

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LULULEMON USA INC.,

Petitioner,

v.

NIKE, INC.,

Patent Owner.

Case IPR2024-00460

Patent No. 8,266,749

PATENT OWNER'S RESPONSE UNDER 37 C.F.R. § 42.120

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EXHIBITS

Exhibit No.	Description
2001	Excerpts of Prosecution History for U.S. Patent No. 8,266,749
2002	05/13/24 Declaration of Dr. Christopher M. Pastore
2003	10/30/24 Declaration of Dr. Christopher M. Pastore
2004	10/18/24 Deposition Transcript of Dr. David S. Brookstein
2005	06/05/24 Deposition Transcript of Dr. David S. Brookstein in <i>Nike, Inc. v. lululemon usa, inc.</i> , No. 2023-cv-00771 (S.D.N.Y.)
2006	<i>Nike, Inc. v. New Balance Athletics, Inc.</i> , No. IPR2024-00778, Paper 10 (PTAB Sept. 26, 2024)
2007	<i>Nike, Inc. v. New Balance Athletics, Inc.</i> , No. IPR2024-00778, Paper 6 (PTAB Aug. 9, 2024)
2008	<i>Nike, Inc. v. New Balance Athletics, Inc.</i> , No. IPR2024-00778, Ex. 2003 (PTAB Aug. 9, 2024)
2009	U.S. Patent No. 4,540,311 (“Leach”)
2010	Christopher M. Pastore & Frank K. Ko, <i>Near Net Shape Manufacturing of Composite Engine Components by 3-D Fiber Architecture</i> (Gas Turbine and Aeroengine Congress and Exposition 1989)

I. INTRODUCTION

Patent Owner Nike, Inc. (“Nike”) submits this Patent Owner Response to lululemon usa, inc.’s (“lululemon”) Petition challenging the patentability of claims 1–21 (the “Challenged Claims”) of U.S. Patent No. 8,266,749 (Ex. 1001; “the ’749 patent”). lululemon has not carried its burden of proving that any Challenged Claim is unpatentable.

The ’749 patent is directed to methods of manufacturing footwear. An article of footwear typically has two primary elements, an upper and a sole structure. The upper covers the foot. The sole structure is below the upper between the foot and the ground. The claims of the ’749 patent recite methods of (i) simultaneously knitting a textile element (i.e., upper) and a different, surrounding textile structure; (ii) removing the textile element from the surrounding textile structure; and (iii) incorporating the textile element into an article of footwear. *E.g.*, Ex. 1001 at 11:43–14:5; *see also* Fig. 9; 7:38–9:4.

lululemon presents six grounds of unpatentability. Only two grounds—anticipation Grounds 1 and 3—challenge the independent claims (1, 13). Grounds 1, 2, and 6 are based on International Patent Publication No. WO 92/22223 (“Nishida”; Ex. 1005). Ground 1 alleges anticipation of claims 1–8 and 12–18 over Nishida. Ground 2 alleges obviousness of dependent claims 9, 10, 19, and 20 over Nishida in

view of the knowledge of a POSITA. And Ground 6 alleges obviousness of dependent claims 11 and 21 over Nishida in view of U.S. Pat. No. 2,047,724 (“Zuckerman”; Ex. 1008). Ground 3–5 are based on Zuckerman. Ground 3 alleges anticipation of claims 1–3, 5–8, 11, 13–17, and 21 over Zuckerman. Ground 4 alleges obviousness of dependent claims 3, 9, 10, 14, 19, and 20 over Zuckerman in view of the knowledge of a POSITA. And Ground 5 alleges obviousness of dependent claim 12 over Zuckerman in view of U.S. Patent No. 2,675,631 (“Doughty”; Ex. 1017).

As to Ground 1, lululemon fails to show that Nishida discloses “simultaneously knitting a textile element with a surrounding textile structure,” as recited in claims 1 and 13¹. Nishida layers shoe pattern pieces onto a pre-existing material base. Nishida therefore does not knit the pattern pieces *simultaneously* with the material base. During prosecution, the Examiner allowed claims 1 and 13 over a nearly identical U.S. counterpart to Nishida after considering arguments directed to this very limitation. What’s more, lululemon’s own expert—Dr. Brookstein—agreed that Nishida does not knit its pattern pieces simultaneously with its material base during his deposition in the parties’ parallel district court litigation. This deficiency is fatal to lululemon’s Grounds 1, 2, and 6 in their entirety. lululemon’s Nishida-

¹ Claim 13 recites a substantially similar limitation.

based grounds fail for another reason: lululemon fails to show that Nishida discloses that the knitted textile element has a “substantially planar configuration” upon removal from the surrounding knitted textile structure, as recited in dependent claims 5 and 15.

As to Ground 3, lululemon fails to show that Zuckerman discloses “knitting a textile element with a surrounding textile structure,” as recited in claims 1 and 13². Zuckerman only discloses knitting a shoe blank with additional material abutting two of its sides. The Board preliminarily found it “difficult [] to characterize” this additional material as “surrounding.” lululemon also fails to show that Zuckerman discloses “incorporating” its shoe blank into an “article of footwear,” as recited in claims 1 and 13. Zuckerman’s shoe blank is not incorporated into a separate structure, i.e., a sole structure, to form an article of footwear. For these reasons, lululemon’s Grounds 3–5 fail in their entirety. lululemon further fails to show that Zuckerman discloses “knitting an outline” of the textile element, as recited in dependent claims 3 and 14, or that the knitted textile element has a “substantially planar configuration” upon removal from the surrounding knitted textile structure, as recited in dependent claims 5 and 15.

² Claim 13 recites a substantially similar limitation.

As to Ground 4, lululemon fails to show that Zuckerman in view of the knowledge of POSITA teaches or suggests “knitting an outline” of the knitted textile element, as recited in dependent claims 3 and 14.

As to Ground 5, lululemon fails to show that a POSITA would have been motivated to “secur[e]” Zuckerman’s shoe blank to Doughty’s detachable “sole structure,” as recited in claim 12.

For at least these reasons, lululemon has not carried its burden of proving by a preponderance of the evidence that any Challenged Claim of the ’749 patent is unpatentable.

II. THE ’749 PATENT

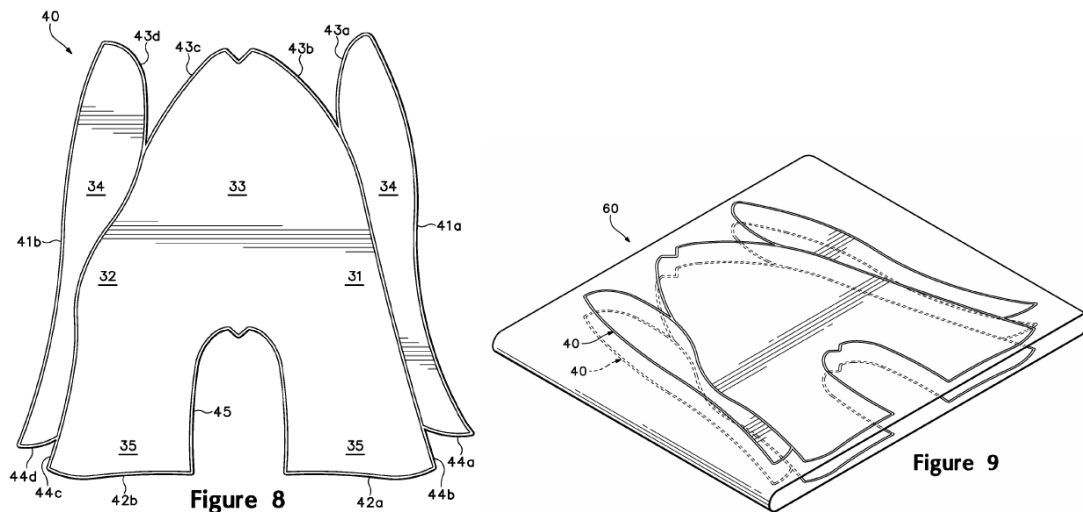
A. Overview of the ’749 patent

The ’749 patent lists Bhupesh Dua and Edward Nathaniel Thomas as inventors. The ’749 patent, now expired, claims priority to U.S. Patent Application No. 10/791,289, filed March 3, 2004 (now U.S. Patent No. 7,347,011, “the ’011 Patent”).

