

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNDER ARMOUR, INC.,
Petitioner,

v.

ATHALONZ, LLC,
Patent Owner.

Case IPR2024-00637
Patent No. 11,013,291

PATENT OWNER'S RESPONSE

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PATENT OWNER'S EXHIBIT LIST

Exhibit	Description
2001	Docket Control Order (Dkt. 35) in <i>Athalonz LLC v. Under Armour, Inc.</i> , No. 2:23-cv-00193-JRG (E.D. Tex.)
2002	United States District Court Judicial Case Profiles, as of December 2023
2003	Under Armour's Invalidity Contentions in <i>Athalonz LLC v. Under Armour, Inc.</i> , No. 2:23-cv-00193-JRG (E.D. Tex.)
2004	Exhibit A ('291 Patent Invalidity Chart Based on Kim) to Under Armour's Invalidity Contentions in <i>Athalonz LLC v. Under Armour, Inc.</i> , No. 2:23-cv-00193-JRG (E.D. Tex.)
2005	Exhibit B ('291 Patent Invalidity Chart Based on Rubin) to Under Armour's Invalidity Contentions in <i>Athalonz LLC v. Under Armour, Inc.</i> , No. 2:23-cv-00193-JRG (E.D. Tex.)
2006	Exhibit C ('291 Patent Invalidity Chart Based on Dufour) to Under Armour's Invalidity Contentions in <i>Athalonz LLC v. Under Armour, Inc.</i> , No. 2:23-cv-00193-JRG (E.D. Tex.)
2007	Exhibit R ('291 Patent Obviousness Chart) to Under Armour's Invalidity Contentions in <i>Athalonz LLC v. Under Armour, Inc.</i> , No. 2:23-cv-00193-JRG (E.D. Tex.)
2008	Declaration of Mr. Timothy Markison in Support of Patent Owner's Response Regarding U.S. Patent No. 11,013,291
2009	CV of Mr. Timothy Markison
2010	Transcript of the 12/19/24 Deposition of Mr. Grant Delgatty in IPR2024-00636, IPR2024-00637, IPR2024-00638, IPR2024-00639, and IPR2024-00640

Exhibit	Description
2011	Excerpts from Holt, Serway & Faughin, Physics (1st ed. 2002)
2012	Presentation Titled “Athletic Positioning Shoe: Presentation to Under Armour, August 22, 2013”
2013	Article Titled “Athalonz Golf Shoes: The Golf Shoe for Distance?” downloaded from https://thelefttrough.com/athalonz-golf-shoes-review/ on December 30, 2024
2014	Claim Charts for U.S. Patent No. 10,674,786; 11,013,291; and 11,064,760 for Athalonz Products
2015	Merriam Webster, “height”

Pursuant to 37 CFR § 42.120, Athalonz, LLC (“Athalonz” or “Patent Owner”) submits this Patent Owner Response to the Petition of Under Armour, Inc. (“UA” or “Petitioner”) seeking *inter partes* review (“IPR”) of U.S. Patent No. 11,013,291 (“the ’291 patent”), and to the Board’s September 11, 2024, Institution Decision (Paper 8).

I. INTRODUCTION

Petitioner’s asserted hodgepodge of prior art references fail to disclose the invention claimed in the ’291 patent. Petitioner relies solely on obviousness arguments, and for every ground, Petitioner’s references fail to teach or suggest one or more limitations of the single challenged independent claim (claim 1). For each ground, Petitioner seeks to supply missing limitations or show they are obvious by citing to expert testimony that either merely quotes the applied reference with no explanation at all as to how it discloses or suggests the relevant limitation, or states without support that a POSITA would just know that the reference disclosed the relevant limitation. This is nothing more than an invitation for the Board to speculate as to the references’ teachings. Petitioner’s cursory citations and unsupported assertions of what a POSITA would know are insufficient to carry Petitioner’s burden to prove invalidity. The fact is that the ’291 patent is novel and nonobvious—no piece of prior art or combination thereof discloses or suggests every limitation of

the challenged claims of the '291 patent, and hand waving by Petitioner and its expert in an attempt to show the claims are obvious necessarily fails.

II. BACKGROUND

A. Overview of the '291 Patent

The '291 patent is directed toward novel athletic shoes. *See* EX1001. The patent recognizes that the prior art offered “a wide variety of shoes” on the market, each with different designs and styles depending on their use. *Id.*, 1:44-46. For example, athletic shoes generally had a “particular sole pattern, a sole design, an insole design, and upper shoe portion design.” *Id.*, 1:48-53. However, prior art athletic shoes were limited in their design for athletic performance. For example, the patent recognizes that prior art baseball cleats were typically designed only to “facilitate[] better traction in grass and/or dirt while playing baseball.” *Id.*, 1:61-62. As such, these prior art shoes consisted of either a “relatively flat platform for the foot within the baseball spikes,” or sometimes offered a “heel portion of the shoe” “higher than the toe portion of the shoe.” *Id.*, 1:62-67. In sum, the prior art only used two dimensions to try and place the athlete in an athletic position, which was of limited value to athletes. EX2008 ¶56.

The '291 patent improved on the prior art by inventing shoes that place athletes in an “athletic position” through a novel “athletic positioning shape.” *Id.*, 9:15-21. As the patent explains, an “athletic position” involves having the athletes’

“knees slightly bent, weight more on the inside of the legs than the outside of the legs, knees position aligned with ankles and hips, and/or other athletic positioning characteristics.” *Id.*, 9:17-21. The patent further explains that this athletic positioning can be used in “any type of shoe” “to promote a better athletic position for an athlete.” *Id.*, 9:37-47; EX2008 ¶57. A POSITA would understand that the ’291 patent addresses the problem of athletic positioning through a specific shoe sole uses a particular sole design to manipulate and optimize the athlete’s foot position. EX2008 ¶58.

The particular implementation of shoes that provide the athletic position may vary, however, these shoes generally include an upper section, an insole section, and a sole section with an athletic positioning shape, including a heel section, a mid-foot section, and a toe section. *Id.*, 9:4-7; EX2008 ¶59.

The athletic positioning shape described by the ’291 patent is achieved by the combination of the midsole, insole, and bottom outsole which produce a heel section that is higher than the inside edge of a toe section at a first angle and also higher than the outer edge of a toe section at a third angle, and an outside edge of a toe section that is higher than the inside edge of the toe section at a second angle. *Id.*, 10:54-61; EX2008 ¶¶59-70. Figure 8 is an isometric diagram of one embodiment of the athletic positioning shoe described in the ’291 patent showing the first, second, and third heights and the resulting slopes:

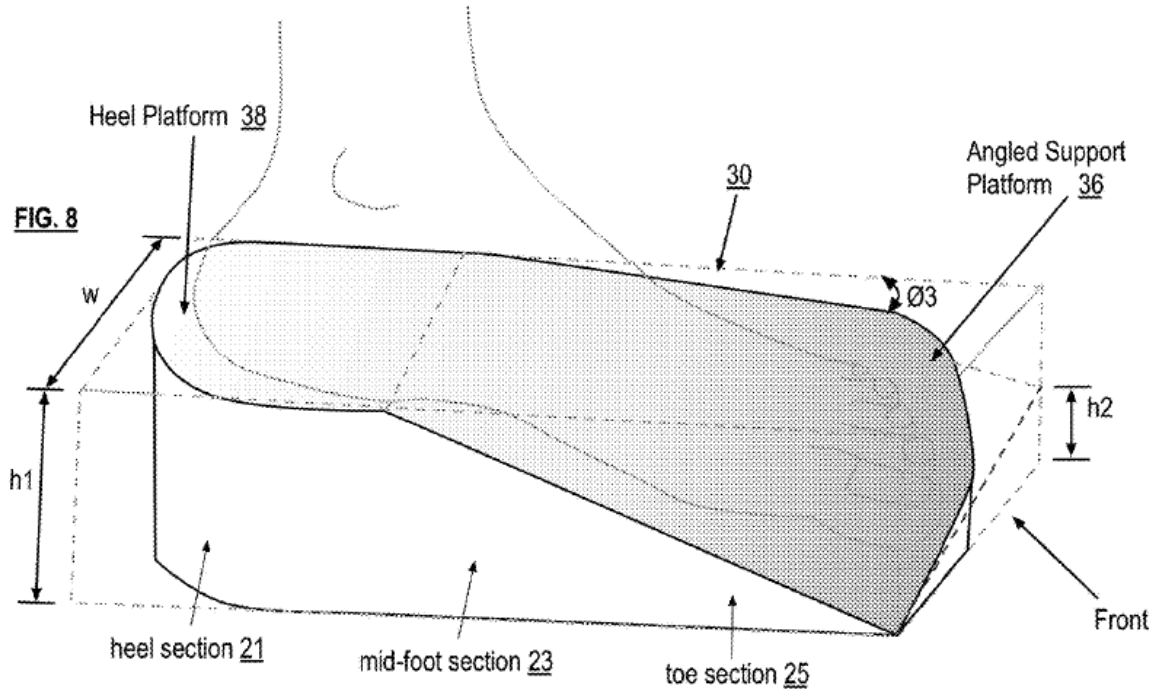


Figure 20 is one of many other illustrations of athletic positioning in a sole of a shoe:

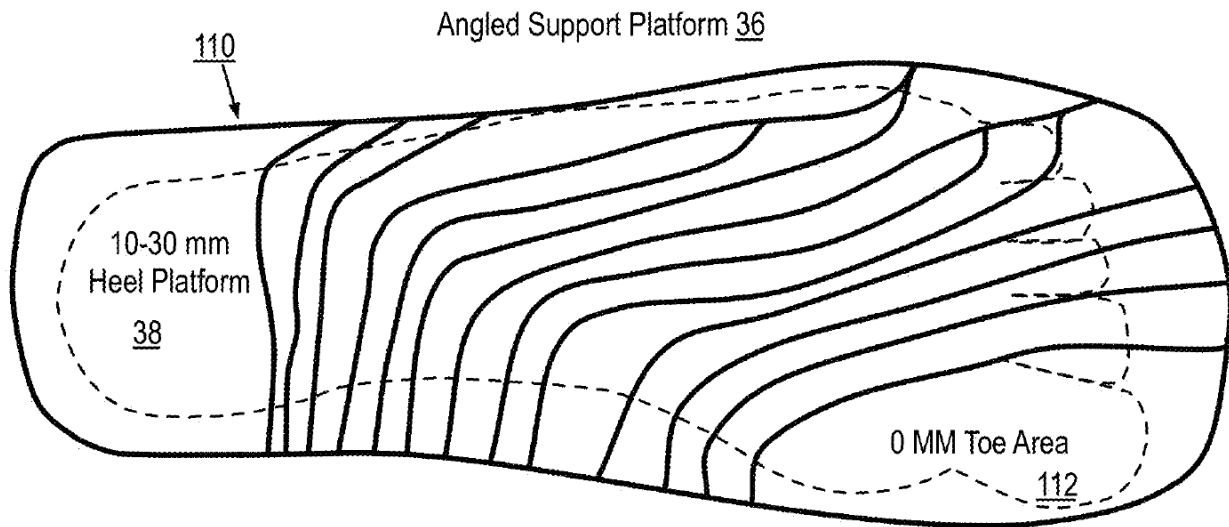


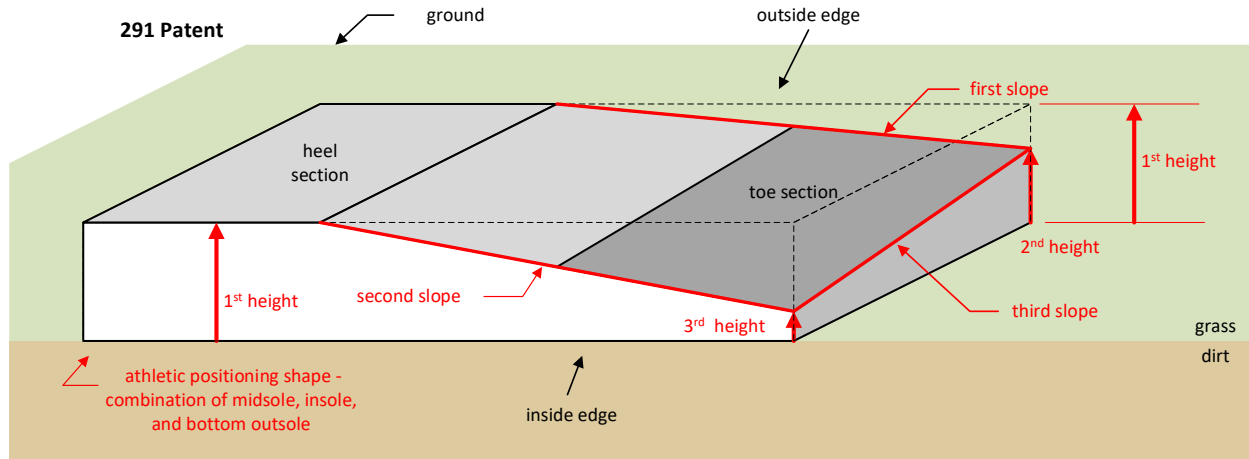
FIG. 20

Each of these embodiments shows a shoe with a heel platform at a first height greater than the small toe area and the small toe area at a height greater than the big

toe area. EX2008 ¶¶59-61. As such, the heel section is at a first height which is higher than the inside edge of a toe section at a second height (represented by elevations lines in Figure 20 above), the heel section is higher than the outer edge of a toe section at a third height (also represented by elevation lines), and the outside edge of the toe section higher than the inside edge of the toe section (also represented by elevation lines). A first slope is formed between the first height and the second height. A second slope is formed between the first height and the third height. And a third slope is formed between the second height and the third height. *Id.* ¶61. The heel section maintains a constant height from its inside edge to its outside edge. *Id.* ¶63. The first and third slopes, which run from the heel platform to an inside edge and outside edge, respectively, thus begin at the same height. This constant heel height is consistent with one of the benefits of the '291 patent, which is to avoid pronation or supination of the foot of the wearer. *Id.* ¶¶70-71. The Institution Decision recognizes that these three heights and slopes “form a big toe section that is lower than a little toe section, with both being lower than the heel section of the shoe’s sole.” Paper 8 at 5.

Mr. Markison’s block diagrams, included below, show a simplified version of the first, second, and third heights and slopes described in the '291 patent. EX2008 ¶72. These illustrations are consistent with the descriptions of the '291 patent that use block diagrams to show the geometric shape of the shoes being claimed. *Id.* ¶72

n.1. The illustrations show the three heights in relation to the heel platform and the toe section that form the athletic positioning shape for the shoe of claim 1:



EX2008 ¶72.

B. The Claims of the '291 Patent

Exemplary independent claim 1 of the '291 patent is shown below:

A shoe comprises:

an upper section;

a midsole coupled to the upper section;

an insole positioned proximal to the midsole and within the upper section;

and

a bottom outsole coupled to the midsole,

wherein a combination of the midsole, the insole, and the bottom outsole form an athletic positioning shape, wherein the athletic positioning shape has:

a first height at an inside edge and at an outside edge of the shoe along a heel section of the shoe,

a second height on the outside edge of the shoe at a toe section of the shoe,

a third height on the inside edge of the shoe at the toe section of the shoe,

and

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 sloped 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.

EX1001, claim 1. Petitioner also challenges dependent claims 2-5, which depend from claim 1 and add additional limitations.

C. Overview of Petitioner's Prior Art

Petitioner relies on three prior art references for its obviousness arguments, each of which relates to a shoe or shoes that purport to address an improved stance to assist the golfer's swing. None of those references disclose or render obvious the claims of the '291 patent. Instead, each of these prior art references incorporate a variation of a "wedge" sole that pushes the golfer's entire foot inward under certain circumstances to improve weight distribution. EX2008 ¶¶92-93, 169-172. This

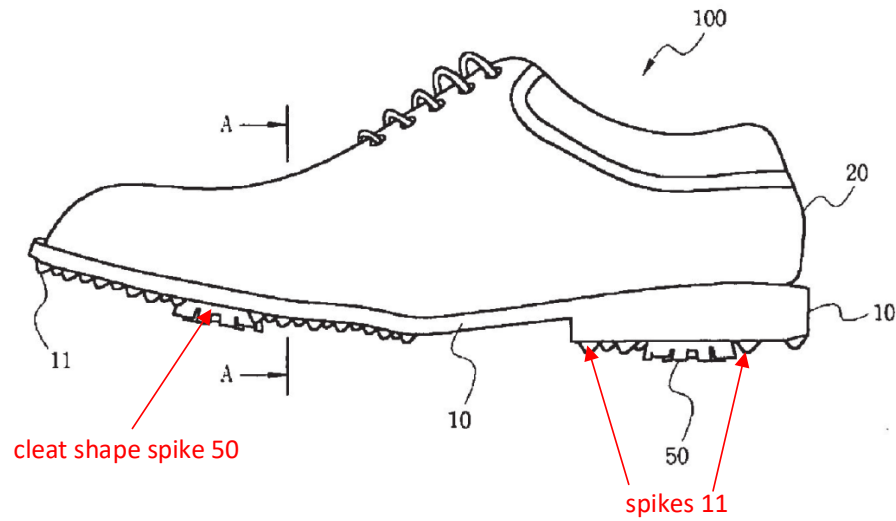
concept is different than the invention claimed and does not render any of the challenged claims obvious, as set forth in detail below. *Id.*

1. Kim (EX1005)

Kim is directed to a pair of golf shoes. EX1005. Kim asserts that its shoes are designed to “assist a golfer in concentrating his/her proper weight balance on the inner edge of soles of feet during the address and swing motions” and to “allow a golfer to stably maintain the lower part of his/her body on the surface of a green during the address and swing motions.” *Id.*, [0012]-[0013]; EX2008 ¶94.

