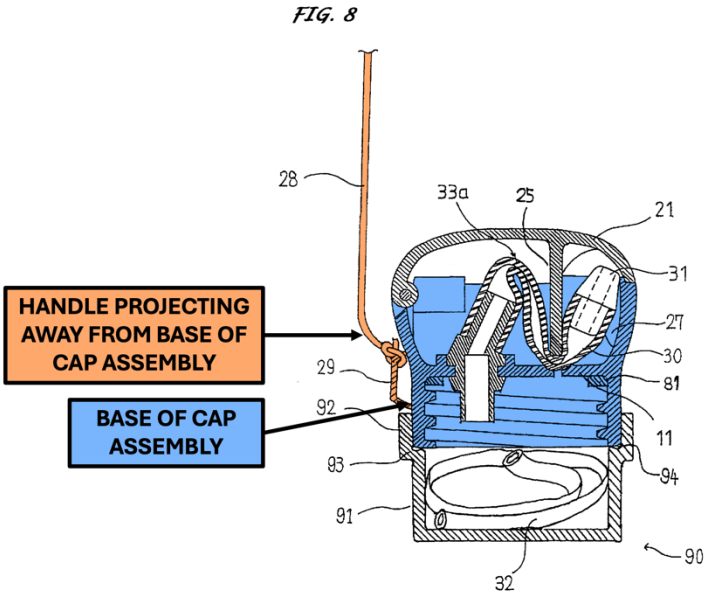
(Ex. 1009, Figs. 2, 3).

Accordingly, claim 17 would have been obvious over Kiyota, Choi, and Ribarits. (Ex. 1003, ¶184).

R. Claim 19

Claim 19 depends from claim 1, and adds "wherein the cap assembly further comprises a handle that projects away from the base." Kiyota discloses this additional limitation. (Ex. 1003, ¶185-90).

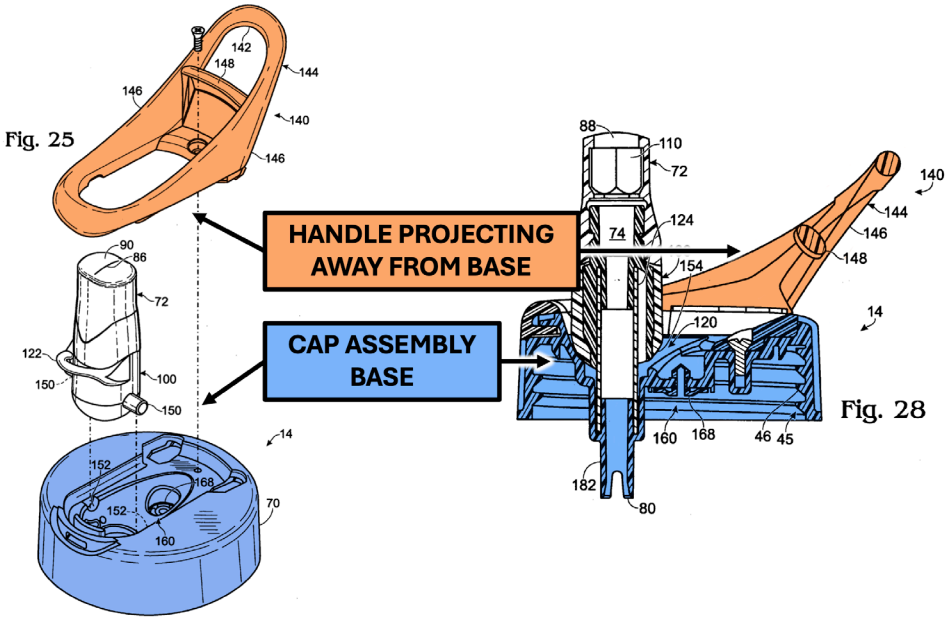
Kiyota discloses a handle that projects away from the base of the cap assembly. Specifically, it includes hooking portion/stopper piece 29, which projects away from the cap assembly base. (Ex. 1004, 12:34-37). Further, it describes that a strap-like body 28 can be tied to the hooking portion, which would also project away from the cap assembly base. (*Id*. at 8:34-38).



(*Id*. at Fig. 8). Both the hooking portion/stopper piece 29 individually and in combination with a strap-like body 28 would be a handle projecting away from the cap assembly base. (Ex. 1003, ¶187).

If one were to find that Kiyota did not sufficiently discloses or suggest a handle that projects away from the base of the cap assembly, e.g. based on the size of the hooking portion or flexibility of the strap, this limitation would have been obvious over Kiyota in view of Choi.

Choi discloses a handle that projects away from its cap assembly base. "The illustrative example of a cap assembly 14 shown in FIGS. 21-27 also includes a handle 140 that extends from the base of the cap assembly." (Ex. 1005, ¶0078).



(*Id.*, Figs. 25, 28).

As discussed above, a POSITA would have been motivated to combine the rigid collar and resilient mouthpiece of Choi with Kiyota's mouthpiece assembly. Kiyota describes the known desirability of carrying the lid and beverage container. (Ex. 1004, 8:51-53). It would have been obvious to a POSITA to enlarge Kiyota's "hooking portion" based on the larger handle disclosed by Choi. (Ex. 1003, ¶189).

Additionally, a POSITA would have understood that Kiyota's "hooking portion" could be readily enlarged to accommodate a user's finger or hand, and thereby form a handle to grasp the device without the need for the strap. (*Id.*, ¶188).

A POSITA would have been motivated modify Kiyota to either add Choi's

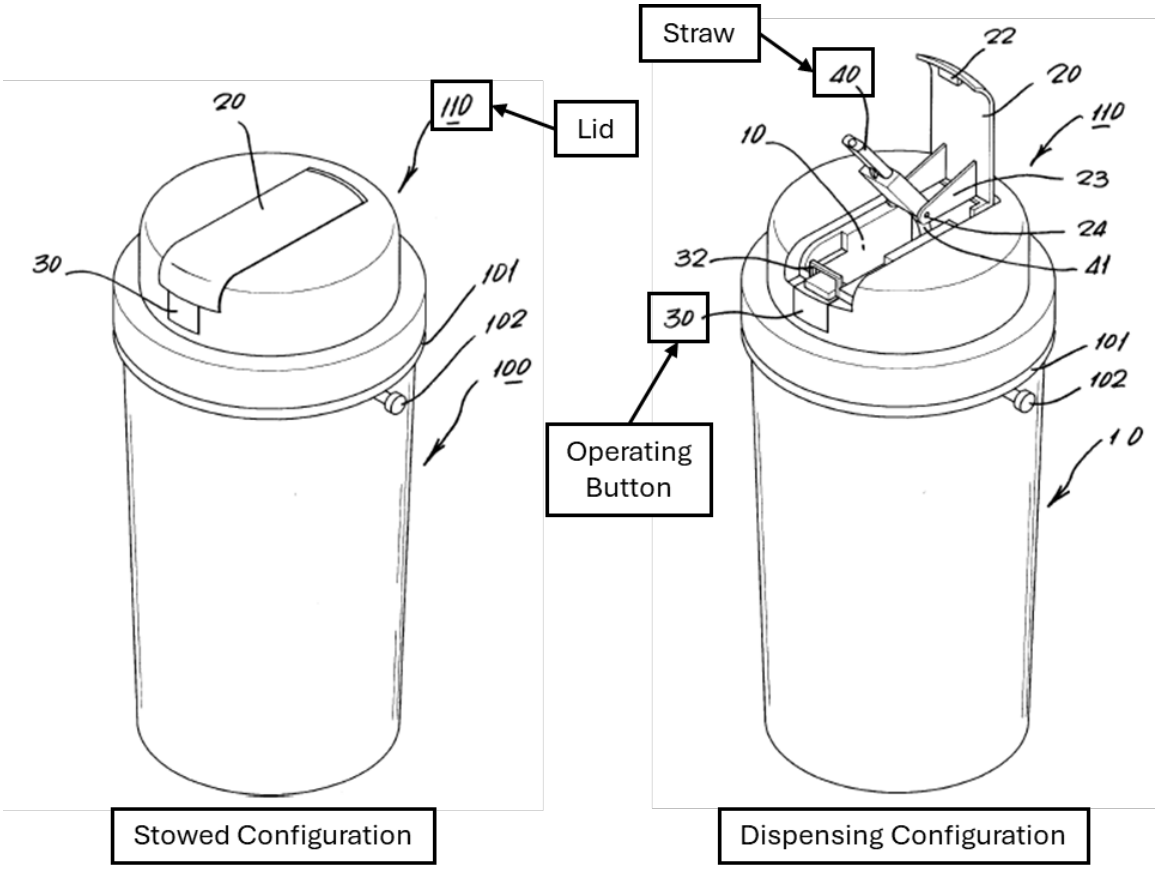
handle or enlarge Kiyota's hooking portion because it would not have altered the overall function or structure of the cap assembly and would have provided an alternative mechanism by which to carry the device, in addition to the hooking portion/strap disclosed in the Kiyota. (*Id*. at ¶188).

Accordingly, claim 19 would have been obvious over Kiyota or Kiyota in view of Choi. (*Id*., ¶190).

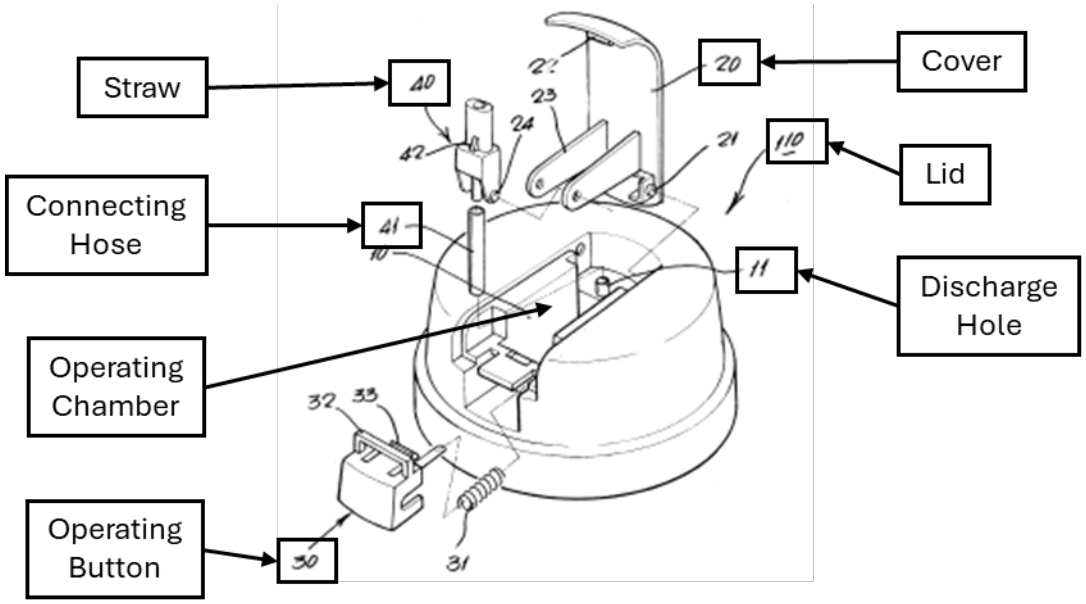
IX. GROUND 2: CLAIMS 1, 3-9, 11-14, 16-17, AND 19 WOULD HAVE BEEN OBVIOUS IN VIEW OF PARK AND RIBARITS

A. Overview of Park

Park (Ex. 1006) discloses a water bottle having a lid with a built-in straw that can be opened automatically with the touch of a button. (Ex. 1006, Abstract; Ex. 1003, ¶53).

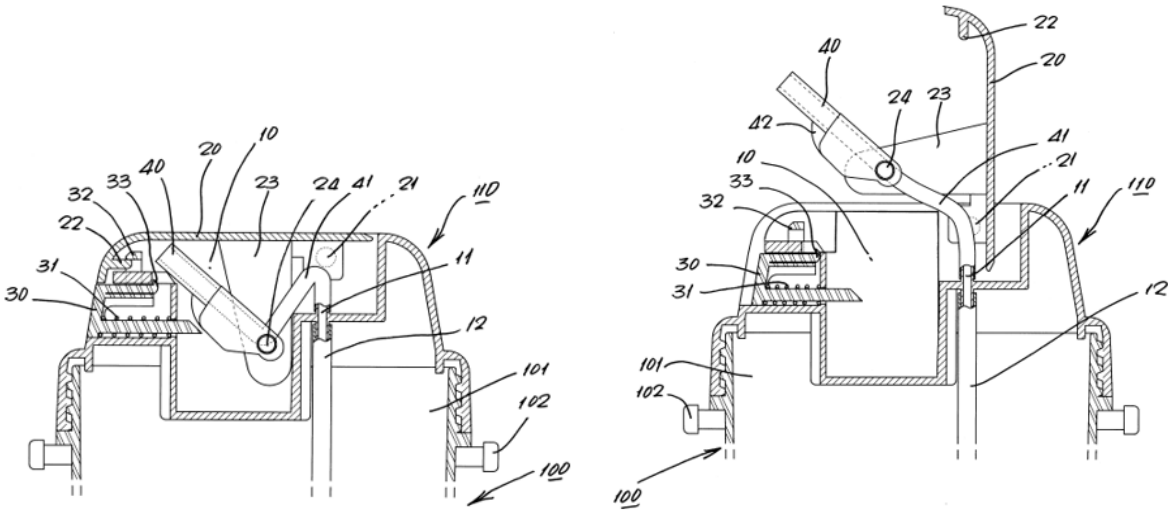


(Ex. 1006., 3, Figs. 1-2). The "lid 110" is shown below:



(*Id*., Fig. 3)

As shown below, the lid is configured with a stowed (closed, left) and dispensing (opened, right) configuration. When stowed, "operating chamber 10" receives "straw 40" and "connecting hose 41."



(*Id.*, Figs. 5-6). When opened (above, right), a user may drink through the straw. (*Id.,* 5). The lid's "locking means" comprises "operating button 30," which includes "hook 32" that engages "protrusion 22" to hold the lid in the closed position. (*Id.,* 4). To open the lid, a user presses "operating button 30," which slides within "operating chamber 10" to disengage "hook 32" from "protrusion 22" and automatically release "cover 20." (*Id.*). Connecting hose 41 is elastic causing it "unfold vertically, and when the lid 20 is opened." (*Id.*).

