

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LULULEMON USA INC.,
Petitioner,

v.

NIKE, INC.,
Patent Owner.

IPR2024-00460
Patent 8,266,749 B2

Before KEN B. BARRETT, MICHAEL J. FITZPATRICK, and
SCOTT A. DANIELS, *Administrative Patent Judges*.

BARRETT, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

A. *Background and Summary*

lululemon usa inc. (“Petitioner”)¹ filed a Petition requesting *inter partes* review of U.S. Patent No. 8,266,749 B2 (“the ’749 patent,” Ex. 1001). Paper 1 (“Pet.”). The Petition challenges the patentability of claims 1–21 of the ’749 patent. We instituted an *inter partes* review of all challenged claims on all proposed grounds of unpatentability. Paper 8. Nike, Inc. (“Patent Owner”)² filed a Response to the Petition. Paper 15 (“PO Resp.”). Petitioner filed a Reply (Paper 17, “Pet. Reply”), and Patent Owner filed a Sur-reply (Paper 20, “PO Sur-reply”).

An oral hearing was held on May 7, 2025, and a transcript of the hearing is included in the record. Paper 29 (“Tr.”).

This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a). For the reasons discussed below, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–21 of the ’749 patent are unpatentable.

B. *Related Proceedings*

The parties identify the following district court proceedings as related matters involving the ’749 patent: *Nike, Inc. v. lululemon usa inc.*, C.A. No. 1:23-cv-00771-AS (S.D.N.Y); *Nike, Inc. v. New Balance Athletics, Inc.*, No. 1:23-cv-12666-JCB (D. Mass.); and *Nike, Inc. v. Skechers U.S.A., Inc.*, No. 2:23-cv-09346-AB-PVC (C.D. Cal.). Pet. 1; Paper 4, 2.

Other matters involving the ’749 patent are Patent Trial and Appeal Board cases: *adidas AG v. Nike, Inc.*, IPR2016-00922; *New Balance*

¹ Petitioner identifies lululemon usa inc. as the real party in interest. Pet. 2.

² Patent Owner identifies Nike, Inc. as the real party in interest. Paper 4, 2.

Athletics, Inc. v. Nike, Inc., IPR2024-00778; and *Skechers U.S.A., Inc. v. Nike, Inc.*, IPR2025-00141. In IPR2016-00922, the Board determined that the petitioner, adidas, had not shown by a preponderance of the evidence that claims 1–9, 11–19, and 21 of the ’749 patent were unpatentable over the combined teachings of Reed³ and Nishida-US⁴ based on a deficiency in establishing an adequate reason to combine the teachings of those references. *See* Ex. 1022 (Decision on Remand).⁵ That decision was affirmed by the Federal Circuit. *See adidas AG v. Nike, Inc.*, 963 F.3d 1355 (Fed. Cir. 2020). In the other two noted cases, institution was denied.

C. The ’749 Patent

The ’749 patent is titled “Article of Footwear Having a Textile Upper.” Ex. 1001, code (54). The Abstract of the ’749 patent is reproduced below:

An article of footwear and a method of manufacturing the article of footwear are disclosed. The footwear may include an upper and a sole structure. The upper incorporates a textile element with edges that are joined together to define at least a portion of a void for receiving a foot. The textile element may also have a first area and a second area with a unitary construction. The first area is formed of a first stitch configuration, and the second area is formed of a second stitch configuration that is different from the first stitch configuration to impart varying textures to a surface of the textile element.

³ U.S. Patent No. 3,985,003.

⁴ U.S. Patent No. 5,345,638, which, according to Petitioner, is “a U.S. national phase of the Nishida PCT application” that is the Nishida reference in this proceeding. Pet. 10.

⁵ The noted Decision on Remand was issued after the U.S. Court of Appeals for the Federal Circuit (“the Federal Circuit”) remanded a prior Final Written Decision (Ex. 1021) based on *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1354 (2018). *See* Ex. 1022, 3.

Various warp knitting or weft knitting processes may be utilized to form the textile element.

Id. at code (57).

Figure 8 of the '749 patent is reproduced below:

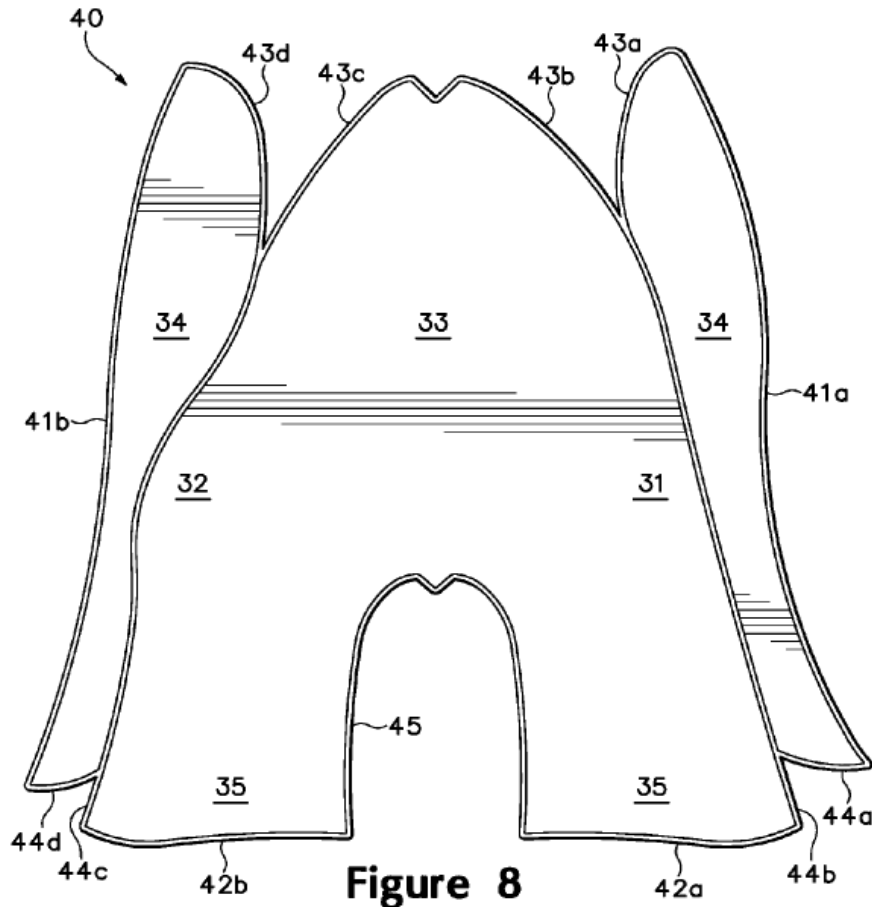


Figure 8 above is a plan view of a textile element that forms at least a portion of a shoe “upper.” *Id.* at 4:11–12. Textile element 40 includes lateral region 31, medial region 32, instep region 33, lower region 34, and heel region 35. *Id.* at 5:21–23.

Figure 9 of the '749 patent is reproduced below:

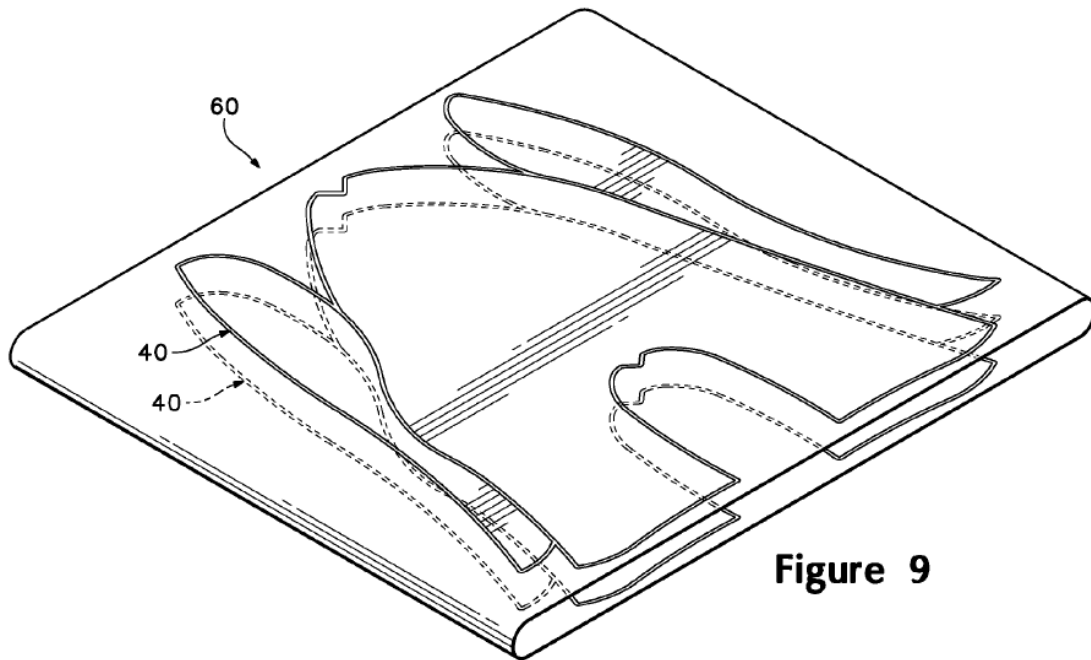


Figure 9

Figure 9 above is a perspective view of textile structure 60 that incorporates two textile elements 40. *Id.* at 4:13–14, 7:38–45. Textile structure 60 may be formed using a “wide-tube circular knitting machine.” *Id.* at 7:38–40.

The '749 patent states the following:

Textile structure 60 has a generally cylindrical configuration, and the types of stitches vary throughout textile structure 60 so that a pattern is formed with the outline of textile element 40. That is, differences in the stitches within textile structure 60 form an outline with the shape and proportions of textile element 40.

Id. at 7:40–45.

The '749 patent also states that “a first textile element 40 and a second textile element 40 may be simultaneously formed in a single textile structure 60.” *Id.* at 7:58–60.

