

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NANOBEBE US INC.,
Petitioner,

v.

MAYBORN (UK) LIMITED,
Patent Owner

Case IPR2023-00467
Patent 10,952,930

DECLARATION OF TIMOTHY P. FLETCHER

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I, Timothy P. Fletcher, declare that:

I. INTRODUCTION AND SCOPE OF WORK

1. I have been retained by Fish & Richardson P.C. as a technical expert on behalf of Mayborn (UK) Limited (“Mayborn” or “Patent Owner”). I understand that Nanobebe US Inc. (“Nanobebe” or “Petitioner”) filed a petition for *inter partes* review (“IPR”) of claims 14, 16, 17, and 19 (“the Challenged Claims”) of U.S. Patent No. 10,952,930 (“the ’930 Patent”) (EX1001).

2. I have been asked to provide my independent analysis of the ’930 Patent in light of the prior art publications cited below and my knowledge and experience in this field during the relevant time period. I have been asked to consider what a person of ordinary skill in the art at the time of the invention of the ’930 Patent (a “POSITA”; refer to ¶¶33-34) would have understood from the teachings of the ’930 Patent, including scientific and technical knowledge related to the ’930 Patent. I have also been asked to consider whether the references recited in the Petition render obvious the inventions described in the Challenged Claims of the ’930 Patent.

3. I am not an employee of Mayborn. My first employer, Stahlwood Mfg. Co., was acquired by Mayborn during my employment (July 1989 to December 1990). After that point, I worked for Mayborn’s competitors, Gerber and Evenflo. I also worked for several of Mayborn’s competitors as a consultant at Gamil Design.

4. I received no compensation for this declaration beyond my normal hourly compensation based on my time actually spent analyzing the '930 Patent, the prior art publications cited below, and the issues related thereto. I will not receive any added compensation based on the outcome of any IPR or other proceeding involving the '930 Patent.

II. QUALIFICATIONS

5. I have summarized in this section my educational background, career, publications, and other relevant qualifications. My full curriculum vitae is attached as Appendix A. I am qualified to testify to the knowledge and understanding of a POSITA during the timeframe leading up to the priority date of the '930 Patent in 2005. *See infra* Section VI (discussing the level of ordinary skill). Indeed, I have personal knowledge and experience in working directly with many such persons in the field during that timeframe. I have relied on my review and analysis of the prior art cited in the Petition, information provided to me in connection with this case, and information I have independently reviewed. *See infra* Section IV (discussing materials considered).

6. I am currently an industrial designer and president of One BusinessDesign, LLC in Pittsburgh, Pennsylvania. Industrial designers are graduates of schools of design either from a fine arts orientation or a product development orientation. I come from the product development orientation. The

Industrial Designers Society of America (“IDSA”) defines industrial design as: “the professional service of creating and developing concepts and specifications that optimize the function, value and appearance of products and systems for the mutual benefit of both user and manufacturer.” Appendix B.

7. I earned my Bachelor of Environmental Design Degree in Product Design from North Carolina State University in 1989 and my Master of Design Degree in Advanced Strategies at the Hong Kong Polytechnic University in 2008. Over the past 30 years I have worked as an industrial designer, product designer and developer, professor of industrial design courses, speaker, and consulting industrial designer. I am the named inventor on 17 design and utility patents in the United States as well as one patent in Europe and one patent in Australia.

8. I have been employed as an industrial designer and product development manager for the following consumer/commercial products companies: Stahlwood Manufacturing Co.; Gerber Products Company; DP; Evenflo Company, Inc; Elumens; DAKA Designs; and Performance Bike. I have seen both sides of the industrial design industry, both as an industrial designer working to design new products and as a product development manager working to develop products and improve the process of product development and creation. As an industrial design consultant, I have designed consumer/commercial products or new product strategies for the following firms: Gamil Design, Daedalus, and One BusinessDesign.

As a product development manager, I have sourced and inspected manufacturing plants in the United States, China and Thailand, and I have been involved in troubleshooting manufacturing issues in the development of consumer/commercial products.

9. I also have significant design experience in the creation and development of nipples and bottles for infants and toddlers.

10. At Gerber Products Company, I was involved in a research project with Dr. Arthur J Nowak of the University of Iowa Department of Pediatric Dentistry where infants were imaged through sonography to see how their physiology changed between different types of feeding methods. By conducting this research, which Gerber partially funded, I gained an understanding of infant feeding physiology that has informed and improved my design work in the area of infant feeding products.

11. Also at Gerber, I designed an easy grip bottle and a nipple system that utilized Gerber's functional nipple elements with a European look and feel. Photos of this bottle and nipples are depicted below:



12. At Evenflo, I designed bottle concepts for the international division to give them a higher end design for the European market. Photo of these concepts are depicted below:

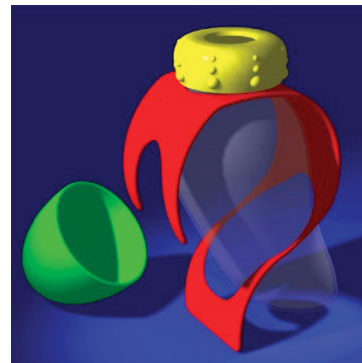
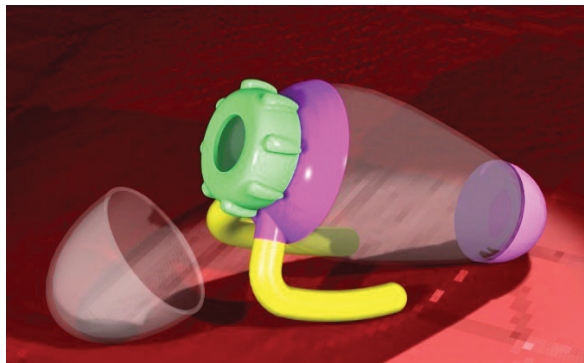


13. At Gamil Design, I designed a new and innovative nipple and bottle system that received the following utility patents: US 6,253,935 B1 and EP 1 093 785 A2. Images of the design for this nipple bottle system are depicted below:



14. Also at Gamil Design, I designed the visual appearance of several bottles, as a concept for Rex Holdings, Ltd. (Thailand). These designs were used in

proposals to U.S. and European infant products brands. Several images of the concepts are depicted below:



15. In addition to all the nipple/bottles above, I have extensive experience in designing spill-proof cups for toddlers, which are also liquid feeding products that require an understanding of the changing feeding needs of infants and toddlers.

16. Beginning with my work at Evenflo in March 1996, I have worked with attorneys to prepare drawings for U.S. design patents. At Gamil Design and Elumens, I was involved in the preparation of drawings and text for multiple U.S. and World Intellectual Property Organization (“WIPO”) utility patent applications. I also have developed design patent drawings for clients.

17. I have taught industrial design courses at North Carolina State University, The Hong Kong Polytechnic University and Carnegie Mellon University. Courses include, but are not limited to, Manufacturing Materials and Processes, Professional Practice and Industrial Design Studio Courses, the latter of which included material relating to the form and preparation of design drawings.

18. I was an invited speaker for the 2017 Design in Plastics conference put on by the Society of Plastics Engineers. My presentation was titled Visual Intellectual Property: The Value of Design Patents & Trade Dress. In the presentation, I gave a brief history of design patents and trade dress, followed by a more in-depth analysis of patent application strategies as well as an explanation of design patent and trade dress registration and litigation. In 2006, the Danish Patent and Trademark Office invited me to speak, and I provided a presentation titled IP as the Basis of Business for Innovative Companies in Asia. In this presentation, I used case studies to explain alternative methods of protecting intellectual property from copying manufacturers in China.

19. I was inducted into the IDSA Academy of Fellows in 2009. The criteria for induction are: the Board of Directors may confer, by a two-thirds majority vote, a fellowship membership to a member in good standing who has earned the special respect and affection of the membership through distinguished service to the industrial design profession.

20. Based on my experience and education, I believe that I am qualified to opine as to the knowledge and level of skill of a POSITA at the time of the '930 Patent (which I further describe below), in addition to the general state of the art during that time.

III. MODIFIED DIAGRAMS

21. Throughout my declaration, I use the term “modified” or “modified diagram.” The definition of this term includes the addition of lines in an image. An example of addition would be taking an image from a utility patent, and adding lines to a sectional view that were left out but needed in order to fully understand said sectional view.

IV. MATERIALS CONSIDERED

22. My analyses set forth in this declaration are based on my experience as an industrial designer and my work in the field of designing infant feeding products. As part of my independent analysis for this declaration, I have considered the following: the background knowledge/technologies that were commonly known to persons of ordinary skill in this field during the time before the '930 Patent; my own knowledge and experiences gained from my work experience in the field; my experience in teaching and/or advising others in that subject; and my experience in working with others involved in the field. In addition, I have analyzed the following publications and materials, or those otherwise noted in this declaration:

- Petition for *Inter Partes* Review of U.S. Patent No. 10,952,930 (Case No. IPR2023-00467)
- EX1001: U.S. Patent No. 10,952,930 (“the ’930 Patent”)
- EX1002: Prosecution History of the ’930 Patent
- EX1005: Declaration of Mr. Brian Silver
- EX1006: U.S. Patent No. 6,032,810 (“Meyers”)
- EX1007: G.B. Patent No. 2,250,017A (“Sepehr”)
- EX1008: English Translation of J.P. Patent No. 2001-299877 (“Ishimaru”)
- EX1009: U.S. Patent No. 2,093,730 (“Kurkjian”)
- EX2008: Markman Order, *Nanobebe US Inc. v. Mayborn (UK) Limited et al.*, Case No. 1:21-cv-08444 (S.D.N.Y.)
- EX2019: U.S. Patent No. 5,474,193 (Silver I)
- EX2024: U.S. Patent No. 6,161,710 (Dieringer)
- EX2029: Oxford Dictionary of English, Second Edition, Revised (2005) (excerpt)
- EX2031: Nipple confusion: Toward a formal definition, Marianne Neifert, MD, et al. (1995) (excerpt)
- EX2034: U.S. Patent No. 5,784,999 (Larson)
- EX2035: U.S. Patent No. 8,708,174 (Itzek)
- EX2036: U.S. Patent No. 1,510,571 (Ware II)
- EX2037: U.S. Patent No. 380,835 (Ware I)
- EX2038: U.S. Patent No. 6,742,665 (Lombardo)
- EX2039: U.S. Patent No. 2,372,281 (Jordan)
- EX2040: U.S. Patent No. 5,779,071 (Brown)
- EX2041: Examination of the Effect of Dr. Brown’s Natural Flow Baby Bottles on Infant Colic, Marsha L. Cirgin Ellett, et. al. (2005)

V. LEGAL STANDARDS

23. I understand Petitioner argues that certain claims of the '930 Patent are unpatentable as allegedly rendered obvious in view of combinations of references. I am not a lawyer and do not provide any legal opinions, but I have been advised that certain legal standards are to be applied by technical experts in forming opinions regarding meaning and validity of patent claims. I have applied the legal standards described below, which were provided to me by counsel for the Patent Owner.

24. It is my understanding that assessing the validity of a U.S. patent based on a prior art analysis requires two steps. First, one must construe the terms of the patent claims to understand what meaning one of ordinary skill in the art would have given the terms. Second, after the claim terms have been construed, one may then assess validity by comparing a patent claim to the “prior art.” I understand that the teaching of the prior art is viewed through the eyes of a POSITA at the time the invention was made. My analysis as to what constitutes a relevant POSITA is set forth below. For purposes of my independent analysis at this stage, I have assumed that the references cited by the Petitioner in this proceeding are “prior art” even though some may not qualify as such under the law.

A. Obviousness

25. I understand that Petitioner contends that the challenged claims are invalid as “obvious.” My understanding is that a patent claim is invalid as obvious

only if the subject matter of the claimed invention “as a whole” would have been obvious to a POSITA at the time the invention was made. To determine the differences between a prior art reference (or a proposed combination of prior art references) and the claims, the question of obviousness is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. Also, obviousness grounds cannot be sustained by mere conclusory statements. Rather, it is necessary to provide some articulated reasoning with rational underpinning to support the legal conclusion of obviousness.

26. I understand that a patent claim that comprises several elements is not proved obvious by simply showing that each of its elements was independently known in the prior art. In my evaluation of whether any claim of the '930 Patent would have been obvious, I considered whether the Petition, or any evidence submitted in this proceeding, presented an articulated reason with a rational basis that would have motivated a POSITA to combine the elements or concepts from the prior art in the same way as in the claimed invention.

27. It is my understanding that there is no single way to define the line between true inventiveness on one hand—which is patentable—and the application of common sense and ordinary skill to solve a problem on the other hand—which is not patentable. For instance, factors such as market forces or other design incentives may be the source of what produced a change, rather than true inventiveness.

28. I understand that the decision-maker may consider whether the change was merely the predictable result of using prior art elements according to their known functions, or whether it was the result of true inventiveness. The decision-maker may also consider whether there is some teaching or suggestion in the prior art to make the modification or combination of elements recited in the claim at issue. Also, the decision-maker may consider whether the innovation applies a known technique that had been used to improve a similar device or method in a similar way. The decision-maker may also consider whether the claimed invention would have been obvious to try, meaning that the claimed innovation was one of a relatively small number of possible approaches to the problem with a reasonable expectation of success by those skilled in the art.

29. I have been instructed by counsel that if any of these considerations are relied upon to reach a conclusion of obviousness, the law requires that the analysis of such a consideration must be made explicit. I understand that the decision-maker must be careful not to determine obviousness using the benefit of hindsight and that many inventions might seem obvious after the fact. I understand that the decision-maker should consider obviousness from the position of a POSITA at the time the claimed invention was made and that the decision-maker should not consider what is known today or what is learned from the teaching of the patent.

30. I understand that in order to determine whether a patent claim is obvious, one must make certain factual findings regarding the claimed invention and the prior art. Specifically, I understand that the following factors must be evaluated to determine whether a claim is obvious: the scope and content of the prior art; the difference or differences, if any, between the claim of the patent and the prior art; the level of ordinary skill in the art at the time the claimed invention was made; and, if available, the objective indicia of non-obviousness, also known as “secondary considerations.”

31. I understand that the secondary considerations include: commercial success of a product due to the merits of the claimed invention; a long felt need for the solution provided by the claimed invention; unsuccessful attempts by others to find the solution provided by the claimed invention; copying of the claimed invention by others; unexpected and superior results from the claimed invention; acceptance by others of the claimed invention as shown by praise from others in the field or from the licensing of the claimed invention; teaching away from the conventional wisdom in the art at the time of the invention; independent invention of the claimed invention by others before or at about the same time as the named inventor thought of it; and other evidence tending to show obviousness.

32. I understand that, to establish a secondary consideration, the evidence must demonstrate a nexus between that secondary consideration and the claimed invention.

VI. PERSON OF ORDINARY SKILL IN THE ART

33. I understand that the teaching of the prior art is viewed through the eyes of a person of ordinary skill in the art (“POSITA”). My analysis is thus based on the perspective of a POSITA having this level of knowledge and skill at the relevant time of the invention.

34. I have been informed that the priority date of the ’930 Patent is no later than June 29, 2005—the earliest claimed priority date listed on the face of the ’930 Patent—and I have applied this timeframe as being the relevant time for the perspective of a POSITA. I also understand that Petitioner’s expert, Mr. Silver, articulated the level of ordinary skill as “a Bachelor of Science Degree in mechanical engineering, industrial design, or [a] similar technical field, and with 2 or more years of practical experience related to the design of infant feeding products or [a] comparable industry.” EX1005 (Silver Dec.) ¶47. I possess the level of skill that Mr. Silver outlined and, for simplicity, I have applied that level of skill for purposes of my analysis in this proceeding. In doing so, however, I do not concede the validity of Mr. Silver’s skill level articulation, and I reserve the right to articulate a different level of skill in other proceedings involving the ’930 Patent.

VII. CLAIM INTERPRETATION

A. Legal Principles and Context

35. For purposes of my analysis in this IPR proceeding, I understand that the terms that appear in the claims of the '930 Patent should be interpreted according to their plain and ordinary meaning under the *Phillips* standard. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (*en banc*). In determining the ordinary and customary meaning, I understand that the words of a claim are first given the plain meaning that those words would have had to a POSITA at the time of the alleged invention. I also understand that the structure of the claims, the specification and file history also may be used to better construe a claim insofar as the plain meaning of the claims cannot be understood. Moreover, I understand that even treatises and dictionaries may be used, albeit under limited circumstances, to determine the meaning attributed by a POSITA to a claim term at the time of filing. I have followed this approach in my analysis.

36. I also understand that the words of the claims should be interpreted as they would have been interpreted by a POSITA at the time the invention was made (not today). For purposes of my analysis here, I have used June 29, 2005 as the date of invention because it is the earliest claimed priority date listed on the face of the '930 Patent.

B. Construed Claim Terms

37. I understand the '930 Patent is at issue in a parallel proceeding at the United States District Court for the Southern District of New York (Case No. 1:22-cv-00694). I also understand the District Court issued an Order (EX2008) on April 18, 2023 construing a number of claim terms recited in the '930 Patent's independent claim 14. Patent Owner's counsel informed me that the Board has adopted and applied the District Court's claim construction analysis in this proceeding. I have reviewed the Order (EX2008) and will also apply the District Court's claim construction analysis regarding the following terms:

Claim Term	Construction
"a teat portion"	"the entire part projecting generally perpendicular to the mouth of the vessel and disposed above the areola portion"
"a teat portion having a variable wall thickness"	Plain meaning
"base portion"	"the lowest portion of the nipple below the areola portion, excluding the flange"
"domed configuration"	"wide circular bottom with an arc-shaped cross-sectional profile"
"an areola portion"	"the part extending beyond the bottom of the teat portion, bounded by the base"
"at least partially inwardly"	Plain meaning

VIII. GROUND 1: THE MEYERS-SEPEHR COMBINATION

A. The Meyers-Sepehr combination does not provide the '930 Patent's one-way valve limitations

1. The valve in Meyers-Sepehr does not extend through the base

38. The '930 Patent's independent claim 14 recites “a one-way air inlet valve (i) extending through said base.” EX1001 ('930 Pat.), 8:46-47. I've highlighted this claim language in context below.