To close the lid, the user presses "cover 20," which causing "straw 40" to pivot into "operating chamber 10." (*Id.,* 5). In this position, the connecting hose

41 is bent and closed at two locations. (*Id.,* 5, Fig. 5).

B. Claim 1

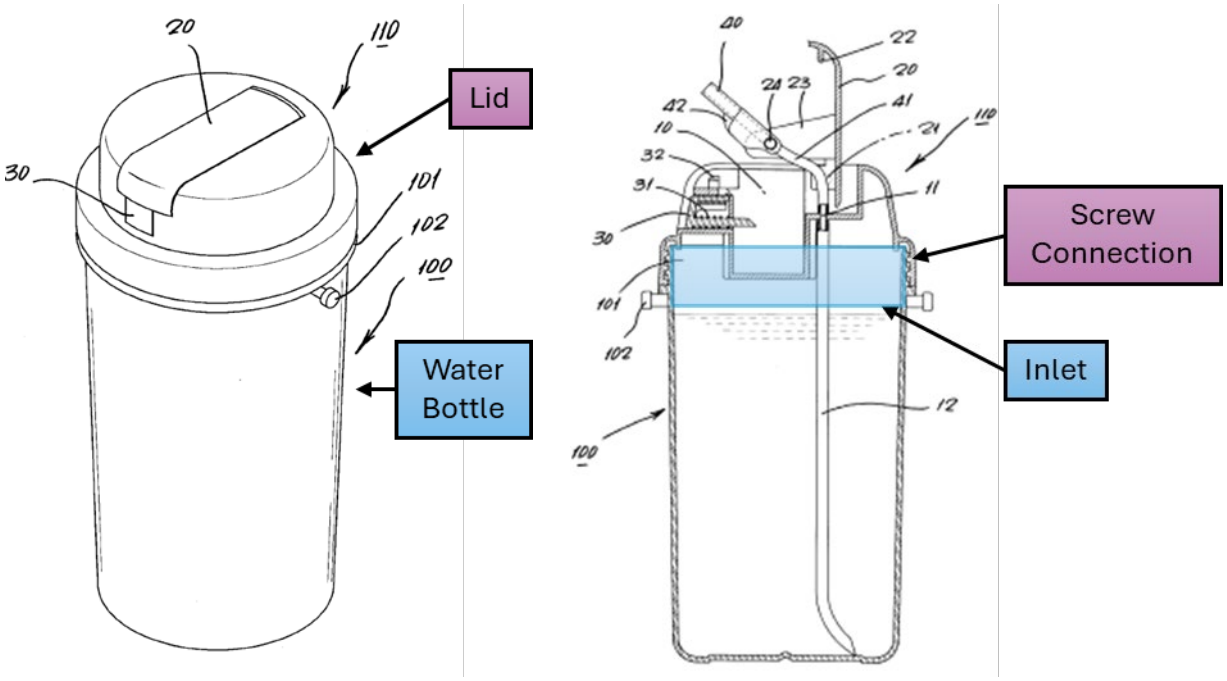
As described below, Park discloses nearly all limitations of claim 1. Park discloses a liquid container (i.e. "water bottle 100") having a removable cap assembly (i.e. "lid 110") with a through-passage (i.e. "discharge hole 11") in its base. (Ex. 1003, ¶192). Park's mouthpiece assembly includes a tube (i.e. "connecting hose 41") that is constructed of a resiliently deformable material and is biased to the dispensing configuration. (*Id.*). Park's mouthpiece assembly includes crimping regions that prevent the flow of liquid when in the stowed position. (*Id.*). The mouthpiece portion of Park's "straw 40" extends from a bracket portion (i.e. rigid collar member), which is pivotally coupled to the cap assembly at hinge shaft 24.

Park also discloses a user release mechanism (i.e. "locking means") that includes first and second catch structures (i.e. "hook 32" and "protrusion 22") that engage to retain the mouthpiece assembly in the stowed configuration. (*Id.*, ¶193). Park's user release mechanism includes a sliding member (i.e. "operating button 30") that slides relative to the base of Park's cap assembly and which is biased via "spring 31" away from the engaging "hook 32" and "protrusion 22." (*Id.*).

1. Preamble and Limitation 1[A]: "liquid container"

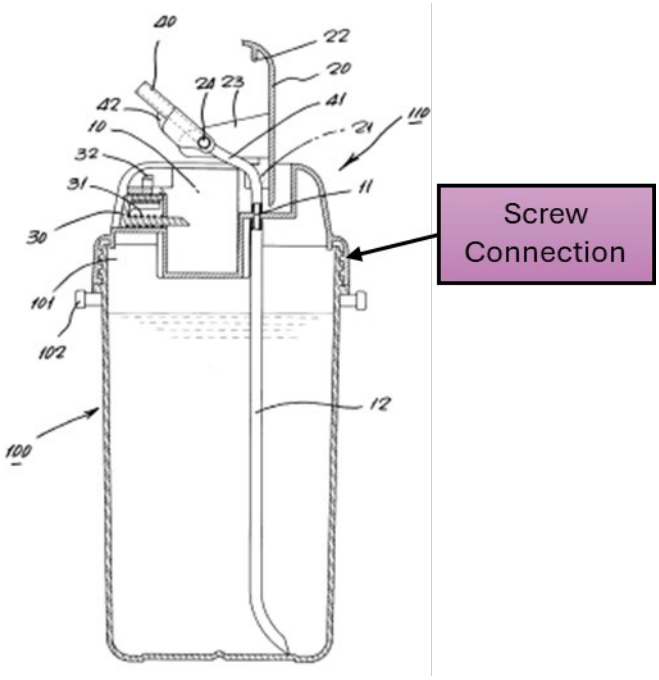
As described below, Park, in combination with Ribarits, discloses a drink container having all the limitations recited in claim 1 and therefore renders the claim obvious. (Ex. 1003, ¶196).

Park "relates to a portable water container" with a lid. (Ex. 1006, Abstract).



2. 1[B] Cap Assembly

Limitation 1[B] recites: "a cap assembly removably coupled to the liquid container." Park discloses that "lid 110 is screwed to… water bottle 100." (Ex. 1003, ¶203; Ex. 1006, 4).

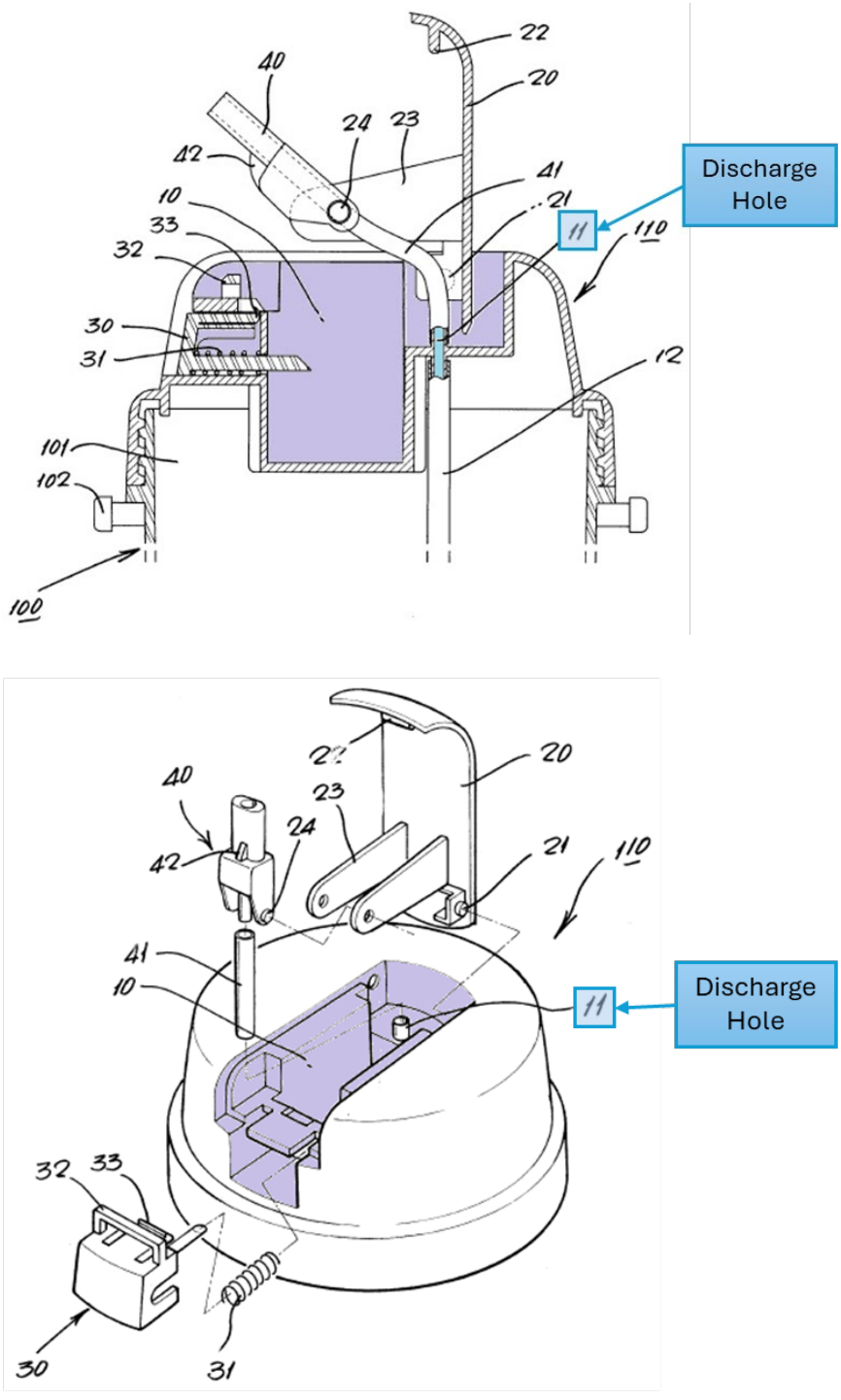


(Ex. 1006 at 4, Fig. 4).

a. 1[B][1] Base

Limitation 1[B][1] recites that the cap assembly comprises "a base removably coupled to the neck of the liquid container and including a through-passage." Park discloses this limitation. (Ex. 1003, ¶¶206-08).

Park's lid is removably coupled to the neck of the water bottle via a threaded connection, (*id.*, ¶207), and includes "discharge hole 11 that is connected upward and downward" to form a through-passage extending through the base of the lid, as shown below:

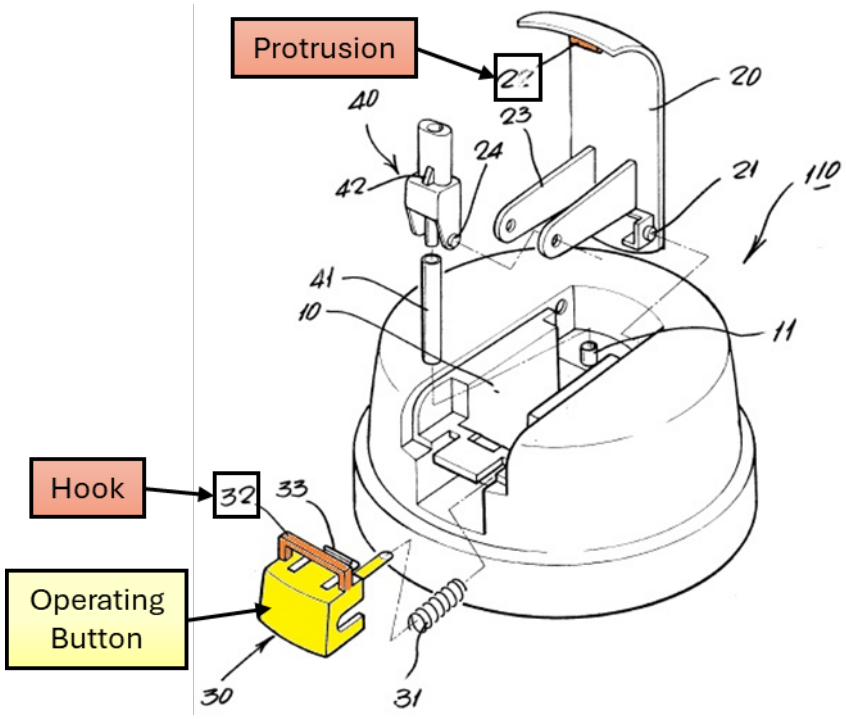


(Ex. 1006, Figs. 3-4).

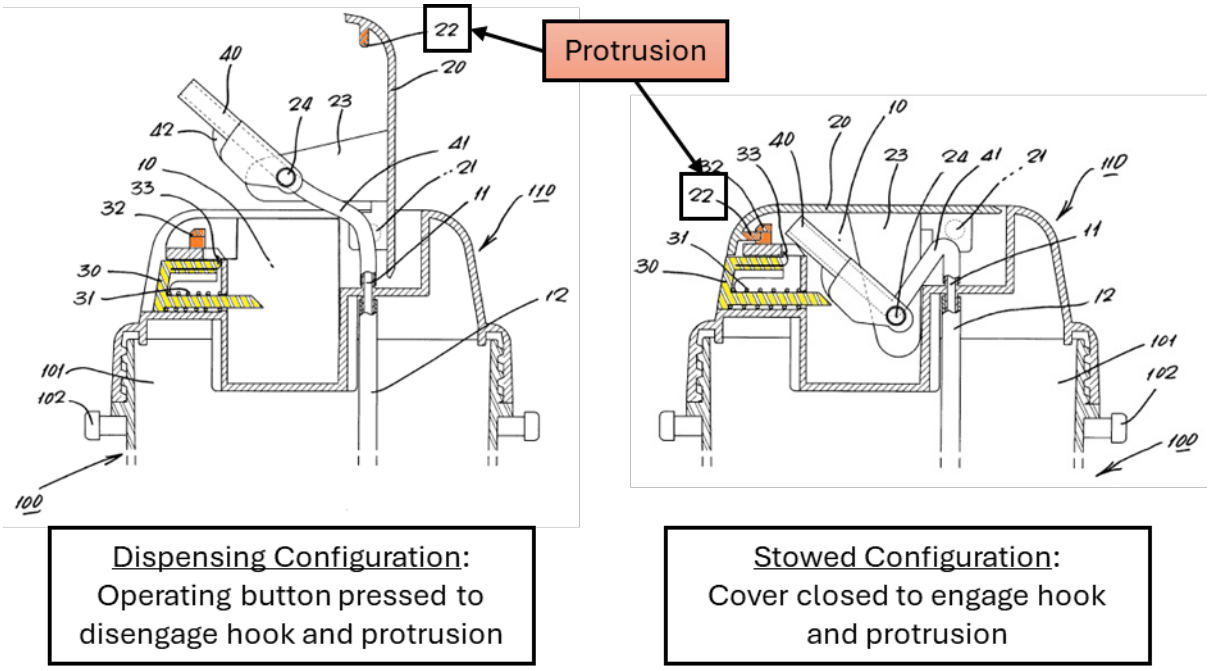
b. 1[B][2] First Catch Structure

Limitation 1[B][2] recites that the cap assembly comprises: "a first catch structure coupled to the base." Park discloses this limitation. (Ex. 1003, ¶¶209-15).