Figure 1 of the '749 patent is reproduced below:

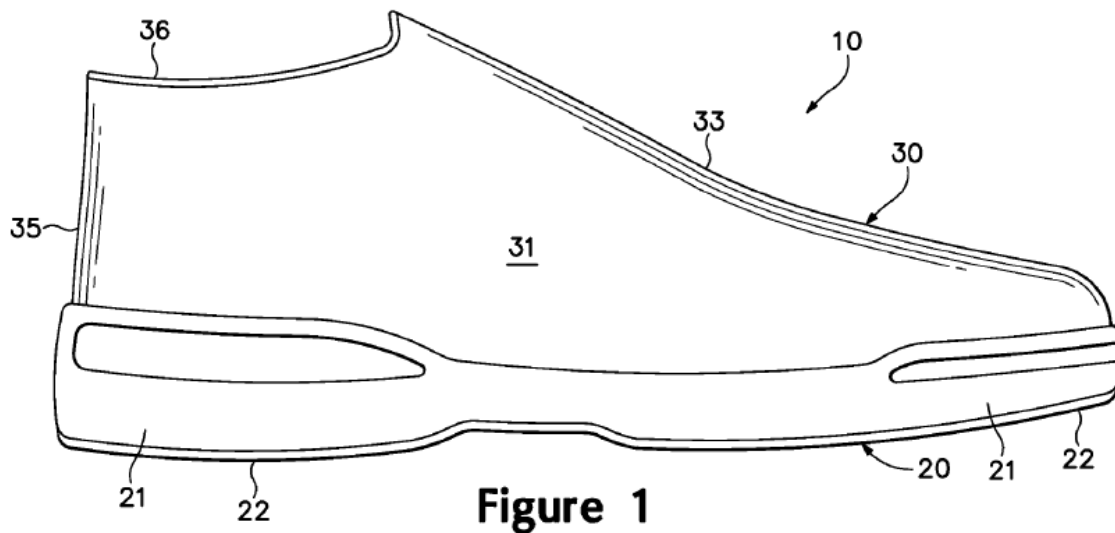


Figure 1 above is a lateral elevation view of an article of footwear 10 having an upper 30 according to the '749 patent. *Id.* at 4:1–2; 4:43–54.

D. Illustrative Claim

Of the challenged claims of the '749 patent, claims 1 and 13 are independent. Claim 1, reproduced below with bracketed annotations inserted, is illustrative.

1. [1Pre] A method of manufacturing an article of footwear, the method comprising:
 - [1a] simultaneously knitting a textile element with a surrounding textile structure, the knitted textile element having at least one knitted texture that differs from a knitted texture in the surrounding knitted textile structure;
 - [1b] removing the knitted textile element from the surrounding knitted textile structure;
 - [1c] incorporating the knitted textile element into the article of footwear.

Ex. 1001, 11:43–52.

E. Evidence

Petitioner relies on the following references:

Name	Reference	Exhibit No.
Nishida	WO 92/22223, published Dec. 23, 1992	1005 ⁶
Zuckerman	US 2,047,724, issued July 14, 1936	1008
Doughty	US 2,675,631, issued Apr. 20, 1954	1017

Petitioner also relies on the declaration of Dr. David S. Brookstein (Ex. 1003) in support of its arguments, and Patent Owner relies on the declaration of Christopher M. Pastore, Ph.D. (Ex. 2003) in support of its arguments. The parties also rely on other exhibits as discussed below.

F. Asserted Grounds of Unpatentability

Petitioner asserts that the challenged claims are unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. § ⁷	Reference(s)/Basis
1–8, 12–18	102(b)	Nishida
9, 10, 19, 20	103(a)	Nishida
1–3, 5–8, 11, 13–17, 21	102(b)	Zuckerman
3, 9, 10, 14, 19, 20	103(a)	Zuckerman
12	103(a)	Zuckerman, Doughty
11, 21	103(a)	Nishida, Zuckerman

II. ANALYSIS

A. Principles of Law

Petitioner bears the burden of persuasion to prove unpatentability of the claims challenged in the Petition, and that burden never shifts to Patent

⁶ Exhibit 1005 is an English translation of the PCT International Application (Exhibit 1004).

⁷ The application that issued as the '749 patent was filed before the effective date of the Leahy Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) ("AIA"), and we apply the pre-AIA versions of 35 U.S.C. §§ 102 and 103.

Owner. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail, Petitioner must establish by a preponderance of the evidence that the challenged claims are unpatentable. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987); *see also Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1334 (Fed. Cir. 2008) (to anticipate a patent claim under 35 U.S.C. § 102, “a single prior art reference must expressly or inherently disclose each claim limitation”). Moreover, “[b]ecause the hallmark of anticipation is prior invention, the prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)). Whether a reference anticipates is assessed from the perspective of one of ordinary skill in the art. *See Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1368–69 (Fed. Cir. 2003) (“‘[T]he dispositive question regarding anticipation [i]s whether *one skilled in the art* would reasonably understand or infer from the [prior art reference’s] teaching’ that every claim element was disclosed in that single reference.” (second and third alterations in original) (quoting *In re Baxter Travenol Labs.*, 952 F.2d 388, 390 (Fed. Cir. 1991))).

Additionally, “[u]nder the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claimed

limitations, it anticipates.” *MEHL/Biophile Int’l Corp. v. Milgraum*, 192 F.3d 1362, 1365 (Fed. Cir. 1999); *see In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1349–50 (Fed. Cir. 2002).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter 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 person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) if present, any objective evidence of obviousness or non-obviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. The Level of Ordinary Skill in the Art

In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (quoting *Custom Accessories, Inc. v. Jeffrey–Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986)).

Petitioner contends that:

A hypothetical person of ordinary skill in the art (“POSA”) 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, including apparel such

as footwear. Ex.1003, ¶¶34-37. 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.*, ¶37.

Pet. 14–15. Patent Owner states that, “[f]or purposes of this proceeding, Nike applies lululemon’s proposed level of skill in the art.” PO Resp. 13.

Petitioner’s definition is consistent with the level of ordinary skill reflected in the prior art references of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (recognizing that the prior art itself may reflect an appropriate level of skill in the art). For purposes of this decision, we apply Petitioner’s definition of the person of ordinary skill in the art.

C. Claim Construction

We apply the same claim construction standard used in district court actions under 35 U.S.C. § 282(b), namely that articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). *See* 37 C.F.R. § 42.100(b). In applying that standard, claim terms generally are given their ordinary and customary meaning as would have been understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *Phillips*, 415 F.3d at 1312–13. “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). “[W]hile extrinsic evidence can shed useful light on the relevant art, . . . it is less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (internal quotation marks omitted).

Petitioner, in the Petition, notes that certain terms were construed in a prior *inter partes* review under the then-applicable broadest reasonable interpretation standard, and states that it does not seek to have those claims re-construed under the currently applicable *Phillips* standard. Pet. 15 (citing Ex. 1022, 15 (IPR2016-00922 (*adidas AG v Nike, Inc.*), Paper 31)).

Petitioner also states that the parties have agreed to the constructions of certain terms. *Id.* at 16. Collectively, those previously-construed and agreed upon terms are: “unitary construction” (claims 11 and 21), “a first area and a second area with a unitary construction” (claims 11 and 21), “wide-tube circular knitting machine” (claims 9 and 19), “impart” (claims 11 and 21), and “texture” (claims 8, 11, and 21). In the Petition, “Petitioner submits that the Board need not specially construe any other claim terms.” *Id.* at 17.

Patent Owner, in the Patent Owner Response, asserts that the Board, in a decision denying institution, construed “article of footwear” as including a sole structure and an upper, and contends that we should adopt that same construction here. PO Resp. 14 (citing Ex. 2006, 14 (IPR2024-00778 (*New Balance Athletics, Inc. v. Nike, Inc.*), Paper 10)). In its Response, Patent Owner states that, “[f]or purposes of this proceeding, Nike contends that no other terms require construction.” *Id.*

Neither party, in the claim construction section of the respective subsequent brief, disagrees with the other party’s claim construction position(s) regarding the terms listed above. *See* PO Resp. 14; Pet. Reply 2–5; PO Sur-reply 3–8. We determine that, to decide the disputed issues before us, there is no need to revisit prior Board constructions or set forth an express construction for these terms.

In Petitioner’s Reply and Patent Owner’s Sur-reply, the parties present claim construction arguments regarding the meaning of the term “surrounding” in the phrase “surrounding textile structure” of independent claims 1 and 13. *See* Pet. Reply 2–5; PO Sur-reply 3. We address those arguments below in the context of the discussion of Petitioner’s anticipation challenge based on Zuckerman (Ground 3).

D. Anticipation of Claims 1–8 and 12–18 by Nishida (Ground 1)

Petitioner asserts that claims 1–8 and 12–18 of the ’749 patent are anticipated by Nishida. *See* Pet. 23–31 (addressing claim 1). Patent Owner argues that Petitioner fails to show that Nishida discloses “simultaneously knitting a textile element with a surrounding textile structure,” as recited in independent claims 1 and 13. PO Resp. 17; PO Sur-reply 8. Patent Owner also argues that Petitioner fails to show that Nishida discloses the “substantially planar configuration” recited in dependent claims 5 and 15.

1. Nishida (Ex. 1005)

Nishida is titled “Method of Producing a Shaped Shoe Part from a Strip of Fabric, and a Shaped Shoe Part Produced by this Method.” Ex. 1005, code (54). Nishida’s Abstract is reproduced below:

The invention concerns the production of a shoe upper by cutting out the upper, in the form of a pattern, from a strip of material and shaping the upper, at the same time joining parts of the upper by seams. The aim of the invention is to develop the method used so that, in spite of the large number of individual parts existing or to be made visible, such shoe uppers can be produced rationally and without waste of time. To this end, the invention proposes 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 (1) is produced, using different manufacturing techniques, such as different make-up, different yarn material, different color, different material

thickness, single- or multi-layer material, etc., the patterns being cut from this strip and further worked to give shoe uppers.

Id. at code (57).

