

**FILED ON BEHALF OF COMOTOMO INC. AND COMOTOMO
CORPORATION**

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COMOTOMO INC. and COMOTOMO CORPORATION,
Petitioners

v.

MAYBORN (UK) LIMITED,
Patent Owner.

Inter Partes Review No. _____
Patent 11,207,244 B2

**PETITION FOR *INTER PARTES* REVIEW OF
U.S. PATENT NO. 11,207,244**

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3. Hakim discloses “an assembly configured to mount over and surround the threaded neck portion, the assembly comprising:”	52
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5.	Hakim discloses “ii. a base portion positioned below said areola portion and comprising a screw collar adapted to threadably engage with said threaded neck portion and removably couple to the nipple to seal over the opening of the container; and”	61
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EXHIBIT LIST (37 C.F.R. §42.63(E))

Exhibit	Description
1001	U.S Patent No. 11,207,244
1002	Prosecution History of U.S. Patent No. 11,207,244
1003	Declaration of Jim Goldman
1004	Curriculum Vitae for Jim Goldman
1005	PCT Publication No. WO 2004/013001 (“Hakim”)
1006	Japanese Patent No. 3209271 (“Kobayashi”)
1007	Affidavit of Certifying English Translation of Japanese Patent No. 3209271 to Kobayashi
1008	U.S. Patent Pub. No. 2002/0033399 (“Manganiello”)
1009	U.S. Patent Pub. No. 2005/0056611 (“Hakim II”)

I. INTRODUCTION

Petitioners Comotomo Inc. and Comotomo Corporation (collectively, “Comotomo” or “Petitioners”) hereby request *inter partes* review under 35 U.S.C. §311 of United States Patent No. 11,207,244 to Rees et al., titled “Baby Bottle With Flexible Nipple Regions” (the “’244 patent”). Comotomo challenges claims 1-31 of the ’244 patent (the “challenged claims”). This Petition demonstrates a reasonable likelihood that Comotomo will prevail on at least one of the challenged claims. The Patent Trial and Appeal Board (“Board”) should therefore institute review of the ’244 patent.

II. COMPLIANCE WITH REQUIREMENTS FOR A PETITION FOR *INTER PARTES* REVIEW

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

Comotomo certifies that the ’244 patent is available for *inter partes* review and that Comotomo is not barred or estopped from requesting *inter partes* review of the ’244 patent.

B. Fees for *Inter Partes* Review (37 C.F.R. §42.15(a))

The Director is authorized to charge the fees specified by 37 C.F.R. §42.15(a) to Deposit Account No. 19-2555.

C. Mandatory Notices (37 C.F.R. §42.8(b))

Real Party-In-Interest: Comotomo Inc. and Comotomo Corporation are the real parties-in-interest. No other party had access to the Petition, and no other

party had any control over, or contributed to any funding of, the preparation or filing of this Petition.

Notice of Related Matters: Pursuant to 37 C.F.R. §42.8(b)(1),

Petitioners are aware of the following related matters:

- Patent Owner asserts U.S. Patent No. 11,207,244 and the related U.S. Patent No. 10,952,930 against Petitioners in *Mayborn (UK) Limited, et al. v. Comotomo Inc., et al.*, Case No. 1:22-cv-00694-PGG (S.D.N.Y. filed January 26, 2022); and
- Petitioner filed a petition for *inter partes* review of U.S. Patent No. 10,952,930, from which the '244 patent is a continuation, concurrent with the filing of the instant Petition.

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

Petitioners designate Dargaye Churnet (Reg. No. 71,288) as lead counsel and Michael J. Sacksteder (*pro hac vice* to be filed) as back-up counsel. Service of any documents via hand delivery may be made to the mailing address of FENWICK & WEST LLP, 555 California Street, 12th Floor, San Francisco, CA 94104, Telephone: (415) 875-2300 and Fax: (415) 281-1350, with courtesy copies to the email addresses dchurnet@fenwick.com and msacksteder@fenwick.com. Petitioners consent to electronic service to dchurnet@fenwick.com and msacksteder@fenwick.com.

III. THRESHOLD FOR REVIEW (35 U.S.C. § 314(A))

It is reasonably likely that Comotomo will prevail on at least one of the claims challenged in this Petition because the request shows that the subject matter recited in claims 1-31 of the '244 patent is taught by the prior art. Any motivation to combine the prior art is provided herein as necessary.

IV. IDENTIFICATION OF CLAIMS BEING CHALLENGED

In accordance with 37 C.F.R. § 42.104(b), Petitioner challenges claims 1-31 under 35 U.S.C. § 103 on the following grounds:

- Ground 1: Hakim (Ex. 1005) renders obvious challenged claims 1-3, 5, 6, 10-12, 14-24, 26, 27, 30, and 31;
- Ground 2: Hakim in view of Hakim II (Ex. 1009) renders obvious challenged claims 4 and 25;
- Ground 3: Hakim in view of Kobayashi (Ex. 1006) renders obvious challenged claims 7-9, 28, 29; and
- Ground 4: Hakim in view of Manganiello (Ex. 1007) renders obvious challenged claim 13.

V. OVERVIEW OF THE '244 PATENT

A. Effective Filing Date of the Challenged Claims

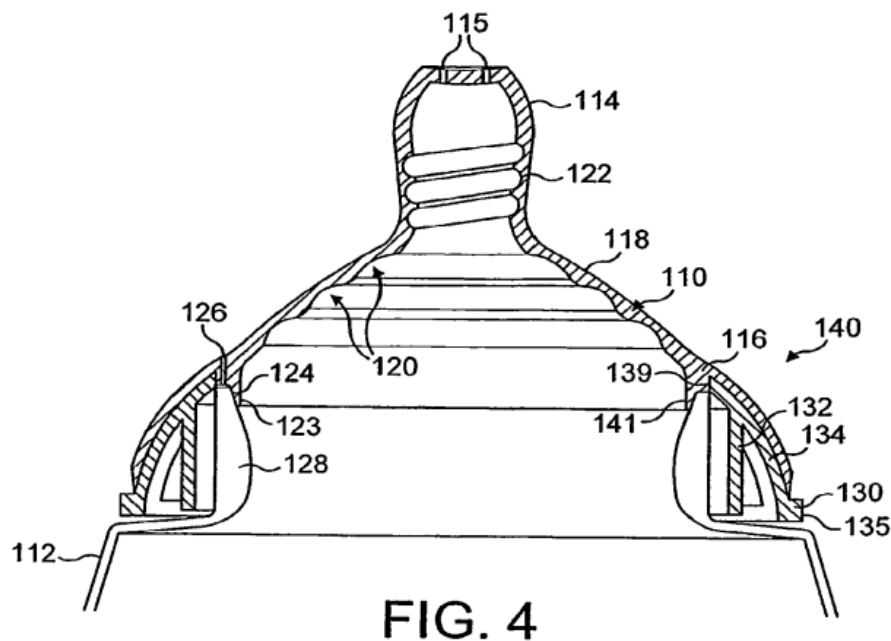
The '244 patent was filed on March 22, 2021 and claims foreign priority to GB applications 2004/14560, filed June 29, 2004, and 2005/02599, filed February 8,

2005. The effective filing date of the challenged claims is therefore no earlier than June 29, 2004. The '244 patent is subject to the pre-AIA provisions of the Patent Statute, so all statutory references in this Petition are to the applicable pre-AIA provision.

B. '244 Patent Description

The '244 patent is directed to a flexible nipple for a baby bottle. Ex. 1001, 1:23-25. The patent admits that prior art baby bottles included flexible nipples. *Id.*, 1:29-43 (citing U.S. Pat. No. 6,645,228). The patent purports to identify two problems in prior art baby bottles: 1) they did not closely mimic the movement of the human breast during drinking, and 2) the amount of flexing and the point at which flexing takes place were undefined and unpredictable. *Id.*

The '244 patent purports to solve these problems. It discloses two embodiments. *Id.*, 2:11-25. The first embodiment provides a “flex region” that includes “flex channels” at the “areola portion” of the nipple. *Id.*, 2:11-15. The second embodiment adds a “helical flow formation” on the inner face of the nipple’s teat portion. *Id.*, 2:17-22. Both embodiments are shown in Figure 4, below.



Id., Fig. 4. Figure 4 shows a cross-sectional view of the disclosed baby bottle nipple, referred to as teat 110. *Id.*, 2:39-40, 2:30-32, Abstract. The teat 110 is attached to a screw collar 130 to form a teat assembly 140 that screws onto infant drinking vessel 112. *Id.*, 4:64-5:3. The teat 110 includes a teat portion 114, an areola region 118, and a base portion 116. *Id.*, 3:59-65. Undulating grooves 120 form the flex region at the areola region 118, in accordance with the first embodiment. *Id.*, 4:16-19. The helical grooves 122, according to the second embodiment, are formed in the teat portion 114. *Id.*, 4:33-43.

The teat assembly 140 shows other aspects described in the '244 patent. The assembly includes a vent passage 126. *Id.*, 5:15-20. “When the infant then drinks from the vessel the pressure difference pulls the lip valve 123 away from the inner face of the neck 128 of the vessel 112 allowing venting through vent passage 126

and hence reducing the risk of colic.” *Id.*, 6:10-16. The patent admits that the prior art includes “valved feeding bottles” that “allow air ingress to the teat” to “reduce[] the risk of colic.” *Id.*, 1:49-53. The patent contends that these prior art valves suffered from certain downsides. Some prior art valves included slits that were purportedly “frail and difficult to machine.” *Id.*, 1:49-55. Other valves were provided via “a downwardly depending cylindrical flange at [a teat’s] base which seals against the inner top face of a vessel neck when deformed by being screwed down by a collar.” *Id.*, 1:62-66. In these valves, “negative pressure inside the vessel lifts the flange away from the vessel neck so that air flows through the collar and between the neck and the flange into the vessel to relieve the pressure differential.” *Id.*, 1:66-2:2. The purported downside of these arrangements was that they relied “on the correct amount of screw pressure being applied by the user on fixing the teat which can give rise to varied levels of valving between uses. Furthermore, the introduction of a circumferential flange increases material costs.” *Id.*, 2:3-7.

The patent purports to improve over these prior art valves:

Because of the provision of the lip valve there is no requirement for providing slits and a natural, robust and resilient valve assembly is provided. Furthermore, the valve is formed during the moulding operation and requires no secondary operation for its formation providing commercial and manufacturing benefits. Yet further as a single vent passage is provided at one point on the teat, the risk of

leakage is reduced, especially as the vent passes through the teat rather than around the vessel neck.

Id., 6:14-23.

The teat 110, shown in Figure 4 above, also includes a downwardly depending cylindrical flange 141. *Id.*, 4:63-5:3. The patent explains that “[t]he teat 110 is over-moulded onto the screw collar 130 and the domed portion 134 terminates at a central circular orifice corresponding with an outer face of the neck 128 of the vessel 112, the over-moulded portion of the teat extending inwardly slightly from this position and terminating in a downwardly depending cylindrical flange 141.” *Id.* The screw collar itself has a separate flange, called a horizontal outward annular flange 135. *Id.*, 4:59-64.

VI. CLAIM INTERPRETATION

Claim terms subject to *inter partes* review are to be “construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b).

Based on the descriptions in the patent, a person of ordinary skill in the art at the time of the invention (“POSITA”) would have applied plain and ordinary meanings to the terms used in the claims. Ex. 1003, ¶ 34.

VII. LEVEL OF ORDINARY SKILL IN THE ART

A POSITA at the time of the alleged invention would have had a bachelor’s degree in mechanical engineering or a related field, with at least two years of professional experience working in bottle manufacturing. *Id.*, ¶ 25. With more education, such as additional graduate degrees or study, less professional experience is needed to attain the ordinary level of skill. *Id.* Similarly, with more experiential knowledge of bottle manufacturing, less professional experience is needed to attain the ordinary level of skill. *Id.*

VIII. OVERVIEW OF THE PRIOR ART

A. Hakim

Hakim was filed as a PCT application on August 5, 2003, that published on February 12, 2004, before the ’244 patent’s earliest priority date of June 29, 2004. Hakim is prior art to the ’244 patent under pre-AIA 35 U.S.C. §§ 102(a), 102(e) and 103. The PTO did not consider Hakim during prosecution of the challenged patent.

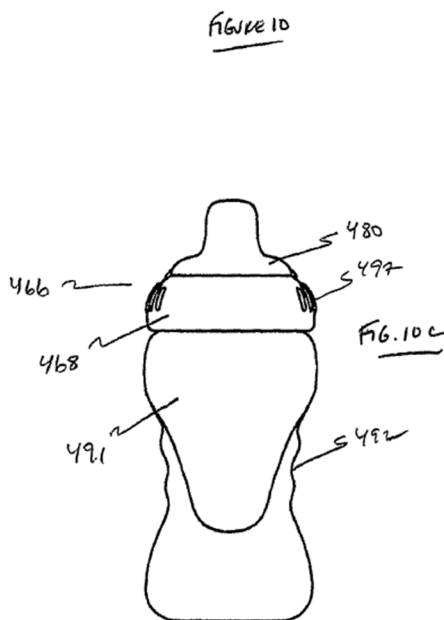
Hakim’s U.S. counterpart—U.S. Patent Publication No. 2007/0221604—was cited, along with over 150 other references, in an April 5, 2021, Information Disclosure Statement By Applicant (IDS) during prosecution of the ’244 patent. The

PTO did not cite or rely on the counterpart in any action during prosecution of the '244 patent. Even if this Petition relied on the counterpart as a ground for institution—which it does not—its citation in the IDS alone is insufficient to deny institution under 35 U.S.C. § 325(d) and in view of *Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GMBH*, IPR2019-01469, Paper 6 (P.T.A.B. Feb. 13, 2020). See *Satco Products Inc. v. The Regents of the Univ. of California*, IPR2021-00662, Paper 13 at 25 (P.T.A.B. Nov. 8, 2021); *Samsung Electronics Co., Ltd., et al. v. Evolved Wireless LLC*, IPR2021-00943, Paper 9 at 11-12 (P.T.A.B. Dec. 1, 2021); *Carrier Fire & Security America's Corp. v. Sentrilock, LLC*, IPR2021-00664, Paper 12 at 21-23 (P.T.A.B. Sept. 16, 2021).

As its title suggests, Hakim discloses “[n]o-spill drinking products.” See Ex. 1005. The “no-spill products includ[ing] baby bottle nipples and their associated baby bottles. . . . are provided for feeding infants, young children, and any other user.” *Id.*, 4. Hakim generally focuses on two embodiments of drinking products: the first includes a cap with a nipple (such as a baby bottle nipple) and the second includes a soft lid with a spout (such as a “trainer cup”). *Id.*, 4, 5, 11, Abstract. Hakim teaches that its descriptions of these embodiments are interchangeable. *Id.*, 35 (“instead of a nipple, a soft spout can be used on a drinking vessel with any combination of the features shown herein”), 19 (“the discussion provided herein with respect to the baby bottle nipple applies well to the spout embodiments as well”),

16, 40. And along with the features specifically described in Hakim, the “invention can be used with any other configuration or type of baby bottle nipple desired, or with other drinking vessels.” *Id.*, 35.

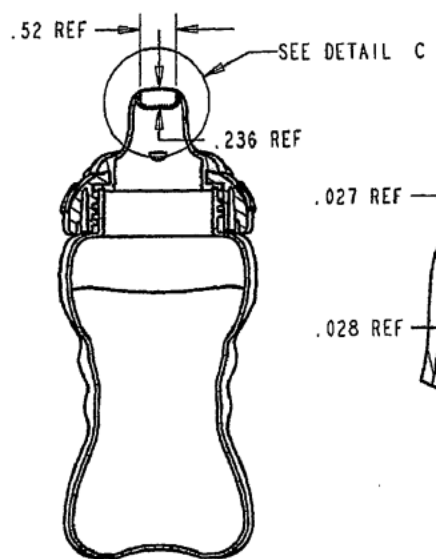
A no-spill drinking product of Hakim is shown in Fig. 10c, below.



