

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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UNDER ARMOUR, INC.,  
Petitioner,

v.

ATHALONZ, LLC,  
Patent Owner.

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IPR2024-00637  
Patent 11,013,291 B2

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Before HYUN J. JUNG, CARL M. DEFRANCO, and  
MATTHEW S. MEYERS *Administrative Patent Judges*.

DEFRANCO, *Administrative Patent Judge*.

JUDGMENT

Final Written Decision

Determining All Challenged Claims Unpatentable

35 U.S.C. § 318(a)

Dismissing Patent Owner's Motion to Exclude

37 C.F.R. § 42.64(c)

## I. INTRODUCTION

Athalonz, LLC is the owner of U.S. Patent No. 11,013,291 B2 (Ex. 1001, “the ’291 patent”). Under Armour, Inc. filed a petition for *inter partes* review of claims 1–5 of the ’291 patent. *See* Paper 1 (“Pet.”). We instituted *inter partes* review of all claims as challenged in the petition. Paper 8 (“Inst. Dec.”).

Athalonz filed a patent owner response. Paper 12 (“PO Resp.”). Under Armour followed with a reply. Paper 15 (“Pet. Reply”). And Athalonz followed with a sur-reply. Paper 23 (“PO Sur-Reply”). Athalonz also filed a motion to exclude (Paper 29, “Mot.”), Under Armour filed an opposition to the motion (Paper 30, “Opp.”), and Athalonz filed a reply in support of the motion (Paper 33, “Mot. Reply”). We held an oral hearing on June 17, 2025, a transcript of which is in the record. Paper 38.

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons below, we determine that Under Armour has shown, by a preponderance of the evidence, that claims 1–5 of the ’291 patent are unpatentable under 35 U.S.C. § 103.

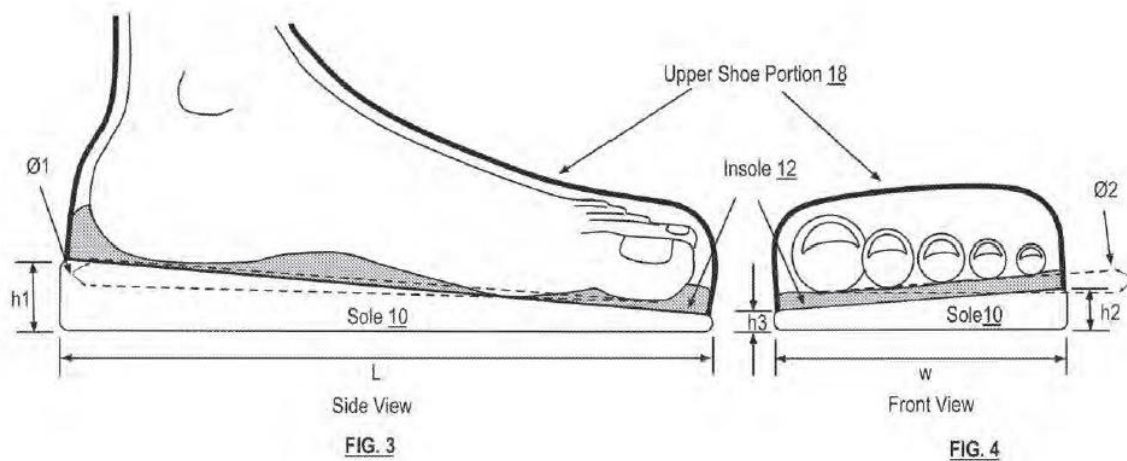
## II. BACKGROUND

### A. *Related Matters*

The ’291 patent is the subject of a parallel district court action: *Athalonz, LLC v. Under Armour, Inc.*, No. 2:23-cv-00193 (E.D. Tex.). *See* Pet. ix; Paper 3. The district court action involves four other patents that are also the subject of petitions for *inter partes* reviews: US 10,674,786 B2 (IPR2024-00636), US 11,064,760 B2 (IPR2024-00638), US 11,375,768 B2 (IPR2024-00639), and US 11,510,456 B2 (IPR2024-00640). *See* Paper 6, at 17.

*B. Overview of the '291 Patent (Ex. 1001)*

The '291 patent relates generally to “athletic positioning footwear.” Ex. 1001, 1:39–40. According to the '291 patent, prior athletic positioning footwear included an upper, a sole, an insole, and cleats or spikes, wherein “the sole and/or padded insole provide a relatively flat platform for the foot” and “the heel portion of the shoe may be higher than the toe portion of the shoe from a side perspective.” *Id.* at 1:56–67, Figs. 1–2. But, unlike prior athletic positioning footwear, the claimed invention purports to have an insole that positions a big toe lower than an outer toe, both of which are lower than the heel. *See id.* at 8:66–9:15, 10:1–22. Figures 3 and 4, reproduced below, are illustrative:



Figures 3 and 4 depict a left foot atop sole 10 where, due to the slope of the sole, the heel is at height h1, the little toe is at height h2, and the big toe is at height h3, where  $h3 < h2 < h1$ . *See id.* at 10:11–22.

*C. The Challenged Claims*

Claim 1 is the only independent claim in the '291 patent and recites:

1. A shoe comprises:
  - [1.1] an upper section;
  - [1.2] a midsole coupled to the upper section;
  - [1.3] an insole positioned proximal to the midsole and within the upper section; and
  - [1.4] a bottom outsole coupled to the midsole,
  - [1.5] wherein a combination of the midsole, the insole, and the bottom outsole form an athletic positioning shape, wherein the athletic positioning shape has:
    - [1.6] a first height at an inside edge and at an outside edge of the shoe along a heel section of the shoe,
    - [1.7] a second height on the outside edge of the shoe at a toe section of the shoe,
    - [1.8] a third height on the inside edge of the shoe at the toe section of the shoe, and
    - [1.9] the first height being greater than the second height and the second height being greater than the third height, wherein a first slope is formed by the first height and the second height, wherein a second slope is formed by the first height and the third height, and wherein a third slope is formed by the second height and the third height.

*D. Instituted Grounds of Unpatentability*

We instituted *inter partes* review of all challenged claims based on the following three grounds of unpatentability as presented in the petition:

Claims Challenged	35 U.S.C. §	Basis
1–5	103(a)	Kim <sup>1</sup>
1–5	103(a)	Dufour, <sup>2</sup> Kim
1–5	103(a)	Rubin, <sup>3</sup> Kim

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<sup>1</sup> US 2004/0040181 A1, published Mar. 4, 2004 (Ex. 1005, “Kim”).

