

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNDER ARMOUR, INC.,
Petitioner,

v.

ATHALONZ, LLC,
Patent Owner.

IPR2024-00639
Patent 11,375,768 B2

Before WILLIAM V. SAINDON, HYUN J. JUNG, and
CARL M. DEFRANCO, *Administrative Patent Judges*.

JUNG, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. *Background and Summary*

Under Armour, Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting institution of an *inter partes* review of claims 1–5 and 8 of U.S. Patent No. 11,375,768 B2 (Ex. 1001, “the ’768 patent”). Athalonz, LLC (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”).

Under 35 U.S.C. § 314, an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Upon consideration of the Petition and for the reasons explained below, we determine that Petitioner has shown a reasonable likelihood of prevailing with respect to at least one of the challenged claims.

Thus, we institute an *inter partes* review of claims 1–5 and 8 of the ’768 patent on all presented challenges. 37 C.F.R. § 42.108(a) (“When instituting . . . review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”); *see also SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

B. *Real Parties in Interest*

Petitioner identifies itself as a real party in interest. Pet. x. Patent Owner identifies itself as a real party in interest. Paper 4, 1.

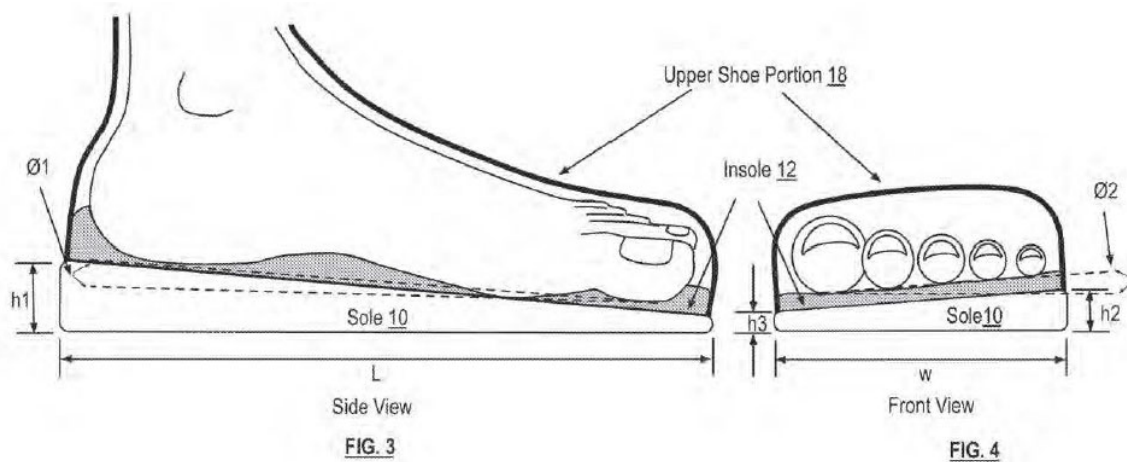
C. *Related Matters*

The parties identify *Athalonz, LLC v. Under Armour, Inc.*, 2:23-cv-00193-JRG (E.D. Tex.) as a related matter. Pet. x; Paper 4, 1; Prelim. Resp. 17. Patent Owner also identifies IPR2024-00636, IPR2024-00637, IPR2024-00638, and IPR2024-00640 as related matters. Prelim. Resp. 17.

D. The '768 Patent (Ex. 1001)

The '768 patent issued on July 5, 2022 from an application filed on August 29, 2019 that is a continuation of several previously filed continuation applications, the earliest of which was filed on January 23, 2012. Ex. 1001, codes (22), (45), (60), (63), 1:6–22. The '768 patent also claims priority to a provisional application filed on March 8, 2011. *Id.* at code (60), 1:22–25.

The '768 patent particularly relates to “athletic positioning footwear.” Ex. 1001, 1:45–46. Figures 3 and 4 of the '768 patent are below reproduced.



Figures 3 and 4 are cross-sectional side and front views, respectively, of “an apparatus that facilitates athletic positioning via an insole and/or a sole of a shoe.” Ex. 1001, 2:15–20, 9:13–16. The shoe has upper section 18, insole section 12, and sole section 10. *Id.* at 9:16–18. The apparatus can be insole section 12 and/or sole section 10 and “has an athletic positioning shape as formed by a heel section 21, a mid-foot section 23, and/or a toe section 25.” *Id.* at 9:19–22. “In general, the athletic positioning shape has the heel section 21 higher than the toe section by a particular angle.” *Id.* at 9:22–24.

Figure 93 of the '768 patent is below reproduced.

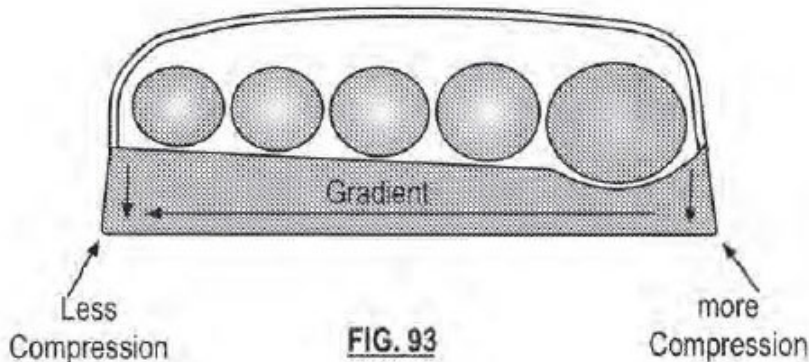


Figure 93 is a cross-sectional front-view diagram of an athletic positioning sole. Ex. 1001, 6:10–12, 27:50–53. An integrated sole and insole can be “comprised of one or more materials that provides a more compressible area towards the big toe/ball of foot area and increasingly less compressible away from the big toe/ball or foot area to facilitate an athletic position.” *Id.* at 27:53–57.

E. Illustrative Claim

The '768 patent includes 8 claims, of which Petitioner challenges claims 1–5 and 8. Of the challenged claims, claim 1, reproduced below, is independent.

1. An athletic shoe comprises:
an upper section; and
a sole section coupled to the upper section, wherein the sole section includes:
a heel platform having a first height that is substantially uniform around a perimeter of the heel platform, wherein the heel platform is constructed of a first material having a first compression factor; and
a forefoot platform juxtaposed to the heel platform, wherein the forefoot platform is constructed of a second material having a gradient compression factor, wherein when the athletic shoe is worn by an athlete and weight of the athlete is applied to the athletic shoe, the second material compresses to a first level near an outer edge of the sole section and the second material

compresses to a second level near an inner edge of the sole section, wherein the second level of compression is greater than the first level of compression, wherein the forefoot platform, at the outer edge, has a first thickness at a position proximal to the heel platform and a second thickness at a toe portion, wherein the first thickness is greater than the second thickness.

Ex. 1001, 43:25–44:7.

F. Asserted Prior Art and Proffered Testimonial Evidence

Petitioner identifies the following references as prior art in the asserted grounds of unpatentability:

Name	Reference	Exhibit
Talarico '911	US 4,642,911, issued Feb. 17, 1987	1008
Won	US 6,158,151, issued Dec. 12, 2000	1005
Norton	US 7,464,428 B2, issued Dec. 16, 2008	1007
Umezawa	US 2007/0107258 A1, published May 17, 2007	1006
Gallas	US 2010/0242307 A1, published Sept. 30, 2010	1020

Petitioner contends that Talarico '911, Won, Norton, and Umezawa are prior art under § 102(b), and Gallas is prior art under § 102(e).¹ Pet. 7. Petitioner also provides a Declaration of Grant Delgatty. Ex. 1002.

“Patent Owner does not dispute, for purposes of this preliminary response, that all of Petitioner’s prior art pre-dates the priority date of the ’768 patent” but “reserves all rights to establish its preferred priority date if the Petition is instituted and in any other proceeding involving the ’768 patent.” Prelim. Resp. 16.

¹ The relevant sections of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (Sept. 16, 2011), took effect on March 16, 2013. Because the ’768 patent claims priority to an application filed before that date, our citations to 35 U.S.C. §§ 102 and 103 in this Decision are to their pre-AIA versions. *See also* Pet. 5 (noting that “the ’768 patent, claims the benefit of U.S. Provisional Patent Application No. 60/450,485, filed March 8, 2011, via a chain of continuation applications”).

G. Asserted Grounds

Petitioner asserts that claims 1–5 and 8 are unpatentable on the following grounds:

Claims Challenged	35 U.S.C. §	References/Basis
1–5, 8	103(a)	Umezawa
1–5, 8	103(a)	Umezawa, Gallas
1–5, 8	103(a)	Norton
1–5, 8	103(a)	Won, Norton
1–5, 8	103(a)	Won, Talarico '911
1–5, 8	103(a)	Won, Talarico '911, Gallas

Pet. 2.

II. 35 U.S.C. § 314(a)

Petitioner argues that factors 1–4 and 6 of *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”) weigh against exercising discretion to deny the Petition. Pet. 72–73. Patent Owner responds that each of the *Fintiv* factors favors denial. Prelim. Resp. 26.

Fintiv instructs us to consider whether to deny institution in certain circumstances when there is parallel district court litigation, upon consideration of six factors:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;

5. whether the petitioner and the defendant in the parallel proceeding are the same party; and

6. other circumstances that impact the Board's exercise of discretion, including the merits.

Fintiv, Paper 11 at 6.