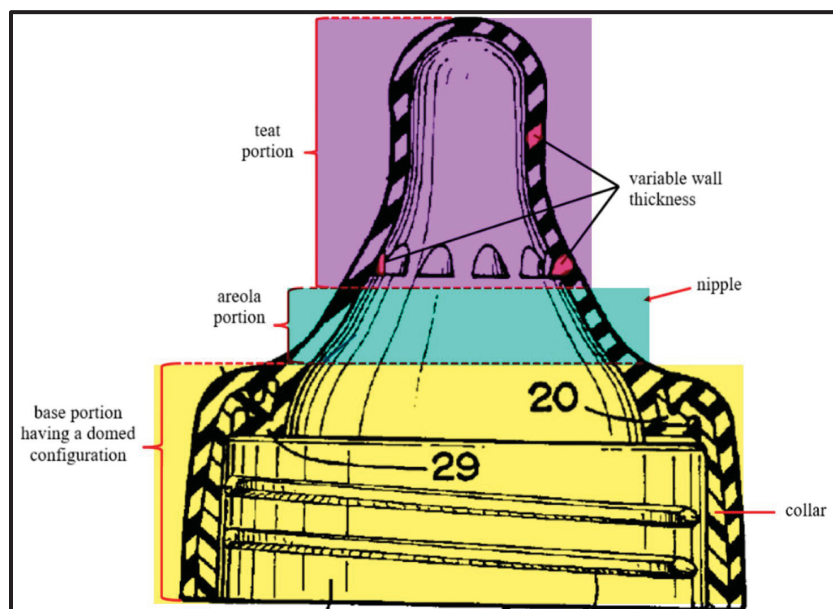
14. A feeding bottle comprising:
a) a vessel having an open top,
b) a collar having an upper rim and a lower rim comprising:
an internally threaded inner surface,
an outermost surface having a sloping portion that extends outwardly and downwardly relative to said upper rim, and
wherein said sloping portion comprises a majority of the collar's outermost surface,
c) a nipple having:
a teat portion having a variable wall thickness including an aperture,
a base portion having a domed configuration,
an areola portion between the teat portion and the base portion,
a flange depending from the base portion,
a one-way air inlet valve (i) extending through said base, (ii) projecting downwardly from the base portion, (iii) having a length that does not extend past the collar's lower rim, and (iv) disposed at least partially inwardly from the collar;
the flange being arranged to seal with the vessel;
d) the nipple being secured to the collar by sealingly capturing an inner edge of the collar between the base portion and the flange; and,
e) the nipple being secured to the vessel by capturing the flange of the nipple between the collar and the open top of the vessel.

EX1001 ('930 Pat.), 8:29-57. As you can see, the phrase “said base” (red underlining) refers back to the prior recitation of “a base portion having a domed

configuration” (red box). Accordingly, to satisfy this limitation, the valve must extend through the domed base.

39. The Meyers-Sepehr combination that Petitioner and Mr. Silver propose lacks the '930 Patent's claim limitation of a valve extending through a domed base. Rather than the base, the valve in Petitioner and Mr. Silver's drawing of the Meyers-Sepehr combination extends through the nipple section that they have both identified as the areola, which is concave, not domed.

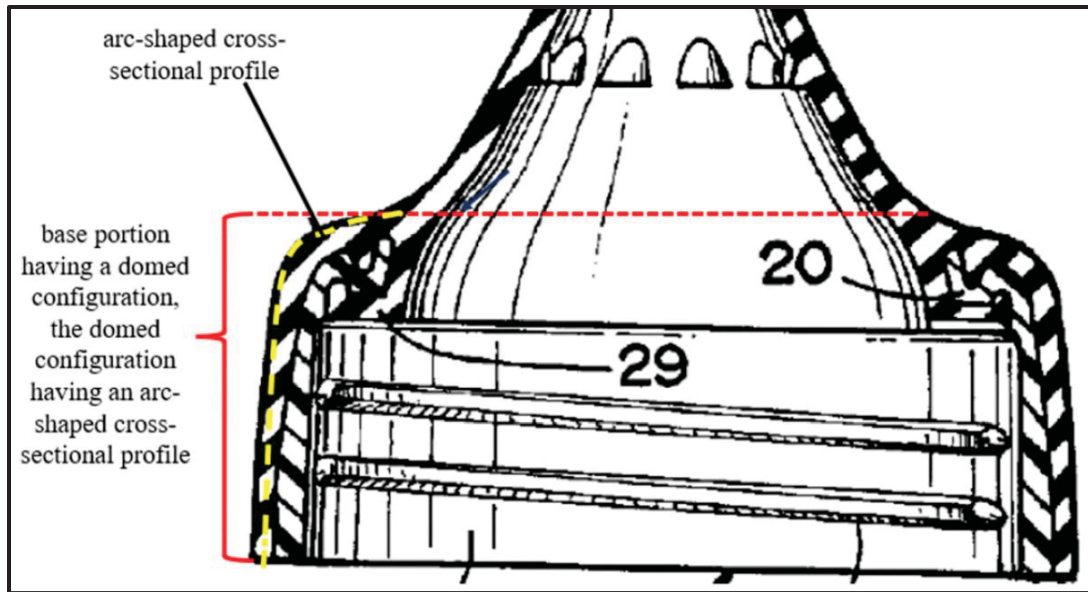
40. Earlier in the analysis, before addressing the '930 Patent's valve limitations, the Petition and Mr. Silver's declaration call out Meyers's Figure 5. Using this figure, they purport to identify various portions of Meyers's nipple using dotted-line and text annotations. I have reproduced their annotated version of Meyers's Figure 5 below, adding distinct colors in accord with Petitioner and Mr. Silver's annotations. *See* Pet., 38.



41. As shown above, the Petition and Mr. Silver’s declaration identify the claimed “base portion having a domed configuration” (yellow) as the lowest convex section of the nipple. *See* Pet., 38-40; EX1005 (Silver Dec.) ¶182. Above the labeled base portion, there is a concave section of the nipple, which the Petition and Mr. Silver’s declaration identify as the areola (turquoise). According to their annotations, the “areola portion” ends and the “base portion” begins where the contour of the nipple flips from concave to convex.

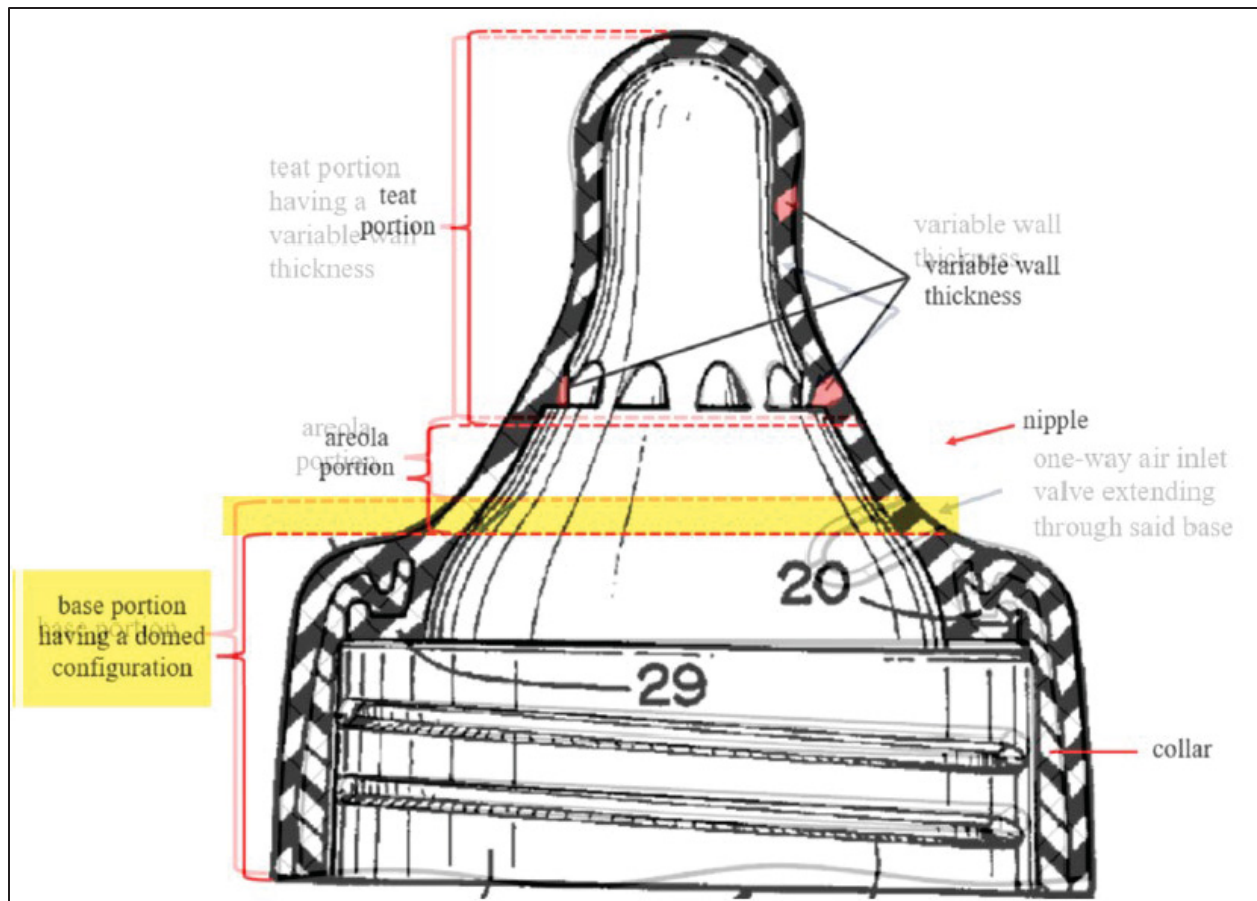
42. It is clear that Petitioner and Mr. Silver selected the lowest *convex* section as the “base” in an attempt to match the “arc-shaped cross-section profile” of Mayborn’s now-adopted “domed configuration” construction¹. *See* Pet., 41-42 (addressing “Patent Owner’s construction of ‘domed configuration’” and annotating Meyers’s Figure 5 (reproduced below)); EX1005 (Silver Dec.) ¶191 (same). They would not have wanted to include any of the concave portion immediately above because an “arc” is convex, not concave.

¹ I do not agree with Petitioner and Mr. Silver’s mapping. The “base” marked in their annotated figure is not “domed,” as I will explain below.

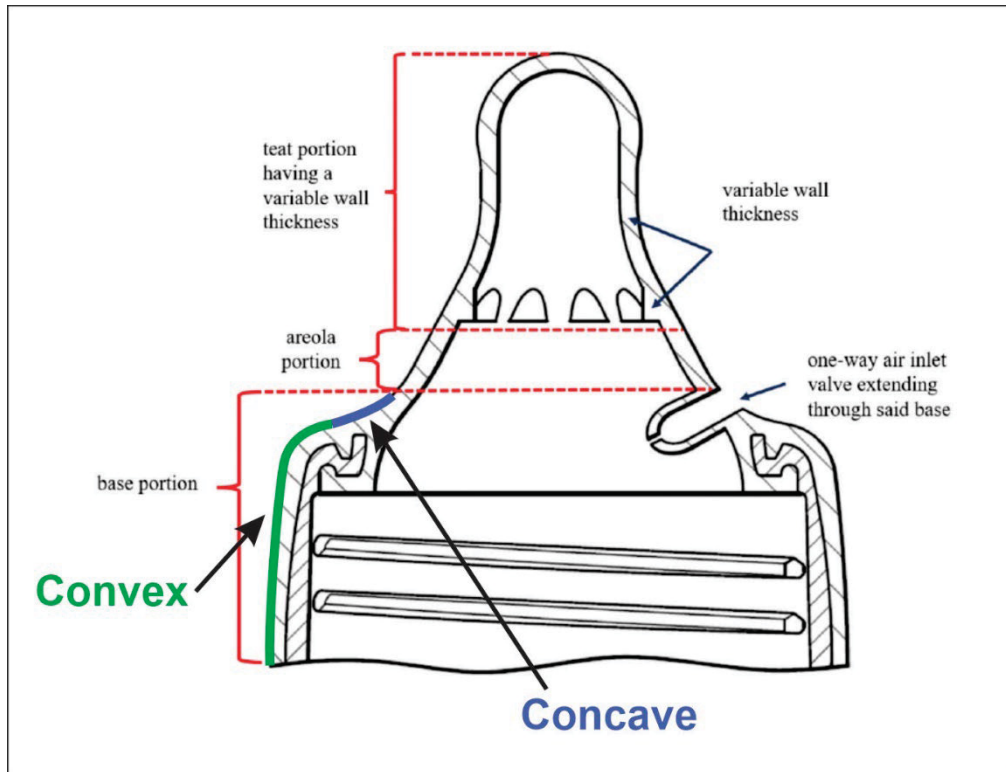


Pet., 42 (excerpt).

43. Later in the analysis, however, the Petition and Mr. Silver’s declaration abandon their original dotted-line annotation that marks the beginning of the “base” (and the end of the “areola”) at the inflection point where the contour of Meyers’s nipple flips from concave to convex. When addressing the ’930 Patent’s “valve” limitations—this time relying on a drawing they created of the Meyers-Sepehr combination—the Petition and Mr. Silver’s declaration draw a brand new dotted line higher up on the nipple to mark the beginning of the “base.” This visual aid below demonstrates how the dotted-line annotation was moved upward by overlaying a transparent copy of the combination drawing from Page 46 of the Petition on top of the annotated version of Meyers’s Figure 5 from Page 38 of the Petition. As I have highlighted below in the visual aid, there is a very clear vertical offset between the dotted line marking the “base portion” in these two images.



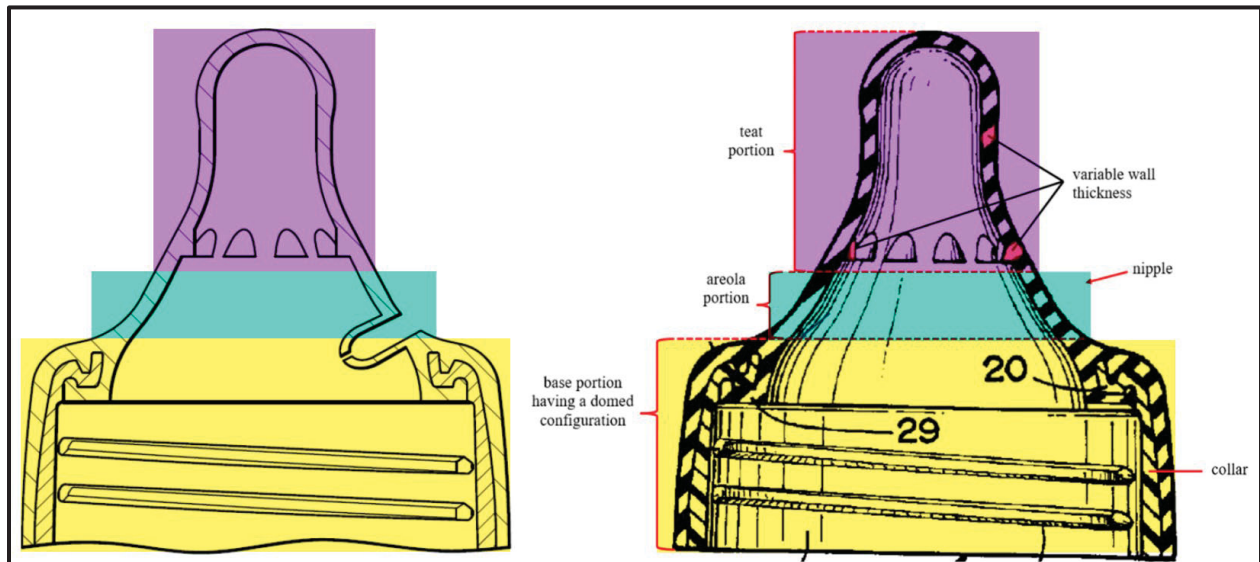
44. Notably, Petitioner and Mr. Silver’s new dotted line is above the inflection point, such that the marked “base portion” has a profile with both convex and concave curves that is in no way arc-shaped. I have reproduced Petitioner and Mr. Silver’s combination drawing below, adding new annotations to show the concave (blue) and convex (green) aspects of their new non-arc-shaped “base portion.”



Pet., 46 (with added “Convex” and “Concave” annotations).

45. Had the Petition and Mr. Silver’s declaration retained the location of their original dotted-line annotation for the beginning of the “base,” it would have been apparent that their Meyers-Sepehr combination drawing fails to satisfy the ’930 Patent’s “valve” limitations. The combination drawing does not place the valve at the lowest convex portion of Meyers’s nipple that Petitioner calls the base. Instead, in the combination drawing, the valve extends through the concave portion immediately above the base, which Petitioner and Mr. Silver’s original annotations identified as the areola. I have illustrated this point below via a side-by-side comparison of Petitioner and Mr. Silver’s annotated version of Meyers’s Figure 5 (right) against their Meyers-Sepehr combination drawing (left). I added the same

colors to both images at locations corresponding to Petitioner and Mr. Silver’s initial annotations to Meyers’s Figure 5. As you can see on the left, the valve in the combination drawing (left) extends through the concave portion of the nipple in blue, which is labeled as the areola in the annotated Meyers figure (right).



Pet, 33 (with added coloring)

Pet., 38 (with added coloring)

46. Finally, I note that Petitioner and Mr. Silver could not have placed the valve within their original lines marking the “base” of Meyers’s nipple when creating the Meyers-Sepehr combination drawing. That configuration is not possible without removing the collar extending along the height of the base. Petitioner and Mr. Silver could not propose to remove the collar, however, because they rely on the collar for mapping to other claim elements.

2. The valve in Meyers-Sepehr does not project downwardly

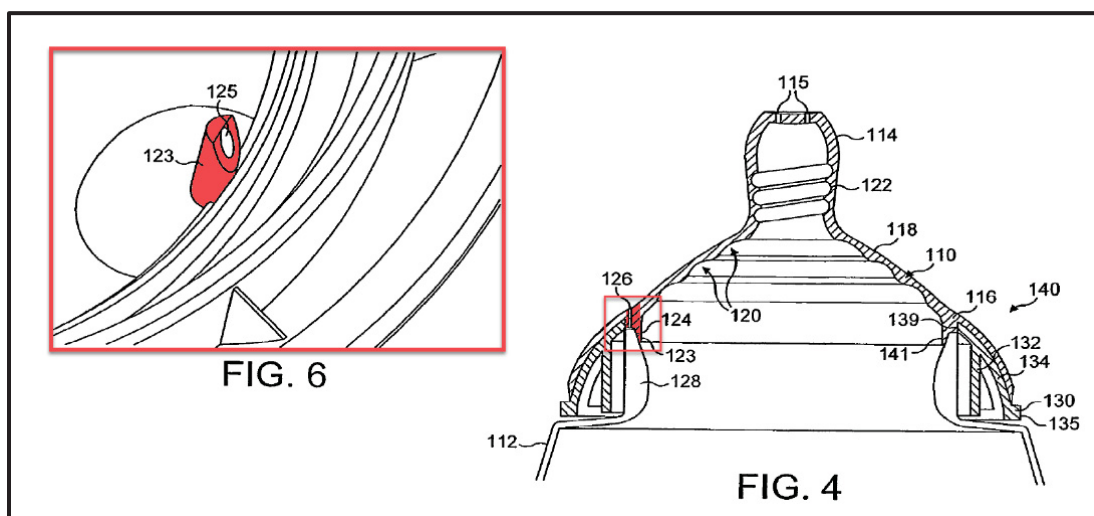
47. The '930 Patent's independent claim 14 recites “a one-way air inlet valve . . . (ii) projecting downwardly from the base portion.” EX1001 ('930 Pat.), 8:46-48. I've highlighted this claim language in context below.

