

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNDER ARMOUR, INC.,
Petitioner,

v.

ATHALONZ, LLC,
Patent Owner.

IPR2024-00640
Patent 11,510,456 B2

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

DEFRANCO, *Administrative Patent Judge*.

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

Athalonz, LLC (“Athalonz”) is the owner of U.S. Patent No. 11,510,456 B2 (Ex. 1001, “the ’456 patent”). Under Armour, Inc. (“Under Armour”) filed a petition for *inter partes* review of claims 1–5, 7, 9–15, and 17 of the ’456 patent. *See* Paper 1 (“Pet.”). In due course, Athalonz filed a preliminary response. *See* Paper 6 (“Prelim. Resp.”). And, per our authorization, Under Armour filed a *Sotera* stipulation. *See* Paper 7. Exercising our jurisdiction under 35 U.S.C. § 314(a), we institute *inter partes* review of the challenged claims.

I. BACKGROUND

A. Related Matters

The ’456 patent is presently the subject of the following federal district court action: *Athalonz, LLC v. Under Armour, Inc.*, No. 2:23-cv-00193 (E.D. Tex.). *See* Paper 4. The district court action also involves four other patents that are also the subject of petitions for *inter partes* review: IPR2024-00636 (US 10,674,786); IPR2024-00637 (US 11,013,291); IPR2024-00638 (US 11,064,760); and IPR2024-00639 (US 11,375,768). *See* Paper 6, at 13.

B. The ’456 Patent

The ’456 patent relates generally to “athletic positioning footwear.” Ex. 1001, 1:43–44. According to the ’456 patent, prior athletic positioning footwear included an upper, a sole, an insole, and cleats or spikes, and was known to have a “sole and/or padded insole [that] provide[s] a relatively flat platform for the foot” or, alternatively, a “heel portion of the shoe [that is] higher than the toe portion of the shoe from a side perspective.” *Id.* at 1:54–2:4, Figs. 1–2. But, unlike prior footwear, the claimed invention purports to have a forefoot platform that is constructed to be more compressible near its

inner edge than its outer edge. *Id.* at 27:47–54, 33:60–34:30, Figs. 93–94, 112–113.

C. Challenged Claims

Of the challenged claims, claims 1 and 10 are independent. Claim 10 exemplifies the challenged claims and reads as follows:

10. 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 substantial uniform from an inner edge of the sole section to an outer edge of the sole section, wherein the heel platform is constructed of a first material; and
 a forefoot platform juxtaposed to the heel platform, wherein the forefoot platform is constructed to have a first level of compression proximal to the outer edge of the shoe and a second level of compression proximal to an inner edge of the shoe, wherein the second level of compression is greater than the first level of compression.

Ex. 1001, 44:15–29 (emphasis added).

D. Asserted Challenges

Claims Challenged	35 U.S.C. §	Basis
10, 11, 15, 17	103	Won ¹
1–5, 7, 9, 12–14	103	Won, Norton ²
1–5, 7, 9, 12–14	103	Won, Talarico ³
1–5, 7, 9–15, 17	103	Umezawa ⁴
1–5, 7, 9–15, 17	103	Norton
1–5, 7, 9–15, 17	103	Talarico

¹ US 6,158,151, issued Dec. 12, 2000 (Ex. 1005, “Won”).

² US 7,464,428 B2, issued Dec. 16, 2008 (Ex. 1007, “Norton”).

³ US 4,642,911, issued Feb. 17, 1987 (Ex. 1008, “Talarico”).

⁴ US 2007/0107258 A1, published May 17, 2007 (Ex. 1006, “Umezawa”).

In further support of these challenges, Under Armour relies on the declaration of Grant Delgatty. *See* Ex. 1002. Athalonz chose not to submit a declaration in rebuttal at this stage.