Park's cap assembly includes a set of corresponding catch structures that engage to maintain the assembly in a closed configuration. (*Id.*, ¶210). As shown in Figure 3, a first catch structure comprises "hook 32. (Ex. 1006, 4-5). The second catch structure comprises "protrusion 22." (*Id.*)



(Ex. 1006, Fig. 3). The catch structures engage in the stowed configuration (below, left) and disengage in the dispensing configuration (below, right):



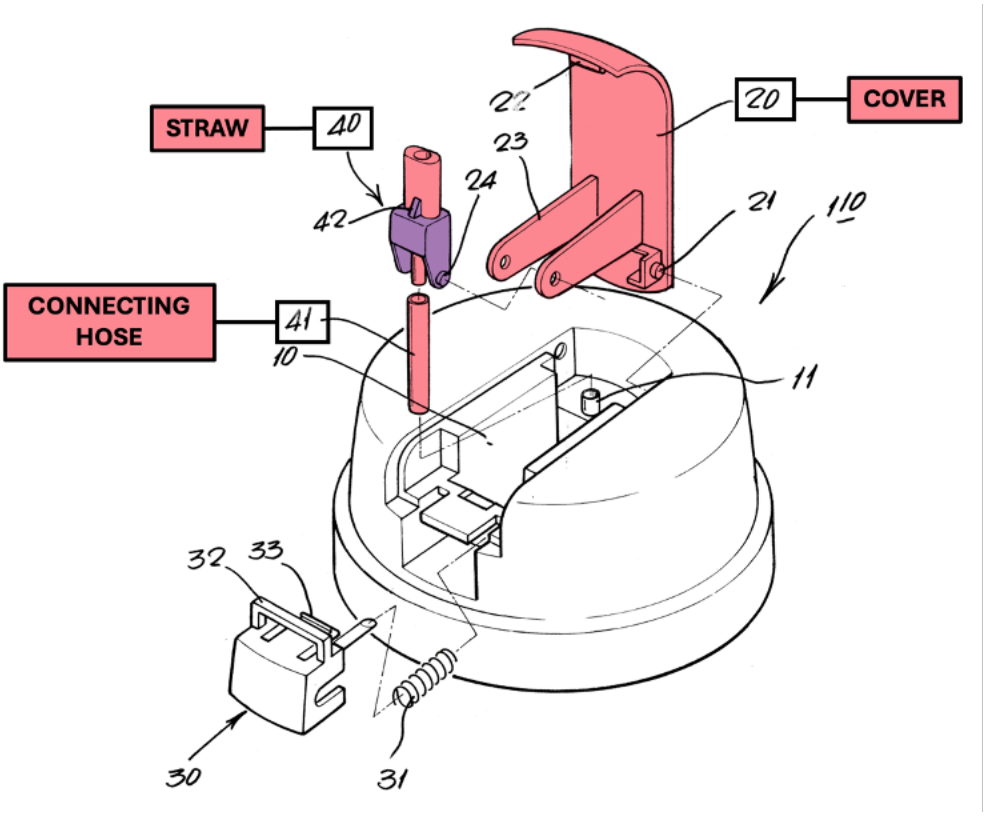
(Ex. 1006, Figs. 5-6).

Park's "operating button 30" is coupled to the base of the cap assembly "by a spring 31 at the front end of the operating chamber 10." (*Id.,* 4). Because "hook 32" (i.e. the first catch structure) is integral with "operating button 30," it is also coupled to the base. (Ex. 1003, ¶213).

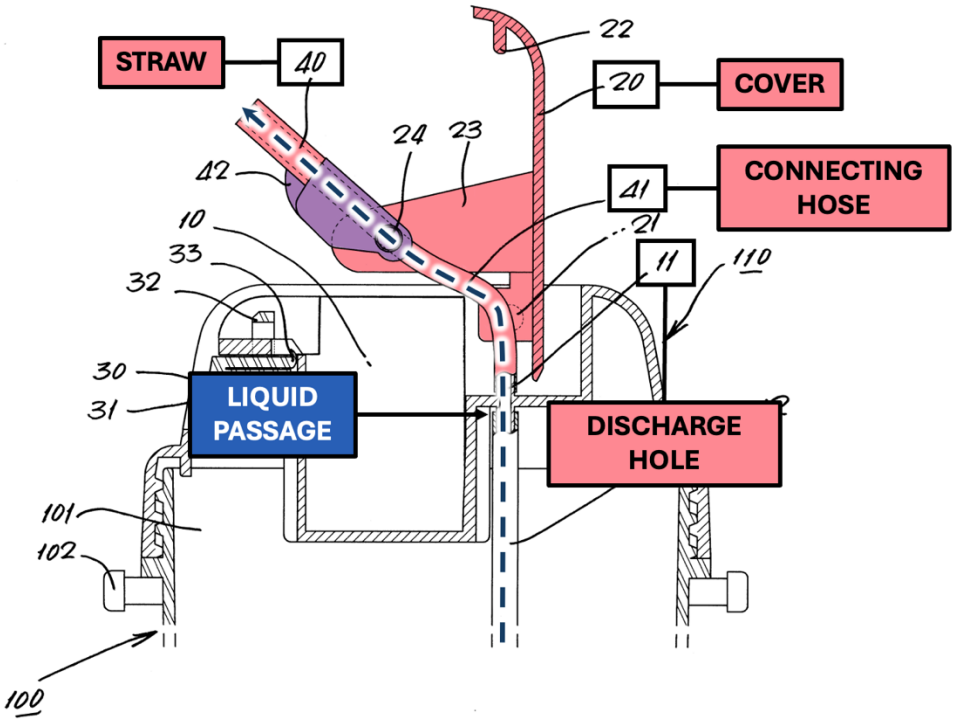
c. 1[B][3] Mouthpiece Assembly

Limitation 1[B][3] is directed to the mouthpiece assembly. The term "assembly" encompasses a number of parts assembled together. (Ex. 1003, ¶77). Park discloses the mouthpiece assembly as recited. (*Id.*, ¶¶216-27).

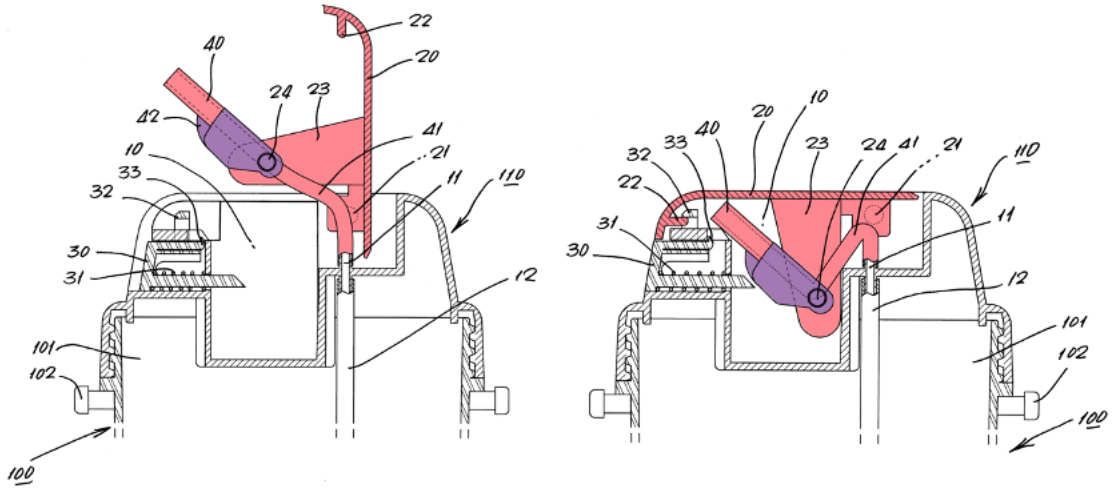
Park's mouthpiece assembly comprises, *inter alia*, "straw 40," "connecting hose 41," and "cover 20," as shown in Figure 3 below:



(Ex. 1006, Fig. 3; Ex. 1003, ¶217). Park's mouthpiece assembly defines a liquid passage through which liquid may flow from the container and to the user:



(*Id.*, Fig. 6; Ex. 1003, ¶218). Park's mouthpiece assembly can be opened into a dispensing configuration (below, right) or closed into a stowed configuration (below, left):

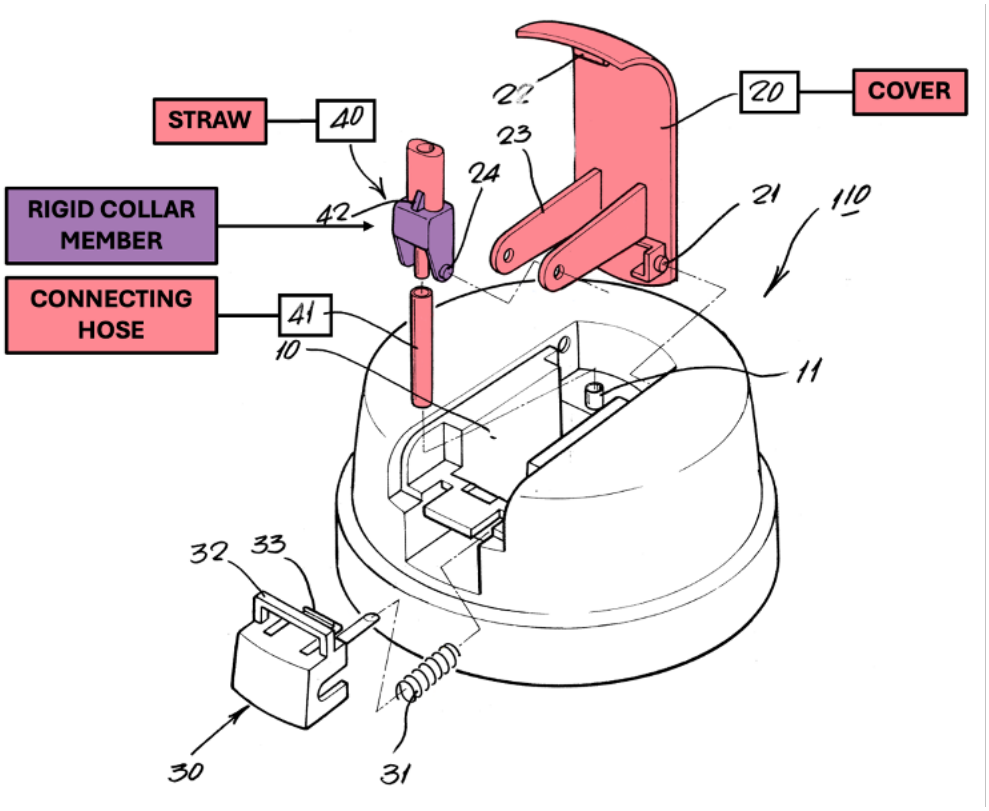


(Ex. 1006, Figs. 5-6). In the dispensing configuration, liquid flows from the internal compartment, through the liquid passage defined by the "connecting hose 41" and "straw 40," and to the user. (Ex. 1006, 5). In the stowed configuration, "the connecting hose 41 is double bent … to completely close the discharge passage of the connecting hose 41," thereby restricting liquid from being dispensed from the container. (*Id.*).

i. 1[B][3][a] Rigid Collar

Limitation 1[B][3][a] recites that the mouthpiece assembly comprises "a rigid collar member that is pivotally coupled to a portion of the cap assembly." This limitation is obvious over Park, and over Park in view of Ribarits and the knowledge of a POSITA. (Ex. 1003, ¶¶228-49).

Park's mouthpiece assembly includes "straw 40," which comprises a mouthpiece portion and a rigid collar member, (*id*., ¶229), is shown below:

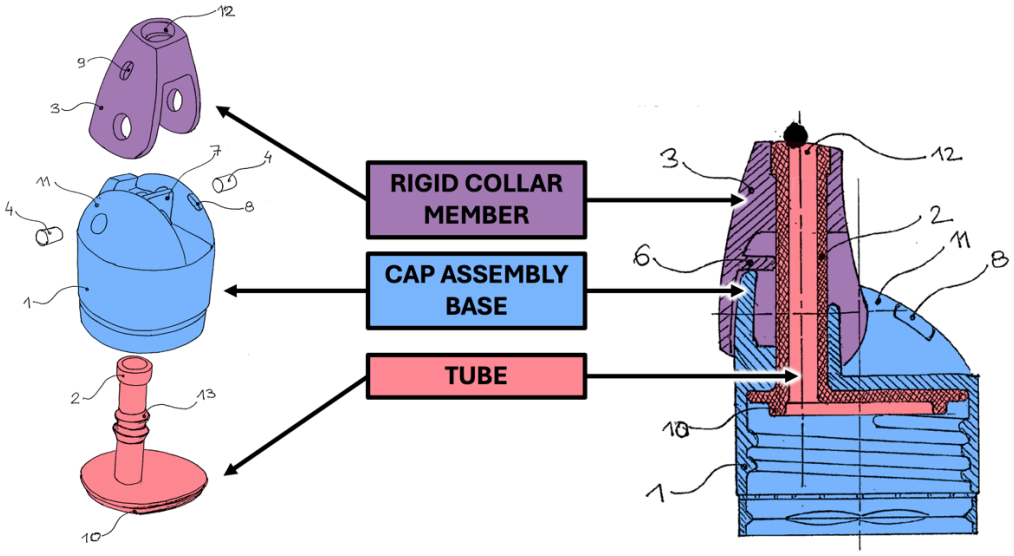


(Ex. 1006, Fig. 3).