14. A feeding bottle comprising:
a) a vessel having an open top,
b) a collar having an upper rim and a lower rim comprising:
an internally threaded inner surface,
an outermost surface having a sloping portion that extends outwardly and downwardly relative to said upper rim, and
wherein said sloping portion comprises a majority of the collar's outermost surface,
c) a nipple having:
a teat portion having a variable wall thickness including an aperture,
a base portion having a domed configuration,
an areola portion between the teat portion and the base portion,
a flange depending from the base portion,
a one-way air inlet valve (i) extending through said base, (ii) projecting downwardly from the base portion, (iii) having a length that does not extend past the collar's lower rim, and (iv) disposed at least partially inwardly from the collar;
the flange being arranged to seal with the vessel;
d) the nipple being secured to the collar by sealingly capturing an inner edge of the collar between the base portion and the flange; and,
e) the nipple being secured to the vessel by capturing the flange of the nipple between the collar and the open top of the vessel.

EX1001 ('930 Pat.), 8:29-57.

48. This claim language—“projecting downwardly”—is not difficult to understand. The adverb “downwardly” modifies the verb “projecting” that describes the structure and orientation of the valve. The meaning of the claim language is

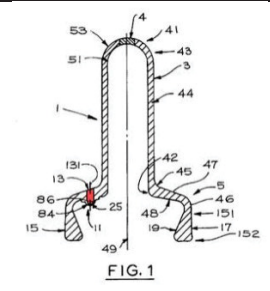
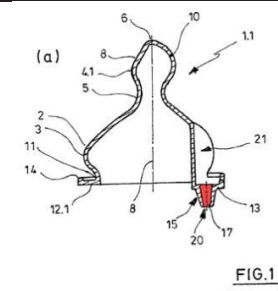
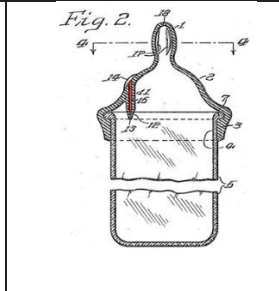
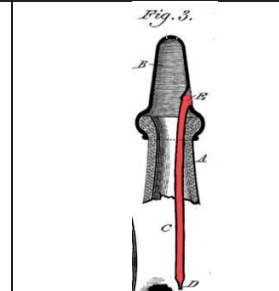
clear on its face: the valve projects in the downward direction. The '930 Patent's specification and figures confirm this straightforward understanding of “projecting downwardly.” For example, the specification describes a preferred embodiment involving a “lip valve” that “projects down.” EX1001 ('930 Pat.), 5:17-20. Figures 4 and 6 depict this embodiment, and they show the valve projection in a downward direction. The downwardly projecting valve is highlighted in red below.



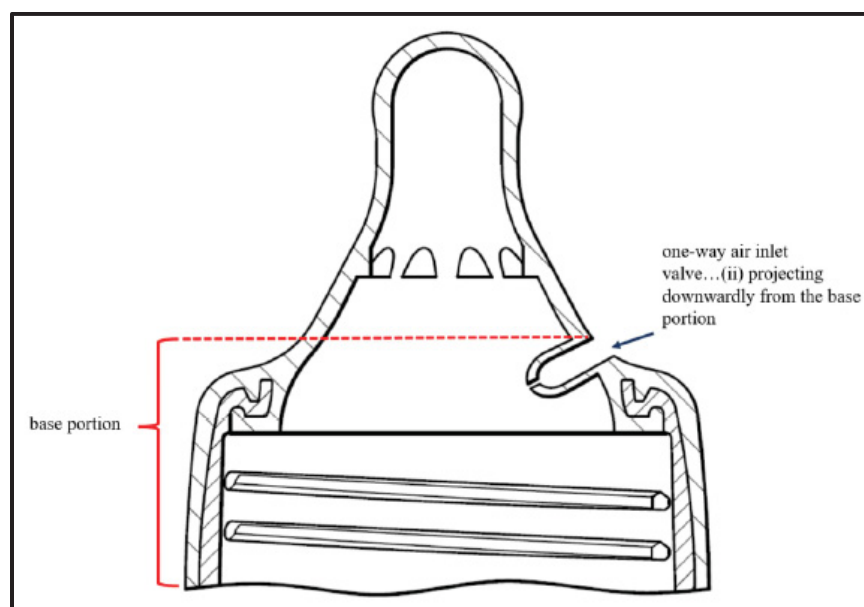
EX1001 ('930 Pat.), Figures 4 & 6 (with annotations).

49. The Examiner understood the “projecting downwardly” claim language in a manner consistent with what I have described—i.e., the straightforward understanding of a valve projecting in a downward direction. I know this because after having reviewed the prosecution history, I see that the Examiner repeatedly cited and relied on prior art with valves pointed down. *See* EX1002 ('930 Pat. Pros. History), pp. 98-99 (citing Larson), 164 (citing Itzek), 276 (citing Ware II), 369

(citing Ware I). A sampling of the Examiner’s cited and relied upon prior art is depicted below, with the downwardly projecting valves highlighted in red.

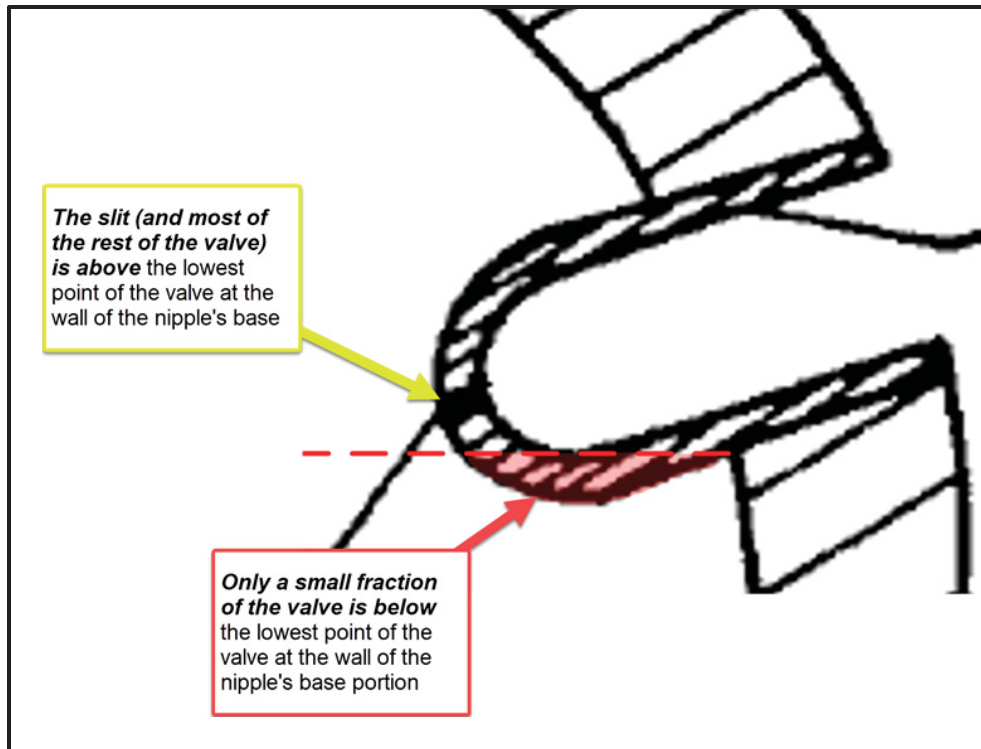
US Pat. 5,784,999 EX2034 (Larson)	US Pat. 8,708,174 EX2035 (Itzek)	US Pat. 1,510,571 EX2036 (Ware II)	US Pat. 380,835 EX2037 (Ware I)
			

50. Citing Mr. Silver’s declaration, the Petition says “the combination of Meyers and Sepehr would result in the air inlet [valve] projecting downwardly from the base portion.” Pet., 52. According to the Petition, a downwardly projecting valve is shown in a drawing created to reflect Meyers’s nipple employing Sepehr’s valve. Pet., 52-53. I have reproduced the Meyers-Sepehr combination drawing from the Petition below. See Pet., 53.



51. I disagree with the Petition and Mr. Silver’s declaration to the extent they characterize Sepehr’s valve in their combination drawing as “projecting downwardly.” The valve does not project downwardly; it projects *inwardly*. That’s how a POSITA would understand the structure of the valve, and it is easy to see why. The valve starts at the peripheral wall of the nipple and ends much closer to the nipple’s centerline. Thus, the valve projects *inwardly*, i.e., toward the centerline of the nipple.

52. Neither the Petition nor Mr. Silver’s declaration provides any explanation of their incorrect “downwardly” characterization, which is telling. *See* Pet., 52-53; EX1005 (Silver Dec.), ¶¶207-209. I do not believe they have any legitimate explanation. The best Petitioner and Mr. Silver might argue is that Sepehr’s valve in the combination drawing is tilted just slightly, a few degrees below the horizontal. They might contend this very slight tilt is enough to say the valve project downwardly. But that hypothetical theory is wrong. No POSITA would call such a slight tilt “projecting downward.” I have provided a visual aid below to help illustrate the point. This visual aid is an excerpt from Sepehr’s Figure 1—the source of the valve in Petitioner and Mr. Silver’s combination drawing—and it highlights how only a small fraction of the valve dips below the horizontal.

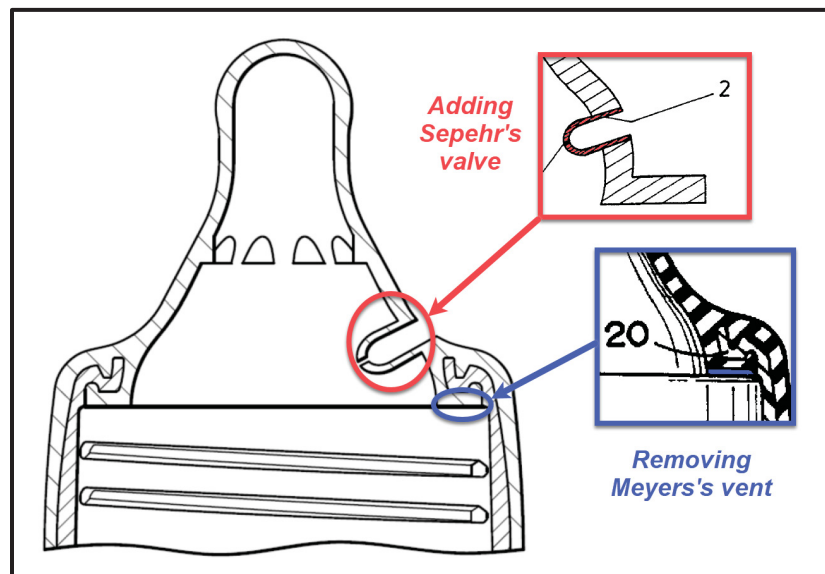


53. Petitioner and Mr. Silver might also argue that Sepehr's valve in the combination drawing projects *partially* downward or *slightly* downward. But that is not what the '930 Patent's claims say. It is also not what the '930 Patent's specification says, nor is it what the '930 Patent's figures show, nor is it what the Examiner's prior art shows. In the '930 Patent, downwardly just means down. I am not aware of any document on the record of this proceeding that supports characterizing Sepehr's inwardly projecting valve as "projecting downwardly."

B. A POSITA would not have been motivated to replace Meyers's vent with Sepehr's valve

54. The Petition and Mr. Silver's declaration each provide a discussion proposing certain motivations for combining Meyers and Sepehr. I will address the substance of their reasoning below. First, though, I must clarify an issue that

Petitioner and Mr. Silver obfuscate. Throughout their analyses, the Petition and Mr. Silver's declaration reference the notion of a POSITA being allegedly "motivated to *move the location of the vent 35* of Meyers from below the collar to above the collar as taught in Sepehr." EX1005 (Silver Dec.) ¶162; *see also* Pet., 30 ("motivated to move the location of the vent 35 of Meyers..."). But simply moving Meyers's vent is *not* what Petitioner and Mr. Silver's Meyers-Sepehr combination drawing shows. As shown below, the combination drawing shows Sepehr's valve incorporated into Meyers's nipple as a replacement for Meyers's vent.



Pet., 33 (with added annotations).

55. As I will explain below, Sepehr's valve and Meyer's vent are meaningfully different, and those differences would not inspire a POSITA to replace the latter with the former.

1. Sepehr's valve is not a suitable solution to the pressure-relief problem

56. The Petition and Mr. Silver's declaration state that "Meyers and Sepehr . . . both teach *analogous solutions* for . . . reliev[ing] negative pressure in the nipple." Pet., 27; EX1005 (Silver Dec.) ¶159. By "analogous solutions," Petitioner and Mr. Silver appear to suggest that Meyers and Sepehr teach interchangeable design options for resolving the pressure-relief problem. I disagree. A POSITA evaluating these references objectively would have appreciated the stark differences between Sepehr's valve and Meyers's vent, understanding that only the latter is a suitable design option. A POSITA would have recognized that Sepehr's valve is not a viable option and rejected such a change.

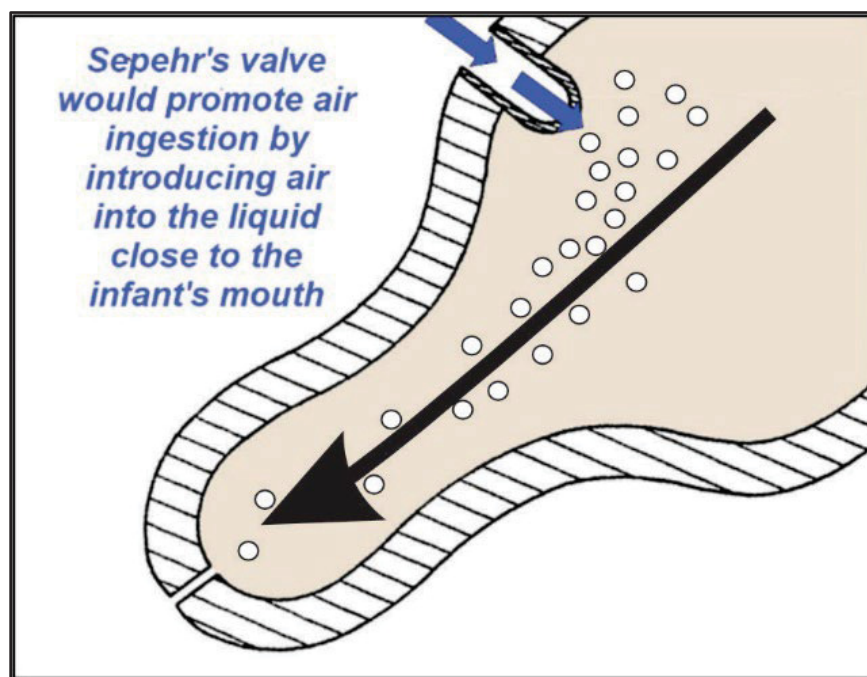
57. The design goal of "reliev[ing] negative pressure in the nipple," (Pet., 27; EX1005 (Silver Dec.) ¶159), is about preventing vacuum pressure from building up in the bottle when an infant sucks liquid (milk or formula) through the teat of the nipple. Vacuum pressure is associated with two difficulties in infant bottle feeding. First, vacuum pressure makes it difficult for the infant to successfully suckle liquid from the bottle. As the vacuum pressure builds, the infant must work harder to extract the liquid. If the pressure is not relieved, it will build to the point where the infant cannot extract any liquid at all. Second, vacuum pressure can also cause infants to ingest an excessive amount of air while feeding. For example, when an infant can no longer extract liquid from the bottle due to vacuum pressure, the infant

(or adult feeding the infant) will break the seal formed by the infant's lips on the nipple to relieve the negative pressure. As a result of the broken seal and relieved negative pressure, the infant will ingest both liquid *and* air. Air ingestion is a suspected cause for a condition called "colic," which is characterized by frequent and persistent crying and restless in an otherwise healthy and well-fed infant. This background information was all well-known in the art.

58. A POSITA possessing the background knowledge that I outlined above would have recognized that Sepehr's valve is not a suitable solution to the pressure-relief problem. The POSITA would *not* have viewed Sepehr's valve as a solution that would help to reduce air ingestion and colic. Rather, the POSITA would have assessed Sepehr's valve as a design that, when measured against other known and commonly implemented solutions like Meyers's vent,² would be expected to

² To be clear, I do not mean to suggest that Meyers's vent is a perfect design solution from the perspective of preventing air ingestion. I am using Meyers as a reference point in my analysis because (A) Meyers's vent was a relatively common design option around the time of the '930 Patent; and (B) Petitioner and Mr. Silver's combination proposed to replace Meyers's vent with Sepehr's valve. Thus, my analysis shows that Sepehr's valve was not a suitable design option that a POSITA would have entertained based on the state of the art.

increase air ingestion and colic. One fundamental flaw with Sepehr's valve design is that Sepehr places the valve relatively close to the nipple's teat—closer than Meyers's vent, for example—without providing any means for directing incoming air away from the teat. Instead of directing the air away from the teat, Sepehr's inwardly projecting valve directs the air toward the centerline of the nipple. As a result, Sepehr's valve would introduce air into the liquid very close to the infant's mouth³, where it would likely be ingested by the infant. The modified diagram below provides an aid for visualizing this effect.



³ This air-ingestion problem would be even worse with the design shown in Petitioner and Mr. Silver's combination drawing, which incorporates the valve even higher up on the nipple than in Sepehr.

59. My explanation of Sepehr’s flawed design is supported by the prior art patent literature, which recognized the detrimental effect of “air bubbles . . . found in the milk in close proximity to the nipple.” *E.g.*, EX2038, 1:35-37. As I have explained:

[T]hese small air bubbles will often be ingested. The ingestion of the air leads to colic and other gastrointestinal disorders. The unwanted ingestion of air is a long-recognized problem in infant feeding.

EX2038, 1:38-42; *see also* EX2039, 1:22-30 (“Such small bubbles when swallowed by an infant in nursing remain mixed with the liquid in the digestive tract and are frequently the cause of colic or similar disorder[s].”).

60. I understand that the Petition and Mr. Silver’s declaration suggest Sepehr’s valve would provide certain benefits over Meyers’s vent. I address their assertions on these points below and explain why they are not credible. Regardless, even if Petitioner and Mr. Silver’s alleged benefits were accepted as true, they would be outweighed by the colic-causing air-ingestion flaw in Sepehr’s valve design. In other words, from a POSITA’s perspective, benefits like increased reliability, improved airflow, and easier-to-clean would not matter if they came at a cost of worsening air ingestion and colic.