Our analysis of *Fintiv* is guided by the USPTO Director's Memorandum issued on June 21, 2022, titled "Interim Procedure for Discretionary Denials in AIA Post Grant Proceedings with Parallel District Court Litigation" ("Director's Memo"). The Director's Memo states that "the PTAB will not discretionarily deny institution . . . in view of parallel district court litigation where a petitioner presents a stipulation not to pursue in a parallel proceeding the same grounds or any grounds that could have reasonably been raised before the PTAB." Director's Memo 3; *see also id.* at 7–8. Thus, we will not exercise our discretion to deny institution if a petitioner makes a stipulation similar to that provided in *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020) (precedential as to § II.A).

Petitioner stipulates that it "will not pursue in the associated litigation, *Athalonz, LLC v. Under Armour, Inc.*, Civil Action No. 2:23-cv-00193-JRG (E.D. Tex.), the grounds raised in the Petition for IPR or any other grounds that could have reasonably been raised before the PTAB in this proceeding." Paper 7, 1. The stipulation is similar to that provided in *Sotera*.

Accordingly, pursuant to the Director's Memo, we decline to exercise discretion under 35 U.S.C. § 314(a) to deny institution.

III. ANALYSIS

A. *Legal Standards*

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent [claim] it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016). This burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). The Board may authorize an *inter partes* review if we determine that the information presented in the Petition shows that there is a reasonable likelihood that Petitioner will prevail with respect to at least one of the claims challenged in the petition. 35 U.S.C. § 314(a).

Petitioner contends that the challenged claims of the ’768 patent are unpatentable under § 103. Pet. 2. A claim is unpatentable under § 103 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) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). When evaluating a combination of teachings, we must also “determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). Whether a

combination of elements produces a predictable result weighs in the ultimate determination of obviousness. *Id.* at 416–417.

B. Level of Ordinary Skill in the Art

Petitioner argues that a person of ordinary skill in the art “would have (1) at least a B.S. or equivalent degree related to industrial or product design and at least two years’ experience designing or developing athletic shoes; or (2) at least five years designing or developing athletic shoes.” Pet. 20–21 (citing Ex. 1002 ¶ 30). According to Petitioner, “the claims are obvious in view of any reasonable definition of a [person of ordinary skill in the art].” *Id.* at 21.

“Patent Owner reserves the right to dispute Petitioner’s definition if an [*inter partes* review] is instituted” and argues that the “preliminary response establishes that Petitioner’s arguments fail even under its preferred definition of the level of ordinary skill.” Prelim. Resp. 16 (citing Pet. 20–21).

Based on the preliminary record, we adopt Petitioner’s asserted level of ordinary skill only to determine whether there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims challenged in the Petition.

C. Claim Construction

In an *inter partes* review, the claims are construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b) (2021); *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

Petitioner argues that all claim limitations are met in the prior art under any interpretation of the challenged claims. Pet. 16. Petitioner, however, offers constructions “for purposes of clarity only.” *Id.*

1. “*gradient compression factor*”

Petitioner contends that the ’768 patent does not define “gradient compression factor” but indicates a meaning when describing Figure 93. Pet. 17–18 (quoting Ex. 1001, 27:47–67). According to Petitioner, one of ordinary skill in the art would have understood that “a forefoot platform constructed of a second material having a ‘gradient compression factor’ would become ‘increasingly less compressible’ from the inner edge to the outer edge of the forefoot platform” based on that description. *Id.* at 18. Petitioner also cites to a dictionary definition for support. *Id.* (citing Ex. 1019).

Patent Owner responds that “Petitioner’s claim construction analysis is incomplete” but “adopts Petitioner’s claim construction proposals for purposes of th[e] preliminary response and reserves the right to propose different constructions if the Petition is instituted.” Prelim. Resp. 18.

Petitioner’s quoted portion of the ’768 patent states that:

The integrated sole 10 and insole 12 is comprised of one or more materials that provides *a more compressible area towards the big toe/ball of foot area and increasingly less compressible away from the big toe/ball of foot area to facilitate an athletic position*. . . . For example, the integrated sole and insole may include a rigid material as an outsole (e.g., a sport specific bottom) to provide a base. On top of the base, the integrated sole and insole includes one or more varying compressible materials. For example, *the next layer is a single resilient material* (e.g., rubber, gel, foam, synthetic material, etc.) *of varying density to provide a compressible gradient*. As another example, the next layer includes a plurality of materials, each having a shape to collectively provide the athletic positioning shape. In addition, at

least some of the materials have a different level of compressibility to facilitate the compressible gradient.

Ex. 1001, 27:47–67 (emphases added).

Based on this description, one of ordinary skill in the art would have likely understood “gradient compression factor” to mean that the insole material may have varying levels of compressibility. And, when read in the context of claim 1, it means that the second material is increasingly less compressible from the inner edge to the outer edge of the forefoot platform. *See* Pet. 17–18. Patent Owner does not dispute that understanding of “gradient compression factor” as used in claim 1. *See* Prelim. Resp. 18. From our review, the parties’ agreed-upon construction of the term “gradient compression factor” appears consistent with the plain language of the claim and the Specification. Thus, we adopt it for purposes of this Decision.

2. *“a perimeter of the heel platform”*

Petitioner also contends that “a perimeter of the heel platform” does not need interpretation for purpose of this proceeding. Pet. 18. According to Petitioner, in related litigation, Patent Owner appears to interpret the phrase to mean “the perimeter of the portion of the shoe where the heel of the foot sits, not the outer-most perimeter of the shoe” and includes “a heel platform that includes some degree of curvature and height change from its inner edge to its outer edge, and from the front to the rear.” *Id.* at 18–19 (citing Ex. 1002 ¶ 26; Ex. 1012, Ex. E, 23–24; Ex. 1021). Petitioner, therefore, applies Patent Owner’s apparent interpretation of “a perimeter of the heel platform” to the challenges of this proceeding “without conceding alternative arguments in the counterpart litigation.” *Id.* at 19.

According to Patent Owner, “Petitioner’s claim construction analysis is incomplete,” but Patent Owner “adopts Petitioner’s claim construction

proposals for purposes of th[e] preliminary response” with reservation to propose a different interpretation if review is instituted. Prelim. Resp. 18.

At this stage, we find the parties’ agreed-upon construction of the “a perimeter of the heel platform” limitation to be reasonable and consistent with the intrinsic record. *Id.* Thus, we adopt it for purposes of this Decision.

3. “*first material*” and “*second material*”

In its arguments for the challenge based on Umezawa, Petitioner notes that, although claim 1 recites a heel platform made of a “first material” and a forefoot platform made of a “second material,” the first and second materials can be the same based on Patent Owner’s apparent interpretation in related litigation. Pet. 25 n.1 (citing Ex. 1012, Ex. E, 38–53). Petitioner applies Patent Owner’s apparent interpretation to the challenges of this proceeding “[w]ithout conceding alternative arguments.” *Id.*

Patent Owner responds that “first material” and “second material” “must be different materials (e.g., be composed of different materials or different combinations of materials).” Prelim. Resp. 19. Patent Owner argues that it did not contend in related litigation that the same material meets the recited first and second materials, and that infringement contentions are irrelevant to how claim terms would be understood. *Id.* at 21–24 (citing Pet 25 n.1; Ex. 1012). Patent Owner also argues that “Petitioner has made no effort to explain why its adopted construction is proper.” *Id.* at 24.

We agree with Patent Owner. As our reviewing court has previously explained, the terms “first” and “second” are conventionally used in patent claims to distinguish between different elements. *See Gillette Co. v. Energizer Holdings, Inc.*, 405 F.3d 1367, 1373 (Fed. Cir. 2005) (“The terms

‘first, second, and third’ are terms to distinguish different elements of the claim”). Petitioner does not dispute that convention, but nonetheless proposes an alternative construction in the event Patent Owner contends that they can be the same material. *See* Pet. 25 n.1 (noting Patent Owner’s “apparent” construction in the related district court action). But Patent Owner makes no such contention, conceding that it has “never contended that the first and second material can be the same material.” Prelim. Resp. 21. Thus, Petitioner’s proposed alternative construction appears to be moot. And, at this stage, we see no reason to disturb the parties’ apparent agreement that the “first” and “second” materials, as claimed, are indeed different in some manner. *Id.* Nonetheless, the parties are free to explore this issue further at trial.

4. *“near an outer edge of the sole section” and “near an inner edge of the sole section”*

Patent Owner also proposes that “near an outer edge of the sole section” and “near an inner edge of the sole section” refer to “near to the outer edge and inner edge (respectively) of the portion of the shoe where the foot sits.” Prelim. Resp. 19–20. Patent Owner argues that the same construction should be applied for both the ’768 patent and related U.S. Patent No. 11,510,456 (“the ’456 patent”) (challenged in IPR2024-00640) because both share a common specification. *Id.* at 25. According to Patent Owner, the ’456 patent uses “inner edge” and “outer edge” in the context of a heel platform and a forefoot platform, and Petitioner in IPR2024-00640 argues that the terms mean “the edges of the portion of the shoe where the heel of the foot sits, not the inner and outer-most edges of the shoe.” *Id.* (quoting from *Under Armour, Inc. v. Athalonz, LLC*, IPR2024-00640, Paper 1, 15–16).

At this stage, the interpretation of “near an outer edge of the sole section” and “near an inner edge of the sole section” is relevant to the parties’ dispute regarding the challenges based on Umezawa. *See* Pet. 21–37; Prelim. Resp. 38–47 (arguing that the limitations are not met). On the preliminary record and for the reasons explained below, Petitioner shows a reasonable likelihood of prevailing on at least one claim in its Umezawa challenges even under the above proposed interpretation.

Thus, because construing “near an outer edge” and “near an inner edge” is not necessary to resolve the parties’ dispute, we determine that an express interpretation of these terms is not needed. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms that . . . are in controversy, and only to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). The parties should consider developing this issue further during trial.