The shoes in Kim include spikes and cleats that are present in both the forefoot and heel section of the shoe, each of which are coupled to the outsole. EX2008 ¶95. Kim explains that “[a] plurality of spikes 11 [that] are protruded from the lower surface 12 of the outsole 10,” as well as “a plurality of cleat-shaped spikes 50 [that] are also protruded from the lower surface 12 of the outsole.” EX1005, [0030]. This is shown in Figure 1 (annotated below):

FIG. 1

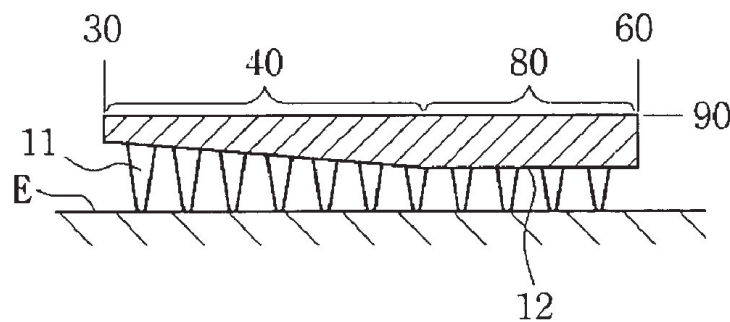


EX2008 ¶95.

Kim explains that the spikes 11 and 50 are longer on the inner edge than the outer edge running the entire length of the shoe. EX2008 ¶¶98-100. In particular, the shoes in Kim have an “outsole provided with a plurality of spikes protruded from a lower surface of the outsole,” arranged so that “the lower surface of the outsole is inclined from an outer edge of the outsole to an inner edge of the outsole[.]” *Id.*, Abstract. Kim’s outsole is also designed “so that the spikes at the inner edge of the outsole have a height larger than that of the spikes at the outer edge of the outsole[.]” *Id.* As a result, the shoes disclosed in Kim are designed so that the “upper surface of the outsole is substantially parallel with a ground,” *id.*, thereby providing a flat surface for an athlete’s foot. *See* EX2008 ¶¶100-104.

According to Kim, “the variation in the height of the spikes 11 and 50 protruded from the lower surface 12 of the outsole 10 is inversely proportional to the variation in the thickness of the outsole 10.” *Id.*, [0033]. Thus, in Kim, “the height of the spikes 11 and 50 at the outer edge 60 of the outsole 10 with the larger thickness is smaller than the height of the spikes 11 and 50 at the inner edge 30 of the outsole 10 with the smaller thickness.” *Id.* This is shown, for instance, in Figure 3b of Kim:

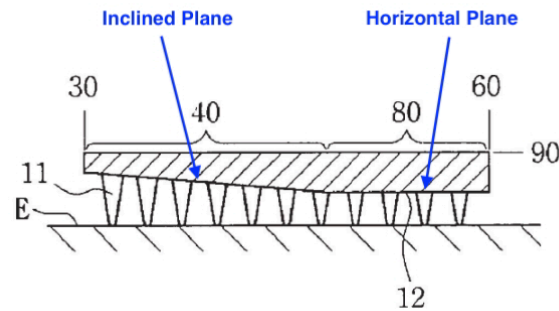
FIG. 3b



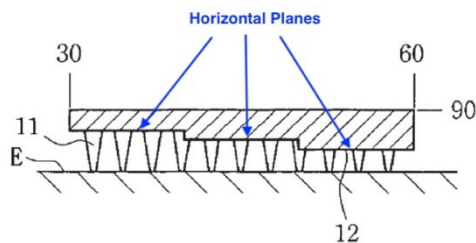
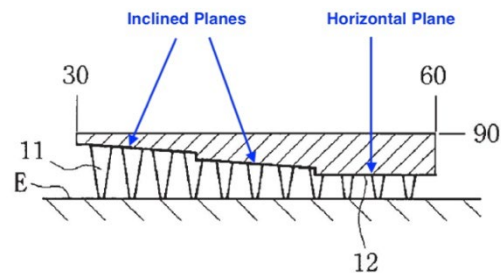
See also EX2008 ¶99.

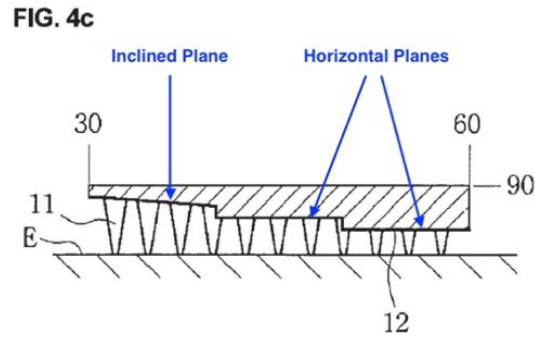
Kim discloses several shapes of the bottom surface of the outsole that maintain the inverse proportionality of the height of the spikes to the height of the outsole. For instance, Figure 3b illustrates a bottom surface of an outsole that has a “horizontal plane 80” across part of the bottom of the outsole and an “inclined plane 40” that extends across the rest of the bottom of the insole. The total height of the spikes and the outsole, whether that outsole has the horizontal plane or the inclined

plane, is the same across the bottom of the shoe, such that the wearer's feet remain parallel to the bottom of the shoe and the ground, as is shown below:

FIG. 3b

Similarly, Figures 4a, 4b, and 4c illustrate combinations both inclined and horizontal planes on the bottom of the shoe, and the combined height of the spikes and outside keeps the wearer's feet parallel to the bottom of the shoe and to the ground (i.e., heel to toe and inside to outside of foot is parallel to the bottom of the shoe and ground), as can be seen below:

FIG. 4a**FIG. 4b**



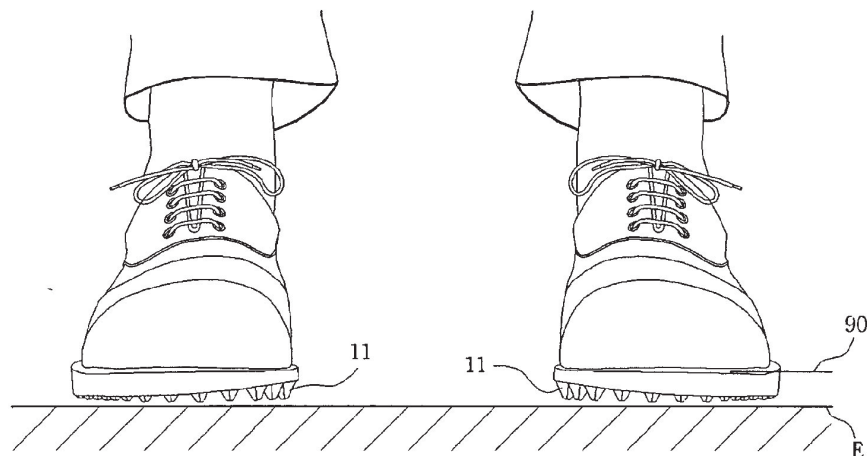
Kim explains that the design of the shoe, with the length of the spikes being inversely proportional to the height of the outsole, has the result that “the upper surface of the outsole is substantially parallel to the ground.” *Id.*, Abstract; *see also* [0014]; claim 1; EX2008 ¶¶103-104.

Kim includes two figures that purport to illustrate what the feet of the wearer of the shoes disclosed therein would look like on different surfaces.

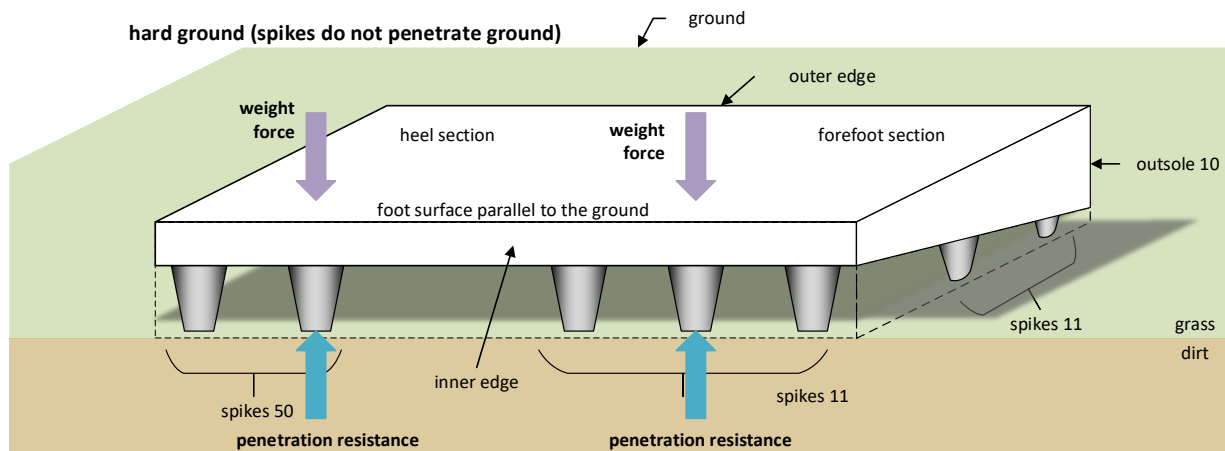
a. Kim’s “Hard Surface” Arrangement

Figure 5a, included below, depicts a “hard surface” arrangement, showing the wearer wearing the shoes on hard surface, like a paved road. *Id.*, [0038]. The bottoms of the spikes, and the upper surface of the outsole where the wearer’s foot rests, are substantially parallel to the ground. *Id.*, [0038]; *cf.* [0014]. In this configuration, the wearer’s feet are substantially parallel to the ground. *Id.*, Abstract; *see also* EX2008 ¶¶99-101.

FIG. 5a



A block diagram illustrating Kim's shoes on hard ground is shown below.



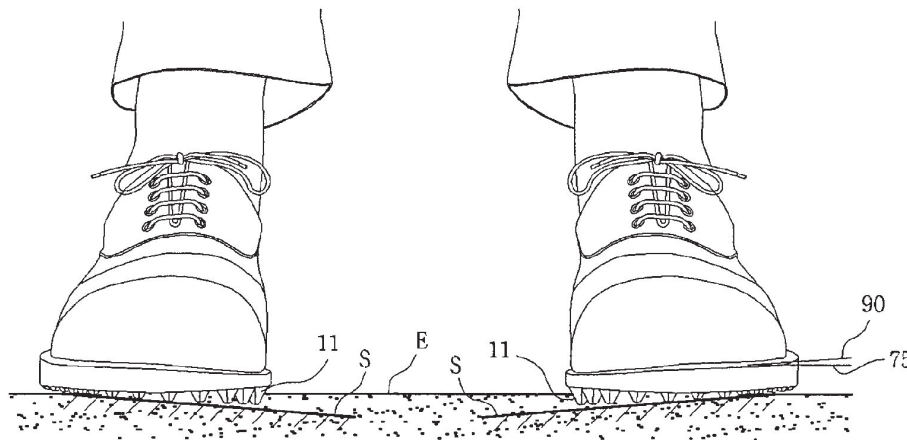
EX2008 ¶¶110-111. As shown in this illustration, the entire upper surface of the outsole is parallel to the bottom of the spikes, and therefore parallel to the ground on a hard surface. *Id.*

b. Kim's "Soft Ground" Arrangement

In contrast, Figure 5b, included below, depicts a "soft ground" arrangement, showing a wearer wearing the shoes on soft ground, such as when "standing on a

green.” *Id.*, [0024]; *compare* [0023] (showing contrast with Fig. 5a illustrating the wearer’s feet on “hard ground”). As shown in Figure 5b, included below, the spikes on the inside edge of both shoes penetrate the ground, with the result that the entire foot of the wearer, including the heel, is rotated inwardly when the wearer is on soft ground. EX2008 ¶¶112-115.

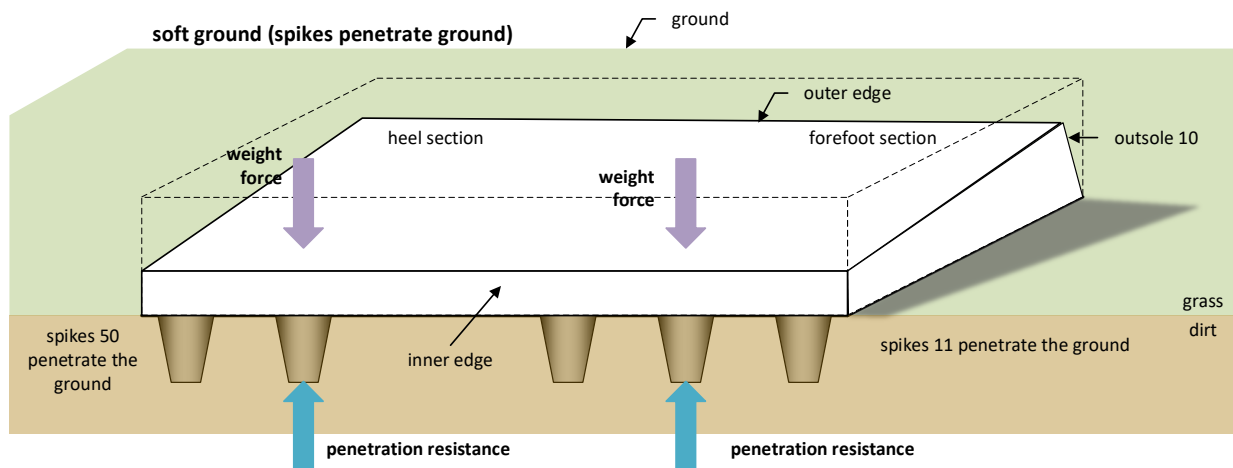
FIG. 5b



As explained by Kim, “the reference numeral 90 denotes a line representing the level of the golfer’s feet being parallel with the ground E, and the reference numeral 75 denotes a line being parallel with a line (S) representing the level of the bottoms of the spikes 11.” *Id.*, [0039]. Therefore, the golfer’s entire foot (including the heel) is either parallel with the ground when on hard surfaces (Fig. 5a, where 90 is parallel to ground E) or the entire foot (including the heel) is angled inward when on soft

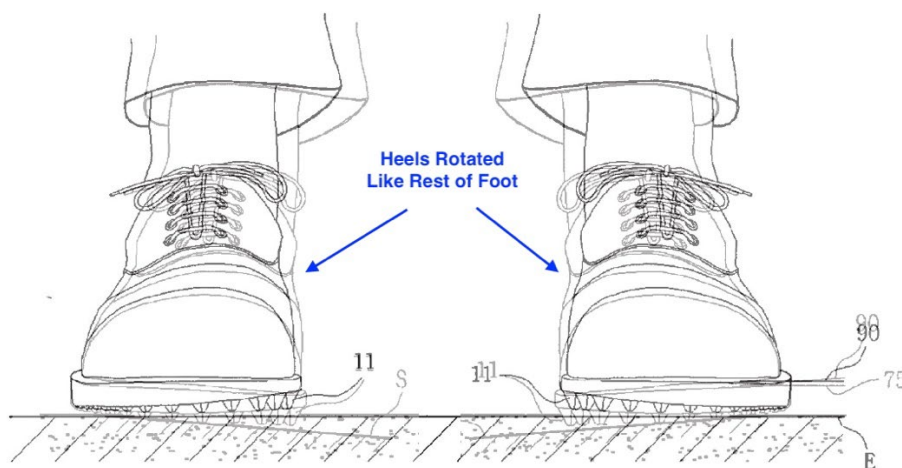
surfaces (Fig. 5b, along the reference line S, which slopes upwardly from the inside edge the outside edge of the shoe). EX2008 ¶112.

A block diagram illustrating Kim's shoes on soft ground is shown below:



EX2008 ¶112. As shown in this illustration, when the spikes penetrate the ground, the entire foot of the wearer tilts inward. This can also be seen in a superimposition of Figures 5a and 5b:

FIG. 5a
FIG. 5b



EX2008 ¶113. As Mr. Markison explains, if the heel did not incline inward like the rest of the foot, the ankles in these figures would be in the same position and only the forefoot would rotate, but that is not what the illustrations show. *Id.* ¶¶114-115.

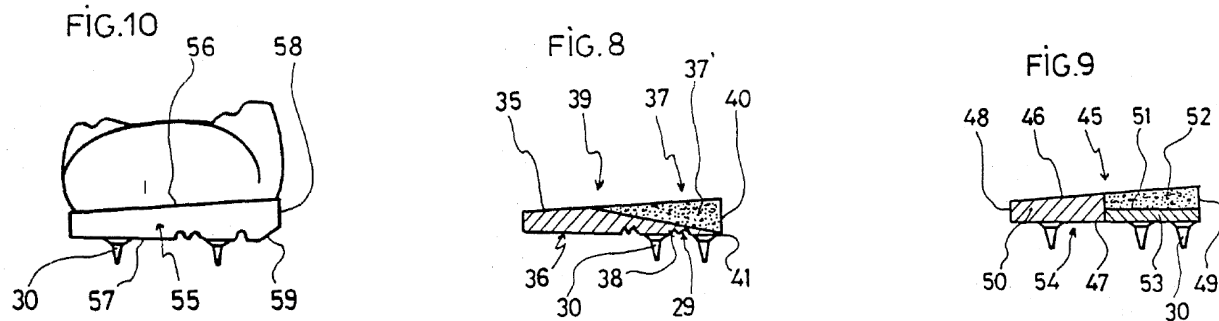
2. Dufour (EX1006)

Dufour is directed to a golf shoe. EX1006. In particular, Dufour describes a number of different embodiments of a golf shoe for the front foot in a golfer's swing (the left foot for a right-handed golfer or the right foot for a left-handed golfer). EX2008 ¶122. Generally, Dufour's golf shoe includes an active zone of a shock absorbing material on the outside edge of a golfer's front shoe to promote comfort when the foot rolls to the outer edge of the sole during a golf swing. EX1006, 1:50-55; EX2008 ¶¶123-125.