2. Petitioner and Mr. Silver’s alleged airflow, reliability, and cleaning improvements are not credible

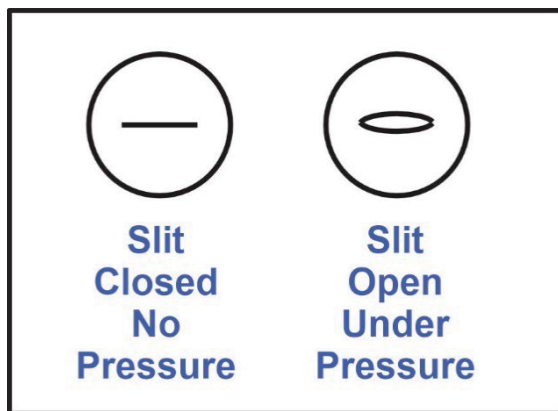
61. The Petition and Mr. Silver’s declaration allege that a POSITA would have viewed Sepehr’s valve as providing airflow, reliability, and cleaning

improvements over Meyers's vent. *See* Pet., 30-31; EX1005 (Silver Dec.), ¶¶162-163. Having reviewed their analyses, I find that Petitioner and Mr. Silver have not established their assertions with credible evidence or reasoned technical explanations.

a) Petitioner and Mr. Silver's unproven "airflow" theory

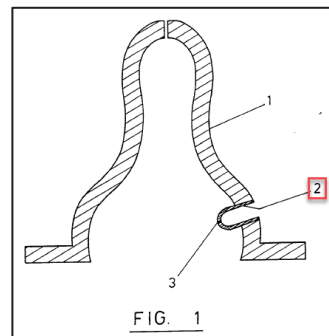
62. According to Mr. Silver, "[t]he one-way air vent communicating directly with the external environment in Sepehr is more effective at pulling air into the bottle than an air vent through the flange covered by the collar pulling in air through the threads as in Meyers." EX1005 (Silver Dec.) ¶162. Mr. Silver is mistaken. His analysis mischaracterizes Sepehr.

63. Sepehr's design for relieving vacuum pressure is not only an air vent—i.e., a passageway facilitating air flow. As shown below, Sepehr's design is a vent *integrated with a one-way valve* having lips that must be deformed by a sufficient pressure differential between the inside of the bottle and the surrounding environment.



Thus, the vent passage in Sepehr does not communicate “directly” with the external environment, as Mr. Silver suggests.

With reference to the drawings, Figure 1 represents a teat 1 for a child feeding bottle, together with ***an automatic valve 2*** produced as an integral part of teat 1 which has a slit 3 across the valve 2 in order to allow the air to enter the bottle when a vacuum is formed within it and ***a pressure difference between inside and outside the bottle is established.***

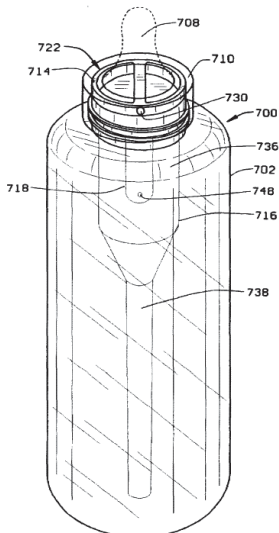


EX1007 (Sepehr), 3:8-19.

64. A POSITA would not have misinterpreted Sepehr in the way Mr. Silver did and, therefore, would not have jumped to the same inaccurate conclusion that Sepehr’s valve is “more effective” at pulling in air than Meyers’s vent. Instead, the POSITA would have recognized that Meyers’s vent is the one that “communicat[es] directly,” not Sepehr’s. That is because Meyers does not employ a valve like Sepehr does, meaning there is a direct air flowpath between the vent and the external environment. This is what Meyers teaches when it says “[v]ent 35 permits ambient air to be drawn back into the nurser bottle around collar threads 5.” EX1006 (Meyers), 4:29-30.

65. Meyers’s approach of pulling in air through the threads is not uncommon. Even before Meyers, this technique was described in the patent literature and employed in commercial products. For example, the Dr. Brown’s Natural Flow Baby Bottle employs an air-through-the-threads approach, as

described in U.S. Patent No. 5,779,071 (EX2040, 5:24-31); *see also* EX2041, p.1 (“A fully vented bottle allowed ***a direct communication between the outside air and the inside of the bottle through a straw-type conduit connecting the threads*** of the nipple cap with a cavity at the bottom of the bottle.”).

Dr. Brown's Natural Flow Baby Bottle	U.S. Patent No. 5,779,071 (EX2040)
  https://youtu.be/R3pv05CY9Wc	“As the liquid is sucked from the inside of the container, it is replaced with air that passes between the threaded collar 710 and the threads on the neck 706, through the openings 730 into the air conduit 728, and from there through the opening 734 into the vent tube 718 through the opening 734 into the vent tube 718 through the opening 748 in the end of the vent tube, and through the reservoir tube 716 to the air space above the liquid in the inverted bottle. This prevents the formation of a vacuum in the bottle.” 5:24-31  FIG. 6

have understood that employing Sepehr's valve would improve reliability by mitigating the tendency of airflow to "vary in the collar region" due to [1] "the compressive force applied to the vent passage from connection to the bottle"; [2] "changes to the shape or size or integrity of the vent passage caused by the bottle lip as the parts are secured together"; or [3] "changes in the material over time that would impede the reliability of the valve to relieve negative pressure in the nipple without leaking." EX1005 (Silver Dec.) ¶162. Mr. Silver does not explain or provide any evidentiary support for these assertions. He simply declares them, as if they are self-evident. But Mr. Silver's assertions are not self-evident, as I will explain below.

i. "the compressive force applied to the vent passage from connection to the bottle"

68. As with all of his assertions on the "reliability" subject, Mr. Silver does not explain how or why a POSITA would have understood that airflow through Meyers's vent could be impacted by a "compressive force." EX1005 (Silver Dec.) ¶162. While Mr. Silver does not identify this compressive force, I assume he is referencing the force exerted on the nipple flange where the vent is located by the collar when the user screws the collar onto the bottle's neck. But the possibility of such a scenario would not have motivated a POSITA to employ Sepehr's valve in place of Meyers's vent.

69. For the compressive force applied by the collar to impact Meyers's vent—which is just a small depression in the nipple's flange with no moving parts—the user would have to over-torque the collar severely. In other words, the user would have to exert a large force to overtighten the collar by continuing to advance it along the threads of the bottle long after the point where it is sufficiently tightened. Doing so would constitute misuse of the device. From a POSITA's perspective, as a matter of basic common sense, the potential for Meyers's vent to malfunction when the product is misused would not outweigh the tendency of Sepehr's valve to promote air-ingestion, even when the product is used as-directed.

70. Notably, Mr. Silver's "compressive force" theory did not dissuade him from employing an under-the-collar vent in his prior patent. *See* EX2019, 4:2-8.

ii. “changes to the shape or size or integrity of the vent passage caused by the bottle lip as the parts are secured together”

71. This particular theory is so unclear that it inhibits my ability to respond. EX1005 (Silver Dec.) ¶162. It is impossible for me to determine with any reasonable degree of certainty what “changes to the shape or size or integrity of the vent passage” Mr. Silver is referring to and how he believes “the bottle lip” might cause them “as the parts are secured together.” As best I can tell, Mr. Silver is simply expressing his “compressive force” theory in slightly different terms. Thus, my discussion above applies equally here.

iii. “changes in the material over time that would impede the reliability of the valve to relieve negative pressure in the nipple without leaking”

72. Mr. Silver’s “changes in the material” theory would not elevate Sepehr’s valve over Meyers’s vent in a POSITA’s view. EX1005 (Silver Dec.) ¶162. Neither Sepehr nor Meyers discloses a new and improved material. While Meyers discloses “a clear thermoplastic elastomer” as a potential nipple material and Sepehr discloses silicone, both references make clear that other suitable materials could be used. *See* EX1006 (Meyers), 4:36-40; EX1007 (Sepehr), 2:13-18. There is no reason why Sepehr’s valve and Meyers’s vent could not be made from the same material.

73. Additionally, Mr. Silver fails to explain how or why Sepehr’s valve would not suffer the similar reliability issues as Meyers’s vent in response to “changes in the material over time.” In fact, to the extent one of Meyer’s vent or Sepehr’s valve is more likely to malfunction based on changes in the material, it is the latter.

74. Meyers’s vent is just a depression in the nipple’s flange that does not have any moving parts. Sepehr’s valve, by contrast, has lips that must be deformed to allow air into the bottle. While changes in the material could change the shape or size of Meyers’s vent, similar material changes could prevent Sepehr’s valve from opening or closing. Indeed, this is a known issue with slit valves formed in silicone nipples.

iv. The Petitioner's "debris" argument

75. Relatedly, I note that the Petition provides an additional aspect of the "reliability" theory that does not appear in Mr. Silver's declaration. The Petition suggests using Sepehr's above-the-collar valve would "avoid debris that may be trapped in the collar region." Pet., 31. Not only does this theory lack evidentiary support (e.g., it is not supported by Mr. Silver's declaration), but it is also not credible. Sepehr's valve is positioned higher up on the nipple where it is equally exposed to debris—if not more so—than the collar region on Meyers's nipple.

c) Petitioner and Mr. Silver's unproven "cleaning" theory

76. According to Mr. Silver, "[a] POSA would be further motivated and find it obvious, to the extent not disclosed by Meyers, to modify the nipple design of Meyers such that the air valve is placed above the collar as taught by Sepehr in order to improve cleaning and maintenance of the nipple." EX1005 (Silver Dec.) ¶163. Specifically, Mr. Silver claims that "locat[ing] the vent above the collar" would make it more "easily boiled and hygienically cleaned." EX1005 (Silver Dec.) ¶163 (quoting EX1007 (Sepehr), 2:20-26, 3:21-24). Mr. Silver's conclusion is baseless. The *location* of the vent or valve, whether above or below the collar on Meyers's nipple, does not impact the ease with which it can be cleaned by boiling. In both locations, the vent or valve is easily reached and cleaned by boiling water or by hand when the nipple is taken off of the bottle. The easier-to-clean language Mr.

Silver relies on from Sepehr is about making the valve an integral part of the nipple rather than a separate component, which is also the case in Meyers. *See* EX1007 (Sepehr), 3:21-24 (“One of the main advantages of the present invention is the valve 2 is produced as an integral part of the teat 1 of the bottle 4 (see Figure 3) therefore, it can easily be boiled and hygienically cleaned following each use.”). A POSITA would know that the deep cylindrical recession of the Sepehr valve is much more difficult to access and properly clean (e.g., with a bottle brush). Therefore, the Mr. Silver’s “cleaning theory” would be best solved through the Meyer valve versus the Sepehr valve.

3. The performance and manufacturing problems with Sepehr’s valve outweigh Petitioner and Mr. Silver’s alleged benefits

77. As I have explained (*see* ¶¶61-75), Mr. Silver’s “airflow,” “reliability,” and “cleaning” improvement theories have no basis (either in Mr. Silver’s declaration or in reality) and, even if they were accurate, would in any event be outweighed by the fact that Sepehr’s valve is not a suitable design option for relieving vacuum pressure from a baby bottle. Even beyond the fact that Sepehr’s valve would promote air ingestion, there are more reasons why a POSITA would not have been prompted to use Sepehr’s flawed design in conjunction with Meyers’s nipple. All of these reasons against Sepehr’s design outweigh Petitioner and Mr. Silver’s alleged improvements/benefits.

78. Sepehr's valve, as pictured in Petitioner and Mr. Silver's Meyers-Sepehr combination drawing, would have a tendency to become obstructed and not reliably relieve vacuum pressure from the bottle. As shown below, with many conventional nipple shapes (which are not wide and domed like the '930 Patent's), the infant often puts all or nearly all of the portion of the nipple above the collar in his/her mouth.

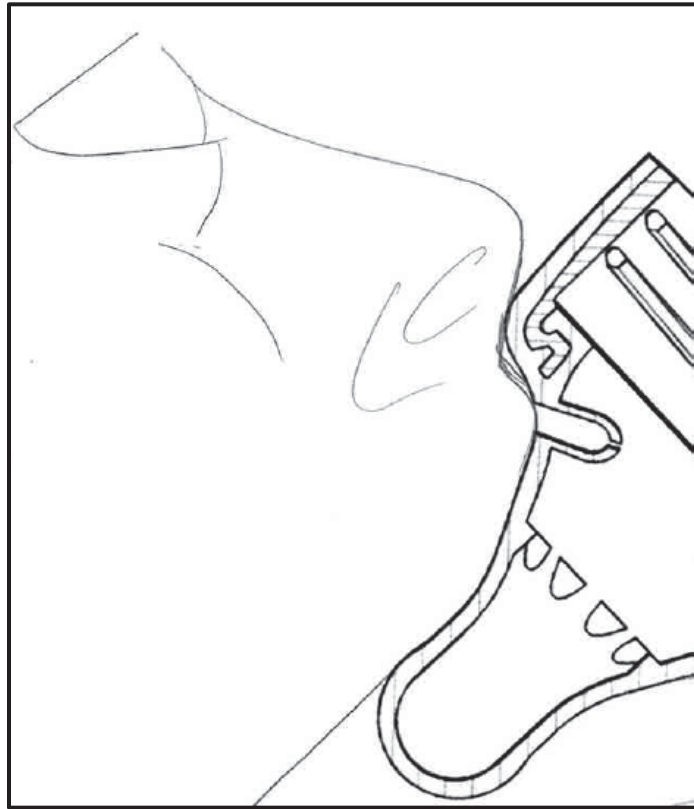


<https://norani.com/blogs/blog/when-to-switch-nipple-sizes-on-babys-bottle-a-full-guide>

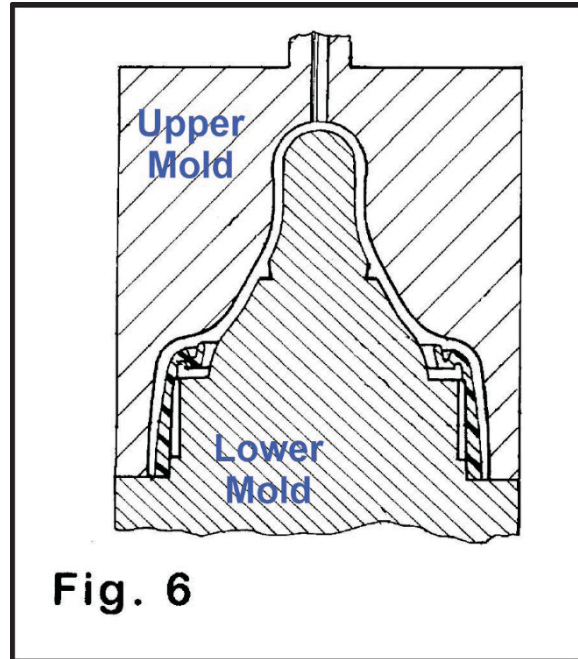


<https://www.drbrownsbaby.com/product/dr-browns-options-plus-baby-bottle-narrow/>

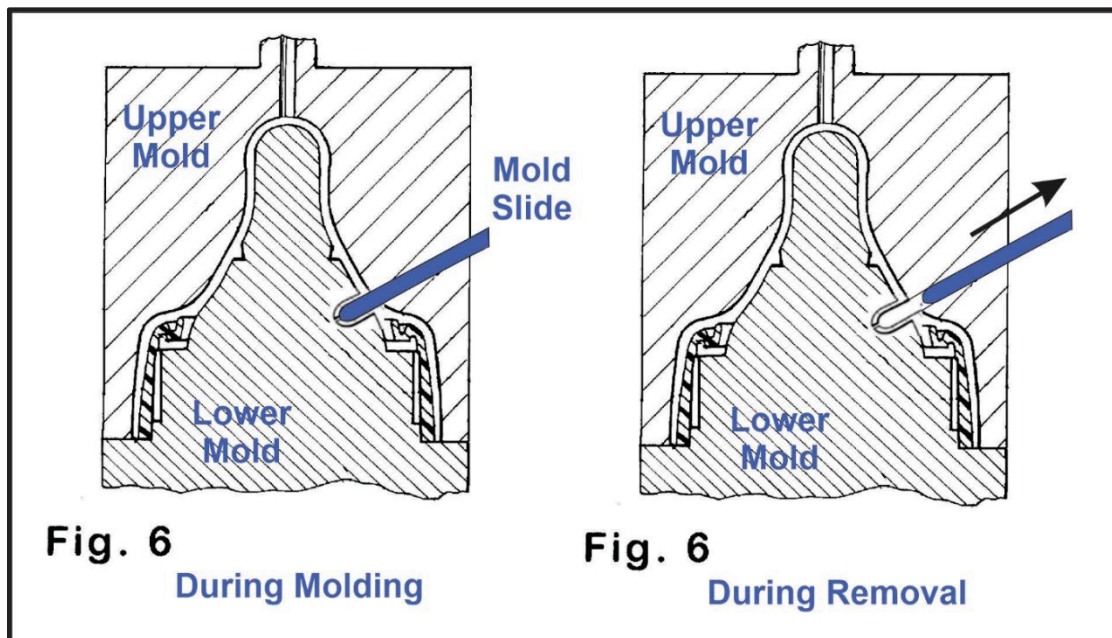
79. Accordingly, in Petitioner and Mr. Silver's Meyers-Sepehr combination—which puts the valve above the collar on a nipple shape that is not wide or domed—the valve would be completely or partially covered up by the infant's lips. The modified diagram below provides an aid for visualizing this effect.



80. Yet another problem with Sepehr's valve is that it creates manufacturing difficulties. Because the valve protrudes inwardly instead of downwardly, special mold slides would be required during manufacturing. Meyers's design requires injection molding as the manufacturing process because the thermoplastic elastomer material is inserted to the collar and because of the anti-collapse ribs. Below is Figure 6 of Meyers's showing the upper and lower mold for Meyers's design. I have modified this image removing the numbers and leader lines to make the image easier to view:



81. In order to introduce the Sepehr valve design, a mold slide, which requires additional power to move the slide in during molding and out during removal would have to be added. A simplified diagram of this action, based on Figure 6 of the Meyer's Patent is below:



82. These additional components as well the extra maintenance required for this additional moving part would drive up tooling costs and slow down the molding process, both of which go against Meyers's goal of producing a nipple that is "economical to manufacture." EX1006 (Meyers), 2:3-6.