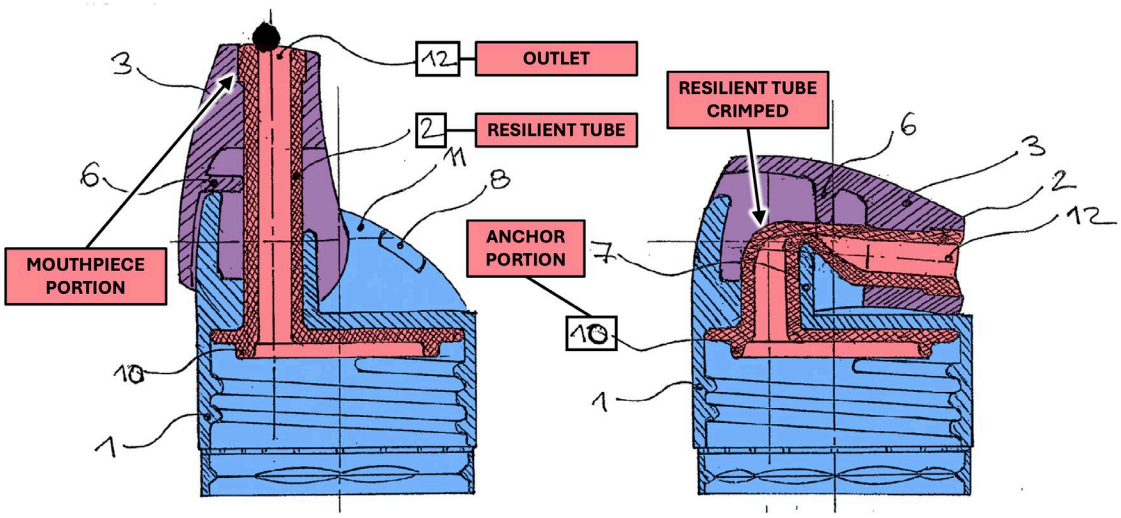
Park additionally discloses that its rigid collar member is pivotally coupled to its cap assembly. "The straw 40 is axially coupled to the bracket 23 of the cover 20 by the hinge shaft 24," and "is freely rotatable." (*Id.*, 4).

Accordingly, this limitation is disclosed by, and therefore obvious over, Park. To the extent that Park does not disclose a rigid collar member because the identified portion of "straw 40" is integral with the mouthpiece portion of "straw 40," using a rigid collar member would have been obvious in view of Ribarits and the knowledge of a POSITA. (Ex. 1003, ¶230). Rigid collar members were well

known in the art. For example, Ribarits discloses a rigid collar member. Ribarits (Ex. 1009) discloses a conventionally threaded drink cap assembly that includes "a drinking spout" (spout 3, i.e. a rigid collar member) that is "pivoted" between open and closed positions. (*Id.,* 2). Ribarits includes sealing tube element 2, a unitary assembly of resiliently deformable material (rubber or latex), that includes a tube, mouthpiece portion, and anchor portion. (*Id.*). Sealing tube element 2 extends through spout and provides fluid communication from the drink bottle, through the cap assembly, to the user's mouth. (*Id.*).



(*Id.*, Figs. 2, 3). The tube seals when it is crimped by the drinking spout in its closed configuration.



(*Id.*, Fig.3).[8]

Ribarits is very closely related to Park. Both have cap assemblies of substantially the same functionality, namely mouthpiece assemblies that can be pivoted between open and closed configurations with one hand, resilient tube portions that are crimped in the closed configuration, and mouthpiece portions for the user to drink liquid from a liquid container coupled to the cap assembly. They all address the same problem of an easily sealable mouthpiece assembly for use in a drink container and do so in the same way, i.e. by crimping the tube. (Ex. 1003, ¶235). Park discloses a mouthpiece integral with a pivotal rigid collar, which is connected to an outlet by a resilient tube, whereas Ribarits discloses a mouthpiece integral with a resilient tube, which extends through a pivotal rigid collar. A

[8] The black dot adjacent the outlet in Figure 3 appears to be a printing error in the original published patent figure.

POSITA would recognize these two configurations are interchangeable. (*Id*., ¶¶237-39).

A POSITA would have been motivated for multiple reasons to combine the integral mouthpiece and tube of Ribarits with the rigid collar of Park. (*Id*., ¶239). For example, it would have been obvious to a POSITA to make Park's resilient tube and mouthpiece integral because use of one-piece construction has been recognized as merely a matter of obvious engineering choice. (Ex. 1003, ¶240); *In re Larson*, 340 F.2d 965, 968 (CCPA 1965).

Further, a POSITA would recognize that Park's separate tube and mouthpiece portions could be molded as a single piece of resiliently deformable material based on the disclosure in Ribarits and/or the knowledge of a POSITA. (Ex. 1003, ¶240). A POSITA would have recognized that an integral tube and mouthpiece would prevent leaks by eliminating the potential of the tube becoming decoupled from the mouthpiece during use. (*Id.*, ¶241). A POSITA would have recognized that a unitary assembly could be easily inserted through the rigid collar member, as in Ribarits.

Additionally, the combination of Park and Ribarits involves the simple substitution of one known element for another—Park's integral mouthpiece and collar for the integral mouthpiece and tube of Ribarits. (*Id.*, ¶247). A POSITA

would have recognized that a unitary assembly would provide comparable overall functionality and also improved leak prevention. (*Id.*). A POSITA would have recognized a drink container with an integral mouthpiece and tube extending through a rigid collar as disclosed in Ribarits would yield predictable results. (*Id.*).

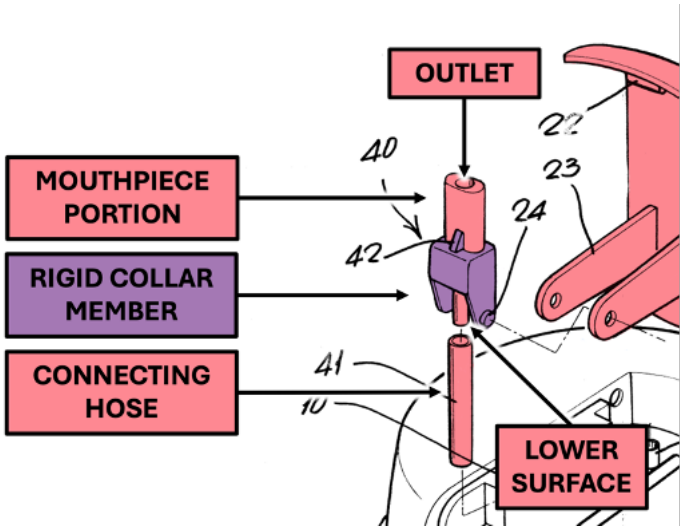
A POSITA also would have reasonably expected success in combining the unitary tube and mouthpiece of Ribarits with Park's rigid collar. (*Id.*, ¶248). For example, a POSITA would have readily understood that Ribarits had already successfully achieved such a combination. (*Id.*). Additionally, a POSITA would have readily understood that Park could accommodate the unitary assembly. (*Id.*). Thus, the combination would have involved no more than the routine substitution of one integral component (mouthpiece and collar) for another (mouthpiece and tube) to provide the same desired functionality, albeit with improved leak prevention. (*Id.*).

In view of the teachings of Park and Ribarits, and the knowledge of POSITA, it would have been obvious to a POSITA to modify Park's straw and connecting hose to include Ribarits' rigid collar member and sealed tubular element. (Ex. 1003, ¶249). Accordingly, this limitation would have been obvious over Park in view of Ribarits and the knowledge of a POSITA.

ii. 1[B][3][b] Mouthpiece Portion

Limitation 1[B][3][b] recites that the mouthpiece assembly comprises "a mouthpiece portion extending from the rigid collar member and including an outlet, wherein the rigid collar member extends around at least a portion of the mouthpiece portion." This limitation is obvious over Park, and over Park in view of Ribarits and the knowledge of a POSITA. (Ex. 1003, ¶¶250-53).

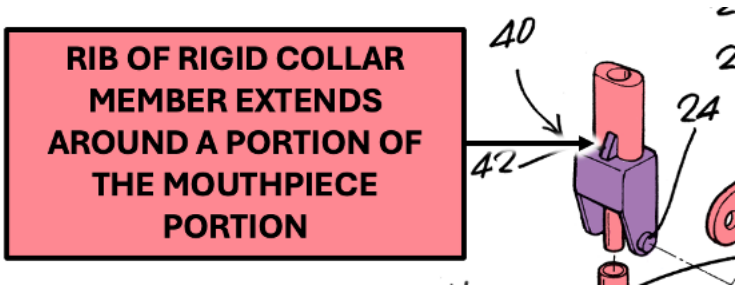
As discussed in limitation 1[B][3][a] above, Park discloses a rigid collar member with an integral mouthpiece portion (straw 40). As shown below, Park's mouthpiece portion includes an outlet and extends from the rigid collar member:



(Ex. 1006, Fig. 3).

The upper surface of the rigid collar member extends around the periphery of the base of the mouthpiece portion. Further, as shown below, Park's rigid collar

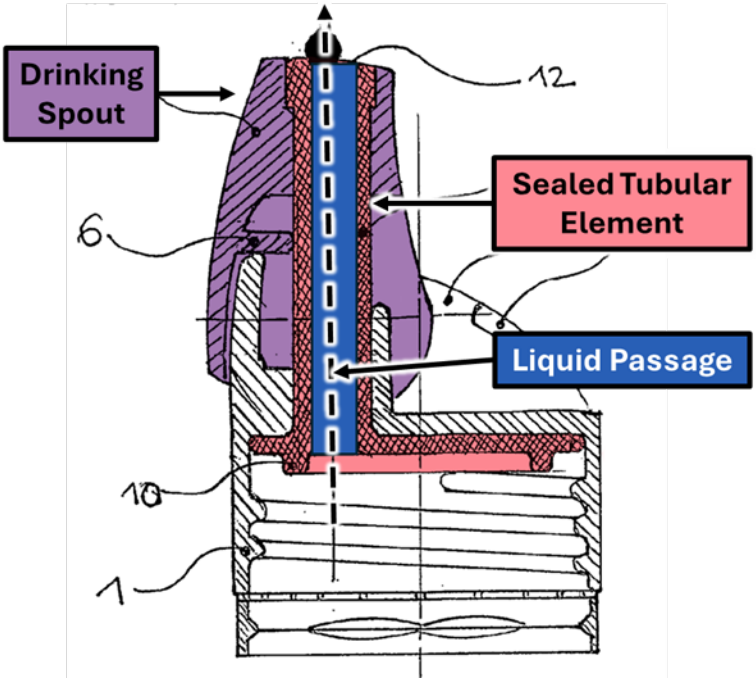
member includes a rib that also extends around at least a portion of the mouthpiece portion.



(*Id*.).

Accordingly, this limitation is disclosed by, and therefore obvious over, Park. To the extent that Park does not disclose that its rigid collar member extends around at least a portion of its mouthpiece portion, because its mouthpiece portion is integral with its rigid collar member, this limitation would have been obvious in view of Ribarits and the knowledge of a POSITA. (Ex. 1003, ¶252).

As discussed above, a POSITA would have been motivated to combine the integral mouthpiece and tube of Ribarits with the mouthpiece assembly of Park. Ribarits discloses that its rigid collar member extends around at least a portion of its mouthpiece portion. (*Id*., ¶253).



(Ex. 1009, Figs. 2-3).

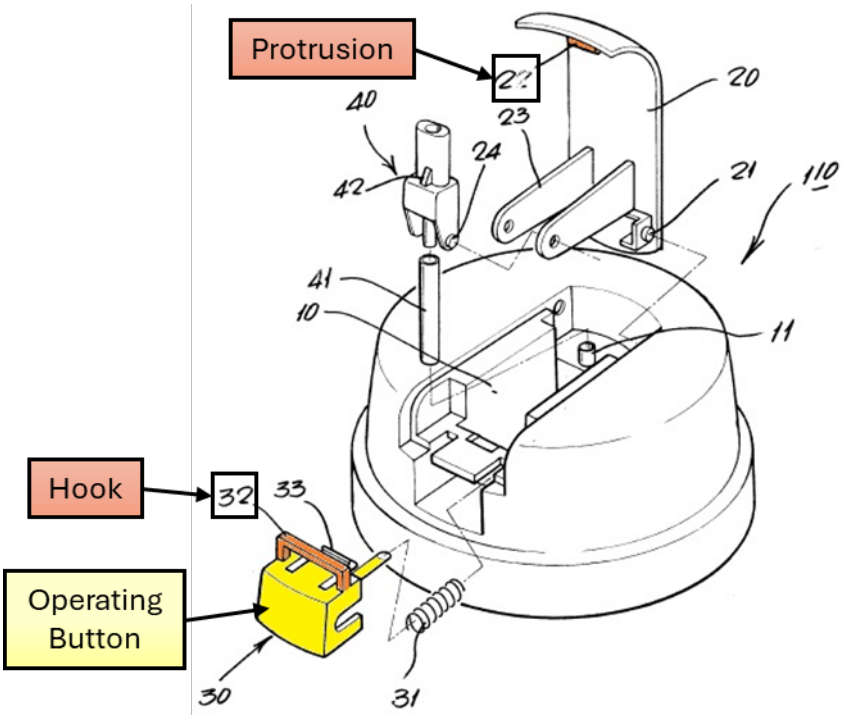
Accordingly, this limitation would have been obvious over Park in view of Ribarits and the knowledge of a POSITA. (Ex. 1003, ¶253).

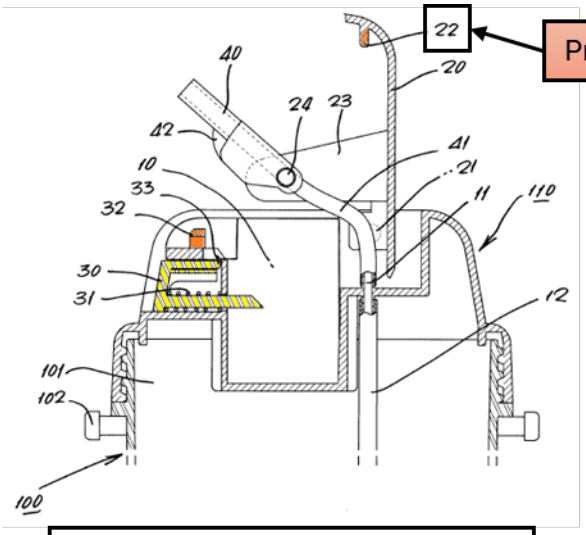
iii. 1[B][3][c] Second Catch Structure

Limitation 1[B][3][c] recites that the mouthpiece assembly comprises "a second catch structure adapted to be selectively engaged with the first catch structure to retain the mouthpiece assembly in the stowed configuration." Park discloses this limitation. (Ex. 1003, ¶254).