Id., Fig. 10c. The drinking product (here, a bottle) includes a drinking vessel (or cup) 491, screw ring 468, and soft lid (or nipple) 480.¹ *Id.*, 2, 37. The screw ring

¹ Figures 10, 11, and 12 of Hakim show a drinking product with the cap attached to the drinking vessel. The specification describes these figures as including a soft lid (e.g., soft lid 480) with the cap (e.g., cap 466). But, as explained above, Hakim explains that each embodiment, including those described with reference to Figs. 10, 11, and 12, applies interchangeably using a soft lid or a nipple. *See, e.g.*, Ex. 1005,

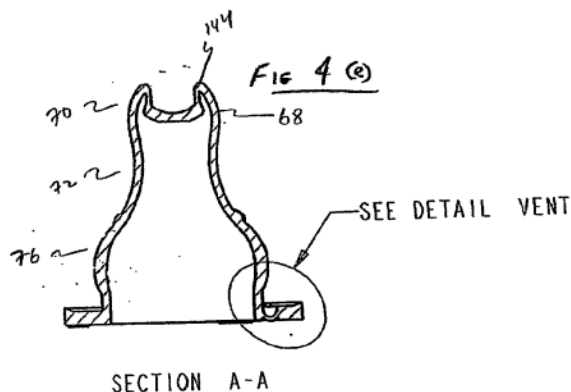
468 and nipple 480 together form a cap 466. *Id.* The screw ring 468 and nipple 480 are separable; and the screw ring 468 attaches to the nipple 480 by “snugly fit[ting] in the groove” of the recess at the bottom of the nipple 480, as shown in Fig. 12b (a cross-sectional view of the bottle shown in Fig. 10c, above). Ex. 1005, 38, 30, 12 (“When the hard cap having the nipple attached thereto is screwed onto the baby bottle, the bottom rim of the nipple is compressed between the top of the bottle and the bottom of the hard cap to further secure the nipple in the cap.”).



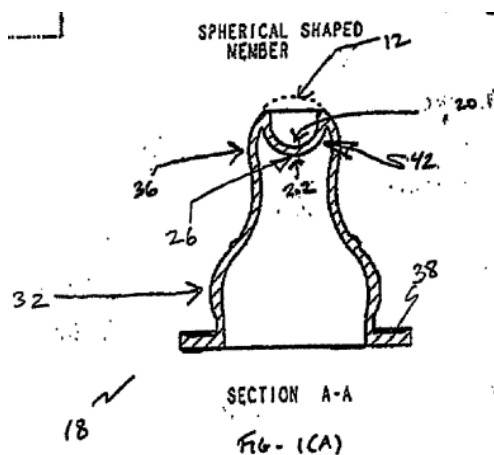
35, 16-17, 41; Ex. 1003, ¶ 51. Accordingly, Figs. 10, 11, and 12 are described in this Petition for embodiments that include a nipple (*e.g.*, the nipple show in Fig. 4e) instead of a soft lid.

Id., Fig. 12b.

Figure 4e, below, shows a nipple according to an embodiment of Hakim.



Id., Fig. 4e. The nipple includes a tip 70, neck 72, and base portion 76. *Id.*, 20. The nipple also includes a flange (circled in the figure above and labeled 38 in Figure 1a, below). *Id.*, 12.



Id., Fig. 1a. The screw ring attaches to the nipple by sealing between the base portion and flange of the nipple. *Id.*, 38-39, 29-30, 12. The cap (*i.e.*, screw ring with attached nipple) can then screw onto the neck of the baby bottle. *Id.*, 12, 37-38.

When the cap is screwed on, the flange of the nipple forms a “secure seal” on the open top of the baby bottle. *Id.*, 37, 30.

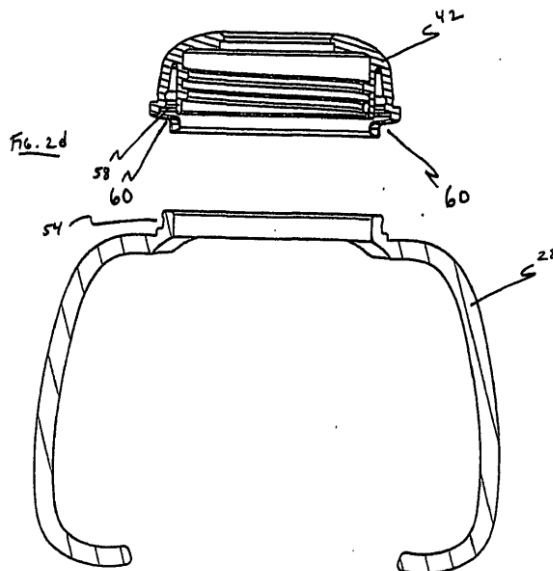
Hakim explains that “[o]ne or more air valves can be provided in the nipple.” *Id.*, 29, 5-6. The air valve may be located “at the bottom of the baby bottle nipple,” and it “extends downward into the nipple.” *Id.*, 12-13. The air valve is used to “facilitate the flow of air back into the bottle while the baby is drinking.” *Id.*, 30.

B. Hakim II

Hakim II was filed on May 24, 2004, before the '244 patent's earliest priority date of June 29, 2004, and it was published on March 17, 2005. Hakim II is therefore prior art to the challenged patent under pre-AIA 35 U.S.C. §§ 102(e) and 103. Hakim II was one of over 150 references cited in an IDS during prosecution of the '244 patent. Ex. 1002, 64. The PTO did not cite or rely on Hakim II in any action during prosecution of the '244 patent. As explained above in Section VIII.A for Hakim, the citation of Hakim II in the IDS alone is insufficient to deny institution under 35 U.S.C. § 325(d).

Hakim II describes a handle that locks into the baby bottle cap. Ex. 1009, ¶ 30. “In the preferred embodiment, the top of the handle snaps into the recess to form a secure fit.” *Id.* The cap also includes “slits or notches” at its sides and the handle tops fit into these notches. *Id.* “As a result, the handles and the cap are integrated

into a single unit.” *Id.* A cap 42 and handle 28 according to Hakim II are shown in Figure 2d.



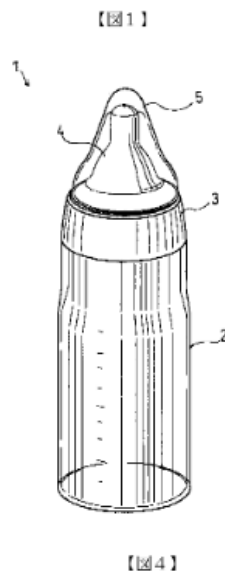
“To assemble the handle 28 and cap 42, ring 54 of handle 28 is inserted into recess 58 of cap 42 to snap into and form a secure fit between the handle 28 and the cap.” *Id.*, ¶ 34. The handles can be “removed from the cap” by removing the ring 54 from the cap’s recess 58. *Id.*, ¶¶ 32, 34.

C. Kobayashi

Kobayashi was published as Japanese Patent No. 3209271 on September 17, 2001, before the ’244 patent’s earliest priority date of June 29, 2004, and more than one year before the ’244 patent’s PCT filing date of June 29, 2005. *See* Ex. 1006 (English translation of the Japanese patent); *see also* Ex. 1007 (affidavit certifying the English translation of Kobayashi). Kobayashi is prior art to the challenged patent

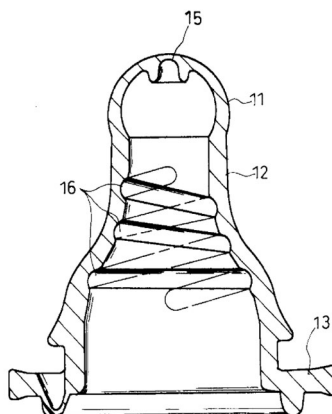
under pre-AIA 35 U.S.C. §§ 102(a), 102(b), and 103. The PTO did not consider Kobayashi during prosecution of the challenged patent.

Kobayashi is titled “Nipple for a Feeding Bottle” and describes a nipple for a baby bottle. Ex. 1006, ¶ 1. With reference to Fig. 1, the “feeding bottle 1 is configured of a bottle 2, a cap 3, and a nipple 4.” *Id.*, ¶ 14.



Id., Fig. 1. The nipple 4 is “fitted or screwed to the cap 3,” and then a lower portion of the nipple is “sandwiched between the cap 3 and an upper portion of the bottle 2” when the cap 3 is screwed onto the bottle 2. *Id.*, ¶ 14. The nipple is shown in greater detail in Fig. 5.

[圖 5]



Id., Fig. 5. The nipple includes an upper portion 11, body portion 12, and lower portion 13. *Id.*, ¶ 15. The nipple also includes a milk suction port 15 where the milk comes out of the bottle. *Id.* An “air hole” can be included (for example, at lower portion 13) so that “[a]ir flows into the bottle . . . and milk can flow out smoothly.” *Id.*

As shown in the figure, the nipple described in Kobayashi also includes a spiral groove 16. “The spiral groove 16 is formed in a spiral shape upward from a lower position of the body portion 12 of the nipple 4 along the inner side surface of the body portion 12.” *Id.* The spiral groove makes “the elongation characteristics of the nipple . . . closer to the mother’s nipple for the baby” and makes the nipple easier to clean. *Id.*, ¶ 21.

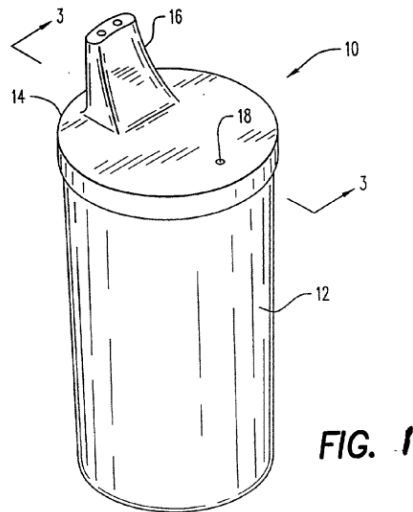
The figure also shows that the nipple decreases in thickness from the base portion to the teat portion. *Id.*, Fig. 5. The wall thickness of the nipple is illustrated

with the shading (diagonal lines) in the figure. *Id.* The lowest end of the base portion (*i.e.*, above the gap above lower portion 13) is thicker than the nipple wall above it. *Id.* Upper portion 11 of the teat portion is thinner and the wall above milk suction port 15—at the top of the teat portion—is the thinnest portion of the nipple wall. *Id.* Kobayashi distinguishes its nipple wall of various thickness from the prior art that used “substantially uniform thickness.” *Id.*, ¶ 5.

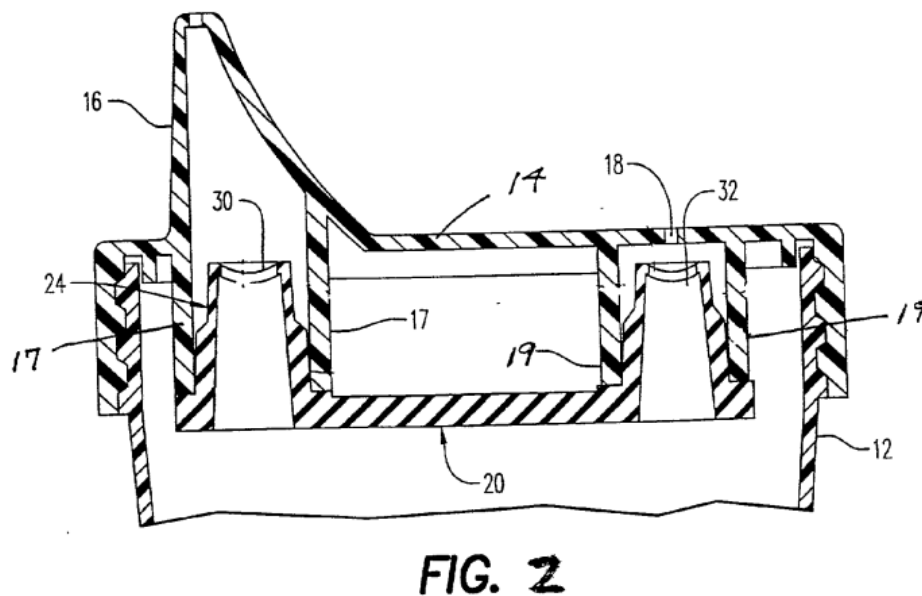
D. Manganiello

Manganiello was filed as a U.S. patent application on July 18, 2001, that published on March 21, 2002, before the '244 patent's earliest priority date of June 29, 2004, and also more than one year before the '244 patent's PCT filing date of June 29, 2005. Manganiello is prior art to the '244 patent under pre-AIA 35 U.S.C. §§ 102(a), (b), (e), and 103. The PTO did consider Manganiello during prosecution of the challenged patent.

Manganiello “relates generally to an improved leak-proof cup,” such as a trainer cup for children. Ex. 1008, ¶ 3. Manganiello describes “conventional” trainer cups with reference to Fig. 1, below. *Id.*, ¶ 1.



Id., Fig. 1. The cup 10 includes a container 12 and a lid 14. *Id.*, ¶ 22. The lid 14 includes a spout 16 and an air vent 18. *Id.* As shown in Figure 2, below, the lid also includes valve portion 30 under spout 16 and valve portion 32 under the air vent 18, respectively. *Id.*, ¶ 24.



Id., Fig. 2. The valve portions form “a removable flow control element that engages in the vicinity of the drinking spout and air vent to control the flow of liquid and air from the drinking spout and the air vent.” *Id.*, ¶ 3. Valve portions 30 and 32 are duck-bill valves. *Id.*, ¶ 26; Ex. 1003, ¶ 62.

IX. GROUND I: CLAIMS 1-3, 5, 10-12, 14-19, 21-24, 26, 27, 30, AND 31 ARE RENDERED OBVIOUS BY HAKIM

A. Claim 1

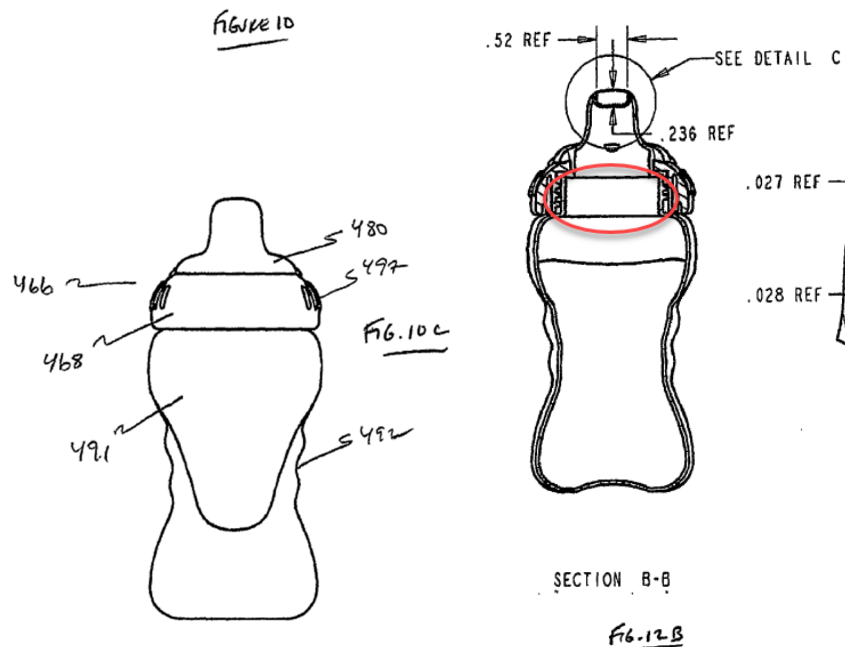
1. Hakim discloses “A feeding vessel, comprising:”

Hakim is titled “No-spill Drinking Products.” Ex. 1005. “The no-spill products of the invention include various embodiments of drinking vessels,” including “baby bottle nipples and their associated baby bottles.” Ex. 1005, 8-9, 4. The “no-spill products are provided for feeding infants, young children, and any other user.” *Id.*, 4.

Hakim therefore discloses a feeding vessel (*i.e.*, a no-spill drinking product, such as a baby bottle). Ex. 1003, ¶ 64.

2. Hakim discloses “a container comprising: i. a threaded upper portion with an opening into the interior of the container, ii. a middle portion below the upper portion, and iii. a bottom portion below the middle portion, wherein the middle portion is tapered inward; and”

The no-spill drinking product described in Hakim includes a “drinking vessel such as a cup 491,” shown in Figures 10c and 12b, below. Ex. 1005, 37.



Id., Figs. 10c, 12b (emphasis added). The drinking vessel is a “liquid holding container.” *Id.*, 35-36.

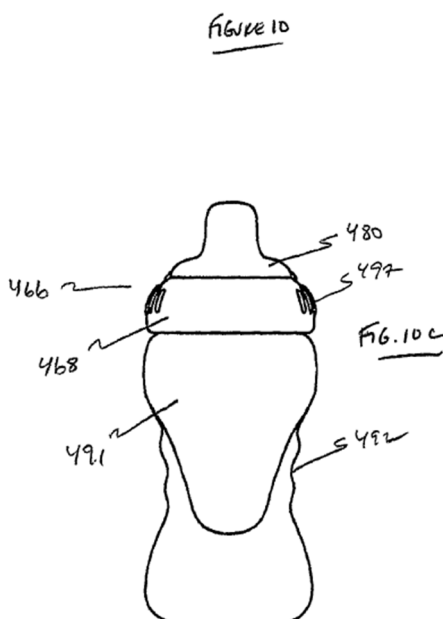
The upper portion of the container includes a bottle neck (to which screw ring 468 is screwed in Fig. 10c and circled in Fig. 12b). *Id.*, 17, 28-29; *see also id.*, 29, 38, and 39-40. The bottle neck has an open top that enables an infant or other user to drink the liquid (*e.g.*, milk) held in the container. *Id.*, 11 (“Such bottles (or cups) are known in the art, and are used for a baby to drink therefrom during the years when the baby is nursing.”); Ex. 1003, ¶ 66. The neck of the bottle includes threads on its outer surface that “mate” with the threads on the inner surface of the screw ring so the ring can screw onto the container. Ex. 1005, 12, 37-38, 30, Fig. 12b.

