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On behalf of **lululemon usa inc.**

By: Ali S. Razai (Reg. No. 60,771)
Joseph F. Jennings (Reg. No. 40,664)
Benjamin J. Everton (Reg. No. 60,659)
Jacob L. Peterson (Reg. No. 65,096)
Brandon G. Smith (*Pro Hac Vice*)
KNOBBE, MARTENS, OLSON & BEAR, LLP
2040 Main Street, 14th Floor
Irvine, CA 92614
Tel.: (949) 760-0404
Fax: (949) 760-9502

Inzer Ni (Reg. No. 76,047)
KNOBBE, MARTENS, OLSON & BEAR, LLP
1155 Avenue of the Americas, 24th Floor
New York, NY 10036
Tel: (212) 849-3000
Fax: (212) 849-3001
email: lululemonIPR-749@knobbe.com

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 8,266,749

PETITIONER'S REPLY

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LIST OF EXHIBITS

Exhibit No.	Description
1001	U.S. Patent No. 8,266,749 to Dua, et al.
1002	Excerpts of Prosecution History for U.S. Patent No. 8,266,749
1003	Declaration of Dr. David S. Brookstein
1004	International Patent Publication No. WO 92/22223 to Nishida (“Nishida”)
1005	English Translation of Nishida (Ex. 1005)
1006	U.S. Patent No. 1,803,554 to Knilans (“Knilans”)
1007	U.S. Patent No. 2,147,197 to Glidden (“Glidden”)
1008	U.S. Patent No. 2,047,724 to Zuckerman (“Zuckerman”)
1009	Spencer, Knitting Technology: A Comprehensive Handbook and Practical Guide, Chapters 2-3, 6-9, 12-13, 16-18, 20, 24, and 28-29, Third Edition, 2001 (“Spencer”)
1010	Excerpts of Man-Made Fiber and Textile Dictionary, Fourth Edition, Issued 1978, Reprinted 1983
1011	JP 2002-65303A to Tani, et al. (“Tani”)
1012	English Translation of Tani (Ex. 1011)
1013	U.S. Patent No. 5,345,638 to Nishida (“Nishida-US”)
1014	Curriculum Vitae of Dr. David S. Brookstein
1015	Joint Disputed Claim Terms Chart, <i>Nike, Inc. v. lululemon usa inc.</i> , C.A. No. 1:23-cv-00771-AS (S.D.N.Y.)
1016	Lewis, et al., A Machine Knitter’s Guide to Creating Fabrics, Part 1: Chapters 1-2 and Part 2: Chapters 1, 4, 6, and 13, 1986
1017	U.S. Patent No. 2,675,631 to Doughty (“Doughty”)

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1018	<i>Adidas AG v. Nike, Inc.</i> , IPR2016-00922, Paper 2 (Petition for <i>Inter Partes</i> Review) (P.T.A.B. Apr. 19, 2016)
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1021	<i>Adidas AG v. Nike, Inc.</i> , IPR2016-00922, Paper 21 (Final Written Decision) (P.T.A.B. Oct. 19, 2017)
1022	<i>Adidas AG v. Nike, Inc.</i> , IPR2016-00922, Paper 31 (Decision on Remand) (P.T.A.B. Feb. 19, 2019)
1023	Wingate, Excerpts of Fairchild’s Dictionary of Textiles, Sixth Edition, 1979
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1026	1/14/25 Deposition Transcript of Dr. Christopher Pastore
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I. INTRODUCTION

Nike cannot avoid the clear teachings of Nishida, which anticipate the claims of the '749 patent. Nike argues that Nishida does not disclose “simultaneously knitting a textile element and a surrounding textile structure.” But Nishida explicitly discloses that its knitted textile element is produced “at the same time” and “directly during the production of” its surrounding textile structure. Nike’s attempt to distract from this explicit disclosure by pointing to alternative manufacturing processes in Nishida is unpersuasive and irrelevant to the simultaneous knitting described.

Nike’s challenges to Zuckerman are similarly flawed. Resting on a claim construction position, Nike tries to narrow the phrase “surrounding textile structure” to require it to encircle “most” or over 50% of the textile element’s perimeter. But this narrowing construction contradicts Nike’s own prior representations. It also conflicts with the goals of the purported invention, including improving manufacturing efficiency and reducing waste. Under the proper construction, Zuckerman discloses a surrounding textile structure.

Nike’s argument that Zuckerman does not disclose “incorporating the textile element into an article of footwear” is equally baseless. Nike’s interpretation, requiring incorporation into a sole structure, improperly adds a limitation absent from the intrinsic record. Zuckerman’s disclosure of making “fashioned footwear from knitted fabric” demonstrates that a textile element is incorporated into a

footwear article during manufacturing, consistent with the claim language. Ex.1008, 2:41-43.

Accordingly, the Board should reject Nike's arguments and cancel the challenged claims.

II. CLAIM CONSTRUCTION

While the parties agree that the phrase “surrounding textile structure” refers to textile outside of and, where applicable, between the knitted textile elements, Nike seeks to impose an additional limitation. Nike and its expert contend that the “surrounding textile structure” must encircle “most” or over 50% of the textile element's perimeter. POR, 26 (arguing that Zuckerman's blank has textile structure that “abut[s] only two sides of the blank, and less than half of its periphery, and therefore cannot be characterized as ‘surrounding’ the textile element.”); Ex.2003, ¶55 (“[A] POSITA would have understood that a ‘surrounding textile structure’ extends around most or all of the periphery of the textile element.”).¹

The Board should reject Nike's proposed construction because it imposes a narrow limitation that is inconsistent with intrinsic evidence, contradicts the plain

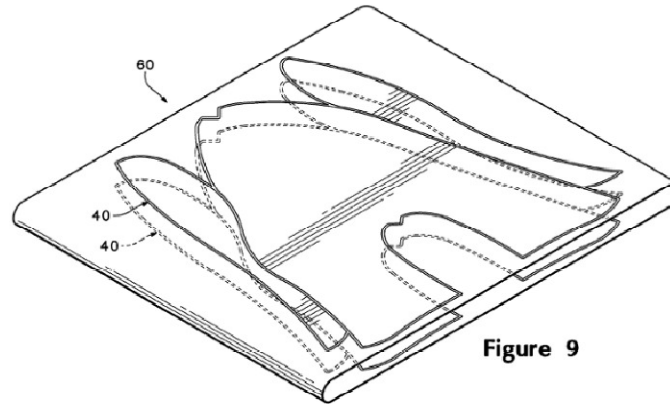
¹ In the related litigation, the district court construed “surrounding textile structure” and adopted Nike's proposed construction. Ex.1027, 4.