C. Meyers fails to disclose or suggest a nipple having a base with a "domed configuration"

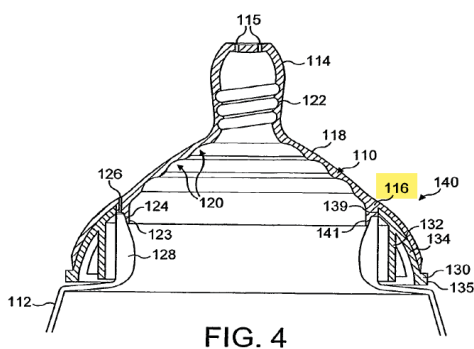
83. The '930 Patent's independent claim 14 recites, "a base portion having a domed configuration." EX1001 ('930 Pat.), 8:43. I've highlighted this claim language in context below:

14. A feeding bottle comprising:
a) a vessel having an open top,
b) a collar having an upper rim and a lower rim comprising:
an internally threaded inner surface,
an outermost surface having a sloping portion that extends outwardly and downwardly relative to said upper rim, and
wherein said sloping portion comprises a majority of the collar's outermost surface,
c) a nipple having:
a teat portion having a variable wall thickness including an aperture,
a base portion having a domed configuration,
an areola portion between the teat portion and the base portion,
a flange depending from the base portion,
a one-way air inlet valve (i) extending through said base, (ii) projecting downwardly from the base portion, (iii) having a length that does not extend past the collar's lower rim, and (iv) disposed at least partially inwardly from the collar;
the flange being arranged to seal with the vessel;
d) the nipple being secured to the collar by sealingly capturing an inner edge of the collar between the base portion and the flange; and,
e) the nipple being secured to the vessel by capturing the flange of the nipple between the collar and the open top of the vessel.

84. The Petition relies solely on Meyers to address the “domed configuration” limitation. *See* Pet., 41-44. But, as I will explain below, Meyers falls short because its nipple is even narrower than the conventional nipple shape shown in the ’930 Patent’s Figure 1, which is not described as “domed.”

1. The word “wide” in the adopted “domed configuration” construction distinguishes conventional nipple shapes

85. As I noted above, the District Court construed the claim term “domed configuration” as “wide circular bottom with an arc-shaped cross-sectional profile.” Having reviewed the Order, I see that the District Court’s analysis is based primarily on the ’930 Patent’s specification, which describes the base portion 116 (or “lower portion”) of the nipple shown in Figure 4 as “being shaped like a breast and having a *wide*, domed configuration.” EX1001 (’930 Pat.), 4:1-3.



“The shape of the teat is also similar to the human breast, *the base portion 116 being shaped like a breast and having a wide, domed configuration.*”

86. In laymen’s terms, the word “wide” means having a greater than typical lateral extent or width. EX2029, p.3 (defining “wide” as “of great or more than average width”). The ’930 Patent’s specification uses the word “wide” the same

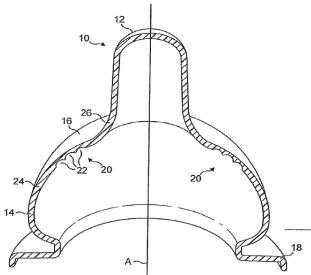
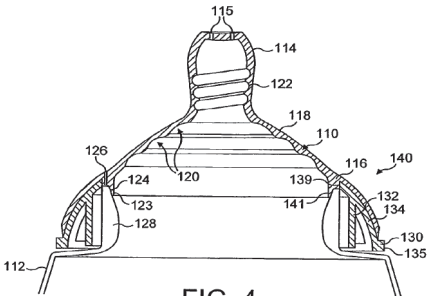
way. So, when the specification says the Figure 4 nipple base is “wide,” a POSITA would understand that to mean the wide base has a larger diameter than a conventional baby bottle nipple⁴. *See* EX1003 (’930 Pat.), 4:1-3. To provide more context, the specification also says the base is “shaped like a breast,” meaning the base is “wide” in a manner that replicates the characteristic anatomical shape of a human breast more closely than an ordinary baby bottle nipple. *See* EX1003 (’930 Pat.), 4:1-3. A POSITA familiar with the landscape of pre-existing nipples (which I will discuss further below) would have appreciated that the Figure 4 embodiment matches this description and understanding of “wide.”

87. I understand that words like “wide” and “shaped like a breast” may seem vague at first blush, but they are clear to a POSITA. “Wide” does not require a specific diameter or diameter range, and “shaped like a breast” does not mean the Figure 4 nipple perfectly matches the specific contour and size of any particular human breast. These words are simply meant to convey to the POSITA that the shape of the nipple base is wider and approximates the anatomy of a typical human breast in the area presented to an infant during feeding more so than a conventional

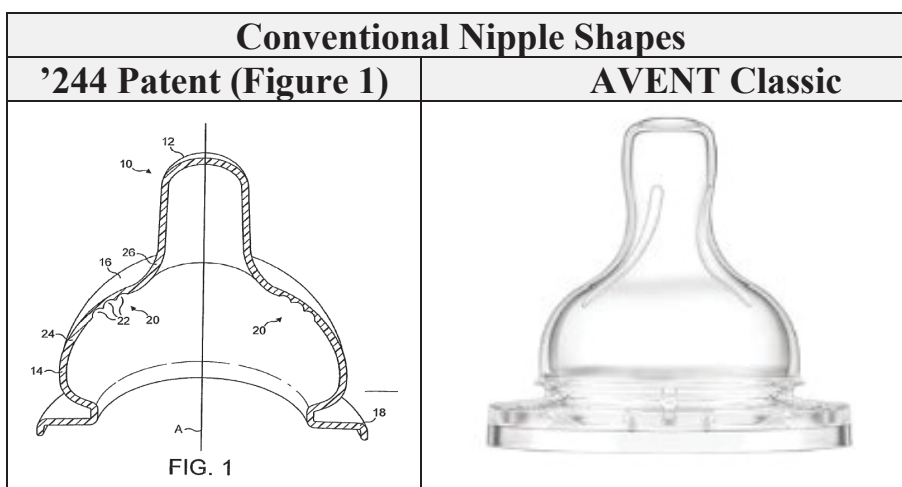
⁴ By “conventional baby bottle nipple,” I am referring to products which were widespread in the market at the time, such as the AVENT Classic product shown below.

nipple. The characteristic “domed” shape of the ’930 Patent is a performance-enhancing feature. Given the breast-like qualities of this shape, infants are more likely to take a bottle, latch onto the artificial nipple in a manner consistent with natural breastfeeding, and successfully switch between bottle and breastfeeding. A conventional nipple that lacks this “domed” shape would not achieve the same performance benefits.

88. Just as it is significant that the ’930 Patent describes Figure 4 as “wide” and “shaped like a breast,” it is equally significant that Figure 1 is *not* described as such. That makes sense from the perspective of a POSITA, who would recognize that Figure 1 depicts a nipple having a conventional shape. The POSITA would not expect the Figure 1 nipple to be described by distinctive words like “wide” or “domed” because the shape was unremarkable at the time of the ’930 Patent in 2005. A POSITA would not need specific dimensions to see that Figure 4 is “wide” while Figure 1 is not. It is clear from looking at these figures that the ratio of width to height is significantly larger in Figure 4 than in Figure 1.

Conventional Nipple Shape '930 Patent (Figure 1)	Breast-Like Nipple Having a Base With a Wide, Domed Configuration '930 Patent (Figure 4)
 FIG. 1	 FIG. 4

89. Indeed, the Figure 1 nipple looks quite similar to known products on the market made by major manufacturers before the '930 Patent, such as the AVENT Classic baby bottle nipple shown below.⁵ A POSITA would have understood these nipples to have a conventional shape that is distinct from the “wide” and “domed shape” shown in the '930 Patent's Figure 4.

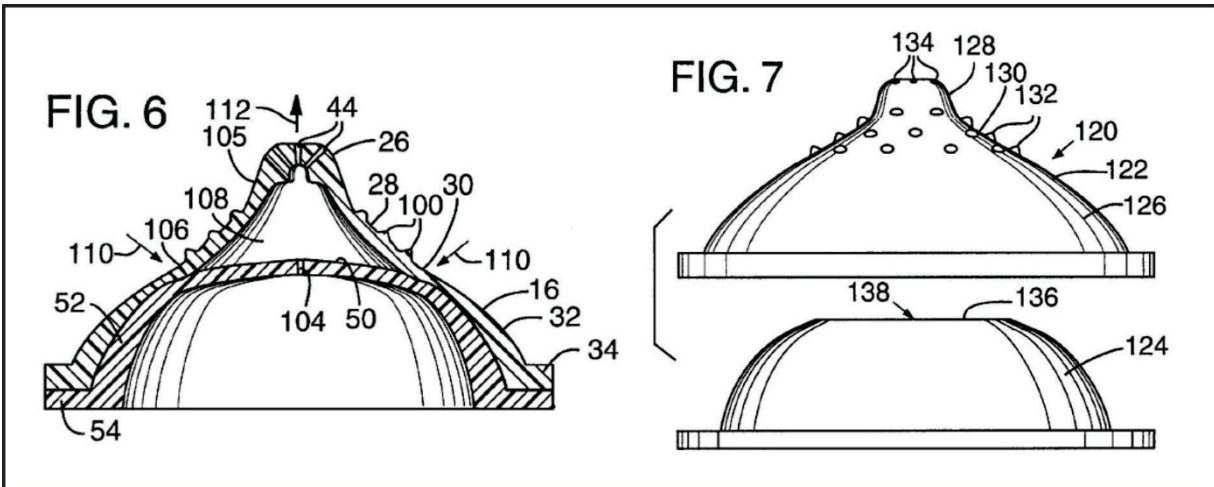


90. My explanation above regarding the POSITA's understanding of the word “wide” in the adopted construction of “domed configuration” is confirmed by additional evidence beyond the '930 Patent's specification.

91. For example, there is a prior art reference cited on the face of the '933 Patent—i.e., U.S. Pat. No. 6,161,710 (“Natural Nipple Baby Feeding Apparatus”), which issued on December 19, 2000 to Dieringer, et al.—that talks about the

⁵ See, e.g., https://www.philips.co.uk/c-p/SCF680_17/avent-classic-baby-bottle?utm_id=71700000104931063&origin=7_700000002399531_71700000104931063_58700008237880425_39700074819928678&gclid=CjwKCAjwp8OpBhAFEiwAG7NaEjKh9WIJwaNvaYIffigrHea-R_4Qxuz3QTm2iwHbeWHhmuJ45v_wMhoCVHkQAvD_BwE&gclsrc=aw.ds

superiority of a “wide” nipple design. The nipples described in the Dieringer Patent “extend substantially across a distance larger than the diameter of a standard baby bottle” and “hav[e] a width approximately double that of the[ir] height[.]” EX2024 (Dieringer Pat.), 1:10-17. To create “wide” contour, “the shape and outer surface texture . . . is taken from a mold of an actual nursing mother’s breast,” and “*due to the wide diameter . . . an infant will recognize and be comfortable with the nipple[.]*” EX2024 (Dieringer Pat.), 5:38-50.



EX2024 (Dieringer Pat.), Figures 6-7.

92. The Dieringer Patent distinguishes its “wide” nipple design with older nipples that “do not look or feel like a natural breast” because they have “a width much narrower than a natural breast.” EX2024 (Dieringer Pat.), 2:28-41. Unlike a “wide” breast-like nipple, “once the infant is comfortable with bottle feeding [using

these older, narrower nipples] the infant will often encounter ‘nipple confusion’ upon returning to breastfeeding.”⁶ EX2024 (Dieringer Pat.), 2:28-41.

93. The Dieringer Patent supports what I explained above—a POSITA would have understood the word “wide” in the adopted “domed configuration” construction to reference a nipple design that is wider, and thus more breast-like, than conventional nipple shapes. For purpose of comparison, I provide a collection of *non*-breast-like nipples below.



94. As shown, the much older nipples are quite narrow, while the more recent nipples are broader like Figure 1 of the '930 Patent. But none of these nipples

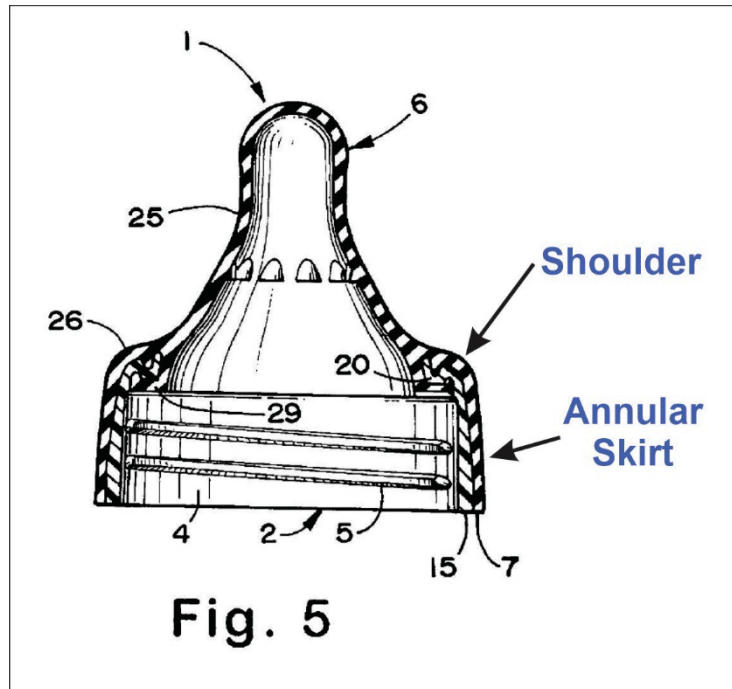
⁶ Nipple confusion is “an infant’s difficulty in achieving the correct oral configuration, latching technique, and suckling pattern necessary for successful breast-feeding after bottle feeding or other exposure to an artificial nipple.” EX2031 (Nipple confusion: Toward a formal definition), p.1.

has a wide base with a domed configuration that resembles the anatomical shape of a human breast like the '930 Patent's Figure 4 or the nipples in the Dieringer Patent.

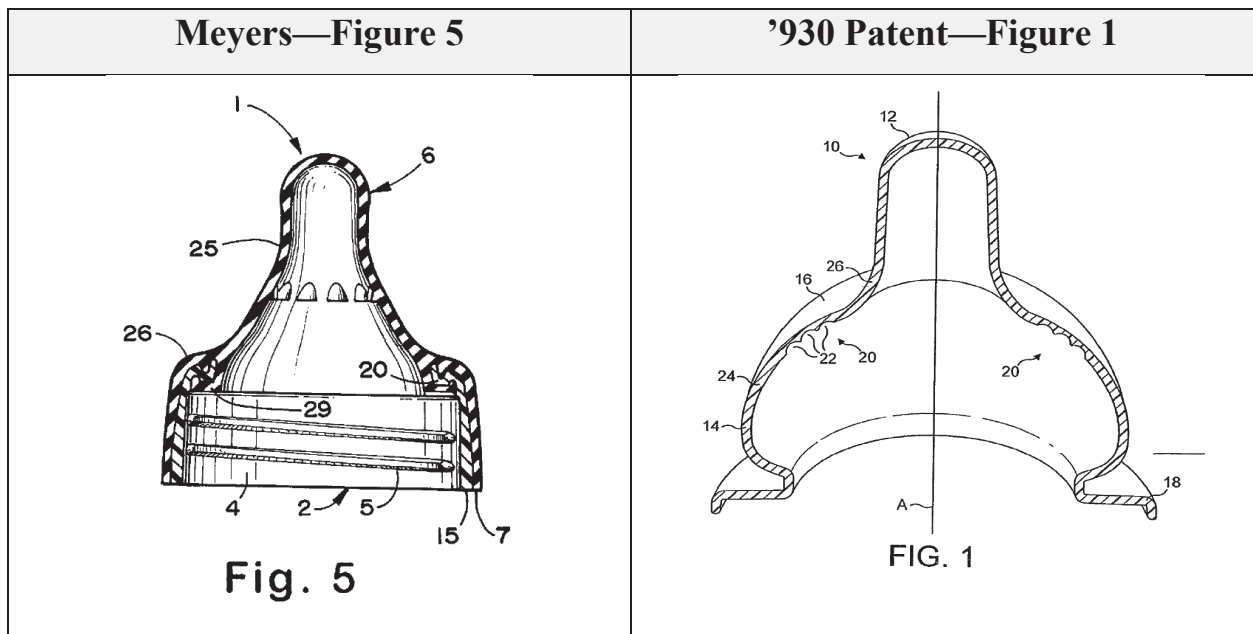
2. Meyers's nipple cannot be “domed” because it is even narrower than the conventional nipple in the '930 Patent

95. The Petition gives no substantive consideration to the word “wide” in the adopted construction of “domed configuration.” All the Petition says is that “the base portion 26 [of Meyers's nipple] as viewed from above and below in Figs. 11-13 is *circular*.” Pet., 42. But just being circular is not enough. A “domed configuration” requires a “*wide* circular bottom,” which Meyers does not disclose and the Petition does not address.

96. There is no disclosure in Meyers that suggests a “domed” base characterized by a “*wide* circular bottom.” While Meyers's base is “uniquely shaped” (EX1006 (Meyers), 3:66-4:1), the shape is unique in a way that differs from the '930 Patent's “domed configuration.” Meyers's base is “uniquely shaped” because it “is molded over [the] collar.” EX1006 (Meyers), 3:66-4:1. Accordingly, the base of the nipple features a curved shoulder and an annular skirt that follow the contour of the collar. The collar-matching shoulder and skirt increase the width of the nipple's base but only slightly, and not in a manner that makes the base “domed.” This is so because the collar does not project radially outward to a significant degree. The side of the collar is nearly vertical in cross-section.



97. Additionally, I know the nipple base in Meyers is not “wide” in the sense of the ’930 Patent’s “domed configuration” because it is even narrower than the conventional-shaped nipple depicted in the ’930 Patent’s Figure 1, which is *not* “domed.”



98. Recognizing that Meyers’s nipple base is not “wide” in the sense of the ’930 Patent, Mr. Silver offers an alternative theory. He argues that the base area 26 of Meyers’s nipple “is wider than the portions of the nipple above it.” EX1005 (Silver Dec.) ¶191. I disagree. Interpreting “wide” this way—i.e., wider than any other portion of the nipple—is inconsistent with the ’930 Patent’s specification. “Wide” and “domed” have meaning in the ’930 Patent. Those words distinguish the breast-like nipple shape in Figure 4 from the conventional nipple shape in Figure 1. But they would have no meaning at all if they were applicable to any nipple-collar assembly that is wider than the teat or areola and nothing more. Virtually every 21st century nipple would be described as having a wide, domed configuration in that case. The ’930 Patent’s specification says otherwise.