Hakim therefore discloses a container comprising: i. a threaded upper portion with an opening into the interior of the container, ii. a middle portion below the upper

portion, and iii. a bottom portion below the middle portion, wherein the middle portion is tapered inward. Ex. 1003, ¶ 67.

3. Hakim discloses “an assembly configured to mount over the opening of the container, the assembly comprising:”

Hakim describes a no-spill cap 466, shown in Fig. 10c.



Ex. 1005, Fig. 10c. “The no-spill cap is provided for attachment to a liquid holding container.” *Id.*, 35-36; *see also id.*, 37. “In use, the cap 466 is sufficiently secured to the cup such that shaking the cup assembly, dropping the cup on the floor, or other vigorous movement of the drinking product or application of sharp force thereto, is insufficient to separate the cap from the cup.” *Id.*, 37. The cap is an assembly that includes screw ring 468 and soft lid (or nipple) 480. *Id.*, 37; *see also id.*, 19-20. The internal surface of the screw ring “includes screw threads for engagement with a

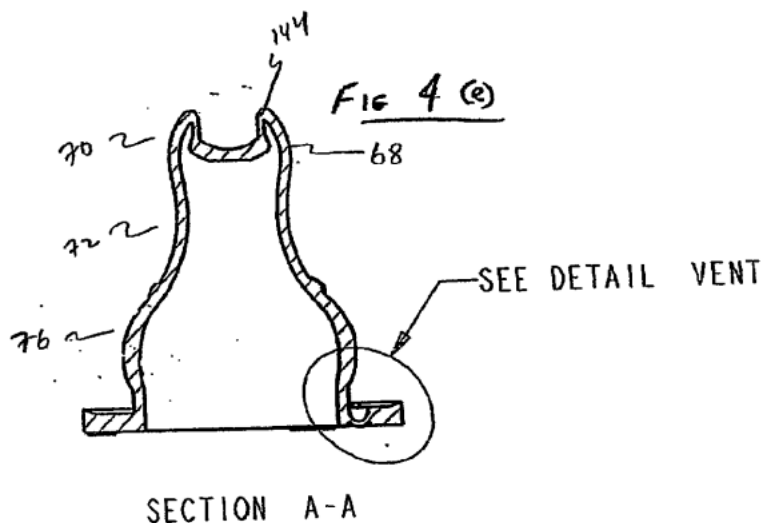
series of screw threads on the baby bottle, so as to screw that cap onto the bottle.”

Id., 12, 37-38 (“[T]he no-spill cap 466 and the drinking vessel include mating male and female screw threads, such that the cap 466 is a screw-on cap which can be easily rotated onto the cup, as is known in the art.”).

Hakim therefore discloses an assembly configured to mount over the opening of the container. Ex. 1003, ¶ 68.

4. **Hakim discloses “i. a nipple having a base, a teat portion with an aperture, an areola portion between the teat portion and the base, and a flange depending from the base defining the nipple circumference furthest from the aperture, wherein the teat portion defines a bite region and the areola portion defines a flex region configured to allow the teat portion to flex towards and away from the areola portion, and”**

The no-spill drinking product of Hakim includes a nipple. Ex. 1005, 12 (“The nipple of the present invention is preferably removably attached to the baby bottles, as is currently known in the art.”); *id.*, 11. The nipple includes regions that meet the claimed teat portion, base portion, and areola portion, as shown in Figure 4e.



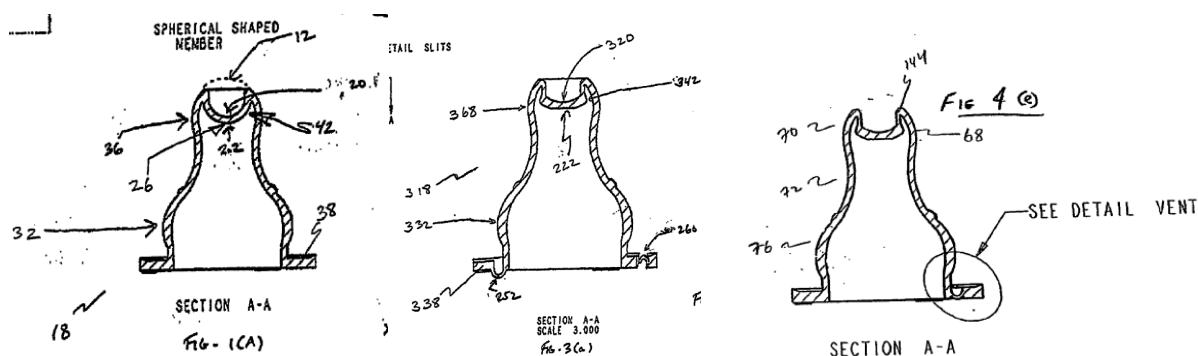
Id., Fig. 4e. The teat portion includes neck 72 and tip 70; the base portion is labeled 76; and the areola portion is the region between the base portion 76 and the neck 72. *Id.*, 20; Ex. 1003, ¶ 69.

The tip 70 includes an aperture, which “can be, for example, a hole, a slit, a slot, an orifice, or so forth.” Ex. 1005, 5; *see also id.*, 20, 5. The teat portion defines a bite region where “a user places his or her mouth against the spout of the product to bite down on the soft material of the spout and to drink liquid out when desired.” *Id.*, 4; *see also id.*, 18-19, 26-27, 40 (“To drink from the product, the user naturally bites down on the nipple or spout’s outer wall.”).

The areola portion in Hakim is between the neck 72 and the base portion 76, shown in Fig. 4e. *See id.*, Figure 4e; Ex. 1003, ¶ 71. The areola portion is made of “any of the flexible materials currently used in the art of baby bottle nipple construction.” Ex. 1005, 10. The flexible materials used in the areola portion (and

for the nipple as a whole) enables the teat portion to flex towards and away from the areola portion. Ex. 1003, ¶ 71.

The nipple disclosed in Hakim includes a bottom rim. Ex. 1005, 12, 30. The bottom rim is shown in Figs. 1a (labeled 38), 3a (labeled 338), and 4e (circled), each reproduced below.



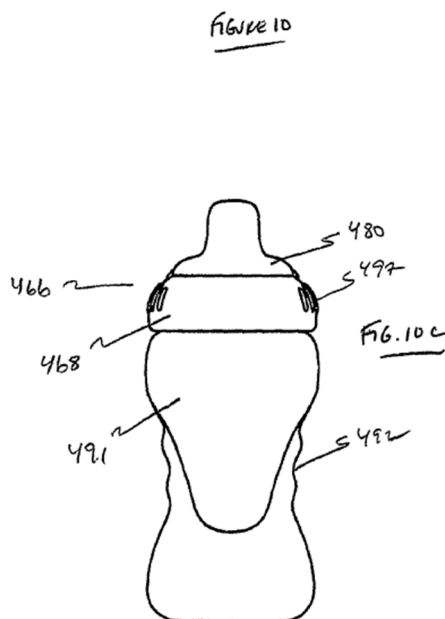
As shown in the figures above, the bottom rim is connected to and extends from the base portion (e.g., 76 in Fig. 4(e)). *Id.*, Figs. 1a, 3a, 4e. As further shown in the figures above, the bottom rim defines the nipple circumference furthest from the aperture at the tip (e.g., 70 in Fig. 4(e)). *Id.*; Ex. 1003, ¶ 73.

A “flange,” according to the ’244 patent, “extends from the base of the base portion to allow fixing to a feeding bottle (not shown) in any appropriate known manner.” Ex. 1001, 2:55-59. The bottom rim of Hakim likewise extends from the base of the base portion 76 to form a “secure seal” with the drinking vessel. Ex. 1005, 37; *see also id.*, 30 (“The bottom rim of the baby bottle nipple is usually covered by the hard portion of the screw cap (i.e., the ring which screws on to the baby bottle) which presses against it tightly.”).

Hakim therefore discloses the assembly including a nipple having a base, a teat portion with an aperture, an areola portion between the teat portion and the base, and a flange depending from the base defining the nipple circumference furthest from the aperture, wherein the teat portion defines a bite region and the areola portion defines a flex region configured to allow the teat portion to flex towards and away from the areola portion. Ex. 1003, ¶ 75.

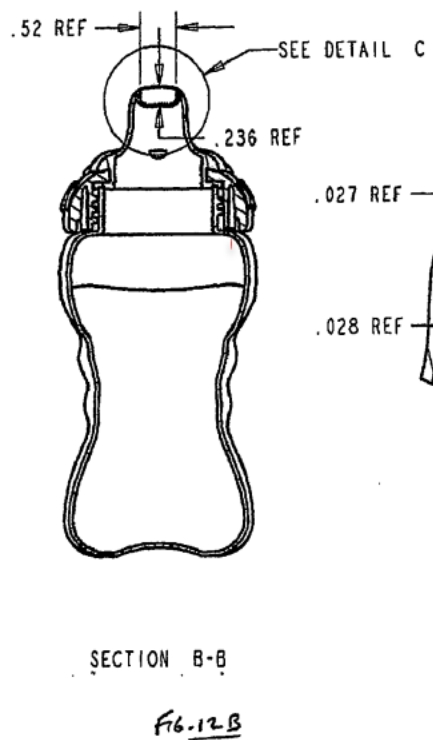
5. Hakim discloses “ii. a collar configured to removably couple to the nipple to seal the container; and”

The nipple disclosed in Hakim “is preferably removably attached to the baby bottles.” Ex. 1005, 12. Specifically, a cap is screwed onto the baby bottle, and the cap is formed “*when* the nipple is attached to the screw cap ring.” *Id.*, 31; *see also id.*, 6-7, 29, 12. Likewise, “the soft lid is removably attached to the ring, as discussed above,” for the nipple. *Id.*, 38-39. An example of a cap 466, including screw ring 468 and nipple 480, is shown in Fig. 10c.



Id., Fig. 10c.

The internal surface of the screw ring “includes screw threads for engagement with a series of screw threads on the baby bottle, so as to screw that cap onto the bottle,” as shown in Fig. 12b, below. *Id.*, 12, 37 (“[T]he no-spill cap 466 and the drinking vessel include mating male and female screw threads, such that the cap 466 is a screw-on cap which can be easily rotated onto the cup, as is known in the art.”).



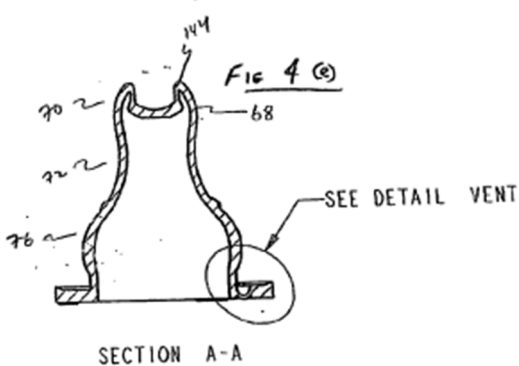
Id., Fig. 12b.

The bottom rim of the nipple seals the container when the cap is screwed on the container. Ex. 1005, 12 (“When the hard cap having the nipple attached thereto is screwed onto the baby bottle, the bottom rim of the nipple is compressed between the top of the bottle and the bottom of the hard cap to further secure the nipple in the cap.”); *id.*, 37 (“The no-spill cap 466 forms a cover for placement onto the cup 491. When attached to the cup, a secure seal is formed such that no liquid can emerge through the connection between the cap and the cup.”); *id.*, 30.

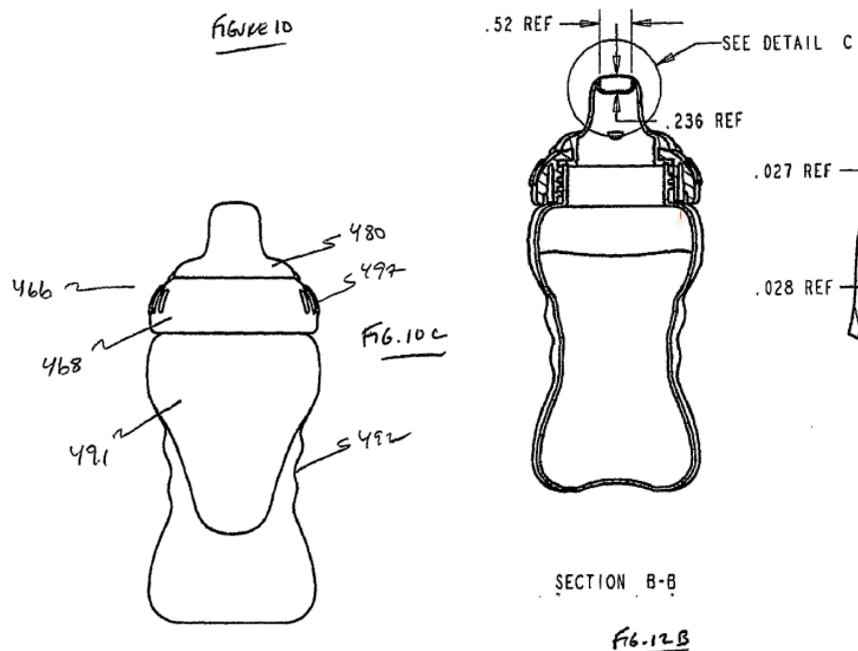
Hakim therefore discloses the assembly including a collar configured to removably couple to the nipple to seal the container. Ex. 1003, ¶ 75.

6. **Hakim discloses “wherein the collar and the base of the nipple together define a downward domed shape that extends outwardly and downwardly between the flex region of the nipple and a widest circumferential edge of the collar.”**

As shown in Fig. 4e, below, the base portion 76 of Hakim has a downward domed shape that extends outwardly and downwardly from the areola portion of the nipple. Ex. 1005, Fig. 4e.



When the screw ring is attached, the downward domed shape extends outwardly and downwardly from the areola portion of the nipple to a widest circumferential edge of the screw ring, as shown in Figs. 10c and 12b, below. *Id.*, Figs. 10c, 12b; Ex. 1003, ¶ 81.



Hakim therefore discloses the collar and the base of the nipple together define a downward domed shape that extends outwardly and downwardly between the flex region of the nipple and a widest circumferential edge of the collar. Ex. 1003, ¶ 82.

B. Claim 2

1. Hakim discloses “The feeding vessel of claim 1, wherein the container is a baby bottle container.”

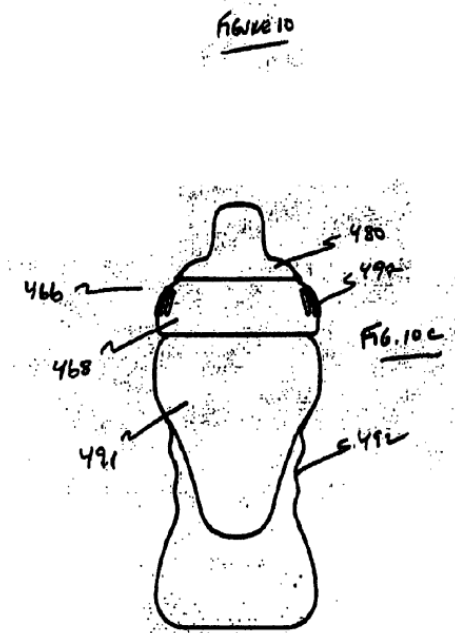
Hakim describes “various embodiments of drinking vessels.” Ex. 1005, 8, 4. The drinking vessel is a “liquid holding container,” such as a “baby bottle.” *Id.*, 35-36, 8-9, 4.

Hakim therefore discloses the feeding vessel of claim 1, wherein the container is a baby bottle container. Ex. 1003, ¶ 83.

C. Claim 3

- 1. Hakim discloses “The feeding vessel of claim 1, wherein the internal circumference of the container below the upper portion increases towards the opening.”**

The container described in Hakim is cylindrical. Ex. 1005, 11, Fig. 10c. It therefore has at least one internal circumference. *Id.*, 26, 17, 20, 27; Ex. 1003, ¶ 84. As shown in Fig. 10c, the circumference of the container is smaller at the middle portion (*e.g.*, at grip 492) and then increases towards the opening at the upper portion of the container. *Id.*, Fig. 10c; Ex. 1003, ¶ 84.



Hakim therefore discloses the feeding vessel of claim 1, wherein the internal circumference of the container below the upper portion increases towards the opening. Ex. 1003, ¶ 85.

D. Claim 5

- 1. Hakim discloses “The feeding vessel of claim 1, wherein the collar comprises threads configured to couple to corresponding threads of the container.”**

The internal surface of the screw ring “includes screw threads for engagement with a series of screw threads on the baby bottle, so as to screw that cap onto the bottle.” Ex. 1005, 12, 37 (“[T]he no-spill cap 466 and the drinking vessel include mating male and female screw threads, such that the cap 466 is a screw-on cap which can be easily rotated onto the cup, as is known in the art.”), Fig. 12b.