Nishida's Figure 2 is reproduced below:

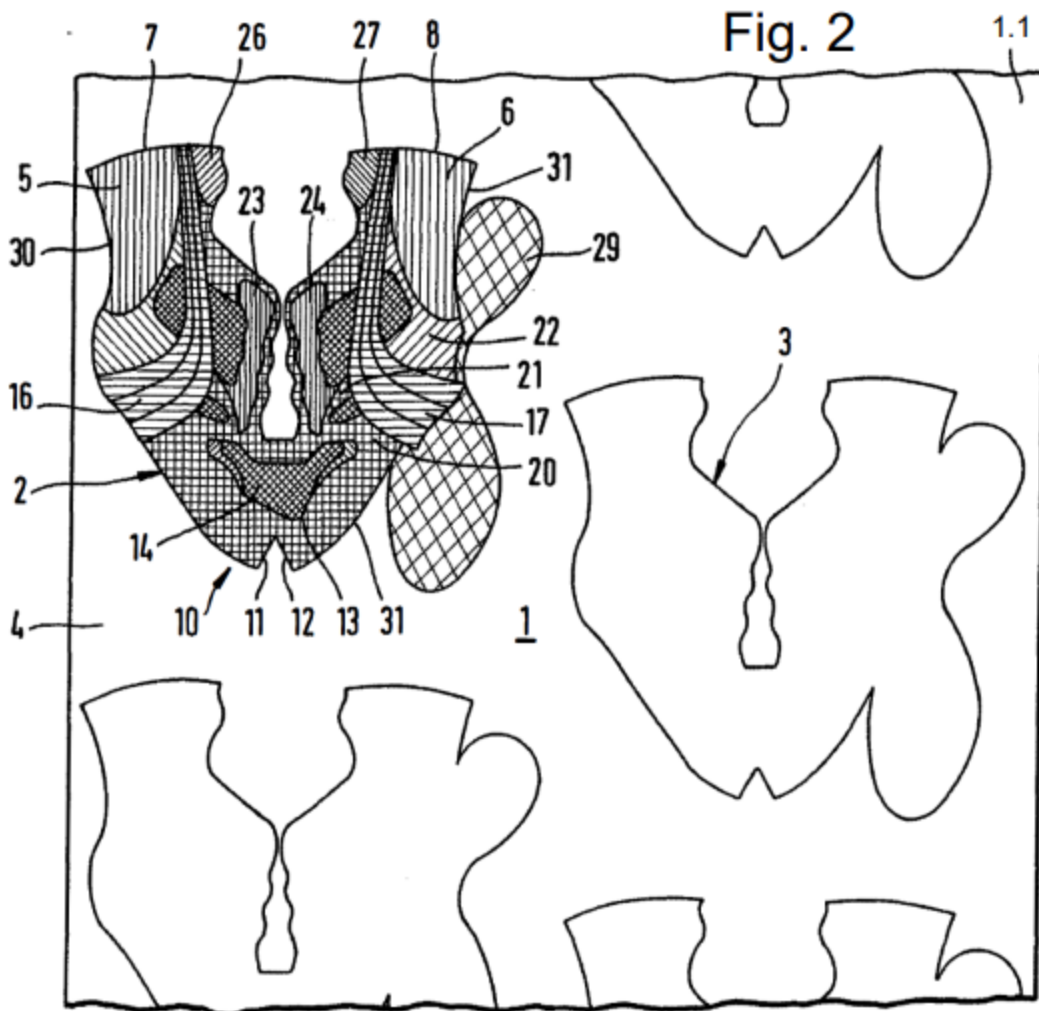


Figure 2 above “shows a detail of a fabric with several unwound web parts for different shoes uppers.” *Id.* at 5. Material web 1 is formed “by weaving and/or knitting and/or embroidery” and “is provided with a single or a plurality of unwound web part(s) 2 for the shoe-upper shape 3.” *Id.* Nishida further describes the following:

The material web base 4 may be a common woven or knitted fabric, e.g., consisting of warp and weft. The unwound web part 2 is divided into different individual parts or areas, which are distinguished from each other by a different type of fabric and/or by different fibers or threads, e.g., of wool, wool with metal threads, silk, silk with metal threads or wool with synthetic fibers, and the like, and/or by different colors of the fibers or threads, including metal threads, or by different color prints and/or differently formed fiber strands or fiber strand compositions, such as twisted, processed in parallel, and the like.

Id.

Nishida's Figure 3 is reproduced below:

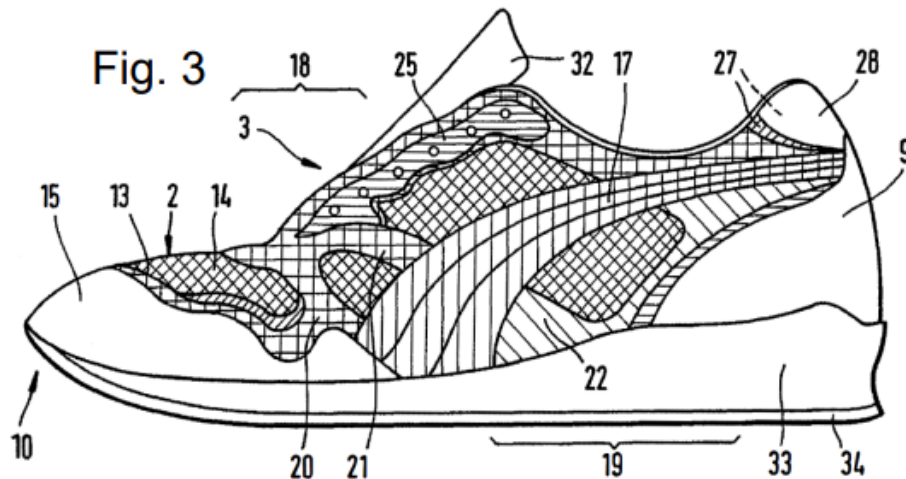


Figure 3 above “is a side view of a shoe with a top part or upper made from a material web unwound web part[.]” *Id.*

2. Independent Claims 1 and 13

Independent claims 1 and 13 are somewhat similar, and the disputed issue pertains to the “simultaneous knitting” aspect recited in both. We begin with a discussion of independent claim 1.

a. [1Pre] A method of manufacturing an article of footwear, the method comprising:

Petitioner contends that Nishida discloses the preamble of independent claim 1. Pet. 23–24 (citing, *inter alia*, Ex. 1003 ¶¶ 68–71). Specifically, Petitioner asserts that Nishida discloses the production of a shoe upper and “provides that a finished shoe upper is ‘placed in an adhesive, injection or casting mold, in which a midsole 33 and an outsole 34 are formed by known methods.’” *Id.* at 24 (citing Ex.1005, Abstr., 4, 6, 9). According to Petitioner, “[t]his process forms a shoe, which is an article of footwear.” *Id.* (citing Ex. 1003 ¶ 71).

Patent Owner does not raise any arguments regarding these contentions. *See* PO Resp. 17–21; PO Sur-reply 8–14.

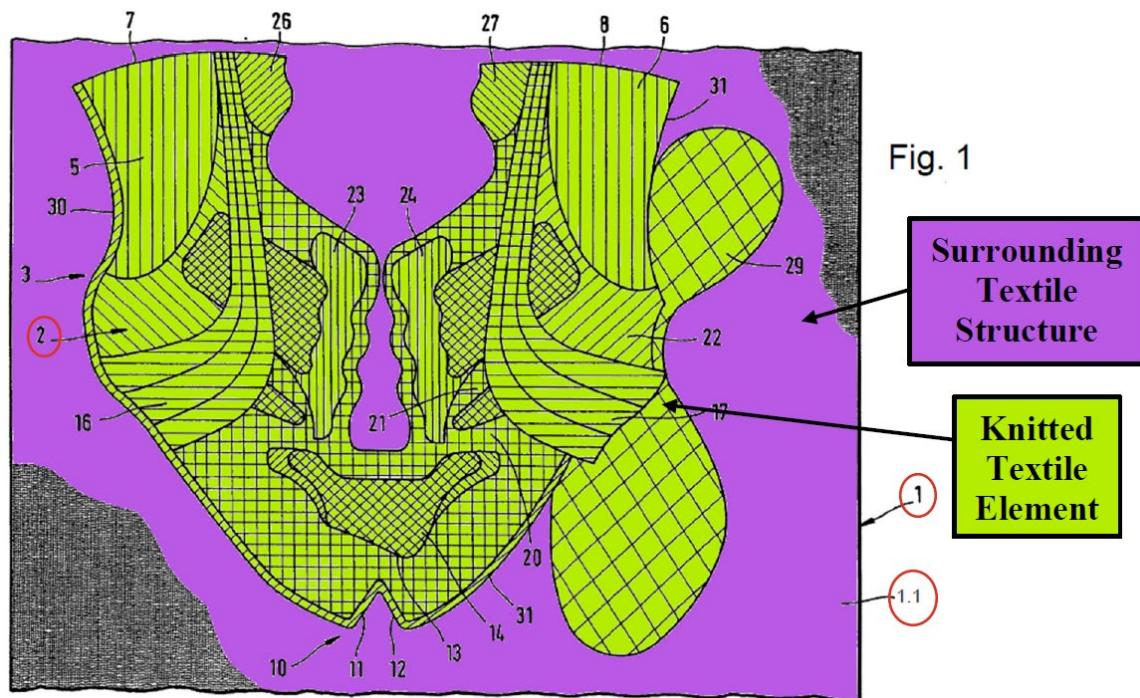
b. [1a] simultaneously knitting a textile element with a surrounding textile structure, the knitted textile element having at least one knitted texture that differs from a knitted texture in the surrounding knitted textile structure;

Claim 1 recites, “simultaneously knitting a textile element with a surrounding textile structure.” Ex. 1001, 11:45–46. The ’749 patent explains that a knitting machine may be used to form a textile structure with a portion of that textile structure being a “textile element,” which may be a shoe component (e.g., an upper) and which is removed from the textile structure after the knitting is complete. *See id.* at 3:27–46, Fig. 9 (depicting two textile elements in a tubular textile structure). Thus, there is an overall textile structure having portions that are one or more shoe components (“textile element(s)”) and portions that are not shoe components (“surrounding textile structure(s)”), with the claim calling for those portions to be knitted “simultaneously.” Petitioner contends that “[s]imultaneously here refers to forming one or more textile elements and a surrounding textile

structure as part of a single textile structure during a single knitting process,” and Patent Owner agrees. Pet. 24–25 (citing Ex.1003 ¶ 73); *see* PO Resp. 9 (Patent Owner stating: “‘simultaneously knit[ted],’ i.e., knitted during a single knitting process.”); PO Sur-reply 8 n.2 (“Both parties agree that the claimed textile element and surrounding textile structure must be knitted as part of a ‘single knitting process.’”).