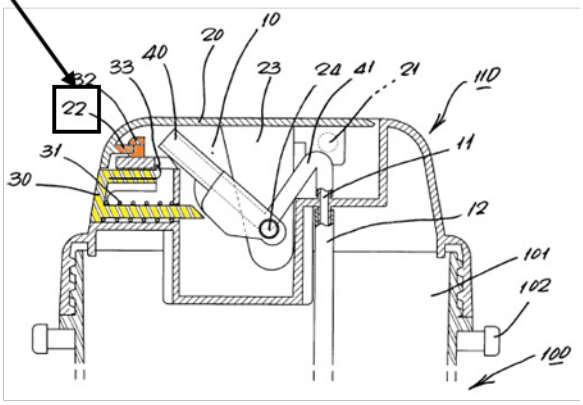
As discussed above in connection with limitation 1[B][2], Park discloses a set of corresponding catch structures that engage to maintain the assembly in a closed configuration. The second catch structure comprises "protrusion 22," which

is adapted to selectively engage "hook 32" (i.e. the first catch structure) to retain the mouthpiece assembly in the stowed configuration. (Ex. 1006, 4-5).





Dispensing Configuration:
Operating button pressed to disengage hook and protrusion



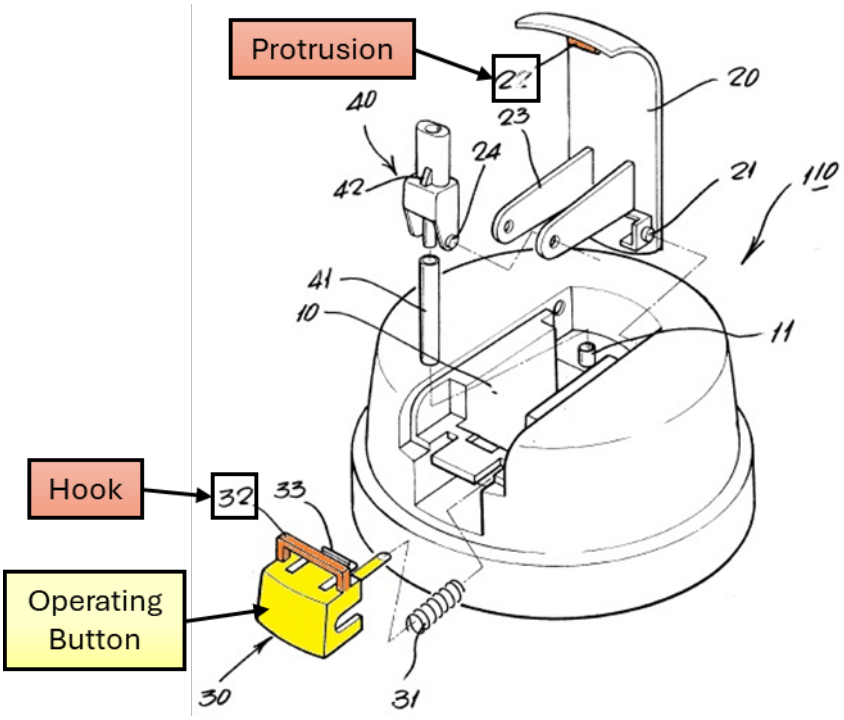
Stowed Configuration:
Cover closed to engage hook and protrusion

(Ex. 1006, Figs. 3, 5-6).

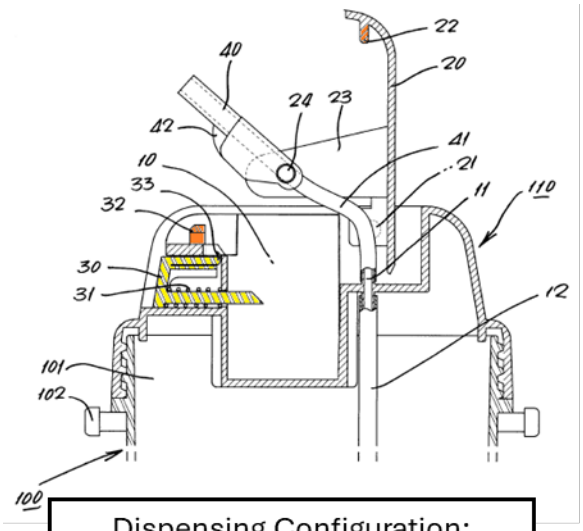
d. 1[B][4] User Release Mechanism

Limitation 1[B][4] is comprised of four sub-parts, the first of which is a means-plus-function limitation. (Section VII.A, *supra*). Park discloses a user release mechanism that performs the recited function, and which is equivalent to the structure recited in the '187 patent. (Ex. 1003, ¶¶258-64).

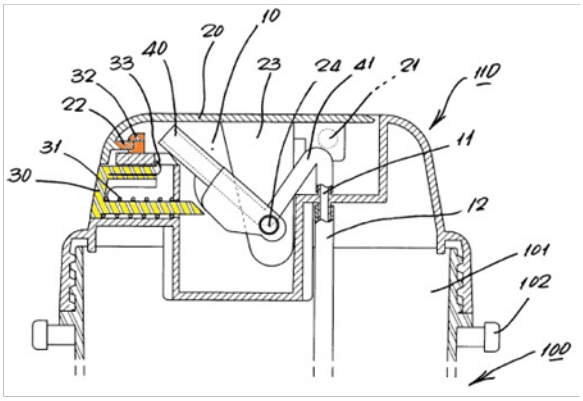
Park also discloses the remaining sub-parts of limitation 1[B][4]. (*Id.*, ¶¶265-75). Park discloses "locking means" comprising "operating button 30 fastened at the front surface of the operating chamber 10" that "is configured to be moved forward and backward, and a hook 32 … for locking and unlocking the cover 20 … ." (Ex. 1006, 4). The "operating button 30 is elastically installed by a spring 31 and is configured to be moved forward and backward" within the "operating chamber 10," as shown in Figure 3 below:



(*Id.* , Fig. 3). During operation, a user presses the exterior surface of "operating button 30," which causes the button to slide relative to the base of the lid within the channel:



Dispensing Configuration: Operating button pressed to slide inward and disengage hook and protrusion



Stowed Configuration: Cover closed to engage hook and protrusion; operating button slides outward

(*Id.* , Figs. 5-6). Because a user interacts with Park's "operation button" by pressing its exterior surface, a POSITA would have understood the exterior surface of Park's "operating button" to constitute a "user engagement pad." (Ex. 1003, ¶269).

The sliding movement of the "operating button 30" causes "hook 32" to disengage from "protrusion 22," which causes "cover 20" to be "unfolded by the elastic force of the connecting hose 41" and "straw 40" to be opened into the dispensing configuration. (Ex. 1006, 5). Thus, a POSITA would have understood Park's "operating button" to constitute a "displacement mechanism" configured to displace the first and second catch structures. (Ex. 1003, ¶270).

Park's "locking mechanism" includes "spring 31," which biases "operating

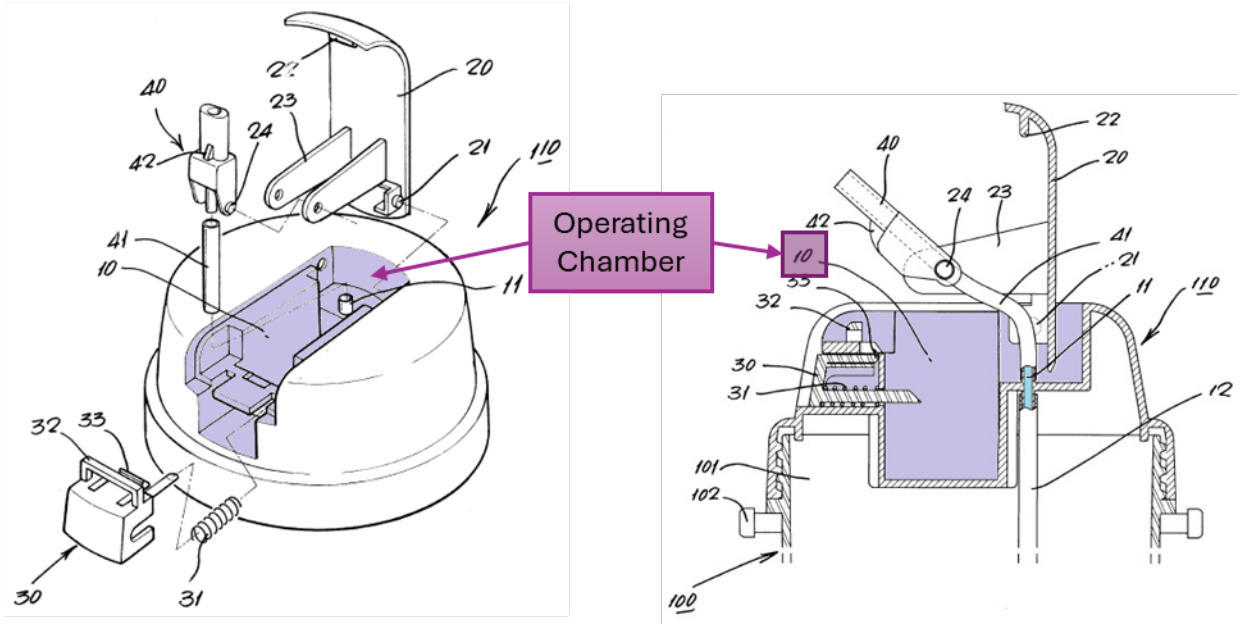
button 30" away from the dispensing configuration, such that when "cover 20" is closed, "hook 32" engages "protrusion 22" on the underside of "cover 20" to retain the mouthpiece assembly in the stowed configuration. (*Id.*, ¶272).

Accordingly, all the limitations of claim 1 are either disclosed in Park or Ribarits, and would have been obvious to a POISTA over Park, in view of Ribarits and the knowledge of a person of ordinary skill in the art.

C. Claim 3

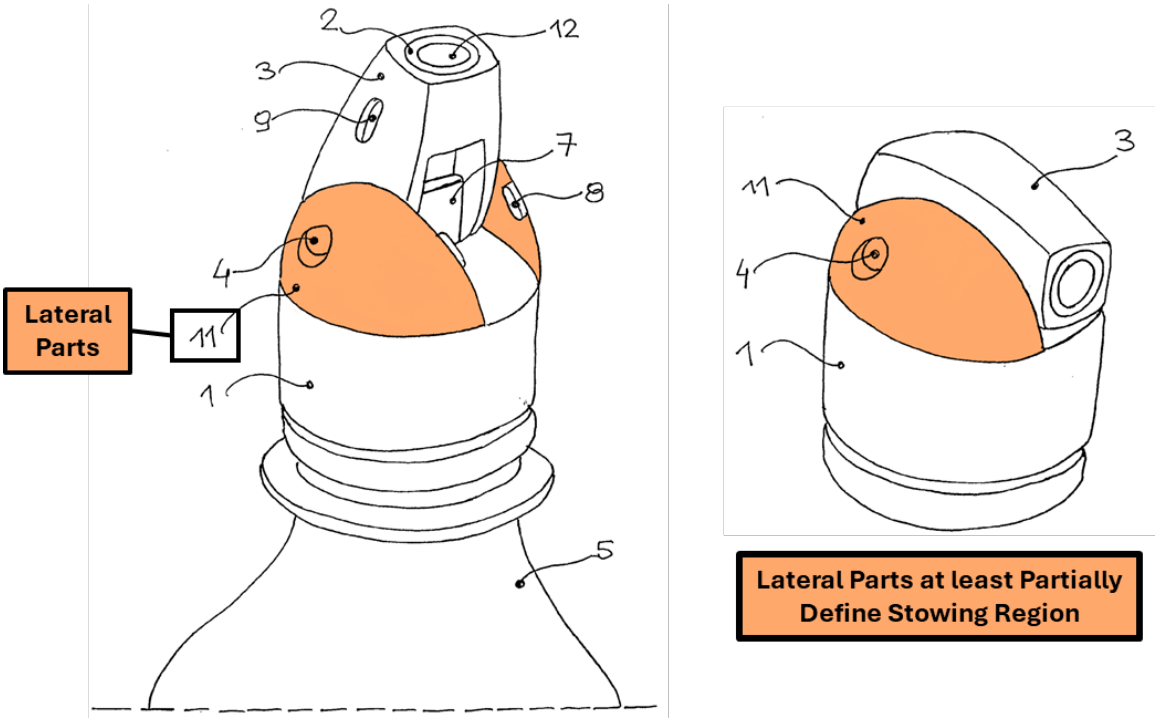
Claim 3 depends from claim 1, and adds "wherein the cap assembly defines a stowing region sized to receive at least a portion of the mouthpiece assembly when the mouthpiece assembly is in the stowed configuration." Each of Park and Ribarits discloses this limitation. (Ex. 1003, ¶¶274-79).

Park discloses "operating chamber 10":



(Ex. 1006, Figs. 3, 6). According to Park, "[i]n the process of closing the cover 20 … the straw 40 … is pivoted using the hinge shaft 24 … and is securely accommodated into the operating chamber." (*Id.,* 5). Thus, a POSITA would have understood "operating chamber 10" to constitute a stowing region, as claimed. (Ex. 1003, ¶277).

Ribarits discloses "lateral parts," which a POSITA would have understood to constitute a stowing region, as claimed:



(Ex. 1009, Fig. 1; Ex. 1003, ¶278).

D. Claim 4

Claim 4 depends from claim 1, and adds "wherein the rigid collar member comprises a collar aperture and wherein the mouthpiece portion extends past the collar aperture." This limitation is obvious over Park, in view of Ribarits and the knowledge of a POSITA. (Ex. 1003, ¶¶280-84).