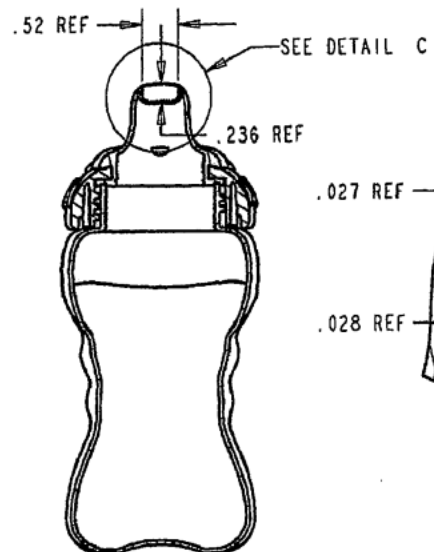
Hakim therefore discloses the feeding vessel of claim 1, wherein the collar comprises threads configured to couple to corresponding threads of the container. Ex. 1003, ¶ 86.

E. Claim 6

- 1. Hakim discloses “The feeding vessel of claim 1, wherein a largest outer diameter of the domed shape is greater than a diameter of the opening of the container.”**

Hakim explains that the screw ring of the cap screws onto the container. Ex. 1005, 37; *see also id.*, 12 (The internal surface of the screw ring “includes screw threads for engagement with a series of screw threads on the baby bottle, so as to screw that cap onto the bottle.”), 37 (“[T]he no-spill cap 466 and the drinking vessel include mating male and female screw threads, such that the cap 466 is a screw-on cap which can be easily rotated onto the cup, as is known in the art.”), 19-20. The

screw ring screws onto the container's neck—the opening of the container, as shown in Fig. 12b. *Id.*



Id., Fig. 12b

The largest outer diameter of the screw ring, as shown in the figure above, is greater than the diameter of the opening at the neck. *Id.*

Hakim therefore discloses the feeding vessel of claim 1, wherein a largest outer diameter of the domed shape is greater than a diameter of the opening of the container. Ex. 1003, ¶ 89.

F. Claim 10

1. Hakim discloses “The feeding vessel of claim 1, wherein the nipple comprises an air vent apart from the aperture.”

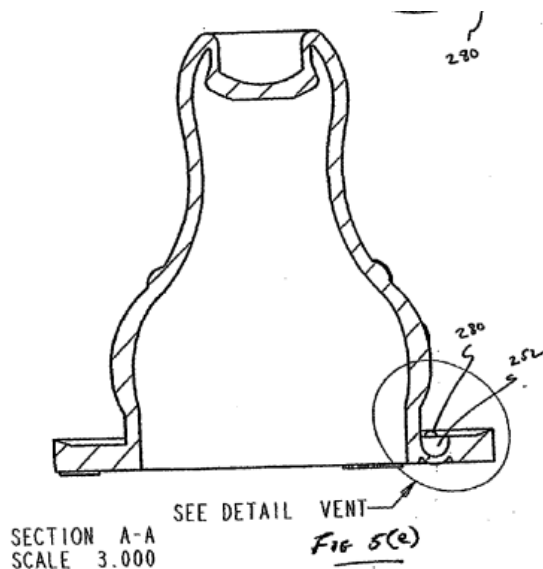
Hakim explains that “[o]ne or more air valves can be provided in the nipple.” Ex. 1005, 29, 5. The air valves in Hakim are also referred to as “air vents.” *Id.*, 33. The air vents “function[] to facilitate the flow of air back into the bottle while the baby is drinking.” *Id.*, 30. The air vent is provided in addition to and apart from the opening at the top of the nipple that enables the user to drink liquid. *Id.*, 5, 28, 30 (“[A]s a child draws liquid from the top of the nipple a vacuum is created in the chamber of the baby bottle or other drinking product which in turn pulls open an opening in the air valve,” which “enables air to go back into the bottle easier.”).

Hakim therefore discloses the feeding vessel of claim 1, wherein the nipple comprises an air vent apart from the aperture. Ex. 1003, ¶ 91.

G. Claim 11

1. Hakim discloses “The feeding vessel of claim 10, wherein the air vent is located in the lower portion of the nipple.”

The air vent disclosed in Hakim “can be provided at the bottom of the baby bottle nipple (e.g. in the nipple’s bottom rim or in the soft lid).” Ex. 1005, 13. For example, air valve 252 is located in the bottom rim of the nipple shown in Fig. 5e, below.



Id., Fig. 5e.

Hakim therefore discloses the feeding vessel of claim 10, wherein the air vent is located in the lower portion of the nipple. Ex. 1003, ¶ 92.

H. Claim 12

1. Hakim discloses “The feeding vessel of claim 11, wherein the air vent is located proximate the collar when the collar is coupled to the nipple.”

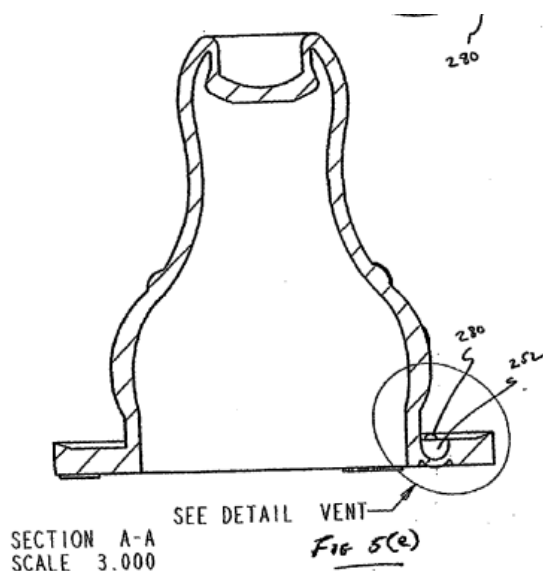
As explained in Section IX.G, above, Hakim describes the air vent as located in the bottom of the nipple (*i.e.*, at the nipple’s bottom rim). The air vent “presses . . . tightly” against the screw ring (*i.e.*, claimed “collar”) “when the nipple is attached to the screw cap ring.” Ex. 1005, 30-31.

Hakim therefore discloses the feeding vessel of claim 11, wherein the air vent is located proximate the collar when the collar is coupled to the nipple. Ex. 1003, ¶ 93.

I. Claim 14

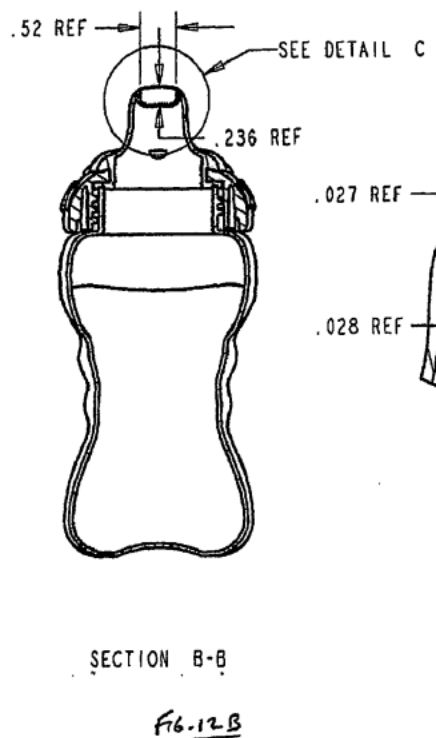
- 1. Hakim discloses “The feeding vessel of claim 10, wherein the air vent projects into the interior of the container.”**

Hakim explains that the air vent is “[a] depression” in nipple that is “preferably the shape of an upside-down dome.” 29. This vent (labeled 252) is shown in Fig. 5e, below.



Ex. 1005, Fig. 5e. The vent shown in the figure projects downward. *Id.* When attached to a screw ring and screwed onto the container (*e.g.*, baby bottle), the air valve projects downward into the neck of container, as shown in Fig. 12b below.

Ex. 1003, ¶ 94.



Id., Fig. 12b.

Hakim therefore discloses the feeding vessel of claim 10, wherein the air vent projects into the interior of the container. Ex. 1003, ¶ 95.

J. Claim 15

- 1. Hakim discloses “The feeding vessel of claim 1, wherein teat portion has circular symmetry around a central axis.”**

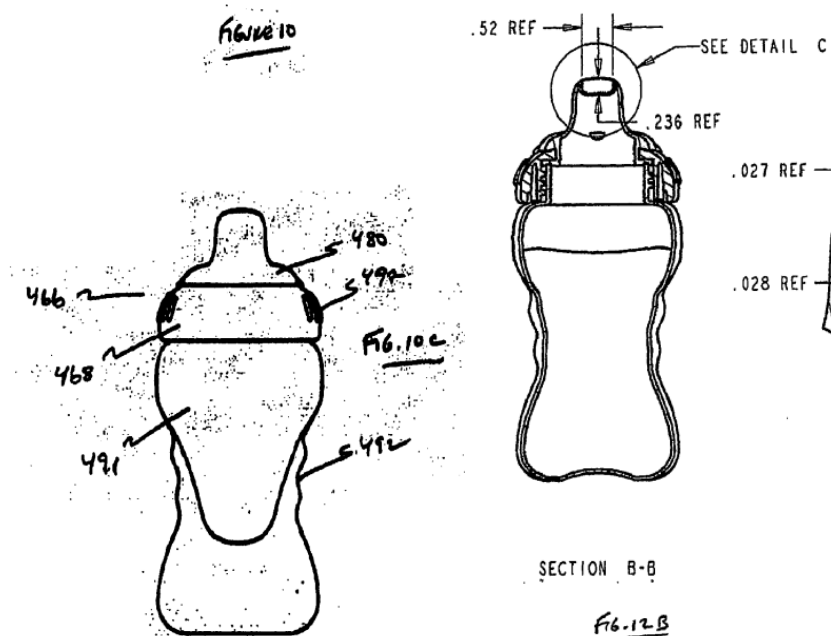
Hakim explains that “[i]n the baby bottle nipple the tip is circular.” Ex. 1005, 17-18. Hakim confirms that the teat portion (*i.e.*, tip 70 with neck 72) has a circular symmetry around a central axis because it “is circular when viewed from the top.” *Id.*, 22; Ex. 1003, ¶ 96.

Hakim therefore discloses the feeding vessel of claim 1, wherein teat portion has circular symmetry around a central axis. Ex. 1003, ¶ 97.

K. Claim 16

1. Hakim discloses “The feeding vessel of claim 1, wherein the domed shape is continuous.”

As explained in Section IX.A.6, above, the screw ring and the base of the nipple together define a downward domed shape that extends outwardly and downwardly between the flex region of the nipple in the areola portion and a widest circumferential edge of the screw ring. This domed shape is continuous from the areola portion to the widest edge of the screw ring, as shown in Figs. 10c and 12b, below.



Ex. 1005, Figs. 10c, 12b; Ex. 1003, ¶ 98.

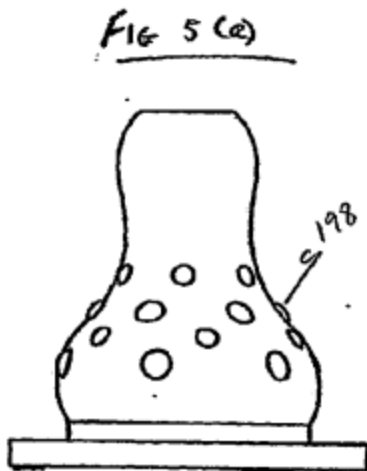
Hakim therefore discloses the feeding vessel of claim 1, wherein the domed shape is continuous. Ex. 1003, ¶ 98.

L. Claim 17

1. Hakim discloses “The feeding vessel of claim 1, wherein an exterior of the teat portion is textured.”

Hakim explains that “the nipple can be constructed out of any of the flexible materials currently used in the art of baby bottle nipple construction.” Ex. 1005, 10. The material used to construct the nipple, including the teat portion, necessarily has a texture, and that texture is “preferably soft, elastic, and made of a material which is harmless to the user.” *Id.* The exterior of the teat portion is therefore “textured.” Ex. 1003, ¶ 99.

Hakim describes embodiments that include “bumps” or “depressions” with a different texture than the rest of the nipple (including the teat portion) “to ease discomfort during the teething process.” Ex. 1005, 34-35. The bumps are shown in Fig. 5a, below.



Id., Fig. 5a. Hakim does not limit where the bumps or depressions are placed on the nipple, and it would have been obvious to one of ordinary skill to include them in the teat portion of the nipple so the “baby can, therefore, rub his or her gums on the harder material bump.” *Id.*, 34-35; Ex. 1003, ¶ 100.

Hakim therefore discloses the feeding vessel of claim 1, wherein an exterior of the teat portion is textured. Ex. 1003, ¶ 101.

M. Claim 18

1. **Hakim discloses “The feeding vessel of claim 1, wherein a circumference of the nipple base is greater than the container opening and configured to overlap the opening and provide an air tight seal.”**

When the cap described in Hakim is screwed onto the container (*e.g.*, baby bottle), “a secure seal is formed such that no liquid can emerge.” Ex. 1005, 37. This secure seal is formed because “[w]hen the hard cap having the nipple attached thereto is screwed onto the baby bottle, the bottom rim of the nipple is compressed between the top of the bottle and the bottom of the hard cap to further secure the nipple in the cap.” *Id.*, 12; *see also id.*, 30 (“The bottom rim of the baby bottle nipple is usually covered by the hard portion of the screw cap (*i.e.* the ring which screws on to the baby bottle) which presses against it tightly.”). To compress on top of the bottle (*i.e.*, on the bottle neck), the bottom rim of the nipple has a circumference greater than the circumference of the bottle neck (otherwise it would fall within the

bottle neck, not sit on top of it). *Id.*; Ex. 1003, ¶ 102. Fig. 12b, below, shows the nipple flange extending beyond the circumference of the bottle neck.

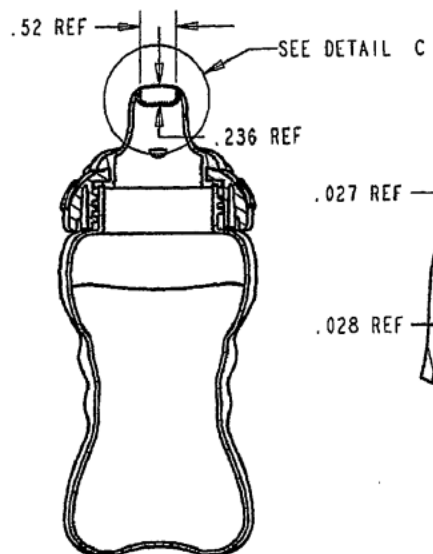


Fig. 12b

Id., Fig. 12b.

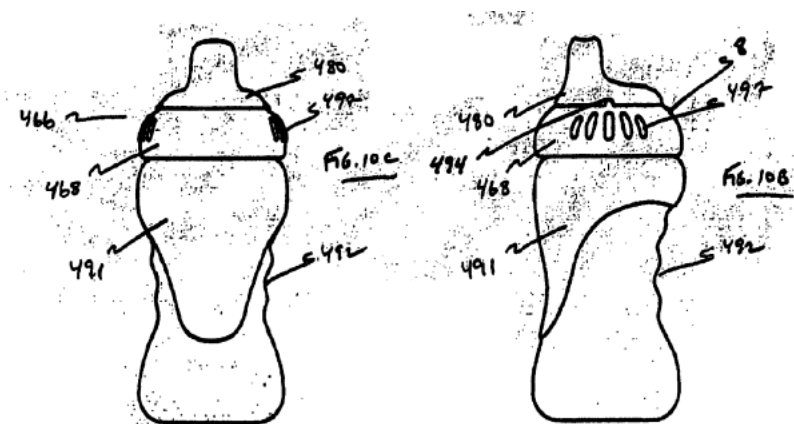
Hakim therefore discloses the feeding vessel of claim 1, wherein a circumference of the nipple base is greater than the container opening and configured to overlap the opening and provide an air tight seal. Ex. 1003, ¶ 103.

N. Claim 19

1. **Hakim discloses “The feeding vessel of claim 1, wherein the middle portion of the container comprises two indentations.”**

The drinking vessel described in Hakim includes a grip, “i.e. a gripping area for use to hold the cup more securely.” Ex. 1005, 36. The grip has multiple

indentations, “in the form of a series of contours.” *Id.* These contours are shown in grip 492 of Figures 10b and 10c, below.



Hakim therefore discloses the feeding vessel of claim 1, wherein the middle portion of the container comprises two indentations. Ex. 1003, ¶ 105.

O. Claim 21

1. Hakim discloses “A drinking vessel comprising:”

Hakim is titled “No-spill drinking products.” Ex. 1005. “The no-spill products of the invention include various embodiments of drinking vessels,” including “baby bottle nipples and their associated baby bottles.” Ex. 1005, 8-9, 4.