The parties’ dispute concerns whether Nishida discloses the “simultaneously” aspect. Petitioner contends that Nishida discloses the simultaneous knitting of shoe components and the surrounding portions of a textile structure. Pet. 25–27. Patent Owner disagrees, arguing that Nishida discloses a two-step process where a “separate, preexisting base” is first created and then later (i.e., not simultaneously) the individual shoe components are manufactured on that preexisting base. *See, e.g.*, PO Resp. 9; *id.* at 2 (“Nishida layers shoe pattern pieces onto a pre-existing material base. Nishida therefore does not knit the pattern pieces *simultaneously* with the material base.”). Although Patent Owner may be correct that Nishida discloses a two-step process that results in a two-layer product, we, for the reasons discussed below, agree with Petitioner that Nishida also discloses shoe components (textile elements) knitted simultaneously with the surrounding textile structure. *See* Pet. Reply 6 (Petitioner arguing that Patent Owner “focuses on alternative approaches mentioned in Nishida,” rather than addressing the “critical disclosure” on which Petitioner relies).

Reproduced below is Petitioner's annotated version of Nishida's Figure 1.



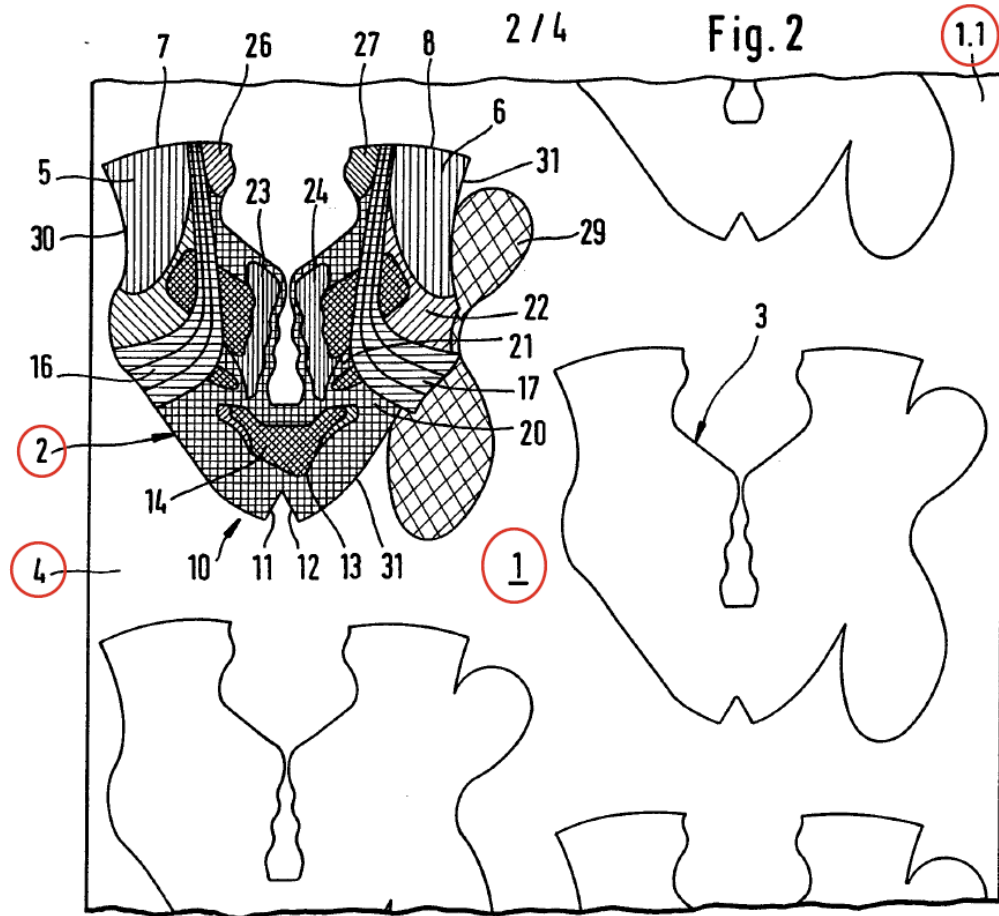
Pet. 26; *see also id.* at 27 (Petitioner providing a similarly purple and green shaded version of Nishida's Figure 4). Above is an annotated version of Nishida's Figure 1, which is "a top view of a section of a material web with an unwound web part for a shoe upper incorporated during the production." Ex. 1005, 4. Shown are Petitioner's annotations in the form of green and purple shading, with labeling of the purple area as "Surrounding Textile Structure" and the green area as "Knitted Textile Element," and with our annotations in the form of circles around certain element numbers. Shown in the figure above are material web 1 (also identified in Nishida's abstract as "strip of material (1)"), surface areas 1.1 of material web 1, unwound web parts 2 for the shoe upper (also identified in Nishida's abstract as "patterns (2)"). *Id.* at code (57), 5, 7.

Petitioner contends that each unwound web part 2 is the recited “knitted textile element” of claim 1, and that surface areas 1.1 are the recited “surrounding textile structure.” Pet. 25. Petitioner further contends that “Figure 1 illustrates the single textile structure of Nishida’s material web 1 that is knit during a single knitting process and includes its knitted textile element (green) and surrounding textile structure (purple),” and thus discloses the two components being “simultaneously knitt[ed].” *Id.* Specifically, Petitioner contends:

Nishida discloses the simultaneously knitting limitation. *Id.*, ¶¶74-75. For example, Nishida provides 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.” Ex.1005, Abstract (emphasis added); *see also id.*, 9 (Claim 1), 4 (“[P]atterns can already be produced directly during the production of the material web.”), 6. The material is “a material web [1] which, during its production by a method customary in the textile industry, e.g., by weaving and/or ***knitting*** and/or embroidery, is provided with a single or a plurality of unwound web part(s) 2 for the shoe-upper shape 3.” *Id.*, 5 (emphasis added). In addition to material web 1 including unwound web part(s) 2, material web 1 includes surface areas 1.1 that are separate from unwound web part(s) 2 and also produced during production of material web 1. *Id.*, 7–8; Ex.1003, ¶75.

Pet. 25 (alterations in original).

Patent Owner, in support of its arguments, relies on Nishida's Figure 2, which is reproduced below. *See* PO Resp. 18.



Above is Nishida's Figure 2, which "shows a detail of a fabric with several unwound web parts for different shoe uppers," with our annotations in the form of circles around certain element numbers. Ex. 1005, 5. Shown in the figure above are material web/strip of material 1, surface areas 1.1 of material web 1, unwound web parts/patterns 2, and material web base 4. *Id.* at code (57), 5, 7.

Patent Owner asserts that Nishida’s material web 1 has two primary components, unwound web parts/patterns 2 and material web base 4 (PO Resp. 17–18), and argues that “Nishida does not disclose that unwound web parts 2 and material web base 4 are ‘simultaneously knit[ted]’” (*id.* at 9

(alterations in the original)). According to Patent Owner, Nishida teaches a two-step process, where “the material web base is formed as a separate, preexisting base,” and then “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 9–10 (citing Ex. 1005, 4–5, 7–9). Patent Owner also argues that Nishida discloses that the “material web is formed by a multi-step production process which mixes-and-matches production processes like weaving, knitting, embroidering, and printing.” *Id.* at 18–19 (citing Ex. 1005, 5, 9; Ex. 2003 ¶¶ 41–42). We disagree with Patent Owner’s implied argument that Nishida discloses *only* a two-step method using multiple production processes and involving a pre-existing material base.

For the assertion of the disclosure of a two-step process, Patent Owner relies, *inter alia*, on Nishida’s claim 1. *See, e.g.*, PO Resp. 9, 18–19 (citing Ex. 1005, 9; Ex. 2003 ¶ 41). Petitioner contends that the same disclosure supports its contention that Nishida discloses the “simultaneously knitting” limitation. *See* Pet. 25. The pertinent portion of Nishida’s claim 1 states,

during the production of the material web (1), both the patterns or partial patterns in the form of the shoe upper (3) unwound web part (2), as well as the patterns or partial patterns in the form of a 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.

Ex. 1005, 9 (emphasis added). Thus, Nishida discloses different production processes. Reading the sentence with the disjunctive conjunction and recognizing the different prepositions yields two processes—printing *on* the material web *or* a textile production method (e.g., knitting) *within* the

material web. *See, e.g., id.* at 5 (Nishida indicating that knitting is an example of “a method customary in the textile industry.”).

Patent Owner relies, in part, on the testimony of Dr. Pastore, who opines that Nishida teaches that “the pattern elements 2 are printed using a fabric printing process or produced with a textile production process *onto* the preexisting base.” Ex. 2003 ¶ 41 (citing Ex. 1005, 4–5, 7–9) (emphasis added). In so opining, Dr. Pastore applies the preposition “onto” to both the printing and textile production processes. Although that conforms to Patent Owner’s argument, it is not consistent with Nishida’s use of the word “within” for the textile production process, and Dr. Pastore does not explain adequately why the change in terminology is justified.

Dr. Brookstein, on the other hand, testifies that the language of Nishida’s claim 1 includes a disclosure of “simultaneously knitting.” *See* Ex. 1003 ¶¶ 74–75 (citing and parenthetically quoting, *inter alia*, Ex. 1005, 9 (claim 1)). Dr. Brookstein further addressed Nishida’s claim language during on cross-examination. *See* Ex. 2004, 98:3–99:25. Dr. Brookstein first agreed with Patent Owner’s counsel that Nishida’s statement, “a print process on the material web (1)” is a disclosure of printing unwound web parts 2 on an existing web base. *Id.* at 98:22–99:11. However, Dr. Brookstein testified that Nishida does not limit its teachings to that— “[t]hat’s just one example.” *Id.* at 99:4–6. Then, Patent Owner’s counsel asked about the other phrase in Nishida’s claim, and, this time, Dr. Brookstein did not agree with counsel’s characterization of the reference’s teachings.