and ordinary meaning that Nike previously espoused, and conflicts with the purported invention's goals.

lululemon's expert, Dr. Brookstein, testified in the related district court proceeding that a POSA would have understood the plain and ordinary meaning of "surrounding textile structure" as referring to the waste textile material adjacent to the "textile element." Ex.2005, 324:5–18. Specifically, this would be "the textile area outside of the knitted textile element(s)." This interpretation aligns with the '749 patent's specification, which states: "Textile element 40 may be formed as a part of a **larger** textile element," and, to be used in the final product, "is then removed from the **larger** textile element." Ex.1001, 5:45–48.² This description underscores the flaw in Nike's attempt to impose a narrowing limitation, as "larger" imposes no specific threshold but merely indicates excess material.

The specification never uses "surround" or "surrounding" to describe a textile structure in relation to the textile element, so the use of "surrounding" in the claims must be interpreted to align with the specification's breadth of disclosure. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1315–16, 1323 (Fed. Cir. 2005) (en banc). The only figure showing a textile element as part of a larger structure is Figure 9.

² Emphasis added unless otherwise noted.



Ex.1001, Fig. 9. Figure 9 depicts the entire perimeter of textile element 40 in contact with other parts of textile structure 60. But the specification never describes textile structure 60 as “surrounding” textile element 40 and instead calls it “[a]n *example* of a textile structure 60 that may be formed with a wide-tube circular knitting machine.” *Id.*, 7:38–40. This distinction is significant because the specification discloses multiple embodiments, including ones where the textile structure is described simply as “larger” than the textile element. The claims should not be limited to Figure 9. *Phillips*, 415 F.3d at 1323. Nike’s own expert, Dr. Pastore, testified that a “surrounding textile structure” could exist even if textile element 40 extended to the edge, eliminating part of textile structure 60 on one side. Ex.1025, 74:9–75:16 (“[I]t wouldn’t be completely surrounded, but I don’t think the claim requires completely surrounded.”) (“[I]f the edge went all the way down in Figure 9 as described in the deposition, that would still be mostly surrounded.”)

Nike's construction also conflicts with the goals of the '749 patent. According to Nike, "[the] conventional method of making uppers was inefficient, and Nike addressed those inefficiencies in the '749 patent and its family." Ex.1020, 1 (Nike's POR arguments in IPR of '749 patent); *see also* POR, 5 ("[T]he claimed methods increase sourcing and manufacturing efficiency."); Ex.2003, ¶25 ("The claimed methods increase efficiency."). Nike further stated that the '749 patent's family "finally solved the well-recognized and long-felt need of reducing waste in the manufacture[] of uppers." *adidas AG v. Nike, Inc.*, IPR2013-00067, Paper 66 at 10 (Nov. 16, 2017) (Nike's argument in IPR of great-grandparent of '749 patent). However, requiring the surrounding textile structure to encircle "most" of the textile element's perimeter would exclude efficient layouts that encircle less of the perimeter, increasing waste and inefficiency. Nike's construction is therefore inconsistent with the '749 patent's purpose.

In sum, Nike's proposed construction should not be adopted. The '749 patent and its claims do not require the surrounding textile structure to contact "most" of the textile element's perimeter. The Board should reject Nike's narrow interpretation and instead adopt the plain and ordinary meaning of "surrounding textile structure" consistent with the intrinsic record—"the textile area outside of the knitted textile element(s)."

III. GROUND 1

Nike’s sole argument for the independent claims in Ground 1 is that Nishida fails to disclose “simultaneously knitting a textile element with a surrounding textile structure.”³ POR, 17. But Nishida expressly discloses simultaneously knitting these components, and the challenged claims of Ground 1 are thus anticipated by Nishida.

While Nike acknowledges Nishida’s textile elements and surrounding textile structure (*see id.*, 17–21), it argues that these components are not knit “simultaneously” (i.e., as part of the same knitting process). *Id.*, 17.

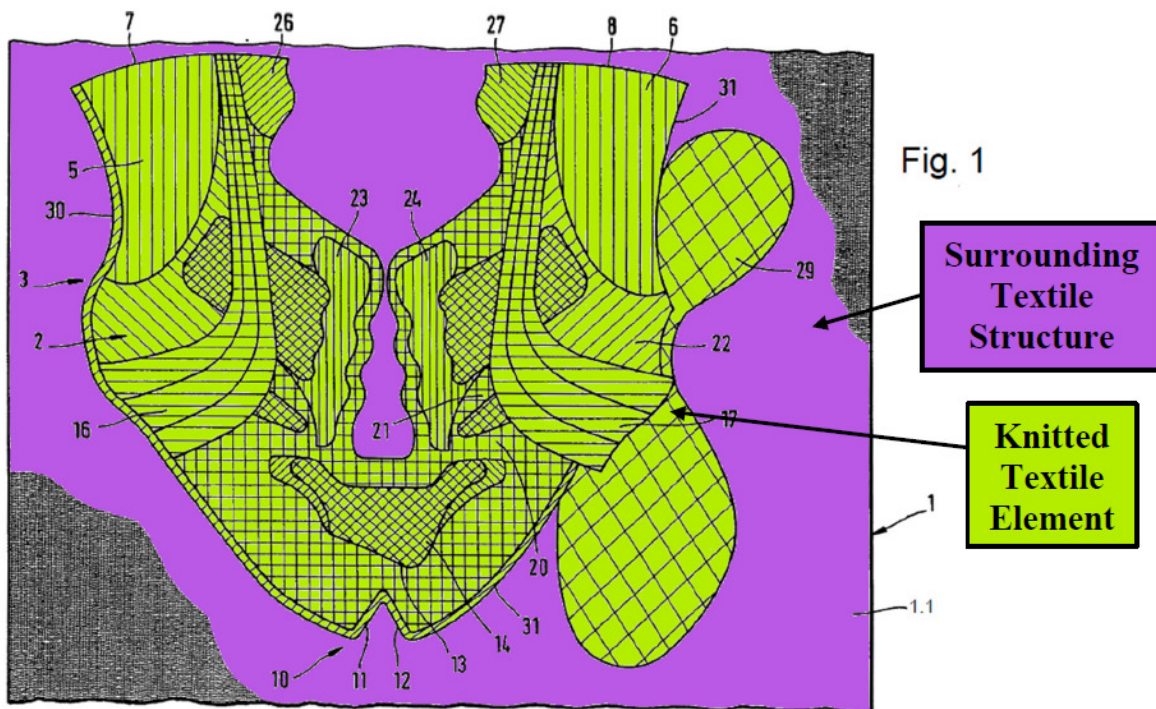
This argument disregards Nishida’s disclosure that the upper patterns and surrounding textile structure are manufactured “at the same time” and that the upper patterns are knitted “during the production of” the surrounding material. Ex.1005, Abstract, 4–5, 9. Rather than addressing this critical disclosure, Nike focuses on alternative approaches mentioned in Nishida. POR, 17–20. These alternatives do not negate Nishida’s explicitly disclosed method. Accordingly, Nike’s arguments are unpersuasive and fail to refute the Petition.