The ’749 patent relates to methods of manufacturing footwear. Specifically, the ’749 patent recites methods of knitting textile elements at the same time as a surrounding textile structure. *E.g.*, Ex. 1001 at 11:43–14:5. The knitted textile elements have at least one texture that is different from the texture of the surrounding textile structure. *Id.* The knitted textile elements are then removed from the

surrounding textile structure and incorporated into articles of footwear. *E.g., id.* at Figure 9, 7:38–9:4, 11:43–14:5. Independent claims 1 and 13 recite these steps.

The claimed methods offer many advantages over traditional methods of manufacturing footwear. For example, the claimed methods increase sourcing and manufacturing efficiency by limiting the required number of suppliers, machinery, or different assembly line techniques used to cut or otherwise prepare the material for incorporation into the footwear. *E.g., Ex. 1001* at 3:4–23 11:6–9. The claimed methods also reduce the number of steps in the manufacturing process and reduce the number of seams in the final footwear product. *Id.*



Figures 8 and 9 of the '749 patent

Figure 8 (reproduced above) shows an example of a textile element with the general shape and form of a footwear upper (or portion of a footwear upper). Figure 9 (reproduced above) shows an example of a tube-shaped cylindrical textile structure

“formed with a wide-tube circular knitting machine.” Ex. 1001 at 7:38–39. Figure 9 further shows that “the types of stitches vary throughout textile structure 60 so that a pattern is formed with the outline of textile element 40 . . . [and] differences in the stitches within textile structure 60 form an outline with the shape and proportions of textile element 40.” *E.g., id.* at 7:38–45.

B. Relevant File History

The Patent Office has already considered all three prior art references now presented in lululemon’s Petition. Nike listed Zuckerman and Doughty in an Information Disclosure Statement. *See* Petition at 86. And the Patent Office considered the Nishida disclosure multiple times, both before and after it granted the ’749 patent. *See id.* Each time, the Patent Office has confirmed the patentability of the ’749 patent over Nishida.

1. Office Actions Based on Nishida

During original prosecution of the ’749 patent, the Examiner twice rejected claims 1–8, 11–18, and 21 as anticipated by U.S. Patent No. 5,345,638 (“Nishida-US”; Ex. 1013). Ex. 2001 at 12, 35. Nishida-US is virtually identical to its foreign counterpart, Nishida (WO 92/22223), which lululemon asserts in its Petition. Exs. 1004, 1005.

In response to the first rejection, Nike argued that Nishida-US fails to disclose “a knitted textile element *simultaneously* formed with a knitted textile structure

during a knitting process.” Ex. 2001 at 29–31. Unlike the claims of the ’749 patent, Nike explained, Nishida-US “discloses that layouts 2 are printed, embroidered, woven, or knitted onto a *pre-existing* backing material 4.” *Id.* at 30. The Examiner initially rejected this argument and issued a final Office Action. *Id.* at 35–37.

Nike and the Examiner then held an interview. *See id.* at 40. “[A]fter further consideration,” the Examiner accepted Nike’s argument. *Id.* “Nishida may disclose a web of material having different textures,” the Examiner explained, “but there is no clear disclosure . . . that the textile element and the surround [sic] structure are simultaneously knitted.” *Id.*

In subsequent remarks, Nike explained that “Nishida discloses that the backing 4 for the web of material 1 must be formed prior to the production of the layouts.” Ex. 2001 at 43. Thus, “Nishida fails to disclose a knitted textile element *simultaneously* formed with a knitted textile structure, having a differing texture, during a knitting process.” *Id.* The Examiner agreed and allowed the claims without amendment. *Id.* at 49.

2. *Inter Partes* Review Based on Nishida

On April 19, 2016, adidas filed a petition for *inter partes* review challenging the ’749 patent. Ex. 1018. adidas challenged claims 1–9, 11–19, and 21 as obvious over the combination of Nishida-US and U.S. Patent No. 3,985,003 (“Reed”). adidas

relied on Nishida-US for various limitations of claims 1 and 13. *Id.* at 16–19. The Board ultimately upheld the patentability of all challenged claims of the '749 patent. Ex. 1022 at 70.

III. Alleged Prior Art References

A. Nishida

Nishida is an English translation of International Publication No. 92/22223, titled “Method of Producing a Shaped Shoe Part From a Strip of Fabric, And a Shaped Shoe Part Produced by This Method.” Nishida was published on December 23, 1992. Nishida claims priority to Japanese patent application P4119911.1, which was filed on June 17, 1991. Nishida-US—the reference that the Patent Office already considered multiple times—claims priority to the same Japanese patent application. The disclosure of Nishida and Nishida-US are virtually identical.

Nishida is directed to a method of manufacturing shoe components including a shoe upper and an associated sole part. *E.g.*, Ex. 1005 at 4, 9. Nishida discloses removing a patterned element of the desired shoe components from a “material web,” and then shaping and seaming the patterned element for incorporation into footwear. *E.g.*, *id.* at 9. As shown in Figure 2 (reproduced below), Nishida’s material web 1 has two primary components: “unwound web parts” 2 (i.e., the patterned pieces) and a “material web base” 4.