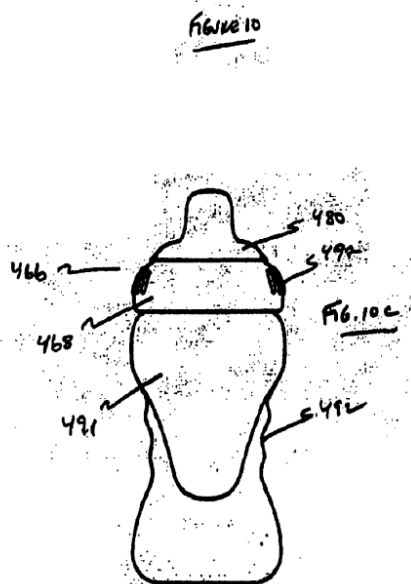
Hakim therefore discloses a drinking vessel. Ex. 1003, ¶ 106.

2. Hakim discloses “a container comprising a varying internal circumference and an opening into the container; and”

Hakim discloses this limitation for the reasons provided in Sections IX.A.2 and IX.C, above.

3. Hakim discloses “a cover assembly configured to couple to the container over the opening, the cover assembly comprising:”

Hakim describes a no-spill cap 466, shown in Fig. 10c.



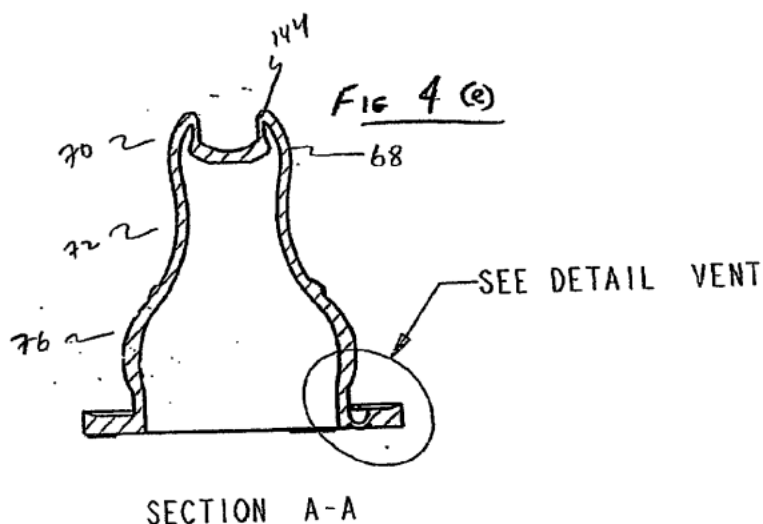
Ex. 1005, Fig. 10c. “The no-spill cap is provided for attachment to a liquid holding container.” *Id.*, 35-36; *see also id.*, 37. “In use, the cap 466 is sufficiently secured to the cup such that shaking the cup assembly, dropping the cup on the floor, or other vigorous movement of the drinking product or application of sharp force thereto, is insufficient to separate the cap from the cup.” *Id.*, 37. The cap is a cover assembly that includes screw ring 468 and soft lid (or nipple) 480. *Id.*, 37; *see also id.*, 19-20. The internal surface of the screw ring “includes screw threads for engagement with a series of screw threads on the baby bottle, so as to screw that cap onto the bottle.” *Id.*, 12, 37 (“[T]he no-spill cap 466 and the drinking vessel include mating male and

female screw threads, such that the cap 466 is a screw-on cap which can be easily rotated onto the cup, as is known in the art.”).

Hakim therefore discloses the drinking vessel including a cover assembly configured to couple to the container over the opening. Ex. 1003, ¶ 110.

4. **Hakim discloses “i. a nipple comprising a mouthpiece configured to allow liquid flow through the nipple to an aperture, a flex region configured to allow flex of the mouthpiece towards and away from a lower portion of the nipple, the mouthpiece defining a bite region, and a flange depending from the lower portion of the nipple defining the nipple circumference furthest from the aperture; and”**

The no-spill drinking product of Hakim includes a nipple. Ex. 1005, 12 (“The nipple of the present invention is preferably removably attached to the baby bottles, as is currently known in the art.”); *id.*, 11. The nipple includes a mouthpiece, *e.g.*, neck 72 with tip 70 as shown in Fig. 4e, below.

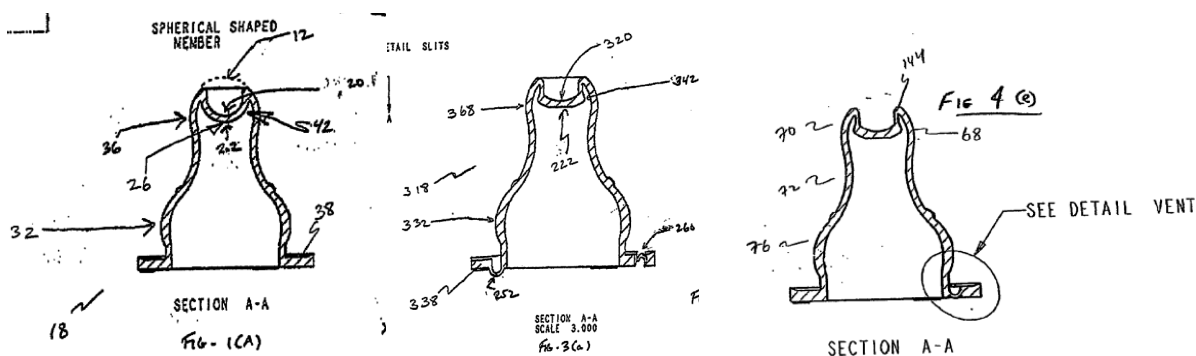


Id., Fig. 4e.

The tip 70 includes an aperture, which “can be, for example, a hole, a slit, a slot, an orifice, or so forth.” *Id.*, 5; *see also id.*, 20, 5. Ultimately, the aperture can be “any form of desired opening suitable for passage of a desired level of liquid.” *Id.*, 5. The mouthpiece is made of “any of the flexible materials currently used in the art of baby bottle nipple construction.” *Id.*, 10. The flexible materials used in the mouthpiece (and for the nipple as a whole) enables the mouthpiece to flex towards and away from the base portion 76 on a lower portion of the nipple. Ex. 1003, ¶ 112.

The mouthpiece defines a bite region where “a user places his or her mouth against the spout of the product to bite down on the soft material of the spout and to drink liquid out when desired.” Ex. 1005, 4; *see also id.*, 18, 26-27, 40 (“To drink from the product, the user naturally bites down on the nipple or spout's outer wall.”).

The nipple disclosed in Hakim includes a bottom rim. *Id.*, 12, 30. The bottom rim is shown in Figs. 1a (labeled 38), 3a (labeled 338), and 4e (circled), each reproduced below.



Id., Figs. 1a, 3a, 4e. As shown in the figures above, the bottom rim is connected to and extends from the base portion (*e.g.*, 76 in Fig. 4(e)). *Id.*, Figs. 1a, 3a, 4e. As further shown in the figures above, the bottom rim defines the nipple circumference furthest from the aperture at the tip (*e.g.*, 70 in Fig. 4(e)). *Id.*; Ex. 1003, ¶ 114.

A “flange,” according to the ’244 patent, “extends from the base of the base portion to allow fixing to a feeding bottle (not shown) in any appropriate known manner.” Ex. 1001, 2:55-59. The bottom rim of Hakim likewise extends from the base of the base portion 76 to form a “secure seal” with the drinking vessel. Ex. 1005, 37; *see also id.*, 30 (“The bottom rim of the baby bottle nipple is usually covered by the hard portion of the screw cap (*i.e.* the ring which screws on to the baby bottle) which presses against it tightly.”).

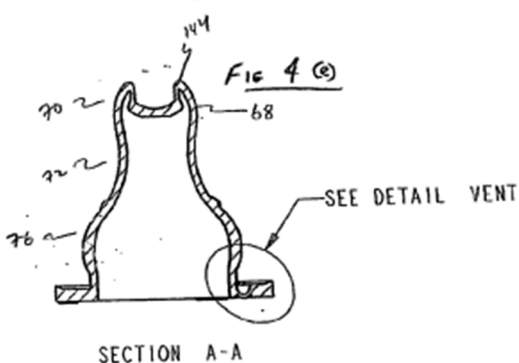
Hakim therefore discloses the cover assembly including a nipple comprising a mouthpiece configured to allow liquid flow through the nipple to an aperture, a flex region configured to allow flex of the mouthpiece towards and away from a lower portion of the nipple, the mouthpiece defining a bite region, and a flange depending from the lower portion of the nipple defining the nipple circumference furthest from the aperture. Ex. 1003, ¶ 116.

5. Hakim discloses “ii. a collar configured to removably couple to the nipple to seal over the opening of the container; and”

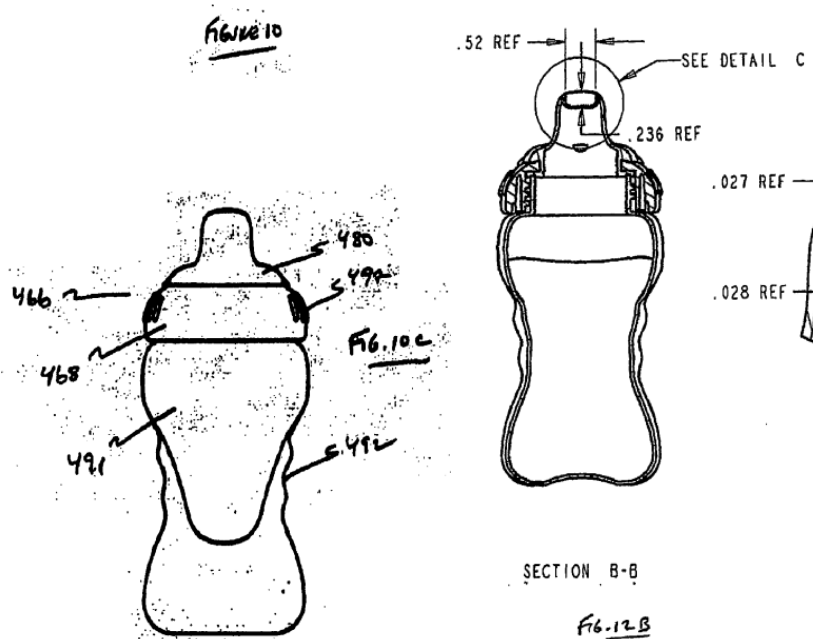
Hakim discloses this limitation for the reasons provided in Section IX.A.5, above.

6. **Hakim discloses “wherein the collar and the lower portion of the nipple together define a downward domed shape that extends outwardly and downwardly from the flex region of the nipple towards a widest circumferential edge of the collar.”**

As shown in Fig. 4e, below, the base portion 76 of Hakim has a downward domed shape that extends outwardly and downwardly from the areola portion of the nipple. Ex. 1005, Fig. 4e.



When the screw ring is attached, the downward domed shape extends outwardly and downwardly from the areola portion of the nipple to a widest circumferential edge of the screw ring, as shown in Figs. 10c and 12b below. *Id.*, Figs. 10c, 12b; Ex. 1003, ¶ 119.



Hakim therefore discloses the collar and the lower portion of the nipple together define a downward domed shape that extends outwardly and downwardly from the flex region of the nipple towards a widest circumferential edge of the collar. Ex. 1003, ¶ 120.

P. Claim 22

- Hakim discloses “The drinking vessel of claim 21, wherein the container is a trainer cup.”**

Hakim explains that its “drinking vessel” is a “liquid holding container,” such as a “trainer cup.” Ex. 1005, 35-36, 5, 9.

Hakim therefore discloses the drinking vessel of claim 21, wherein the container is a trainer cup. Ex. 1003, ¶ 121.

Q. Claim 23

- 1. Hakim discloses “The drinking vessel of claim 21, wherein the container comprises a material more rigid than the nipple material.”**

Hakim explains that the nipple is made of materials that “are preferably soft, elastic, and made of a material which is harmless to the user.” Ex. 1005, 10. The container, on the other hand, is “hard,” and therefore more rigid than the “soft” nipple. *Id.*, 36; Ex. 1003, ¶ 122. The containers “are generally made of a plastic or glass material, and are usually cylindrical in shape, although bottles of any suitable material or shape can be used consistent with the invention.” Ex. 1005, 11.

Hakim therefore discloses the drinking vessel of claim 21, wherein the container comprises a material more rigid than the nipple material. Ex. 1003, ¶ 123.

R. Claim 24

- 1. Hakim discloses “The drinking vessel of claim 21, wherein the cover assembly further comprises an air vent apart from the mouthpiece.”**

Hakim explains that “[o]ne or more air valves can be provided in the nipple.” Ex. 1005, 29, 5. The air valves in Hakim are also referred to as “air vents.” *Id.*, 33. The air vents “function[] to facilitate the flow of air back into the bottle while the baby is drinking.” *Id.*, 30. The air vent is provided in addition to and apart from the opening at the top of the nipple that enables the user to drink liquid. *Id.*, 5, 28, 30 (“[A]s a child draws liquid from the top of the nipple a vacuum is created in the

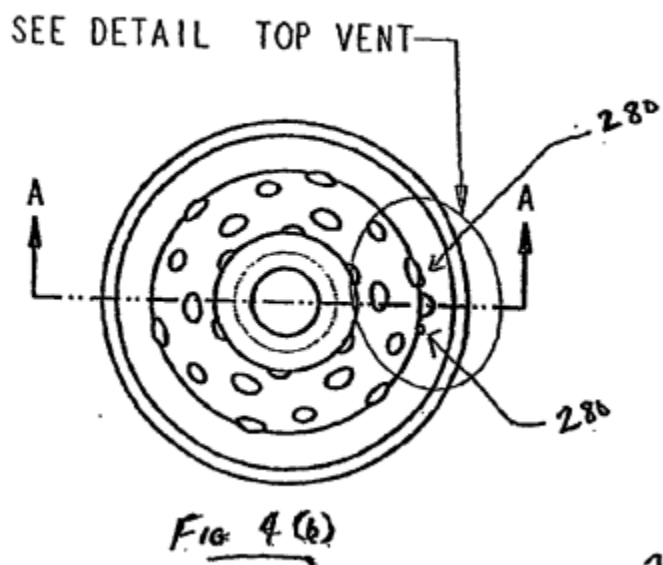
chamber of the baby bottle or other drinking product which in turn pulls open an opening in the air valve,” which “enables air to go back into the bottle easier.”).

Hakim therefore discloses the drinking vessel of claim 21, wherein the cover assembly further comprises an air vent apart from the mouthpiece. Ex. 1003, ¶ 125.

S. Claim 26

1. Hakim discloses “The drinking vessel of claim 21, wherein the mouthpiece is located in the center of the nipple.”

As shown in Fig. 4b, below, the mouthpiece is located in the center of the nipple.



Id., Fig. 4b. The figure provides an overhead view of the nipple and shows that the tip and neck of the nipple are located in the center of the nipple. *Id.*; Ex. 1003, ¶ 126.

Hakim therefore discloses the drinking vessel of claim 21, wherein the mouthpiece is located in the center of the nipple. Ex. 1003, ¶ 126.

T. Claim 27

1. Hakim discloses “The drinking vessel of claim 21, wherein the teat portion comprises a resilient material.”

Hakim explains that the nipple (including its teat portion) “can be constructed out of any of the flexible materials currently used in the art of baby bottle nipple construction, or any other suitable flexible materials for use in such a nipple.” Ex. 1005, 10. These materials “are preferably soft, elastic,” and “are sterilizable (preferably by boiling).” *Id.* These materials are resilient enough to withstand boiling water and maintain flexibility through repeated use. *Id.*; Ex. 1003, ¶ 127.

Hakim therefore discloses the drinking vessel of claim 21, wherein the teat portion comprises a resilient material. Ex. 1003, ¶ 128.

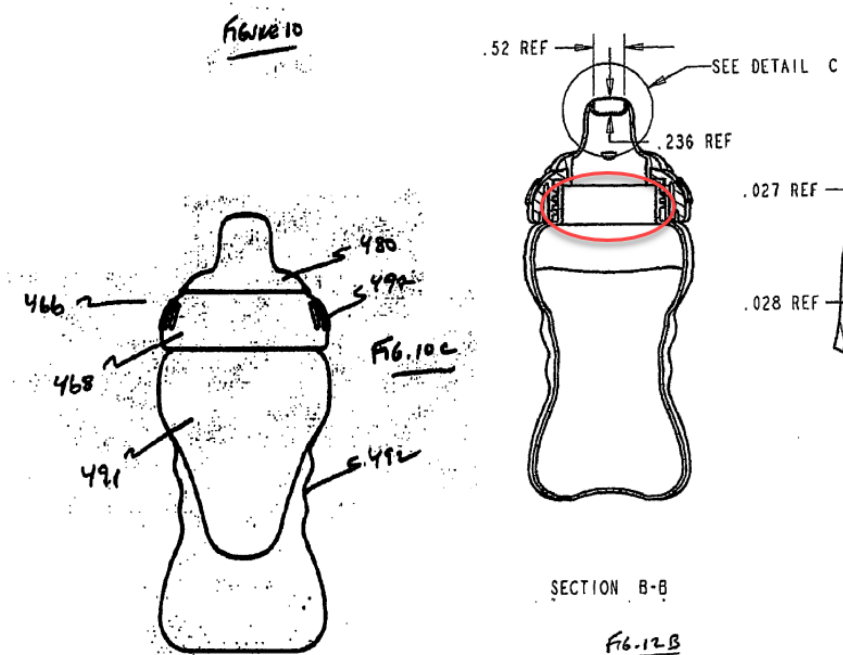
U. Claim 30

1. Hakim discloses “A feeding vessel, comprising:”

Hakim discloses this limitation for the reasons provided in Section IX.A.1, above.