Q And what does it mean when it says “a textile production method within the material web”?

A That tells me it could be either knitting or weaving within the material web.

Q Within an existing material web?

A No. At the same time, you're making a material web.

Q Doesn't the phrase "within the material web" suggests that the material already exists?

A Not to me.

Id. at 99:12–25. Dr. Brookstein stated during his deposition that he has “49 years of experience of teaching textile engineering.” *Id.* at 97:6–8. We credit Dr. Brookstein's testimony over that of Dr. Pastore's because it is consistent with the reference and based on decades of experience in the textile field. Nishida's claim 1 states that, “during the production of the material web (1), [shoe patterns] . . . are produced by . . . a textile production method within the material web.” Ex. 1005, 9. We find that Nishida's claim language discloses the recited, “simultaneously knitting a textile element with a surrounding textile structure.”

Patent Owner argues that Nishida discloses that the “material web is formed by a multi-step production process which mixes-and-matches production processes like weaving, knitting, embroidering, and printing.” *Id.* at 18–19 (citing Ex. 1005, 5, 9; Ex. 2003 ¶¶ 41–42); *see also* PO Sur-reply 1, 12 (Patent Owner arguing that “Nishida never discloses that material web 1 and pattern pieces 2 are produced together in the same knitting process. Instead, Nishida exclusively discloses using a variety of processes to form material web base 4 and pattern pieces 2.”); *id.* at 10–11 (Patent Owner arguing that Nishida's abstract's statement that “the invention proposes that . . . [shoe patterns 2] are produced . . . using different manufacturing techniques, such as different make-up, different yarn material, different color, different material thickness, single- or multi-layer material, etc.,” supports its argument that separate processes are used to

produce the material web base 4 and pattern pieces 2.). We disagree with Patent Owner’s implied assertion that Nishida discloses *only* the use of a multi-step process that mixes-and-matches production processes. Reading Nishida’s claim 1 with the disjunction conjunction “or” yields a disclosure consistent with Petitioner’s position, namely, the teaching of using a print process *or* a textile production method. Ex. 1005, 9. Nishida’s teachings are not limited to using together both printing *and* a textile production method. Printing merely is disclosed in Nishida’s claim 1 as one example of a stand-alone process. *See* Ex. 1005, 9. Nishida, at page 5, states:

In Figs. 1 and 2, 1 indicates a material web which, during its production by a method customary in the textile industry, e.g., *by weaving and/or knitting and/or embroidery*, is provided with a single or a plurality of unwound web part(s) 2 for the shoe-upper shape 3.

Id. at 5 (emphasis added). When read with the disjunctive conjunction, Nishida discloses the use of a single process that may be chosen from among a list of examples—weaving or knitting or embroidery. Nishida does not disclose, as Patent Owner implies, only forming the material web by a multi-step production process.

Patent Owner also asserts that Nishida discloses differences in the number of layers and in the qualities of unwound web parts 2 (the shoe parts) and surface areas 1.1 (the areas of the material web that are not shoe parts), and argues that this shows that Nishida does not disclose simultaneous knitting the shoe parts and the non-shoe parts. *See* PO Resp. 19–20 (citing Ex. 1005, 4, 7; Ex. 2003 ¶ 42).

Nishida contrasts its invention with the prior art, where both the shoe patterns and the “offcut” (the portion to be discarded) “consists, e.g., of an

elaborate hollow fabric, multilayer fabric, and the like.” Ex. 1005, 4.

According to Nishida:

With the method according to the invention only those parts of the material web corresponding to the pattern or an area of a pattern of the shoe upper or the associated sole part are produced in the required quality, thickness, multilayered, or the like. However, the remaining area of the material web may be of a simple, lightweight or inexpensive fabric quality, which merely holds together the patterns or areas of such patterns in the material web after its completion. Thus, the offcut resulting from the cutting represents a simple, light and cheap fabric.

Id. Nishida later discusses a particular embodiment where the to-be-discarded portions are of a simple and inexpensive quality. *Id.* at 7–8.

In an advantageous further embodiment of the invention, the material web 1 is produced such that its surface areas 1.1, in which no unwound web part(s) 2 or tongue(s) 40 are provided, consist of a lightweight fabric quality being as simple and inexpensive as possible. For example, these surface areas 1.1 can be produced in the manner of a gauze or with a low to very low number of warps and/or wefts and/or, e.g., thin-threaded or the like.

Id. Thus, Nishida teaches a method of making high quality, customized shoe patterns along with inexpensive offcut areas of the material web.

We disagree with Patent Owner’s argument that these sections of Nishida disclose only a two-step process where a cheap base layer such as gauze is first created and later a high-quality shoe pattern is produced as another layer on that first layer. *See* PO Resp. 19–20 (“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.” (citing Ex. 2003 ¶ 42)). The customized shoe parts may be of the “required quality, thickness, multilayered, or the like” (Ex. 1005, 4), but Patent Owner does not explain

adequately how Nishida requires that the shoe patterns and the offcut be two different layers that are created at different times. Although Nishida does indicate that inexpensive gauze may be used, it also indicates that the offcut area may be knit inexpensively with a low number of warps and wefts. *See id.* at 7–8; *see also* Ex. 1003 ¶ 49 (Dr. Brookstein discussing warp knitting and weft knitting). Thus, both the shoe patterns and the offcut may be knitted, and the offcut area may be knitted with a fewer number of warps and wefts. *Cf.* PO Sur-reply 4 (Patent Owner conceding that “Nishida discloses that both the material web base 4 and pattern elements 2 may be knitted.”). Patent Owner does not direct our attention to any disclosure in Nishida that requires the knitting to be performed by an “asynchronous production process[.]” PO Resp. 19–20 (citing Ex. 2003 ¶ 42); *see* Pet. Reply 10–11 (Petitioner arguing that Patent Owner’s “asynchronous” assertion is contradicted by Nishida’s statement that “[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.” (citing Ex.1005, 4)). Dr. Pastore’s opinion regarding a multilayered product is based, at least in part, on the assertion that Nishida discloses only using multiple processes to produce different layers. *See* Ex. 2003 ¶ 42 (“In my opinion, Nishida uses material web base 4 as a mechanism for building pattern elements 2 by stacking layers of material formed by a number of processes.”). For the reasons discussed above, we disagree that Nishida’s disclosure is so limited. Further, Nishida indicates that the shoe parts may be “additionally embroidered” (Ex. 1005, 6), and, thus, even the disclosure of a multilayered shoe pattern does not equate to a disclosure of the shoe pattern and the offcut being different layers. *See also*

Ex. 2003, 116:18–24 (Dr. Brookstein testifying that it is possible to embroider something on top of a knitted material); *but see* PO Sur-reply 11 (Patent Owner acknowledging that Nishida’s abstract “discloses that the pattern pieces 2 may be constructed using a manufacturing technique employing a single-layer material.”).

Both parties, in support of their respective positions, point to the Office’s prior consideration of the ’749 patent. *See, e.g.*, Pet. 12–14; PO Resp. 20; PO Sur-reply 13. Petitioner contends that, in a prior *inter partes* review, a Board panel determined that Nishida-US (which, according to Petitioner (Pet. 10) is the national stage of the Nishida reference at issue before us) discloses all the limitations of the independent claims, but ultimately concluded that the petitioner in that case had not shown the claims unpatentable. Pet. 12–13 (citing Ex. 1022, 38–50 (IPR2016-00922)); *see* PO Sur-reply 13 (Patent Owner arguing that Petitioner is relying on dicta). Patent Owner argues that, during prosecution, the examiner found that there was no clear disclosure in Nishida-US of the “simultaneously knitting” limitation.⁸ PO Resp. 6, 20 (citing Ex. 2001, 40); *see* Pet.

⁸ The Board recently discretionarily denied institution in another case involving the ’749 patent and which was brought by a different petitioner. IPR2025-00141, Paper 20. In that case, Patent Owner argued that, “[i]n denying institution under [35 U.S.C.] § 325(d), the Board found no material error in the Examiner’s previous consideration of Nishida.” Paper 22, 3 (citing Paper 20, 19). That is an incorrect characterization. The Board determined that the petitioner had not met its burden, under the *Ecto World* standard, to demonstrate that the examiner erred, and the panel stated that “we need not and do not reach the issue of whether ‘the previously presented art [Nishida] teaches the limitations of the challenged claims.’” IPR2025-00141, Paper 20, 20–21, 21 n.10 (citing *Ecto World, LLC and SV3, LLC v.*

Reply 11–12 (addressing this argument). We have considered the statements of the examiner during prosecution and the statements of the prior panel during the earlier IPR. We, on the full record before us and for the reasons discussed herein, find that Nishida discloses simultaneously knitting a textile element and surrounding textile structure.

Patent Owner argues that Petitioner’s expert, Dr. Brookstein, agrees with Patent Owner’s assertion that “Nishida fails to disclose that material web base 4 and pattern pieces 2 are knitted in the same knitting process.” PO Sur-reply 9–10; *see id.* at 1; PO Resp. 21. For this argument, Patent Owner relies solely on the following brief exchange during the deposition of Dr. Brookstein taken in the parallel district court case. *See* PO Resp. 21.

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.

Q. What makes you say that?

A. You can’t knit two separate unconnected fabrics at the same time—not at the same time. . . .

Ex. 2005, 257:5–23. Petitioner argues that Patent Owner’s assertion that this testimony shows that Dr. Brookstein agrees with Patent Owner “misrepresents Dr. Brookstein’s testimony, which responded to a question

RAI Strategic Holdings, Inc., IPR2024-01280, Paper 13, 6 (Stewart May 19, 2025) (Director Review) (precedential as to § A) (alteration in original).

about ‘base material’—a phrase not found in Nishida” and that “[c]ontext shows that Dr. Brookstein understood ‘base material’ to refer to [Patent Owner’s] ‘pre-existing base’ theory, not Nishida’s ‘strip of material.’” Pet. Reply 12. Petitioner further asserts that:

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

Id. at 12–13.