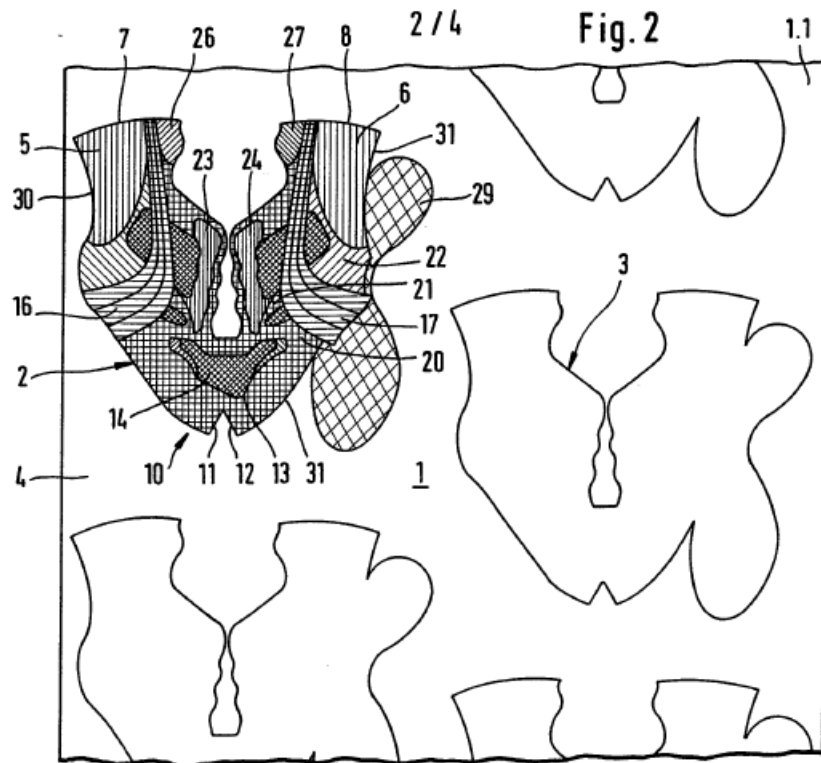


Figure 2 of Nishida

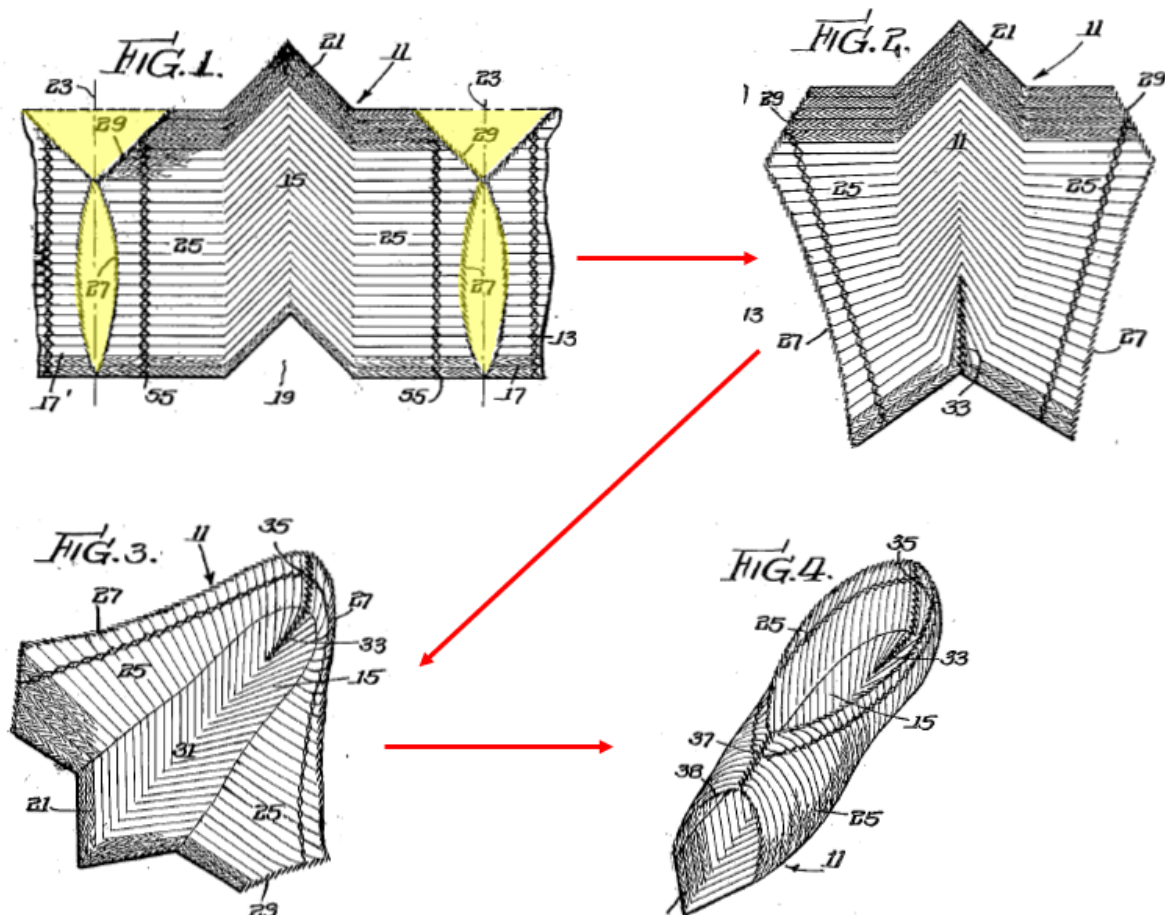
Unlike the '749 patent, Nishida does not disclose that unwound web parts 2 and material web base 4 are “simultaneously knit[ted],” i.e., knitted during a single knitting process. Nishida instead teaches a two-step process. In the first step, the material web base is formed as a separate, preexisting base. Ex. 1005 at 4–5. The preexisting material web base “may be a common woven or knitted fabric, e.g, consisting of warp and weft.” *Id.* at 5. In the second step, after the material web base is fully formed, the unwound web parts are printed (with a fabric printing process) or produced (with a textile production process) on top of or within that preexisting base. *Id.* at 4–5, 7–8, 9 (claiming that “unwound web part (2)” and “sole part (29)”

are “produced by a print process on the material web (1) and/or by a textile production method within the material web.”).

Surface areas 1.1 of the material web represent the areas free from unwound web parts. Ex. 1005 at Fig. 1. After the unwound web parts are produced on the material web base, they are cut from the material web and assembled into an article of footwear. *E.g., id.* at 5.

B. Zuckerman

U.S. Patent No. 2,047,724 (“Zuckerman”; Ex. 1008) is titled “Knitted Article and Method of Making Same” and issued almost a century ago on July 14, 1936. Zuckerman is directed to knitted footwear and methods for making the same. *See, e.g.,* Ex. 1008 at 1(L):1–4. Zuckerman describes that an object of the invention is “to form a knitted article, shaped to fit the foot, from a knitted blank of inexpensive form requiring a minimum of folding and stitching to provide the finished article.” *Id.* at 1(L):5–11. Zuckerman’s Figures 1–4 (reproduced below) depict a progression of turning a strip of knitted material into a finished shoe.



Figures 1-4 of Zuckerman

Figure 1 depicts a knitted strip 13 including blank 11 used to form the shoe. Within blank 11, element 15 becomes the sole of the shoe and elements 25 form the lateral and medial sides of the upper. Ex. 1008 at 1(L):27–32; 2(L):35–52. The highlighted portions of Figure 1 represent material that has been cut from knitted strip 13 to form blank 11. Figure 2 shows the blank 11 after removal from strip 13 along cut edges 27 and 29 and after seam 33 is joined. *Id.* at 1. Figure 3 shows blank 11 after heel seam 35 is joined, thereby forming a “rounded heel portion in the sole.”

Id. at 2(L):54–56. Finally, Figure 4 shows edges 29 adjoined to form a slipper. *Id.* at 1.

C. Doughty

U.S. Patent No. 2,675,631 (“Doughty”) is titled “Footwear of the Slipper-Sock Type” and was issued on April 20, 1954. Doughty is directed to a sock having “a separately made foot bottom or sole section” that is joined to “a knitted instep portion” in a “readily detachable” fashion. Ex. 1017 at 1:22–29. Doughty’s Figure 1 (reproduced below) shows a sock with “knitted instep portion 2,” “ribbed ankle section 9,” and detachable sole portion 3. *Id.* at 2:37–38, 3:8–11.

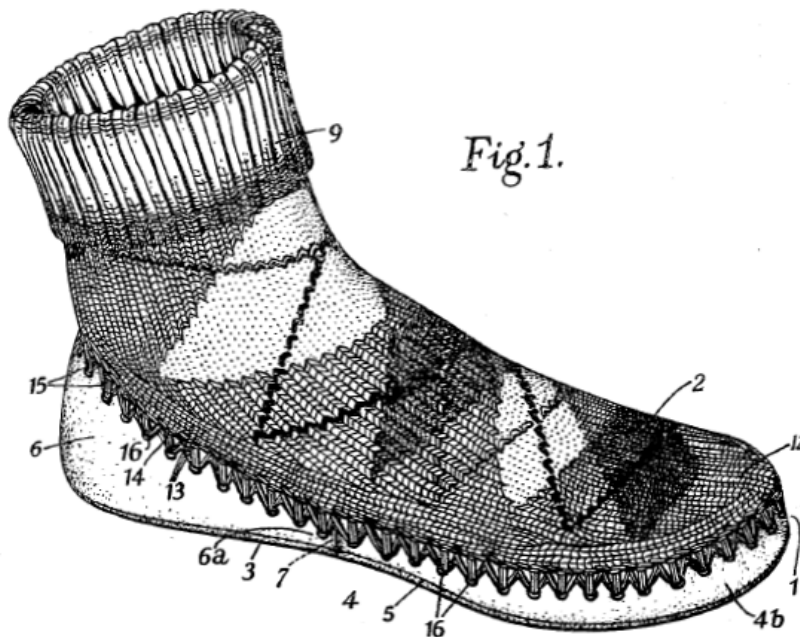


Figure 1 of Doughty

The knitted instep portion and sole portion may be attached “by any conventional method of stitching, sewing, or seaming” or by means of a “lacing thong or thread.” Ex. 1017 at 3:73–4:1, 4:16–20.