³ Claim 1 requires “simultaneously knitting a textile element with a surrounding textile structure.” Claim 13 similarly requires “knitting a first textile element and a second textile element simultaneously with knitting a surrounding textile structure.”

A. Claims 1 and 13: Nishida Discloses Simultaneously Knitting a Textile Element and Surrounding Textile Structure

Nishida unequivocally describes simultaneously knitting a textile element with a surrounding textile structure. It identifies two distinct components in its material: the upper patterns (or “unwound web parts,” i.e., textile elements) and the surrounding strip of material (or “surface areas of material web,” i.e., surrounding textile structure). Pet., 25 (citing Ex.1005, 5). Regarding these components, Nishida specifies that “a material web [1] which, during its production by a method customary in the textile industry, e.g., by ... *knitting* ... is provided with a single or a plurality of unwound web part(s) 2.”). *Id.* (citing Ex.1005, 5).

Figure 1 below illustrates this description, with Nishida’s knitted textile element (green) shown surrounded by the surrounding textile structure (purple):



Pet., 26 (showing Ex.1005, Fig. 1 (annotated)).

Nishida further states that “when the strip of material (1) is manufactured, the patterns (2) of the uppers are produced, *at the same time* as the strip of material.” *Id.* (citing Ex.1005, Abstract). This unambiguous statement demonstrates that the textile element (including (2)) and surrounding structure (1) are produced at the same time in a single knitting process. Nishida reinforces this point by explaining that the upper patterns are “produced directly during the production of” the surrounding material. *Id.* (citing Ex.1005, 4).

Nike advances several arguments that Nishida does not satisfy the “simultaneously knitting” limitation. However, these arguments fail to address Nishida’s disclosure of this limitation. Pet., 24–27, 44–46; Ex.1003, ¶¶74–76, 106; Paper 8 (“ID”), 18–19.

First, Nike argues that Nishida discloses only “layer[ing] shoe pattern pieces onto a pre-existing material base.” POR, 2; *see also id.*, 9–10; Ex.2003, ¶32. But Nishida neither describes “material web base 4” as pre-existing nor as requiring multiple layers. Instead, Nishida discloses embodiments where production results in a single-layer material, stating that knitted “patterns (2) of the uppers are produced, at the same time as the strip of material ... , using different manufacturing techniques, such as ... *single-* or multi-layer material.” Ex.1005, Abstract.

Second, Nike argues that Nishida fails to disclose “producing *both* material web base [i.e., surrounding structure] and unwound web parts [i.e., upper patterns] *during the same knitting process.*” POR, 18 (emphasis original). This argument implies two separate knitting processes—one for the “material web” and another for the upper patterns. To support this position, Nike cites Nishida’s discussion of various production methods for the material web and upper patterns. *Id.*, 18–19. But Nike and its expert then misinterpret Nishida to **require** only multi-step methods. Ex.1026, 31:3–11. This ignores that Nishida discloses methods where the material web and upper patterns are produced together in a single knitting process, as demonstrated in the Petition (Pet., 24–27).

Third, Nike argues that Nishida’s material is not formed in a single knitting process because Nishida describes “a multi-step production process which mixes-and-matches production processes like weaving, knitting, embroidering, and printing.” POR, 19. But these alternative production processes do not negate Nishida’s repeated references to knitting as an option for simultaneous production. For instance, Nishida describes the fabric as “a common woven or knitted fabric,” mentions “the weave type, knit type and/or via a suitable selection of the material,” and refers to “mesh-like fabric or a knitted structure.” Ex.1005, 5. It further discloses fabrics that are “multi-layered or particularly thickly woven or knitted, or additionally embroidered.” *Id.*, 6.

Dr. Brookstein explained that material cannot be knitted onto an existing knitted material. Ex.2004, 116:13–17; *see also id.*, 82:14–24, 83:5–8, 84:1–3, 94:16–18. In contrast, processes like embroidering or printing can be applied on top of knitted materials. *Id.*, 116:18–24, 98:22–99:6. Nishida recognizes this distinction by disclosing “double- or multi-layered” fabrics that are “thickly woven or knitted, or *additionally* embroidered.” Ex.1005, 6.

To counter this point, Nike’s expert cited Leach, asserting it is “very much possible” to knit onto existing fabric. Ex.2003, ¶43. However, during deposition, Nike’s expert conceded such knitting “unavoidably damages the nonwoven fabric.” Ex.1026, 48:3–16. Nishida’s teaching of printing or embroidery to mix-and-match textile creation does not undermine its disclosure of simultaneously knitting a textile element and surrounding textile structure. *Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1381–82 (Fed. Cir. 2015) (disclosing the patented system as one of many options is still anticipation). Nike’s focus on alternative processes improperly disregards Nishida’s explicit disclosure of simultaneous knitting.