IX. GROUND 2: THE MEYERS-SEPEHR-ISHIMARU COMBINATION

A. Ishimaru does not cure the deficiencies of the Meyers-Ishimaru combination in any respect

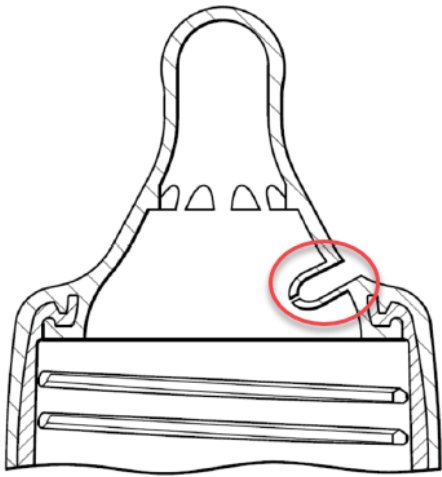
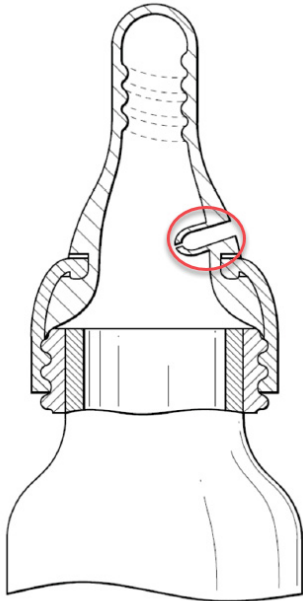
99. The Petition and Mr. Silver’s declaration rely on Ishimaru in Ground 2 as a tertiary reference to the Ground 1 Meyers-Sepehr combination. Specifically, they rely on Ishimaru to address the ’930 Patent’s claim feature of “a nipple having: a teat portion having a variable wall thickness including an aperture.” *See* Pet., 67-69; EX1005 (Silver Dec.) ¶¶254-256. The Petition and Mr. Silver’s declaration do not assert that Ishimaru cures any of the above-discussed flaws regarding the one-

way valve limitations or the “domed configuration” limitation. Thus, my prior analysis from Ground 1 applies equally here in Ground 2.

X. GROUND 3: THE KURKJIAN-SEPEHR-ISHIMARU COMBINATION

A. The valve in Kurkjian-Sepehr-Ishimaru does not “project[] downwardly,” as claimed

100. Just like Ground 1, Ground 3’s Kurkjian-Sepehr-Ishimaru combination, relies on the same teaching from Sepehr—namely, Sepehr’s Figure 1—to address the ’930 Patent’s “projecting downwardly” valve limitation. Below, I’ve depicted the combination drawings from Ground 1 and Ground 3 side-by-side to show that both combinations incorporate Sepehr’s *inwardly* projecting valve in the same way. Accordingly, my analysis above at ¶¶47-53 regarding Ground 1 applies equally here in Ground 3.

Meyers-Sepehr Drawing Ground 1, Pet., 33	Kurkjian-Sepehr-Ishimaru Drawing Ground 3, Pet., 79
	

B. A POSITA would not have been motivated to employ Sepehr's valve with Kurkjian's nipple

101. As noted above, Petitioner and Mr. Silver's Kurkjian-Sepehr-Ishimaru combination in Ground 3 proposes to incorporate Sepehr's valve in substantially the same way as their Meyers-Kurkjian combination in Ground 1. Likewise, Petitioner and Mr. Silver's motivation-to-combine analyses for the Ground 3 combination resembles their prior Ground 1 analyses on the same subject. Accordingly, my discussion undercutting their position in Ground 1 (*see* ¶¶54-82) also applies here in Ground 3. As I explained above, incorporating Sepehr's valve in the manner proposed by Petitioner and Mr. Silver would:

- Increase the likelihood of the infant ingesting air, which causes colic;
- Increase the likelihood of the nipple not fulfilling its intended purpose of relieving vacuum pressure from the bottle when the valve is obstructed by the infant's lips; and
- Increase costs by causing manufacturing difficulties.

102. All of these negative consequences outweigh the alleged airflow, reliability, and cleaning benefits that Petitioner and Mr. Silver allege but fail to prove. And just like in Ground 1, their alleged improvements are easily debunked.

103. As in Ground 1, Petitioner and Mr. Silver make the same error of misunderstanding how Sepehr's valve works when making their case on the "airflow" improvement theory. The vent passageway in Sepehr does not "communicat[e]"

directly with the external environment,” such that it would be “more effective at pulling air into the bottle.” Pet., 75; *see also* EX1005 (Silver Dec.) ¶285. Instead, as I have explained (*see* ¶¶62-66), Sepehr’s nipple employs a slit valve that regulates communication between the bottle and the external environment based on the existence or absence of a pressure differential. Kurkjian employs a different kind of valve, one located on the nipple’s flange that pulls in air around the collar when the nipple flexes inward due to vacuum pressure. *See* EX1009 (Kurkjian), 1:45-2:10, 2:34-3:17. This is a well-known approach that has been commercially adopted in longstanding commercial products, such as in the Philips AVENT baby bottle pictured below:



<https://www.amazon.com/Philips-Avent-Anti-colic-Bottles-Clear/dp/B01LRVDU8Y>

104. Petitioner and Mr. Silver provide no reasonable explanation for why Sepehr’s valve would prove more effective than Kurkjian’s. In fact, Petitioner and Mr. Silver mischaracterize Kurkjian, suggesting it pulls in air through the mating threads of the bottle and collar, which is not true. Pet., 75 (“pulling in air through the threads as in Kurkjian”); EX1005 (Silver Dec.) ¶285 (same).

105. Additionally, Petitioner and Mr. Silver’s “reliability” argument based on a “compressive force” is even less credible in Ground 3 than in Ground 1. *See* Pet., 75; EX1005 (Silver Dec.) ¶285. Both of their analyses fail to consider that Kurkjian offers a solution to this compressive force by designing the collar so that it does not impact operation of the pressure relief mechanism. *See* EX1009 (Kurkjian), 2:34-40 (“This bead 21 [of the retaining cap/collar] will constitute an efficient means for engaging the flange adjacent the body portion 13 and inwardly of the vent opening 15 *so as to prevent spreading of the vent when an excessive pull is exerted upon the body portion 13 of the nipple.*”).

106. Relatedly, I note that the Petition provides an additional aspect of the “reliability” theory that does not appear in Mr. Silver’s declaration. The Petition suggests using Sepehr’s above-the-collar valve would “avoid debris that may be trapped in the collar region.” Pet., 75. Not only does this theory lack evidentiary support (e.g., it is not supported by Mr. Silver’s declaration), but it is also not

credible. Sepehr's valve is positioned higher up on the nipple where it is equally exposed to debris—if not more so—than the collar region on Kurkjian's nipple.

107. Lastly, I note Mr. Silver's theory that Sepehr's valve would be easier to clean fails here in Ground 3 for the same reason it failed in Ground 1. *See* EX1005 (Silver Dec.) ¶286 (quoting EX1007 (Sepehr), 2:20-26, 3:21-24). As I have explained (*see* ¶76), the easier-to-clean language on which Mr. Silver relies is based on the fact that the valve is integral to the nipple, which is equally true in Kurkjian.

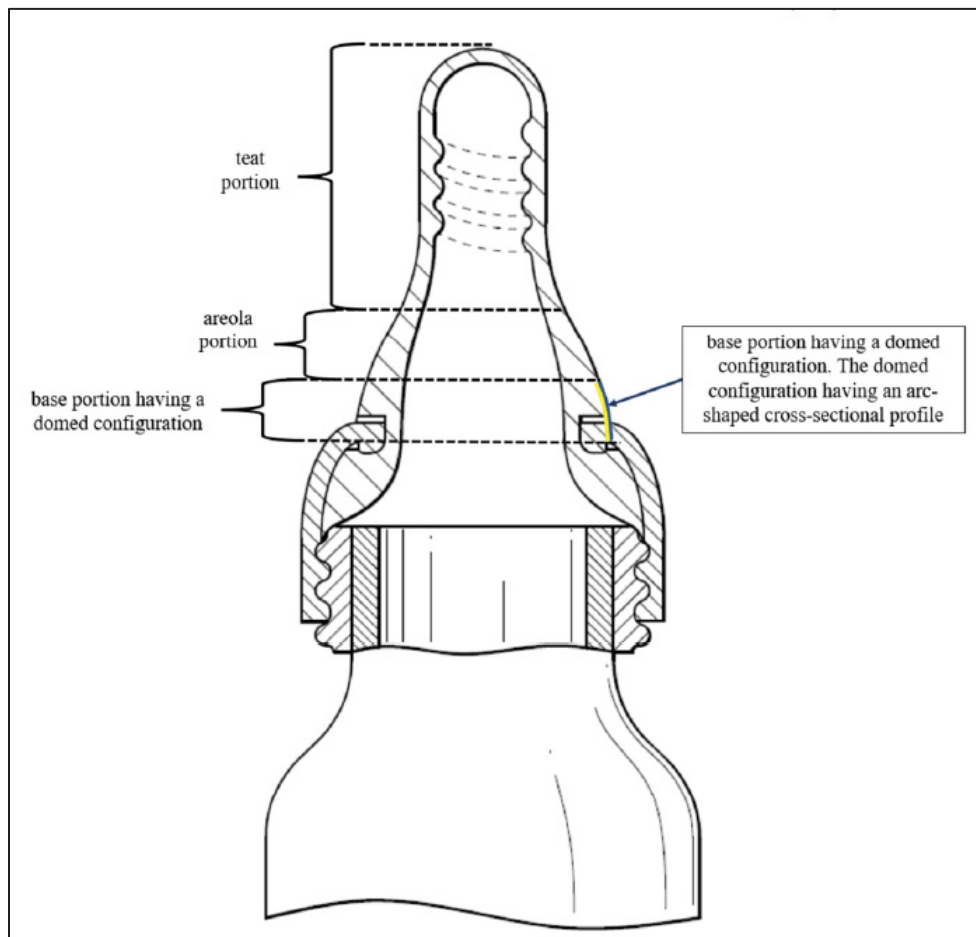
C. Kurkjian fails to disclose or suggest a nipple having a base with a “domed configuration”

108. The '930 Patent's independent claim 14 recites, “a base portion having a domed configuration.” EX1001 ('930 Pat.), 8:43. I've highlighted this claim language in context below:

c) a nipple having:
a teat portion having a variable wall thickness including an aperture,
a base portion having a domed configuration,
an areola portion between the teat portion and the base portion,
a flange depending from the base portion,
a one-way air inlet valve (i) extending through said base, (ii) projecting downwardly from the base portion, (iii) having a length that does not extend past the collar's lower rim, and (iv) disposed at least partially inwardly from the collar;
the flange being arranged to seal with the vessel;
d) the nipple being secured to the collar by sealingly capturing an inner edge of the collar between the base portion and the flange; and,
e) the nipple being secured to the vessel by capturing the flange of the nipple between the collar and the open top of the vessel.

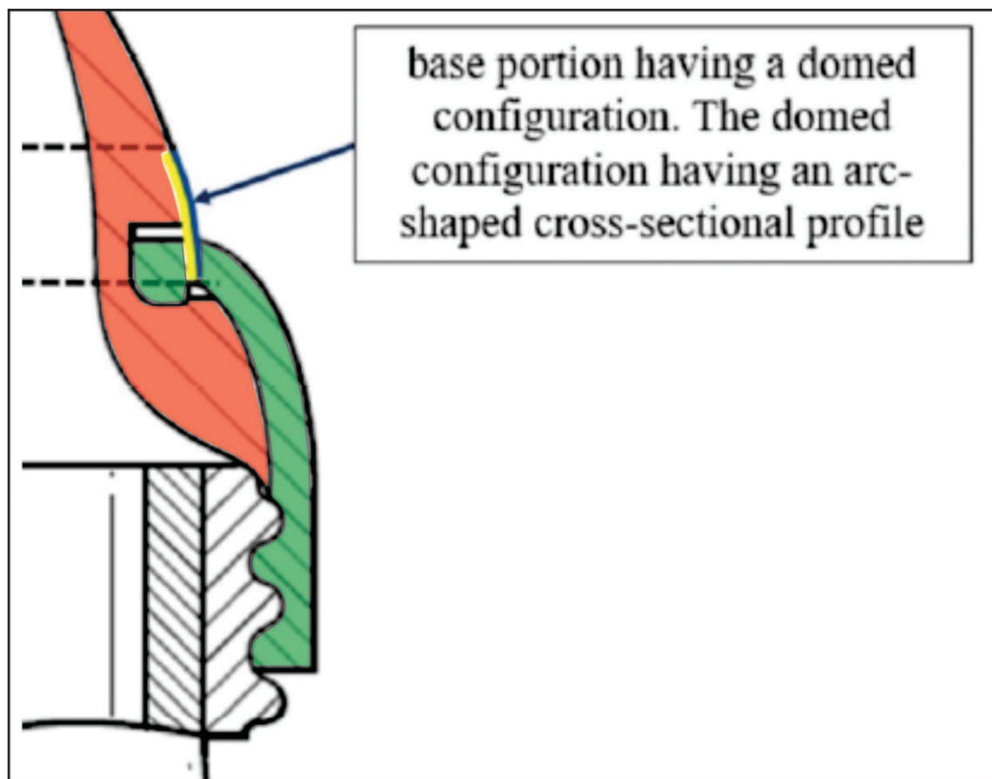
109. The Petition and Mr. Silver’s declaration rely solely on Kurkjian to address the “domed configuration” limitation. *See* Pet., 92 (“Kurkjian discloses this limitation.”); EX1005 (Silver Dec.) ¶313 (“Kurkjian discloses a base portion having a domed configuration.”).

110. When addressing the adopted construction of “domed configuration”—i.e., wide circular bottom with an arc-shaped cross-sectional profile—the Petition points to an annotated Kurkjian-Ishimaru combination drawing, which I have reproduced below.



Pet., 93.

111. Notably, this annotated drawing does not appear in the portion of Mr. Silver’s declaration addressing the “domed configuration” limitation. It is also notable that the drawing above from the Petition adds a curved yellow line—the line purportedly marking the “domed configuration” of the nipple base—that inexplicably extends through the lip of the collar. I have reproduced an excerpt of the combination drawing, coloring the nipple red and the collar green, to reveal that Petitioner’s curved yellow line extends through the collar. The Petition does not even attempt to explain why the yellow line is drawn this way, and there is no plausible explanation in my opinion. The “domed configuration” limitation is about the base of the nipple, not the collar.



Pet., 93 (with added coloring).

112. Regardless, a POSITA would immediately see that the nipple in the Petition's combination drawing—the shape of which ostensibly comes from Kurkjian's figures—is not “domed” in any sense of the word. The base portion of this nipple has the shape of a relatively narrow cone rather than a dome, which is consistent with Kurkjian's disclosure. Indeed, it is telling that Kurkjian describes a collar that “conforms to the contour of the nipple” as “conical.”

In Figure 6, there is shown a modified form of the invention carrying out the same principle previously described, the same type of nipple being employed and being designated in this form by numeral 23. However, a different type of securing cap is provided as indicated by the numeral 24, *which cap 24 may be formed of soft rubber and consists of a conical body of a thimble-like structure. . . The outer face of the cap 24 preferably conforms to the contour of the nipple 23 and constitutes a continuation thereof* to provide a streamline type connection between the nipple 23 and the bottle 28.

EX1009 (Kurkjian), 3:29-46.

113. It is no surprise that Kurkjian's nipple is narrow and conical. Kurkjian is a patent filed in 1935, when this kind of narrow nipple design was a common approach. There is no disclosure in Kurkjian to suggest a departure from the standard narrow nipple shape. That was not Kurkjian's goal. Kurkjian's objectives were directed to improving the connection between the collar (“retaining cap”) and the nipple. Kurkjian says nothing about providing a “wide” or “domed” nipple assembly that is “shaped like a breast.” EX1003 ('930 Pat.), 4:1-3.

- “the production of *a resilient flanged nipple which is so constructed as to permit the nipple to be secured to the mouth of a bottle by means of a retaining cap*, and permit the entrance of air into the interior of the bottle, and also prevent the nipple from collapsing inwardly of the retaining cap”
- “the production of a nursing unit wherein *a flexible nipple having a vented flexible flange is removably retained upon the neck of a bottle by means of a retaining cap* which is so constructed as to resist the spreading of the vented portion of the flange in the event of excessive pull thereon”; and
- “the production of a nursing unit wherein *a nipple retaining cap* is constructed in a manner as to present *a streamline type of connection between the bottle and the nipple.*”

EX1009 (Kurkjian), 1:1-20.

114. While functional, narrow nipples like Kurkjian’s tend to cause a detrimental condition called “nipple confusion”⁷ because they do not resemble the anatomy of a human breast. A POSITA would have known about the characteristics of narrow nipples and would have identified Kurkjian’s nipple (and collar) as such. *E.g.*, EX2024 (Dieringer Pat.), 2:28-41 (“[O]nce the infant is comfortable with bottle feeding [using these older, narrower nipples] the infant will often encounter ‘nipple confusion’ upon returning to breastfeeding.”). Accordingly, the POSITA would not

⁷ Nipple confusion is “an infant’s difficulty in achieving the correct oral configuration, latching technique, and suckling pattern necessary for successful breast-feeding after bottle feeding or other exposure to an artificial nipple.” EX2031 (NIPPLE CONFUSION: TOWARD A FORMAL DEFINITION), p.1.

view the nipples shown in any of Kurkjian’s figures or the Petition’s combination drawing as “domed” in any sense of the word.

115. The fact that Kurkjian’s nipple is **not** domed becomes even more apparent when we consider that the District Court’s claim construction calls for a “**wide** circular bottom.” Kurkjian certainly does not disclose that shape, and such a shape is not shown in the Petition’s combination drawing. Again, Kurkjian describes a collar matching the contour of the nipple as “conical,” and it is clear from Kurkjian’s figures and the Petition’s combination drawing that the nipple and collar are quite narrow. Indeed, in both Kurkjian’s figures and the Petition’s combination drawing, the nipple and collar are assembled on a very narrow bottleneck. In every case, the bottom of the nipple’s base is far narrower than the conventional nipple shape depicted in the ’930 Patent’s Figure 1, which is **not** “wide” or “domed.” Kurkjian’s nipple shape is also much narrower than Meyers’s, which also is not “wide” or “domed,” as I have explained (*see* ¶¶95-98).