IV. DEFINITION OF A PERSON OF ORDINARY SKILL IN THE ART

For purposes of this proceeding, Nike applies lululemon’s proposed level of skill in the art: a POSITA for the ’749 patent would have had at least a bachelor’s degree in textile engineering, mechanical engineering, or similar technical degree and at least 3 years of experience working with knitted textiles for use in fabric-based articles. Petition at 14–15; Ex. 1003 at ¶37. For individuals with different educational backgrounds, a person could still be of ordinary skill in the art provided that person’s additional experience compensates for any differences in that person’s education as stated above. *Id.*

V. CLAIM CONSTRUCTION

Claims challenged in *inter partes* review proceedings “shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b).” 37 C.F.R. § 42.100(b). Under this standard, claims “are generally given their ordinary and customary meaning,” as understood by a person of ordinary skill. *Phillips v. AWH Corp.*, 415 F.3d 1303 at 1312–13 (Fed. Cir. 2005) (citation omitted).

In a recent decision denying institution of New Balance’s Petition challenging the ’749 Patent, the Board construed the term “article of footwear,” which appears in claims 1 and 13. Ex. 2006 at 14. The Board found that “article of footwear,” consistent with the intrinsic record, should include “a sole structure and an upper.” *Id.* For the same reasons that Nike presented in its Preliminary Response in that proceeding (Ex. 2007 at 11), Nike contends that the Board should adopt the same construction in this proceeding.

For purposes of this proceeding, Nike contends that no other terms require construction. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms ... in controversy, and only to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

VI. LEGAL STANDARDS

Petitioner has “the burden of proving a proposition of unpatentability by a preponderance of the evidence.” 35 U.S.C. § 316(e); *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1375 (Fed. Cir. 2016). It is Petitioner’s obligation to “identify with particularity the evidence that supports the grounds for the challenge to each claim.” *Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1330 (Fed. Cir. 2019) (internal quotations omitted); *Microsoft Corp. v. FG SRC, LLC*, 860 Fed. Appx. 708,

713 (Fed. Cir. 2021) (arguments in petition “must be made with particularity, not opacity”).

A. Anticipation

Anticipation requires “that a single prior art reference discloses each and every element of a claimed invention.” *Silicon Graphics, Inc. v. ATI Techs., Inc.*, 607 F.3d 784, 796 (Fed. Cir. 2010). A reference must not only explicitly or inherently disclose every claimed element, but those elements must also be arranged within that reference as they are in the claim. *Net MoneyIN, Inc. v. Verisign, Inc.*, 545 F.3d 1359, 1369–71 (Fed. Cir. 2008). “[D]ifferences between the prior art reference and a claimed invention, however slight, invoke the question of obviousness, not anticipation.” *Id.* at 1371.

B. Obviousness

Obviousness requires that “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made” to a skilled artisan. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). An obviousness determination is based on four inquiries: (1) the scope and content of the prior art; (2) the differences between the claims and the prior art; (3) the level of ordinary skill in the art; and (4) objective indicia of nonobviousness. *Id.*, 406 (citing *Graham v. John Deere Co. Kan. City*, 383 U.S. 1, 17–18 (1996)).

Petitioner must show that a POSITA would have been motivated to modify or combine teachings from the reference(s) asserted in the obviousness ground. *KSR*, 550 U.S. at 418; *see also In re Stepan Co.*, 868 F.3d 1342, 1345–46 (Fed. Cir. 2017). Petitioner must articulate specific reasoning to modify or combine references—they cannot rely on conclusory statements or attorney argument. *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1362–63 (Fed. Cir. 2016); *Facebook, Inc. v. Windy City Innovations, LLC*, 973 F.3d 1321, 1342 (Fed. Cir. 2020) (affirming nonobviousness where petitioner’s challenge was “based on attorney argument rather than evidence in the record”). Petitioner must also show that a skilled artisan would have “reasonably expected success in achieving the goal,” i.e., the achieving the claimed invention. *See Institut Pasteur & Universite Pierre Et Marie Curie v. Focarino*, 738 F.3d 1337, 1346 (Fed. Cir. 2013); *see also Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1360–61 (Fed. Cir. 2017).

When Petitioner supplies a claim limitation missing from the references using common sense or general knowledge, the obviousness analysis is particularly searching. *Arendi*, 832 F.3d at 1361–62 (“especially when dealing with a limitation missing from the prior art references specified[,]” “our cases repeatedly warn that references to common sense ... cannot be used as a wholesale substitute for reasoned analysis and evidentiary support.”) (internal quotations omitted).

VII. GROUND 1: LULULEMON FAILS TO SHOW THAT NISHIDA ANTICIPATES CLAIMS 1–8 AND 12–18

lululemon’s Ground 1 challenges claims 1–8 and 12–18 as anticipated by Nishida. Ground 1 fails in its entirety because lululemon fails to show that Nishida discloses “simultaneously knitting a textile element with a surrounding textile structure,” as recited in independent claims 1 and 13. lululemon further fails to show that Nishida discloses that the “knitted textile element has a substantially planar configuration upon removal from the surrounding knitted textile structure,” as recited in dependent claims 5 and 15. Ex. 2003 at ¶38.

A. Nishida does not disclose “simultaneously knitting” a “textile element” with a “surrounding textile structure” as recited in Claims 1 and 13

lululemon fails to show that Nishida discloses “simultaneously knitting a textile element with a surrounding textile structure,” as recited in claim 1. lululemon also fails to show that Nishida discloses a substantially similar limitation recited in independent claim 13.³ Ex. 2003 at ¶39.

As described above in the overview of Nishida, material web 1 has two primary components: “unwound web parts 2” (i.e., pattern elements) and “material

³ Independent claim 13 recites “knitting a first textile element and a second textile element simultaneously with knitting a surrounding textile structure.”

web base 4.” Ex. 1005 at 5; Ex. 2003 at ¶40; Ex. 2004 at 88:17–21. Nishida’s Figure 2 (reproduced below) shows each of these item numbers.

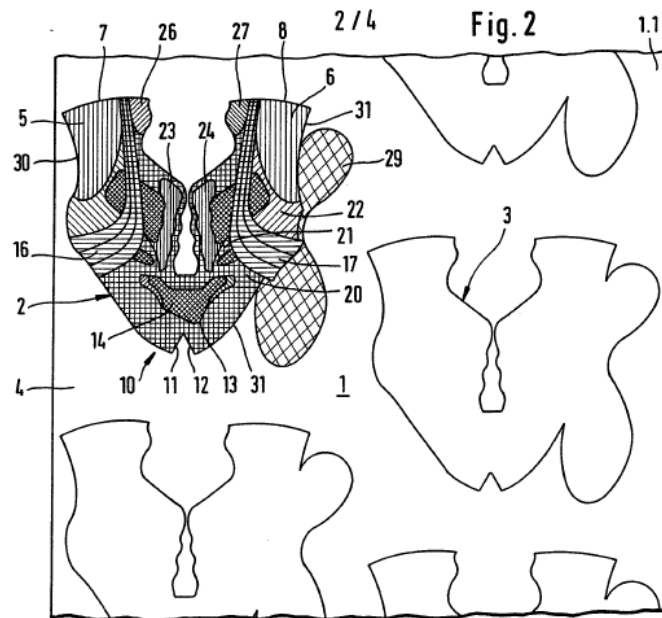


Figure 2 of Nishida

lululemon incorrectly argues Nishida discloses “simultaneously knitting” a knitted textile element and a surrounding textile structure. Petition at 24–25. lululemon relies solely on Nishida’s disclosure that the unwound web parts 2 can be produced “at the same time as” or “during the production of” material web 1. *Id.* But lululemon hasn’t shown that the production of Nishida’s material web 1 includes producing *both* material web base 4 and unwound web parts 2 *during the same knitting process*. lululemon’s interpretation is at odds with Nishida’s disclosure. For example, Nishida discloses that “material web base 4 may be a common woven or knitted fabric” (Ex. 1005 at 5), while “unwound web part (2)” is “produced by a

print process on the material web (1) and/or by a textile production method within the material web” (*id.* at 9) or by “embroidery” (*id.* at 5). Ex. 2003 at ¶41. Nishida also discloses that material web 1 is produced by a method including “weaving *and/or* knitting *and/or* embroidery.” *Id.* at 5.