As discussed above, a POSITA would have been motivated to combine the integral mouthpiece and tube of Ribarits with the mouthpiece assembly of Park. A POSITA would understand that the modified rigid collar member would necessarily have an aperture to allow the integral mouthpiece and tube to pass through the collar. A POSITA would further understand that, just as Choi's

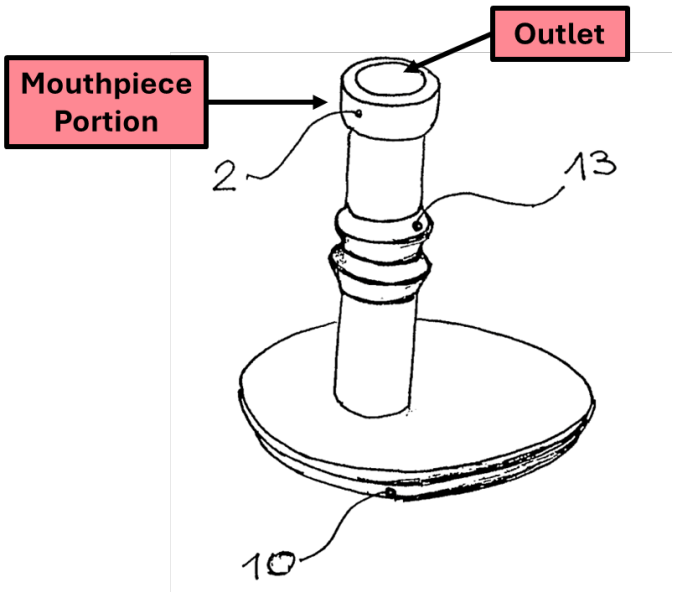
unmodified mouthpiece does, the modified mouthpiece portion would extend past the aperture of the modified collar. (Ex. 1003, ¶283).

Accordingly, claim 4 also would have been obvious to a POSITA over Park and Ribarits. (*Id.*, ¶284).

E. Claim 5

Claim 5 depends from claim 1, and adds "wherein the mouthpiece portion is constructed of a resiliently deformable material." This limitation is obvious over Park in view of Ribarits. (Ex. 1003, ¶¶285-88).

As discussed in claim 1 above, a POSITA would have been motivated to combine the integral mouthpiece and tube of Ribarits with the mouthpiece assembly of Park. As shown below, Ribarits discloses "a sealed tubular element of rubber or latex" that includes an integral mouthpiece portion. (Ex. 1009, 2).



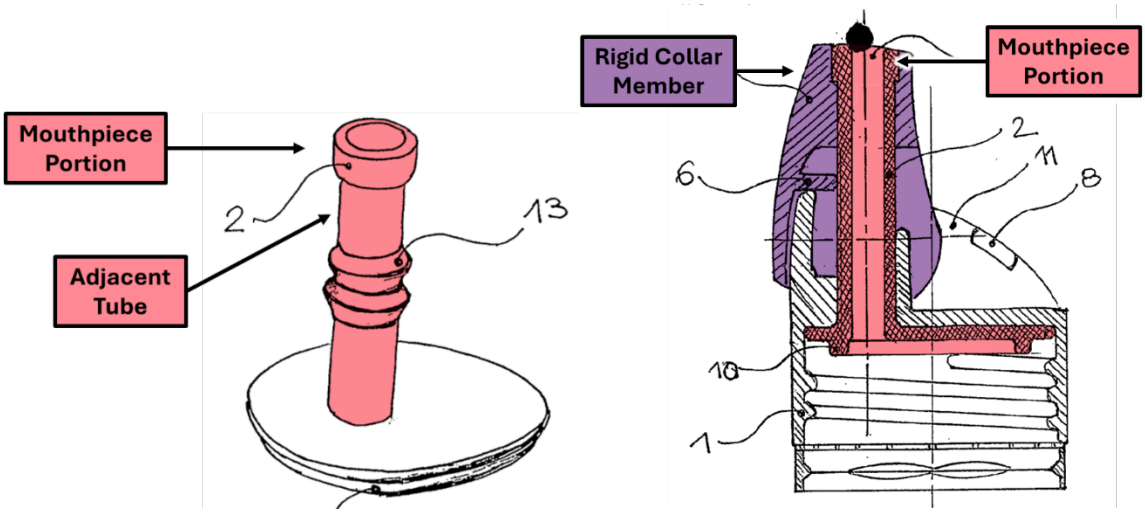
(*Id.* , Fig. 2).

Accordingly, claim 5, would have been obvious over Park and Ribarits. (Ex. 1003, ¶288).

F. Claim 6

Claim 6 depends from claim 5, and adds "wherein the mouthpiece assembly includes mouthpiece-securing structure that secures the mouthpiece portion to the rigid collar member and restricts relative movement between the mouthpiece portion and the rigid collar member." This limitation is obvious over Park in view of Ribarits (Ex. 1003, ¶¶283-289).

Ribarits discloses that its "sealed tubular element" includes a mouthpiece portion that comprises a structure for securing the tube to the "drinking spout." As shown below, the mouthpiece portion has a larger diameter than the adjacent portion of the tube, which structure fits within the outlet end of Ribarits' "drinking spout."



(Ex. 1009, Figs. 2-3).

As discussed above, a POSITA would have been motivated to combine the integral mouthpiece and tube of Ribarits with the mouthpiece assembly of Park. A POSITA would understand that the modified integral mouthpiece and tube would require a structure, such as the one in Ribarits, to secure it to the modified rigid collar member. A POSITA would further understand that, when seated in the rigid collar member, the mouthpiece portion would extend past the collar aperture. (Ex. 1003, ¶295).

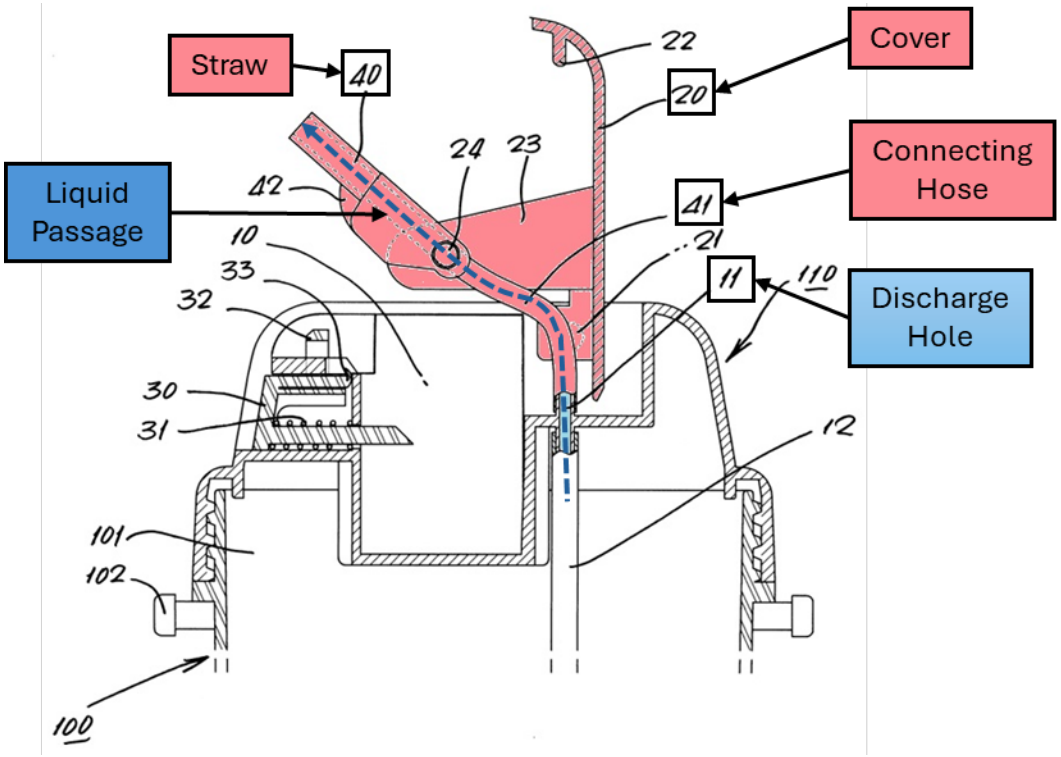
Accordingly, claim 6 also would have been obvious over Park and Ribarits. (*Id.*, ¶296).

G. Claim 7

Claim 7 depends from claim 5, and adds "wherein the mouthpiece assembly comprises a tube portion that defines at least a portion of the liquid passage for

drink liquid to flow from the internal compartment to the mouthpiece portion." Park discloses this additional limitation. (Ex. 1003, ¶¶297-301).

Park discloses "connection hose 41" which defines part of the liquid passage between the inlet at the base of the lid and the outlet at the opposite end of "straw 40," as shown below:



(Ex. 1006, Fig. 6).

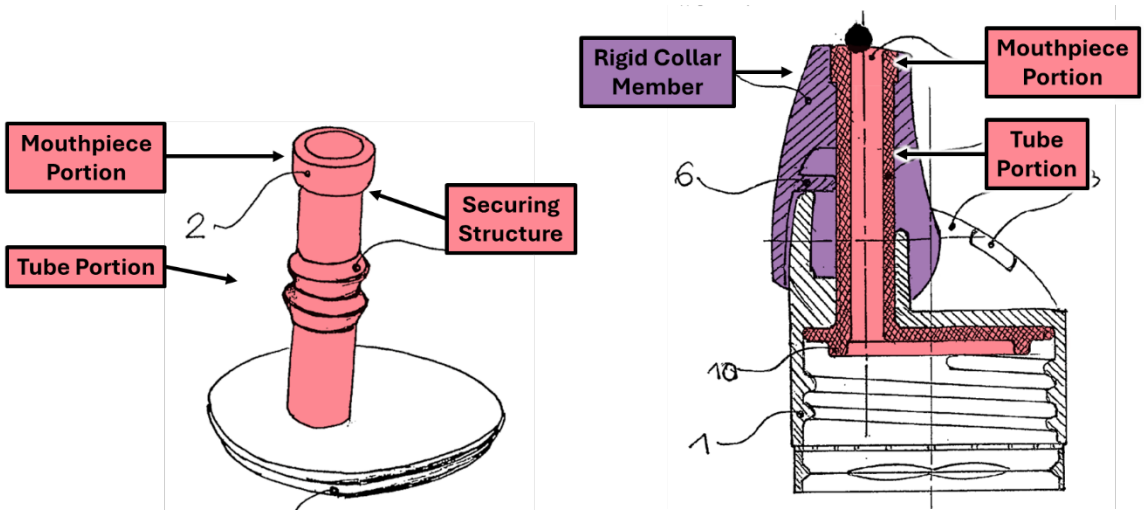
Accordingly, claim 7 also would have been obvious to a POSITA over Park. (Ex. 1003, ¶301).

H. Claim 8

Claim 8 depends from claim 7, and adds "wherein the tube portion includes

structure for securing the tube portion to the rigid collar member and restricting relative movement between the tube portion and the rigid collar member." This limitation is obvious over Park in view of Ribarits (Ex. 1003, ¶¶302-08).

As discussed in claim 6 above and shown below, the sealed tubular element of Ribarits includes a mouthpiece portion with a larger diameter than the tube portion, which forms a structure that secures both the mouthpiece portion and tube portion within the "drinking spout" (i.e. rigid collar member), as shown below:



(Ex. 1009, Figs. 2-3). The mouthpiece portion is fit within the rigid collar member via a friction fit, and thus restricts relative movement between the tube and the collar during use. (Ex. 1003, ¶305).

As discussed in claim 1 above, it would have been obvious to replace Park's "straw" and "connection hose" with Ribarits' "drinking spout" and "sealed tubular element." In implementing that modification, a POSITA also would have

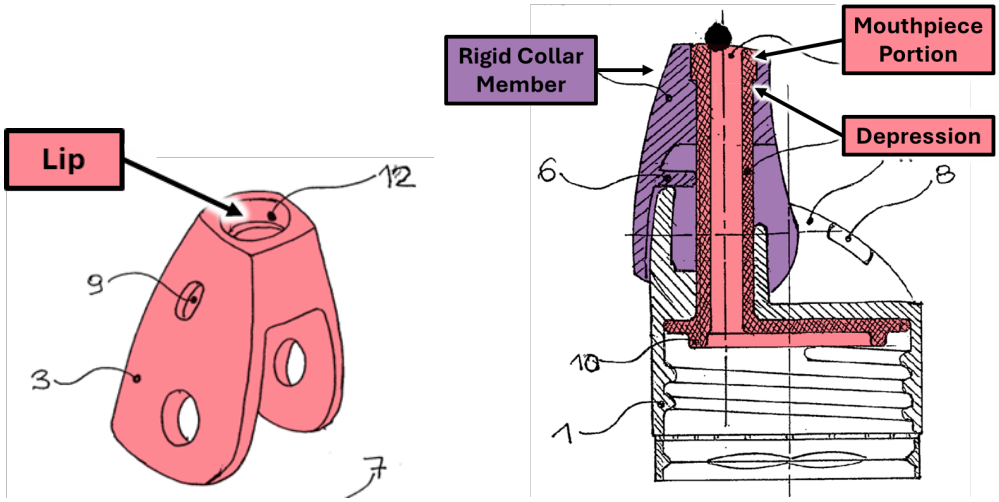
recognized the desirability of implementing a structure for securing the tube portion of the mouthpiece assembly to the rigid collar member, similar to that disclosed in Ribarits. (*Id.*, ¶306). As in Ribarits, such structure ensures correct positioning of the tube portion within the rigid collar member, and prevents relative movement of the components during use of the device. Thus, a POSITA would have recognized that a securing structure would ensure the intended crimping functionality of the device when pivoted to the stowed configuration. (*Id.*, ¶307).

Accordingly, claim 8 also would have been obvious to a POSITA over Park and Ribarits. (*Id.*, ¶308).

I. Claim 9

Claim 9 depends from claim 7, and adds "wherein one of the mouthpiece portion and the tube portion includes the mouthpiece-securing structure; wherein the mouthpiece-securing structure includes one or more of a channel and a depression; wherein the rigid collar member includes one or more of a lip, a flange, and a protrusion; and wherein the one or more of the channel and the depression defines a seat that engages and mates with the one or more of the lip, the flange, and the protrusion." Ribarits discloses this additional limitation. (Ex. 1003, ¶¶309-313).

As discussed in claim 6 above, Ribarits' "sealed tubular element" includes the mouthpiece-securing structure. (*Id.*, ¶311). As shown below, that structure includes a circumferential depression which defines a seat that engages with a circumferential lip on Ribarits' "drinking spout" (i.e. the rigid collar member):



(Ex. 1009, Figs. 2-3; Ex. 1003, ¶¶311-12). For the same reasons discussed in claim 6 above, it would have been obvious to a POSITA to include a securing structure of the claimed design in the proposed modification of Park. (Ex. 1003, ¶313).