<sup>2</sup> US 4,754,561, issued July 5, 1988 (Ex. 1006, “Dufour”).

<sup>3</sup> US 3,789,523, issued Feb. 5, 1974 (Ex. 1007, “Rubin”).

In further support of these challenges, Under Armour relies on the initial and supplemental declarations of Grant Delgatty. *See* Exs. 1002, 1022. Athalonz relies on the rebuttal declaration of Timothy Markison. *See* Ex. 2008. The parties also submit their cross-examinations of Mr. Delgatty and Mr. Markison. *See* Ex. 2010 (first deposition transcript of Mr. Delgatty); Ex. 2022 (second deposition transcript of Mr. Delgatty); Ex. 1023 (deposition transcript of Mr. Markison).

### III. ANALYSIS

#### A. *Level of Ordinary Skill in the Art*

Under Armour proposes 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 designing or developing athletic shoes.

Pet. 11 (citing Ex. 1002 ¶ 31). Athalonz responds that “[f]or purposes of this proceeding, Patent Owner does not dispute Petitioner’s level of ordinary skill.” PO Resp. 23 (citing Pet. 11). There being no dispute, we see no reason to depart from Under Armour’s proposed definition of the level of skill in the art, as it appears reasonable and consistent with the asserted prior art and the ’291 patent..

#### B. *Claim Construction*

##### 1. *“inside edge” and “outside edge”*

Claim 1 requires height measurements at an “inside edge” and an “outside edge” of the shoe. Ex. 1001, 43:23–28. Athalonz construes those terms to mean “the edges of the portion of the shoe where the foot sits” and that such construction is consistent with how one skilled in the art “would understand those terms in light of the specification.” PO Resp. 25 (citing

Ex. 2008 ¶¶ 85, 90–91). Athalonz explains that “[i]n light of the specification, the ‘inside’ and ‘outside edges’ in the claims do not refer to the edges of the exterior of the shoe.” *Id.* (citing Ex. 2008 ¶¶ 90–91).

Under Armour does not dispute Athalonz’s proposed construction of “inside edge” and “outside edge” as recited in claim 1. *See* Pet. 10; Pet. Reply 1. And, from our review of the record, Athalonz’s proposed construction appears consistent with the plain language of the claims and the specification. Thus, we adopt it for purposes of this decision.

2. *“athletic positioning shape”*

Athalonz argues that the term “athletic positioning shape” in claim 1 should be construed to mean “a heel section higher than the toe section and the outside edge of the toe section higher than the inside edge of the toe section.” PO Resp. 26; PO Sur-Reply 25. According to Athalonz, “[a]llowing ‘athletic positioning’ to have some broader or different meaning, or no meaning because of other limitations, is inconsistent with the patent’s own description.” PO Resp. 28.

In our institution decision, we declined to explicitly construe “athletic positioning shape” because it was unnecessary in view of the claim language itself. Inst. Dec. 5. More particularly, we explained that “claim 1 already appears to define the term by describing the various heights and slopes of the sole that provide ‘athletic positioning’ of the foot.” *Id.*

After considering Athalonz’s argument, we maintain that it is unnecessary to explicitly construe “athletic positioning shape” because its meaning is already captured in the claim through the recitation of the relationship between the various heights and slopes of the sole that define the “athletic positioning shape.” *See* Ex. 1001, 43:21–35. Those recitations translate into the relative heights proposed in Athalonz’s construction.

Nonetheless, Athalonz contends that we should adopt its proposed construction because it

incorporates the specification's consistent descriptions of "athletic positioning" in terms of relative heights and slopes. For example, one embodiment of an "athletic positioning shape" is where "the heel platform may be 10 to 30 mm higher" than "the toe cup and/or the ball of foot cup." [Ex. 1001], 13:3–8. Another embodiment discloses "an athletic positioning sole that includes an overall geometric shape" including "the heel of the sole [at] a particular height (e.g., h1, which may be 1's to 10's of mm) that slopes at an angle (e.g., Ø1) to the toe on the inside edge of the sole" which "may have a height of zero to a few millimeters." *Id.*, 10:11–16.

PO Resp. 27–28. We find, however, that Athalonz's proposed construction regarding particular heights and angles is nothing more than an attempt to improperly import limitations from the specification into claims.

*Superguide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) ("Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim.").

In sum, we determine that express claim construction of "athletic positioning shape" is not necessary to resolve the present dispute. *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))).

### *C. Ground 1—Obviousness Over Kim (Claims 1–5)*

Under Armor contends that claims 1–5 would have been obvious over Kim. Pet. 11–26. In doing so, Under Armour explains how Kim satisfies each limitation of claim 1 and provides supporting testimony in that regard

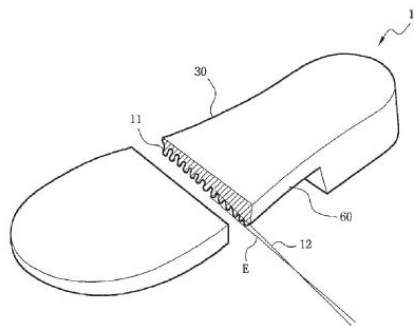
from its expert, Mr. Delgatty. *See id.* (citing Ex. 1002 ¶¶ 53–68). Athalonz disputes Under Armour’s assertions with rebuttal testimony from one the inventors listed on the face of the ’291 patent, Mr. Timothy Markison. *See* PO Resp. 29–47 (citing Ex. 2008); PO Sur-Reply 13–16.

We begin with an overview of Kim before addressing the parties’ arguments and evidence as to how Kim teaches and/or suggests each limitation of claims 1–5.<sup>4</sup> We then address Athalonz’s evidence of secondary considerations before deciding the ultimate question of obviousness.

*1. Overview of Kim (Ex. 1005)*

Kim is directed to a pair of golf shoes having an outsole with the lower surface inclined between its outer and inner edges. Ex. 1005 ¶ 2. The inclination assists a golfer in concentrating their weight balance on the inner edges of their feet during the swing motion, which Kim states allows the golfer to maintain a more stable position. *Id.* ¶ 12. Figure 2, reproduced below, depicts an exploded perspective view of the outsole of Kim’s golf shoe.

FIG. 2



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<sup>4</sup> Athalonz does not argue dependent claims 2–5 separately from claim 1 (*see* PO Resp. 47), hence, our focus on claim 1.



Figure 2 depicts a perspective view of the outsole of a golf shoe.