Nothing in Nishida indicates that material web 1, which includes the material web base 4 and the unwound web parts 2, is formed during a single knitting process. To the contrary, these disclosures indicate that Nishida’s material web is formed by a multi-step production process which mixes-and-matches production processes like weaving, knitting, embroidering, and printing. Ex. 2003 at ¶42. lululemon falls far short of the standard for showing anticipation by Nishida. *See Net MoneyIN*, 545 F.3d at 1371 (“[D]ifferences between the prior art reference and a claimed invention, however slight, invoke the question of obviousness, not anticipation.”).

Other aspects of Nishida confirm that Nishida does not disclose simultaneous knitting. For example, Nishida discloses that “the shoe upper or the associated sole part are produced in the required quality, thickness, multilayered, or the like,” while the “remaining area of the material web,” i.e. “surface areas 1.1,” are made of “simple, lightweight or inexpensive fabric quality.” Ex. 1005 at 4, 7. Surface areas 1.1 may be formed, for example, from “gauze or with a low to very low number or warps and/or wefts.” *Id.* at 7. The difference in quality between surface areas 1.1 and

unwound web parts 2, including the different number of layers in each component, results from separate, asynchronous production processes. Ex. 2003 at ¶42.

lululemon does not assert an inherency argument in its Petition. Petition at 24–27. But even if it did, that argument would also fail. Nishida never discloses that material web base 4 and unwound web parts 2 are formed during the same knitting process. And lululemon cannot show that Nishida’s material web base 4 and unwound web parts 2 are *necessarily* formed simultaneously during the same knitting process. *See Nextremity Sols., Inc. v. Extremity Med., LLC*, IPR2022-00802, Paper 35 at 12 (PTAB Jul. 26, 2023) (petitioner bears the burden to show that any claim element not explicitly disclosed by an allegedly anticipating reference “is necessarily present” in the reference); *Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1295 (Fed. Cir. 2002) (“necessarily present” is more than “possibly present”).

During prosecution of the ’749 patent, the Examiner was confronted with this very issue and ultimately agreed with Nike. *See supra* § II.B.1. The Examiner was persuaded that Nishida-US fails to disclose “a knitted textile element *simultaneously* formed with a knitted textile structure during a knitting process,” and found that “there is no clear disclosure ... that [Nishida’s] textile element and the surround [sic] structure are simultaneously knitted.” *Id.* The Board should find the same here.

lululemon's expert, Dr. Brookstein, agreed with Nike and the Examiner. When deposed in the parties' parallel district court litigation—where Dr. Brookstein offered the same opinions about Nishida—he admitted that the unwound parts and base material were *not* simultaneously knit:

Q: So this document, Exhibit 9, is what you referred to in your report as the Nishida reference; is that right?

A: That is correct.

Q: It's actually an English translation of the Nishida reference?

A: It's a certified English translation, yes.

Q: Is it your opinion, Dr. Brookstein, that unwound parts number two disclosed in Nishida are simultaneously knit with the base material?

A: Not with the base material, no.

Q: No?

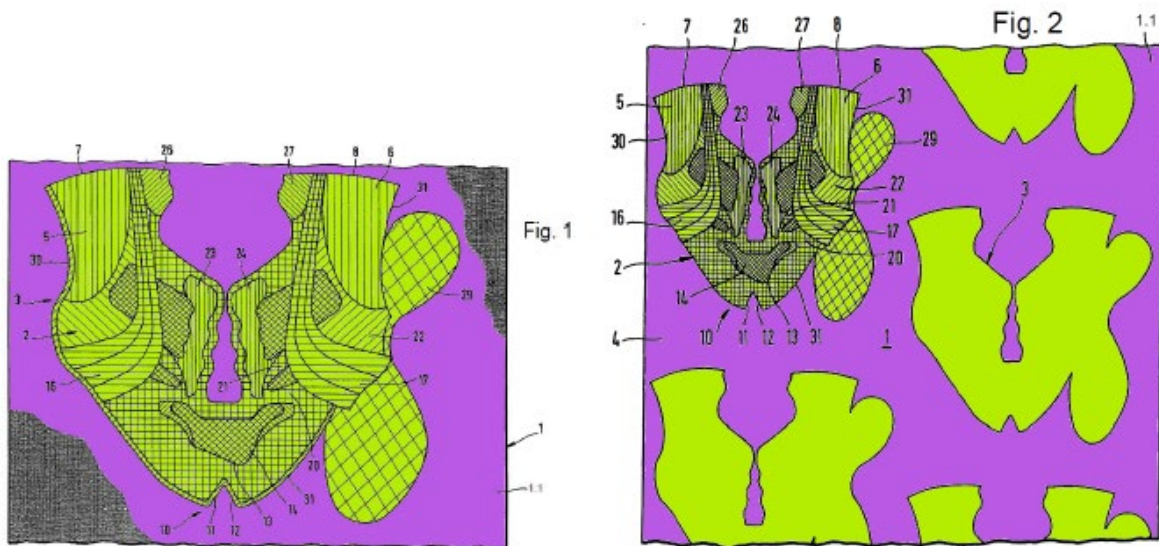
A: No.

Ex. 2005 at 257:5–24. The Examiner and Dr. Brookstein got it right: Nishida does not disclose knitting unwound web parts 2 during the same knitting process as material web base 4.

For at least these reasons, lululemon fails to show that Nishida anticipates any challenged claim in Ground 1. Ex. 2003 at ¶44.

B. Nishida does not disclose that the knitted textile element has a “substantially planar configuration upon removal from the surrounding knitted textile structure” as recited in claims 5 and 15

lululemon fails to show that Nishida discloses a knitted textile element with a “substantially planar configuration” when removed from the surrounding knitted textile structure, as recited in dependent claims 5 and 15. Ex. 2003 at ¶45. lululemon incorrectly argues that Nishida discloses this limitation based on two things: (i) Figures 1 and 2 of Nishida (lululemon’s annotated versions reproduced below); and (ii) Nishida’s disclosure that part 29 is “folded out of the unwound web part 2 into the plane of the shoe sole.” Petition at 37–38. Neither of those disclosures establish that Nishida’s unwound web parts 2 are substantially planar upon removal from material web 1. Ex. 2003 at ¶46.



Figures 1 and 2 of Nishida (annotated)

First, Nishida's Figures 1 and 2 don't show that unwound web parts 2 are substantially planar *upon removal* from material web 1. Nishida's Figures 1 and 2 show unwound web parts 2 integrated with material web 1. Ex. 2004 at 101:20–24 (“Q: So these two figures don't show you what unwound web part 2 looks like upon removal from the material web; right? A: That would be correct.”). Neither Figures 1 and 2, nor any other figure in Nishida, shows unwound web parts after removal from material web 1. *See* Ex. 2004 at 101:7–102:4; Ex. 2003 at ¶47. In addition, Nishida describes production processes for forming unwound web parts 2 that impart curl or three-dimensionality to those parts upon removal. Ex. 2003 at ¶47. Second, Nishida's disclosure of folding sole portion 29 “into the plane of the shoe sole” does not establish that unwound web part 2 is substantially planar upon removal from material web 1. *Id.* Later post-processing steps that alter the shape of the unwound web part (2) do not indicate the initial shape of the unwound web part when initially removal from material web 1. *Id.*; Ex. 2004 at 103:25–104:1 (testifying that Nishida's unwound web part 2 could be folded just the same if it was or wasn't planar). lululemon also cites to Dr. Brookstein's declaration as support, but Dr. Brookstein merely relies on these same disclosures in Nishida.

For at least these reasons, lululemon fails to show that Nishida anticipates claims 5 and 15. Ex. 2003 at ¶48.

VIII. GROUND 2: LULULEMON FAILS TO SHOW THAT NISHIDA IN VIEW OF A POSITA'S KNOWLEDGE RENDERS OBVIOUS CLAIMS 9, 10, 19, AND 20

For at least the reasons discussed above with respect to Ground 1, Nishida does not disclose independent claims 1 and 13. For at least the same reasons, Nishida in view of a POSITA's general knowledge does not teach or suggest dependent claims 9, 10, 19, and 20. Ex. 2003 at ¶49.