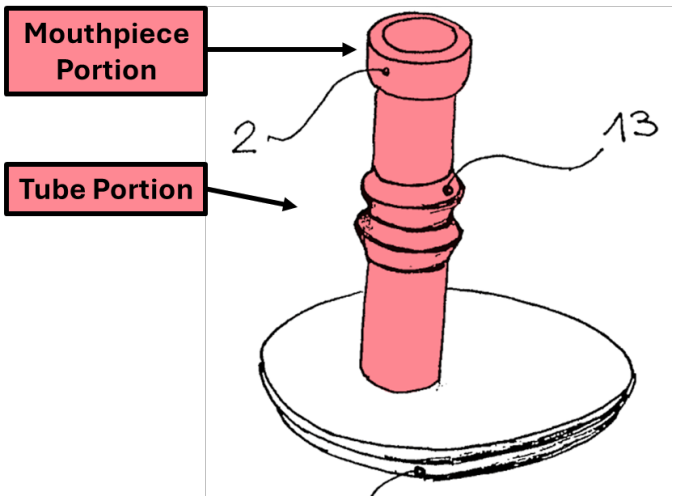
Accordingly, claim 8 also would have been obvious to a POSITA over Park and Ribarits. (*Id.*)

J. Claim 11

Claim 11 depends from claim 7, and adds "wherein the mouthpiece portion and the tube portion are constructed as a unitary assembly of the resiliently

deformable material." Ribarits discloses this additional limitation. (Ex. 1003, ¶¶314-17).

Ribarits' "sealed tubular element" is made from a resilient elastic material and is constructed as a unitary assembly that includes both the mouthpiece portion and the tube portion, as shown below:



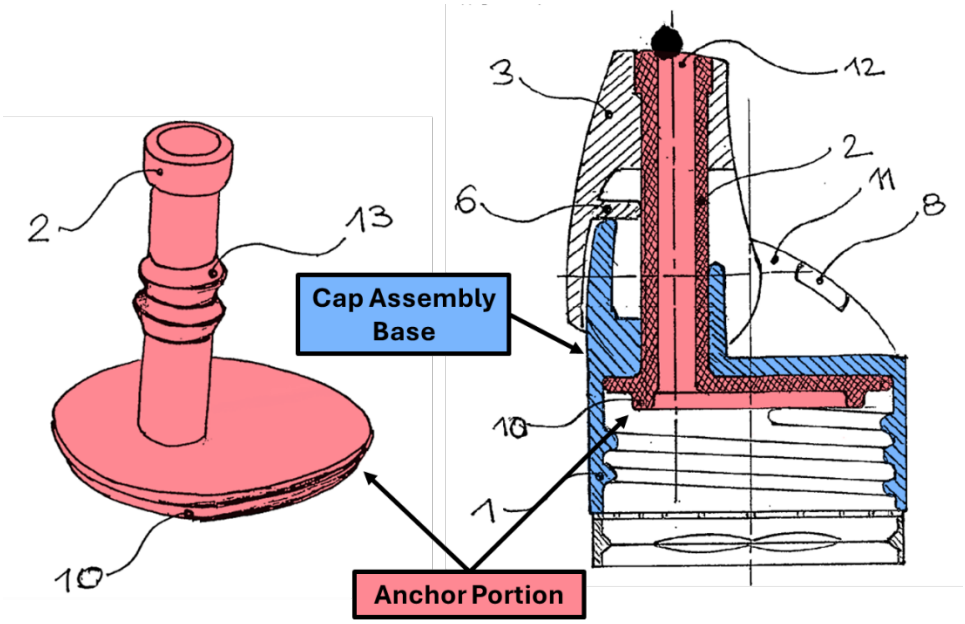
(Ex. 1009, 2, Fig. 2). Accordingly, claim 11 also would have been obvious to a POSITA over Park and Ribarits. (Ex. 1003, ¶317).

K. Claim 12

Claim 12 depends from claim 7, and adds "wherein the mouthpiece assembly further includes an anchor portion that extends from the tube portion." Ribarits discloses this additional limitation. (Ex. 1003, ¶¶318-24).

Ribarits' discloses "sealing rings 10" on its flexible tube, which comprise an anchor portion that extends from the tube portion of the flexible tube, as shown

below:



(Ex. 1009, Figs. 2-3; Ex. 1003, ¶¶320-21).

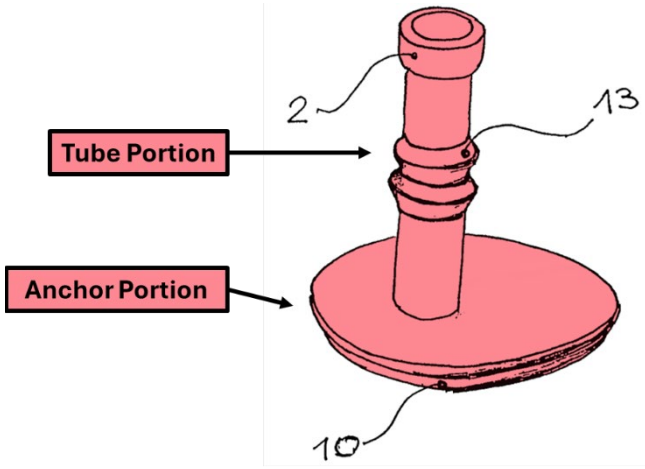
For the reasons discussed in claim 1 above, it would have been obvious to replace Park's "straw" and "connection hose" with Ribarits' "drinking spout" and "sealed tubular element." (Ex. 1003, ¶322). In implementing that modification, a POSITA also would have been motivated to include an anchor, such as that disclosed in Ribarits, to secure the tube portion of the mouthpiece assembly on the inlet side of the cap assembly. (*Id.*) In view of the teachings of Ribarits, a POSITA would have recognized the benefit of a simple circumferential flange incorporated on either side of the through-passage to ensure a tight fit and maintain the position of the mouthpiece assembly within the through-passage. (*Id.*, ¶323). A POSITA

also would have recognized that such a design could be readily inserted into or removed from the through-passage, providing the added benefit of facilitating cleaning, maintenance, or replacement of the mouthpiece assembly. (*Id.*)

Accordingly, claim 11 also would have been obvious to a POSITA over Park and Ribarits. (*Id.*, ¶324).

L. Claim 13

Claim 13 depends from claim 12, and adds "wherein the anchor portion has a greater exterior perimeter than the tube portion." As shown below, Ribarits discloses this additional limitation. (Ex. 1003, ¶¶325-28).

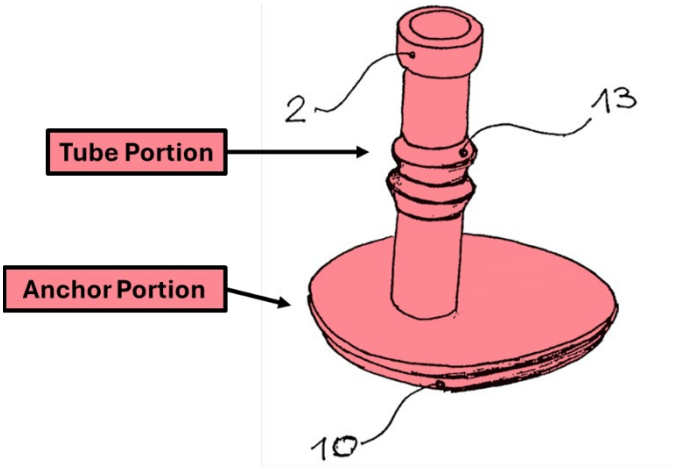


(Ex. 1009, Fig. 2). Accordingly, claim 13 also would have been obvious to a POSITA over Park and Ribarits. (Ex. 1003, ¶328).

M. Claim 14

Claim 14 depends from claim 12, and adds "wherein the anchor portion and tube portion are constructed as a unitary assembly of the resiliently deformable material." Ribarits discloses this additional limitation. (Ex. 1003, ¶¶329-32).

Ribarits' "sealed tubular element" is made from a resilient elastic material, such as "rubber or latex," and is constructed as a unitary assembly that includes both the "sealing rings 10" (i.e. the anchor portion) and the tube portion, as shown below:



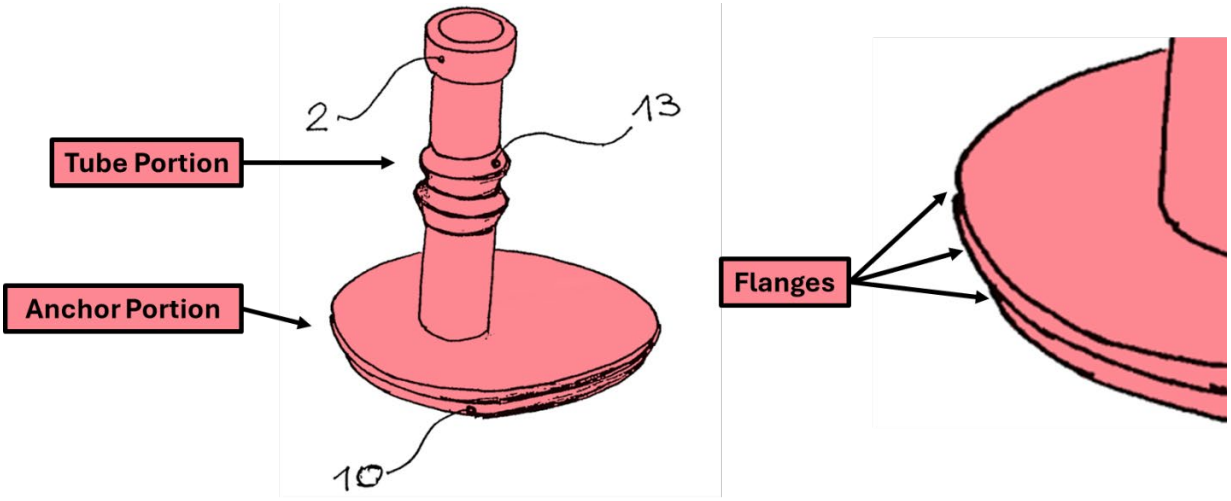
(Ex. 1009, 2-3, Fig. 2). Accordingly, claim 14 also would have been obvious to a POSITA over Park and Ribarits. (Ex. 1003, ¶322).

N. Claim 16

Claim 16 depends from claim 12, and adds "wherein the anchor portion includes a projecting flange that provides a friction-fit arrangement with the

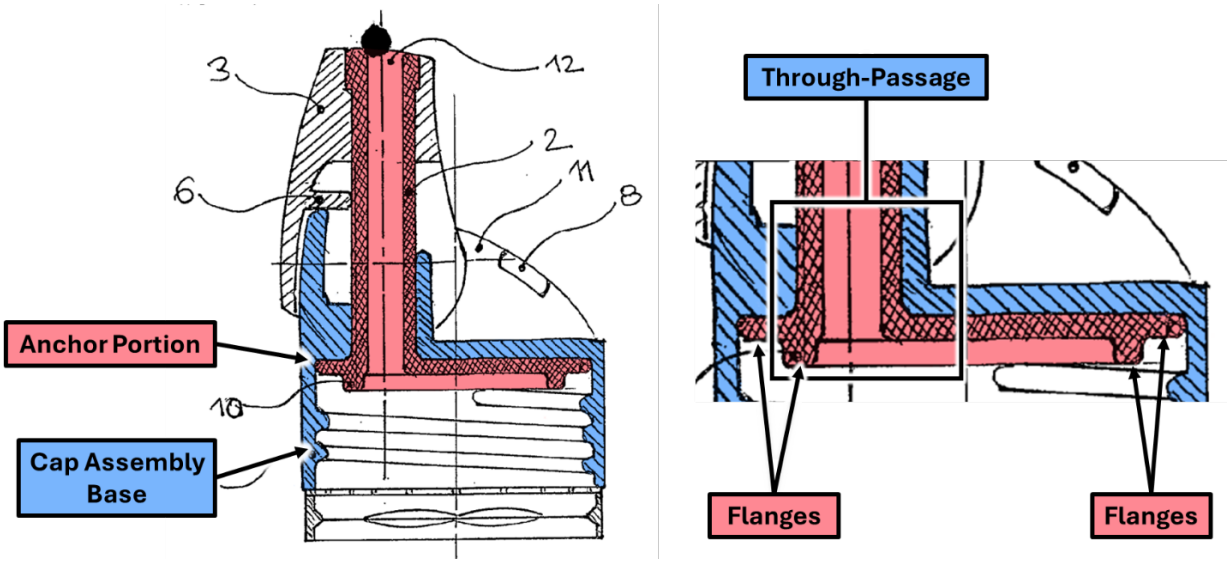
through-passage of the base." Ribarits discloses this additional limitation. (Ex. 1003, ¶¶333-37).

The anchor portion of Ribarits' mouthpiece assembly includes "one or several projecting sealing rings," (Ex. 1009, 3 (Claim 2)), which a POSITA would have understood to be an "anchor portion":



(Ex. 1009, Fig. 2).