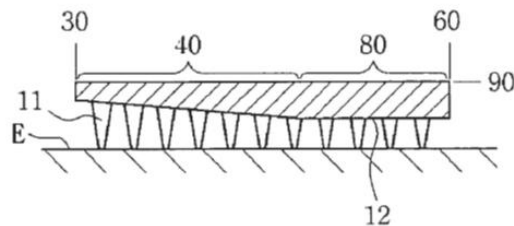
Ex. 1005 ¶ 19. Kim discloses that:

The outsole 10 includes a lower surface 12 inclined from its outer edge 60 to its inner edge 30 so that the outer edge 60 has a thickness larger than that of the inner edge 30. Except for the outsole 10 including the inclined lower surface 12, the golf shoe 100 of the present invention is substantially the same as conventional golf shoes.

*Id.* ¶ 27.

In order to provide that inclination during the swing but allow a golfer to walk stably on hard ground, the slope across the front edge of the shoe in Kim is complemented by the length of the spikes. Ex. 1005 ¶¶ 14–15. Figure 3b, reproduced below, depicts a cross-section of the sole of Kim's golf shoe when on hard ground.

**FIG. 3b**



As shown above, Kim's Figure 3b depicts a cross-section of an outsole of a golf shoe. *Id.* ¶ 21. The height of spikes 11 at inner edge 30 of the sole is shown larger than that of spikes 11 at outer edge 60 of the sole, while the thickness of the sole is thinner at inner edge 30 than outer edge 60. *Id.* ¶ 36. Accordingly, the combination of the sole's slope and the spikes' lengths makes it so the golfer can walk around normally on hard surfaces on the tips of the spikes, but adopt a more balanced position when swinging a

golf club once those spikes sink into the softer grass. *Id.* ¶ 38. Figures 5a and 5b of Kim show these positions:

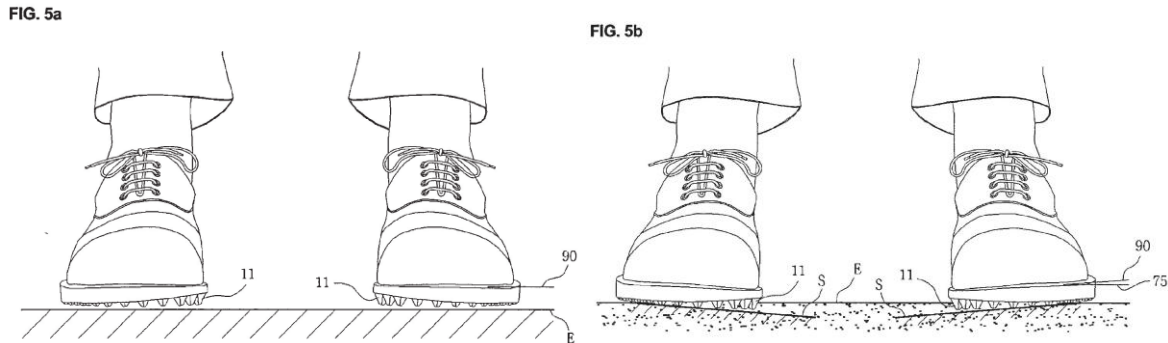


Figure 5a (left) illustrates the feet of a golfer in a pair of golf shoes standing on hard ground. *Id.* ¶ 38. The lengths of the spikes on the ground ensure that the golfer's feet are parallel with the ground (despite the sloped sole). *Id.* Figure 5b (right) illustrates the feet of a golfer in a pair of golf shoes standing on a green with their feet sloped inward. *Id.* ¶ 36. Figure 5b depicts the spikes sunk into the ground (line S) up to the sole, such that the golfer has their feet sloped inwardly. This position provides more grip for the golfer. *Id.*

## 2. Analysis

We begin with Under Armour's challenge of claim 1 based on Kim. *See* Pet. 11. For this challenge, Under Armour breaks claim 1 into nine parts (as annotated above in section II.C) and explains exactly where and how Kim teaches and/or suggests each of those claim elements. *See id.* at 12–21.

At the outset, we note that Athalonz does not dispute Under Armour's showing that Kim teaches or suggests a shoe comprising an upper section coupled to a combination of an insole, midsole, and outsole, as required by claim 1. Rather, the parties' dispute centers on the claim limitation reciting that the combination of soles form "an athletic positioning shape" having

three different heights—with “the first height being greater than the second height and the second height being greater than the third height”—so as to form “a first slope,” “a second slope,” and “a third slope.” Ex. 1001, 43:20–35 (claim 1).

Focusing on those claim limitations, Athalonz contends that Kim “does not disclose or render obvious the first, second, and third slopes that form from having different first, second, and third heights.” PO Resp. 30. According to Athalonz, as claimed, “these three heights are measured from the bottom of the outsole—which in a golf shoe like Kim is the bottom of the spikes—to the top of the insole.” *Id.* at 30–31 (citing Ex. 1001, 21:22–26, 28:16–19; Ex. 2008 ¶¶ 179–182); *see also* PO Sur-Reply 8 (“the claims require measuring various heights against the bottom surface of the shoe, not the ground”). Athalonz surmises, then, that “[b]ecause the heights in the claims are measured from the bottom of the shoe sole (the spikes in Kim), none of Kim’s embodiments disclose any of the claimed heights or slopes.” PO Resp. 30.

Under Armour, in turn, argues that Athalonz “improperly include[s] cleat height when measuring the claimed heights.” Pet. Reply 10 (citing Ex. 1022 ¶ 18). According to Under Armour, one of ordinary skill in the art “would understand that the claimed first, second, and third heights would be measured with respect to the bottom of the sole, not with respect to the bottom of the cleats.” *Id.* at 14. Under Armour contends that measuring heights with respect to the bottom of the sole is supported by “the intrinsic record, the prior art, and Athalonz’s prior analysis of the claim’s scope.” *Id.* at 6 (citing Ex. 1022 ¶¶ 10–17).