IX. GROUND 3: LULULEMON FAILS TO SHOW THAT ZUCKERMAN ANTICIPATES CLAIMS 1–3, 5–8, 11, 13–17, AND 21

lululemon's Ground 3 challenges claims 1–3, 5–8, 11, 13–17, and 21 as anticipated by Zuckerman. Ground 3 fails in its entirety for two reasons. First, Zuckerman fails to disclose knitting a textile element with a “surrounding textile structure,” as recited in independent claims 1 and 13. Second, lululemon fails to show that Zuckerman's shoe blank, i.e., textile element, is “incorporated” into an “article of footwear,” as recited in independent claims 1 and 13. Ex. 2003 at ¶50.

lululemon further fails to show that Zuckerman discloses “knitting an outline” of the textile element, as recited in dependent claims 3 or 14, or that the knitted textile element has a “substantially planar configuration” when removed from the surrounding knitted textile structure, as recited in dependent claims 5 and 15. *Id.*

A. Zuckerman does not disclose simultaneously knitting a textile element with a “surrounding textile structure” as recited in claims 1 and 13

Zuckerman fails to disclose “simultaneously knitting a textile element with a surrounding textile structure,” as recited in claim 1. Zuckerman also fails to disclose a similar limitation recited in independent claim 13.⁴ Ex. 2003 at ¶51.

lululemon alleges that Zuckerman meets this limitation by disclosing “blanks 11” (i.e., textile elements) that are removed from “knitted strip 13.” See Petition at 57–59 (citing Ex. 1003 at ¶139). lululemon’s annotated version of Zuckerman’s Figure 1 (reproduced below) depicts knitted strip 13 containing blank 11. *Id.* at 59; Ex. 2003 at ¶52.

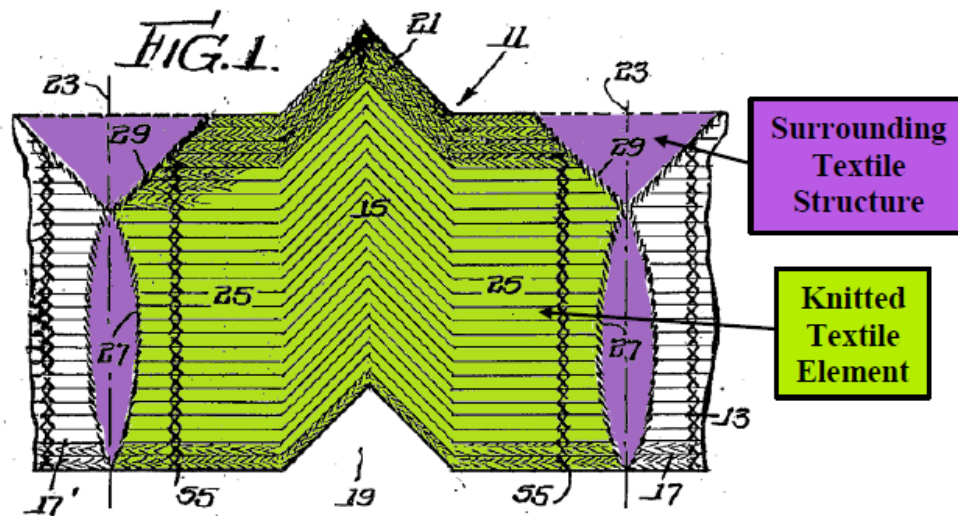


Figure 1 of Zuckerman (annotated)

⁴ Independent claim 13 recites “knitting a first textile element and a second textile element simultaneously with knitting a surrounding textile structure.”

lululemon argues that the “portion of continuous strip 13 [purple] that surrounds blank 11 [green]” is “a surrounding textile structure to the knitted textile element.” Petition at 58. The Board’s inclination in its Institution Decision that it’s “difficult [] to characterize the noted purple portions as ‘surrounding’ the noted green portion” is astute. Institution Decision at 26. This is because Zuckerman’s blank 11 is knitted with two separate textile structures adjacent the blank—one on each side. Ex. 2003 at ¶¶53–54. And even if the two separate structures could be considered a single structure (they can’t), they abut only two sides of the blank, and less than half of its periphery, and therefore cannot be characterized as “surrounding” the textile element. *See id.*; Ex. 2004 at 33:18–34:13.

Dr. Brookstein testified in deposition that Zuckerman’s strip 13 would still surround blank 11 even if it only had abutting material from which it was removed on one side of blank 11. *Id.* at 35:7–36:2. In other words, if blank 11 were only removed from the purple portion shown on the right-hand side of annotated Figure 2. *Id.* In lululemon’s apparent interpretation, a textile element having *any edge* which is adjacent to an abutting material would meet this limitation. *See, e.g., id.* at 20:15–21:20. But as Dr. Pastore explains, a POSITA would not have understood Zuckerman’s strip 13 to abut enough of blank 11 to be a textile structure “surrounding” the blank. Ex. 2003 at ¶55.

For at least these reasons, lululemon fails to show that Zuckerman anticipates any challenged claims in Ground 3. Ex. 2003 at ¶56.

B. Zuckerman does not disclose “removing” the “textile element” from the “surrounding textile structure” as recited in Claims 1 and 13

Zuckerman does not disclose “removing the knitted textile element from the surrounding knitted textile structure,” as recited in claim 1 or claim 13.⁵ Because Zuckerman fails to disclose knitting a textile element with a “surrounding textile structure” (*see supra* § IX.A), Zuckerman also fails to disclose removing the textile element from a “surrounding textile structure.”

C. Zuckerman does not disclose “incorporating” the knitted textile element into the “article of footwear” as recited in Claims 1 and 13

Zuckerman does not disclose “incorporating the knitted textile element into the article of footwear,” as recited in claim 1. Zuckerman also fails to disclose a substantially similar limitation recited in independent claim 13.⁶ Ex. 2003 at ¶57.

⁵ Independent claim 13 recites “knitting the first and second knitted textile elements from the knitted textile structure.”

⁶ Independent claims 13 recites “incorporating at least one of the first and second knitted textile elements into the article of footwear.”

Within the context of the '749 patent, an “article of footwear” includes an upper and a sole structure. *See supra* § V. With this in mind, the “incorporating” step of claims 1 and 13 must mean that the “knitted textile element” is incorporated into a sole structure. Ex. 1001 at 11:51–52, 12:42–43; *see also id.* at Fig. 12, item 120, 10:8–31. Zuckerman’s blank 11 (i.e., knitted textile element) is not incorporated into an article of footwear. Ex. 2003 at ¶57. Zuckerman describes its objective is “to form a knitted article, shaped to fit the foot, from a knitted blank of inexpensive form requiring a minimum of folding and stitching to provide the finished article.” Ex. 1008 at 1(L):5–11; *see also id.* at Fig. 4; Ex. 2003 at ¶58. To that end, Zuckerman’s knitted blank 11 forms both the upper and sole of a slipper. *See, e.g., Id.* at 1(L):27–32. Thus, Zuckerman’s blank is not incorporated into a sole structure, it already includes a sole structure. Ex. 2003 at ¶59.

lululemon argues unavailingly that Zuckerman discloses this limitation because its slipper may be “formed of components in addition to blank 11.” *See* Petition at 62–63 (citing Ex. 1008 at 2(R):17–37, 1(R):31–36). lululemon points to Zuckerman’s Figure 7 (reproduced below) to illustrate these additional components. *Id.* at 63; Ex. 2003 at ¶60.



Figure 7 of Zuckerman

But as Figure 7 shows, these “additional components” are merely finishing materials or adornments (a toe covering portion 47, edge finishing materials 53, and a pom-pom 51). Dr. Brookstein agrees that Zuckerman’s slipper is already an article of footwear before the addition of any of these finishing materials. Ex. 2004 at 40:9–24. This is far different from the way the claimed “textile element” of the ’749 patent is incorporated into an article of footwear, i.e., into a sole structure. Ex. 1001 at 3:40–53; Ex. 2003 at ¶61.