We determine that this testimony is too ambiguous to show that Dr. Brookstein inexplicably changed his opinion and agreed with Patent Owner’s assertion that “Nishida does not disclose knitting unwound web parts 2 during the same knitting process as material web base 4.” PO Resp. 21. Although the questioning attorney used precise language in referring to “unwound parts number two,” the question, in referring to “base material,” used a term not in the reference and did not include an element number (i.e., “four”). After handing the Nishida reference to the witness, the attorney did not identify on the record any particular page or figure of Nishida to give context to the question. *See* Ex. 2005, 256:9–257:16. Thus, it is not clear that the witness had the same understanding of the question that Patent Owner now urges. The witness’s reasoning involving “knit[ting] two separate unconnected fabrics at the same time” adds confusion, not clarity to the earlier answer. The questioning attorney did not ask a follow-up question to clarify Dr. Brookstein’s testimony. *See* Ex. 2005, 257:23–258:10 (moving on to a discussion of double patenting). Patent Owner does not point to any questions asked of Dr. Brookstein in his subsequent

deposition taken in this IPR that would have clarified and confirmed the purported agreement with Patent Owner's position. *Cf.* Tr. 52:11–14 (Petitioner asserting that the matter “actually was clarified during the context of the IPR depositions, during which he unequivocally in every single context says, no, they’re not knit at different times in different processes. They’re knit at the same time.”).

We agree with Petitioner that Nishida discloses simultaneously knitting the shoe upper patterns 2 during the same knitting process as the offcut portions, namely surface areas 1.1 of material web 1. For example, Nishida's abstract states, under a reproduction of Figure 1, 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 (1) is produced.” Ex. 1005, code (57) (emphasis added). Nishida's claim states that, “*during* the production of the material web (1), [shoe patterns] . . . are produced by . . . a textile production method within the material web.” *Id.* at 9 (emphasis added). Nishida also discloses “that the individual patterns or partial patterns can already be produced directly *during* the production of the material web.” *Id.* at 4 (emphasis added). Dr. Brookstein credibly and persuasively testifies that these and other portions of Nishida disclose the “simultaneously knitting limitation.” *See* Ex. 1003 ¶¶ 74–77. As discussed above, Dr. Pastore's declaration contains opinions regarding certain non-simultaneous alternatives disclosed in Nishida, but does not credibly testify that those are the solely disclosed embodiments or that the recited “simultaneously knitted” process is not disclosed. *See* Ex. 2003 ¶¶ 39–44.

We determine that Petitioner has demonstrated by a preponderance of the evidence that Nishida discloses “simultaneously knitting a textile

element with a surrounding textile structure,” as recited in independent claim 1.

Limitation 1a, in addition to the “simultaneously knitting” aspect, calls for the textile element to have a texture different than that of the surrounding structure. *See* Ex. 1001, 11:46–48. Petitioner contends that Nishida discloses imparting a desired texture to the knitted textile element because “Nishida provides that the knitted textile element may be produced ‘using different manufacturing techniques, such as . . . different yarn material . . . [or] different material thickness.’” Pet. 28 (citing Ex. 1005, code (57 (Abstr.)) (alterations in original)). Petitioner further contends that Nishida discloses that, in contrast, the surrounding textile structure is of a lower quality. *Id.* at 28–29 (citing Ex. 1005, 4, 10). Petitioner additionally contends that “[t]he differing yarns, material thickness, and/or other properties of Nishida’s knitted textile element relative to Nishida’s surrounding textile structure result in at least one texture in the knitted textile element differing from a texture in the surrounding textile structure.” *Id.* at 29 (citing Ex. 1003 ¶ 78). Lastly, Petitioner contends that, for the reasons discussed above regarding “simultaneously knitting,” the differing textures are created when the textile element is simultaneously knitted with the surrounding textile structure. *See id.* (citing Ex. 1003 ¶ 79).

Patent Owner does not raise any arguments regarding these differing-textures contentions, except as to the “simultaneously knitting” aspect discussed above. *See* PO Resp. 17–21; PO Sur-reply 8–14.

We determine that Petitioner has demonstrated by a preponderance of the evidence that Nishida discloses the entirety of limitation 1a.

c. [1b] removing the knitted textile element from the surrounding knitted textile structure;

Petitioner contends that “Nishida discloses that the knitted textile element is cut out of material web 1,” and that “Nishida refers to its surrounding textile structure as ‘offcut resulting from the cutting.’” Pet. 30 (citing Ex. 1003 ¶ 81; Ex.1005, 4, 5 (“[a]fter cutting out the unwound web part 2 from the material web 1”). Patent Owner does not raise any arguments regarding these contentions. *See* PO Resp. 17–21; PO Sur-reply 8–14.

d. [1c] incorporating the knitted textile element into the article of footwear.

Petitioner contends that “Nishida discloses ‘[t]he finished shoe upper 3 is then placed in an adhesive, injection or casting mold, in which a midsole 33 and an outsole 34 are formed by known methods as shown in Fig. 3,’” and that the assembled shoe incorporating the knitted textile element is article of footwear. Pet. 30–31 (citing Ex. 1003 ¶ 82; Ex. 1005, 5–8, Fig. 3) (alteration in original). Patent Owner does not raise any arguments regarding these contentions. *See* PO Resp. 17–21; PO Sur-reply 8–14.

e. Conclusion as to Independent Claim 1

Having considered the parties’ arguments and evidence, we determine that Petitioner has shown by a preponderance of the evidence that independent claim 1 is anticipated by Nishida.

f. Independent Claim 13

Independent claim 13 is similar to independent claim 1, with claim 13 reciting two textile elements. *See, e.g.,* Ex. 1001, 12:28–31 (“knitting a first textile element and a second textile element simultaneously with knitting a

surrounding textile structure”). Petitioner explains how Nishida discloses the limitations of independent claim 13. Pet. 44–48 (citing, *inter alia*, Ex. 1003 ¶¶ 104–109). For claim 13, Patent Owner does not present arguments beyond those regarding independent claim and discussed above. *See* PO Resp. 17–23; PO Sur-reply 8–15; *see* PO Resp. 17 & 17 n.3 (Patent Owner addressing together the “simultaneously knitting” limitations of both independent claims 1 and 13).

Having considered the parties’ arguments and evidence, we determine that Petitioner has shown by a preponderance of the evidence that Nishida anticipates independent claim 13.

3. Dependent Claims 5 and 15

Dependent claim 5 recites, “wherein the knitted textile element has a substantially planar configuration upon removal from the surrounding knitted textile structure.” Ex. 1001, 11:61–63. Dependent claim 15 similarly recites “substantially planar” textile elements. *See id.* at 12:48–51 (referring to the two textile knitted elements introduced in independent claim 13).

Petitioner contends that Nishida’s Figure 1 and 2 show the knitted textile element in a substantially planar configuration with the surrounding textile structure. Pet. 37 (citing Ex. 1003 ¶¶ 92–93; Ex. 1005). Petitioner notes that Nishida discloses that, after being cut out, individual part 29 (the insole) is “folded out of the unwound web part 2 into the plane of the shoe sole” (Ex.1005, 6), and contends that this “confirm[s] that the knitted textile element (unwound web part(s) 2) has substantially planar configuration upon removal from the surrounding textile structure (surface areas 1.1) and prior to folding.” *Id.* at 38 (citing Ex.1003 ¶ 93); *see* Ex. 1005, 6 (Nishida

explaining that, after cutting out, the upper is shaped into its final form and the insole is folded under and fixed to the bottom of the formed upper).

Patent Owner argues that, in the relied-on figures, the unwound web parts 2 (textile elements) are depicted only integrated with the material web and that “[n]either Figures 1 and 2, nor any other figure in Nishida, shows unwound web parts after removal from material web 1.” PO Resp. 22–23 (citing Ex. 2003 ¶ 47; Ex. 2004, 101:7–102:4). Patent Owner also argues that Nishida’s disclosure of folding the insole does not prove that the unwound web parts were substantially planar after being cut out and prior to folding. *Id.* at 23. We need not rely on this insole folding assertion to decide this matter.

Based on the evidence presented by Petitioner, we find that a person of ordinary skill in the art would recognize that Nishida depicts the shoe patterns and the remaining area of the material web in a substantially planar condition prior to cutting out the patterns (textile elements), and Patent Owner does not offer any persuasive rebuttal to Petitioner’s evidence. *See, e.g.*, Ex. 1005, code (57) (Nishida’s abstract indicating that the configuration is a strip of material), Figs. 1, 2, 4, 5 (Nishida’s figures depicting a shoe upper splayed out flat); *see also* PO Resp. 22–23 (Patent Owner discussing only the possible configuration of the unwound web parts upon removal from the material web but not arguing that, prior to cutting, the material web is non-planar); Ex. 1003 ¶ 93 (Dr. Brookstein testifying that Figures 1 and 2 show the knitted textile element having a substantially planar configuration within the surrounding textile structure); Ex. 2004, 102:5–24 (Dr. Brookstein testifying that, “when I look at the picture, that tells me it is planar.”); Ex. 1026, 39:15–40:8 (Dr. Pastore initially agreeing that Figure 1

“appears to contain a planar structure,” but, when asked about Figure 2, stating that “[i]t looks like a two-dimensional drawing but of course it is on a piece of paper so we can’t really judge that.”).

Petitioner asserts, and we agree, that Patent Owner “identifies no disclosure in Nishida indicating that removing a piece from this substantially planar material web would alter its planar configuration.” Pet. Reply 14. Patent Owner’s witness, Dr. Pastore, opines that “neither of these [Figures 1 and 2 of Nishida] show that pattern elements 2 are substantially planar upon removal from Nishida’s material web.” Ex. 2003 ¶ 46. However, this appears to merely be the opinion that the figures do not depict the pattern elements removed from the material web. *See id.* ¶ 47. Dr. Pastore does not affirmatively opine that the cut-out pattern elements would not be substantially planar. *See id.* ¶¶ 45–48; Ex. 1026, 39:2–46:9 (cross-examination testimony of Dr. Pastore). Rather, Dr. Pastore testifies in his declaration, without elaboration or explanation, that: “In my opinion, 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.” Ex. 2003 ¶ 47 (emphasis added); *see* PO Resp. 23 (Patent Owner’s argument omitting the word “may”). Dr. Pastore, on cross-examination testified that the referenced “varying processes” include embroidery, weaving, and a two-step knitting process with the pattern elements on top of a base. *See* Ex. 1026, 41:7–44:1. According to Dr. Pastore, “depending on the [specifics of the production] details, it may or may not impart curvature and cause a three-dimensional structure when it is removed from the base.” *Id.* at 43:11–44:1; *see also id.* at 42:2–10 (Dr. Pastore, in the context of embroidery, stating that imparting

of a curl “is possible depending on the specifics of the production technique.”).