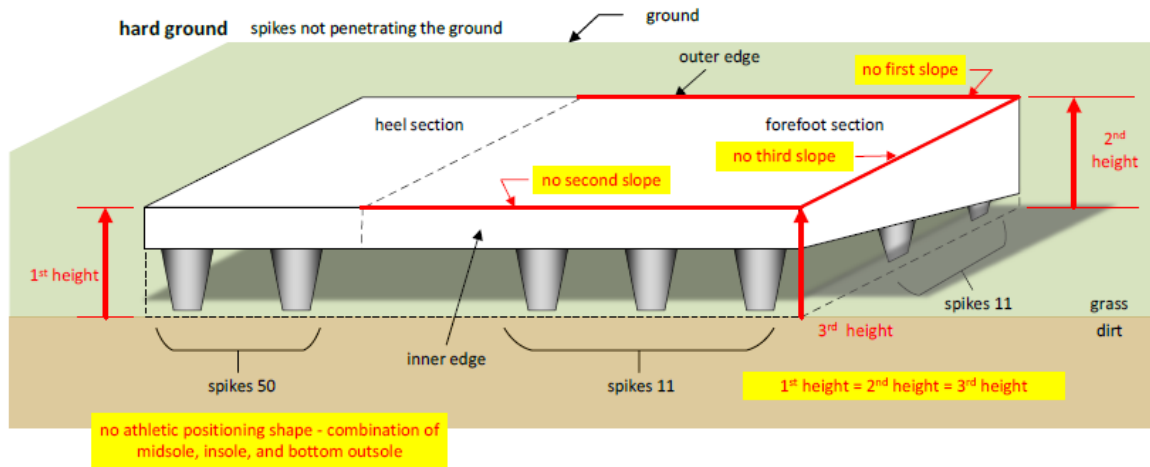
We agree with Under Armour that the claims do not require the claimed slopes to be measured with respect to the bottom of the cleats. *See*

Pet. Reply 6–10. In support, we credit the declaration testimony of Under Armour’s expert that one of ordinary skill in the art “would understand that the shape and orientation of the sole (*i.e.*, the platform on which an athlete stands) in relation to the *ground* is what determines if the foot is placed in an athletic position when in use” and that “[c]leats serve to provide traction, not athletic positioning.” *Id.* at 8 (citing Ex. 1022 ¶ 15). We also agree with Under Armour’s expert that one of ordinary skill in the art “would [] understand that because the cleats’ height does not contribute to the athletic positioning shape when in use on soft ground (the surface on which golf is played), it would not be included in the measurement of the claimed first, second, and third heights.” *Id.* at 8–9 (citing Ex. 1022 ¶ 16).

We find the testimony of Under Armour’s expert to be credible and supported by the trial record. For instance, the ’291 patent specification itself distinguishes between the “sole” and “cleats” of the shoe as separate components. Ex. 1001, 1:59–61. Similarly, Kim describes the sole and cleats as distinct components of a shoe, illustrating the industry’s understanding of these terms. Ex. 1022 ¶ 14; *see also* Ex. 1005 ¶¶ 9, 14, 15, 30, claim 1 (describing that the spikes, in Kim, “protrude” or “extend” from the “outsole” and are located below the outsole’s “lower surface.”). We also note that Athalonz’s inclusion of the height of Kim’s cleats in measuring the claimed “heights” appears to be inconsistent with its own litigation position in the parallel district court action. *See* Pet. Reply 9–10. In particular, as Under Armour notes, “Athalonz did not include the height of the cleats in the measurement of the claimed heights” in accusing Under Armour’s shoes that have cleats of infringement. *Id.* (citing Ex. 1025, 51, 55–56, 61–62 (Athalonz’s infringement contentions regarding claim limitations [1.6] and [1.9])).

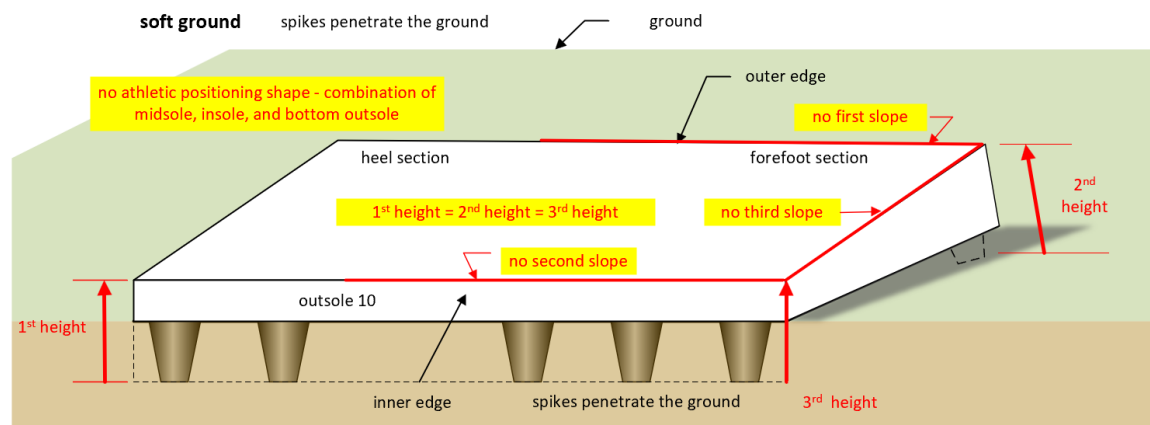
To the extent Athalonz asserts that its “infringement contentions are extrinsic evidence that should be afforded little weight” (PO Sur-Reply 12), we disagree. While Athalonz’s infringement contentions may indeed be extrinsic evidence, we nevertheless find they provide an indication of Athalonz’s understanding and application of the claims. As such, we find that Athalonz’s infringement contentions, *together with the plain language of the claims, the specification, and the credible testimony of Under Armour’s expert*, fully supports Under Armour’s assertion that one of ordinary skill in the art in the relevant time frame “would understand that the claimed first, second, and third heights would be measured with respect to the bottom of the sole, not with respect to the bottom of the cleats.” Pet. Reply 14; *see also* Ex. 1022 ¶¶ 10–24 (Under Armour’s expert confirming same).

Athalonz also contends that Kim fails to disclose the claimed first, second, and third heights, as well as the slopes resulting from those different heights, because “Kim’s primary embodiment” shows a first height along the heel section “which is *identical* to the second height at the outer toe section and the third height at the inner toe section.” PO Resp. 34 (emphasis added). Athalonz provides the following annotated diagram of Kim’s golf shoe to illustrate as much. *Id.* (citing Ex. 2008 ¶ 189).



According to Athalonz, the above diagram represents Kim's golf shoe on hard ground and shows that "the first, second, and third heights *are the same*," and, thus, "do not form first, second, or third slopes," as required by claim 1. *Id.* (citing Ex. 2008 ¶ 190) (emphasis added).