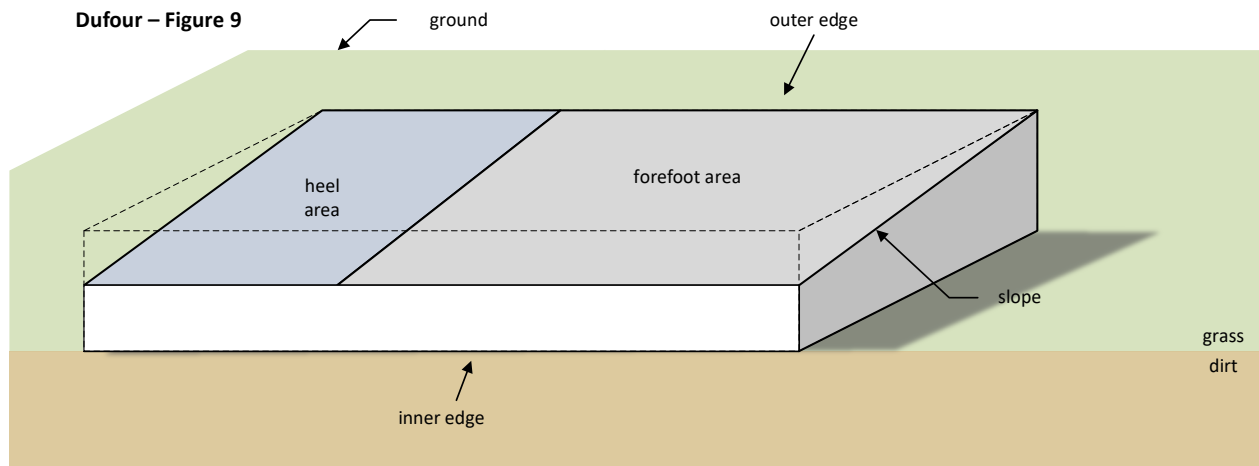
Dufour has two embodiments that are relevant to this proceeding, the first with minor variations in two implementations shown in Figures 8-10, and the second shown in Figures 11 and 12. EX1006, 3:5-29; *see also* EX2008 ¶126; EX2010, 102:8-103:3 (admitting Figures 11 and 12 are the same embodiment).

The first embodiment of Dufour corresponds to Figures 8-10, where Figures 8 and 9 are cross sections of the golf shoe of Figure 1 and Figure 10 is a front view of a shoe at cross-section VI – VI. The sole of Figure 10 has the thickness of the sole increasing from inner edge to the outer edge. This is also shown in Figures 8 and 9.

EX2008 ¶¶127-128. Figures 8 and 9 also illustrate that the upward slope from the inner edge to the outer edge extends the length of the sole (i.e., heel to toe).



A block diagram illustrating the arrangement of Embodiment #1 is illustrated below:

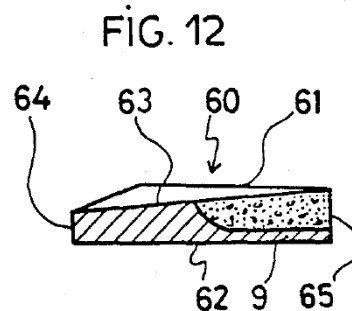
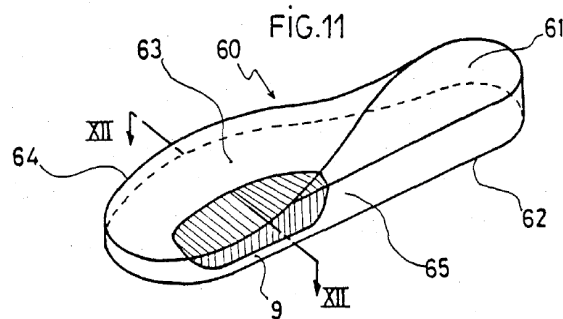


EX2008 ¶128.

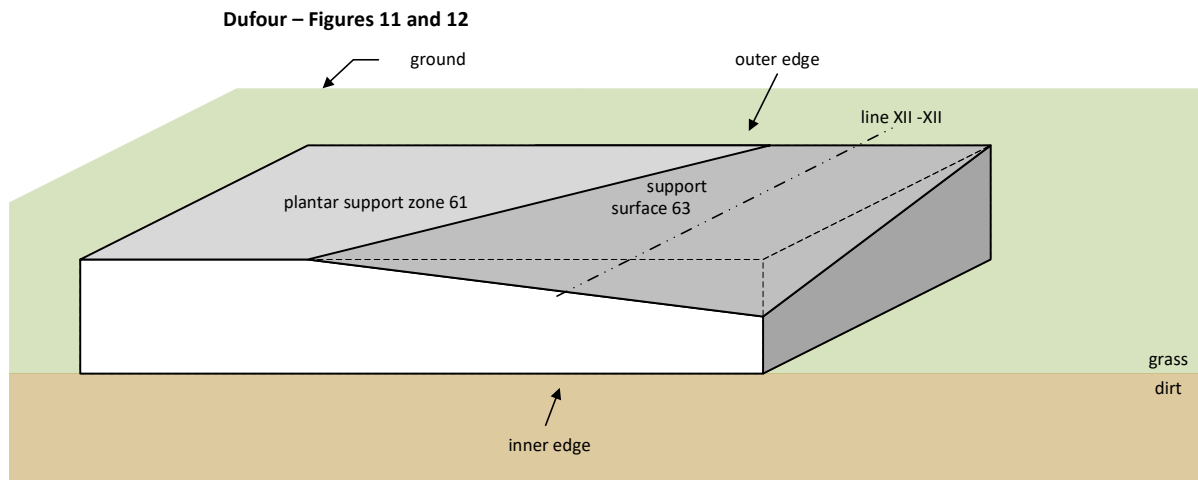
The second relevant embodiment of Dufour is illustrated in Figures 11 and 12. In this embodiment, the outsole has two regions: the plantar support zone 61 and the support surface 63. The plantar support zone 61 is substantially parallel to the ground, whereas the entire support surface is angled. *Id.*, 5:7-14; *see also* EX2008 ¶¶129-130. In this embodiment, the height of the outer edge of the shoe remains the

same as the height of the heel, while the inner edge angles downward. EX2008

¶¶130-137.



A block diagram illustrating the arrangement of Embodiment #2 is shown below:



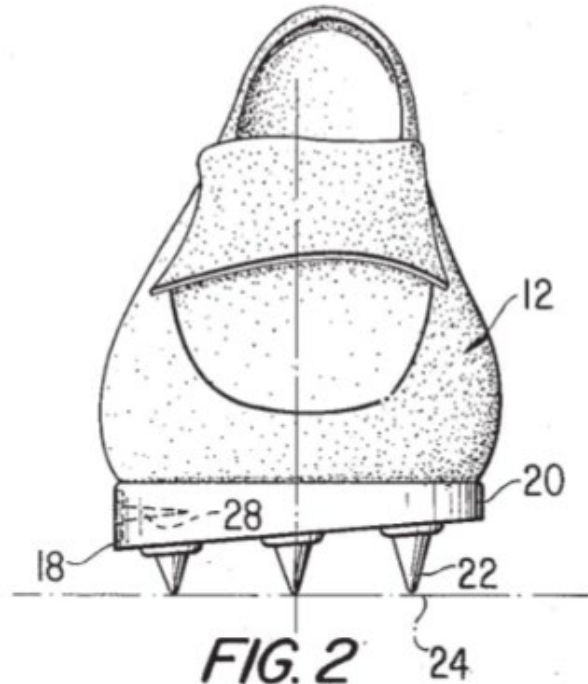
EX2008 ¶134.

3. Rubin (EX1007)

Rubin is directed to a single golf shoe designed to be worn on the rearwardmost foot of a golfer in a stance addressing the golf ball. EX1007; EX2008 ¶138. The shoe disclosed in Rubin is similar to Kim in that it uses a wedge-shaped sole with differing cleat lengths to position the foot of the golfer. EX2008 ¶138.

Rubin discloses a golf shoe for the “rearmost foot positioned when the golfer takes his stance over the ball.” *Id.*, 3:2-5. Rubin’s shoe includes a “wedge-shaped sole 14” that has an “outer side 18” of the sole that “extends downwardly from the shoe upper 12 to a lower elevation than the inner side 20 of [the] sole.” *Id.*, 3:9-11, 3:59-61. The shoe 10 includes cleats 22, which are shorter near the outer side 18 than at the inner side 20. The difference in cleat length is the same as the difference in the thickness of Rubin’s sole moving from the outer side to the inner side of the shoe. *Id.*, 3:29-33; EX2008 ¶¶141-142.

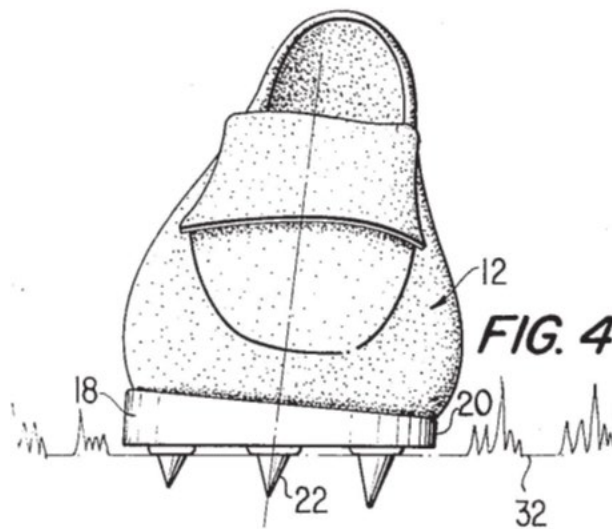
Rubin explains throughout its disclosure that the inverse relationship between the height of the cleats and the thickness of the sole enables the wearer to keep the foot “substantially level” to the ground when walking, as shown in Figure 2. *Id.*, 4:4-8; EX2008 ¶142.



For instance, Rubin explains the inverse relationship results in the sole being parallel to the ground on hard surfaces, such as concrete decks: “Cleats 22 adjacent the outer side 18 of the sole 14 are smaller than the cleats adjacent the inner side 20 of the sole 14 by an amount approximately equal to the difference in elevation between the outer side 18 and inner side 20 of the sole 14 so that when the wearer walks on a nonplaying surface, such as a concrete deck 24 as illustrated in FIG. 2, the foot of the wearer will be substantially level.” EX1007, 3:29-37. Rubin reiterates this concept several times, explaining that the relationship between cleat height and sole thickness has the effect that “when the golfer walks on a planar surface, his foot will be substantially level.” EX1007, Abstract; *see also id* 2:16-25 (difference in cleat size between inside and outside of sole is approximately equal to difference in

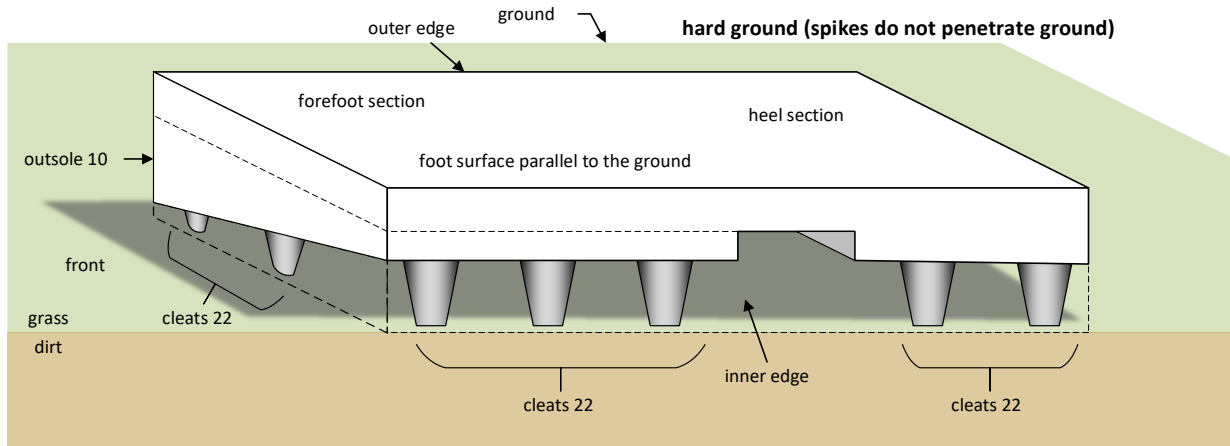
elevation between the inside and outside of sole “so that when the golfer walks his foot will be substantially level”). Thus, in Rubin, the bottom of the cleats and the top of the sole are parallel to each other under all circumstances. EX2008 ¶143.

Rubin further discloses that when standing on a soft playing surface, “the golfer will imbed cleats 22 in a golf playing surface 32 when addressing a golf ball. The[] rearwardmost *foot* of the golfer will be tilted inwardly because of the wedge-shaped sole 14 of shoe 10. This will tend to provide a more satisfactory weight distribution when hitting the ball.” *Id.*, 3:56-62 (emphasis added). This inward tilt of the entire foot is shown in Figure 4, which shows both the heel and toe of the rear foot tilted inward based on the vertical line over the shoe:

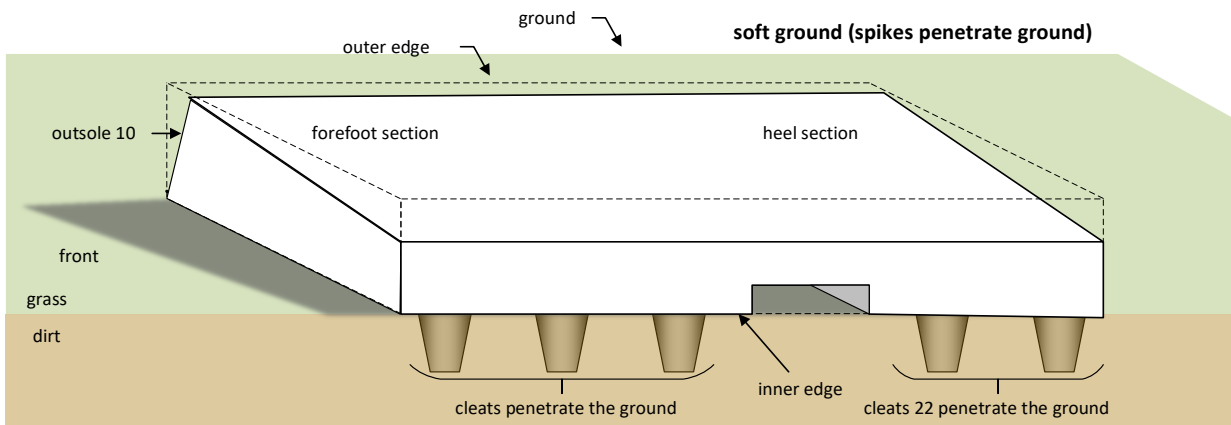


See also EX2008 ¶¶144-146.

Block diagrams showing the arrangement of Rubin’s shoes on hard and soft ground are illustrated below.



EX2008 ¶148.



Id. ¶149. As these diagrams show, the entire foot surface of Rubin is parallel to the bottom of the cleats under all circumstances. Even when the cleats penetrate the ground, the foot surface remains parallel between the forefoot and the cleats. *Id.* ¶¶148-149.

III. PRIORITY DATE OF THE '291 PATENT

The '291 patent claims priority to U.S. Provisional Patent Application No. 61/450,485, filed on March 8, 2011. Patent Owner does not dispute, for purposes of

this proceeding, that all of Petitioner's prior art pre-dates the priority date of the '291 patent.

IV. LEVEL OF ORDINARY SKILL

Petitioner asserts that a POSITA 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., 11. For purposes of this proceeding, Patent Owner does not dispute Petitioner's level of ordinary skill.

Here, Patent Owner's expert is the inventor of the '291 patent¹ and the CEO of Athalonz, Mr. Timothy Markison. As set forth in his declaration, Mr. Markison began designing and developing athletic shoes shortly before the priority date of the patent. EX2008 ¶¶17-25, 29, 42-43. His current knowledge and experience, which includes 13 years of designing and developing athletic shoes that embody the patent at issue here, far exceeds the proposed level of ordinary skill in the art. *Id.* ¶¶43-44. Moreover, given his familiarity with the technology at issue, Mr. Markison can readily understand and apply this level of ordinary skill at the time of the invention.

¹ Petitioner's expert failed to consider the education level of the inventor in analyzing the level of skill in the art, EX2010, 23:7-26:18, and had no opinion on whether the inventor here should be considered a POSITA, *id.*, 27:9-19.

EX2008 ¶44; *see Osseo Imaging, LLC v. Planmeca USA Inc.*, 116 F.4th 1335, 1341 (Fed. Cir. 2024) (“an expert can acquire the necessary skill level later and develop an understanding of what a person of ordinary skill knew at the time of the invention.”). Based on Mr. Markison’s duties as a registered patent attorney and licensed attorney, he can offer good faith and objective opinions on the issues in this proceeding. EX2008 ¶¶11-13, 26-30.