For at least these reasons, lululemon fails to show that Zuckerman anticipates any challenged claims in Ground 3. Ex. 2003 at ¶62.

D. Zuckerman does not disclose “knitting an outline” of the “knitted textile element,” as recited in claims 3 and 14

lululemon fails to show that Zuckerman discloses that the step of simultaneously knitting a textile element with a surrounding textile material includes

“knitting an outline” of the knitted textile element, as recited in dependent claims 3 and 14. As discussed above in Section IX.A, Zuckerman fails to disclose knitting a textile element with a surrounding textile structure. For at least this reason, Zuckerman likewise fails to knit an outline of the textile element within a surrounding textile structure. Ex. 2003 at ¶63. lululemon’s arguments only highlight this deficiency. lululemon argues that Zuckerman discloses an outline (red) in annotated Figure 1 shown below. Petition at 64. But this annotated figure demonstrates that the upper and lower edges of blank 11 (outlined by blue dashed lines) are not surrounded by any textile material within which an outline would be evident. Ex. 2003 at ¶64.

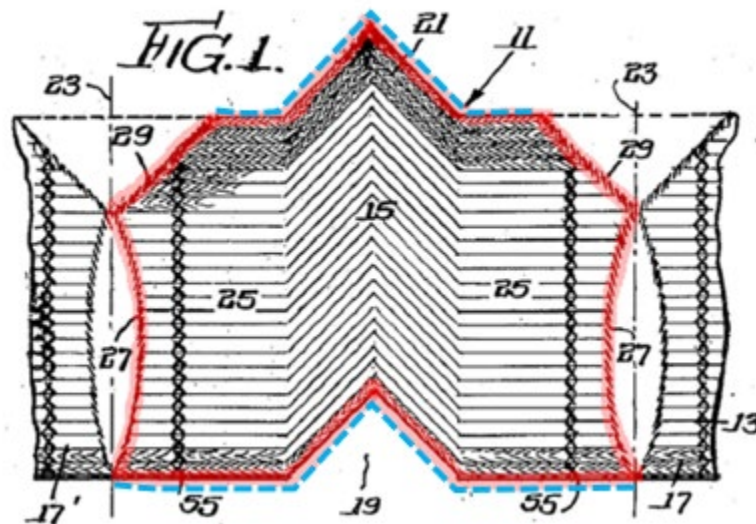


Figure 1 of Zuckerman (annotated)

lululemon also hasn't shown that item numbers 29 and 27 constitute knitted outline. Petition at 64. lululemon, relying on Dr. Brookstein, argues that Zuckerman's Figure 1 "discloses varying the stitches throughout continuous strip 13 to form an outline of the knitted textile element (blank 11) along lines 29 and 27." *Id.* (citing Ex. 1003 at ¶153). But neither lululemon nor Dr. Brookstein provide any supporting citations to Zuckerman. *Id.*; Ex. 2004 at 42:3–9. This is because Zuckerman describes item numbers 27 and 29 only as cut edges or raw edges. *E.g.*, Ex. 1008 at 2(L):22–34, 2(R):27–31, 2(R). Zuckerman never discloses that edges 27 and 29 represent any sort of knitted outline within continuous strip 13. Ex. 2003 at ¶65; Ex. 2004 at 45:8–47:12; 119:11–122:4.

For at least these reasons, lululemon fails to show that Zuckerman anticipates dependent claims 3 or 14. Ex. 2003 at ¶66.

E. Zuckerman does not disclose the knitted textile element has a “substantially planar configuration” upon removal from the surrounding knitted textile structure, as recited in claims 5 and 15

lululemon fails to show that Zuckerman discloses that the knitted textile element has a “substantially planar configuration” when removed from the surrounding knitted textile structure, as recited in dependent claims 5 and 15. Ex. 2003 at ¶67. lululemon points to three things in Zuckerman as allegedly disclosing this limitation, none of which is sufficient.

First, lululemon alleges that Zuckerman’s blank must be substantially planar because it is cut from a “strip of fabric.” Petition at 64–65 (citing Ex. 1003 at ¶155). lululemon, relying on Dr. Brookstein, argues that “strip of fabric” means a “substantially planar” structure. *Id.* (citing Ex. 1003 at ¶155). In paragraph 155 of his declaration, Dr. Brookstein opines that the term “strip” mean “a long, narrow piece,” and the term “fabric” means “the piece has length and width but limited thickness,” which together forms a “flat piece of fabric and a plane.” Ex. 1003 at ¶155. Dr. Brookstein provides zero support for his proposed definition of “strip of fabric.” *Id.*; Ex. 2004 at 49:13–51:5. In deposition, Dr. Brookstein confirmed that he not only made up these definitions—he specifically tailored them to match Zuckerman’s disclosure. Ex. 2003 at ¶68; Ex. 2004 at 51:2–52:12. His conclusory, results-driven opinion should be given little weight. *See Xerox Corp. et al v. Bytemark, Inc.*, IPR2022-00624, Paper 9 at 15–16 (PTAB Aug. 24, 2022) (precedential).

Second, lululemon alleges that Figure 1 “illustrates continuous strip 13 as substantially planar.” Petition at 64–65 (citing Ex. 1003 at ¶155). But Figure 1 does not show blank 11 after removal from strip 13. Ex. 1008 at Fig. 1; Ex. 2003 at ¶69. And it is also unclear, even from Figure 1, that strip 13 is substantially planar. *Id.*; Ex. 2003 at ¶69.

Third, lululemon alleges that Zuckerman meets this limitation because it discloses joining edges of its blank “to form a rounded heel portion.” Petition at 65. lululemon, relying on Dr. Brookstein, further alleges that the formation of a rounded heel portion, by “introduc[ing] a non-planar structure,” somehow confirms that blank 11 has a substantially planar configuration upon removal from strip 13. *Id.*; Ex. 1003 at ¶156. This is nonsensical. Stitching together seam 33 (see Zuckerman’s Figure 2 below) to “form a rounded heel portion” says nothing of the shape blank 11 initially takes upon removal from strip 13. Ex. 2003 at ¶70. Zuckerman never depicts blank 11 after removal from strip 13, but before heel seam 33 is joined. *Id.* Thus, none of these disclosures establish that Zuckerman’s blank 11 is substantially planar upon removal from strip 13. *Id.*

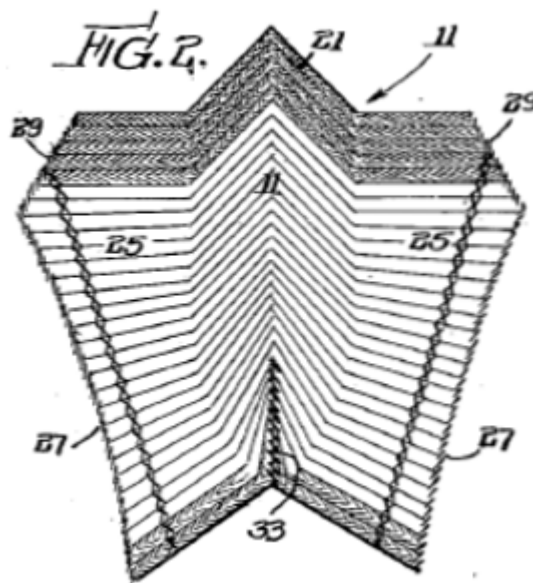


Figure 2 of Zuckerman

For at least these reasons, lululemon fails to show that Zuckerman anticipates claims 5 and 15. Ex. 2003 at ¶71.

X. GROUND 4: LULULEMON FAILS TO SHOW THAT ZUCKERMAN IN VIEW OF A POSITA’S KNOWLEDGE RENDERS OBVIOUS CLAIMS 3, 9–10, 14, AND 19–20

For at least the reasons discussed above with respect to Ground 3, Zuckerman does not disclose independent claims 1 and 13. For at least the same reasons, Zuckerman in view of a POSITA’s general knowledge does not teach or suggest dependent claims 3, 9–10, 14, and 19–20. lululemon further fails to show that Zuckerman, in view of the general knowledge of a POSITA, teaches or suggests “knitting an outline,” as recited by dependent claims 3 and 14. Ex. 2003 at ¶72.