II. ANALYSIS

A. Discretionary Denial Under 35 U.S.C. § 314(a)

Athalonz requests that we discretionarily deny institution under 35 U.S.C. § 314(a) due to the advanced state of the parallel district court action. *See* Prelim. Resp. 21–34. Under Armour disputes that discretionary denial is warranted (Pet. 72–73), but nonetheless submits a *Sotera* stipulation (Paper 7) per our authorization. In light of Under Armour’s *Sotera* stipulation, we will not discretionarily deny institution under § 314(a). *See* Director Memorandum, *Interim Procedure for Discretionary Denials in AIA-Post Grant Proceedings With Parallel District Court Litigation*, U.S. PATENT AND TRADEMARK OFFICE (June 21, 2022), at 3, 7.

B. Level of Ordinary Skill in the Art

Under Armour proposes, and Athalonz agrees, that one of ordinary skill in the art would have had

(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’ experience designing or developing athletic shoes.

Pet. 17–18 (citing Ex. 1002 ¶ 31); Prelim. Resp. 12 (accepting Under Armour’s proposed definition “[f]or present purposes”). At this stage, we see no reason to depart from Under Armour’s proposed definition, as it appears reasonable and consistent with the asserted prior art.

C. Claim Construction

Under Armour proposes a claim construction for two limitations in claim 1: “gradient compression factor” and “a heel platform having a first

height that is substantial[ly] uniform from an inner edge of the sole section to an outer edge of the sole section.” *See* Pet. 13–16. Athalonz does not dispute Under Armour’s proposed constructions, but proposes additional constructions for: (1) the recitation in claim 1 of “a first material” and “a second material,” and (2) the recitation in claims 1 and 10 of “near an outer edge of the sole section”/“proximal to the outer edge of the shoe” and “near an inner edge of the sole section”/“proximal to an inner edge of the shoe.” *See* Prelim. Resp. 13–21. We address the parties’ proposed constructions as follows.

1. “*gradient compression factor*”

Claim 1 recites that the foot platform is constructed of a second material having a “gradient compression factor, wherein, when . . . weight of the athlete is applied to the athlete 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.”

Although the ’456 patent does not explicitly define “gradient compression factor,” the specification provides 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 skilled in the art would likely understand “gradient compression factor” to mean that the insole material may have varying levels of compressibility. And, when read in the context of claim 1 (and as Under Armour correctly notes), it means that the second material is increasingly less compressible from the inner edge to the outer edge of the forefoot platform. *See* Pet. 14–15. Athalonz does not dispute that understanding of “gradient compression factor” as used in claim 1. *See* Prelim. Resp. 13–14 (stating that, “unless otherwise stated below, Patent Owner adopts Petitioner’s claim construction proposals for purposes of this preliminary response”). 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. “*heel platform*”

Under Armour construes the “heel platform” limitation of claim 1 to mean “the portion of the shoe *where the heel of the foot sits*, not the inner and outer-most edges of the shoe” such that the heel platform “includes some degree of curvature and height change from its inner edge to its outer edge.” Pet. 15–16. Athalonz does not dispute Under Armour’s proposed construction of this claim limitation. *See* Prelim. Resp. 35 (expressly stating as much); *see also id.* at 40 (agreeing that the proper construction “require[s] the heel height from an inner edge to an outer edge be uniform ‘where the heel of the foot sits, not the inner and outer-most edges of the shoe’”). At this stage, we find the parties’ agreed-upon construction of the “heel

platform” limitation to be reasonable and consistent with the intrinsic record. Thus, we adopt it for purposes of this Decision.

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

Claim 1 recites that the heel platform is constructed of “a first material” and the forefoot platform is constructed of “a second material.” Ex. 1001, 43:29–35. Athalonz contends that, as claimed, “the ‘first material’ and ‘second material’ are set forth as separate limitations and so should be required to be met by *different* materials.” Prelim. Resp. 16 (emphasis added). Athalonz also points to the specification of the ’456 patent as supporting such a construction. *See id.* at 17 (“That is precisely how the terms are used in the ’456 patent: to distinguish between materials that are *in some way different* (for example, they are totally different materials, or they consist of materials combined in different ways).” (emphasis added)); *see also id.* at 2–5 (“[T]he heel and the forefoot [are] constructed of different material compositions (i.e., there is a greater proportion of ‘Compressible Material #2’ in the heel platform than in the forefoot platform”).”).