V. RELATED MATTERS

Patent Owner is presently asserting the ’291 patent in the following district court action: *Athalonz, LLC v. Under Armour, Inc.*, No. 2:23-cv-00193 (E.D. Tex.). Petitioner has also filed four other petitions for *inter partes* review on the four other patents asserted in the district court action: *Under Armour, Inc. v. Athalonz, LLC*, No. IPR2024-00636 (P.T.A.B. Mar. 4, 2024) (U.S. Pat. No. 10,674,786); *Under Armour, Inc. v. Athalonz, LLC*, No. IPR2024-00638 (P.T.A.B. Mar. 4, 2024) (U.S. Pat. No. 11,064,760); *Under Armour, Inc. v. Athalonz, LLC*, No. IPR2024-00639 (P.T.A.B. Mar. 4, 2024) (U.S. Pat. No. 11,375,768); *Under Armour, Inc. v. Athalonz, LLC*, No. IPR2024-00640 (P.T.A.B. Mar. 4, 2024) (U.S. Pat. No. 11,510,456).

VI. CLAIM CONSTRUCTION

A. Petitioner’s Claim Constructions

Petitioner claims that under any interpretation of the claims, all of the limitations of the challenged claims are met in the prior art. In related proceedings, Petitioner indicated that the terms “inner” and “outer” edge should mean the “edges

of the portion of the shoe where the foot sits.” *See* IPR2024-00636, IPR2024-00638.

The '291 patent uses similar terms for the same concepts, with claim 1 requiring measurements at the “inside” and “outside” edge. A POSITA would understand those terms in light of the specification to mean the edges of the portion of the shoe where the foot sits. EX2008 ¶¶85, 90-91. As Mr. Markison explains, the '291 patent consistently illustrates the inside (or inner) and outside (or outer edges of the shoe in terms of how the shoe places the wearer in an athletic position, which requires reference to how the foot engages with the foot assembly. *Id.* ¶¶85-89. In 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.* ¶¶90-91.

B. Construction of “Athletic Positioning Shape”

Patent Owner offers the following claim construction for the term “athletic positioning shape.” To the extent that the Board does not agree with the Patent Owner’s offered construction, Patent Owner submits that this Petition still fails for the reasons described below.

Term	Meaning
“Athletic positioning shape” (claim 1)	“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”

Independent claim 1 (and all other challenged dependent claims) requires the combination of the shoe’s midsole, insole, and bottom outsole to form an “athletic positioning shape.” Even though each of the individual words in the phrase “athletic positioning shape” have their own meaning in the abstract, the phrase as a whole does not have a clear, immediate ordinary meaning to a POSITA. EX2008 ¶83. However, its meaning is clear from the specification of the ’291 patent. *Id.* ¶84. Every embodiment in the specification consistently shows a heel section higher than the outside edge of the toe section higher than the inside edge of the toe section, and the specification provides an unambiguous definition:

an athletic positioning shape as formed by a heel section 21, a mid-foot section 23, and/or a toe section 25. In general, the athletic positioning shape has the heel section 21 higher than the toe section by a particular angle (e.g., Ø1, . . .) and the outside edge of the shoe higher than the inside edge of the shoe by another angle (e.g., Ø2, . . .) at the ball of foot and/or toe section of the shoe.

EX1001, 9: 5–15 (emphasis added); EX2008 ¶80.

It is true that the specification also provides a result-oriented description of “athletic positioning”—that the athlete have “knees slightly bent, weight more on the inside of the legs than the outside of the legs, knees position aligned with ankles and hips” EX1001, 9:17-21; EX2008 ¶79. However, this general description does not describe the actual shape or positioning of the *shoe* at all, but rather describes one possible *result* of athletic positioning. A result does not accurately capture how to identify a shoe sole, particularly when the specification provides physical descriptors. And statements of intended results do not limit claims even when they appear directly in the claim language, let alone when they appear in the specification, as they do here. *E.g.*, *Bristol–Myers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1376 (Fed. Cir. 2001) (claim language that “is only a statement of purpose and intended result” and “does not result in a manipulative difference in the steps of the claim” is not limiting).

Patent Owner’s proposal 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.” *Id.*, 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. More embodiments, still, are illustrated throughout, including Figures 3–15, 19–23, 44–47, 63–64, 87, 93–94, and 119–121. Every athletic position shown includes a heel section higher than the toe section and the outside edge of the shoe higher than the inside edge of the shoe. *See Merck & Co. v. Teva Pharms. USA, Inc.*, 347 F.3d 1367, 1371 (Fed. Cir. 2003) (“[C]laims must be construed so as to be consistent with the specification, of which they are a part.”). Allowing “athletic positioning” to have some broader or different meaning, or no meaning because of other limitations, is inconsistent with the patent’s own description.

The institution decision found that Patent Owner’s construction was unnecessary because the claims appeared to define the term “athletic positioning” themselves in the same manner. Paper 8 at 5. However, “interpretations that render some portion of the claim language superfluous are disfavored.” *Power Mosfet Technologies, L.L.C. v. Siemens AG*, 378 F.3d 1396, 1410 (Fed. Cir. 2004). Finding that “athletic positioning” has no standalone meaning other than through descriptions provided elsewhere in the claims runs afoul of that canon of claim construction. Moreover, Petitioner’s expert agrees that “athletic positioning” has to

mean something more than simply having the slopes described in the claims.

EX2010, 53:1-20.²

Finally, Patent Owner’s construction is consistent across all three patents at issue in the IPRs—which all share a specification—that use the term “athletic positioning” in a similar way. The Board should adopt Patent Owner’s construction.

VII. PETITIONER HAS NOT PROVEN THAT ANY CHALLENGED CLAIMS ARE UNPATENTABLE

A. Ground 1: Claims 1-5 Are Not Obvious Because Kim Does Not Disclose or Render Obvious the Claimed First, Second, and Third Heights or the Resulting Slopes.

Every challenged claim of the ’291 patent requires having three heights, the first greater than the second, and the second greater than the third, which form three slopes. EX1001, claim 1. Petitioner has failed to properly identify a first, second, or third height in Kim. Instead, as set forth below, Kim is directed to a different solution

² While Petitioner’s expert indicated at his deposition that the term meant something to do with “weight distribution,” he did not offer any such construction in his declaration and was unable to provide any meaningful definition to a POSITA when questioned. He also did not actually perform any claim construction analysis and simply applied the constructions provided to him by counsel. EX2010, 45:15-13 (“I wasn’t hired to provide claim construction”). His testimony should therefore be afforded no weight in the claim construction analysis.

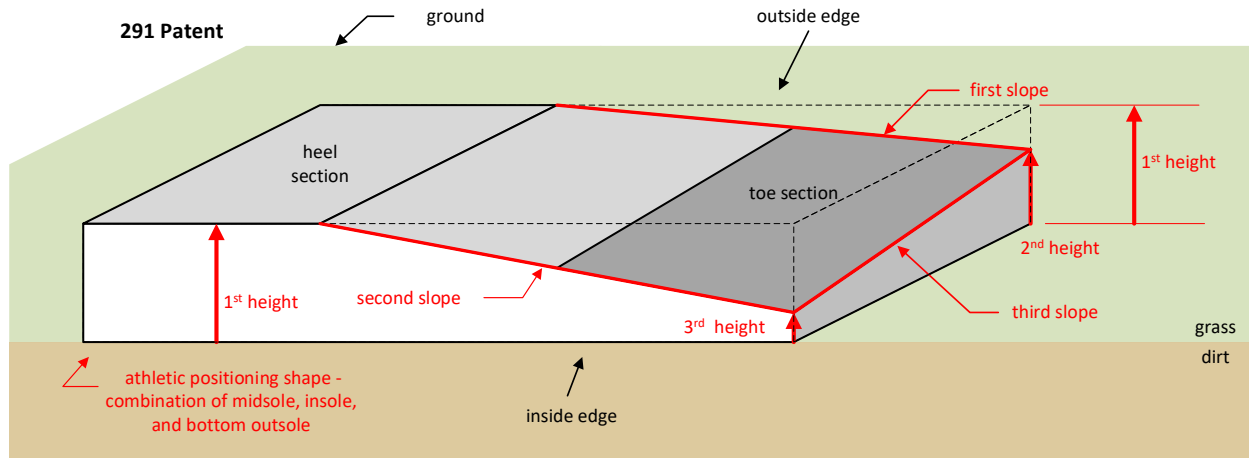
to the problem solved by the patent and as a result does not disclose or render obvious the first, second, or third slopes that form from having different first, second and third heights. EX2008 ¶¶175-178.

1. Kim Does Not Disclose the Claimed First, Second, and Third Heights or Slopes.

Ground 1 fails because Petitioner has not shown that Kim discloses a first height greater than a second height greater than a third height to form three slopes, a limitation found in every challenged claim. Because 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.

a. The Claimed Heights are Measured Relative to the Bottom of the Shoe.

The ’291 patent requires an “athletic positioning shape” made up of the midsole, insole, and bottom outsole. The athletic positioning shape has three heights: a first height, a second height, and a third height, measured at different parts of the heel and toe sections of the shoe. EX2008 ¶179. As discussed further below, 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.* ¶182. The claims of the ’291 patent result in an athletic positioning shape that is illustrated in the following block diagram:



EX2008 ¶179.

The disclosure of the '291 patent confirms that the height of the athletic positioning shape is measured from the bottom of athletic positioning shape. EX2008 ¶180; *see* EX1001, Figures 3-15, 56-65, and 67. The '291 patent describes how a “sport specific bottom” of the shoe is part of its outsole: “the integrated sole and insole may include *an outsole of a rigid material (e.g., a sport specific bottom)*.” EX1001, 28:16-19, 28:48-50 (emphasis added). The '291 patent explains that a “sport specific bottom,” can include “a spike and/or cleat pattern” for “golf,” or other bottoms specific to baseball, football, and soccer. *Id.*, 21:22-26; 21:51-55. In other words, in the '291 patent, the cleats/spikes on the bottom of a golf shoe are a part of the outsole that makes up the height. EX2008 ¶180.

Measuring the height of the sections of the athletic positioning shape from its bottom (i.e., the bottom outsole) is also consistent with the ordinary meaning of “height.” EX2008 ¶181. According to Meriam Webster, the definition of “height” is

“the highest part, the distance from bottom to top of something standing upright, and/or the extent of elevation above a level.” EX2015; EX2008 ¶181. None of Kim, the Petitioner, or Mr. Delgatty have offered any other definition for height. *Cf.* Pet., 10; EX1002 ¶27.

A POSITA would understand that the heights of the claims in the '291 patent measure the distance from the bottom of the cleats/spikes to the top of the insole, along the vertical axis. EX2008 ¶182. This distance may or may not be different than the distance from the ground to the top of that component. For instance, on hard ground, the distance from the bottom of the cleats to the top of the outsole would be the same as the height of the top of the insole to the ground. *Id.* On soft ground, however, if the spikes sink into the ground, the distance between the bottom of the cleats and the ground is a “negative” height since the spikes are below ground. *Id.* ¶183. The top of the insole with respect to the ground would be less than it is with respect to the bottom of the cleats (at least at some points) by the negative amount of that the spikes penetrate the ground. *Id.*

The '291 patent does not use the word “height” in this manner—an absolute distance above the ground. *Id.* ¶184. For example, if part of the bottom outsole, such as a cleat or a spike, went below the ground, the '291 patent would not consider that part of the outsole to have a negative height—it would still have a positive height value and its value would still count toward the claimed heights. *Id.* In other words,

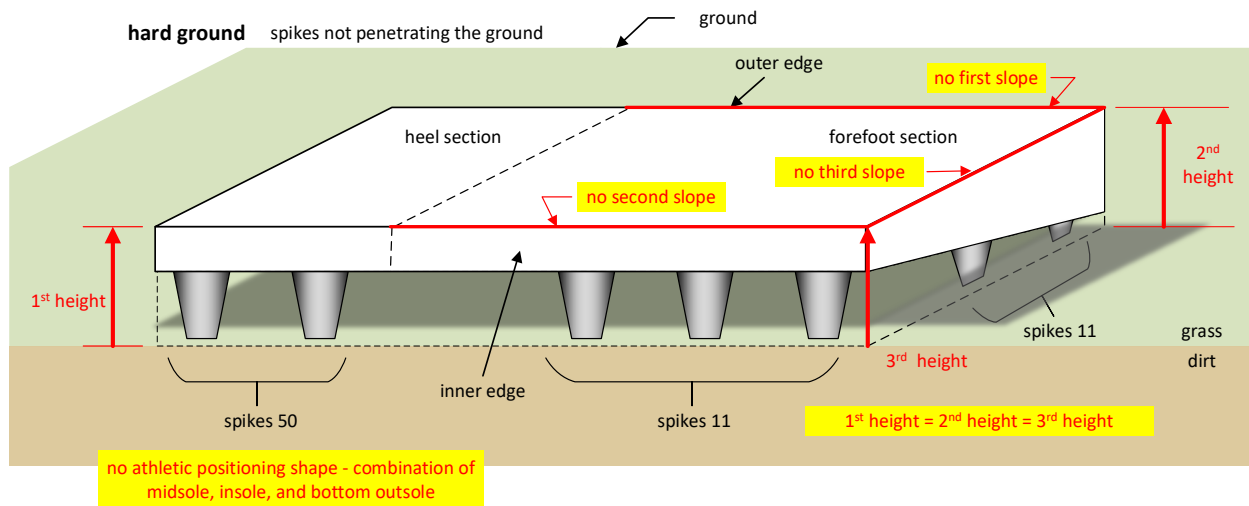
the first, second, and third heights consider the distance from the bottom of the spikes to the top of the outsole, regardless of the shoe's height above or below the ground. *Id.* As such, the heights of claim 1 are the same *regardless* of whether the spikes are on a hard surface or if they have been pressed into soft ground. *Id.* ¶187. This concept is also clear from the fact that the patent claims a “shoe” with particular heights—that is, the heights of a shoe do not change simply because the shoe is oriented differently with respect to the ground or held up in the air in a particular way.

Claim 8 reinforces this understanding. That claim requires that the second height “includ[e]” three constituent heights: (1) “an insole second height component”; (2) “a midsole second height component”; and (3) “a bottom outsole second height component.” EX1001, 44:30-32. Claim 8 also requires a “third height component” in relation to the insole, midsole, and bottom outsole. *Id.*, 44:33-35. It would only make sense that the second and third “heights” of claim 1 “includ[ed]” these three component heights of claim 8 if each of claim 8's components were measured from its bottom to its top, not from the ground to its top. EX2008 ¶185. In the latter, counterfactual, case, the sum of the heights of the three components would *exceed* the second and third heights. Claim 1 provides further support for this understanding. Claim 1 requires the first, second, and third heights to form the athletic positioning without making any reference to the type of ground on which the shoe rests. *See* EX1001, 43:14-36. Thus, the “heights” of claim 1 refer to the

distance from the bottom of the cleats (bottom outsole) to the top of the insole, not from the ground to the top of the insole. EX2008 ¶186.

b. When Measured Correctly, Kim Does Not Disclose a First, Second, or Third Height or Resulting Slopes.

When the heights in Kim are measured correctly, it is clear that Kim lacks a first height greater than a second height, which is in turn greater than a third height, or any resulting first, second, or third slope formed by those heights. Mr. Markison's block diagram below of Kim's primary embodiment shows that at an inside edge and at an outside edge of the sole along a heel section there is a first height, which is identical to the second height at the outer toe section and the third height at the inner toe section:



EX2008 ¶189. Further, since the first, second, and third heights are the same, they also do not form first, second, or third slopes. *Id.* ¶190; see EX1002 ¶62 (Petitioner's

291 Patent

ground

outside edge

heel section

1st height

2nd height

1st height

2nd height

3rd height

first slope

second slope

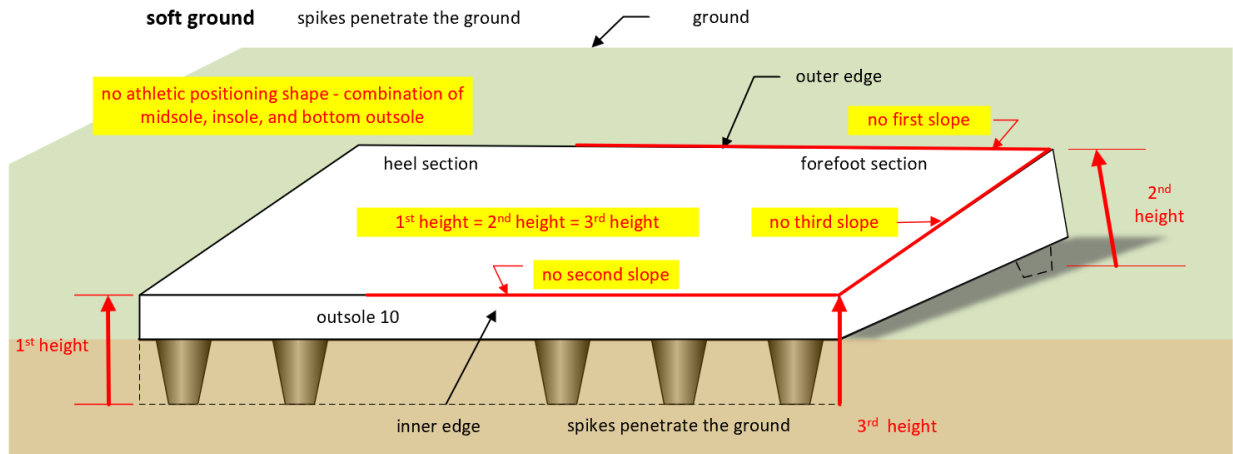
third slope

athletic positioning shape - combination of midsole, insole, and bottom outsole

inside edge

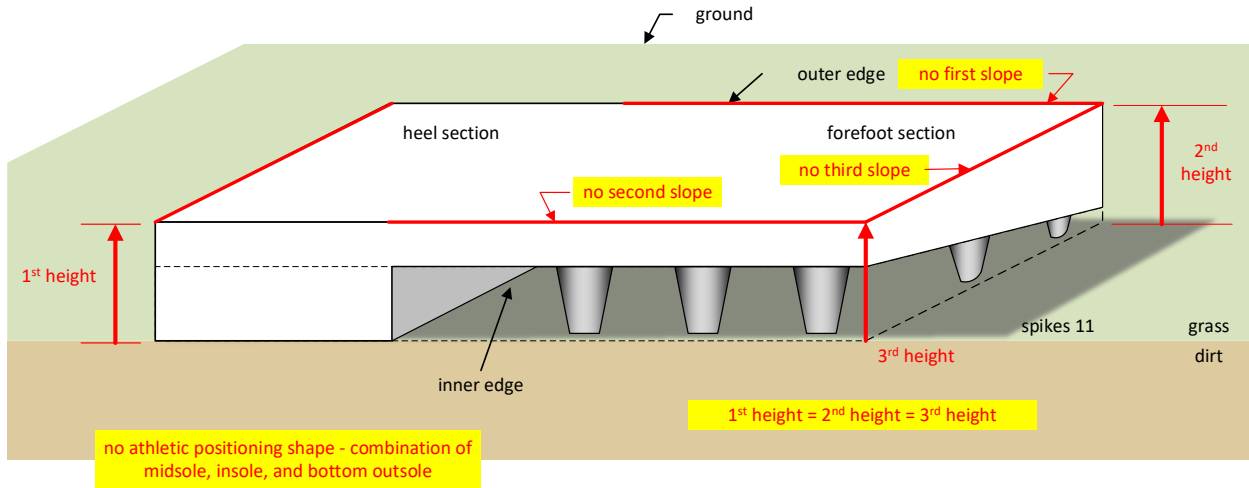
grass dirt

Further, as discussed above, nothing changes about the heights or slopes as claimed when the spikes of Kim penetrate the ground (the “soft surface” arrangement, *supra* § II.C.1.b). Instead, the bottom of Kim’s cleats are still parallel to the upper surface of the outsole 10. EX2008 ¶190. As Petitioner’s expert agreed “the distance between the top of the foot platform and the bottom of the cleats remains the same” in Kim regardless of the surface. EX2010, 91:6-9. Again, this can be seen in the block diagram shown below:



EX2008 ¶190.