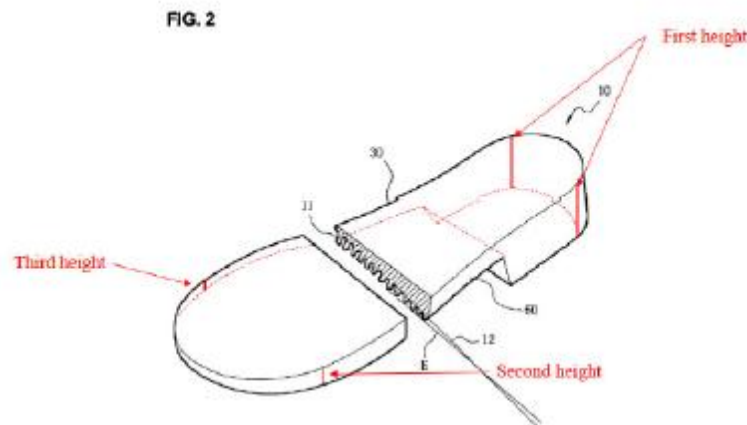
And, with respect to Kim's shoe on "soft ground," Athalonz argues that "nothing changes about the heights or slopes as claimed when the spikes of Kim penetrate the ground." *Id.* at 35. In support, Athalonz provides the following annotated diagram as representing Kim's golf shoe on soft ground. *Id.* at 36 (citing Ex. 2008 ¶ 190).



According to Athalonz, Kim's shoe on soft ground still fails to disclose the claimed heights and slopes because "the bottom of Kim's cleats

are still parallel to the upper surface of the outsole 10” and “the distance between the top of the foot platform and the bottom of the cleats remains the same.” *Id.* at 35 (citing Ex. 2008 ¶ 190; Ex. 2010, 91:6–9).

We have considered Athalonz’s arguments and diagrams. However, we agree with Under Armour that Athalonz’s “hard ground” and “soft surface” diagrams misrepresent Kim’s heel section as “being at the same level as the toe section and as having an identical thickness and inclined surface as the forefoot section.” Pet. Reply 11. Indeed, we find that Under Armour’s annotation of Kim’s Figure 2, reproduced below, more accurately identifies the first, second, and third heights of Kim’s golf shoe. *Id.* at 12 (citing Pet. 18; Ex. 1005, Fig. 2).

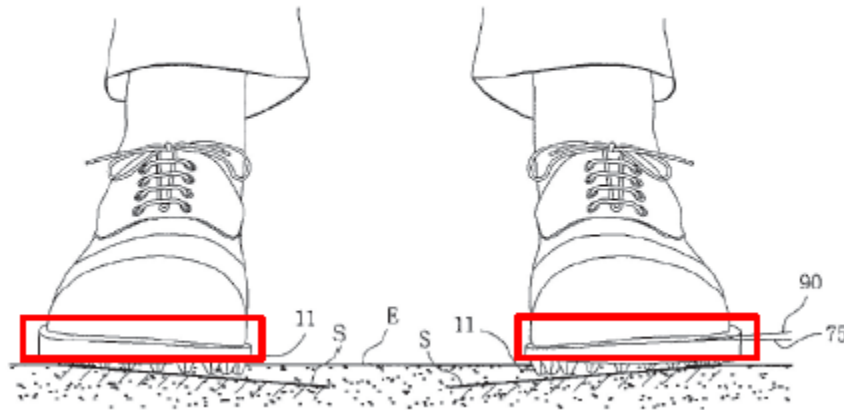


Annotated Figure 2 illustrates a perspective view of the outsole of Kim’s golf shoe, with a first height greater than a second height and the second height greater than a third height. Pet. 14–21 (citing Ex. 1002 ¶¶ 47–52, 56–62). Relying on annotated Figure 2, Under Armour asserts, and we agree, that one of ordinary skill in the art would not reasonably view the outsole of Kim’s golf shoe as supporting Athalonz’s position that Kim’s heel section is “at the same level” and has “an identical thickness” as Kim’s

forefoot section. Pet. Reply 11–12; *see also* Ex. 1022 ¶¶ 18–22 (Under Armour’s expert persuasively explaining as much).

Under Armour also annotates Figure 5b of Kim to show that the heel section of Kim’s golf shoe is taller than the toe section. Pet. Reply 13 (citing Ex. 1005, Fig. 5b; Ex. 1022 ¶ 21).

FIG. 5b



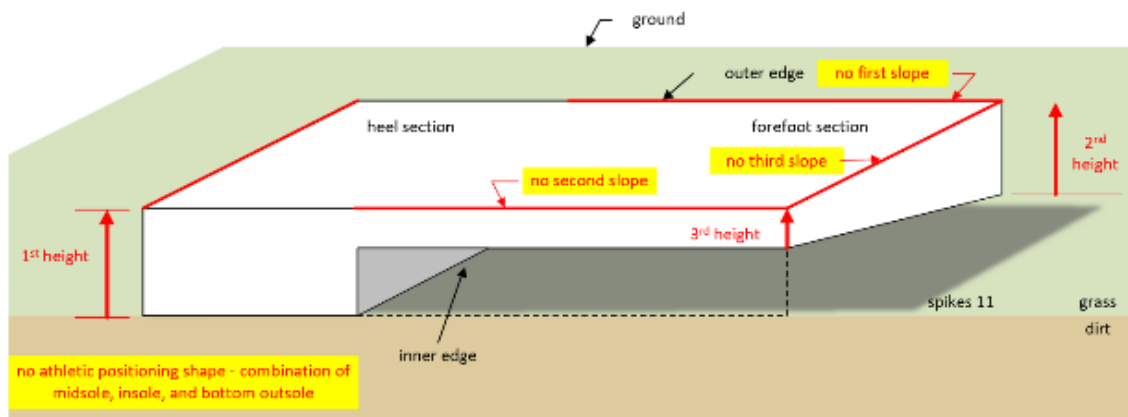
Annotated Figure 5b is a schematic view of Kim’s golf shoes on soft ground. Ex. 1005 ¶ 24. Relying on the testimony of its expert, Under Armour contends that Figure 5b “shows the top of a surface area on the part of the sole that sticks out beyond the upper, suggesting the shoes are tilted forward.” Pet. Reply 13 (citing Ex. 1022 ¶ 21; Ex. 2010, 80:14–81:22).