5. *Other Terms*

At this preliminary stage, express interpretation of other terms is not necessary to determine whether Petitioner shows a reasonable likelihood of prevailing. *Realtime Data*, 912 F.3d at 1375.

D. Asserted Obviousness Based on Umezawa

1. Umezawa (Ex. 1006)

Umezawa “relates to shoes suitable for golf, tennis, squash, field hockey, basketball, aerobic exercise or the like.” Ex. 1006 ¶ 3. Figure 1 of Umezawa is below reproduced.

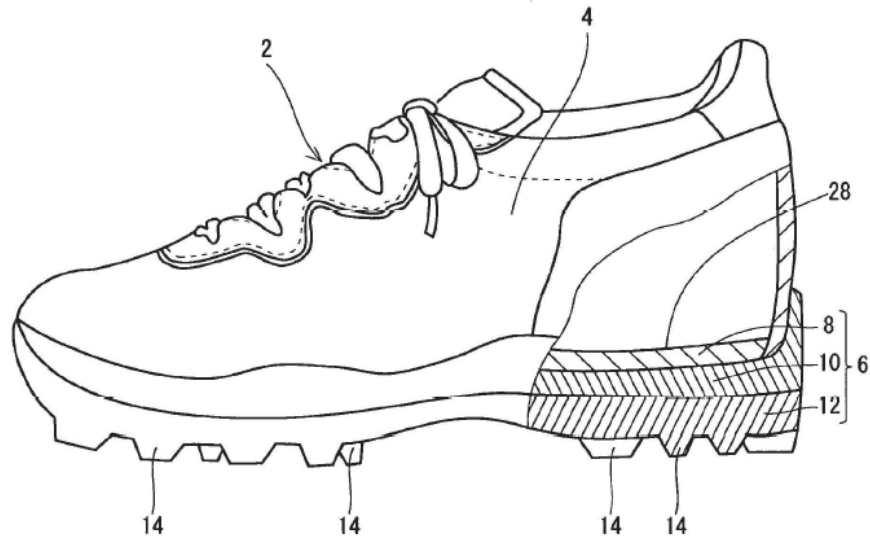


Fig. 1

Figure 1 shows a partially-cutout side view of a golf shoe. Ex. 1006 ¶ 15. Golf shoe 2 includes upper part 4 and bottom part 6 that has insole 8, midsole 10, and outsole 12. *Id.* ¶ 32. Figures 2 and 4 of Umezawa are below reproduced.

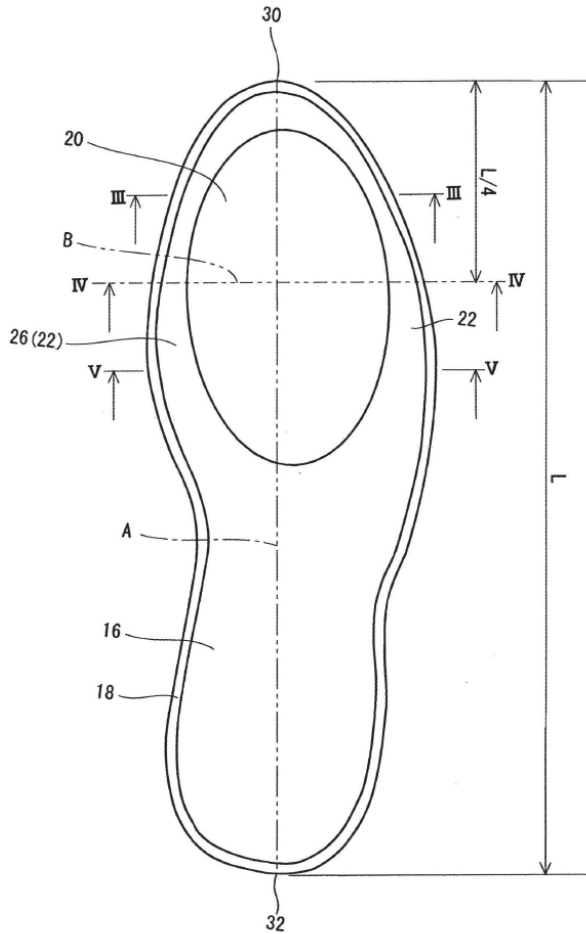


Fig. 2

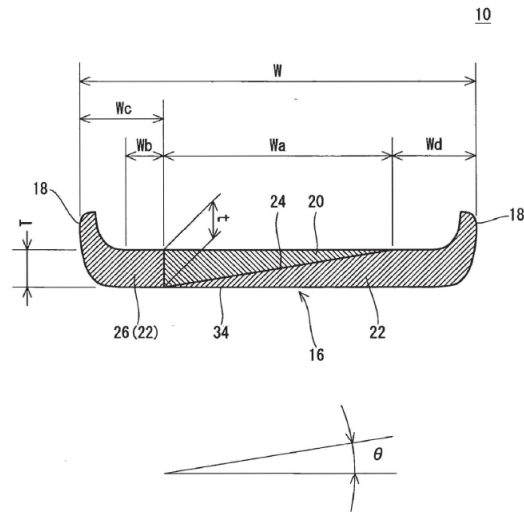


Fig. 4

Figure 2 is a plan view of a midsole of a golf shoe, and Figure 4 is a cross-sectional view taken along line IV-IV in Figure 2. Ex. 1006 ¶¶ 16, 18. Midsole 10 has low elastic part 20 and high elastic part 22. *Id.* ¶ 36. When a compressive load is applied to midsole 10, low elastic part 20 is more easily deformed than high elastic part 22. *Id.* The thickness of low elastic part 20 and high elastic part 22 gradually changes along inclined surface 24. *Id.* ¶ 43. “When a golf player wears these golf shoes 2 and the body weight of the golf player is applied to the bottom part 6, this midsole 10 is compressed.” *Id.* ¶ 38. “Since the thickness of the low elastic part 20 is larger in the inside, the inside compression deformation is larger.” *Id.*

2. *Claim 1*

Petitioner argues that, to the extent the preamble is limiting, Umezawa discloses “[a]n athletic shoe.” Pet. 21 (citing Ex. 1002 § IX.A.a; Ex. 1006 ¶ 3). Petitioner also argues that Umezawa’s upper part 4 teaches or suggests “an upper section.” *Id.* at 21–22 (citing Ex. 1002 § IX.A.b; Ex. 1006 ¶ 32, Fig. 1). Petitioner further argues that Umezawa’s bottom part 6 with insole 8, midsole 10, and outsole 12 teaches or suggests “a sole section coupled to the upper section.” *Id.* at 22 (citing Ex. 1002 § IX.A.c; Ex. 1006 ¶ 32, Fig. 1).

For “a heel platform having a first height that is substantially uniform around a perimeter of the heel platform,” Petitioner argues that one of ordinary skill in the art would have understood that Umezawa’s disclosure of a known golf shoe with a known outsole and “insole with a consistent-thickness heel section” teaches or suggests the limitation. Pet. 22–24 (citing Ex. 1002 § IX.A.d, ¶ 72; Ex. 1006 ¶ 32, 33, 52, 61–69, 72, Figs. 1–4).

For “wherein the heel platform is constructed of a first material having a first compression factor,” Petitioner argues that one of ordinary skill in the art would have understood that “the heel disclosed in Umezawa would be made of a material inherently having some compression factor.” Pet. 25 (citing Ex. 1002 ¶¶ 72, 74; Ex. 1006 ¶ 36).

Petitioner also argues that Umezawa teaches “a forefoot platform juxtaposed to the heel platform, wherein the forefoot platform is constructed of a second material having a gradient compression factor,” because Umezawa discloses a midsole having low elastic part 20 and high elastic part 22, with low elastic part 20 being more compressible than high elastic part 22. Pet. 25–27 (citing Ex. 1001, Fig. 112; Ex. 1002 § IX.A.e; Ex. 1006 ¶ 36, Figs. 2, 3, 6). According to Petitioner, the difference in elastic moduli

of the low elastic part 20 and high elastic part 22 creates a compression gradient. *Id.* at 27 (citing Ex. 1006 ¶¶ 36, 43). Petitioner also argues that Umezawa teaches

wherein when the athletic shoe is worn by an athlete and weight of the athlete is applied to the athletic shoe, the second material compresses to a first level near an outer edge of the sole section and the second material compresses to a second level near an inner edge of the sole section, wherein the second level of compression is greater than the first level of compression.

Id. at 27–28 (quoting Ex. 1006 ¶ 38).

For “wherein the forefoot platform, at the outer edge, has a first thickness at a position proximal to the heel platform and a second thickness at a toe portion, wherein the first thickness is greater than the second thickness,” Petitioner argues that Umezawa teaches the limitation, which is common in most shoes. Pet. 28–29 (citing Ex. 1002 § IX.A.f, ¶ 75; Ex. 1006, Fig. 1). Petitioner also argues that Umezawa would have been understood to teach that “the sole is thicker at a position proximal to the front edge of the heel platform than at the toe portion.” *Id.* at 29 (citing Ex. 1002 ¶ 75).

Petitioner alternatively argues that, to the extent Umezawa does not disclose the limitation, the feature is described in Applicant’s admitted prior art. Pet. 29 (citing Ex. 1001, 1:63–2:6, 2:14–15; Ex. 1002 ¶ 76). Petitioner contends that one of ordinary skill in the art would have been motivated to include the feature with a reasonable expectation of success. *Id.* (citing Ex. 1002 ¶ 77).

a) Patent Owner’s Preliminary Response

Patent Owner responds that Petitioner fails to show that Umezawa discloses or would have rendered obvious “the second material compresses

to a first level near an outer edge of the sole section and the second material compresses to a second level near an inner edge of the sole section, wherein the second level of compression is greater than the first level of compression.” Prelim. Resp. 38. In particular, Patent Owner argues that Umezawa’s inner high elastic part 22, not low elastic part 20 cited by Petitioner, is “near an inner edge of the sole section,” as expressly described by Umezawa. *Id.* at 39–40 (citing Pet. 26–28; Ex. 1006, code (57), ¶¶ 37–39, 61, 63, 65, 68, 72, 77, 78, 83).