We agree with Athalonz. 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”). Under Armour does not dispute that convention, but nonetheless proposes an alternative construction in the event Athalonz contends that they can be the same material. *See* Pet. 27 n.1 (noting Athalonz’s “apparent” construction in the related district court action). But Athalonz makes no such contention, conceding that it has “never contended that the first and second material can be the same material.” Prelim. Resp.

18. Thus, Under Armour’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. Nonetheless, the parties are free to explore this issue further at trial.

4. “*near an outer edge of the sole section*” / “*proximal to the outer edge of the shoe*” / “*near an inner edge of the sole section*” / “*proximal to an inner edge of the shoe*”

Athalonz argues “[t]here is no reason to apply inconsistent or different constructions” to the terms “*near an*” and “*proximal to*” as used in claims 1 and 10, apparently accusing Under Armour of doing so in the context of construing the term “*heel platform*.” Prelim. Resp. 21 (citing Pet. 15–16). But, aside from making that accusation, Athalonz provides no further explanation. *See id.* And, based on our review, it does not appear that Under Armour is construing those terms differently. Thus, without more as to exactly how Under Armour is applying an incorrect construction, we need not further address Athalonz’s argument. *See 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)).

D. Obviounsess Over Won

Under Armour challenges claims 10, 11, 15, and 17 as being obvious over Won. *See* Pet. 21–27. In doing so, Under Armour explains how Won satisfies each claim element and provides testimony from its expert in support. *See id.* (citing Ex. 1002 ¶¶ 62–68).

We begin with independent claim 10, which recites the disputed claim limitation of “a heel platform having a first height that is substantial[ly] uniform from an inner edge of the sole section to an outer edge of the sole section.” As discussed above, the parties agree that this claim limitation should be construed to require that the heel height be substantially uniform from an inner edge to an outer edge of “where the heel of the foot sits” and “not the inner and outer-most edges of the shoe.” *See* Section II.C.2. With that in mind, Athalonz argues that Won fails to disclose this limitation because the figures on which Under Armour relies—Figures 2, 6, and 7—“only show the heel height from the side,” and Figure 5, on which Under Armour also relies, “similarly . . . shows the heel platform from below.” Prelim. Resp. 35; *see also* Pet. 23–24 (discussing Ex. 1005, Figs. 2, 5, 6, 7). “Without a figure showing the back of the shoe (or an equivalent disclosure),” Athalonz argues, Won “does not show that the heel platform has a uniform height *along the width (from the inner edge to the outer edge)*.” *Id.*; *see also id.* at 36 (“it says nothing about the heel along its width”).

We agree that Won does not include a figure depicting the thickness of the sole in the transverse direction, i.e., along its width. What Athalonz ignores, however, is that Under Armour additionally relies on the knowledge that one skilled in the art would bring to the table when reviewing Won’s description of the figures. *See* Pet. 22–24. More specifically, as Under Armour correctly notes, one skilled in the art would have understood that the heel platform depicted in many of Won’s figures is the same as that found in “conventional” golf shoes. *Id.* at 24 (citing Ex. 1002 ¶¶ 55–61, 66). Indeed, Won expressly discloses that its Figures 6 and 7 illustrate “the sole of a conventional golf shoe[.]” Ex. 1005, 1:42–62. And the conventional heel

platform shown in Won's Figures 6 and 7 appears to be no different than the heel platform shown in Won's Figures 2 and 5, which concern only changes to the intermediate metatarsal and toe portions of the shoe but not the heel portion. *Compare* Ex. 1005, Figs. 6 and 7 *with id.*, Figs. 2 and 5; *see also* Prelim. Resp. 47 (acknowledging that "Won is only concerned with the forefoot material"). Thus, reading Won as a whole, one skilled in the art would clearly recognize that, while the angle and elasticity of the metatarsal and toe portions of the shoe are modified to promote balance and stability during the swing, the heel portion is "flat (0°)" and of uniform thickness as is the "standard" with conventional golf shoes. Ex. 1002 ¶¶ 55–61, 65–67; Ex. 1005, 5:28–29, 6:20–33.