Nike argues that quality differences between Nishida’s upper patterns and surrounding strip “result[] from separate, asynchronous production processes.” POR, 19–20. Nike and its expert cite page 4 of Nishida to support this assertion. *Id.*; Ex.2003, ¶42. However, this is contradicted by the same page and following paragraph in Nishida, which state “[a] further advantage of the method according to

the invention is that the individual patterns or partial patterns can already be produced directly during the production of the material web.” Ex.1005, 4.

Nike further argues that the “different number of layers in each component” in Nishida indicates separate, asynchronous production. POR, 19–20. But Nike’s expert admitted that multilayered knit fabric does not necessarily result from asynchronous production. In fact, Nike’s expert explained that layers in a multilayered fabric, like spacer fabric, can be knit simultaneously, with “two planar layers that are separated yet connected to each other, typically through a monofilament, that both joins and separates the two layers that are formed *simultaneously*.” Ex.1025, 240:11–241:6; *see also* Ex.1026, 17:19–18:4 (“[S]pacer fabric [is] an example of a multilayered knit textile,” in which layers are typically “knit simultaneously.”)

Fourth, Nike argues that the Examiner’s analysis of Nishida-US should apply to Nishida, urging the Board to similarly find that Nishida fails to teach the “simultaneously knitting” limitation. POR, 20. But Nike provides no rationale supporting the Examiner’s conclusions or addressing the Board’s differing conclusion in the *adidas IPR* (Ex.1022, 29–31). As noted in the Institution Decision, the record shows a “clear inconsistency” in the “assessment of Nishida’s and Nishida-US’s teachings pertaining to the pertinent ‘simultaneously knitting’ requirement.” ID, 23. Furthermore, the Board correctly observed that “[t]he record

is devoid of any indication that the Examiner considered or apprehended the extent of [Nishida-US's] disclosure.” *Id.*, 23–24. Regardless, the Examiner’s findings are merely part of the prosecution history that the Board “take[s] into account.” PTAB Consolidated Trial Practice Guide, 46 (Nov. 2019).⁴

Fifth, Nike incorrectly asserts that Dr. Brookstein agreed during his district court deposition that Nishida fails to knit its pattern pieces simultaneously with the surrounding structure. POR, 21. This assertion misrepresents Dr. Brookstein’s testimony, which responded to a question about “base material”—a phrase not found in Nishida. Context shows that Dr. Brookstein understood “base material” to refer to Nike’s “pre-existing base” theory, not Nishida’s “strip of material.” Nike omits his further explanation that “[y]ou can’t knit two separate unconnected fabrics at the same time” (Ex.2005, 257:21–23), which aligns with his rejection of Nike’s “pre-existing base” theory (Ex.2004, 98:22–99:25 (testifying that the phrase “within the material web” does not suggest “that the material already exists”), 115:11–116:24). Dr. Brookstein consistently affirmed that Nishida discloses simultaneously knitting the pattern pieces with the surrounding structure (Ex.1003, ¶¶31, 73–76, 79–80, 106) and unequivocally explained that “Nishida discloses simultaneously knitting a

⁴ Available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>.

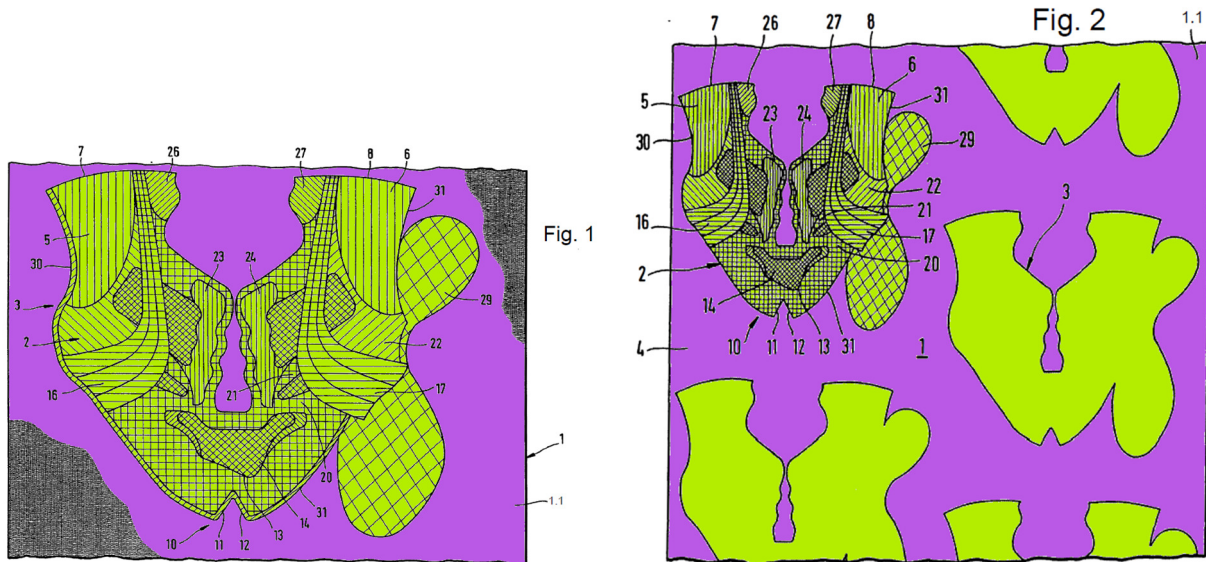
textile element (unwound web part(s) 2) with a surrounding textile structure (surface areas 1.1)” (*id.*, ¶76).

Finally, Nike argues that the Petition “does not assert an inherency argument” and claims that “even if it did, that argument would also fail.” POR, 20. Inherency is unnecessary because Nishida explicitly discloses the “simultaneously knitting” limitation.

B. Claims 5 and 15: Nishida’s Knitted Textile Element Has a Substantially Planar Configuration Upon Removal from the Surrounding Knitted Textile Structure

Nike argues that Nishida does not disclose its knitted textile element as substantially planar when removed from the surrounding knitted textile structure. POR, 22. However, Nike’s arguments are incorrect.