Patent Owner also responds that Umezawa discloses that the level of compression near the inner and outer edges of the sole section are the same because they are both made of high elastic part 22. Prelim. Resp. 40–43 (citing Ex. 1006 ¶ 37, Figs. 2–6, 8–15). Patent Owner argues that Umezawa repeatedly confirms that the level of compression is the same at the inner and outer edges of the sole section. *Id.* at 44 (citing Ex. 1006 ¶¶ 37, 39, 49, 50, 62, 64, 66, 69, 72, 75, 77). Patent Owner also argues that Umezawa discloses two different manufacturing processes that both use the same material in the inner and outer edges of the sole section. *Id.* at 45–46 (citing Ex. 1006 ¶¶ 56–59, Figs. 6, 7).

b) Petitioner Shows a Reasonable Likelihood of Prevailing

Based on the preliminary record, Petitioner shows a reasonable likelihood of prevailing on its challenge that Umezawa would have rendered obvious claim 1. At this stage, Petitioner sufficiently shows that Umezawa teaches, suggests, or would have been understood to meet the limitations of claim 1.

For the limitation requiring the second material to compress greater near an inner edge of a sole section than near an outer edge of the sole section, Petitioner sufficiently shows, at this stage, that Umezawa’s low

elastic part 20 extends *near* inner and outer edges of midsole 10. Ex. 1006, Fig. 2. Regarding the level of compression, Petitioner quotes from Umezawa where it states that “[s]ince the thickness of the low elastic part 20 is larger in the inside, the inside compression deformation is larger” and “[s]ince the thickness of the high elastic part 22 is larger in the outside, outside compression deformation is smaller.” Pet. 27–28; Ex. 1006 ¶ 38, Figs. 3–5. Umezawa also states that “[t]he thickness of the low elastic part 20 becomes gradually larger along the inclined surface 24 from the outside to the inside.” *Id.* ¶ 37. On the present record, the thickness of low elastic part 20 being larger on the inside and gradually becoming smaller on the outside adequately shows that Umezawa discloses that a second level of compression near an inner edge is greater than a first level of compression near an outer edge when the shoe is worn. *Id.* ¶ 38.

Furthermore, under an interpretation of “near an outer edge of the sole section” and “near an inner edge of the sole section” based on where a foot sits in a shoe, Petitioner sufficiently shows at this stage that low elastic part 20 would be near inner and outer edges of a sole section. Pet. 25–28; Prelim. Resp. 19–20, 25; Ex. 1006, Fig. 2. Although Umezawa does not describe expressly where a foot would sit on its midsole 10, Umezawa states that “[w]hen a golf player wears these golf shoes 2 and the body weight of the golf player is applied to the bottom part 6, this midsole 10 is compressed,” and “the inside compression deformation is larger.” *Id.* ¶ 38.

By describing that wearing the shoe causes midsole 10 to compress with larger compression deformation on the inside of midsole 10, Umezawa makes clear that the player’s foot must be on top of the compression deformation to cause such deformation and, thus, must necessarily be “near an inner edge” and “near an outer edge of the sole section,” under an

interpretation based on a where a foot sits in a shoe. *See also* Ex. 1006, Figs. 3, 4 (showing cross-sectional views with side walls 18 that indicate where a foot would sit in midsole 10). Therefore, even under Patent Owner’s proposed interpretation, Petitioner sufficiently shows on the present record that Umezawa teaches or suggests a “second material [that] compresses to a first level near an outer edge of the sole section and . . . compresses to a second level near an inner edge of the sole section,” such that “the second level of compression is greater than the first level of compression.” Ex. 1001, 43:38–44:1–3.

Because Petitioner shows a reasonable likelihood of prevailing on claim 1 in its challenge based on Umezawa, we institute *inter partes* review of the ’768 patent on all presented challenges. 37 C.F.R. § 42.108(a).

3. *Dependent Claims 2–5 and 8*

Claim 2 depends from claim 1 and recites “wherein the forefoot section comprises: a mid-foot section; and a toe section proximal to the mid-foot section.” Ex. 1001, 44:8–11. Petitioner argues that Umezawa teaches the limitations of claim 2. Pet. 30 (citing Ex. 1002 § IX.A.g.; Ex. 1006, Figs. 1, 2).

Claim 3 depends from claim 1 and recites “wherein the second material comprises: a resilient material of varying density to provide a compressible gradient to provide the gradient compression factor.” Ex. 1001, 44:12–16. Petitioner argues that Umezawa teaches these additional limitations. Pet. 30–31 (citing Ex. 1002 ¶ 78).

Claim 4 depends from claim 3 and recites “wherein the resilient material comprises one or more of: a rubber, a gel, a foam, a synthetic material.” Ex. 1001, 44:17–19. Petitioner argues that Umezawa teaches a

resilient material comprising a synthetic material. Pet. 31 (citing Ex. 1002 § IX.A.i.; Ex. 1006 ¶ 34).

Claim 5 depends from claim 1 and recites

wherein the second material comprises: a plurality of materials configured to provide a shape of the forefoot platform and to provide the gradient compression factor, wherein a first material of the plurality of materials is one of a foam, a soft rubber, memory foam, a housing that holds a liquid, and a material that compresses under pressure and substantially returns to its uncompressed shape when the pressure is removed.

Ex. 1001, 44:20–28. Petitioner refers to its arguments for claims 1 and 4. Pet. 31–32 (citing Ex. 1002 ¶ 79).

Claim 8 depends from claim 1 and recites “wherein the sole section comprises: an insole; a mid-sole; and an out-sole.” Ex. 1001, 44:35–39. Petitioner argues that Umezawa teaches bottom part 6 with insole 8, midsole 10, and outsole 12. Pet. 32 (citing Ex. 1002 § IX.A.k.; Ex. 1006 ¶ 32).

Patent Owner does not provide arguments specifically for dependent claims 2–5 and 8. *See* Prelim. Resp. 38–46. Based on the present record, Petitioner shows a reasonable likelihood of prevailing with respect to at least one of the challenged dependent claims.

E. Asserted Obviousness Based on Umezawa and Gallas

1. Gallas (Ex. 1020)

Gallas discloses a golf shoe. Figures 2 and 5 of Gallas are below reproduced.

correct arch deficiencies, provide heel support, correct pronation, or otherwise address foot problems or comfort issues.” *Id.* ¶ 29.

2. *Claims 1–5 and 8*

Petitioner argues that, to the extent that Umezawa does not disclose a heel platform “having a first height that is substantially uniform around a perimeter of the heel platform,” or a forefoot platform that “at the outer edge, has a first thickness at a position proximal to the heel platform and a second thickness at a toe portion, wherein the first thickness is greater than the second thickness,” Gallas teaches these limitations. Pet. 32–33 (citing Ex. 1002 ¶¶ 80, 81), 35–37 (citing Ex. 1002 §§ IX.B.b, IX.B.c, ¶ 87; Ex. 1020 ¶¶ 12, 17–21, 28, 29, Figs. 2, 5).

Petitioner also refers to previous arguments that Umezawa teaches the preamble of claim 1, the remaining limitations of claim 1, and the additional limitations of dependent claims 2–5 and 8. Pet. 35 (citing Ex. 1002 ¶ 86), 37 (citing Ex. 1002 ¶ 88).

a) *Petitioner’s Asserted Reason for Combining*

Petitioner argues that Umezawa and Gallas are analogous art because both are in the same field. Pet. 33 (citing Ex. 1002 ¶ 83), 35 (citing Ex. 1001, codes (54), (57); Ex. 1002 ¶ 85; Ex. 1006, codes (54), (57); Ex. 1020, codes (54), (57)). According to Petitioner, one of ordinary skill in the art would have looked to Gallas and would have understood “that providing a drop in height from the heel of the shoe to the toe was common in shoe design and provides several benefits,” such as “improv[ing] the wearer’s weight distribution, spine angle, knee flex, and athletic performance.” *Id.* at 33 (citing Ex. 1020 ¶¶ 12, 17, 18). Petitioner also argues that incorporating a heel platform with a substantially uniform height around its perimeter, would have “provide[d] a flat surface for the wearer’s

heel which provides additional stability.” *Id.* at 33–34 (citing Ex. 1002 ¶ 83; Ex. 1020 ¶ 17). Petitioner further argues that the proposed combination would have had a predictable result and that one of ordinary skill in the art would have had a reasonable expectation of success in combining Umezawa and Gallas. Pet. 33 (citing Ex. 1002 ¶ 82), 34 (citing Ex. 1002 ¶ 84).

b) Patent Owner’s Preliminary Response

Patent Owner responds that Petitioner does not rely on Gallas for disclosing or suggesting “the second material compresses to a first level near an outer edge of the sole section and the second material compresses to a second level near an inner edge of the sole section, wherein the second level of compression is greater than the first level of compression.” Prelim. Resp. 46–47 (citing Pet. 35). Patent Owner also refers to its previous arguments that Umezawa fails to disclose or teach the limitation. *Id.*

c) Petitioner Shows a Reasonable Likelihood of Prevailing

Based on the preliminary record, Petitioner sufficiently shows that its proposed combination teaches or suggests the limitations of claims 1–5 and 8 and that one of ordinary skill in the art would have combined Umezawa and Gallas in the manner asserted with a reasonable expectation of success.