A. lululemon fails to show that Zuckerman, in view of a POSITA’s knowledge, teaches or suggests “knitting an outline” of the “knitted textile element,” as recited in claims 3 and 14

Recognizing that Zuckerman fails to disclose the “knitting an outline” step of claims 3 and 14, lululemon argues that the addition of a knitted outline in Zuckerman would have been obvious to a POSITA. Petition at 74. lululemon’s obviousness argument fails for two reasons. Ex. 2003 at ¶73.

First, lululemon’s attempt to supply this missing limitation with a POSITA’s general knowledge is improper. *See Arendi*, 832 F.3d at 1361–62. A party mounting an obviousness challenge may only rely on “common sense” or general knowledge in certain circumstances. *Id.* For example, common sense “cannot be used as a

wholesale substitute for reasoned analysis and evidentiary support, especially when dealing with a limitation missing from the prior art.” *Id.* Here, lululemon provides no analysis whatsoever, and its only evidentiary support is inapposite. lululemon simply states in conclusory fashion that a POSITA would have understood “how to knit an outline as part of a knit structure ... into a knit structure like Zuckerman’s.” Petition at 74. And lululemon relies on only two pieces of evidence for support: (1) paragraph 182 of Dr. Brookstein’s declaration; and (2) four disclosures in Spencer (Ex. 1009 at pages 30, 90, 106, and 184). But Dr. Brookstein’s paragraph 182 merely parrots the petition without providing any additional reasoning or analysis. Ex. 1003 at ¶82 (citing to the same portions of Spencer). And, as Dr. Brookstein admitted at his deposition, none of the cited portions of Spencer truly support lululemon’s argument. *E.g.*, Ex. 2004 at 61:12–62:7; 63:17–64:22; 69:23–70:2; *see also* Ex. 2003 at ¶75. (Dr. Pastore analyzing why none of lululemon’s citation to Spencer support lululemon’s argument).

Second, even if a POSITA would know how to knit an outline of Zuckerman’s blank 11 in strip 13, a POSITA would not have been motivated to do so. There would have been no reason to knit an outline of Zuckerman’s cut edges 27 and 29 because Zuckerman’s blanks 11 are arranged in a repeating fashion within strip 13. Ex. 2003 at ¶74. Each blank 11 has triangular portion 21 and triangular recess 19 to orient a

cutting die. *Id.* It would have been significantly easier and cheaper to utilize a cutting die instead of programming a knitting machine to knit an outline. *Id.*; Ex. 2004 at 26:9–27:15.

For at least these reasons, lululemon fails to show that Zuckerman, in view of the general knowledge of a POSITA, renders obvious dependent claims 3 or 14. Ex. 2003 at ¶75.

XI. GROUND 5: LULULEMON FAILS TO SHOW THAT ZUCKERMAN IN VIEW OF DOUGHTY RENDERS OBVIOUS CLAIM 12

For at least the reasons discussed above with respect to Ground 3, Zuckerman does not disclose independent claim 1. For at least the same reasons, Zuckerman in view of Doughty does not teach or suggest dependent claim 12. lululemon also fails to show that a POSITA would have been motivated to combine Zuckerman with Doughty for the step of “securing the upper to a sole structure” recited in dependent claim 12. Ex. 2003 at ¶76.

A. A POSITA would not have been motivated to combine Zuckerman with Doughty to “secur[e] the upper to a sole structure,” as recited in claim 12

lululemon combines Zuckerman with Doughty for claim 12. Doughty discloses a sock and a “separately made foot bottom or sole portion” that can be “readily detached” from one another. Ex. 1017 at 1:22–29, 1:33–38. lululemon, relying on Dr. Brookstein, alleges that it would have been obvious to secure

Zuckerman's upper to Doughty's sole structure. Petition at 79–81; Ex. 1003 at ¶¶191–196. But lululemon fails to show that a POSITA would have been motivated to secure Zuckerman's slipper to Doughty's sole structure. Ex. 2003 at ¶¶77–78.

lululemon argues that this combination would facilitate (1) “easy washing” and (2) “reduced wear” / increased “durability” for Zuckerman's knit upper. Petition at 80–81 (citing Ex. 1003 at ¶194). Neither would have motivated a POSITA to make lululemon's proposed combination. Ex. 2003 at ¶¶78–79.

To (1), it would be *more difficult* to wash Zuckerman's slipper if a wearer had to remove Doughty's sole structure before washing. Ex. 2003 at ¶78. For example, the “stitching, sewing, or seaming” used to fasten Doughty's sole structure to its Zuckerman's slipper would need to be undone before the slipper could be washed. *Id.* Dr. Brookstein was unable to offer any intelligible explanation as to how attaching Doughty's sole structure to Zuckerman's slipper could possibly facilitate easy washing of Zuckerman's slipper. Ex. 2004 at 74:3–79:1.

To (2), the addition of Doughty's sole structure is unnecessary because Zuckerman's slipper already includes a sole structure. As discussed above in Section IX.C, Zuckerman's blank 11 forms an article of footwear, i.e., an upper and sole. *See, e.g.*, Ex. 1008 at Fig. 4, 1(L):27–32, 2(L):35–52. Zuckerman describes that sole portion 15 of its slipper is “heavier” and “more durable than that used in the

remaining portions of the blank” so that it may withstand “heavy wear.” *Id.* at 2(L):39–44; Ex. 2003 at ¶79. Thus, it would have been unnecessary to attach a sole structure to Zuckerman’s slipper to enhance durability of the sole. *See South-Tek Sys., LLC v. Eng. Corrosion Sols., LLC*, Fed. Appx. 1003, 1007 (Fed. Cir. 2018) (affirming Board’s finding of nonobviousness because the proposed modification would yield “redundant functions”).

A POSITA reading Zuckerman also would not have looked to combine Doughty’s sole structure because Zuckerman espouses the benefits of its one-piece knitted slipper as being “inexpensive” and reducing processing steps. Ex. 1008 at 1(L):5–11. The introduction of Doughty’s sole structure would only make Zuckerman’s intentionally austere design more expensive and increase the required processing steps. Ex. 2003 at ¶80.

For at least these reasons, lululemon fails to show that Zuckerman, in view of Doughty, renders obvious dependent claim 12.

XII. GROUND 6: LULULEMON FAILS TO SHOW THAT NISHIDA IN VIEW OF ZUCKERMAN RENDERS OBVIOUS CLAIMS 11 OR 21

For at least the reasons discussed above with respect to Ground 1, Nishida does not disclose independent claims 1 and 13. For at least the same reasons, Nishida in view of Zuckerman does not teach or suggest dependent claims 11 and 21. Ex. 2003 at ¶81.

XIII. CONCLUSION

For the reasons set forth above, lululemon has failed to prove by a preponderance of the evidence that any of claims 1–21 of the '749 patent are unpatentable. Nike requests that the Board enter a final written decision affirming the patentability of those claims.

Dated: October 30, 2024

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CERTIFICATE OF WORD COUNT

Under the provisions of 37 C.F.R. § 42.24(d), the undersigned hereby certifies that the Microsoft Office word count including all footnotes for the foregoing Patent Owner's Response, excluding the table of contents, table of authorities, certificate of word count, appendix and certificate of service, totals 7,677 words, which is less than the 14,000 words allowed under 37 C.F.R. § 42.24(b)(1).

Dated: October 30, 2024

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CERTIFICATE OF SERVICE

The undersigned hereby certifies service on the Petitioner, pursuant to 37 C.F.R. § 42.6(e) and by agreement of counsel, by electronic (e-mail) delivery of a true copy of the foregoing **PATENT OWNER'S RESPONSE**, which was served on October 30, 2024 to the following Counsel for Petitioner via e-mail:

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