First, Nike argues that “Nishida’s Figures 1 and 2 don’t show that unwound web parts 2 are substantially planar *upon removal* from material web 1” because they are depicted as “integrated with material web 1.” *Id.*, 23 (emphasis original).



Pet., 37–38 (showing Ex.1005, Figs. 1–2 (annotated)); Ex.1003, ¶¶93. But neither Nike nor Dr. Pastore disputes that these figures depict the material web, including the textile elements within it, as substantially planar. POR, 22–23; Ex.2003, ¶¶46–47. Dr. Pastore conceded during deposition that the figures “appear[] to contain a planar structure.” Ex.1026, 39:15–40:8. These figures support the conclusion that components of the material web retain their substantially planar configuration when separated. Ex.1003, ¶¶93; Ex.2004, 102:5–24. Nike identifies no disclosure in Nishida indicating that removing a piece from this substantially planar material web would alter its planar configuration. The Petition and Dr. Brookstein both affirm that components removed retain their substantially planar configuration. Pet., 37–38, 49; Ex.1003, ¶¶93, 113.

Nike cites Dr. Pastore’s opinion that “the varying processes that Nishida describes for forming pattern elements 2 *may* impart a curl or three-dimensional

structure to a removed pattern element such that it is not substantially planar.” POR, 23 (citing Ex.2003, ¶47). However, this is mere speculation (Ex.1026, 42:2–44:1) and unsupported by Nishida’s disclosure, which provides no indication that removing a pattern from its substantially planar configuration would create a three-dimensional structure. Dr. Pastore offers no plausible mechanism or reasoning to explain such a change. Even if his speculation were accepted, the possibility that some embodiments “may impart” three-dimensionality does not negate that others remain “substantially planar.” *Core Wireless Licensing S.A.R.L. v. Apple Inc.*, 899 F.3d 1356, 1363 (Fed. Cir. 2018) (“[I]nfringement is not avoided merely because a non-infringing mode of operation is possible.”); *Omega Patents, LLC v. CalAmp Corp.*, 920 F.3d 1337, 1344 (Fed. Cir. 2019) (finding substantial evidence supported the jury’s infringement verdict where the accused infringer’s witness testified that 95% of the time the accused product operated in a way that did not infringe); *CommScope Techs. LLC v. Dali Wireless Inc.*, 10 F.4th 1289, 1294 (Fed. Cir. 2021) (“Although the questions of infringement and anticipation are separate inquiries, the two are related. As the Supreme Court has stated, ‘[t]hat which infringes, if later, would anticipate, if earlier.’” (internal citations omitted)).

Even if certain manufacturing processes imparted a curl or three-dimensional structure, the claims specify a configuration that is “substantially planar,” not strictly

“planar.” Dr. Pastore acknowledged that “substantially” permits some degree of curling or curvature. Ex.1026, 44:19–45:3.

Second, Nike argues that “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.” POR, 23. But this mischaracterizes the Petition’s analysis that sole portion 29 is “folded out of” unwound web part 2. Pet., 37–38. When considered in conjunction with Figures 1–2, “fold out of” demonstrates that unwound web part 2 begins in a substantially planar configuration, later transformed into a non-planar state through folding. Ex.2004, 102:5–24.

IV. GROUND 2

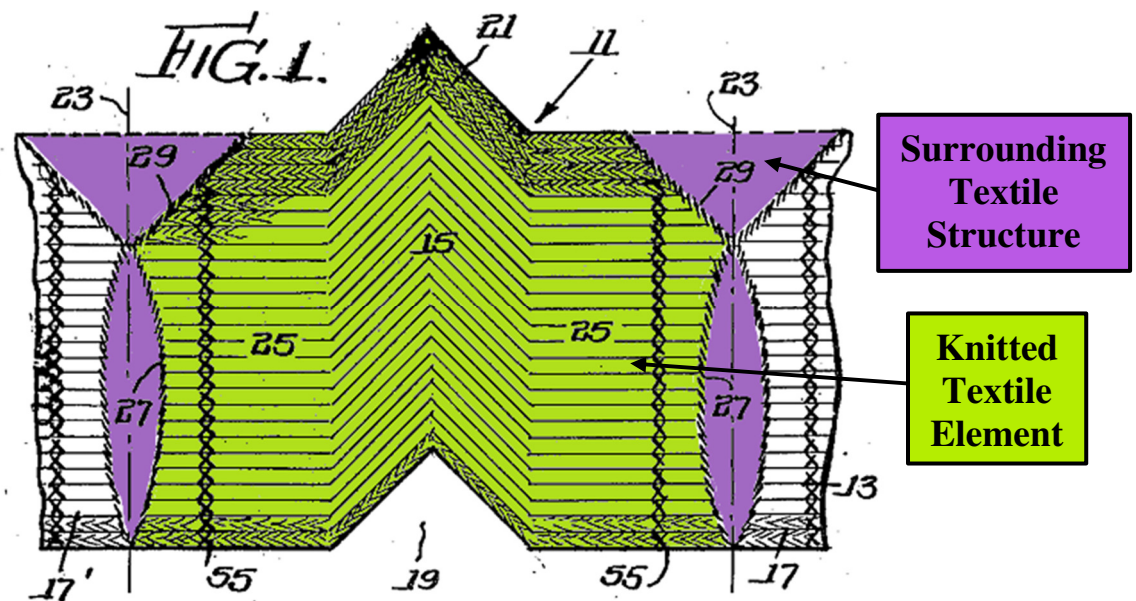
Nike provides no new arguments for this ground, instead relying on its arguments for Ground 1. POR, 24. These fail for the reasons described above. *See supra* §III.A. Nike has waived all other challenges to this ground. *See Parus Holdings, Inc. v. Google LLC*, 70 F.4th 1365, 1373 (Fed. Cir. 2023) (arguments not raised in POR are deemed waived).