To the extent Athalonz argues that such an understanding by one skilled in the art "makes no sense and is unsupported by the evidence," we disagree. Prelim. Resp. 38. As noted above, Won discloses a golf shoe with a "conventional" heel platform. Ex. 1005, 1:42–62, Figs. 2, 5, 6, 7. And Under Armour submits unrebutted expert testimony that one skilled in the art reasonably would have understood that Won's conventional heel has a substantially uniform thickness, which the expert amply supports with evidence of the knowledge in the art at the time, including Nike's "Air Force One" athletic shoe (Ex. 1016, Fig. 7), Footjoy's "Style 51409" golf shoe (Exs. 1014, 1015), and Tretorn's golf shoe (Ex. 1017, Fig. 4). Moreover, contrary to Athalonz's assertion, Under Armour need not prove that "every" conventional shoe has a heel of uniform height (Prelim. Resp. 39); rather, it need only prove that one skilled in the art would have recognized that Won discloses such a heel or that it would have been obvious for Won to have such a heel, given Won's description and depiction of a "conventional" heel

and the prior knowledge in the art of how a conventional heel is typically constructed.

In sum, Athalonz’s arguments attack individual aspects of Won and the prior knowledge in the art while ignoring, first, Won’s disclosure as a whole, and, second, the fact that one skilled in the art would have read Won knowing the standard construction of conventional golf shoes. Thus, based on the current record, we find that Won satisfies the “heel platform” limitation of claim 10.

Athalonz does not dispute Under Armour’s showing of how Won discloses the other limitations of claim 10, as well as dependent claims 11, 15, and 17. *See* Prelim. Resp. 34–42 (arguing only the “heel platform” limitation of claim 10). In reviewing the preliminary record, we find that Under Armour sufficiently shows that Won discloses each of those additional limitations. *See* Pet. 21–22, 24–27. Thus, at this stage, Under Armour demonstrates a reasonable likelihood that independent claim 10, as well as dependent claims 11, 15, and 17, are unpatentable as obvious over Won.

E. Under Armour’s Additional Challenges

Under Armour challenges the other independent claim of the ’456 patent—claim 1—as obvious over Won in view either Norton or Talarico, and as obvious over several references alone: Umezawa, Norton, or Talarico. *See* Pet. 2, 27–72. Claim 1 of the ’456 patent has substantial overlap with claim 1 of a related patent, US 11,375,768, which we address in IPR2024-00639 (“639 IPR”). There, we find that Under Armour demonstrates a reasonable likelihood of showing that claim 1 of the related ’768 patent is obvious based on several of the same grounds asserted here against claim 1 of the ’456 patent, namely Umezawa alone, Norton alone,

Won in view of Norton, and Won in view of Talarico. *See* 639 IPR, Paper 8, 14–21, 26–44. Indeed, in reviewing Athalonz’s arguments for claim 1 of the ’768 patent, we note that they are essentially the same as, if not identical to, the arguments Athalonz makes with respect to claim 1 of the ’456 patent here. *Compare* Prelim. Resp. 47–55 (Umezawa ground), 55–61 (Norton ground), 34–37, 42–45 (Won/Norton ground), 45–47 (Won/Talarico ground), *with* 639 IPR, Paper 6, 38–46 (Umezawa ground), 47–49, 54–58 (Norton ground), 58–64 (Won/Norton ground), 64–68 (Won/Talarico ground). As such, we incorporate here the relevant analysis from our Decision on Institution in the 639 IPR, and, for those reasons, find that Under Armour demonstrates a reasonable likelihood of showing that claim 1 of the ’456 patent is unpatentable.

III. CONCLUSION

For the above reasons, we determine that Under Armour demonstrates a reasonable likelihood of proving that at least claims 1, 10, 11, 15, and 17 are unpatentable as obvious. And because “[e]qual treatment of claims and grounds for institution purposes has pervasive support in *SAS*,” we institute on all the claims as challenged in the petition. *See* 37 C.F.R. § 42.108(a), (c); *PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (citing *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018)).

IV. ORDER

Accordingly, it is:

ORDERED that an *inter partes* review of claims 1–5, 7, 9–15, and 17 of the '456 patent is *instituted*; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), notice is hereby given of the institution of trial, which will commence on the entry date of this Decision.

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