The flange of Ribarits' anchor portion provides a friction-fit arrangement with the through-passage of the base of Ribarits' cap assembly, as shown below:

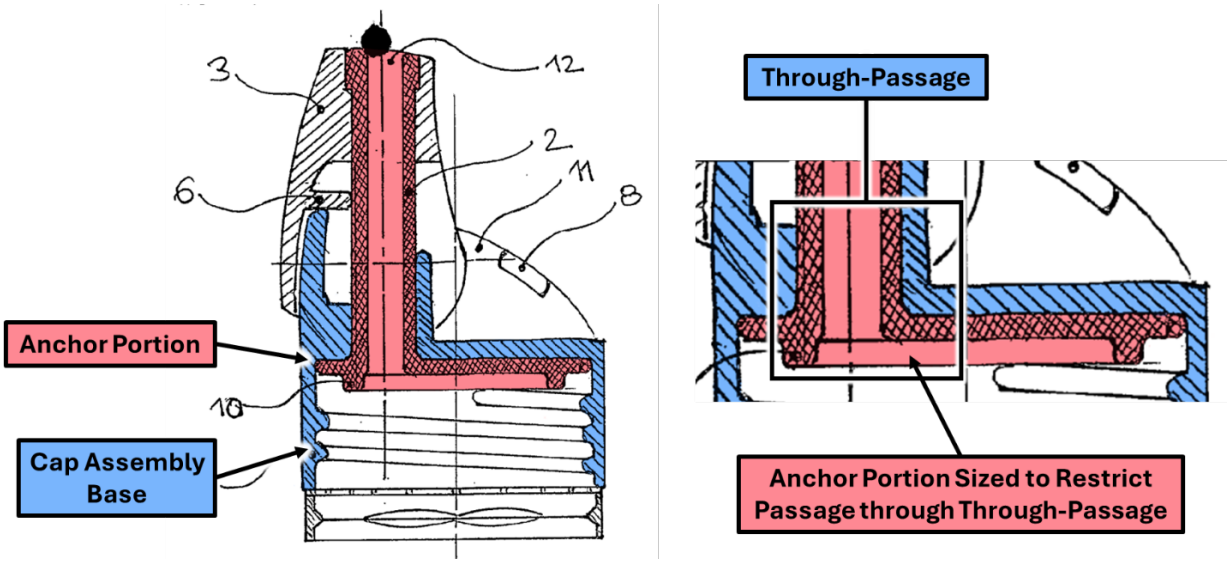


(*Id.*, Fig. 3; Ex. 1003, ¶336). Accordingly, claim 15 also would have been obvious over Park and Ribarits. (Ex. 1003, ¶337).

O. Claim 17

Claim 17 depends from claim 1, and adds "wherein the anchor portion is sized to restrict passage of the anchor portion through the through-passage and thus restrict removal of the mouthpiece assembly via a top side of the cap assembly." Ribarits discloses this additional limitation. (Ex. 1003, ¶¶338-42).

Ribarits' "sealing rings" (i.e. anchor portion) extend outward to prevent the anchor portion from passing through the through-passage at the base of the cap assembly, as shown below:



(Ex. 1009, Fig. 3; Ex. 1003, ¶¶340-41).

Accordingly, claim 16 also would have been obvious over Park and Ribarits. (Ex. 1003, ¶342).

P. <u>Claim 19</u>

Claim 19 depends from claim 1, and adds "wherein the cap assembly further comprises a handle that projects away from the base." This additional limitation would have been obvious over Park in view of the knowledge of a POSITA. (Ex. 1003, ¶¶343-46).

Park teaches that "a separate belt can be fastened to a loop 102 formed on the outer circumference of the water bottle 100 to facilitate portability." (Ex. 1006, 5). A POSITA would have understood that a "belt" fastened to the "loop" on Park's bottle would have constituted a handle for transporting the water bottle.

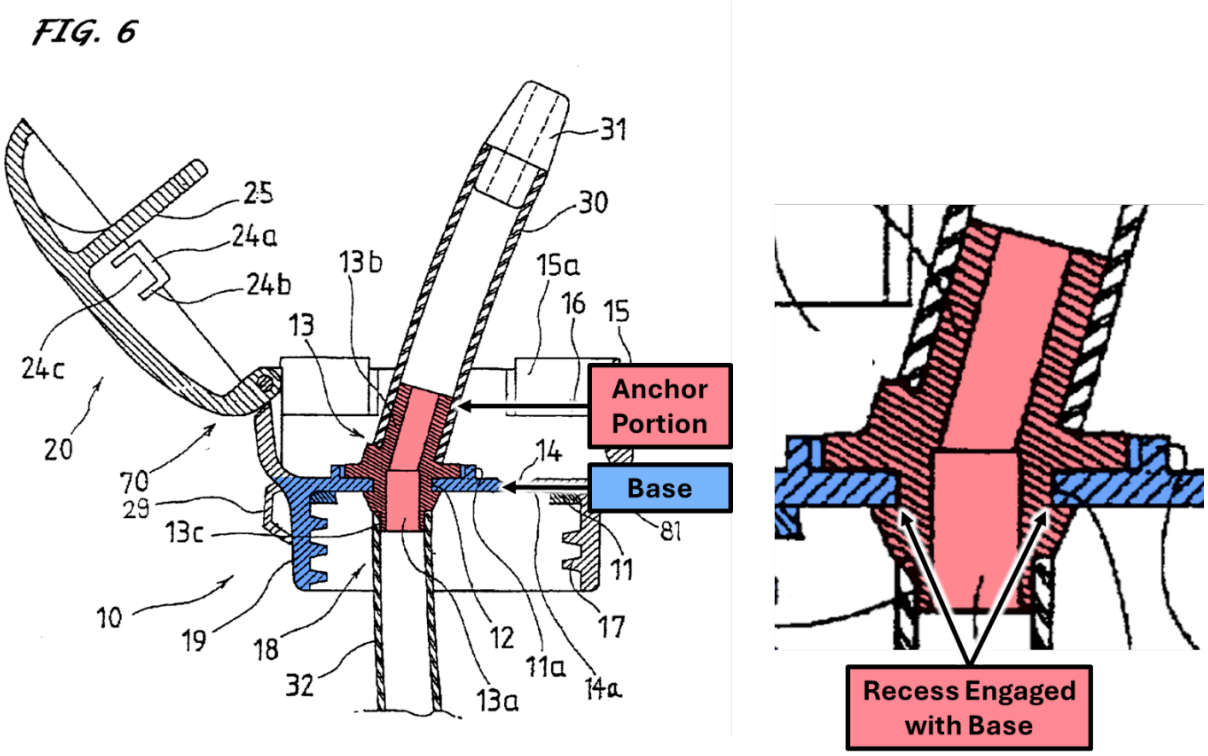
(Ex. 1003, ¶345). Although Park's handle is not a component of Park's cap assembly (i.e. "lid 110"), a POSITA would have readily understood that such handle could be attached directly to the cap assembly, rather than to the water bottle. (*Id.*) Thus, a POSITA would have understood that attaching the handle to the cap assembly, as opposed to the bottle, constituted nothing more than a simple choice between two possible designs. (*Id.*)

Accordingly, claim 19 also would have been obvious over Park and Ribarits. (Ex. 1003, ¶346).

X. GROUND 3: CLAIM 15 IS OBVIOUS IN VIEW OF PARK, RIBARITS AND KIYOTA

Claim 15 depends from Claim 12, and adds "wherein the anchor portion defines a recess that is sized and shaped to engage and mate with corresponding structure of the base of the cap assembly." This additional limitation would have been obvious over Park and Ribarits, in further view of Kiyota and the knowledge of a POSITA. (Ex. 1003, ¶¶347-53).

As discussed in connection with claim 15 in ground 1, above, Kiyota discloses "coupling tube 13" (i.e. anchor portion), which defines a recess that is sized and shaped to engage and mate with corresponding structure of the base of the cap assembly:



(Ex. 1004, Fig. 6).

As discussed above in ground 2, in view of Ribarits and the knowledge of a POSITA, it would have been obvious to replace Park's "straw" and "connecting hose" with Ribarits' "drinking spout" and "sealed tubular element." (Ex. 1003, ¶350).

A POSITA would have looked to the teachings of Kiyota to further modify and improve Park's and/or Ribarits' design. (Ex. 1003, ¶351). That is because Kiyota is directed to similar subject matter to both Park and Ribarits. (*Id.*) For example, Kiyota discloses drink containers with cap assemblies of substantially the same functionality as both Park and Ribarits. (*Id.*) As explained above, Kiyota

discloses cap assemblies having mouthpieces that can be opened and closed into dispensing and stowed configurations, and includes elastic tube elements with crimping regions that collapse in the stowed configuration to prevent leakage when the drink containers are not in use. (*Id.*)

In view of the teachings of Kiyota, a POSITA would have recognized the desirability of modifying the design of Ribarits' anchor portion to include a recess sized and shaped to engage and mate with the base of the cap assembly, as taught by Kiyota. (*Id.*, ¶352). That is because such a design would have ensured a tight seal between the anchor portion and the cap assembly base, and would have prevented slippage of the tube portion during use. (*Id.*)

Accordingly, claim 15 would have been obvious to a POSITA in view of Ribarits and Park, and in further view of Kiyota. (*Id.*, ¶353).

XI. SECONDARY CONSIDERATIONS

Secondary considerations should be considered but do not control the obviousness conclusion. *Newell Cos., Inc. v. Kenney Mfg. Co.*, 864 F.2d 757, 768 (Fed. Cir. 1988). Where, as here, a strong *prima facie* case of obviousness has been made, even relevant secondary considerations supported by substantial evidence may not dislodge an obviousness conclusion. *Leapfrog Enters. v. Fisher-*

Price, Inc., 485 F.3d 1157, 1162 (Fed. Cir. 2007). Petitioner is aware of no evidence supporting a claim for secondary considerations.

XII. DISCRETIONARY DENIAL UNDER §314(A) IS NOT APPROPRIATE

The Board should decline to exercise its discretion under §314(a). Efficiency, fairness, and the merits support institution despite the existence of co-pending litigation. *Apple v. Fintiv,* IPR2020-00019, Paper 11 (P.T.A.B. Mar. 20, 2020) ("*Fintiv*"). Each *Fintiv* factor is discussed below.

A. Factor 1: Potential Stay

When this IPR is instituted, Petitioner will move to stay the district court action, at least as to the patents in the family of the challenged '187 patent pending resolution of this IPR. Thus, this factor weighs against discretionary denial.

B. Factor 2: Proximity of Trial to FWD

Trial in the district court action is almost one year away (currently scheduled for September 2025). (Ex. 1002). Thus, this factor weighs against discretionary denial.

C. Factor 3: Investment in Parallel Proceeding

Fact discovery in the district court action is still pending. The district court has not yet construed claim terms. No expert reports have been served.

Fact discovery does not close until December 2024, and even after that, much work would still remain, including expert reports, expert discovery, dispositive motions, pretrial motions, and trial. (Ex. 1002). The "remaining investment" outweighs any investments made. *Samsung Elecs. Am. Inc. v. Snik LLC*, IPR2020-01428, Paper 10 at 11 (P.T.A.B. Mar. 9, 2021); *Huawei Techs. Co. v. WSOU Invs., LLC*, IPR2021-00226, Paper 10 at 13-14 (P.T.A.B. June 10, 2021). Thus, this factor weighs against discretionary denial.

D. Factor 4: Overlapping Issues

Petitioner stipulates that, if this IPR is instituted, it will not pursue in the district court proceeding the same grounds of invalidity raised in this Petition or any grounds that it could have reasonably been raised in this Petition. This factor weighs against discretionary denial.

E. Factor 5: The Parties

While the same parties are involved here as in the district court, this factor is not determinative. The Board repeatedly declines to exercise its discretion to deny institution under such circumstances. *See, e.g., NanoCellect Biomedical, Inc. v. Cytonome/ST, LLC*, IPR2020-00551, Paper 19 at 2-25 (P.T.A.B. Aug. 27, 2020); *VMware, Inc. v. Intellectual Ventures I LLC*, No. IPR2020-00470, Paper 13 at 20,

22 (P.T.A.B. Aug. 18, 2020); *Samsung Electronics Co., Ltd. v. Dynamics, Inc.,* IPR2020-00502, Paper 34 at 13-14 (P.T.A.B. Aug. 12, 2020).

F. Factor 6: Other Circumstances

This Petition's merits are particularly strong, which favors institution. *Fintiv*, IPR2020-00019, Paper 11 at 14-15. Moreover, denying institution would negate Congress's intent in providing a 1-year period to file petitions.

Accordingly, the *Fintiv* analysis favors institution.

XIII. DISCRETIONARY DENIAL UNDER §325(D) IS NOT APPROPRIATE

This Petition presents a strong case of unpatentability and rests on prior art and arguments not previously presented to the PTO, and discretionary denial under §325(d) is thus not warranted.

In a §325(d) analysis, the Board considers several factors delineated in *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (P.T.A.B. Dec. 15, 2017). Factors (a), (b), and (d) relate to whether the art or arguments are substantially the same as those previously presented, while factors (c), (e), and (f) relate to whether the petition has demonstrated a material error by the PTO during prior consideration. *Advanced Bionics, LLC v. Med-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 10 (P.T.A.B. Feb.

13, 2020). The Board considers the second set of factors only if the first set of factors weighs in favor of exercising discretion. (*Id.*, 8).

A. Factors (a), (b), and (d)

The references relied on in this Petition were not cited or applied during examination of the '187 patent. PO never submitted an IDS during prosecution of the '187 Patent. Thus, any arguments relating to these references likewise have not been considered by the PTO.

Because each ground presented herein includes prior art and arguments not previously considered by the PTO, the Board should not exercise its discretion to deny the Petition under §325(d). *See, e.g.*, *Samsung Elecs. Co., Ltd. v. Cellect, LLC*, IPR2020-00475, Paper 15 at 9-17 (P.T.A.B. Aug. 18, 2020) (declining to exercise discretion where petition relies on art not before the PTO in a majority of asserted grounds).

B. Factors (c), (e), and (f)

As discussed above, because each ground includes prior art and arguments not previously considered by the PTO, there is not any significant overlap between discussion of the references in this Petition and the arguments presented in prior examination. Because the references as applied in this Petition present a strong case for unpatentability, the Examiner clearly and materially erred in not applying

them. Accordingly, these factors weigh strongly against exercising discretion. *See, e.g.*, *Fusion Orthopedics, LLC v. Extremity Med., LLC*, IPR2023-00894, Paper 15 at 34-35 (P.T.A.B. Nov. 17, 2023).

Accordingly, the Board should not exercise discretion under §325(d).

XIV. CONCLUSION

Petitioner respectfully requests cancellation of the challenged claims for the reasons described above.

Dated: November 7, 2024 By: */Ali S. Razai/*

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CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. §42.24(d), the undersigned certifies that the foregoing **PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 11,684,187**, exclusive of the parts exempted as provided in 37 C.F.R. §42.24(a), contains 13,015 words and therefore complies with the type-volume limitations of 37 C.F.R. §42.24(a).

Dated: November 7, 2024 By: */Ali S. Razai/*

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on the date below a copy of this **PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 11,684,187 PETITIONER'S POWER OF ATTORNEY, AND EXHIBITS 1001 –1011** were served by Federal Express overnight mail on the Patent Owner at the correspondence address of record for the subject patent as follows:

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A courtesy copy has been sent by email on this day to Patent Owner's counsel of record in the matter identified in Section I.B of the Petition as follows:

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