V. GROUND 3

A. Claims 1 and 13

1. Zuckerman Discloses Simultaneously Knitting a Textile Element and Surrounding Textile Structure

Nike argues that the portion of Zuckerman's strip 13 shown in purple below does not "surround" the textile element, blank 11 (shown in green). POR, 25–26. This argument relies on Nike's construction of "surrounding textile structure." *Id.*



Pet., 59 (showing Ex.1008, Fig. 1 (annotated)); Ex.1003, ¶139. As discussed above, the plain and ordinary meaning of "surrounding textile structure" is "the textile area outside of the knitted textile element(s)." *Supra*, §II. Under this construction, Zuckerman discloses a "surrounding textile structure," as the portion of strip 13 shown in purple is the textile area outside of blank 11. Pet., 57–59, 69–70.

Nike's expert reinforced this construction, admitting in district court that a textile structure qualifies as a "surrounding textile structure" under the claims even if it does not fully encircle a textile element, leaving textile element portions without additional material along an edge. Ex.1025, 74:9–75:16. This matches Zuckerman, where the portion of strip 13 shown in purple qualifies as a "surrounding textile structure" because it constitutes the entire textile area outside of blank 11.

Nike also argues that Zuckerman does not disclose "a surrounding textile structure" because "blank 11 is knitted with two separate textile structures adjacent the blank," rather than a single, continuous structure. POR, 26. However, the limitation merely recites "a surrounding textile structure," with no requirement for singularity or continuity. Ex.1025, 78:16–79:4 (Dr. Pastore explaining that "small *gaps* would still allow something to be encircled"). Under the proper construction, "surrounding" does not require the textile structure to completely encircle the textile element without interruption, as gaps composed of air are not part of the surrounding textile structure. In Zuckerman, two disconnected structures collectively satisfy this requirement by encircling the entire textile element, leaving only gaps where air, rather than textile, borders the edges.

Nike also misrepresents Dr. Brookstein's statements responding to an ambiguous, objected-to question. Ex.2004, 35:10–20. Referring to the annotated Zuckerman's Figure 1, shown above, Nike's counsel asked, "would the Blank 11 be

surrounded by the purple portion only on the right side of the figure?” *Id.*, 35:16–18. This question followed a series of unclear remarks about hypothetical changes to the figure. *Id.*, 35:10–16. In response, Dr. Brookstein explained that the non-blank portion (colored purple) still constitutes a surrounding textile structure as long as it remains connected to blank 11. *Id.*, 35:10–36:2.

2. Zuckerman Discloses Removing Its Textile Element from the Surrounding Textile Structure

Nike provides no new arguments for the “removing” limitation, instead relying on its “simultaneous knitting” arguments. POR, 27. These fail for the reasons described above. *See supra* §V.A.1.

3. Zuckerman Discloses Incorporating Its Knitted Textile Element into the Article of Footwear

Nike contends that Zuckerman does not disclose “incorporating the knitted textile element into the article of footwear” because Zuckerman’s knitted textile element already includes a sole structure. POR, 27–28, 3. This argument relies on Nike’s incorrect interpretation that claims 1 and 13 require incorporation into a *separate sole structure*, which is unsupported by the record. The plain language of the limitation imposes no such restriction. Neither the specification nor prosecution history suggests the knitted textile element must be incorporated into a separate sole structure. Nike’s attempt to narrow the claims by rewriting the limitation should be rejected.

Nike's reliance on the Board's claim construction in the New Balance IPR (Ex.2006, 13–14) is misplaced. POR, 28, 14. There, the Board determined that the claimed “article of footwear” includes both a sole structure and an upper, addressing whether a *sock* constitutes an article of footwear. Ex.2006, 13–14; Ex.2007, 11. The Board did not, however, exclude a slipper, as disclosed by Zuckerman. Pet., 62–63. Nike cannot credibly argue Zuckerman's slipper is not an article of footwear, especially as its expert conceded that “Zuckerman's slipper when completed is an article of footwear, as the term is used in the '749 patent.” Ex.1026, 56:4–7.

Even applying the New Balance IPR claim construction confirms that Zuckerman's footwear includes “a sole structure and an upper.” Zuckerman describes both sole portion 15 (sole) and side portions 25 (upper). Ex.1008, Figs. 1–4; Ex.2004, 37:3–18 (explaining that Zuckerman discloses a sole and an upper).

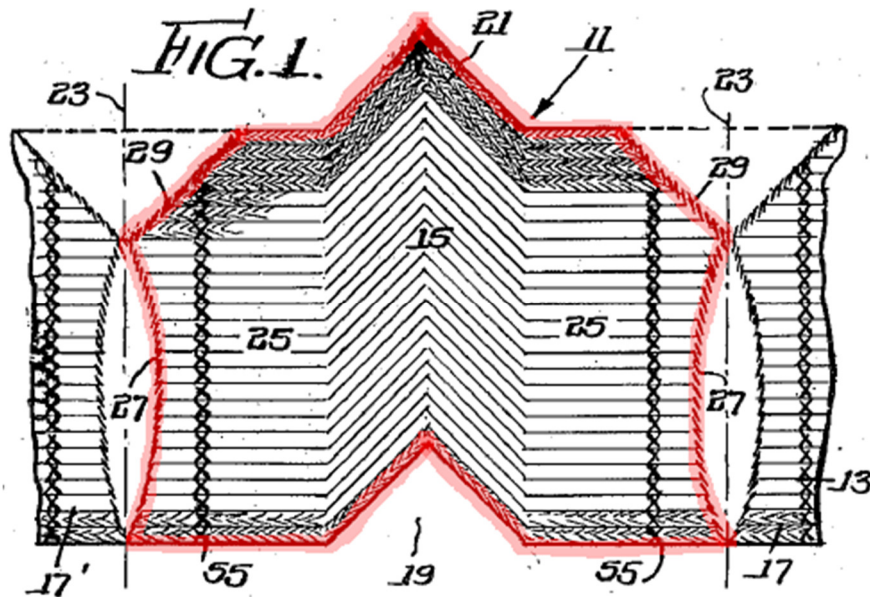
Nike cites Dr. Brookstein's acknowledgement that Zuckerman's blank qualifies as an article of footwear before “additional components” are added. POR, 29. But Nike's reliance is misplaced. Each step—modifying the blank or adding components—further constructs or alters the article, and the final product is an article of footwear. Ex.2004, 39:19–41:1; Ex.1003, ¶¶149, 170. Nike's argument that the blank becomes an article of footwear when knit and therefore cannot be incorporated into one later is illogical and circular, as noted by the Board (ID, 26). Ex.1026, 57:3–11 (Dr. Pastore testifying that the unremoved blank is an article of

footwear but “incomplete”). Adding components to refine or complete the article does not undo the earlier incorporation of the textile element.