Finally, as Mr. Markison explains at length, Petitioner's expert also 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. EX2008 ¶¶116-121 (discussing EX1005, [0046]). Using this passage, Mr. Delgatty suggests that Kim discloses a sole with no different length spikes and no corresponding slope in the heel at all. *Id.* Even if this were true (which it is not), such a modified version of Kim would still not render claim 1 obvious. *Id.* ¶195. Instead, as set forth in the block diagram below, a version of Kim without different length spikes and no corresponding slope in the heel would still have the same height at the heel and at the inner and outer portions of the toe—that is, it would still not disclose a first, second, or third height or any resulting slopes:



EX2008 ¶¶193-196; *see also id.* ¶¶120-121 (explaining why the “what if” embodiment also fails to render the claims obvious on soft ground because such an embodiment is illogical and does not disclose the claim elements).

2. Petitioner Incorrectly Measures Kim's Heights Without the Cleats.

Petitioner's analysis primarily relies on a misreading of Kim that excludes the spikes from the measurement of heights to claim obviousness. EX2008 ¶199. Specifically, Petitioner relies on only the thicknesses of Kim's intermediate sole (not the entire outsole 10, which includes the spikes), ignoring both the height of the spikes of the outsole and the height of the insole in the claimed heights:

FIG. 5b

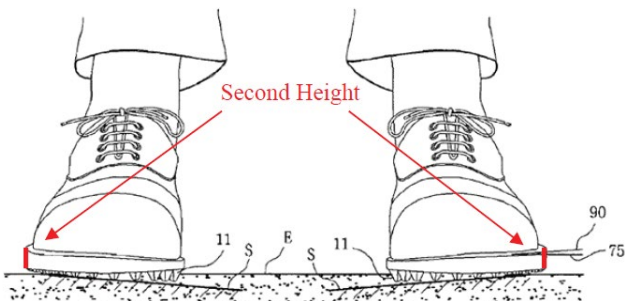
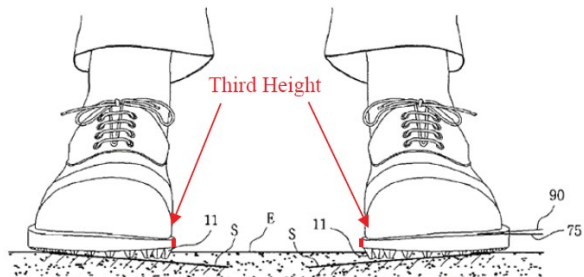
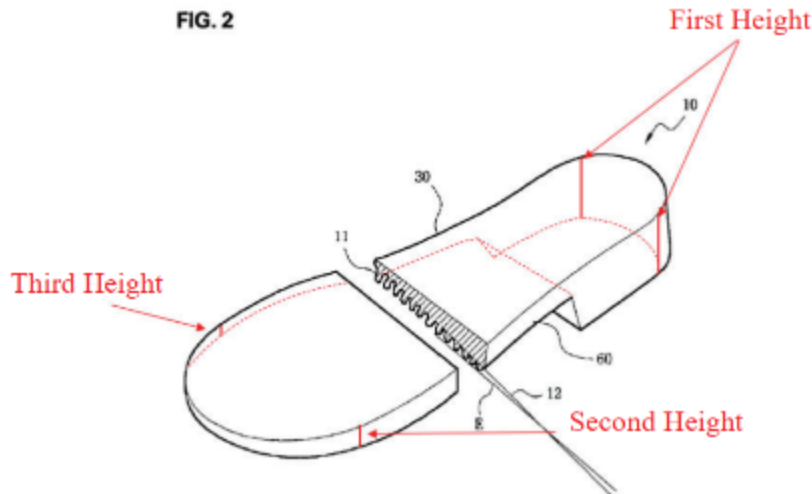


FIG. 5b



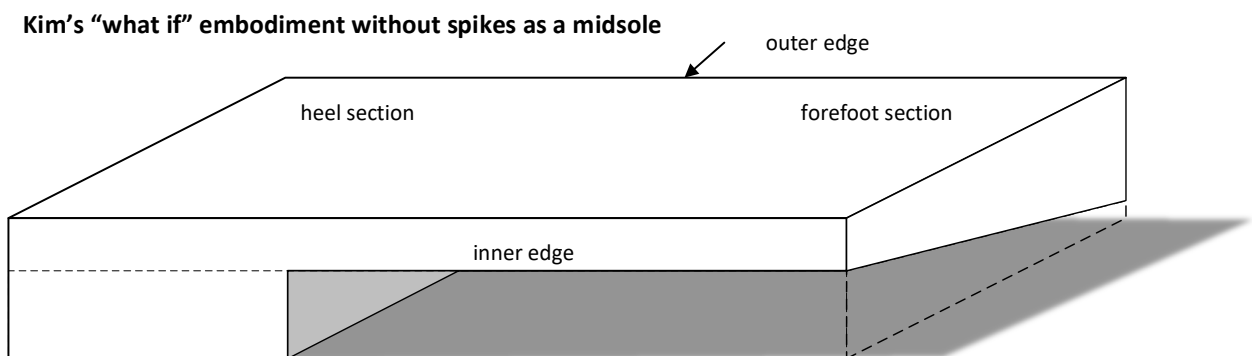


EX1002 ¶60. Petitioner’s expert agreed that his analysis excludes the height of the spikes when analyzing the heights in Kim. EX2010, 95:12-96:5. As set forth above, the correct way to measure the three heights of claim 1 is from the bottom of the outsole to the top of the insole, not just a portion of that distance corresponding to a portion of Kim’s outsole (i.e., the intermediate sole). By failing to include the spikes (i.e., the outer sole of Kim’s outsole 10), Petitioner is effectively reading the “bottom outsole” out of claim 1, as explained further below.

As discussed in the overview of Kim, *supra* § II.C.1, and in Mr. Markison’s declaration, Kim considers the spikes to be part of its outsole. EX2008 ¶198. Kim explains that element 10 is the “outsole.” EX1005, [0028]. Kim further explains that a “plurality of spikes 11 are protruded from the lower surface of the outsole 10,” to give the golf shoe its grip. *Id.*, [0030]. In Kim, the outsole and spikes are a single unit. According to Kim, the “spikes 11 are *integrally formed* with the outsole 10.”

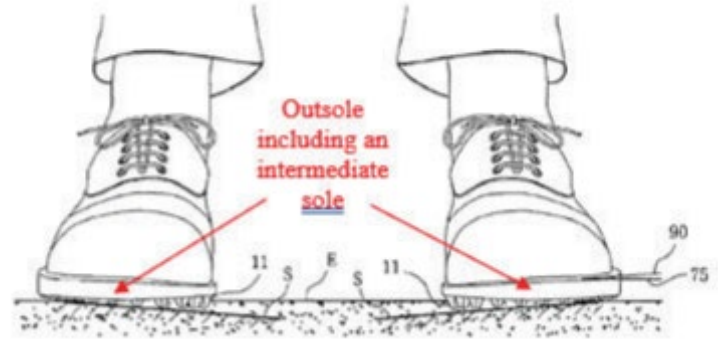
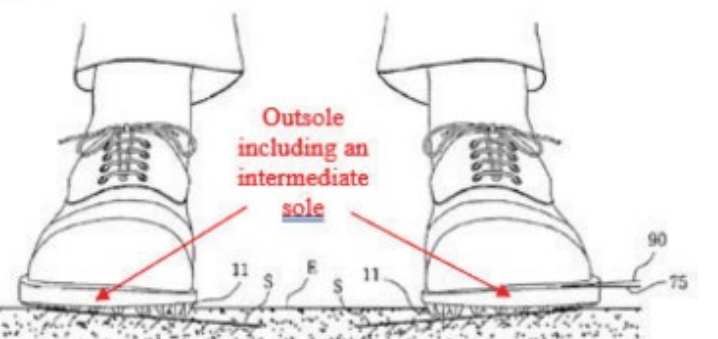
Id. (emphasis added); *see also id.* [0031] (“the spikes 11 integrally formed with the outsole 10”) *Id.*, [0031]. In addition, Kim explains that “the outsole 10 [is] attached to the lower surface of the upper leather portion 20, and ***adapted to contact the ground.***” *Id.*, [0028] (emphasis added). In other words, the outsole itself contacts the ground and the outsole includes the spikes (i.e., the outer sole of the outsole). EX2008 ¶198. *See also* EX1005, [0026], [0027], [0029], [0030], [0033], [0039], Figures 2 and 3a.

By excluding the cleats from his measurements, Petitioner’s expert has modified the “what if” embodiment of Kim discussed above without spikes in the heel even further to create a shoe that neither makes logical sense nor meets the claims. EX2008 ¶199. The modified version of Kim without spikes is illustrated below in a block diagram:



Id.

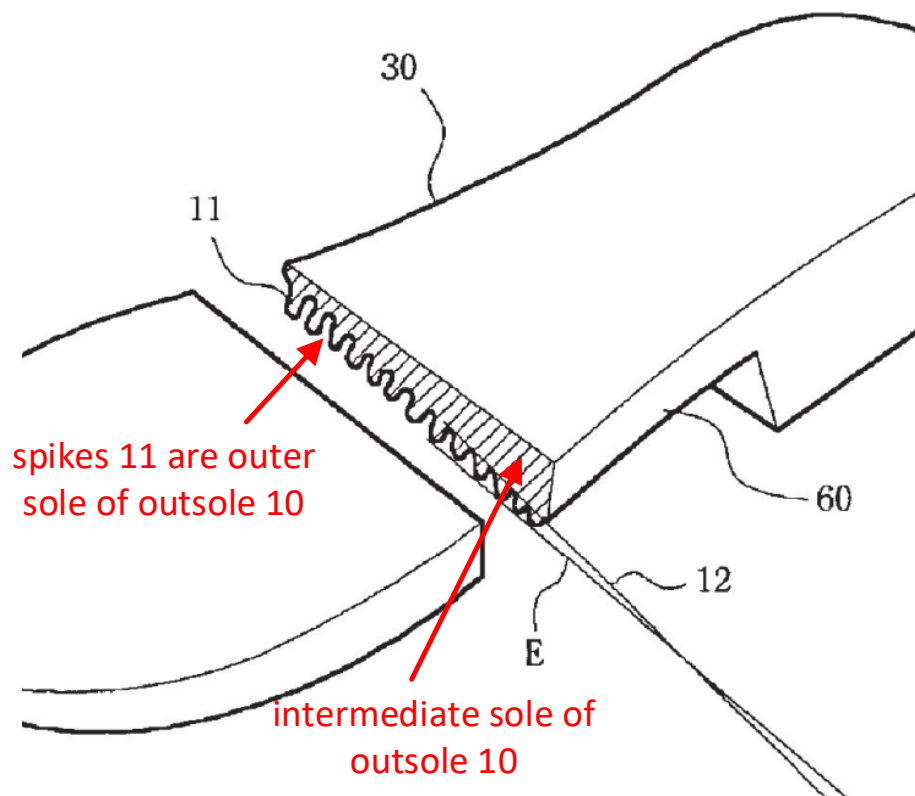
Petitioner's expert specifically interprets Kim incorrectly to say that the intermediate sole of the outsole 10 is **both** the midsole and the outsole, as shown below from his declaration. *See* EX2008 ¶200 (citing EX1002, pages 28 and 30).

claim element	Kim reference with annotations
midsole	FIG. 5b  The diagram shows a top-down view of a shoe sole. A red arrow points from the text 'Outsole including an intermediate sole' to the sole structure. Another red arrow points from the same text to the sole structure. The sole is labeled with '11' and 'S'. A label '90' points to the heel area, and '75' points to the sole edge. The text 'Outsole including an intermediate sole' is written in red.
outsole	FIG. 5b  The diagram shows a top-down view of a shoe sole. A red arrow points from the text 'Outsole including an intermediate sole' to the sole structure. Another red arrow points from the same text to the sole structure. The sole is labeled with '11' and 'S'. A label '90' points to the heel area, and '75' points to the sole edge. The text 'Outsole including an intermediate sole' is written in red.

However, this is not what Kim discloses. *See* EX1005, [0029] (“Generally, the outsole 10 includes an intermediate sole and an outer sole. Here, the outsole 10 denotes the intermediate sole and the outer sole.”). Kim does not specifically define intermediate sole or outer sole, but it does make it clear what each term means: the outer sole is the spikes and the intermediate sole is the remainder of the outsole 10 above line 12. EX2008 ¶202; *see also* EX1005, [0030] (“spikes 11 protrude from

the lower surface of the outsole 10 and are integrally formed with the outsole 10. The cleat-shaped spikes 50 may be integrally formed with the outsole 10 or are detectable”).

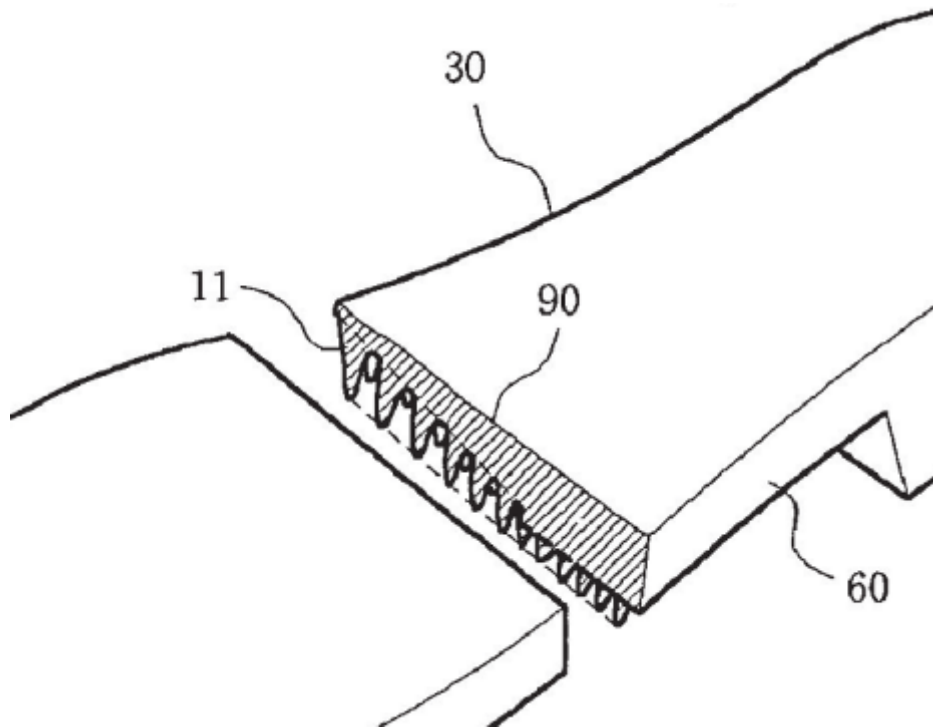
Figure 2 supports this understanding. As shown below, the bottom of the spikes 11 are in contact with the ground E, while the lower surface 12 of the outsole 10 angles upward from the outer edge 60 to the inner edge 30 and does not come in contact with the ground E:



See EX2008 ¶¶204-205, 208.

Figure 3a provides further support. As shown below, the slope of the lower surface of the outsole does not extend fully from the outer edge 60 to the inner edge

30. Instead, there is a parallel to the bottom of the spikes section near the outer edge 60 before the upward slope begins. This figure includes 90, a line representing the level of the golfer's feet being parallel with ground E. EX1005, [0039]. Line 90 is parallel to the bottom of the spikes 11, which are in contact with the ground.



EX2008 ¶¶207-208.