The person of ordinary skill in the art would be familiar with various production techniques. *See supra* Section II.B (setting out the level of ordinary skill in the art). Nishida discloses to such a person that the designer has many options, stating, for example, that “it is possible to design the individual patterns or partial patterns to be soft, rigid, elastic, of different color, etc., depending on the subsequent stress or desired shape.” Ex. 1005, 4; *see also id.* (“When using program-controlled, fabric-web production units, the size of the unwound web part corresponding to the subsequent shoe size, the weave or knit type of individual areas or contours, the type of thread or fiber and/or the color can be selected almost freely after the program has been created once.”).

We find Dr. Brookstein’s testimony credible, that “Nishida discloses a knitted textile element (unwound web part(s) 2) that has a substantially planar configuration upon removal from a surrounding textile structure (surface areas 1.1).” Ex. 1003 ¶ 113. Even if, as Patent Owner argues and Dr. Pastore opines, some production techniques would result in a curled pattern upon being cut-out, we find that a person of ordinary skill in the art would recognize that Nishida also discloses techniques where the shoe patterns would remain substantially planar upon their removal from the remainder of the material web. Accordingly, we determine that Petitioner has demonstrated by a preponderance of the evidence that Nishida discloses a “knitted textile element [that] has a substantially planar configuration upon removal from the surrounding knitted textile structure,” as recited in dependent claims 5 and 15.

4. Dependent Claims 2–4, 6–8, 12, 14, and 16–18

The remaining claims challenged in Ground 1, claims 2–4, 6–8, 12, 14, and 16–18, are dependent claims. Petitioner identifies disclosures in Nishida of the limitations of those dependent claims. Pet. 31–44, 49–50. For these claims, Patent Owner does not present arguments beyond those regarding the independent claims and discussed above. *See* PO Resp. 17–23; PO Sur-reply 8–15.

Having considered the parties’ arguments and evidence, we determine that Petitioner has shown by a preponderance of the evidence that Nishida anticipates dependent 2–4, 6–8, 12, 14, and 16–18.

E. Obviousness of Claims 9, 10, 19, and 20 over Nishida and the Knowledge of a Person of Ordinary Skill in the Art (Ground 2)

Petitioner asserts that dependent claims 9, 10, 19, and 20 would have been obvious over Nishida in view of the general knowledge of a person of ordinary skill in the art. *See* Pet. 50–54. These claims pertain to the specific type of knitting machine to be utilized in the claimed method. *See* Ex. 1001, 12:7–9, 12:64–67 (claims 9 and 19 reciting a wide-tube circular knitting machine); *id.* at 12:10–13, 13:1–4 (claims 10 and 20 reciting a jacquard double needle-bar raschel knitting machine). Petitioner, with the supporting testimony of Dr. Brookstein, contends that these types of knitting machines were well known in the industry and provides persuasive reasoning as to why utilization of the recited knitting machines would have been obvious to one of ordinary skill in the art. *See* Pet. 50–54 (citing, *inter alia*, Ex. 1003 ¶¶ 120–129). For these claims, Patent Owner does not present arguments beyond those regarding the independent claims and discussed above. *See* PO Resp. 49.

Having considered the parties' arguments and evidence, we determine that Petitioner has shown by a preponderance of the evidence that the subject matter of dependent claims 9, 10, 19, and 20 would have been obvious over Nishida in view of the general knowledge of a person of ordinary skill in the art.

*F. Obviousness of Claims 11 and 21 over Nishida and Zuckerman
(Ground 6)*

Petitioner asserts that dependent claims 11 and 21 would have been obvious over Nishida in view of Zuckerman. *See* Pet. 81–84. These claims pertain to using different stitch configurations in different areas “to impart varying textures to a surface of the knitted textile element.” Ex. 1001, 12:14–21 (claim 11); *see also id.* at 13:5–14:5 (claim 21).

Petitioner contends that “Zuckerman discloses ‘knitt[ing] more tightly’ sole portion 15 than other parts (e.g., side portions 25),” and that “[k]nitting more tightly involves using different stitch configurations than knitting less tightly.” Pet. 82 (citing Ex. 1003 ¶ 199 (citing Ex. 1008, 2, left col., ll. 44–52)) (first alteration in original). Petitioner provides persuasive reasoning as to why “[i]t would have been obvious in view of Zuckerman to use different stitch configurations in knitting the different areas of Nishida’s knitted textile element.” *Id.* at 81–84. Petitioner contends that a person of ordinary skill in the art would have understood that these different stitch configurations, and Petitioner discusses some resulting textures such as rib structures and plain structures. *See id.* at 82. For these claims, Patent Owner does not present arguments beyond those regarding the independent claims and discussed above. *See* PO Resp. 38.

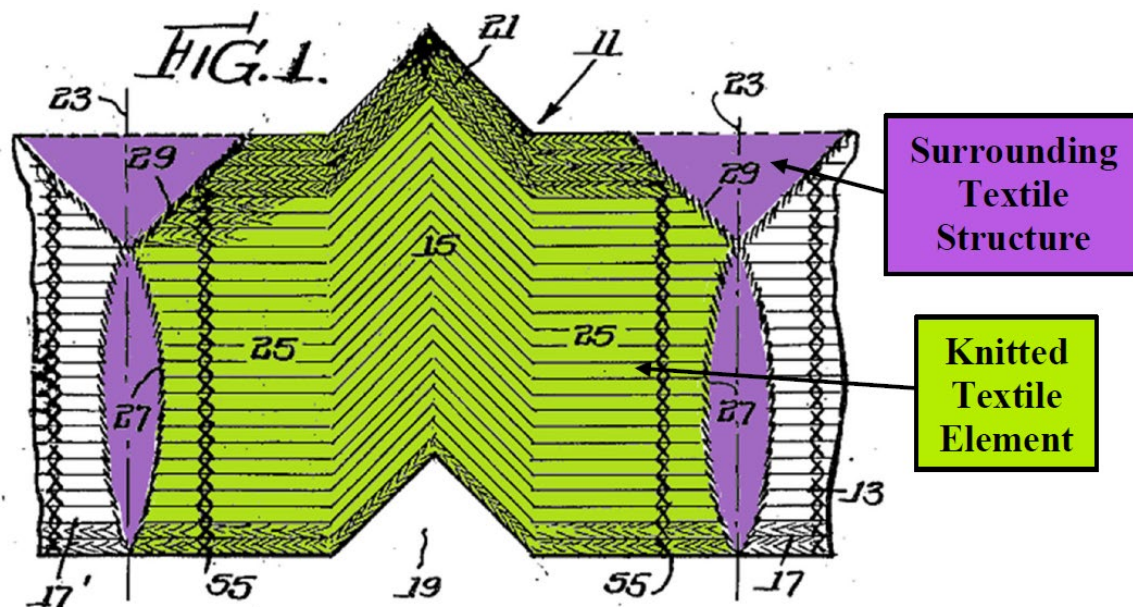
Having considered the parties' arguments and evidence, we determine that Petitioner has shown by a preponderance of the evidence that the subject

matter of dependent claims 11 and 21 would have been obvious over Nishida in view of Zuckerman.

*G. Anticipation of Claims 1–3, 5–8, 11, 13–17, and 21 by Zuckerman
(Ground 3)*

As mentioned, independent claim 1 recites “simultaneously knitting a textile element with a surrounding textile structure.” Ex. 1001, 11:45–46. Independent claim 13 contains a somewhat similar recitation involving two textile elements. *Id.* at 12:29–31 (“knitting a first textile element and a second textile element simultaneously with knitting a surrounding textile structure”). The parties’ dispute pertains to whether Zuckerman discloses a textile element with a “surrounding” textile structure.

Reproduced below is Petitioner’s annotated version of Zuckerman’s Figure 1. As will be discussed, Petitioner contends that the purple area is “surrounding” the green area, within the meaning of the independent claims.



Pet. 59. Above is an annotated version of Zuckerman’s Figure 1, which “shows a blank [11] . . . and indicates the manner in which the same may be formed by cutting it from a continuously knitted fabric strip [13].”

Ex. 1008, 1, right col., ll. 10–13. Shown are Petitioner’s annotations in the form of green and purple shading, with labeling of the purple area as “Surrounding Textile Structure” and the green area as “Knitted Textile Element.” The green area corresponds to Zuckerman’s blank 11, from which finished footwear articles are formed. *See* Ex. 1008, 1, right col., ll. 41–45. The blanks are cut from a strip of fabric 13, “which may be made as a continuous strip on a knitting machine, if desired, and which comprises knitted portions 15 at equally spaced intervals in the strip.” *Id.* at 1, right col., ll. 45–50. Petitioner’s purple area corresponds to the portions of the strip located between successive blanks 11 and that are cut away so that the blank may be fashioned into a slipper. *See id.* at 1, right col, ll. 45–47; *id.* at 2, left col., ll. 53–56.

Petitioner contends that “Zuckerman discloses simultaneously knitting a textile element (blank 11) [green] with a surrounding textile structure (portion of continuous strip 13 surrounding blank 11) [purple].” Pet. 59.

Patent Owner argues that Zuckerman does not disclose a textile structure surrounding a textile element. *See* PO Resp. 25–27. Specifically, Patent Owner argues that “Zuckerman’s blank 11 is knitted with two separate textile structures adjacent the blank—one on each side,” and “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.” *Id.* at 26 (citing Ex. 2003 ¶¶ 53–54; Ex. 2004, 33:18–34:13). Dr. Pastore opines that a person of ordinary skill in the art “would have understood that a ‘surrounding textile structure’ extends around most or all of the periphery of the textile element,” and would not have understood the purple areas in

Zuckerman to be a textile structure surrounding the blank. Ex. 2003 ¶¶ 54–55. In its Sur-reply, Patent Owner confirms that it’s position is that “‘surrounding textile structure’ must completely or mostly surround the textile element.” PO Sur-reply 3.