For the reasons discussed above for the challenge based on Umezawa alone, Petitioner sufficiently shows at this stage that Umezawa teaches or suggests “the second material compresses to a first level near an outer edge of the sole section and the second material compresses to a second level near an inner edge of the sole section, wherein the second level of compression is greater than the first level of compression.” *Id.*

F. Asserted Obviousness Based on Norton

1. Norton (Ex. 1007)

Norton relates to “sole elements” that have “a specific density distribution in a transverse and/or longitudinal direction.” Ex. 1007, code (57), 1:14–18, 3:33–36. Figure 4A of Norton is below reproduced.

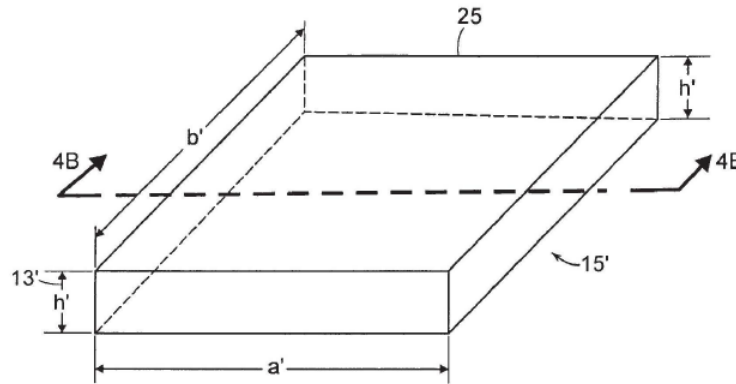


FIG. 4A

Figure 4A “is a schematic perspective view of a sole element” with “a locally varying density distribution.” Ex. 1007, 5:24–26. Sole element 25 has a hardness distribution from medial side 13’ (left side of the figure) to lateral side 15’ (right side of the figure). *Id.* at 7:44–59.

Norton creates a density distribution by “us[ing] a single material being supplied as a preform and having a thickness distribution that is transformed by pressure forming into the desired density distribution” or by supplying heat selectively to expand the sole element preform. Ex. 1007, 3:9–15, 3:36–41, 3:50–56. “Density can increase gradually from a lateral side of the sole element to a medial side of the sole element or density can decrease gradually from a lateral side of the sole element to a medial side of the sole element.” *Id.* at 4:9–12.

An embodiment can be “an article of footwear including an upper and a sole including a sole element” of Norton. Ex. 1007, 4:59–62. Norton’s

sole element may be “used in the heel and/or in parts of the forefoot.” *Id.* at 5:65–67.

2. *Claim 1*

Petitioner argues that Norton teaches “[a]n athletic shoe” with “an upper section” and “a sole section.” Pet. 38 (citing Ex. 1002 §§ IX.C.a.–IX.C.c., ¶ 90; Ex. 1007, code (57), 4:59–62). Petitioner also argues that Norton’s sole section would have been understood to be “coupled to the upper section.” *Id.* (citing Ex. 1002 ¶ 91).

Petitioner further argues that Norton teaches the recited “heel platform” and that the heel would have been understood to be made of a material with some compression factor. Pet. 38–39 (citing Ex. 1002 § IX.C.d.; Ex. 1007, 7:39–43, Figs. 4A, 4B), 41 (citing Ex. 1002 ¶ 95). According to Petitioner, Norton teaches that its sole element is used in parts of the forefoot and that one of ordinary skill in the art would have understood “a typical athletic shoe has a heel platform that is consistent in height throughout.” *Id.* at 39–40 (citing Ex. 1002 ¶¶ 61–69, 92). Petitioner, thus, argues that Norton’s teachings of a consistent height heel platform and consistent thickness heel section would have led one of ordinary skill in the art “to conclude that Norton’s heel platform has a substantially uniform height around its perimeter.” *Id.* at 40 (citing Ex. 1002 ¶ 92).

Petitioner additionally argues that Norton incorporates Geise (Ex. 1010 (US 5,025,573, issued June 25, 1991)) that discloses a heel platform that is substantially uniform in height around its perimeter. Pet. 40 (citing Ex. 1002 ¶ 93; Ex. 1010, 7:16–18, Figs. 1–5, 35–39, 48–51). Petitioner also quotes from Geise that “historically, shoe bottoms [] consisted primarily of flat surfaces on both their top and bottom.” *Id.* at 41 (citing Ex. 1010, 1:10–27; Ex. 1002 ¶ 94).

Petitioner argues that Norton teaches the recited “forefoot platform juxtaposed to the heel platform” and “constructed of a second material having a gradient compression factor.” Pet. 41–42 (citing Ex. 1002 § IX.C.e.; Ex. 1007, 3:14–15, 3:33–56, 4:7–13, 8:12–18, Figs. 3B, 4B, 5A). Petitioner also argues that one of ordinary skill in the art would have understood that Norton’s sole “compresses to a first level near an outer edge of the sole section” and “compresses to a second level near an inner edge of the sole section, wherein the second level of compression is greater than the first level of compression.” *Id.* at 42 (citing Ex. 1002 ¶ 96). Petitioner alternatively argues that, to the extent required, it would have been obvious to incorporate Giese’s heel designs with substantially uniform height into Norton’s shoes. *Id.* at 42–43 (citing Ex. 1002 ¶ 97).

For “the forefoot platform, at the outer edge, ha[ving] a first thickness at a position proximal to the heel platform and a second thickness at a toe portion, wherein the first thickness is greater than the second thickness,” Petitioner argues that Norton teaches, or would have been understood to meet, the limitation that is also a common and conventional design feature. Pet. 43 (citing Ex. 1002 ¶ 98; Ex. 1007, 5:65–67). Petitioner also argues that Giese and another reference incorporated into Norton disclose the limitation. *Id.* at 44–45 (citing Ex. 1002 ¶¶ 99–101; Ex. 1009, Figs. 1, 3B; Ex. 1010, 6:60–7:2, Figs. 1, 2, 6, 7, 40, 41, 48, 49). Petitioner further argues that the limitation is present in Applicant’s admitted prior art. *Id.* at 45 (citing Ex. 1001, 1:63–2:6, 2:14–15; Ex. 1002 ¶ 102). According to Petitioner, one of ordinary skill in the art would have been motivated to modify Norton to include the limitation “to provide known benefits” previously argued with a reasonable expectation of success. *Id.* (citing Ex. 1002 ¶ 103).

a) Patent Owner's Preliminary Response

Patent Owner responds that Petitioner fails to show that its proposed combination includes “a heel platform having a first height that is substantially uniform around a perimeter of the heel platform.” Prelim. Resp. 47. According to Patent Owner, Norton does not show the recited heel platform, as argued by Petitioner, because the relied-upon disclosures describe a sole element, not the entirety of a heel platform. *Id.* at 47–49 (citing Pet. 39; Ex. 1007, 5:60–67, 7:36–38, Figs. 4A, 4B).

Patent Owner also argues that one of ordinary skill in the art would not have understood that Norton's heel platform is substantially uniform around its perimeter, as argued by Petitioner, because there is no disclosure of a heel platform and there is no evidence that the ordinarily skilled artisan would have assumed every shoe has such a heel platform. Prelim. Resp. 50–51. Patent Owner further argues that Petitioner's testimonial evidence is conclusory and unsupported. *Id.* at 51–54 (citing Pet. 18, 39–40; Ex. 1002 ¶¶ 61–69, 92). Regarding Giese, Patent Owner argues that Petitioner does not show how any of the relied-upon figures show the recited heel platform, and that Giese describes cup-shaped heel portions. *Id.* at 54–55 (citing Pet. 40–41; Ex. 1010, 7:16–18, 8:57–68, 9:18–23, Figs. 5, 39, 51).

Patent Owner also responds that Petitioner fails to show that Norton would have rendered obvious a “forefoot platform [that] is constructed of a second material having a gradient compression factor” and, thus, institution should be denied. Prelim. Resp. 56–57 (citing Pet. 41). Patent Owner argues that Norton only describes a sole element, not an entire shoe, and does not describe the materials of the forefoot and heel platforms. *Id.* at 57 (citing Ex. 1007, 5:60–67, 7:36–38). Patent Owner also argues that Norton describes using only a single material for its sole element and teaches away

from a second material for the forefoot platform. *Id.* at 57–58 (citing Pet. 47, 49; Ex. 1007, 3:9–15).

b) Petitioner Shows a Reasonable Likelihood of Prevailing

Based on the preliminary record, Petitioner shows a reasonable likelihood of prevailing on its challenge that Norton would have rendered obvious claim 1. At this stage, Petitioner sufficiently shows that Norton teaches, suggests, or would have been understood to meet the limitations of claim 1.

As Patent Owner points out, Norton does not disclose expressly the required heel platform with a substantially uniform height around its perimeter. Petitioner, however, relies on testimonial evidence that one of ordinary skill in the art would have understood that the typical athletic shoe would have included the recited heel platform. Pet. 39–40; Ex. 1002 ¶¶ 61–69, 92. Petitioner also relies on portions of Norton that describe using its sole element in “sport shoes” and “an article of footwear” with “a sole including a sole element manufactured in accordance with the preceding methods.” Pet. 38; Ex. 1006, code (57), 4:59–62. Petitioner further argues alternatively that Norton would have been combined with Giese so that the proposed combination would have the recited heel platform. Pet. 42–43; Ex. 1002 ¶ 97. On the preliminary record without evidence rebutting Petitioner’s declaration, Petitioner sufficiently shows that it would have been obvious that Norton’s sole element used in a “sports shoe” would have the recited heel platform. This issue would benefit from further development by the parties during trial.