This is even further supported by figures 3b, 4a-4c, and 5a, which show that the spikes touch the ground (E). Thus, the spikes are part of the outsole 10 and, in particular, provide the outer sole of the outsole 10 and provide the contact with the ground. Even in Figure 5b, a majority of the contact with the ground is via the spikes even as they penetrate the ground.

FIG. 3b

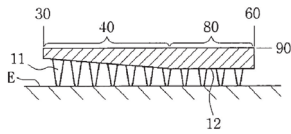


FIG. 4a

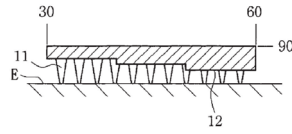


FIG. 4b

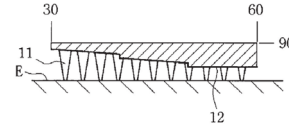


FIG. 4c

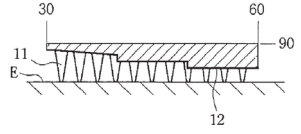


FIG. 5a

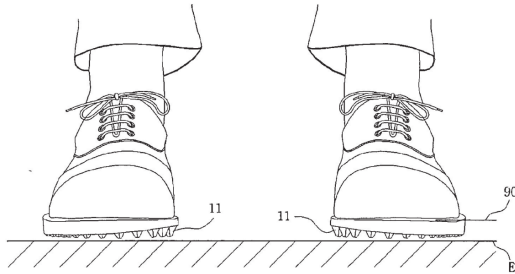
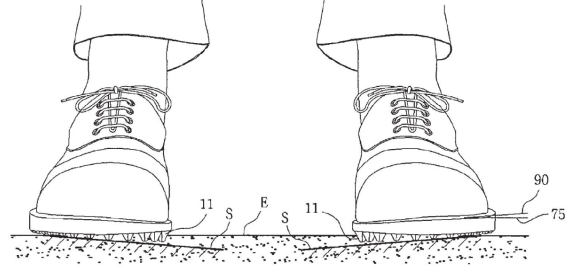


FIG. 5b



EX2008 ¶209.

All of this makes clear to a POSITA that Kim’s “outer sole” of the outsole 10 means the integrally formed spikes 11 and the “intermediate sole” of the outsole 10 is the rest of the outsole 10 above the lower surface 12. Petitioner’s treatment of the intermediate sole as both the midsole and outsole is directly contradicted by the disclosure of Kim. *Id.* ¶210.

Even using this modified “what if” embodiment, Petitioner still fails to show that Kim discloses or renders obvious three different heights that create three different slopes. Petitioner relies on the following annotated versions of Figure 2. *See* EX2008 ¶211 (citing EX1002, pages 39 and 40):

FIG. 2

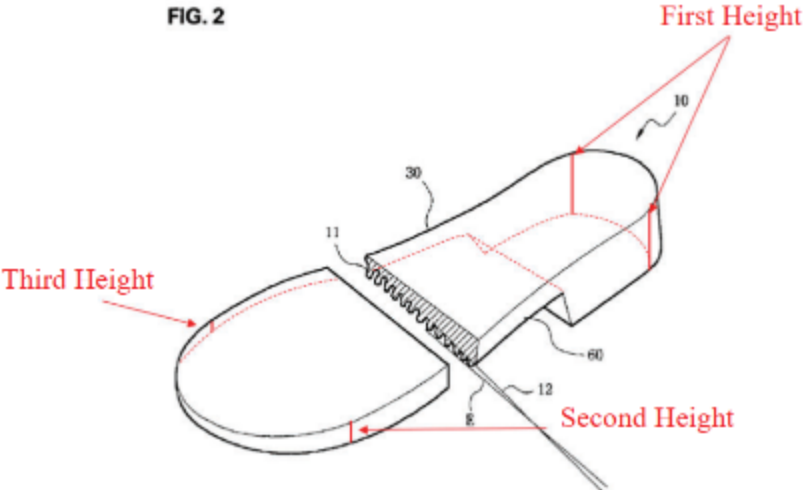


FIG. 2

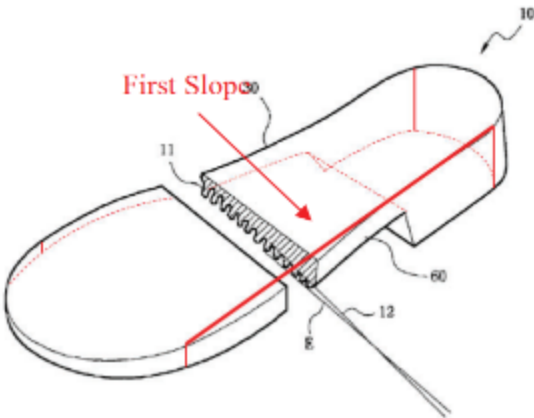


FIG. 2

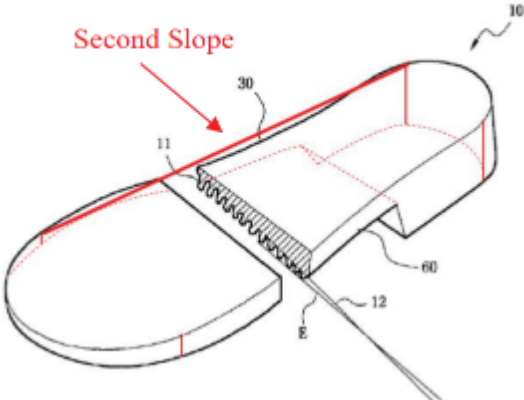
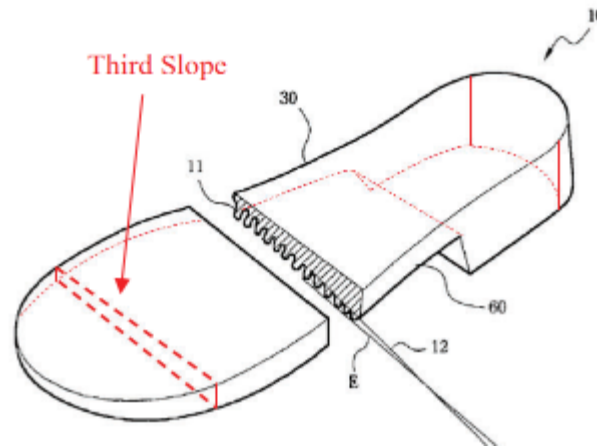
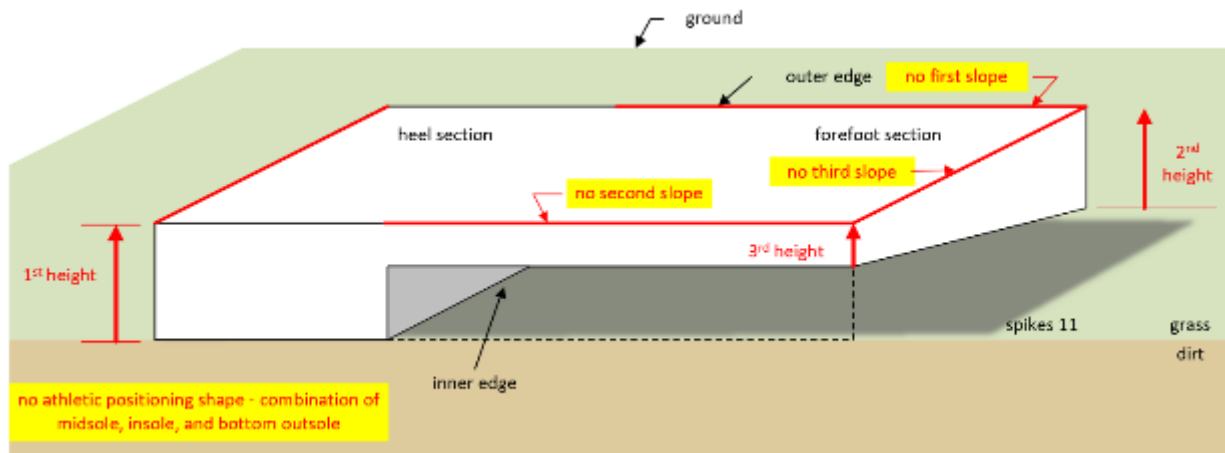


FIG. 2

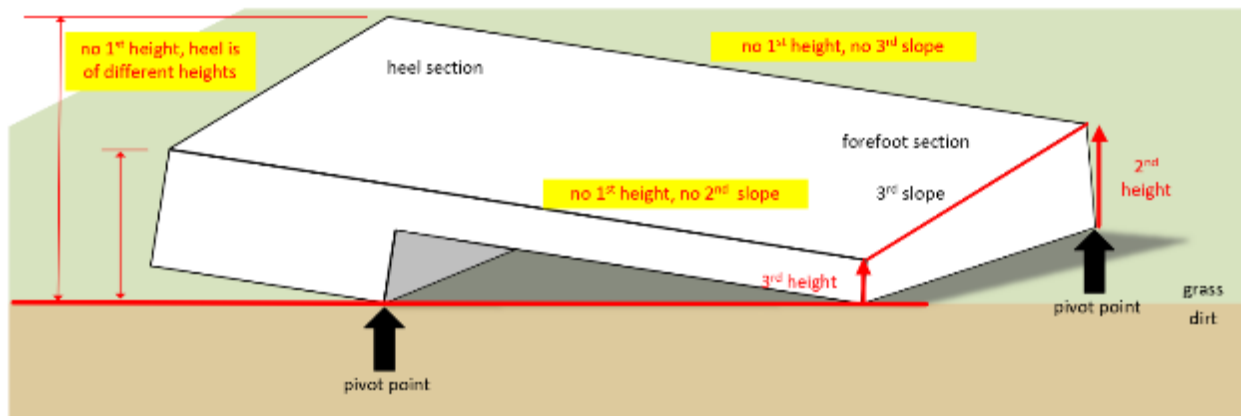


Petitioner's expert concludes from these drawings that a POSITA would understand that slopes inherently form between areas of different heights in a shoe sole, as shown in the figures above. EX1002 ¶60. This conclusory statement is not supported by the annotations above, however, which are all located at the top end of the lines he drew for the heights. EX2008 ¶212. That is, the slopes in these annotations are all on the top surface of the outsole of Kim, but Kim explains over and over that this surface is *parallel* to the bottom of the spikes. *See supra* § II.C.1; EX2008 ¶212. Therefore, even in Petitioner's "what if" embodiment, the slopes are all parallel to the ground and thus parallel to each other as shown below:



EX2008 ¶213. As can be seen above, since the first, second, and third heights are the same, they do not form different first, second, and third slopes.

Finally, even if the above “sole” were tilted forward, it would not render claim 1 obvious:



EX2008 ¶214. As shown in the above figure, 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. EX2008 ¶215.

As shown above, by pointing only to Kim's intermediate sole of the outsole, and omitting the height of the cleats (i.e., the outer sole of the outsole), Petitioner has failed to show that Kim discloses or renders obvious any of the first, second, or third heights required by claim 1 of the '291 patent. EX2008 ¶216.

3. Claims 2-5 are Patentable over Kim.

Because independent claim 1 is patentable over Kim, the more specific dependent claims are also patentable for the same reasons. *Id.* ¶218.

B. Ground 2: The Combination of Dufour and Kim Does Not Render Independent Claim 1 Obvious.

Ground 2 of the Petition fails because Dufour, both alone and in combination with Kim, fails to disclose the claimed first, second, and third height or the resulting slopes. Petitioner relies on two separate embodiments of Dufour, but as explained below, Petitioner has not shown how Dufour discloses that a sole for a golf shoe has a second height along the outside edge of the shoe that is greater than a first height because the first and second height are the same in both of Dufour's embodiments. Further, because the first and second heights are the same, there is no first slope formed by the first height and second height. Instead, Dufour is directed to a different solution to the problems solved by the patent. EX2008 ¶¶222-228.

Finally, Petitioner relies on Dufour for every limitation of every challenged claim, but acknowledges that Dufour does not disclose a golf shoe with a midsole or an insole. Thus, Petitioner seeks to combine Dufour with Kim as, according to

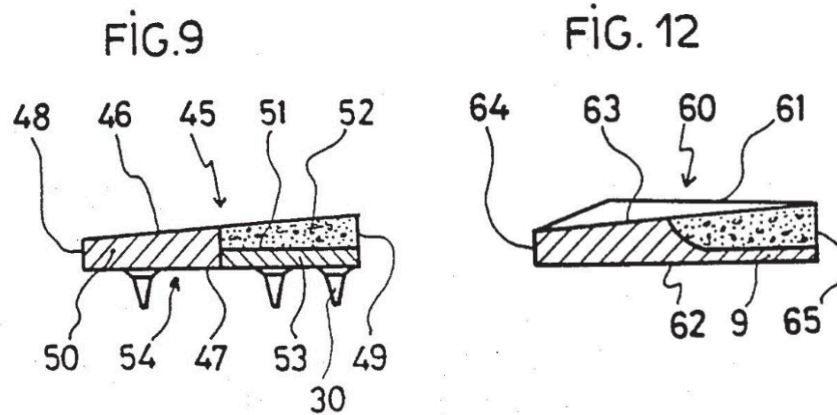
Petitioner, Kim expressly discloses a midsole and an insole. However, that argument is also fundamentally flawed because Petitioner is inconsistently applying portions of Kim between Grounds 1 and 2 and a POSITA would not have found combining Kim with Dufour obvious or that such a combination meets the claims. *Id.* ¶¶219-221.

1. Dufour Does Not Disclose a First Height Greater Than a Second Height.

The Petition must fail because neither of the Dufour embodiments upon which Petitioner relies discloses a second height along the outside edge of the shoe that is different from, or greater than, the first height. Rather, both embodiments clearly demonstrate that the first and second heights, both measured along the outside edge of the shoe, are the same. EX2008 ¶229. Because the second height is not greater than the first height, there is also no slope as required by the claims. *Id.*

Petitioner relies on Figures 8-12 of Dufour in its attempt to show that Dufour discloses all the limitations of the challenged claims. These figures represent two separate embodiments of soles for golf shoes. One sole for a golf is shown in Figures 8-10, which has a consistently upwardly inclined sole from the inner edge to the outer edge running the full length of the shoe (i.e., the front to the back of the shoe). EX2008 ¶¶231, 234. The second is depicted in Figures 11 and 12, which has a tilted support surface at the front of the shoe and a plantar support zone (or platform) at the rear of the shoe that is parallel to the walking surface. EX1006, 5:7-14; EX2008

¶232. Figures 9 and 12 show cross sections of the two shoe embodiments, looking from the front of the shoe toward the heel, as shown below:



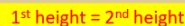
As can be seen from the figures, the support surfaces—46 in Fig. 9 and 63 in Fig. 12—are inclined upward from the inside edge (48 in Fig. 9 and 64 in Fig. 12) to the outside edge (49 in Fig. 9 and 65 in Fig. 12) of the shoe. EX2008 ¶233.

In Figure 9, the entire top of the sole has the same profile from the toe of the shoe to the heel (i.e., it inclines upward from the inner edge to the outer edge for the full length of the shoe). EX2008 ¶234. As such, at the outside edge of the shoe (49), the toe section is at the same height as the heel section of the shoe, from the front to the back of the shoe. This can be seen at the upper right-hand corner of Fig. 9:

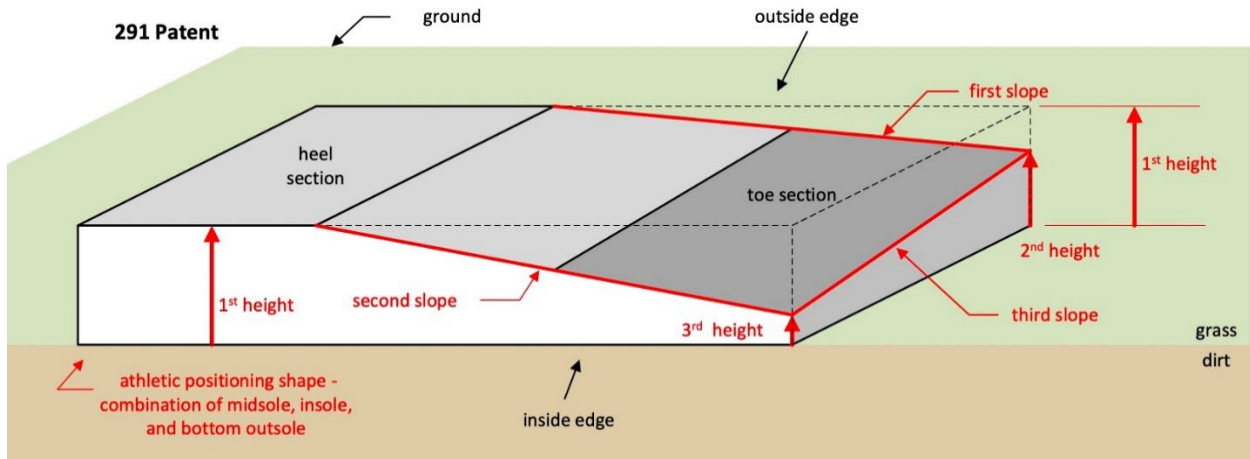


Id.

A perspective view of the embodiment of Figure 9 compared against a side view of the '291 patent further illustrates this point:



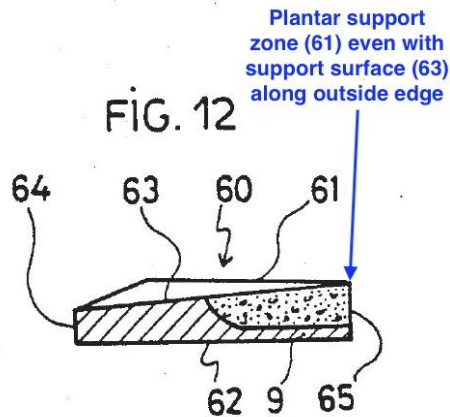
EX2008 ¶235.