Petitioner, in its Reply, addresses the issue as one of claim construction. *See* Pet. Reply 2–5. Petitioner contends that the Board should adopt the plain and ordinary meaning of “surrounding textile structure,” which Petitioner argues refers to “the waste textile material adjacent to the ‘textile element,’” and that “this would be ‘the textile area outside of the knitted textile element(s).’” *Id.* at 3 (citing Ex. 2005, 324:5–18 (the deposition testimony of Petitioner’s expert witness, Dr. Brookstein taken in the district court litigation)); *see id.* at 17 (Petitioner asserting that “the plain and ordinary meaning of ‘surrounding textile structure’ is ‘the textile area outside of the knitted textile element(s).’”). In other words, Petitioner’s position is that any textile material that abuts the textile element is “surrounding textile structure,” within the meaning of the challenged claims. *See* Tr. 58:19–26.

Petitioner argues that the Specification of the ’749 patent supports its broad construction. Pet. Reply 3–5. Petitioner concedes that “Figure 9 [of the ’749 patent] depicts the entire perimeter of textile element 40 in contact with other parts of textile structure 60,”—i.e., depicting the non-element portions of textile structure arranged completely around the textile element. *Id.* at 4; *see* PO Sur-reply 5 (Patent Owner arguing that “Figure 9 shows a ‘textile element’ (40) that is completely encircled by a ‘textile structure’ (60),” and therefore supports its position). Petitioner argues, however, that the Specification refers to this merely as an example and elsewhere broadly

discloses embodiments “where the textile structure is described simply as ‘larger’ than the textile element,” and argues that the claims should not be limited to Figure 9. Pet. Reply 4. Petitioner argues that, because the Specification contains a broad disclosure, the claim term “surrounding textile structure” should be construed broadly. *Id.* at 3 (Petitioner arguing that “the use of ‘surrounding’ in the claims must be interpreted to align with the specification’s breadth of disclosure.”). We do not find Petitioner’s argument persuasive. Even if there are broadly disclosed embodiments in the Specification, the claims are allowed to be narrower than the disclosure, which Petitioner admits includes an embodiment (Figure 9) under what Petitioner characterizes as a narrower construction. *Cf. Baran v. Med. Device Techs., Inc.*, 616 F.3d 1309, 1316 (Fed. Cir. 2010) (“It is not necessary that each claim read on every embodiment.”).

Petitioner also argues, without citation to the Specification, that the purpose of the ’749 patent is to reduce waste and inefficiencies in the shoe manufacturing process, and that “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.” Pet. Reply 5. However, as Patent Owner points out, the ’749 patent discusses the conventional processes and states that, “[f]rom the perspective of manufacturing, utilizing multiple materials to impart different properties to an article of foot wear may be an inefficient practice.” Ex. 1001, 3:4–8; PO Sur-reply 7 (citing Ex. 1001, 3:4–6). The Specification further explains, for example, that “[t]he various materials may also require additional machinery or different assembly line techniques to cut or otherwise prepare the material for incorporation into the foot wear.”

Ex. 1001, 3:12–15. The Specification addresses such “inefficient practice[s]” in disclosing a process of forming a pattern for a shoe upper in a single knitting operation during which may be imparted various patterns, textures, or designs. *See* Ex. 1001, 7:26–45. Petitioner does not direct our attention to any disclosure in the Specification that indicates that the named-inventors’ goal was to reduce waste by avoiding the textile element being encircled by the “surrounding textile structure.” *Contra* Ex. 1001, Fig. 9 (depicting textile element 40 completely surrounded by the remainder of textile structure 60). We are not persuaded by Petitioner’s argument that a construction narrower than proposed by Petitioner is inconsistent with the Specification or “conflicts with the purported invention’s goals.” Pet. Reply 2–3.

We have considered, but do not find helpful, the parties’ extrinsic evidence in the form of expert testimony. For example, Petitioner cites to the deposition testimony of Dr. Brookstein which includes the opinion—without a meaningful explanation of any basis for the opinion and apparently independent of the context of the Specification—that “surrounding could be something used in the textile and apparel industry” as meaning “it’s adjacent to something, but it doesn’t have to go all the way around.” Ex. 2005, 324:10–14; *see* Pet. Reply 3. Petitioner similarly points to Dr. Pastore’s deposition testimony as purportedly supporting Petitioner’s argument that the claimed invention should not be limited to the “completely surrounded” shown in Figure 9 and that “surrounding” can encompass “mostly surrounded.” *See* Pet. Reply 4 (citing Ex. 1025, 74:9–75:16); *see id.* at 18 (Petitioner arguing: “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.”); *see also* PO Sur-reply 7 (Patent Owner arguing that this same testimony supports its proposed claim construction, “mostly or completely surrounding the textile element.”). For purposes of applying the claim language to Zuckerman, we need not address the distinction between “mostly surrounding” and “completely surrounding.”

According to Patent Owner, “Nike and lululemon [in the parallel litigation] each proposed the same constructions they propose here.” PO Sur-reply 4 (citing Ex. 1027)). In the District Court, “[Patent Owner] Nike contends the ‘surrounding textile structure’ must completely or mostly surround the textile element,” and “[Petitioner] lululemon contends the ‘surrounding textile structure’ is ‘any’ material outside the textile element—even if that material abuts only a tiny portion or percentage of the textile element.” Ex. 1027, 1. The District Court stated the following:

The Court has considered the parties’ proposed constructions of “surrounding textile structure.” The Court adopts [Patent Owner] Nike’s proposed construction based on the plain and ordinary meaning of the term “surrounding”; the well-understood definition of the term as not simply referring to what is “outside” or “adjacent,” but rather what is around or encircling, *see, e.g.*, Oxford English Dictionary (defining the adjective “surrounding” as “[t]hat is (or are) around; encompassing, circumjacent”); and the lack of any intrinsic evidence supporting a broader understanding of the term. Rather, the evidence there is in the ‘749 patent supports the Court’s construction. *See, e.g.*, Fig. 9; Fig. 14.

Ex. 1027, 4 (the District Court’s text added at the end of Patent Owner Nike’s letter brief regarding claim construction) (alterations in original).

We find the District Court’s reasoning persuasive, and we, like the District Court, decline to adopt Petitioner’s overly broad proposed construction. However, for purposes of deciding the dispositive fact issue before us, we need not determine the precise boundaries of “surrounding textile structure,” for example whether it completely or mostly encircles the textile element, and if “mostly,” what percentage of encircling is required. *See* Pet. Reply 2 (Petitioner characterizing Patent Owner’s position as “mostly” means over 50%); *id.* at 4 (Petitioner impliedly arguing that the “surrounding” need not be complete, i.e., 100%); PO Sur-reply 3–4 (Patent Owner arguing that “Zuckerman’s textile structures . . . each abut only about 25% of the periphery of Zuckerman’s blank.”).

We find that a person of ordinary skill in the art would not understand the portion of Zuckerman’s strip 13 in purple to surround the green blank 11 (textile element) under any reasonable construction of “surrounding textile structure.” Dr. Pastore testifies that “Zuckerman discloses two separate textile structures adjacent the blank—one on each side . . . they abut only two sides of Zuckerman’s blank, with each structure abutting only about a quarter of the blank’s periphery,” and opines that “a POSITA would not have understood these two separate structures, designated by purple in the figure above, to be a textile structure ‘surrounding’ the blank [shown in green].” Ex. 2003 ¶ 54. We find Dr. Pastore’s testimony credible as it is consistent with Zuckerman’s Figure and with the plain and ordinary meaning of “surrounding” and with the Specification of the ’749 patent (particularly Figure 9). Dr. Brookstein’s testimony, on the other hand, is based on Petitioner’s overly broad proposed construction—that any part of a textile area that is not a textile element is “surrounding textile structure”—

which we have rejected. *See, e.g.*, Ex. 1003 ¶ 139 (Dr. Brookstein: “The portion of continuous strip 13 which surrounds blank 11 and is not part of blank 11 is a surrounding textile structure to the knitted textile element.”).

Accordingly, we determine that Petitioner has not demonstrated by a preponderance of the evidence that Zuckerman discloses “a surrounding textile structure” as recited in independent claims 1 and 13, and therefore has not shown that those independent claims and dependent claims 2, 3, 5–8, 11, 14–17, and 21 are anticipated by Zuckerman.

H. Obviousness of Claims 3, 9, 10, 14, 19, and 20 over Zuckerman and the Knowledge of a Person of Ordinary Skill in the Art (Ground 4), and Obviousness of Claim 12 over Zuckerman and Doughty (Ground 5)

Petitioner asserts that claims 3, 9, 10, 14, 19, and 20 would have been obvious over Zuckerman and the knowledge of a person of ordinary skill in the art (Ground 4), and that claim 12 would have been obvious over Zuckerman and Doughty (Ground 5). Pet. 74–81. All of these challenged claims are dependent claims and therefore include the “surrounding textile structure” limitation of the independent claims. Petitioner’s articulated grounds for these claims do not cure the deficiency in the challenge to the underlying independent claims. *See id.* Accordingly, Petitioner has not shown by a preponderance of the evidence that these dependent claims would have been obvious under the Zuckerman-based obviousness grounds.

III. CONCLUSION⁹

Petitioner has shown by a preponderance of the evidence that claims 1–21 of the '749 patent are unpatentable.

In summary:

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
1–8, 12–18	102(b)	Nishida	1–8, 12–18	
9, 10, 19, 20	103(a)	Nishida	9, 10, 19, 20	
1–3, 5–8, 11, 13–17, 21	102(b)	Zuckerman		1–3, 5–8, 11, 13–17, 21
3, 9, 10, 14, 19, 20	103(a)	Zuckerman		3, 9, 10, 14, 19, 20
12	103(a)	Zuckerman, Doughty		12
11, 21	103(a)	Nishida, Zuckerman	11, 21	
Overall Outcome			1–21	

⁹ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

IV. ORDER

For the foregoing reasons, it is

ORDERED that claims 1–21 of the '749 patent have been proven to be unpatentable;

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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