2. **Hakim discloses “a container comprising: i. a threaded neck portion with an opening into the interior of the container, ii. a body portion having 1. an upper body portion, 2. a middle body portion below the upper body portion, and 3. a bottom body portion below the middle body portion, wherein the middle body portion has a smaller horizontal cross-section than a horizontal cross-section of both the upper body portion and the bottom body portion; and”**

The no-spill drinking product described in Hakim includes a “drinking vessel such as a cup 491,” shown in Figures 10c and 12b, below. Ex. 1005, 37.



Id., Figs. 10c, 12b (emphasis added). The drinking vessel is a “liquid holding container.” *Id.*, 35-36. As shown in the figures, the container 491 is tapered in the middle such that the middle portion of the container (*e.g.*, near grip 492) has a smaller horizontal cross-section than that of the portions above and below it. *Id.*, Figs. 10c, 12b.

The container includes a bottle neck (circled in Fig. 12b and to which screw ring 468 is screwed in Fig. 10c). *Id.*, 17, 28-29; *see also id.*, 29, 38, 39-40. The bottle neck has an open top that enables an infant or other user to drink the liquid (*e.g.*, milk) held in the container. *Id.*, 11 (“Such bottles (or cups) are known in the art, and are used for a baby to drink therefrom during the years when the baby is nursing.”); Ex. 1003, ¶ 131. The neck of the container includes threads on its outer surface that “mate” with the threads on the inner surface of the screw ring so the ring can screw onto the container. Ex. 1005, 12, 37-38, 30, Fig. 12b.

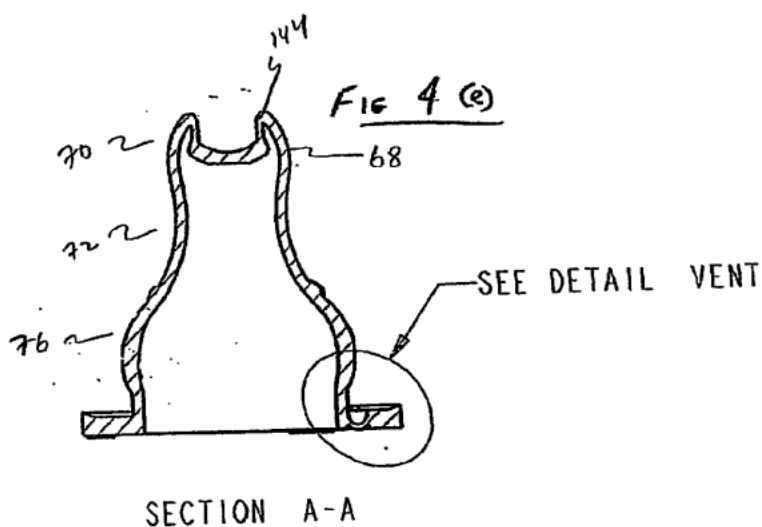
Hakim therefore discloses the feeding vessel including a container comprising: i. a threaded neck portion with an opening into the interior of the container, ii. a body portion having 1. an upper body portion, 2. a middle body portion below the upper body portion, and 3. a bottom body portion below the middle body portion, wherein the middle body portion has a smaller horizontal cross-section than a horizontal cross-section of both the upper body portion and the bottom body portion. Ex. 1003, ¶ 132.

3. Hakim discloses “an assembly configured to mount over and surround the threaded neck portion, the assembly comprising:”

Hakim discloses this limitation for the reasons provided in Sections IX.A.2 and IX.A.3, above.

4. **Hakim discloses “i. a nipple having a teat portion with an aperture, an areola portion with an outer surface extending downwardly and outwardly from the teat portion, and a flange depending from the base defining the nipple circumference furthest from the aperture, wherein the teat portion defines a bite region and the areola portion defines a flex region configured to allow the teat portion to flex towards and away from the areola portion, and”**

The no-spill drinking product of Hakim includes a nipple. Ex. 1005, 12 (“The nipple of the present invention is preferably removably attached to the baby bottles, as is currently known in the art.”); *id.*, 11. The nipple includes regions that meet the claimed teat portion, base portion, and areola portion, as shown in Figure 4e.



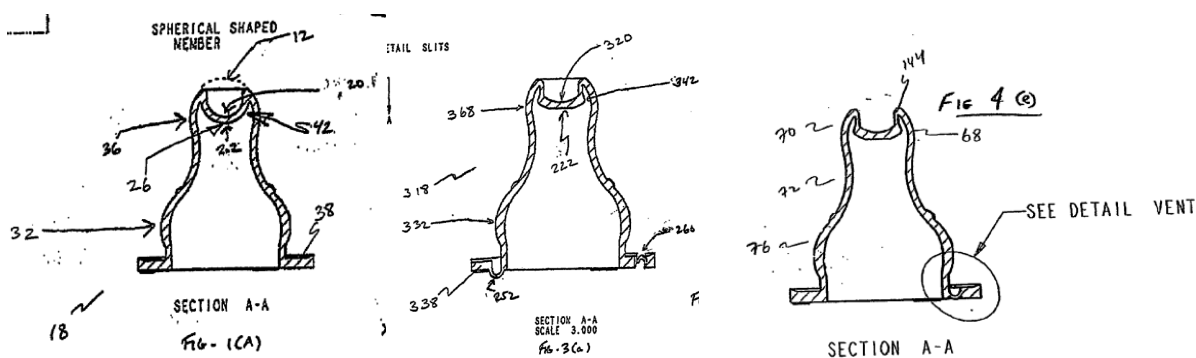
Id., Fig. 4e. The teat portion includes neck 72 and tip 70; the base portion is labeled 76; and the areola portion is the region between the base portion 76 and the neck 72. *Id.*, 20; Ex. 1003, ¶ 134.

The teat portion (*i.e.*, neck 72 with tip 70) includes an aperture, which “can be, for example, a hole, a slit, a slot, an orifice, or so forth.” Ex. 1005, 5; *see also*

id., 20, 5. The teat portion defines a bite region where “a user places his or her mouth against the spout of the product to bite down on the soft material of the spout and to drink liquid out when desired.” *Id.*, 4; *see also id.*, 18-19, 26-27, 40 (“To drink from the product, the user naturally bites down on the nipple or spout's outer wall.”).

The areola portion in Hakim extends downwardly and outwardly from the neck 72 and base portion 76, shown in Fig. 4e. *Id.*, Figure 4e; Ex. 1003, ¶ 136. The areola portion is made of “any of the flexible materials currently used in the art of baby bottle nipple construction.” Ex. 1005, 10. The flexible materials used in the areola portion (and for the nipple as a whole) enables the teat portion to flex towards and away from the areola portion. Ex. 1003, ¶ 136.

The nipple disclosed in Hakim includes a bottom rim. Ex. 1005, 12, 30. The bottom rim is shown in Figs. 1a (labeled 38), 3a (labeled 338), and 4e (circled), each reproduced below.



As shown in the figures above, the bottom rim is connected to and extends from the base portion (*e.g.*, 76 in Fig. 4(e)). *Id.*, Figs. 1a, 3a, 4e. As further shown in the

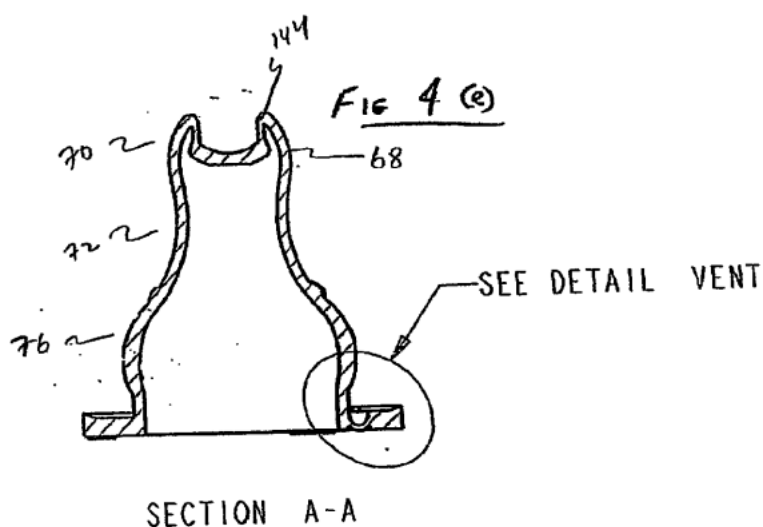
figures above, the bottom rim defines the nipple circumference furthest from the aperture at the tip (*e.g.*, 70 in Fig. 4(e)). *Id.*; Ex. 1003, ¶ 137.

A “flange,” according to the ’244 patent, “extends from the base of the base portion to allow fixing to a feeding bottle (not shown) in any appropriate known manner.” Ex. 1001, 2:55-59. The bottom rim of Hakim likewise extends from the base of the base portion 76 to form a “secure seal” with the drinking vessel. Ex. 1005, 37; *see also id.*, 30 (“The bottom rim of the baby bottle nipple is usually covered by the hard portion of the screw cap (*i.e.* the ring which screws on to the baby bottle) which presses against it tightly.”).

Hakim therefore discloses the assembly including a nipple having a teat portion with an aperture, an areola portion with an outer surface extending downwardly and outwardly from the teat portion, and a flange depending from the base defining the nipple circumference furthest from the aperture, wherein the teat portion defines a bite region and the areola portion defines a flex region configured to allow the teat portion to flex towards and away from the areola portion. Ex. 1003, ¶ 139.

5. **Hakim discloses “ii. a base portion positioned below said areola portion and comprising a threaded collar adapted to threadably engage with said threaded neck portion and removably couple to the nipple to seal over the opening of the container; and”**

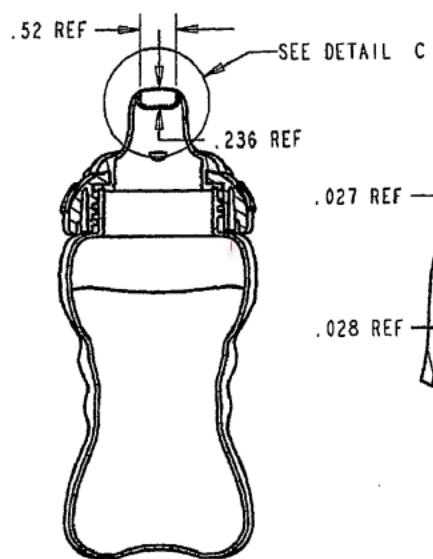
As explained in Section IX.A.4, above, the base portion (*i.e.*, base portion 76 in Fig. 4e) is located below the areola portion. Hakim explains that the “nipple is attached to a hard screw-ring to form a cap for a baby bottle, with the nipple protruding through the hole in the screw ring.” Ex. 1005, 12. The nipple includes a “recess,” like the recess between the base portion 76 and the bottom rim shown in Fig. 4e below, where the screw ring attaches. *Id.*, 12.



Id., Fig. 4e. The inner edge of the screw ring “snugly fits in the groove” of the recess, pressing tightly against the base portion above it and the bottom rim below it. *Id.*, Fig. 12b, *id.* 38-39. (“When the hard cap having the nipple attached thereto is screwed onto the baby bottle, the bottom rim of the nipple is compressed between

the top of the bottle and the bottom of the hard cap to further secure the nipple in the cap.”).

The internal surface of the screw ring “includes screw threads for engagement with a series of screw threads on the baby bottle, so as to screw that cap onto the bottle,” as shown in Fig. 12b, below. *Id.*, 12, 37-38 (“[T]he no-spill cap 466 and the drinking vessel include mating male and female screw threads, such that the cap 466 is a screw-on cap which can be easily rotated onto the cup, as is known in the art.”).



SECTION B-B

Fig. 12b

Id., Fig. 12b.

The bottom rim of the nipple seals the container when the cap is screwed on the container. Ex. 1005, 12 (“When the hard cap having the nipple attached thereto is screwed onto the baby bottle, the bottom rim of the nipple is compressed between

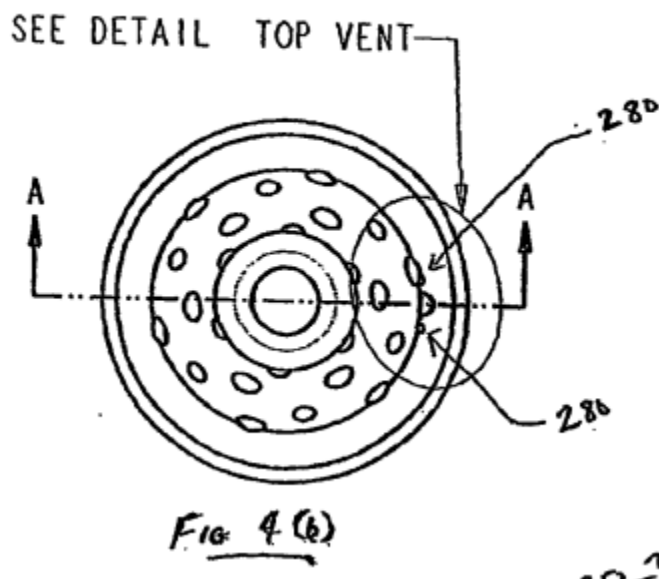
the top of the bottle and the bottom of the hard cap to further secure the nipple in the cap.”); *id.*, 38 (“The no-spill cap 466 forms a cover for placement onto the cup 491. When attached to the cup, a secure seal is formed such that no liquid can emerge through the connection between the cap and the cup.”); *id.*, 30.

Hakim therefore discloses the assembly including a base portion positioned below said areola portion and comprising a threaded collar adapted to threadably engage with said threaded neck portion and removably couple to the nipple to seal over the opening of the container. Ex. 1003, ¶ 143.

6. **Hakim discloses “wherein the nipple has an outer surface of elastomeric material that extends from the teat portion to a portion below said areola portion and that is substantially rotationally symmetric about the central vertical axis of said assembly and has a circumference that continuously and smoothly decreases from a position on said outer surface that is below the areola portion and has a substantially vertical slope to at least a position on said teat portion that has a substantially vertical slope.”**

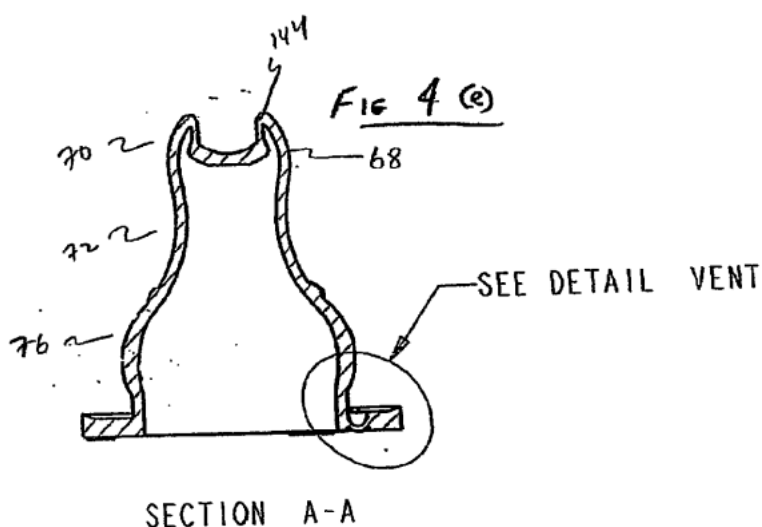
The nipple described in Hakim “can be constructed out of any of the flexible materials currently used in the art of baby bottle nipple construction.” Ex. 1005, 10. These materials include elastomers such as “silicone, latex, rubber, plastic, or so forth.” *Id.*; Ex. 1003, ¶ 144.

As shown in Fig. 4b, below, the nipple is substantially rotationally symmetric about the central vertical axis (*i.e.*, a vertical axis located at the center of the nipple tip).



Id., Fig. 4b. The figure provides an overhead view of the nipple and shows that the tip is located in the center of the nipple. *Id.*; Ex. 1003, ¶ 145. The nipple “is circular when viewed from the top.” *Id.*, 22; Ex. 1003, ¶ 145.