Kurkjian—Figure 6	Combination Drawing	'930 Patent—Figure 1

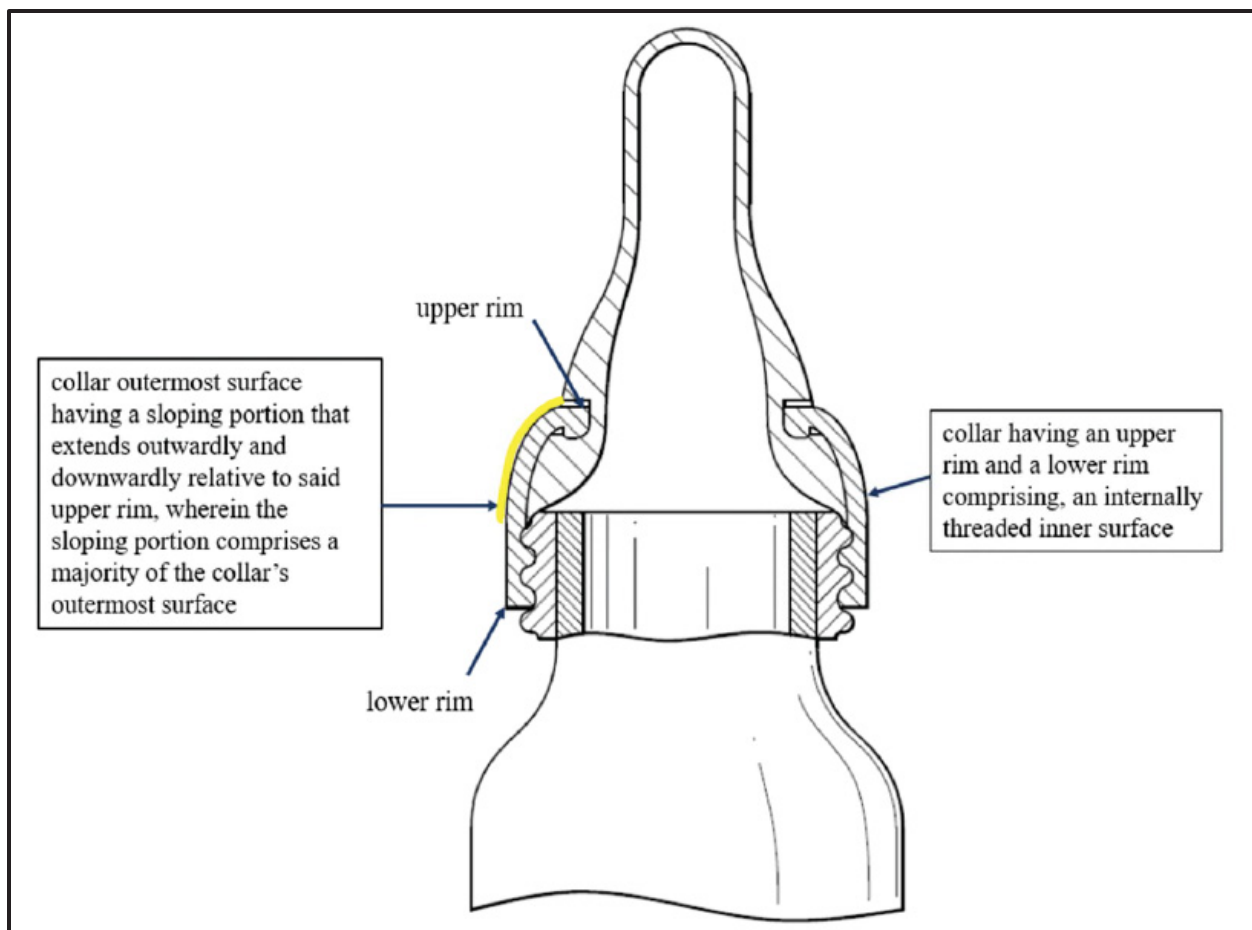
116. Recognizing that Kurkjian’s nipple base is not “wide” in the sense of the ’930 Patent, Mr. Silver offers an alternative theory. He argues that the base of Kurkjian’s nipple “is wider than the two portions above it.” EX1005 (Silver Dec.) ¶317. I disagree. Interpreting “wide” this way—i.e., wider than any other portion of the nipple—is inconsistent with the ’930 Patent’s specification. “Wide” and “domed” have meaning in the ’930 Patent. Those words distinguish the breast-like nipple shape in Figure 4 from the conventional nipple shape in Figure 1. But they would have no meaning at all if they were applicable to any nipple-collar assembly that is wider than the teat or areola and nothing more. Virtually every 21st century nipple would be described as having a wide, domed configuration in that case. The ’930 Patent’s specification says otherwise.

D. The Petition’s combination of Kurkjian’s embodiments to address the claimed “sloping” collar limitation lacks support in the record

117. The ’930 Patent’s independent claim 14 recites “wherein said sloping portion comprises a majority of the collar’s outermost surface.” EX1001 (’930 Pat.), 8:37-38. The phrase “said sloping portion” in this limitation refers to a previously recited portion of the outermost surface that “extends outwardly and downwardly relative to said upper rim” of the collar. EX1001 (’930 Pat.), 8:34-36. I’ve highlighted this claim language in context below.

14. A feeding bottle comprising:
- a) a vessel having an open top,
 - b) a collar having an upper rim and a lower rim comprising:
 - an internally threaded inner surface,
 - an outermost surface having a sloping portion that extends outwardly and downwardly relative to said upper rim, and
 - wherein said sloping portion comprises a majority of the collar's outermost surface,
 - c) a nipple having:
 - a teat portion having a variable wall thickness including an aperture,
 - a base portion having a domed configuration,
 - an areola portion between the teat portion and the base portion,
 - a flange depending from the base portion,
 - a one-way air inlet valve (i) extending through said base, (ii) projecting downwardly from the base portion, (iii) having a length that does not extend past the collar's lower rim, and (iv) disposed at least partially inwardly from the collar;
 - the flange being arranged to seal with the vessel;
 - d) the nipple being secured to the collar by sealingly capturing an inner edge of the collar between the base portion and the flange; and,
 - e) the nipple being secured to the vessel by capturing the flange of the nipple between the collar and the open top of the vessel.

118. The Petition addresses this “sloping” collar limitation by pointing to a fabricated drawing labeled “Figure F” that the Petition says depicts a combination of Kurkjian’s Figures 1 and 7. *See* Pet., 81-84 (alleging a combination of Kurkjian’s figures), 85 (pointing to the “Figure F” combination drawing). I have reproduced the Petition’s Figure F below.



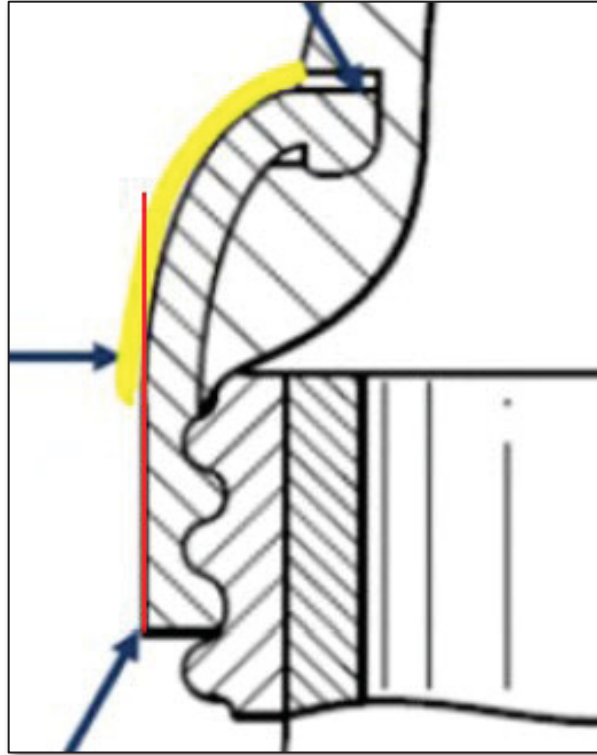
Pet., 84.

119. According to the Petition, this Figure F combination drawing spawned from the notion that a POSITA “would be motivated to incorporate the internal thread design of Kurkjian’s Figure 1 with the cap depicted in Kurkjian’s Figure 7.” Pet., 84. Nothing in the Petition’s discussion justifying the Figure F combination drawing says anything about the ’930 Patent’s claimed feature of “wherein said sloping portion comprises a majority of the collar’s outermost surface.” Additionally, despite suggesting that the Figure F combination drawing is something a POSITA would have pursued, Mr. Silver does not appear to include or endorse

Petitioner’s drawing anywhere in his declaration. In fact, rather than Figure 7, the subject of the Petition, the short discussion in Mr. Silver’s declaration focuses primarily on Kurkjian’s **Figure 6**. See EX1005 (Silver Dec.) ¶¶301, 305. In the end, neither the Petition nor Mr. Silver’s declaration explains how or why a POSITA would have combined Kurkjian’s figures to reach a combination drawing that satisfies the ’930 Patent’s particular “sloping” collar limitation.

120. Regardless, even if the Figure F combination drawing were supported by corroborating evidence or technical explanation (which it is not), the Petition would still have a critical shortcoming. Even in the Petition’s fabricated Figure F, it is not clear that the collar has a “sloping portion” comprising the “majority” of its outermost surface. The Petition says this is the case by providing annotations on Figure F—a yellow line and a comment bubble—but the Petition lacks any supporting measurements or substantive analysis.

121. In any event, measuring the yellow line in the Petition’s Figure F would not support a valid argument that the “sloping” collar limitation is met. The yellow line that purportedly marks the sloping portion of the collar is drawn inaccurately. The yellow line goes well beyond the part of the collar that extends outwardly and downwardly, misleadingly suggesting that the “sloping portion” of the collar is longer than it really is. The visual aid below demonstrates this point by adding a red vertical line to an excerpt of the Petition’s Figure 5.



Pet., 84 (excerpt with added vertical red line).

XI. ADDITIONAL REMARKS

122. I currently hold the opinions expressed in this declaration. But my analysis may continue, and I may acquire additional information and/or attain supplemental insights that may result in added observations.

123. I hereby declare that all statements made are of my own knowledge are true and that all statements made on information and belief are believed to be true. I further declare that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of the Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this proceeding.

Dated: October 24, 2023

By: 

Timothy P. Fletcher

Appendix A

Tim P. Fletcher

321 Hallock Street, Pittsburgh, PA 15211 USA; Cell: +1 (412) 952-3755; email: tim.fletcher@onebusinessdesign.com

Summary

Innovator with over 30 years' experience developing and managing the development of a wide variety of products for diverse industries. Proven management success in process development and innovation strategies in both private industry and volunteer-based professional organization. Career long experience working with many different professions in many different countries and cultures.

Professional Experience

President/ Design Thinking Facilitator & Trainer

One BusinessDesign, LLC, Pittsburgh, PA, USA November 2014 – Present

- Innovation training and facilitation using Design Thinking methods. Areas include products and services, business model design and organizational change.
- Design patent, utility patent and trade dress expert witness.
- Design Strategy Advisor - a) Develop culture of design thinking within your organization. b) Develop a highly functioning design department within your organization. c) Improve the quality of output you get from your design consultancies. d) Institutionalize a high level design look and feel across your organization (products, graphics, service and strategy).
- Chief Design & Technology Officer – Artesa, previously Revolutionary Electronic Design, LLC (January 2018 to Present) - startup
- Outreach:
 - Presentation: *Visual IP; An Industrial Designer's Value Proposition* – RDU Chapter of IDSA, Raleigh, NC, Sept. 21, 2023.
 - Advocate and co-author - Industrial Designer's Society of America letter of support for The Counterfeit Goods Seizure Act of 2019 to U.S. Senators.
 - Panelist - *After Hoop, what constitutes design patent inventorship and should it be based on utility patent "conception" principals?* Design Day 2022, Washington DC, October 26, 2022.
 - Webinar Presentation - Visual IP - The Value of Design Patents Trade Dress and Copyright – Catalyst Connection, Pittsburgh, PA, Jan. 16, 2019.
 - Presentation – *Visual Intellectual Property: The Value of Design Patents & Trade Dress*. Design in Plastics conference, Detroit, MI, Nov. 6-8, 2017.
 - Cited in *The Other Side of Patents: What Design Can Gain from Looking Beyond the Lawsuits* by Michael Hages. Design Management Review; Volume 27, Issue 4. pp. 20 - 29.
 - Juror and Presenter – Design Turkey Awards and *Design and Business*, Design Week Turkey, Istanbul, Oct. 18-19, 2016
 - Interview - *Making the Connection: The Importance of Linking Manufacturers with Designers and It's All in the JAM*. Made in PA magazine. Winter 2016, Vol 7, Issue 1.
 - Presentation – *Design Matters: Changing Your Business Model By Design*, Pittsburgh Technology Council, Pittsburgh, PA, August 25, 2016
 - Board Member/Secretary - Design House, <http://www.designhousechicago.org/>, Oct. 2015 to Dec. 2018.
 - Presentation – *Design Patent and Trade Dress Overview*. Meetup, Pittsburgh, PA, July 16, 2015.
 - Participant and Moderator - *Design Your Business: Panel Discussion*. CREATE 2015 Festival, Pittsburgh, PA, June 12, 2015.
 - Presentation – *Design Thinking*. Young Presidents Organization meeting, Orlando, FL, March 25, 2015.
 - Teaching – Career Planning for Integrated Innovators. Carnegie Mellon University. Integrated Innovation Institute. Fall 2015 to 2017 semesters. Business Model Development. Carnegie Mellon University. Integrated Innovation Institute. Fall 2016 semester.

Business Development Manager

Daedalus, Pittsburgh, PA USA November 2009 to March 2015

- Responsible for new business sales and marketing for the firm. Employee growth increased by 54%.
- Co-developed and facilitated Design Thinking methods in client projects.

Tim P. Fletcher

321 Hallock Street, Pittsburgh, PA 15211 USA; Cell: +1 (412) 952-3755; email: tim.fletcher@onebusinessdesign.com

- Strategic planning with clients; including voice of the customer, roadmapping, business model design and idea generation.
- Expert Witness – Design patent and trade dress infringement cases.
- Outreach:
 - Juror and Jury Chairperson – Sichuan-Taiwan Industrial Design Awards, Chengdu, China. Dec. 4, 2013.
 - Interview – *Five Minutes with Tim Fletcher* (article about doing business in China). Pittsburgh Business Times. June 5-21, 2011.
 - Juror – Core 77 Design Awards – Research & Strategy category. Rochester, NY. June 4, 2012
 - Advisory Panel – Pittsburgh Technology Council's Creative Technology Network. March 2011 to Dec. 2012.
 - Juror – Red Star Design Awards, Beijing, China. September 27, 2011.
 - Presentation – *Industrial Design in Commercial Markets*. Sino-US Exchange of Industrial Design, F518 Bao'an District, Shenzhen Creative Industry Association, Shenzhen, China. Sept. 22, 2011.
 - Interview - *College Prowler soars after making switch to business model*. Pittsburgh Business Times August 12-18, 2011.
 - Presentation – *Design Thinking; What it is, What it is not and Why it is important*. LKK Design office (Beijing), ZTE headquarters (Shanghai) May 18 and May 27, 2011, Arriba Software (Pittsburgh, PA) April 17, 2013, Wuxi Design Conference (Wuxi, China) May 25, 2013 and Sichuan-Taiwan Industrial Design Awards (Chengdu, China) Dec. 4, 2013.
 - Teaching – Practicing Design (Professional Practices). Carnegie Mellon University. School of Design. Fall 2010 - 2011 semesters.
 - Presentations & Workshops: *Design Thinking*. Carnegie Mellon University, Engineering, Master's Degree in Engineering and Technology Innovation Management. 2011 and 2013; and Tepper School of Business, Entrepreneurship for High Growth Opportunities class. 2010, 2012 and 2013.
 - Presentations & Workshops: *Idea Generation and User Research*. Carnegie Mellon University, Tepper School of Business, Entrepreneurial Boot Camp. 2010 and 2012.
 - Presentation: *A Sheep in Wolf's Clothing: How to be a Design Thinker in an Analytical World*. IDSA Mideast District Conference. Grand Rapids, MI. April, 31, 2010 and IDSA Southern District Conference. Atlanta. April 21, 2012.

Assistant Professor

The Hong Kong Polytechnic University, School of Design, Hong Kong August 2006 to November 2009

- Taught Industrial Design courses for Bachelor level students in Industrial Design and Engineering.
- Developed sales tools to introduce School of Design Research Labs and Centres to US corporations.
- Operations Manager for School of Design Annual (Graduation) Show for 2007 & 2008.
- Consultant on product development management in the University and with external clients.
- Outreach:
 - Presentation - *Design Thinking as a Solution to Strategic Planning* at the following conferences:
 - 2009 Shenzhen Industrial Design Forum. Shenzhen, China. June 14, 2009.
 - 2008 6th China (Wuxi) International Industry Design Expo. Wuxi, China. December 8, 2008.
 - 2008 China International Consumer Electronics Show – Industrial Design Forum. Qingdao, China. July 11, 2008.
 - 2008 First China (Shenzhen) World Industrial Design Forum. Shenzhen, China. May 17, 2008.
 - Interview – Various design topics for ATOP design web site. Shenzhen, China. December 5, 2008.
 - Panel Discussion: *Design*. Education USA-Careers Day. Hong Kong. November 22, 2008.
 - Interview – *Design Expert: Be in China to Assure Quality*. Plastics News; April 22, 2008.
 - Presentation - *Panel Discussion: Appreciating Differences: Teaching International Students*. IDSA Educational Conference. San Francisco, CA, USA. October 20, 2007.
 - Presentation - *We Think Differently; How to Better Communicate with Your Hong Kong/China Partners*. IDSA National Conference. Austin, Texas, USA. September 19, 2006.
 - Moderator (Master of Ceremony) of the Business of Design Week Conference, Hong Kong. 2006, 2007 & 2008.
 - First Round Judge for the Hong Kong Design Centre's *Design for Asia Award (DFA)* 2007.

Tim P. Fletcher

321 Hallock Street, Pittsburgh, PA 15211 USA; Cell: +1 (412) 952-3755; email: tim.fletcher@onebusinessdesign.com

- First Round Judge for the *Hong Kong Young Design Talent Awards 2006*.
- Article – *It's Socrates vs. Confucius*. *Plastics News*; October 9, 2006.

Director of Design

DAKA Development, Ltd., Hong Kong (Consumer Electronic Company) **September 2005 to April 2006**

- Managed a department of five Industrial Designers and three Graphic Designers.
- Developed company's first Roadmap of new products including launch dates by season and team members by project.
- Developed Industrial Design process guidelines, which improved quality of output.
- Liaised with DAKA Engineering in China and the UK on a daily basis to creatively solve product development issues and maintain schedules.
- Outreach:
 - Presentation: *IP as the Basis of Business for Innovative Companies in Asia*. Danish Patent and Trademark Office. Copenhagen, Denmark. April 26, 2006.
 - Presentation: *Integrating Concepts, Technologies and Design*. HK Design Association's Design Entrepreneur Programme. March 25, 2006.
 - Presentation: *Strategies for Driving New Product Innovation*. Hong Kong Electronic Appliance Manufacturers Association. November 25, 2005.
 - Interview: *Out of the Box*. Hong Kong Trade Development Council. April 10, 2006.
 - Presentations of products to judging panels for design competitions.

Director of Product Development

Elumens Corp., Durham, NC USA (Simulator Product Company) **October 2001 to August 2005**

- Managed the business model change from selling standard product to selling custom solutions from the Product Development aspect.
- Developed concepts and component costs for custom simulator projects for commercial and military applications in US, Europe and Asia. Customers include The Museum of World Religions (Taipei, Taiwan R.O.C.) and US Army 160th SOAR.
- Technical Sales both at Trade Shows and on-site for customers worldwide. Worked to understand customer requirements and communicate how Elumens can meet their needs.
- Developed and maintained a vendor database for components in order to speed up the quoting process for custom projects.
- Researched and tested "off the shelf" materials to reduce costs. An example is finding a suitable Polypropylene for use as a front projection screen that reduced the cost of materials from \$60 per square foot to \$5 per square foot.
- Reviewed existing product lines for cost and part count reductions. Reduced inventory of Projector Stands by 73%.