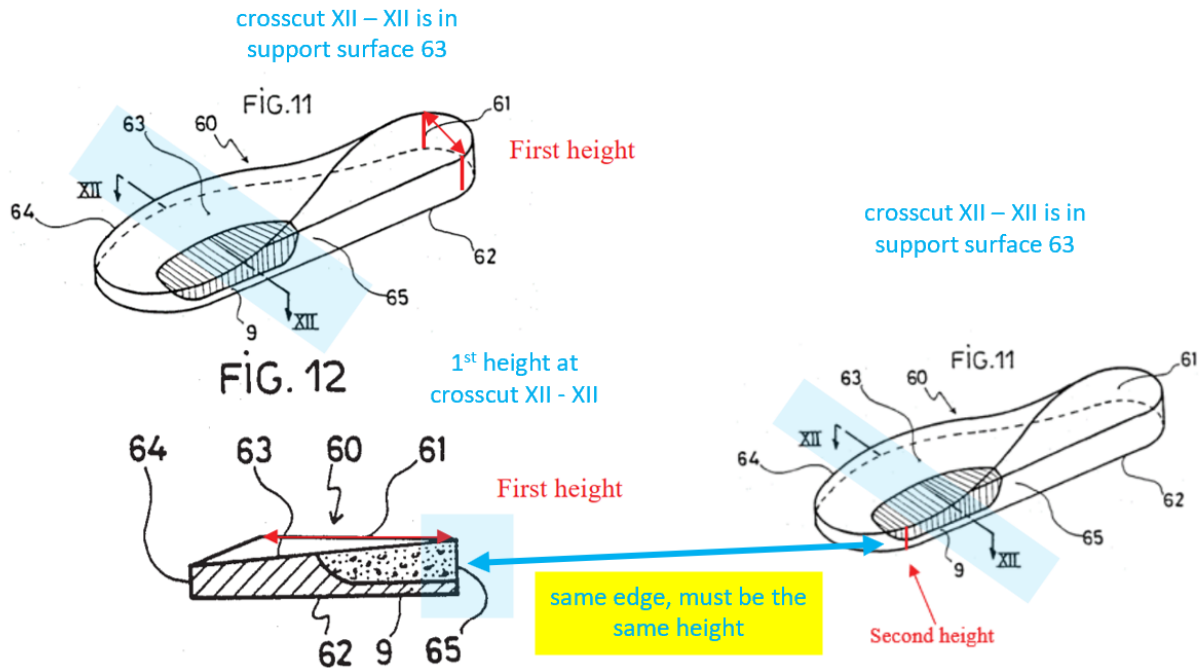
EX2008 ¶236. As can be seen in the first figure above, the outer edge of the shoe embodiment depicted in Figure 9 of Dufour is at the same height from the back to the front of the shoe. *See also* EX2008 ¶237. In contrast, in the shoe claimed in the '291 patent, only the heel is at a first height. *Id.* In front of the '291 patent's heel section, the outer edge starts at one height (the first height of the heel platform) and decreases along the outside edge until it reaches the front of the shoe at a second height. *Id.* Thus, in the embodiment of Figure 9 in Dufour, there is only a single height (a first height) along the outside edge of the shoe, whereas in the '291 patent, there is a first height at the heel section and a second, lower height at the toe of the shoe.

Petitioner's reliance on the Figure 11-12 embodiment of Dufour fares no better. In Figure 12, plantar support zone 61, where the back of the foot rests, is higher than support surface 63 near to the inside edge of the shoe (64). EX2008 ¶238. Importantly, at the outside edge of Figure 12 (65), the support surface 63 is at the

same height as plantar support zone 61. Thus, at the outside of the shoe (65) where the little toe sits, the toe section of the embodiment shown in Figure 12 is at the same height as the heel section. *Id.* This can be seen at the upper right-hand corner of Fig. 12:



Id. Indeed, Petitioner's own expert agreed with this in his annotations, which make clear that the first height at the back of the shoe is the same as the second height at the outer edge of the toe:

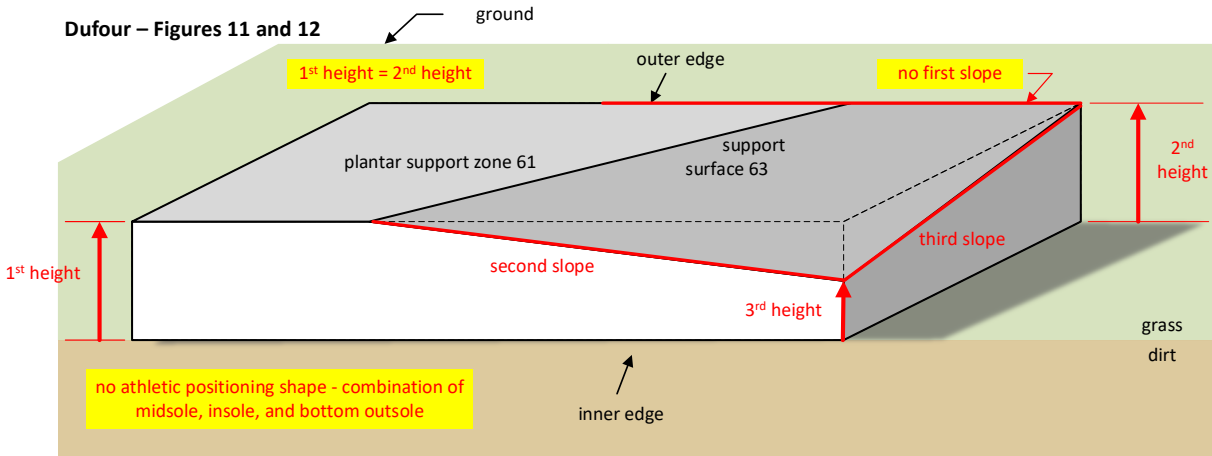


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EX2008 ¶¶243-244 (annotating EX1002 at 54-55). As shown above, Petitioner's expert labeled the outer edge 65 of Figures 11 and 12 of Dufour as having the first slope on the left in the above set of figures, then labeled the same outer edge 65 in Figure 11 (on the right in the above set of figures) as having the second height. *Id.* Thus, his own annotations show that there is only one height on the outer edge 65. *Id.* ¶244.

A drawing showing a block diagram of the embodiment depicted in Figure 12 illustrates the second height relative to the first height:



EX2008 ¶239. As can be seen in the figure above, support surface 63 angles upward.

Id. ¶240. As in Figure 12, the support surface 63 rises from the inside edge until it reaches the upper, outer edge of the shoe, at the same height as the plantar support zone 61. It is the same height all along the outer edge of the support surface 63 and plantar support zone 61, from the front to the back of the shoe. *Id.* The second height is determined at the front outer edge of the shoe, as shown in the figure. Because the front outer edge of both the support surface 63 and plantar support zone 61 have the same height from the toe to the heel of the shoe, the second height is the same as the first height. Therefore, Figures 11 and 12 of Dufour—which are the same embodiment—do not disclose a first height greater than a second height. EX2008 ¶241.

In sum, both the embodiments of Figure 9 and Figure 12 have the outer edge of the sole near the heel of a foot at the same height as the outer edge of the sole near the toes of a foot. Thus, the first and second heights in both embodiments are the

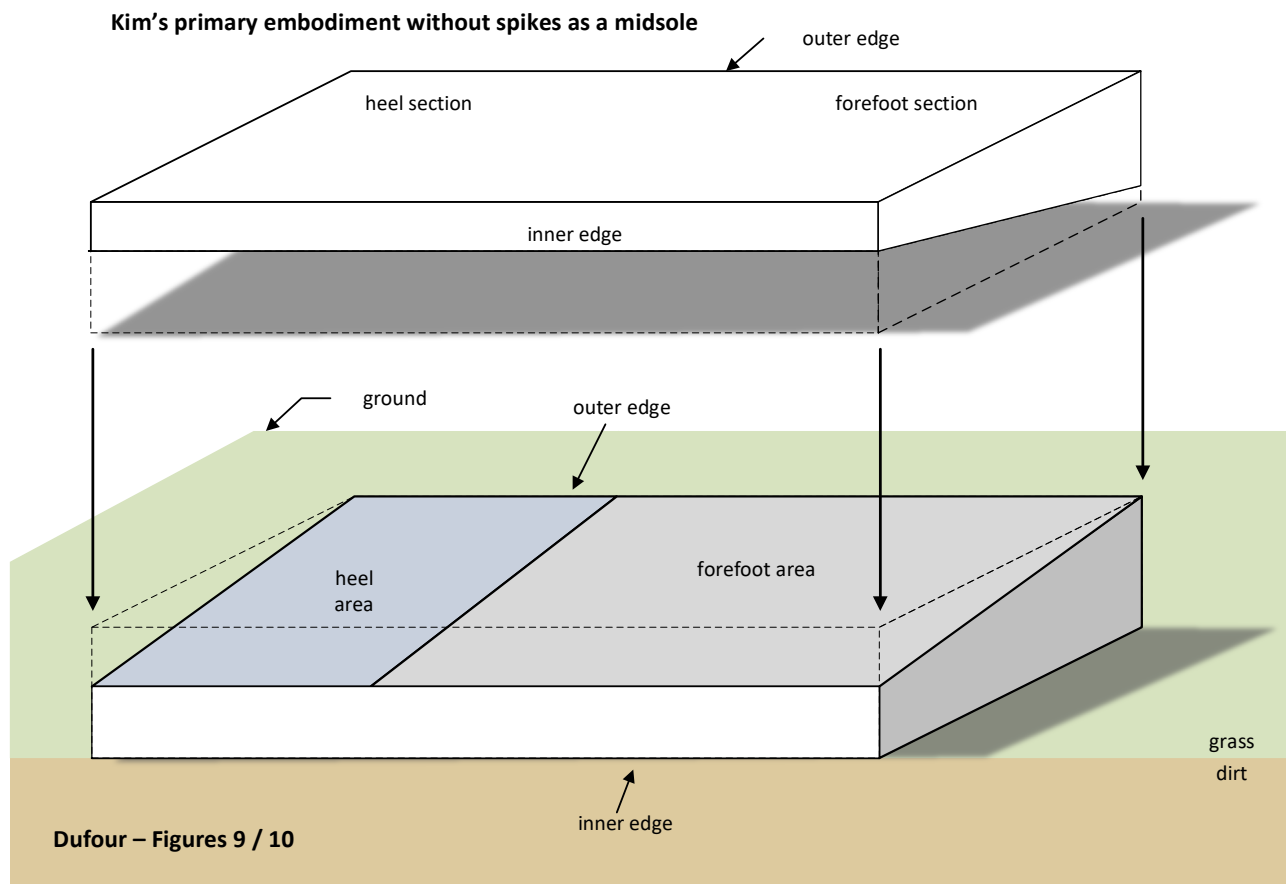
same. And because the heights are the same, Dufour also does not disclose a first slope between the first height and the second height.

Finally, Petitioner presented no analysis and offered no expert testimony about combining the various embodiments to modify Dufour to create a new shoe that had the claimed slopes. As explained above, each of the individual embodiments of Dufour lacks critical claim elements standing alone. Mr. Markison provides a detailed explanation about why a POSITA would not have found it obvious to combine the various embodiments to pull different portions together and redesign a new shoe that met the elements of the claims here. EX2008 ¶¶245-258. Petitioner's expert does not even offer a conclusory explanation of such a combination; instead, he simply mixes and matches embodiments without providing any rationale or reasoning, which is improper. *See, e.g., Abiomed, Inc. v. Maquet Cardiovascular, LLC*, IPR2017-01204, -01205, Paper 8 at 8-12 (P.T.A.B. Oct. 23, 2017) (“Petitioner’s challenge treats the various features of [the prior art]’s different embodiments as if they are interchangeable with one another” and the failure to “explain sufficiently why one skilled in the art would have found it obvious to combine those teachings” rendered analysis unreliable).

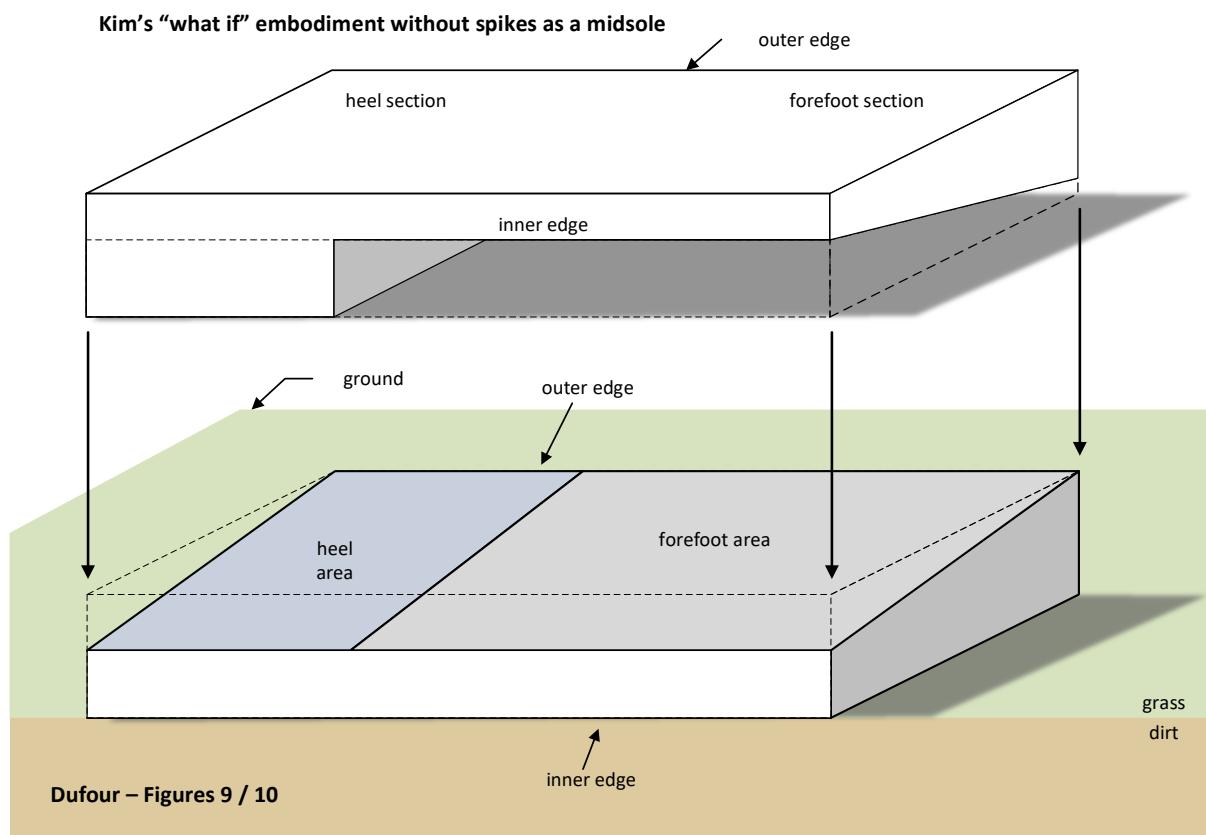
2. A POSITA Would Not Have Combined Dufour with Kim and the Combination Fails to Render the Claims Obvious.