We find that the record fully supports Under Armour’s position that one of ordinary skill in the art would have appreciated that Kim depicts a conventional flat heel section in Figure 2 that is taller than the toe section. *See* Pet. Reply 13. We also find Mr. Delgatty’s Declaration testimony to be supported by Kim’s disclosure. In this regard, Kim discloses that “the inclined plane may be formed only at the front portion of the outsole” and “[e]xcept for the outsole 10 including the inclined lower surface 12, the golf shoe 100 of the present invention is substantially the same as conventional



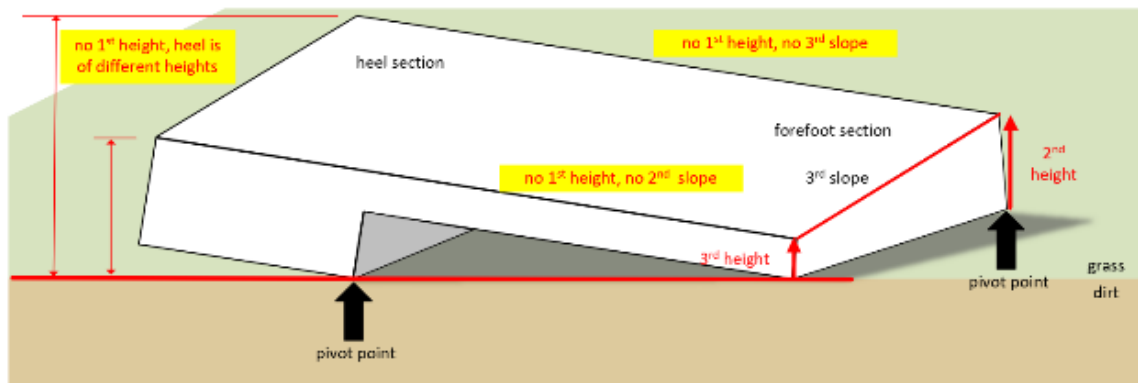
golf shoes.” Ex. 1005 ¶¶ 27, 46; *see also* Ex. 1022 ¶¶ 19–20 (confirming same). Therefore, we reject the notion that “Kim’s outsole is level—parallel to the bottom surface of the apparatus—from the heel forward.” PO Resp. 31–39. Rather, for all the above reasons, we find that Kim teaches disputed claim limitation [1.9].

Also, with respect to what Athalonz characterizes as Under Armour’s “what if” embodiments of Kim, Athalonz asserts that Under Armour’s expert “relies on a portion of Kim (in a single paragraph at the end of the specification) stating that the incline plane can be formed only at the front portion of the outsole” and, from there, improperly “suggests that Kim discloses a sole with . . . no corresponding slope in the heel at all.” PO Resp. 36–37 (citing Ex. 2008 ¶¶ 116–121, 193–196). In particular, Athalonz contends that, “[b]y excluding the cleats from his measurements,” Under Armour’s expert has modified Kim to be “without spikes” and “to create a shoe that neither makes logical sense nor meets the claims.” *Id.* at 39 (citing Ex. 2008 ¶ 199). According to Athalonz, one of ordinary skill in the art would understand that such a configuration would result in a shoe where “the slopes are all parallel to the ground and thus parallel to each other,” as shown below in Athalonz’s diagram illustrating the sole of Kim’s shoe on hard ground. *Id.* at 45–46 (citing Ex. 2008 ¶ 213).



As shown above, the first, second, and third heights of Kim's sole are all the same when on hard ground. According to Athalonz, "since the first, second, and third heights are the same, they do not form different first, second, and third slopes," as required by claim 1. *Id.* at 46.

Athalonz also provides the following diagram to illustrate the heights of Kim's sole when the heel and forefoot sections of Kim's shoe are tilted toward the ground to be in an athletic position.



As shown in the above diagram, the heel section is lifted off the ground such that the heel section has a height along its inside edge that is lower than the height along its outside edge. As such, Athalonz contends, even if Kim's sole is tilted toward the ground, "the tilted 'sole' would not have a first height at an inside edge and at an outside edge of the shoe along a heel section of the shoe, and without such a first height, there can be no claimed first slope or second slope formed by the first height connecting to the second and third heights." *Id.* (citing Ex. 2008 ¶¶ 214–215).

Under Armour, in turn, argues that "Athalonz's 'what if' diagrams still fail to rebut Petitioner's showing of obviousness because they improperly include the cleat height in the measurement of the claimed second and third height limitations." Pet. Reply 14. Under Armour also disagrees with Athalonz's contention that Kim's heel section would pivot

and lift off the ground such that its height across the inside edge and the outside edge of the shoe would be different, and, thus, not satisfy claim 1. *Id.* at 15–16 (citing PO Resp. 46; Ex. 2008 ¶¶ 119–121, 214–215). To that end, Under Armour asserts that Athalonz’s contention is premised on the incorrect assumption that “Kim’s sole is rigid” when, in actuality, “Kim expressly discloses that the ‘outsole 10 of the golf shoe 10 is made of synthetic rubber.’” *Id.* at 16 (citing Ex. 1005 ¶ 40).

Consistent with Kim’s disclosure of the outsole being made of synthetic rubber, Under Armour’s expert testifies that one of ordinary skill in the art

would understand that a shoe sole made of synthetic rubber would flex rather than pivot due to the golfer’s downward weight forces on the heel and toe sections, allowing the toe section to extend downwards into the ground while the heel section also remains flat on the ground. Indeed, this is the only reasonable interpretation of Kim’s disclosure that when standing on soft ground, “the golfer can maintain his/her stable position during and after the swing motion.”

Pet. Reply 16 (citing Ex. 1022 ¶¶ 25–28; Ex. 1005 ¶ 37). We also credit Mr. Delgatty’s opinion that one of ordinary skill in the art “would understand Kim’s shoe to be designed such that the downward weight force on the heel section would keep the heel in place flat on the ground while the cleats in the forefoot section depress into the ground.” Ex. 1022 ¶ 28.

We find the testimony of Under Armour’s expert to be reasonable and supported by Kim’s disclosure. *See, e.g.*, Ex. 1005 ¶¶ 37, 40, 44. We also note that, although Athalonz’s expert “recognized that to pivot in this manner, Kim’s sole must be rigid,” he later admitted that he “hadn’t considered” whether the pivot points would exist for a flexible rubber sole, such the one Kim expressly discloses. Ex. 1023, 104:21–105:2. In view of

Under Armour’s expert testimony and Kim’s express disclosure, we agree with Under Armour and its expert that “Kim’s heel would remain flat on soft ground,” and, thus, “Kim discloses a first height greater than the second height, and a second height greater than a third height.” Pet. Reply 17 (citing Ex. 1022 ¶ 28).

Accordingly, based on the information in the petition and the evidence of record, and accounting for Athalonz’s arguments, we find that Under Armour persuasively shows that Kim teaches or suggests all the limitations of claim 1.