For a “forefoot platform [that] is constructed of a second material having a gradient compression factor,” Petitioner argues that Norton discloses using its sole element in a “sports shoe” and in the sole of an

article of footwear. Pet. 38; Ex. 1006, code (57), 4:59–62. Because Norton describes using its sole element as part of a sole, and not as the entire sole, Petitioner sufficiently shows at this preliminary stage that Norton discloses the recited forefoot platform made of a second material with a gradient compression factor. *See* Pet. 38. Also, on the preliminary record, using Norton’s sole element in a shoe sole does not appear to be a teaching away, because Norton describes using a single material for the sole element, not an entire sole. Ex. 1006, 3:9–15, 4:59–62.

For the reasons above, Petitioner shows a reasonable likelihood of prevailing on claim 1 in its challenge based on Norton.

3. Dependent Claims 2–5 and 8

Petitioner argues that Norton teaches the limitations of dependent claims 2–5 and 8. Pet. 46–47 (citing Ex. 1002 §§ IX.C.g, IX.C.i, ¶¶ 104–106; Ex. 1007, 3:59–61, 6:56–60, Fig. 5A).

Patent Owner does not provide arguments specifically for dependent claims 2–5 and 8. *See* Prelim. Resp. 47–58. Based on the preliminary record, Petitioner shows a reasonable likelihood of prevailing with respect to at least one of the challenged dependent claims.

G. Obviousness Based on Won and Norton

1. Won (Ex. 1005)

Won relates to a golf shoe. Ex. 1005, code (57), 1:5–6. Figure 3 of Won is below reproduced.

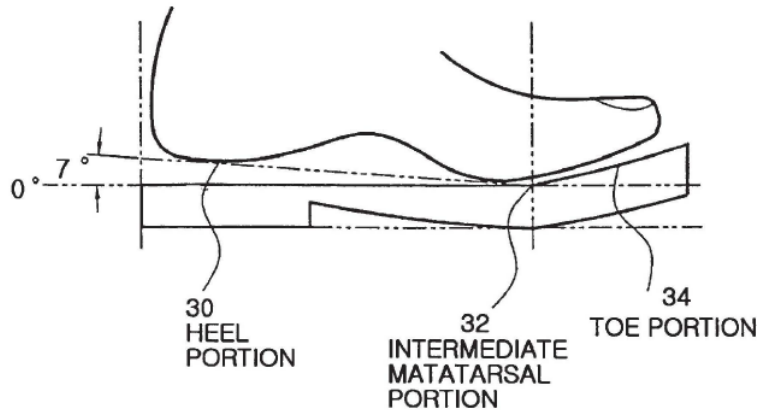


FIG. 3

Figure 3 shows a cross sectional view illustrating the tilted angle of a sole. Ex. 1005, 3:12–13. The golf shoe includes heel portion (30), toe portion (34) formed forward of heel portion (30), and intermediate metatarsal portion (32) formed between heel portion (30) and toe portion (34). *Id.* at code (57); *see also id.* at 1:42–57 (describing conventional golf shoe). Heel portion (30) is angled between -7° and 7° from a horizontal line. *Id.* at code (57), 2:50–51; *see also id.* at 4:6–12 (describing heel portion tilted at 0°). Won also describes “golf shoes [that] can be formed such that the inside surface and outside surface separated by a central longitudinal axis of the sole (or mid sole) are different from each other.” *Id.* at 4:47–50, Fig. 5. “The inside surface is soft surfaced and outside surface is hard surfaced, both of which are made from elastic materials.” *Id.* at 4:50–52, Fig. 5.

2. Claims 1–5 and 8

Petitioner argues that, to the extent the “forefoot platform . . . having a gradient compression factor” requires the forefoot platform to become “increasingly less compressible” from inner to outer edges, Won modified by Norton would have rendered it obvious. Pet. 47 (citing Ex. 1002 ¶ 107).

According to Petitioner, Won teaches a sole with two materials of varying density and Norton teaches a forefoot platform that is increasingly less compressible from inner to outer edges. *Id.* at 47–48 (citing Ex. 1002 ¶ 108), 51–60 (citing Ex. 1002 § IX.D.a.–IX.D.d., ¶¶ 116–117; Ex. 1005, code (57), 2:51–53, 4:6–12, Figs. 1–7).

Petitioner contends that one of ordinary skill in the art would have understood that Won’s “heel platform must be level from the inner edge to the outer edge to obtain the desired zero-degree tilt across the entire width of the heel, and thus uniform in height around the perimeter of the heel platform.” Pet. 54–55 (citing Ex. 1002 ¶¶ 61–69, 118–120). Petitioner also contends that one of ordinary skill in the art would have understood that Won’s heel is made of a material with some compression factor. *Id.* at 55 (citing Ex. 1002 ¶ 121). Petitioner further contends that it would have been obvious to incorporate the heel designs of Norton and Giese into Won. *Id.* at 55–56 (citing Ex. 1002 ¶ 122).

In Petitioner’s view, Won teaches the recited “forefoot platform.” Pet. 56–57 (citing Ex. 1002 § IX.D.e.; Ex. 1005, 4:46–58, 6:28–36, Fig. 5). Petitioner also argues that it would have been obvious to make Won’s forefoot platform increasingly less compressible from inner to outer edges in view of Norton. *Id.* at 57–59 (citing Ex. 1002 § IX.D.e., ¶ 123; Ex. 1007, 3:33–43, 4:7–21, 6:33–37, 7:44–58, 8:12–18, Fig. 4B).

Petitioner argues that Won teaches that its “forefoot platform, at the outer edge, has a first thickness at a position proximal to the heel platform and a second thickness at a toe portion, wherein the first thickness is greater than the second thickness.” Pet. 59 (citing Ex. 1002 § IX.D.f., ¶ 124; Ex. 1005, Figs. 6, 7), 60 (citing Ex. 1002 ¶ 126; Ex. 1005, 1:6–53). Petitioner also argues that the recited feature is common and conventional

and shown in Won. *Id.* at 59–60 (citing Ex. 1002 ¶¶ 61–69, 124; Ex. 1005, Figs. 6, 7). Petitioner further argues that one of ordinary skill in the art would have recognized that the feature shown in Won can be used in other disclosed embodiments. *Id.* at 60 (citing Ex. 1002 ¶ 125).

Petitioner contends that Won teaches the limitations of claims 2, 4, and 8 (Pet. 60–61 (citing Ex. 1002 § IX.D.g., ¶ 128; Ex. 1005, 3:26–32, 4:50–52, Figs. 2–7), 62 (citing Ex. 1002 § IX.D.k.; Ex. 1005, 3:24–26)) and that Norton teaches the limitations of claims 3, 4, and 5 (*id.* at 61–62 (citing Ex. 1002 § IX. B.d., ¶ 127; Ex. 1007, 3:59–61, 6:56–60)). Petitioner also contends that “it would have been an obvious design choice whether to use one or a plurality of materials to achieve the benefits of gradient compression.” *Id.* at 62 (citing Ex. 1002 ¶ 129).

a) Asserted Reason to Combine

Petitioner argues that Won and Norton are in the same field and disclose similar improvements. Pet. 48 (citing Ex. 1002 ¶ 110), 51 (citing Ex. 1001, codes (54), (57); Ex. 1002 ¶ 115; Ex. 1005, codes (54), (57); Ex. 1007, codes (54), (57)). According to Petitioner, one of ordinary skill in the art would have looked to Norton in considering how to improve Won’s sole. *Id.* at 48 (citing Ex. 1002 ¶ 48).

Petitioner argues that “[i]t would have been obvious to substitute a forefoot platform constructed of a single material having a varying density distribution, as taught by Norton, into the shoe disclosed in Won,” and that the combination would have had predictable results. Pet. 48 (citing Ex. 1002 ¶ 109). Petitioner also argues that Norton describes the advantages of using a single material and the benefits of a sole that is increasingly less compressible from inside to outside of the forefoot. *Id.* at 48–50 (citing Ex. 1002 ¶¶ 111–113; Ex. 1007, 1:63–2:50, 2:54–67, 3:9–24, 4:7–21, 6:33–

38, 9:30–34, 12:41–47, Figs. 11A–12). Petitioner further argues that the ordinarily skilled artisan would have had a reasonable expectation of success in making the proposed combination. *Id.* at 50–51 (citing Ex. 1002 ¶ 114; Ex. 1007, 2:20–3:24, Figs. 11A–12).

b) Patent Owner’s Preliminary Response

Patent Owner responds that Petitioner fails to show that its proposed combination includes “a heel platform having a first height that is substantially uniform around a perimeter of the heel platform” under its proposed interpretation. Prelim. Resp. 58 (citing Pet. 18–20). Patent Owner argues that the relied-upon disclosures show a heel platform from its side “which does not show that the heel platform is of a uniform height all around the perimeter.” *Id.* at 59. Patent Owner also argues that Won’s preference for a heel that is not tilted “says nothing about the perimeter of the heel.” *Id.* at 59–60 (citing Pet. 54; Ex. 1005, 2:51–57). In Patent Owner’s view, Won’s heel could have a non-uniform height and still not be tilted. *Id.* at 60 (citing Pet. 54; Ex. 1002 ¶ 118). Patent Owner further argues that a flat bottom surface does not show that the heel platform has a substantially uniform height. *Id.* at 60–61 (citing Pet. 55).

Patent Owner additionally argues that Petitioner’s argument that one of ordinary skill in the art would have understood conventional and typical shoes have a heel platform with substantially uniform height fails for the same reasons asserted for the challenge based on Norton alone. Prelim. Resp. 61 (citing Pet. 55). Turning to Petitioner’s asserted support from Norton and Giese, Patent Owner argues that they do not disclose the recited heel platform for reasons previously presented. *Id.* (citing Pet. 55–56).