Vice President/Partner

Gamil Design, Inc.; Raleigh, NC USA (Design Consulting Firm) **June 1998 to March 2001**

- Managed new product development from initial concept sketches through manufacturing for a variety of clients.
- Shared the duties of Office Management, Sales and Marketing of the firm. Brought in new clients located in US, Asia and Europe. Raised International projects from 30% to 50% of total business.
- Co-developed highly detailed quoting, project timeline and customer requirements documentation.
- Designed and developed Sporting Goods, Infant Products, Electronic Equipment and Packaging.
- Outreach:
 - Teaching - Materials and Processes for the Industrial Design program. NC State University College of Design. Spring 1999 semester.

Manager of Product Development – Feeding Division

Evenflo Company, Inc., Piqua, OH USA (Infant Products) **March 1996 to May 1998**

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- Designed and developed 7 lines of new products from initial concepts to production. Created timelines, evaluated international and domestic vendors and communicated with all departments as well as vendors. Managed 50 new Disney licensed products into the product line in one year.
- Hired and managed one direct report. Managed projects with 2-4 outside design consultancies a year.
- Developed and managed a \$750K department budget.
- Utilized research being conducted by universities, independent researchers and internal R&D staff in the areas of child development.
- Evaluated concepts from outside sources for inclusion in product lines.
- Developed ISO 9001 procedures for product development, in a team environment. Served as an ISO internal auditor.
- Brought ProE CAD system into the department.

Industrial Designer

Roadmaster, Inc.; Opelika, AL USA (Exercise Equipment) **October 1995 to March 1996**

- Designed and developed a new line of higher end treadmills.

Industrial Designer

Performance, Inc.; Carrboro, NC USA (Bicycle Catalog) **October 1994 to October 1995**

- Designed and developed new Bicycle Accessories, such as tire pumps, automobile rack systems, and water bottle cages as well as packaging structures.
- Managed product development schedules based on introduction in five catalogs per year.

Senior Product Development Specialist – International Division

Gerber Products Company; Fremont, MI USA (Infant Products) **August 1991 to September 1994**

- Designed and developed new infant feeding products from concept to production for both International and Domestic Markets.
- Managed the flow of information regarding new products between manufacturing, product supply and marketing to produce a complete product in a timely manner.
- Evaluated International and Domestic manufacturers.

Design Coordinator

Stahlwood Mfg. Co., Inc.; Youngsville, NC USA (Infant Products) **July 1989 to December 1990**

- Designed new infant products.
- Managed timelines and international and domestic vendor communication.

Professional Development

Founding Board Member (appointed position)

The Institute for Design Science and Public Policy (IDSPP) 2023 to Present

US Government Liaison Officer (appointed position)

Industrial Designers Society of America (IDSA) May 2011 to July 2014

- Research US Government for mutually beneficial design connections and build relationships.
- Work with IDSA National Staff to build programs with the US Government.

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International Liaison Officer - Asia (appointed position)

Industrial Design Society of America (IDSA) January 2007 to November 2009

- Wrote newly approved IDSA By-Laws to allow for and manage International Chapters.
- Worked with stakeholders to begin the IDSA China Chapter. The first chapter outside of North America.
- Built relationships and mutually beneficial collaborations between IDSA and Asian design organizations. Including: Promotion of IDEA awards competition to Chinese firms and Design-centered US trips for Chinese manufacturers and brands.
- Interview - *Made In China: IDSA Launches First Asian Chapter*. Design Perspectives. Nov/Dec 2009.
- Interview - Various design topics for the Culture Talk show on CCTV-3. Beijing, China. November 7, 2009.
- Interview - *Industrial design group begins vote to add China chapter*. Plastics News. October 7, 2008.

Chapter VP (elected position)

Industrial Design Society of America (IDSA) January 2005 to December 2006

- Developed management training and seminars for the 28 Chapters in the US and Canada.
- Set up and moderated two Chapter Council meetings per year. The Chapter Council acts as a legislative body that develops policies from the grass roots to be presented to the Board.
- As an IDSA Board Member, I work in a team environment to develop policies for the entire organization.

Southern District VP (elected position)

Industrial Design Society of America (IDSA) January 2003 to December 2004

- Developed management training and seminars for the five Chapter Chairs, covering the states of NC, SC, GA, FL, TN, AL, MS, LA & TX. Through this training and a constant mentorship we have been able to create a very strong IDSA brand in the South.
- Developed and implemented two (2) IDSA Southern District Conferences with an average budget of \$65,000. Duties included developing the conference theme, appointing volunteers to manage areas such as Graphics, Web Site, Treasury, etc. Secured sponsors that contributed \$20,000 to the total budget. Searched and coordinated with an average of 17 speakers per conference.

Carolina Chapter Chair (elected position)

Industrial Design Society of America (IDSA) January 1999 to December 2002

- Managed events and information transfer for the Members in North and South Carolina. Events included a first ever exhibit of the entire Industrial Design process at the Mint Museum of Craft + Design in Charlotte, NC.
- Worked with individual Members to solve IDSA issues and other professional needs.
- As a result membership increased from 78 to 108 members.
- Organized The Designers Life Process' Presentations - a separate "conference within the conference" with presentations and discussions on issues that affect all designers during their professional life, such as unemployment, retiring, changing from profession to teaching and starting your own business. IDSA Southern District Conference 2002.
- Interview - *Fun and Function-Consumer Design Redefines High Style*. Tuscaloosa News. June 25 2000.

Computer Experience

Business – Word, Excel, Project, Access, PowerPoint. Freemind.

Design – Pro Engineer, Rhino, Fusion 360, Illustrator, and Corel Draw.

Travel Experience

Professional: Hong Kong/China, Japan, Northern Ireland, South Korea, Sweden, Switzerland, Taiwan (R.O.C.), Thailand, UK, and extensive US travel.

Personal: Australia, Austria, Belize, British Virgin Islands, Cambodia, Canada, China, Costa Rica, Cuba, Czech Republic, Dominican Republic, Ecuador/Galapagos Islands, Germany, Ghana, Greece, Hungary, India, Italy, Lichtenstein, Lithuania, Malaysia(Borneo), Malta, Mexico, Nicaragua, Northern Cyprus, Panama,

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Peru, Philippines, Sri Lanka, Switzerland, Thailand, Turkey, UAE, Vietnam, Yugoslavia(1988) and extensive US travel.

Patents

US Design patents – 14; Utility patents – 3. **Europe** Utility patents – 1. **Australia** Utility Patent – 1. **WIPO** Utility patents - 2

Education

IDSA Continuing Education Seminar – How to Serve as an Expert Witness in Design Patent Litigation, April 2015
Masters of Design – Advanced Strategies, Hong Kong Polytechnic University, Kowloon, Hong Kong, November 2008
Bachelor of Environmental Design in Product Design, North Carolina State University, Raleigh, NC, July 1989

Memberships

The Institute for Design Science and Public Policy (IDSPP) 2023 to Present
Industrial Design Society of America (IDSA) 1989 to Present
Intellectual Property Owners Association (IPO) 2017 to Present
The Design Thinking Association – 2020 to Present
Product Development and Management Association (PDMA) 2011 to 2015
Hong Kong Designers Association 2006 to 2009
Design Management Institute 2008 to 2011

Honors

Inducted into the Academy of Fellows, Industrial Designers Society of America, September 2009

Tim P Fletcher's Expert Witness Cases - Complete List

Date	Case Name (underlined notes my client)	Case Number	Client IP Owner	Report	Depo.	Markman Case	Trial/Hearing	Firms & Attorneys
2023	Zhejiang Yuanzheng Auto & Motorcycle Assessories Co., Ltd. v. <u>Arex Industries, Inc.</u> (Design Patent)	United States District Court for the Central District of California, Case No. 2:22-cv-01692-JWH-PD	X	Yes	Yes	N/A	TBD	Plaintiff - InHouse Co. Law Firm (Alexander Chen, Katja M. Grosch, Theodore S. Lee) Defendant - Glacier Law, LLP (Tianyu Ju, Yu Hao Yao)
2023	<u>A&A Global Imports, Inc.</u> v. Lerman Container Corporation (Design Patent)	Inter Parties Review No. : N/A		Yes	No	N/A	No	Petitioner: Blank Rome, LLP (Dipu Doshi and Jonathan England)
2023	<u>Shenzhen Shi Borunxing Wujiu You Xian Gong Si</u> v. The Individuals, Partnerships and Unincorporated Associations Identified on Schedule A (Design Patent)	United States District Court for the Northern District of Illinois, Eastern Division, Civ. A. No. 23-cv-01946	X	Yes	No	No	No	Plaintiff - Glacier Law, LLP (Wei Wang, Ruoting Men, Tao Liu) Defendant - AU LLC (Adam E. Urbanczyk)
2023	<u>Siddhi, LLC</u> v. OPS Labs, LLC. (Utility Patent)	American Arbitration Association AAA Case Number - 01-22-0002-2881	X	Yes	No	N/A	No	Claimant: Ward & Smith, P.A. (Joseph A. Shouten), Respondent: Gravis Law, PLLC (Paul H. Beattie)
2022	<u>Hydrow, Inc.</u> v. iFit Health & Fitness, Inc. (Design Patent and Trade Dress)	United States District Court for the District of Delaware, Case, No. 1:22-cv-00195-CFC	X	Yes	No	N/A	No	Plaintiff: Burns & Levinson LLP (Howard J. Susser & Christopher S. Schultz)
2022	<u>Glam and Glits Nail Design, Inc.</u> vs. IGEL Beauty, LLC, et al (Design Patent)	United States District Court for the Central District of California, Southern Division, Case, No. 8:20-cv-88-JVS (DFMx)	X	Yes	Yes	N/A	TBD	Plaintiff: Lapple Ubell IP Law, LLP - Matthew C. Lapple Defense: Fox Rothchild, LLP - John Shaeffer
2021	<u>Gentex Corporation</u> v. Galvion Ltd., and Galvion, Inc. (Design Patent)	United States District Court for the District of Delaware, Case, No. 1:19-cv-00921-MN	X	Yes	Yes	N/A	No	Plaintiff: Morgan, Lewis & Bockius LLP - Scott D. Sherwin Defense: Shaw Keller LLP, Jason W. Balich
2021	<u>Munchkin, Inc.</u> v TOMY International, Inc. (Utility Patent & Design Patent)	United States District Court for the Northern District of Illinois, Eastern Division, Case, No. 1:18-cv-6337	X	Yes	Yes	N/A	TBD	Plaintiff: Lathrop GPM LLP - Luke Meriwether Defense: Husch Blackwell LLP - Thomas P. Heneghan
2021	<u>Think Green Limited d/b/a Haakaa</u> , v. Medela AG and Medela LLC (Design Patent & Trade Dress)	United States District Court for the Northern District of Illinois, Eastern Division Case, No. 1:21-CV-05445	X	Yes	Yes	N/A	Yes	Plaintiff: Dunlap Bennett & Ludwig PLLC - Robert P. Greenspoon Defense: Marshall, Gerstein & Borun LLP - Michael R. Weiner
2021	<u>J.R. Simplot Company</u> v. McCain Foods USA, Inc. (Design Patent)	United States District Court, District of Idaho, Case No. 1:16-cv-00449-DCN	X	Yes	Yes	N/A	TBD	Plaintiff: Parsons Behle & Latimer - Christopher Cuneo Defense: Jones Day - John C. Evans
2021	<u>Ideavillage Products Corp.</u> , v. Koninklijke Philips N.V. (Design Patent)	Ex Parte Reexamination, Case: PGR2021-00116		Yes	No	N/A	No	Petitioner: Delarosa and Associates - Emil Braca and McAndrews, Held & Malloy, Ltd. - Chris Carani
2021	Certain Batteries and Products Containing Same - <u>for Complainants</u> (Design Patent)	US International Trade Commission Investigation No. 337-TA-1244	X	Yes	No	N/A	N/A	Complainant: Morgan, Lewis & Bockius LLP - Ehsun Forghany
2021	Certain Percussive Massage Devices - <u>for certain Respondents</u> (Design Patent)	US International Trade Commission Investigation No. 337-TA-1206		Yes	Yes	N/A	N/A	Complainant: Lewis Brisbois Bisgaard & Smith LLP - Joshua Curry Respondents: Dentons US LLP - Benjamin Harbuck
2020	<u>J.R. Simplot Company/Simplot Canada (II) Limited</u> - and - McCain Foods Limited (Industrial Design Registration)	Federal Court of Canada, Court File No. T-569-17	X	Yes	N/A	N/A	No	Plaintiff: Smart & Biggar - Daniel Hnatchuk Defense: Norton Rose Fulbright Canada LLP/ Jones Day
2020	<u>Golden Eye Media USA, Inc.</u> v. Trolley Bags UK, Ltd and Berghoff International, Inc. (Design Patent)	United States District Court, Southern District of California, Civ. A. No. 3:18-cv-02109-BEN-LL		Yes	Yes	N/A	No	Plaintiff: Insight, LLP. - Cody LeJeune Defense: Honigman LLP, Matthew Mrkoncic
2020	Simplehuman, LLC, v. <u>Itouchless Housewares and Products, Inc.</u> (Trade Dress)	United States District Court, Central District of California, Civ. A. No. 2:19-cv-02351-MWF		Yes	Yes	N/A	No	Plaintiff: Knobbe, Martens, Olson & Bear, LLP. - William Adams Defense: Foley & Lardner LLP - Victor de Gyarfas
2019	<u>Good L Corporation</u> v. Fasteners for Retail, Inc. d/b/a FFR Merchandising (Trade Dress)	US District Court, Middle District of Tennessee, Civil Action No. 3:18-cv-000489	X	Yes	Yes	N/A	No	Plaintiff: Patterson Intellectual Property Law, P.C. - Scott Douglass Defense: Honigman LLP - Mary Hyde
2019	<u>Zuru, LLC (Petitioner)</u> v. LEGO (Patent Owner) (Design Patent)	Ex Parte Reexamination, Ctrl. No. 90/014,339		Yes	N/A	N/A	N/A	Petitioner: Dentons US LLP - Kevin Greenleaf
2018	<u>Pavo Solutions, LLC v. Kingston Technology Company, INC.</u> , (Utility Patent)	US District Court of Central California, Civil Action No. 8:14-cv-01352-JLS-KES		Yes	Yes	Yes	No	Plaintiff: Russ August & Kabat - Minna Y. Chan Defense: Fish & Richardson - Maria Elena Stiteler
2018	AJB Enterprises, LLC, v. <u>BackJoy Orthotics, LLC</u> , (Trade Dress)	US District Court of Connecticut, Civil Action No. 3:16-cv-00758 (VAB)		Yes	Yes	N/A	No	Plaintiff: Handal & Morofsky - Anthony Handal Defense: Perkins Cole LLP - Jonathan Goddard & William Rava
2018	Shenzhen Kean Silicone Product CO., LTD (Petitioner) v. <u>PKOH NYC, LLC (Patent Owner)</u> (Utility Patent)	Inter Parties Review No. IPR2017-01327	X	Yes	No	No	No	Petitioner: Stratum Law LLC - Xiyan Zhang Patent Owner: Silis Cummis & Gross P.C. - Scott Stimpson & Tod M. Melgar
2012	Luv N' Care Ltd. et al. v. <u>Mayborn USA, Inc.</u> (Design Patent)	U.S. District Court, Southern District of New York, Civil Action No. 11-2460		Yes	Yes	No	No	Plaintiff: Goldberg & Cohen - Morris Cohen & Lee Goldberg Defense: Alston and Bird - James Grant & Elizabeth Helmer
2011	Luv N' Care Ltd. et al. v. <u>Jackel International, Ltd. et al.</u> (Design Patent & Trade Dress)	State of Louisiana Parish of Ouachita 4th Judicial District Court, Case No. 10-1891		Yes	Yes	No	No	Plaintiff: Goldberg & Cohen - Morris Cohen & Lee Goldberg Defense: Alston and Bird - James Grant & Elizabeth Helmer

Appendix B



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What is Industrial Design? (/what-is-industrial-design)



Industrial Design Defined

Industrial design (ID) is the professional service of creating and developing concepts and specifications that optimize the function, value and appearance of products and systems for the mutual benefit of both user and manufacturer.

Industrial designers develop these concepts and specifications through collection, analysis and synthesis of data guided by the special requirements of the client or manufacturer. They are trained to prepare clear and concise recommendations through drawings, models and verbal descriptions.

Industrial design services are often provided within the context of cooperative working relationships with other members of a development group. Typical groups include management, marketing, engineering and manufacturing specialists. The industrial designer expresses concepts that embody all relevant design criteria determined by the group.

The industrial designer's unique contribution places emphasis on those aspects of the product or system that relate most directly to human characteristics, needs and interests. This contribution requires specialized understanding of visual, tactile, safety and convenience criteria, with concern for the user. Education and experience in anticipating psychological, physiological and sociological factors that influence and are perceived by the user are essential industrial design resources.

Industrial designers also maintain a practical concern for technical processes and requirements for manufacture; marketing opportunities and economic constraints; and distribution sales and servicing processes. They work to ensure that design recommendations use materials and technology effectively, and comply with all legal and regulatory requirements.

In addition to supplying concepts for products and systems, industrial designers are often retained for consultation on a variety of problems that have to do with a client's image. Such assignments include product and organization identity systems, development of communication systems, interior space planning and exhibit design, advertising devices and packaging and other related services. Their expertise is sought in a wide variety of administrative arenas to assist in developing industrial standards, regulatory guidelines and quality control procedures to improve manufacturing operations and products.

Industrial designers, as professionals, are guided by their awareness of obligations to fulfill contractual responsibilities to clients, protect the public safety, respect the environment and observe ethical business practices.

Related articles:

Now that you have an idea of what Industrial Design is why not explore some more?

Go to the IDSA Design of the Decade Gallery to see what products won the Design of the Decade award this year and how design contributes to business and society by [clicking here](http://www.idsa.org/dod).

Every year the IDSA runs an award to promote the development of design excellence. This award, the International Design Excellence Award (IDEA) is juried by an independent international group of well recognized designers who work with a set of criteria that have been developed over the 30 years that the IDEA has been running. These criteria are not static because design is not static, it is a young developing profession and as the world changes and requires designers to produce more responsible and more sustainable products so the criteria for excellence shift to reflect these changes in expectations. To see the products that have been awarded over the past 10 years [click here](http://www.idsa.org/Awards).

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Submitted by cliver on January 1, 2010 - 10:23am