### *3. Dependent Claims 2–5*

Claims 2–5 depend from claim 1. Ex. 1001, 43:36–44:20. Under Armour asserts that the additional limitations of claims 2–5 are taught or suggested by Kim. Pet. 21–26 (citing Ex. 1002). Athalonz does not make any specific arguments regarding the dependent claims, instead, stating simply that “[b]ecause independent claim 1 is patentable over Kim, the more specific dependent claims are also patentable for the same reasons.” PO Resp. 47 (citing Ex. 2008 ¶ 218). Based on our review of the record, we find that Under Armour persuasively shows that Kim teaches or suggests the additional limitations of dependent claims 2–5.

### *4. Secondary Considerations*

Athalonz argues that Under Armour’s evidence of obviousness is outweighed by Athalonz’s evidence of secondary considerations, such as long-felt need, skepticism by others, industry praise, and copying. PO Resp. 80–88; PO Sur-Reply 25–28. Under Armour disputes Athalonz’s showing. See Pet. Reply 27–29.

At the outset, Athalonz contends that Under Armour’s expert “admitted” that he “did not perform any analysis of any of the secondary

considerations.” PO Resp. 82 (citing Ex. 2010, 117:14–118:2, 120:17–122:1). We disagree. Under Armour’s expert adequately considered Athalonz’s objective indicia of nonobviousness as presented for the first time in Athalonz’s response. *See* Ex. 1022 ¶¶ 48–51. Indeed, it is undisputed that Athalonz bears the burden to produce evidence of secondary considerations, and that Under Armour was under no obligation to preemptively address such evidence before Athalonz even offers it. As such, we reject the notion that his subsequent testimony on the issue should be disregarded, as Athalonz seems to assert. *See* PO Sur-Reply 25–26.

*a. Nexus*

Athalonz argues that “the requisite nexus exists here, owing to the legally and factually sufficient connection between the evidence of non-obviousness and the patented invention.” PO Resp. 81. According to Athalonz, “Mr. Markison has provided unrebutted evidence that Athalonz’s products practice and are coextensive with the claims of the ’291 patent, entitling it to a presumption of nexus.” *Id.* (citing Ex. 2008 ¶ 341; Ex. 2014).

Upon reviewing the record, we find that, from the outset, Athalonz fails to show nexus between the claimed invention and the asserted evidence of nonobviousness. *See* PO Resp. 80–88. Other than asserting that “the requisite nexus exists here” (PO Resp. 81) and citing to a single paragraph in Mr. Markison’s declaration (Ex. 2008 ¶ 341), Athalonz’s response does not sufficiently analyze Athalonz’s product relative to the claims of the ’291 patent. To the extent Athalonz argues otherwise, we note that Mr. Markison’s testimony consists solely of the conclusory statement that “Athalonz sells and markets golf and baseball shoes that embody the claims of the ’291 patent,” which then improperly incorporates by reference

arguments from a 70-page exhibit in the parallel district court litigation without any further discussion. *See* Ex. 2008 ¶ 341 (citing simply “EX2014”). We find that Athalonz’s reliance on such conclusory and improper evidence falls short of what is required to demonstrate a presumption of nexus. Having failed to show that the asserted evidence is tied to a specific product that is the claimed invention, Athalonz is not entitled to a rebuttable presumption of nexus. *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1373 (Fed. Cir. 2019).

And, even if nexus was properly shown, we identify additional reasons below why Athalonz’s asserted objective indicia of nonobviousness is entitled to little weight.

*b. Long-Felt Need*

Athalonz argues that Under Armour’s asserted prior art references show “that there was a long-felt need for an athletic shoe that put an athlete in a better athletic position,” but that such shoes “are not prevalent in the market,” thereby indicating that there is still a “need for putting the golfer into a better athletic position.” PO Resp. 82–83 (citing Ex. 2008 ¶ 343; Ex. 2010, 128:8–124:6). With that in mind, Athalonz surmises “there was a long-felt and [unmet need] until the ’291 patent was filed.” *Id.* at 83.

We are not persuaded. Rather, we agree with Under Armour that Athalonz fails to show a persistent need recognized by one of ordinary skill in the art, fails to explain why the cited prior art did not already meet that need, and fails to show that the claimed invention did. *See* Pet. Reply 27 (citing Ex. 1022 ¶ 49). Indeed, to the extent Athalonz alleges there was a “need for putting athletes into a better athletic position” (PO Resp. 83), we find that prior art shoes already met that alleged need. *See, e.g.*, Ex. 1005 ¶ 12 (“[I]t is an object of the present invention to provide a pair of golf

shoes, which assist a golfer in concentrating his/her proper weight balance on the inner edges of soles of feet during the address and swing motions, thus allowing the golfer to perform the swing motion while maintaining his/her stable position.”). Thus, even if nexus was shown, we would give little or no weight to Athalonz’s evidence of long-felt need.

*c. Skepticism by Others*

Athalonz contends that it “introduced a baseball shoe in 2015 that embodied the invention of the ’291 Patent, and was met with limited success” because “the industry did not believe that the shoes would improve athletic positioning.” PO Resp. 83 (citing Ex. 2008 ¶ 344). According to Athalonz, this was because “until that time, achieving a better athletic position was viewed primarily as a problem for the athlete to solve with their body.” *Id.* (citing Ex. 2008 ¶ 344).

We note that Athalonz’s contention relies entirely on the uncorroborated personal beliefs of the inventor of the patented invention, Mr. Markison, for why its baseball shoe was met with limited success in 2015. But Athalonz cannot sufficiently demonstrate skepticism by others based solely on uncorroborated inventor testimony. Moreover, to the extent Athalonz contends that a product embodying the patented invention “was met with limited success” (PO Resp. 83), we note that neither Athalonz nor Mr. Markison establishes that this “limited success” was due to the claimed features of the shoe, as opposed to economic or commercial factors. Thus, even if nexus was shown, there is insufficient evidence to establish skepticism by others.

*d. Industry Praise and Unexpected Results*

Athalonz asserts that, in 2018, it “released the EnVe golf shoe, which embodied the invention of the ’291 patent.” PO Resp. 84 (citing Ex. 2008

¶ 341). According to Athalonz, those golf shoes “were praised by people in the industry, including by Bernhard Langer and professional World Long Drive (WLD) athletes.” *Id.* (citing Ex. 2013 (titled, “Athalonz Golf Shoes: The Golf Shoe for Distance?”)). Athalonz explains that, at a competition in the summer of 2018, a golf pro named Mitch McDowell was wearing “a prototype of the EnVe golf shoes, which embodied the ’291 patent’s invention” and

[a]nother golfer, Ryan Steenberg, who was at the event, asked Mr. McDowell if he could try the Athalonz golf shoes, and Mr. McDowell agreed to let him try them. At the time, Mr. Steenberg had been competing in WLD for 8 years, was ranked number 6 in the world, but had never won an event. Mr. Steenberg got his first WLD win while wearing the Athalonz shoes. Mr. Steenberg won the next event, as well, again while wearing the Athalonz shoes. When other players asked him what he had changed, he responded that it was his shoes.