As shown in Fig. 4e, below, the nipple circumference continuously and smoothly decreases from the base portion 76 up through the neck 72.



Id., Fig. 4e. The figure also shows that the nipple has a substantially vertical slope.

Id.; Ex. 1003, ¶ 147.

Hakim therefore discloses the nipple has an outer surface of elastomeric material that extends from the teat portion to a portion below said areola portion and that is substantially rotationally symmetric about the central vertical axis of said assembly and has a circumference that continuously and smoothly decreases from a position on said outer surface that is below the areola portion and has a substantially vertical slope to at least a position on said teat portion that has a substantially vertical slope. Ex. 1003, ¶ 148.

V. Claim 31

1. Hakim discloses “A feeding vessel, comprising:”

Hakim discloses this limitation for the reasons provided in Section IX.A.1, above.

2. Hakim discloses “a container comprising: i. a threaded neck portion with an opening into the interior of the container, ii. a body portion having 1. an upper body portion, 2. a middle body portion below the upper body portion, and 3. a bottom body portion below the middle body portion, wherein the middle body portion has a smaller horizontal cross-section than horizontal cross-section of both the upper body portion and the bottom body portion; and”

Hakim discloses this limitation for the reasons provided in Section IX.U.2, above.

3. **Hakim discloses “an assembly configured to mount over and surround the threaded neck portion, the assembly comprising:”**

Hakim discloses this limitation for the reasons provided in Section IX.A.3, above.

4. **Hakim discloses “i. a nipple having a teat portion with an aperture, and an areola portion with an outer surface extending downwardly and outwardly from the teat portion, and a flange depending from the base defining the nipple circumference furthest from the aperture, wherein the teat portion defines a bite region and the areola portion defines a flex region configured to allow the teat portion to flex towards and away from the areola portion, and”**

Hakim discloses this limitation for the reasons provided in Section IX.U.4, above.

5. **Hakim discloses “ii. a base portion positioned below said areola portion and comprising a screw collar adapted to threadably engage with said threaded neck portion and removably couple to the nipple to seal over the opening of the container; and”**

Hakim discloses this limitation for the reasons provided in Section IX.U.5 above.

6. **Hakim discloses “wherein the assembly has an outer surface extending from the teat portion to the base portion that is substantially rotationally symmetric about the central vertical axis of said assembly and has a circumference that continuously and smoothly decreases from a position on said base portion having a substantially vertical slope to a position on said teat portion having a substantially vertical slope.”**

Hakim discloses this limitation for the reasons provided in Section IX.U.6, above.

X. GROUND II: CLAIMS 4 AND 25 ARE RENDERED OBVIOUS BY HAKIM IN VIEW OF HAKIM II

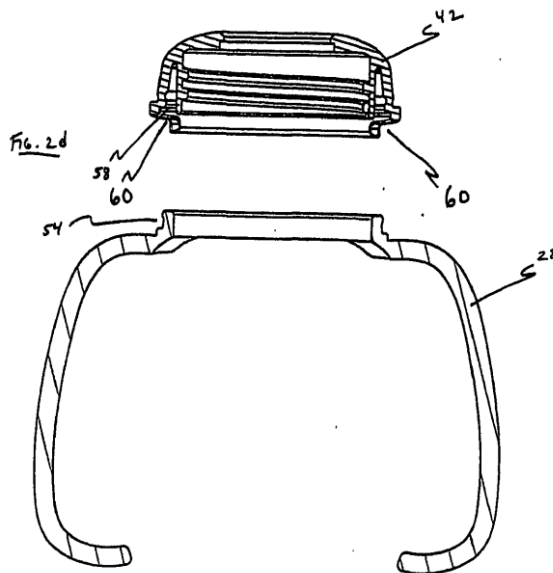
A. Claim 4

1. **Hakim in view of Hakim II discloses “The feeding vessel of claim 1, wherein the assembly comprises removable handles.”**

Hakim describes an assembly, called a “cap,” that is removable from a drinking vessel, such as a baby bottle. Ex. 1005, 12 (the nipple “is preferably removably attached to the baby bottles”), 31 (and the cap is formed “*when* the nipple is attached to the screw cap ring”) (emphasis added); *see also id.*, 6, 29-30, 12. Hakim explains that the drinking vessel can be “provided with no handles, one handle, two handles, or any other number of handles, for use to grip the cup.” *Id.*, 36.

Hakim II describes a handle that locks into the baby bottle cap. *Id.*, ¶ 30. “In the preferred embodiment, the top of the handle snaps into the recess to form a secure fit.” *Id.* The cap also includes “slits or notches” at its sides and the handle tops fit

into these notches. *Id.* “As a result, the handles and the cap are integrated into a single unit.” *Id.* A cap 42 and handle 28 according to Hakim II are shown in Figure 2d.



“To assemble the handle 28 and cap 42, ring 54 of handle 28 is inserted into recess 58 of cap 42 to snap into and form a secure fit between the handle 28 and the cap.” *Id.*, ¶ 34. The handles can be “removed from the cap” by removing the ring 54 from the cap’s recess 58. *Id.*, ¶¶ 32, 34.

To the extent Hakim does not disclose the assembly comprising removable handles as recited in this claim, it would have been obvious to replace the handles of Hakim with the removable handles of Hakim II. Hakim and Hakim II share the same sole named inventor and are both directed to improvements to baby bottles. Ex. 1005, 8-9; Ex. 1009, ¶ 3. The baby bottles in both references include handles and a removable cap. Replacing the handles of Hakim, which are attached to the

sides of Hakim's drinking vessel, with the removable handles of Hakim II, which are removably attached to the Hakim II's bottle cap, uses a known technique to improve a similar device in the same way. Ex. 1003, ¶ 157. A person of ordinary skill would have been motivated to replace Hakim's handles with those described in Hakim II to provide the user (*e.g.*, baby) more options for grasping the baby bottle while also facilitating cleaning or replacement of components in the baby bottles. The baby may prefer using handles at times, but at other times may prefer no handles. Hakim II's handles provides versatility and the option to remove the handles, which also makes it easier to replace or clean the handles as desired by the user. *Id.*

Hakim in view of Hakim II therefore teaches the feeding vessel of claim 1, wherein the assembly comprises removable handles. *Id.*, ¶ 158.

B. Claim 25

- 1. Hakim in view of Hakim II discloses “The drinking vessel of claim 21, wherein the cover assembly further comprises removable handles.”**

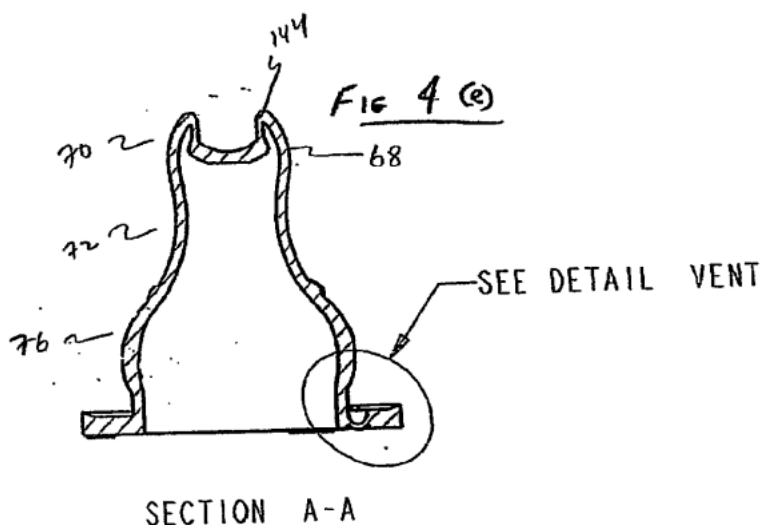
Hakim in view of Hakim II discloses this limitation for the reasons provided in Section X.A, above.

XI. GROUND II: CLAIMS 7-9, 20, 28, AND 29 ARE RENDERED OBVIOUS BY HAKIM IN VIEW OF KOBAYASHI

A. Claim 7

1. **Hakim in view of Kobayashi discloses “The feeding vessel of claim 1, wherein the flex region comprises a plurality of grooves in an inward facing surface of the nipple configured to enable the teat portion and areola portion to flex towards and away from one another by respective collapsing and extending of the flex region in the grooves.”**

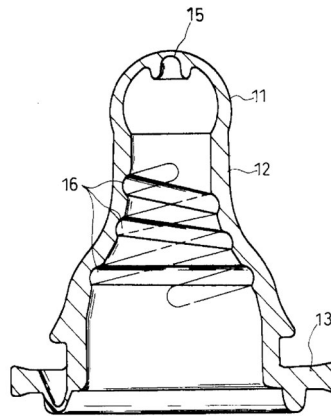
The areola portion in Hakim is between the neck 72 and the base portion 76, shown in Fig. 4e, below. *See* Ex. 1005, Fig. 4e; Ex. 1003, ¶ 160.



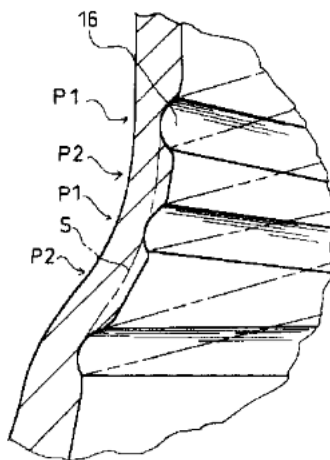
The areola portion is made of “any of the flexible materials currently used in the art of baby bottle nipple construction.” Ex. 1005, 10. The flexible materials used in the areola portion (and for the nipple as a whole) enables the teat portion to flex towards and away from the areola portion. Ex. 1003, ¶ 161.

Kobayashi also describes a baby bottle nipple with a flex region. Kobayashi describes a nipple that includes a “spiral groove” that is “formed on an inner side” of the nipple. Ex. 1006, ¶ 15. The spiral groove 16 is shown in Figure 5, below.

【図5】



Id., Fig. 5. The spiral groove 16 is at the inner surface of the body portion 12. *Id.*, ¶ 15. Fig. 8, below, more clearly shows the grooves in the inward facing surface of the nipple.

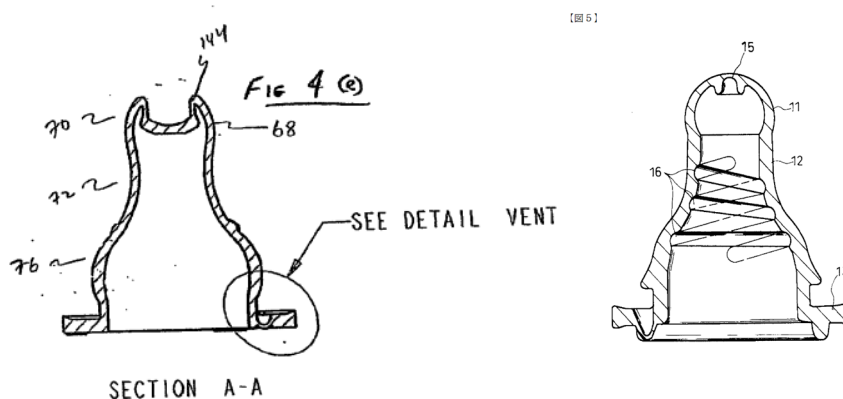


【図8】

Id., Fig. 8; *id.* ¶ 28 (the spiral “groove is molded on a body portion of the nipple for a feeding bottle”).

The spiral groove “aid[s] the supply of milk to the upper portion of the nipple” when a baby is drinking milk. Ex. 1006, ¶ 23. Specifically, the spiral groove elongates in the direction of the teat as the baby drinks milk. *Id.*; *id.* ¶ 18 (“That is, by taking the above-described shape, it is possible to improve the elongation of the nipple and prevent the nipple is not easily crushed.”); *id.* ¶ 28 (“the body portion is mainly elongated when the nipple is elongated”). The spiral groove therefore enables the teat portion and areola portion to flex towards and away from one another by respective collapsing and extending of the flex region in the spiral groove. *Id.*

To the extent Hakim does not disclose a flex region as recited in this claim, it would have been obvious to add the spiral groove of Kobayashi into the areola portion of Hakim. Both Hakim and Kobayashi are directed to improvements to baby bottle nipples. Ex. 1005, 8-9; Ex. 1006, ¶ 1. The nipples, show in the figures below, have generally the same shape and structure.



Ex. 1005, Fig. 4e (left), Ex. 1006, Fig. 5 (right). Adding Kobayashi's spiral groove into the nipple of Hakim combines prior art elements to yield predictable results. Ex. 1003, ¶ 167. A person of ordinary skill would have been motivated to add Kobayashi's spiral groove into Hakim's nipple so that "elongation of the nipple in the tip direction is improved," the "supply of milk to the upper portion of the nipple" is improved, and the "tactile sensation. . . . can induce feeling of contact with the mother." Ex. 1006, ¶ 23; Ex. 1003, ¶ 167.

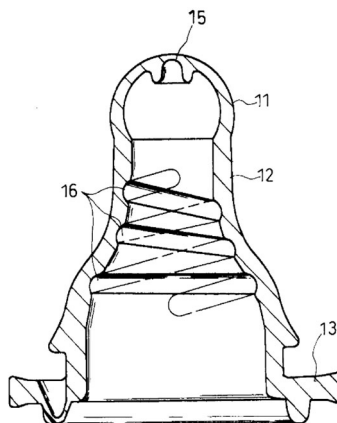
Hakim in view of Kobayashi therefore teaches the feeding vessel of claim 1, wherein the flex region comprises a plurality of grooves in an inward facing surface of the nipple configured to enable the teat portion and areola portion to flex towards and away from one another by respective collapsing and extending of the flex region in the grooves. Ex. 1003, ¶ 168.

B. Claim 8

1. Hakim in view of Kobayashi discloses "The feeding vessel of claim 7, wherein the grooves are circumferential."

As Kobayashi explains, "[t]he spiral groove 16 is formed in a spiral shape upward from a lower position of the body portion 12 of the nipple 4 along the inner side surface of the body portion 12." Ex. 1006, ¶ 15. The spiral groove is shown in Fig. 5, below.

【圖 5】



Id., Fig. 5. The “spiral shape” extends circumferentially around the nipple. *Id.* The spiral groove is in the portion of the nipple that includes the areola portion claimed in the challenged patent. *Id.*; Ex. 1003, ¶ 170.

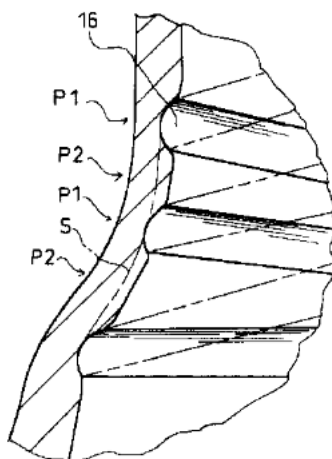
It would have been obvious to add the spiral groove described in Kobayashi to the nipple of Hakim for the reasons provided in Section XI.A, above.

Hakim in view of Kobayashi therefore teaches the feeding vessel of claim 7, wherein the grooves are circumferential. Ex. 1003, ¶ 172.

C. Claim 9

1. **Hakim in view of Kobayashi discloses “The feeding vessel of claim 7, wherein the flex region further comprises a thinned circumferential region in the inward facing surface of the nipple.”**

Fig. 8 of Kobayashi, below, shows the grooves in the inward facing surface of the nipple used for spiral groove 16.



【図8】

Ex. 1006, Fig. 8. The figure shows that nipple wall has varying thicknesses, with regions where the grooves are formed thinner than adjacent regions. *Id.*; *id.*, ¶ 18 (“Further, by adjusting the widths of the thick portion and the thin portion, a nipple having an elongation close to that of the human body can be molded.”); *id.*, ¶ 19 (“Further, for the widths of the concave portion and the convex portion formed by the spiral groove 16, the width of the concave portion can be formed to be wider, equal to or narrower than that of the convex portion, if necessary, and desired elongation characteristics can be obtained.”). Indeed, Kobayashi confirms that “the spiral groove 16 is molded is molded [*sic*] thinly.” *Id.*, ¶ 15.

It would have been obvious to add the spiral groove described in Kobayashi to the nipple of Hakim for the reasons provided in Section XI.A, above.

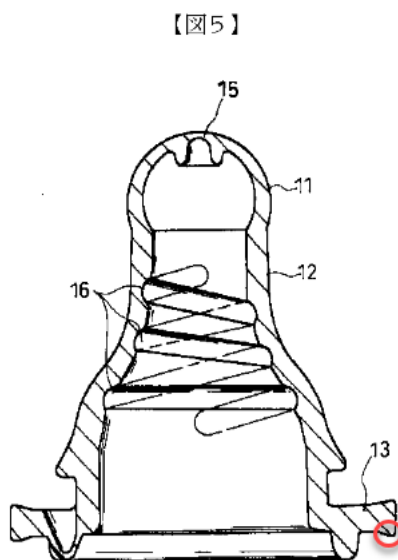
Hakim in view of Kobayashi therefore teaches the feeding vessel of claim 7, wherein the flex region further comprises a thinned circumferential region in the inward facing surface of the nipple. Ex. 1003, ¶ 176.