Zuckerman incorporates its blank into an article of footwear at least by describing how the blank combines with a toe covering portion to complete the article. Pet., 62–63. Nike and its expert downplay the toe covering portion, calling it “merely [a] finishing material[] or adornment[]” (POR, 29) or “merely [a] decorative finishing[]” (Ex.2003, ¶60). This characterization is inaccurate and unsubstantiated. The toe covering portion serves a functional and structural purpose, and Nike’s attempt to trivialize it fails to address its role in incorporating the blank into a fully functional article of footwear.

B. Claims 3 and 14: Zuckerman Discloses Knitting an Outline of the Knitted Textile Element

Nike argues that the Petition identified no knitted outline in Zuckerman. POR, 30–31. But, as Dr. Brookstein explained, Zuckerman’s Figure 1 “shows varying stitches throughout continuous strip 13, forming an outline [red below] of the knitted textile element (blank 11) along lines 27 and 29.” Ex.1003, ¶153.



Pet., 64 (showing Ex.1008, Fig. 1 (annotated)). This demonstrates that Zuckerman describes knitting an outline. Nike's expert acknowledged that varying stitches can knit an outline. Ex.1025, 267:3–20. Zuckerman also describes cutting textile elements along lines of varied stitches (Ex.1008, 2(L):22–34; Ex.1003, ¶153), further confirming the outline.

Rather than addressing this specific disclosure, Nike and its expert focus on other statements in Zuckerman to argue that cut edges—like edges 27 and 29—do not constitute a knitted outline. POR, 31; Ex.2003, ¶¶64–65. These arguments distract by focusing on post-knitting cutting steps while ignoring that the varied stitches themselves form an outline.

C. Claims 5 and 15: Zuckerman’s Knitted Textile Element Has a Substantially Planar Configuration Upon Removal from the Surrounding Knitted Textile Structure

Nike argues that the Petition lacks sufficient support to show that “strip of fabric” means a “substantially planar structure.” POR, 32. Nike asserts Dr. Brookstein offered no basis for defining “strip” as “a long, narrow piece” or “fabric” as “[a] piece ha[ving] length and width but limited thickness.” *Id.* But Dr. Brookstein explained that Zuckerman’s disclosure, particularly in the context of Figure 1, demonstrates the substantially planar nature of the continuous strip. Ex.1003, ¶¶155–156, 174. In contrast, Nike’s expert offers no explanation and merely asserts that “strip of fabric” in Zuckerman “has no particular significance” regarding planarity. Ex.2003, ¶68.

Nike mischaracterizes Dr. Brookstein’s testimony by alleging that he “made up these definitions” and “tailored them to match Zuckerman’s disclosure.” POR, 32. In reality, Dr. Brookstein explained how a POSA would interpret “strip of fabric” in Zuckerman, based on his expertise and teaching experience in knitting methodology. Ex.2004, 49:19–50:4; *see also* Ex.1003, ¶¶3–4, 36. When Nike’s counsel focused on “strip,” Dr. Brookstein clarified that its interpretation is context-dependent, with the “strip of fabric” understood in Zuckerman’s context and Figure 1. *Id.*, 50:5–14. Far from making up a definition, he applied a POSA’s understanding to the specific context of Zuckerman. Regarding “fabric,” he

elaborated on his interpretation and confirmed its relevance to Zuckerman's context.
Id., 50:19–52:12.

Nike argues that Zuckerman's Figure 1 does not show blank 11 after removal from strip 13 and that it is unclear whether strip 13 is substantially planar. POR, 32. Nike relies solely on Dr. Pastore's assertion that "in my opinion, it is unclear from Figure 1 that knitted strip 13 is substantially planar." Ex.2003, ¶69. But this contradicts Zuckerman's disclosure, as Figure 1 depicts a substantially planar strip. Ex.1008, Fig. 1; Ex.1003, ¶155. Dr. Pastore identifies nothing in Zuckerman suggesting the "continuously knitted fabric strip" (Ex.1008, 1(R):11–14) is not planar or that removing a piece would render it non-planar.

Nike argues that "[s]titching together [Zuckerman's] seam 33 ... to 'form a rounded heel portion' says nothing of the shape blank 11 initially takes upon removal from strip 13." POR, 33. But this ignores lululemon's position, supported by Zuckerman and Dr. Brookstein, which considers both Figure 1 and the disclosure that "Zuckerman's knitted textile element's edges are brought together and stitched 'to form a rounded heel portion' together. Pet., 64–65, 73. These show that blank 11 begins in a substantially planar state and is later transformed into a non-planar configuration by folding and stitching. Ex.1003, ¶¶155–156, 174.

VI. GROUND 4

Nike argues that Zuckerman, combined with a POSA's general knowledge, does not render obvious "knitting an outline" as required by claims 3 and 14. POR, 34. However, neither of Nike's two reasons is persuasive.

First, Nike contends that the Petition improperly relies on a POSA's general knowledge to establish that "knitting an outline" was known, claiming that the Petition's arguments are conclusory and the evidence "inapposite." *Id.*, 34–35. But the Petition identified multiple passages in Spencer (Ex.1009), a widely recognized knitting reference, describing the uses and benefits of such outlines. Pet. 74–75. For example, Spencer explains that outlines were known to facilitate cutting knitted articles. Ex.1009, 30, 90. Dr. Brookstein further elaborated that incorporating these guides into knitting improves efficiency, minimizes errors, and reduces material waste. Ex.1003, ¶¶182–183.

The Petition and Dr. Brookstein explained that varying stitches in Zuckerman's strip 13 along blank 11's edges would enhance structural integrity. Pet., 75; Ex.1003, ¶183. Spencer confirms that such outlines were known to prevent laddering or unroving (Ex.1009, 106), and Dr. Brookstein noted that incorporating the outline into knitting would mitigate these issues (Ex.1003, ¶183).