Patent Owner also responds that Petitioner fails to show that Won and Norton would have rendered obvious a “forefoot platform [that] is

constructed of a second material having a gradient compression factor” because Petitioner acknowledges that Won does not disclose it and there is no evidence that one of ordinary skill in the art would have added Norton’s single material to Won as a second material. Prelim. Resp. 62 (citing Pet. 47–51, 56–59). Patent Owner argues that “[n]either Won nor Norton discuss[es] the heel material in any capacity, so there would be no suggestion to use a different material in the heel and in the forefoot.” *Id.* at 63 (citing Pet. 50). Patent Owner also argues that Petitioner’s relied-upon surfaces are not part of the sole, but surfaces to which spikes are attached. *Id.* (citing Ex. 1005, 4:46–58). Patent Owner further argues that Norton’s sole element cannot be used to replace a surface and that one of ordinary skill in the art would not have added Norton’s material to Won in view of Norton’s disclosure to use a single material, not two different materials. *Id.* at 63–64 (citing Pet. 49, 50; Ex. 1007, 3:9–15).

c) Petitioner Shows a Reasonable Likelihood of Prevailing

Based on the preliminary record, Petitioner sufficiently shows that its proposed combination teaches, suggests, or would have been understood to meet the limitations of claims 1–5 and 8 and that one of ordinary skill in the art would have combined Won and Norton in the manner asserted with a reasonable expectation of success.

Regarding the “heel platform having a first height that is substantially uniform around a perimeter of the heel platform,” Petitioner relies on its testimonial evidence to contend that one of ordinary skill in the art would have understood Won to have such a heel platform. Pet. 54–55 (citing Ex. 1002 ¶¶ 61–69, 118–120). At this stage, that as-yet unrebutted testimony sufficiently shows that Won has the required heel platform. *See* Ex. 1002 ¶¶ 61–69, 118–120. Parties should consider further developing the

record regarding this limitation during trial. Also, for the reasons discussed above for the challenge based on Norton, Petitioner sufficiently shows at this stage that Norton's sole element when used in a "sports shoe" would have the recited heel platform. *See* Pet. 39–40; Ex. 1002 ¶¶ 61–69, 92. Petitioner also shows on the present record that Norton would have been incorporated into Won so that the combination would have the required heel platform. *See* Pet. 55–56; Ex. 1002 ¶ 122.

Turning to the "forefoot platform [that] is constructed of a second material having a gradient compression factor," on the present record, Petitioner's reliance on the description in Won of the soft surface on the inside of its sole sufficiently shows a forefoot platform made of a material different from its heel. Pet. 56–57; Ex. 1002 § IX.D.e.; Ex. 1005, 4:46–58, Fig. 5. Figure 5 appears to show that Won's heel and soft surface are made of materials different in some manner, such as softness.

Also, the portions of Won and Norton cited by Petitioner, at this stage, show that Norton's sole element with a varying density distribution in a transverse or longitudinal direction would have been used in Won's forefoot for the advantages and benefits described in Norton. Pet. 48–50, 56–58; Ex. 1002 ¶¶ 111–113; Ex. 1005, 4:46–59, 6:28–36, Fig. 5; Ex. 1007, 1:63–2:50, 2:54–67, 3:9–24, 3:33–43, 4:7–21, 6:33–38, 7:44–58, 8:12–18, 9:30–34, 12:41–47, Figs. 4B, 11A–12. The preliminary record supports that using Norton in Won would have "improve[d] upon the dual-material design of Won." Pet. 57; Ex. 1002 § IX.D.e.

The preliminary record supports Petitioner's implied argument that the proposed combination would have had different materials for Norton's sole element that Petitioner proposes to use in Won's forefoot and the

“conventional” heel disclosed in Won. *See* Pet. 55, 56–58. The parties should consider further developing this issue during trial.

There is insufficient evidence in the present record to show that Norton’s sole element would not have been used to replace the forefoot of Won’s sole or for attaching spikes, as shown in Won. *See* Prelim. Resp. 63–64. On the record before us, incorporating the single-material sole element of Norton into Won appears to be consistent with Norton’s teachings to use a single material for the sole element. *See id.* At this stage, Norton does not appear to be teaching the use of a single material for the entire sole, just the sole element with a varying density distribution. *See, e.g.,* Ex. 1006, 3:9–15, 4:59–62. The parties should also consider developing further these issues during trial.

For the reasons above, Petitioner shows a reasonable likelihood of prevailing on its challenge based on Won and Norton.

H. Obviousness Based on Won and Talarico ’911

1. Talarico ’911 (Ex. 1008)

Talarico ’911 provides an article of footwear that includes a sole with a “sole forefoot portion [that] is comprised of different compressibilities of materials . . . thereby providing an effective inclined surface” because of “less compressible material at the lateral aspect of the forefoot than at the medial aspect.” Ex. 1008, code (57). Talarico ’911 “is intended for any and all footwear wherein dual-density or dual-compressibility materials . . . may be incorporated into either the midsole, outersole or innersole.” *Id.* at 1:11–15. In Talarico ’911, “‘dual-density’ shall be understood particularly to mean ‘dual-compressibility.’” *Id.* at 1:17–18. Figures 5, 9, and 13 are reproduced below.



FIG. 5

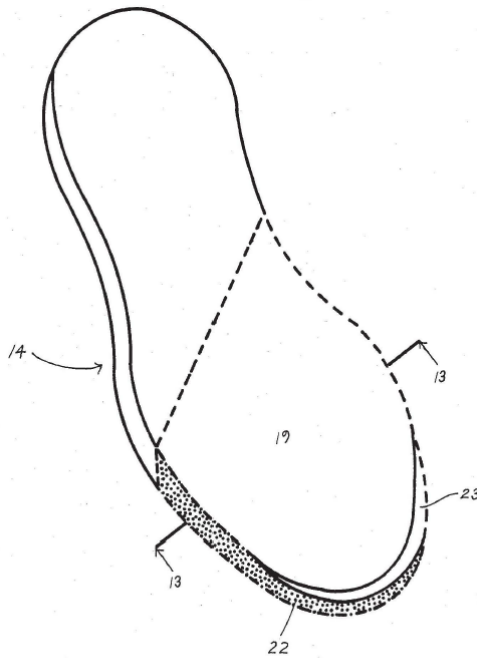


FIG. 9

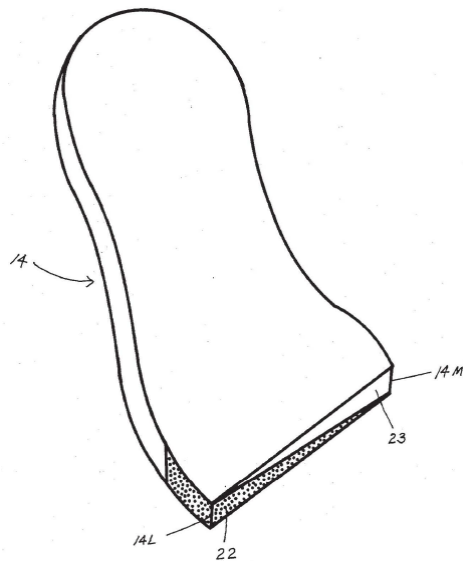


FIG. 13

Figure 5 is a plan view of a skeletal right foot viewed top to bottom showing a “dual-density forefoot valgus compensation” with a broken line.

Ex. 1008, 14:35–42. Figure 9 is a perspective plan view of a right midsole showing the dual-density forefoot valgus compensation in phantom, and Figure 13 is a perspective, cross-sectional view along line 13-13 of Figure 9. *Id.* at 14:67–15:6, 15:23–25.

Midsole 14 includes an area of a 45-degree split dual-density forefoot valgus compensation 19. Ex. 1008, 19:44–46, Fig. 9. Shaded area 22 represents denser material, and non-shaded area 23 represents a less dense material. *Id.* at 19:47–49, Figs. 9, 13. The use of different materials creates an effective upward slope 14L. *Id.* at 19:50–52, Fig. 13.

2. *Claims 1–5 and 8*

Petitioner states that this challenge is similar to the challenge based on Won and Norton, “but relies on Talarico ’911 rather than Norton . . . to disclose a forefoot platform that is ‘increasingly less compressible’ from its inner edge to its outer edge.” Pet. 62 (citing Ex. 1002 ¶ 130); *see also id.* at 62 (providing overview of the proposed combination) (citing Ex. 1002 ¶ 131), 63 (arguing it would have been obvious to modify Won in view of Talarico ’911) (citing Ex. 1002 ¶ 132).

For the preamble of claim 1 and the recited “upper section,” “sole section,” and wherein clause regarding the first thickness of the forefoot platform being greater than the second thickness, Petitioner refers to arguments based on Won and Norton. Pet. 65 (citing Ex. 1002 ¶ 136). For the recited “heel platform,” Petitioner argues that Won teaches it for the reasons previously asserted and that one of ordinary skill in the art would have concluded from disclosures in Talarico ’911 that its heel platform has a substantially uniform height around its perimeter. *Id.* at 65–66 (citing Ex. 1002 ¶¶ 61–69, 137, 138; Ex. 1008, 6:56–62, 12:1–3, 21:22–23, Figs. 8–15). Petitioner alternatively argues that it would have been obvious to

incorporate that heel platform of Talarico '911 into Won. *Id.* at 66 (citing Ex. 1002 ¶ 138).