D. Claim 20

- 1. Hakim in view of Kobayashi discloses “The feeding vessel of claim 1, wherein the flange comprises a downwardly extending skirt around its circumference.”**

As explained in Section IX.A.4, above, Hakim discloses a nipple that includes a flange (*i.e.*, the bottom rim).

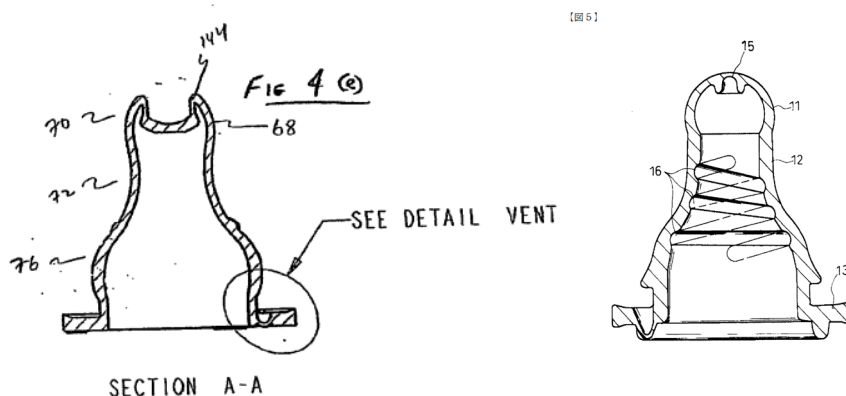
Kobayashi also discloses a nipple that includes a flange. The flange is lower portion 13, shown in Fig. 5, below.



Ex. 1006, Fig. 5 (emphasis added). As shown in the circled portion, the end of the lower portion 13 extends downwards. *Id.* The end of the lower portion also defines the largest circumference of the nipple. *Id.*; Ex. 1003, ¶ 179. Fig. 5 is a cross-

sectional view of the nipple, and the downwardly extending portion of the lower portion 13 (*i.e.*, its skirt) extends around the nipple's circumference. *Id.*, ¶ 13; Ex. 1003, ¶ 179.

To the extent Hakim does not disclose a flange comprising a downwardly extending skirt around its circumference, it would have been obvious to add the downwardly extending skirt of Kobayashi to the bottom rim of Hakim. Both Hakim and Kobayashi are directed to improvements to baby bottle nipples. Ex. 1005, 8-9; Ex. 1006, ¶ 1. The nipples, show in the figures below, have generally the same shape and structure.



Ex. 1005, Fig. 4e (left), Ex. 1006, Fig. 5 (right). Adding Kobayashi's downwardly extending skirt to the bottom rim of Hakim combines prior art elements to yield predictable results. Ex. 1003, ¶ 181. A person of ordinary skill would have been motivated to add Kobayashi's downwardly extending skirt to Hakim's bottom rim to aid in securing the nipple to the bottle's neck. Ex. 1006, ¶ 14; Ex. 1003, ¶ 181.

The skirt, for example, may latch to the outside rim of the bottle's neck to secure the cap and nipple to the bottle. Ex. 1006, ¶ 14.

Hakim in view of Kobayashi therefore teaches the feeding vessel of claim 1, wherein the flange comprises a downwardly extending skirt around its circumference. Ex. 1003, ¶ 182.

E. Claim 28

- 1. Hakim in view of Kobayashi discloses “The drinking vessel of claim 21, wherein the bite region comprises a groove in an inward facing surface of the nipple configured to pass fluid through the bite region when the bite region is collapsed.”**

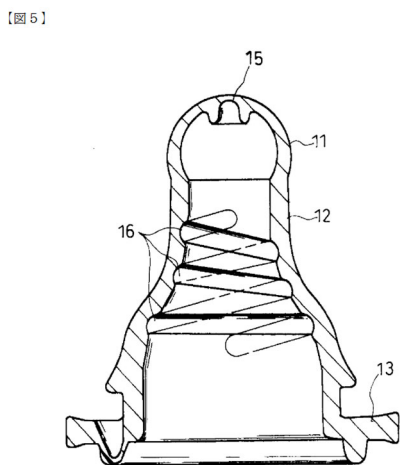
The teat portion (*i.e.*, tip 70 with neck 72) of Hakim defines a bite region where “a user places his or her mouth against the spout of the product to bite down on the soft material of the spout and to drink liquid out when desired.” Ex. 1005, 4; *see also id.*, 18-19, 26-27, 40 (“To drink from the product, the user naturally bites down on the nipple or spout's outer wall.”).

Kobayashi also describes a bite region in the nipple:

When a baby sucks the nipple 4 of the feeding bottle 1, milk in the feeding bottle 1 is given to the baby. The baby holds a body portion of the nipple 4 with his/her upper and lower lips and drinks milk from the feeding bottle. At this time, the baby deforms the nipple 4 with the tongue and bites the nipple 4 with the upper and lower jaws.

Ex. 1006, ¶ 14. The “baby can enjoy the tactile sensation by biting the nipple” at the bite region. *Id.*, ¶ 29. This “tactile sensation” is provided at the spiral groove

16, located at the nipple's bite region. *Id.*, ¶¶ 19, 23 (“Further, the spiral groove 16 makes the tactile sensation of the nipple 4 non-uniform. This can stimulate the tactile sensation of the baby.”), 25. “The spiral groove 16 is formed in a spiral shape upward from a lower position of the body portion 12 of the nipple 4 along the inner side surface of the body portion 12.” Ex. 1006, ¶ 15. The spiral groove is shown in Fig. 5, below.



Id., Fig. 5.

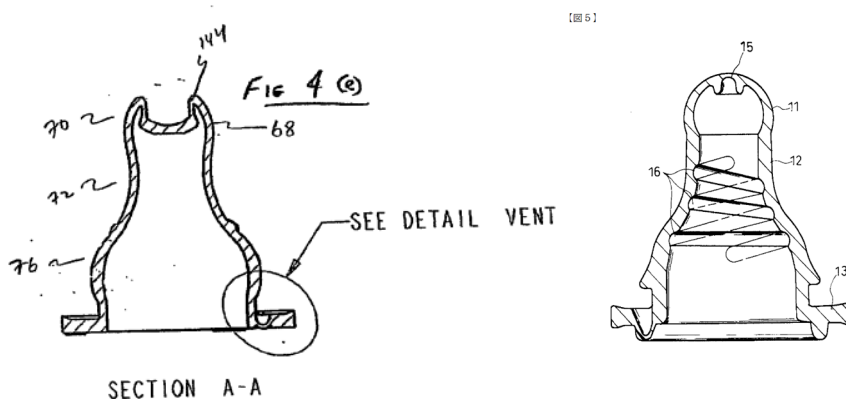
The bite region of Kobayashi is configured to pass fluid through the bite region when the bite region is collapsed:

Therefore, the nipple is unlikely to be crushed by a negative pressure during the feeding. Further, even when the nipple is crushed by the negative pressure, the spiral groove 16 can aid the supply of milk to the upper portion of the nipple 4. Therefore, the baby can drink milk by holding the nipple, fixing the nipple in the oral cavity with the gums,

and pressing the nipple against the upper jaw with the tongue to come out milk. That is, the milk can be drunk in a state similar to case of drinking breast milk.

Id., ¶ 23.

To the extent Hakim does not disclose the bite region comprising a groove in an inward facing surface of the nipple configured to pass fluid through the bite region when the bite region is collapsed, it would have been obvious to add the spiral groove of Kobayashi into the bite region of Hakim. Both Hakim and Kobayashi are directed to improvements to baby bottle nipples. Ex. 1005, 8-9; Ex. 1006, ¶ 1. The nipples, show in the figures below, have generally the same shape and structure.



Ex. 1005, Fig. 4e (left), Ex. 1006, Fig. 5 (right). Adding Kobayashi's spiral groove into the nipple of Hakim combines prior art elements to yield predictable results. Ex. 1003, ¶ 186. A person of ordinary skill would have been motivated to add Kobayashi's spiral groove into Hakim's nipple so that "elongation of the nipple in the tip direction is improved," the "supply of milk to the upper portion of the nipple"

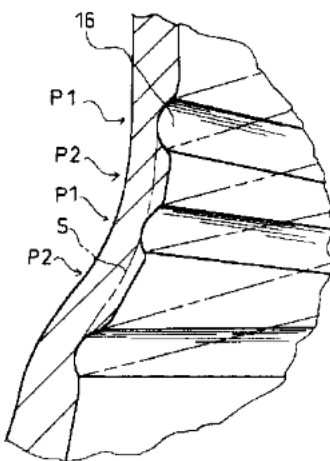
is improved, and the “tactile sensation. . . . can induce feeling of contact with the mother.” Ex. 1006, ¶ 23; Ex. 1003, ¶ 186.

Hakim in view of Kobayashi therefore teaches the drinking vessel of claim 21, wherein the bite region comprises a groove in an inward facing surface of the nipple configured to pass fluid through the bite region when the bite region is collapsed. Ex. 1003, ¶ 187.

F. Claim 29

1. **Hakim in view of Kobayashi discloses “The drinking vessel of claim 21, wherein the bite region further comprises a thinned region in the inward facing surface of the nipple.”**

Fig. 8 of Kobayashi, below, shows the grooves in the inward facing surface of the nipple used for spiral groove 16.



【图8】

Ex. 1006, Fig. 8. The figure shows that nipple wall has varying thicknesses, with regions where the grooves are formed thinner than adjacent regions. *Id.*; *id.*, ¶ 18

(“Further, by adjusting the widths of the thick portion and the thin portion, a nipple having an elongation close to that of the human body can be molded.”); *id.*, ¶ 19 (“Further, for the widths of the concave portion and the convex portion formed by the spiral groove 16, the width of the concave portion can be formed to be wider, equal to or narrower than that of the convex portion, if necessary, and desired elongation characteristics can be obtained.”). Indeed, Kobayashi confirms that “the spiral groove 16 is molded is molded [*sic*] thinly.” *Id.*, ¶ 15.

It would have been obvious to add the spiral groove described in Kobayashi to the nipple of Hakim for the reasons provided in Section XI.A, above.

Hakim in view of Kobayashi therefore teaches the drinking vessel of claim 21, wherein the bite region further comprises a thinned region in the inward facing surface of the nipple. Ex. 1003, ¶ 190.

XII. GROUND III: CLAIM 13 IS RENDERED OBVIOUS BY HAKIM IN VIEW OF MANGANIELLO

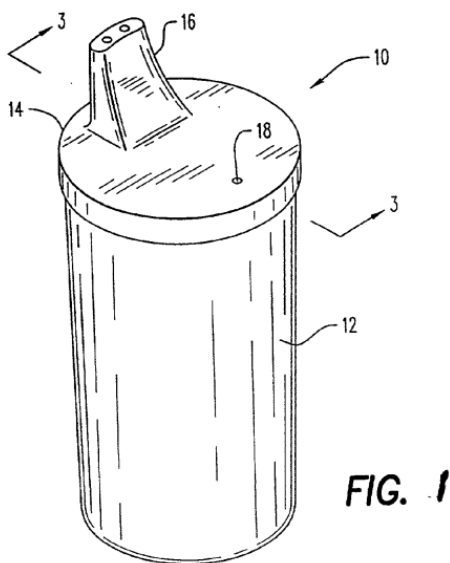
A. Claim 13

- 1. Hakim in view of Manganiello discloses “The feeding vessel of claim 10, wherein the air vent is an integrally molded duck-bill valve.”**

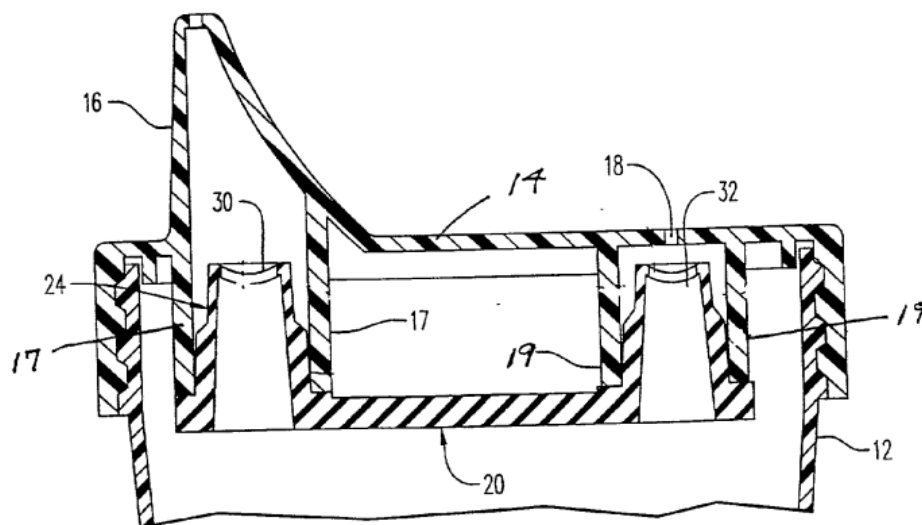
Hakim explains that the “the nipple is molded as one integral piece with the valve at top and the valve or valves at the bottom being part of that molded part.” Ex. 1005, 34. The nipple is made from “conventional molding methods,” such as injection or compression molding. *Id.* And “the nipple is molded as one integral

piece with the valve at top and the valve or valves at the bottom being part of that molded part.” *Id.* “One or more air valves can be provided in the nipple. These valve [*sic*] can all be of the same type or can be a mixture of types.” *Id.*, 29. Hakim identifies examples of vent types—like a slit or valve—but “[a]ny desired opening can be used.” *Id.*, 30, 32-33.

Manganiello “relates generally to an improved leak-proof cup,” particularly a trainer cup for children. Ex. 1008, ¶ 3. Manganiello describes “conventional” trainer cups with reference to Fig. 1, below. *Id.*, ¶ 1.



Id., Fig. 1. The cup 10 includes a container 12 and a lid 14. *Id.*, ¶ 22. The lid 14 includes a spout 16 and an air vent 18. *Id.* As shown in Figure 2, below, the lid also includes valve portions 30 and 32 under the spout 16 and air vent 18, respectively.



Id., Fig. 2. The valve portions form “a removable flow control element that engages in the vicinity of the drinking spout and air vent to control the flow of liquid and air from the drinking spout and the air vent.” *Id.*, ¶ 3. “Valve portion 30 is a duck bill valve.” *Id.*, ¶ 26.

To the extent Hakim does not disclose an air vent that is a duck-bill valve, it would have been obvious to incorporate the duck-bill valve disclosed in Manganiello in Hakim’s air vent. Both Hakim and Manganiello are directed to improvements to no-spill drinking products, including trainer cups. Ex. 1005, 9; Ex. 1008, ¶ 3. Hakim discloses that its air vent “can be a mixture of types.” Ex. 1005, 29. Modifying Hakim’s air vent to be a duck-bill valve as disclosed in Manganiello is a simple substitution of known elements to obtain predictable results. Ex. 1003, ¶ 193. A person of ordinary skill would have been motivated to modify Hakim’s air vent as

disclosed in Manganiello “to control the flow of . . . air from . . . the air vent.”

Ex. 1008, ¶ 3; Ex. 1003, ¶ 193.

Hakim in view of Manganiello therefore teaches the feeding vessel of claim 10, wherein the air vent is an integrally molded duck-bill valve. Ex. 1003, ¶ 194.

XIII. CONCLUSION

Therefore, *Inter Partes* Review under §§ 311-319 and 37 CFR §§ 42.200 *et seq.*, of claims 1-31 of United States Patent No. 11,207,244 is hereby requested.

Dated: July 26, 2022

Respectfully submitted,

FENWICK & WEST LLP

/Dargaye Churnet/

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Attorneys for Petitioners
Comotomo Inc. and Comotomo
Corporation

**CERTIFICATE OF COMPLIANCE
WITH TYPE-VOLUME LIMITATION**

Pursuant to 37 CFR § 42.24 et seq., the undersigned certifies that this Petition complies with the 14,000-word type-volume limitation. This Petition contains 13,660 words, excluding the parts of the Petition exempted from the type-volume limitation.

Dated: July 26, 2022

FENWICK & WEST LLP

/Dargaye Churnet/
Dargaye Churnet
(Reg. No. 71,288)

Attorneys for Petitioners
Comotomo Inc. and Comotomo
Corporation

CERTIFICATE OF SERVICE (37 C.F.R. §§42.63(E), 42.105(A))

The undersigned hereby certifies that a complete and entire copy of the above-captioned “**PETITION FOR *INTER PARTES* REVIEW U.S. PATENT NO. 11,207,244**” and all supporting exhibits numbered 1001-1009 were provided via U.S. Express Mail, postage prepaid, to the Patent Owner’s correspondence address as stated below:

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*Patent Owner’s correspondence
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