*Id.* at 84 (citing Ex. 2008 ¶¶ 345–348).

We do not find this evidence persuasive of industry praise. At the outset, we note that Mr. Markison’s testimony concerning the alleged statements between Mr. McDowell and Mr. Steenberg is uncorroborated, and, thus, entitled to little weight. Moreover, it is unclear whether the alleged praise from Mr. Steenberg is due to specific features recited in the claims or due to unclaimed features. Indeed, Exhibit 2013 identifies that benefits deriving from Athalonz’s “EnVe technology *paired with their Grip & Glide Technology*.” Ex. 2013, 3 (emphasis added). There is no evidence tying Athalonz’s grip and glide technology to the claimed invention. Industry praise that is too general or directed towards unclaimed features will not carry significant weight in demonstrating non-obviousness.



We also are not persuaded that Athalonz establishes a difference between its alleged “unexpected results” and the closest prior art. “To be particularly probative, evidence of unexpected results must establish that there is a difference between the results obtained and those of the closest prior art, and that the difference would not have been expected by one of ordinary skill in the art at the time of the invention.” *Bristol-Meyers Squibb Co. v. Teva Pharms. USA, Inc.*, 752 F.3d 967, 977 (Fed. Cir. 2014). Also, “[w]hen assessing unexpected properties, . . . we must evaluate the significance and ‘kind’ of expected results along with the unexpected results.” *Id.* Here, we find that the record establishes that the results alleged by Athalonz to be unexpected, were in fact, expected and known results in the art. *See, e.g.*, Ex. 1005 ¶ 46 (explaining that Kim’s golf shoes allow a “golfer to correctly hit (impact) a golf ball and to strengthen his/her force imposed on the swing motion, and prevents the soles of the golfer’s feet from being pushed toward the outer edges of the outsoles of the golf shoes.”).

For the above reasons, even if nexus was shown, we would give little weight to Athalonz’s evidence of “industry praise” and “unexpected results.”

*e. Copying*

Athalonz alleges it met with Under Armour personnel in August 2013 and gave them a presentation about “the concept of ‘athletic positioning’ claimed in the ’291 patent.” *See* PO Resp. 85 (citing Ex. 2008 ¶¶ 352–355; Ex. 2012 (titled “Athletic Positioning Shoe: Presentation to Under Armour, August 22, 2013”), 13, 54). According to Athalonz, it “offered Under Armour the opportunity to acquire or license Athalonz’s technology” and Under Armour “received physical sample products of the Athalonz shoes in 2014” before Under Armour “eventually stopped responding” and instead

“release[d] infringing products that copied the athletic positioning claimed in the ’291 patent.” *Id.* at 87 (citing Ex. 2008 ¶¶ 356–358; Ex. 1009).

It is undisputed that Athalonz gave a presentation and “sample products” to Under Armour, and subsequently Under Armour produced a shoe that Athalonz accuses of infringement. *See* Pet. Reply 27–29. But evidence of copying is more persuasive when it includes evidence of efforts to replicate a specific product as shown through internal company documents and/or testimony from company employees. Athalonz proffers no such evidence. And, even if its evidence is probative of similarity, “[n]ot every competing product that arguably falls within the scope of a patent is evidence of copying” because “[o]therwise every infringement suit would automatically confirm the nonobviousness of the patent.” *Iron Grip Barbell Co. v. USA Sports Inc.*, 392 F.3d 1317, 1325 (Fed. Cir. 2004).

Thus, even if nexus was shown, we would give little weight to Athalonz’s evidence of copying.

### 5. Conclusion

We have considered all of the arguments and evidence adduced at trial. For the reasons explained above, we find that Under Armour persuasively shows that Kim teaches or suggests all the limitations of claims 1–5. We also find that the value of Athalonz’s objective evidence of non-obviousness is weak in comparison to the evidence presented under the first three *Graham*<sup>5</sup> factors. Accordingly, we find that Under Armour demonstrates by a preponderance of the evidence that claims 1–5 of the ’291 patent are unpatentable as obvious over Kim.

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<sup>5</sup> *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

*D. Grounds 2 and 3*

As noted previously, Under Armour presents two additional grounds of unpatentability against claims 1–5, one that relies on Kim and Dufour and another that relies on Kim and Rubin. *See* Pet. 2, 26–54. However, as we have determined that claims 1–5 are unpatentable as obvious over Kim alone, we deem it unnecessary to address Under Armour’s additional grounds that also include Kim. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359 (2018) (holding that petitioner “is entitled to a final written decision addressing all of the claims it has challenged”); *Bos. Sci. Scimed, Inc. v. Cook Grp. Inc.*, 809 F. App’x 984, 990 (Fed. Cir. 2020) (non-precedential) (recognizing that the “Board need not address issues that are not necessary to the resolution of the proceeding” and, thus, agreeing that the Board has “discretion to decline to decide additional instituted grounds once the petitioner has prevailed on all its challenged claims”).

IV. ATHALONZ’S MOTION TO EXCLUDE

Athalonz moved to exclude Exhibits 1032–1034. Mot. 1. Exhibits 1032 and 1033 are dictionary definitions of the terms “cross section” and “perspective,” respectively. *Id.* at 2. Exhibit 1034 is a compilation of “PGA tour official stats.” *Id.* at 4. We do not rely on any of these exhibits. As such, we dismiss Athalonz’s motion to exclude as moot.

## V. CONCLUSION<sup>6</sup>

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–5	103(a)	Kim	1–5	
1–5	103(a)	Dufour, Kim <sup>7</sup>		
1–5	103(a)	Rubin, Kim <sup>7</sup>		
<b>Overall Outcome</b>			1–5	

## VI. ORDER

Accordingly, it is hereby:

ORDERED that claims 1–5 of U.S. Patent No. 11,013,291 B2 have been shown, by a preponderance of the evidence, to be unpatentable; and

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

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<sup>6</sup> Should Athalonz wish to pursue amendment of the challenged claim in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Athalonz’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Athalonz chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Athalonz of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

<sup>7</sup> As explained in Section III.D, we do not reach this ground.

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