For the recited “forefoot platform,” Petitioner argues that Won teaches the limitation for the reasons previously asserted and, to the extent the limitation requires the forefoot platform to be “increasingly less compressible” from inner to outer edges, it would have been obvious in view of Talarico '911’s express disclosures of “dual-density or dual-compressibility materials.” Pet. 66–68 (citing Ex. 1001, Fig. 112; Ex. 1008, 1:11–18, 11:42–55, 12:41–47, Figs. 9, 13). According to Petitioner, Talarico '911 discloses that “the varied density across the forefoot platform would cause the sole elements to compress more near their inner edge than near their outer edge when the weight of an athlete is applied to the shoe.” *Id.* at 68 (citing Ex. 1002 ¶ 139; Ex. 1008, code (57), 19:50–63). Petitioner argues that, during prosecution, the Examiner made a similar finding. *Id.* at 68–69 (citing Ex. 1002 ¶ 140; Ex. 1011, 15).

For claims 2 and 8, Petitioner refers to arguments based on Won and Norton. Pet. 65 (citing Ex. 1002 ¶ 136). For claims 3–5, Petitioner argues that Talarico '911 teaches their limitations. *Id.* at 69 (citing Ex. 1002 § IX.E.e., ¶¶ 141, 143; Ex. 1008, 18:45–47). For claim 4, Petitioner argues that Won also discloses its limitations. *Id.* (citing Ex. 1002 § IX.E.e., ¶ 142; Ex. 1005, 4:50–52).

a) Asserted Reason to Combine

Petitioner argues that Won and Talarico '911 are in the same field. Pet. 63 (citing Ex. 1002 ¶ 133), 64–65 (citing Ex. 1001, codes (54), (57); Ex. 1002 ¶ 135; Ex. 1005, codes (54), (57); Ex. 1008, codes (54), (57)). According to Petitioner, one of ordinary skill in the art would have looked to Talarico '911 and “would have understood that a sole that is increasingly

less compressible from the inside to the outside of the forefoot” has “several benefits.” *Id.* at 63 (citing Ex. 1002 ¶ 133); *see also id.* at 68 (arguing that the ordinarily skilled artisan “would have been motivated to replace the vertical intersection of the two sole materials disclosed in Won with the angled intersection between the materials as disclosed in Talarico ’911 to gain the described benefits”) (citing Ex. 1002 ¶ 139).

Petitioner argues that, as explained in Talarico ’911, “its design is ‘generally preferred to the medial and lateral half dual-density methods because of a more even and gradual alteration of the weight-bearing gravitational forces as they are delivered and directed across the forefoot section of the footwear.’” Pet. 63 (citing Ex. 1008, 12:41–47, 13:23–45). Petitioner also argues that the ordinarily skilled artisan would have had a reasonable expectation of success in making the proposed combination. *Id.* at 64 (citing Ex. 1002 ¶ 134).

b) Patent Owner’s Preliminary Response

Patent Owner responds that Petitioner fails to show that its proposed combination includes “a heel platform having a first height that is substantially uniform around a perimeter of the heel platform.” Prelim. Resp. 64–65 (citing Pet. 65). Patent Owner refers to its previous arguments that Won does not disclose the recited heel platform. *Id.*

Regarding Talarico ’911, Patent Owner argues that the Office previously determined that it does not teach the recited heel platform. Prelim. Resp. 65 (citing Pet. 65; Ex. 1011, 15). Patent Owner also argues that other portions of the heel having a consistent thickness does not show a perimeter with a uniform height. *Id.* at 65–66 (citing Pet. 65). Patent Owner further argues that the contention that one of ordinary skill in the art would have understood conventional and typical shoes have a heel platform with

substantially uniform height fails for the same reasons previously asserted. Prelim. Resp. 66.

Patent Owner also responds that Petitioner fails to show that Won and Talarico '911 would have rendered obvious a “forefoot platform [that] is constructed of a second material having a gradient compression factor” because Petitioner acknowledges that Won does not disclose it and there is no evidence that one of ordinary skill in the art would have added Talarico '911's single material to Won as a second material. Prelim. Resp. 66–67 (citing Pet. 62–64, 66–69). Patent Owner argues that both references are directed to the forefoot portion, not the heel portion, and that neither suggests using a different material in the two portions. *Id.* at 67 (citing Pet. 65; Ex. 1008, 6:56–62).

c) Petitioner Shows a Reasonable Likelihood of Prevailing

Based on the preliminary record, Petitioner sufficiently shows that its proposed combination teaches or suggests the limitations of claims 1–5 and 8 and that one of ordinary skill in the art would have combined Won and Talarico '911 in the manner asserted with a reasonable expectation of success.

As discussed above for the challenged based on Won and Norton, at this stage, Petitioner provides sufficient argument and evidence that one of ordinary skill in the art would have understood Won to meet the recited heel platform. Pet. 54–55 (citing Ex. 1002 ¶¶ 61–69, 118–120), 65. We, therefore, do not need to address for purposes of this Decision whether Talarico '911 teaches the same limitation that Patent Owner asserts the Office previously found was lacking in Talarico '911. Prelim. Resp. 65 (citing Pet. 65; Ex. 1011, 15). The parties, nonetheless, should consider addressing this issue during trial.

Similar to the challenge based on Won and Norton, Petitioner sufficiently argues that Won teaches the recited forefoot platform made of a second material. Pet. 66. Petitioner also, at this stage, presents adequate reasons with citations to the record that the ordinarily skilled artisan would have combined Won and Talarico '911 for the benefits described in Talarico '911. *See* Pet. 63, 68. We understand Petitioner to be arguing that the proposed combination would have resulted in materials different in some manner for the forefoot and heel, as shown, for example, in Figure 5 of Won.

For the reasons above, Petitioner shows a reasonable likelihood of prevailing on its challenge based on Won and Talarico '911.

I. Obviousness Based on Won, Talarico '911, and Gallas

1. Claims 1–5 and 8

Petitioner argues that, to the extent that Won and Talarico '911 do not disclose a heel platform “having a first height that is substantially uniform around a perimeter of the heel platform,” Gallas discloses the limitation, and Won, Talarico '911 and Gallas would have rendered obvious claims 1–5 and 8. Pet. 70 (citing Ex. 1002 ¶¶ 144, 145), 72 (citing Ex. 1002 ¶ 151). For the preamble and remaining limitations of claim 1, Petitioner refers to arguments based on Won and Talarico '911. *Id.* at 72 (citing Ex. 1002 ¶ 150). For claims 2–5 and 8, Petitioner refers to arguments based on Won and Talarico '911. *Id.* (citing Ex. 1002 ¶ 150).

a) Petitioner's Asserted Reason to Combine

Petitioner argues that Won, Talarico '911, and Gallas are in the same field. Pet. 70 (citing Ex. 1002 ¶ 147), 72 (citing Ex. 1001, codes (54), (57); Ex. 1002 ¶ 149; Ex. 1005, codes (54), (57); Ex. 1008, codes (54), (57); Ex. 1020, codes (54), (57)). According to Petitioner, one of ordinary skill in

the art would have looked to Gallas and would have understood that incorporating a heel platform with a substantially uniform height around its perimeter, “as opposed to a heel platform that is angled, . . . provides a flat surface for the wearer’s heel which provides additional stability, e.g., during the player’s upswing, when weight is placed on the heels.” *Id.* at 71 (citing Ex. 1002 ¶ 147; Ex. 1020 ¶ 17). Petitioner also argues that the ordinarily skilled artisan would have had a reasonable expectation of success in making the proposed combination. *Id.* at 71–72 (citing Ex. 1002 ¶ 148).

b) Patent Owner’s Preliminary Response

Patent Owner responds that Won and Talarico ’911 do not disclose or render obvious “heel platform having a first height that is substantially uniform around a perimeter of the heel platform.” Prelim. Resp. 68.

Patent Owner also argues that Petitioner relies on Gallas for “a heel platform that has a substantially uniform height around a perimeter of the heel platform,” but Gallas does not disclose such a heel platform. Prelim. Resp. 68 (quoting Pet. 72). According to Patent Owner, Gallas discloses that rear portion 110 has a greater elevation than front portion 108. Prelim. Resp. 68–69 (citing Pet. 36; Ex. 1020 ¶¶ 20, 21, 28, 29, Fig. 2).

Patent Owner further argues that “Petitioner does not provide any additional argument from Gallas regarding” “a forefoot platform juxtaposed to the heel platform, wherein the forefoot platform is constructed of a second material having a gradient compression factor.” Prelim. Resp. 70 (citing Pet. 72). Patent Owner refers to previous arguments that Won and Talarico ’911 also do not disclose or render obvious the limitation. *Id.*

c) Petitioner Shows a Reasonable Likelihood of Prevailing

Based on the preliminary record, Petitioner sufficiently shows that its proposed combination teaches or suggests the limitations of claims 1–5 and

8 and that one of ordinary skill in the art would have combined Won, Talarico '911, and Gallas in the manner asserted with a reasonable expectation of success.

For the reasons discussed above, at this stage, Petitioner sufficiently shows that Won and Talarico '911 teach or suggest a “heel platform having a first height that is substantially uniform around a perimeter of the heel platform” and “a forefoot platform juxtaposed to the heel platform, wherein the forefoot platform is constructed of a second material having a gradient compression factor.” Ex. 1001, 43:29–30, 33–36. Whether Gallas teaches the required heel platform will be considered after the record has been developed during trial.

IV. CONCLUSION

After considering the evidence and arguments presented in the Petition and the cited evidence, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing in proving that at least one of claims 1–5 and 8 of the '768 patent is unpatentable, and thus, we institute an *inter partes* review of all challenged claims on all presented challenges. 37 C.F.R. § 42.108(a).

At this stage of the proceeding, the Board has not made a final determination as to the patentability of any challenged claim or any underlying factual and legal issues.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–5 and 8 of U.S. Patent No. 11,375,768 B2 is instituted with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of U.S. Patent No. 11,375,768 B2 shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

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