Nike does not address these teachings from Spencer and the motivations cited by Dr. Brookstein. POR, 34–36; Ex.2003, ¶¶74–75. Instead, Nike incorrectly

contends that Dr. Brookstein admitted Spencer does not support the Petition’s analysis. POR, 35. But Dr. Brookstein detailed how Spencer describes “knitted stitches that would form an outline, then put a marker on it and then follow that and cut it.” Ex.2004, 65:12–66:2; *see also id.*, 61:12–70:2 (discussing Spencer’s disclosure of knitted outlines in detail); Ex.1003, ¶¶182–183 (“Spencer describes outlines in multiple chapters and highlights uses and benefits of outlines which would be generally known to a POSA.”).

Second, Nike argues that even if a POSA would have known how to knit an outline of Zuckerman’s blank 11 in strip 13, a POSA would not have been motivated to do so. POR, 35–36. Nike asserts that using a cutting die would have been easier and cheaper. *Id.* However, that a cutting die offers certain advantages does not preclude a POSA from considering and adopting an alternative, particularly when the alternative provides distinct advantages or mitigates disadvantages. *In re Fulton*, 391 F.3d 1195, 1200 (Fed. Cir. 2004); *see also Winner Intern. Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n.8 (Fed. Cir. 2000).

Nike also fails to address several motivations explained by Dr. Brookstein for knitting the outline, such as reducing time spent and simplifying quality control. Ex.1003, ¶183. These un rebutted motivations underscore the manufacturing benefits of knitting an outline, which a POSA would have found compelling despite the availability of alternatives like cutting dies.

VII. GROUND 5

Nike argues that Zuckerman, combined with Doughty, does not render obvious “securing the upper to a sole structure,” as required by claim 12. POR, 36. Nike challenges two motivations from the Petition: (1) “easy washing” and (2) “reduced wear” / increased “durability” for Zuckerman’s textile element. *Id.*, 37. However, Nike ignores two additional motivations: (3) providing “added protection” for Zuckerman’s textile element for use “in more varied environments” and (4) “permit[ting] changing of the sole structure” to “extend[] the knit upper’s life.” Pet., 80–81; *see also* Ex.1003, ¶193. These un rebutted motivations independently support the combination. Nike thus fails to show that a POSA would not have been motivated to combine Zuckerman with Doughty.

Even setting aside Nike’s failure to address the “added protection” and “replaceability” motivations, its challenges to the other motivations are unpersuasive. As Dr. Brookstein explained, using a separate sole structure like Doughty’s with Zuckerman’s textile element would enable the textile element to be detached and washed separately. Ex.1003, ¶193. This configuration facilitates washing because the sole structure may not be washable like the textile element and could deteriorate if exposed to water. *Id.* Nike’s assertion that Dr. Brookstein was “unable to offer an intelligible explanation” about washing misinterprets his testimony. POR, 37 (citing Ex.2004, 74:3–79:1). Dr. Brookstein explained how

Doughty’s detachable sole structure would allow separate cleaning of Zuckerman’s textile element. Furthermore, even if using a separate sole structure introduced certain disadvantages, one possible disadvantage competing with known advantages would not negate a POSA’s motivation to combine. *In re Fulton*, 391 F.3d 1200; *see also Winner*, 202 F.3d 1349 n.8.

Nike’s arguments regarding the “reduced wear” / increased “durability” motivation are similarly flawed. While Zuckerman’s textile element includes both an upper and a sole structure, the motivation to reduce wear and increase durability still applies. That Zuckerman’s textile element already includes a sole structure does not preclude the additional benefits of using a separate sole structure, as explained by Dr. Brookstein. Ex.1003, ¶¶193–194. Moreover, the Federal Circuit has confirmed that “case law does not require that a particular combination must be the preferred, or the most desirable, combination described in the prior art in order to provide motivation for the current invention.” *In re Fulton*, 391 F.3d 1200.

Finally, Nike and its expert assert that using a separate sole structure like Doughty’s would be undesirable due to increased expense and additional processing. POR, 38; Ex.2003, ¶80. These assertions lack support. In contrast, Dr. Brookstein cited references like Knilas (Ex.1006), which describes a separate sole structure as “inexpensive” and allowing for the “expeditious[] remov[al]” of the upper from the

sole.” Ex.1003, ¶195. This evidence demonstrates that incorporating a separate sole structure is neither inherently costly nor impractical and provides advantages.

VIII. GROUND 6

Nike provides no new arguments for this ground, instead relying on its arguments for Ground 1. POR, 38. These fail for the reasons described above. *See supra* §III.A. Nike has waived all other challenges to this ground. *See Parus Holdings*, 70 F.4th at 1373.

Respectfully submitted,

Dated: January 22, 2025

/Ali S. Razai/
Ali S. Razai (Reg. No. 60,771)
Customer No. 20,995
Attorneys for Petitioner
lululemon usa inc.
(949) 760-0404

CERTIFICATION UNDER 37 C.F.R. § 42.24

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Petitioner Reply to Patent Owner Response totals 5,556 words, which is less than the 5,600 allowed under 37 CFR § 42.24(c)(1).

Dated: January 22, 2025

/Ali S. Razai/

Ali S. Razai (Reg. No. 60,771)

Customer No. 20,995

Attorneys for Petitioner

lululemon usa inc.

(949) 760-0404

CERTIFICATE OF SERVICE

The undersigned hereby certifies service on Patent Owner, 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 **PETITIONER'S REPLY** was served on January 22, 2025 to the following Counsel for Patent Owner via email:

chris.renk@arnoldporter.com
michael.harris@arnoldporter.com
aaron.bowling@arnoldporter.com
lindsey.staubach@arnoldporter.com
xNIKE-lululemonIPRs@arnoldporter.com

Arnold & Porter Kaye Scholer LLP
70 West Madison Street, Suite 4200
Chicago, IL 60602-4231

Dated: January 22, 2025

/Ali S. Razai/

Ali S. Razai (Reg. No. 60,771)
Customer No. 20,995
Attorneys for Petitioner
lululemon usa inc.
(949) 760-0404