Petitioner acknowledges that Dufour does not disclose a golf shoe with a midsole or an insole. Thus, Petitioner is relying on the sole of Dufour as a bottom

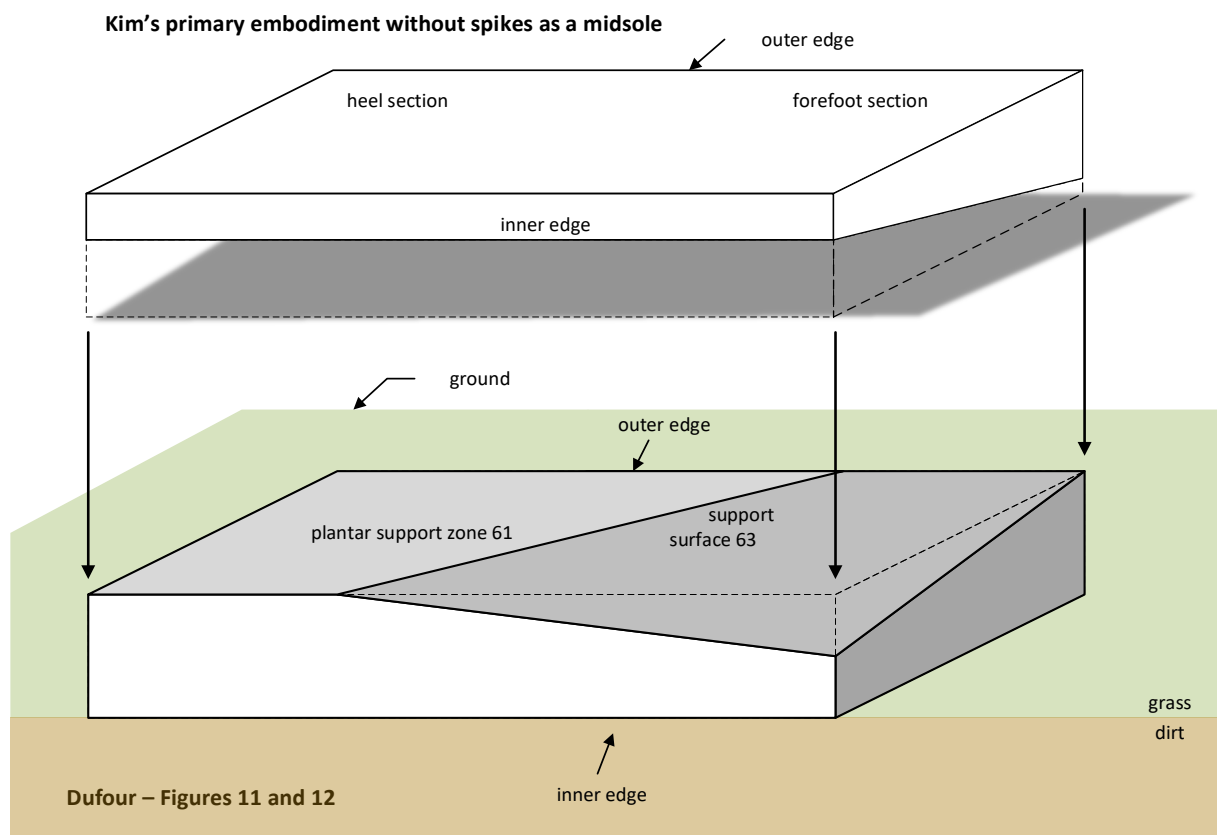
outsole with respect to claim 1. EX2008 ¶259. Petitioner’s expert treats the intermediate sole of Kim as a midsole—that is, is the part of Kim’s outsole that does not include the spikes. As Mr. Markison illustrates through the following figures, however, a combination of Kim and Dufour as suggested by the Petitioner would make no sense to a POSITA. These figures represent the two embodiments of Kim (the primary and “what if” embodiments) combined with the two embodiments of Dufour (Figs. 8-10 and Figs. 11-12):



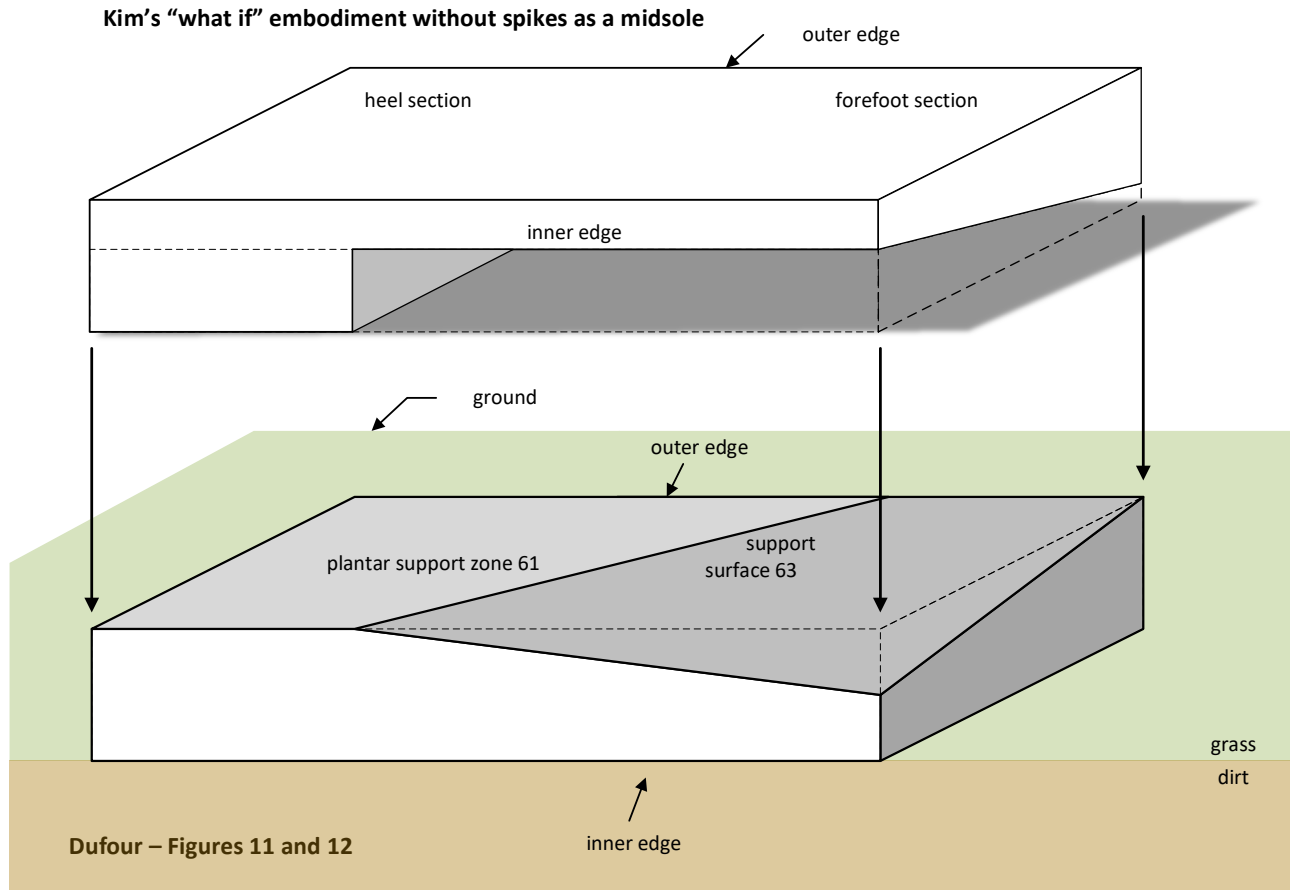
Id. ¶¶263-264.



Id. ¶¶265-266.

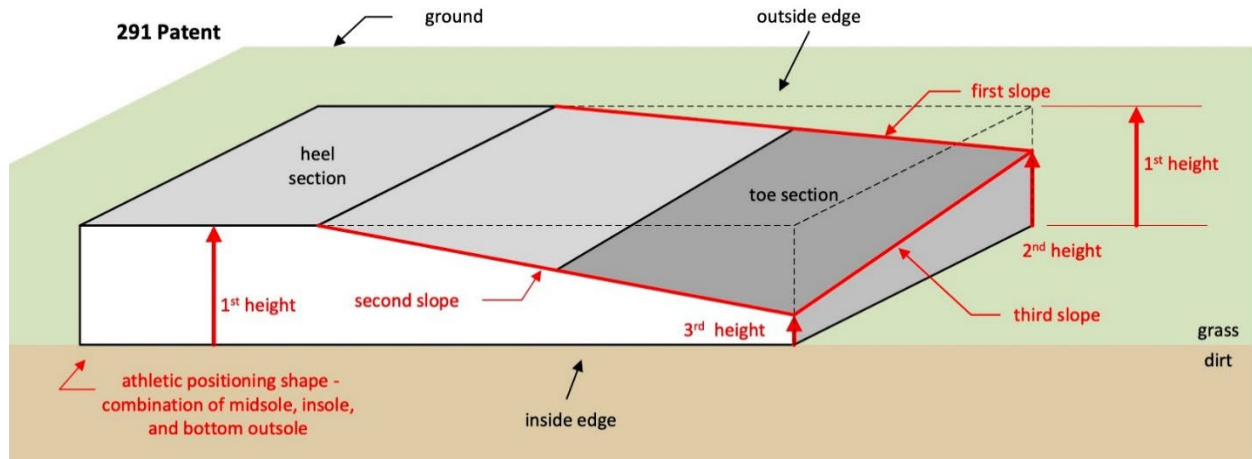


Id. ¶¶267-268.



Id. ¶¶269-270.

As Mr. Markison explains in detail, a POSITA would not have found creating any of these combinations obvious. *Id.* ¶¶261-270. Moreover, none of these combinations satisfy the claimed requirements in any event, illustrated in the block diagram below.



Compare EX2008 ¶¶72, with *id.* ¶270. Because a POSITA would not have combined Kim with Dufour and the combination still fails to meet the claims, Ground 2 fails.

3. Claims 2-5 are Patentable Over Dufour in View of Kim.

Because independent claim 1 is patentable over the combination of Dufour in view of Kim, the more specific dependent claims are also patentable for the same reasons. EX2008 ¶272.

C. Ground 3: The Combination of Rubin and Kim Does Not Render Independent Claim 1 Obvious.

Ground 3 of the Petition fails for similar reasons to Ground 1. EX2008 ¶273. Like Kim, Rubin discloses a golf shoe with variable thickness in the sole and variable length on the cleats, which are inversely proportional. Regardless of whether Rubin's shoe is on a hard surface or soft ground, Rubin's disclosure is insufficient to disclose or render obvious various limitations of the independent claims. Instead, when the heights in Rubin are measured correctly, there is no first height greater

than a second height or second height greater than a third height, and no resulting slopes. *Id.* ¶¶274-278.

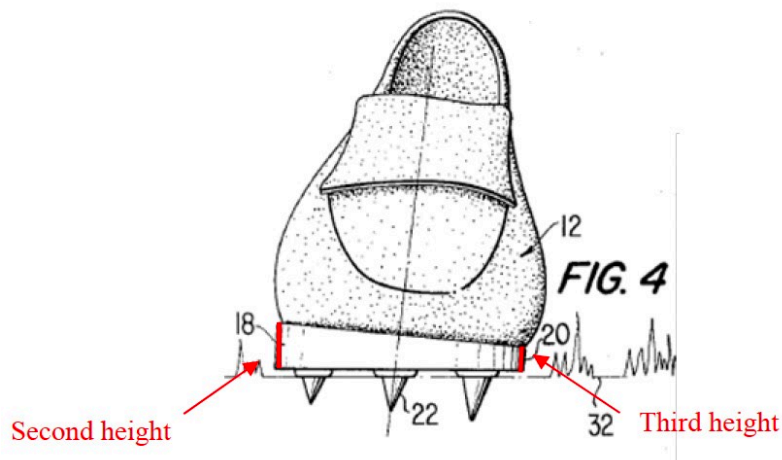
Finally, like for Dufour above, Petitioner relies on Rubin for every limitation of every challenged claim, but acknowledges that Rubin does not disclose a golf shoe with a midsole or an insole. Thus, Petitioner seeks to combine Rubin with Kim as, according to Petitioner, Kim expressly discloses a midsole and an insole. *Id.* ¶280. However, that argument is also fundamentally flawed because Petitioner is inconsistently applying portions of Kim between Grounds 1 and 3 and a POSITA would not have found combining Kim with Rubin obvious or that such a combination meets the claims.

1. Rubin Does Not Disclose a Second Height Greater than a Third Height.

As set forth in detail above with regard to Kim, the '291 patent measures the heights in the claims relative to the bottom of the shoe. *See supra* § VII.A.1.a. In particular, the '291 patent claims three heights of the athletic positioning shape, including the insole, midsole, and bottom outsole. These three heights measure distances from the bottom of the cleats to the top of the insole. *See also* EX2008 ¶289. And, as explained above, the '291 patent makes clear that spikes are considered part of the outsole. *See supra*, § VII.A.1; EX1001, 21:22-26, 51-55, 28:16-19, 28:48-50 (claimed shoe's outsole includes sport specific bottoms which may be a spike or cleat pattern for golf); EX2008 ¶290. Because the cleats form part

of the outsole, a POSITA would understand that they must be included in any measurement of the height of the outsole. *Id.*

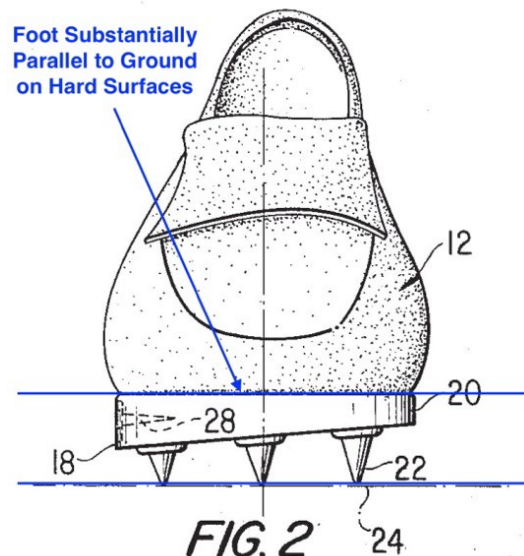
However, like it did for Kim, Petitioner incorrectly measures the heights of Rubin by excluding the cleats altogether. Specifically, to show the second and third heights of Rubin, Petitioner relies on the following annotated perspective view of Fig. 4 of Rubin:



Pet., 47. In identifying the “second height” and “third height,” Petitioner points only to the solid portion of the outsole, excluding the height of Rubin’s spikes. EX2008 ¶287. Indeed, once again, Petitioner’s expert agreed that his analysis excludes the height of the spikes when analyzing the heights in Rubin. EX2010, 111:15-112:11.

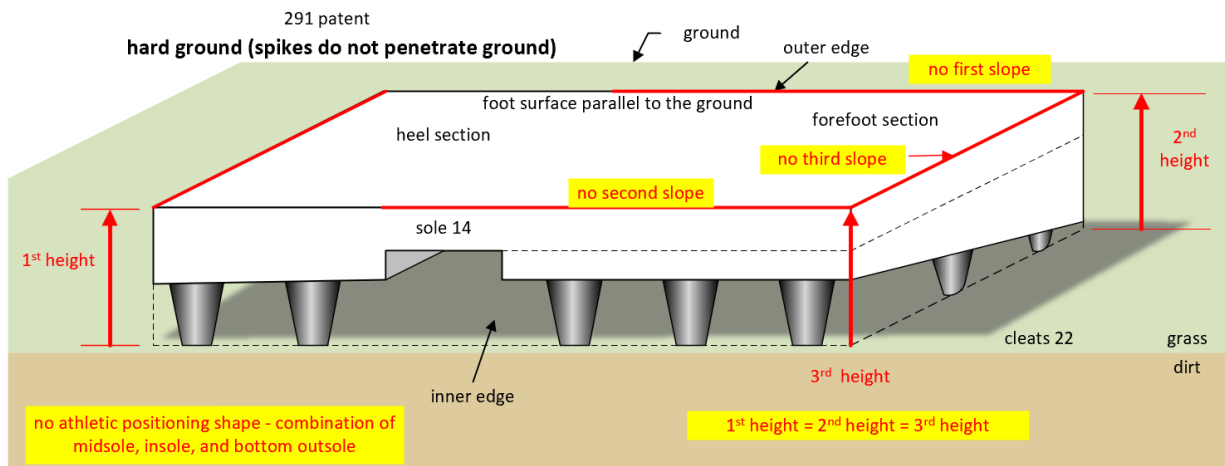
Since the Petitioner is using Rubin to provide an outsole, the cleats that touch the ground are part of the outsole. Thus, when Rubin’s cleats are included, the difference between the second height and third height vanishes. EX2008 ¶291. As described above, the cleats on the inside of the shoe are shorter than the cleats on the

outside of the shoe, whereas the sole is thicker on the inside and thinner on the outside of the shoe, to maintain a consistent height across the shoe. *Supra* § II.C.3; *see also* EX1007, 3:29-34 (“Cleats 22 adjacent the outer side 18 of the sole 14 are smaller than the cleats adjacent the inner side 20 of the sole 14 by an amount approximately equal to the difference in elevation between the outer side 18 and inner side 20 of the sole 14); *id.*, 3:34-37 (“when the wearer walks on a nonplaying surface, such as a concrete deck 24 as illustrated in FIG. 2, the foot of the wearer will be substantially level.”). The inversely proportional relationship between the height of Rubin’s cleats and thickness of its sole creates a flat surface for walking across the shoe. EX2008 ¶291. This understanding is confirmed by Figure 2 of Rubin, which shows the top of the outsole being parallel to the ground:

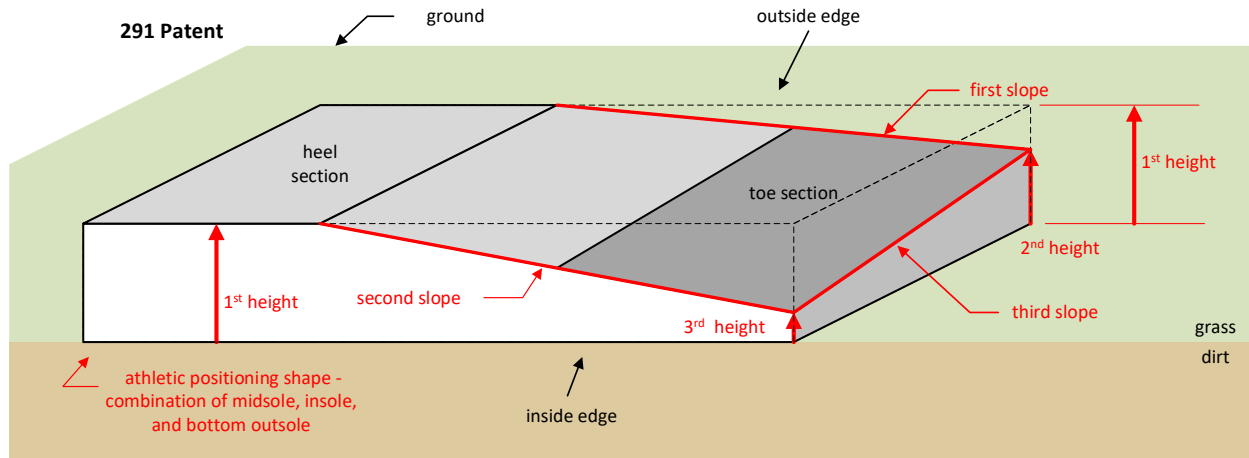


EX2008 ¶292.

Overall, like for Kim, Rubin consistently describes how the foot of the golfer wearing its shoe will be substantially level, i.e., parallel to the ground. EX2008 ¶293. This can be seen in the following block diagram, which represents Rubin's shoe, identifying where the first, second, and third heights are located and measured in Rubin.

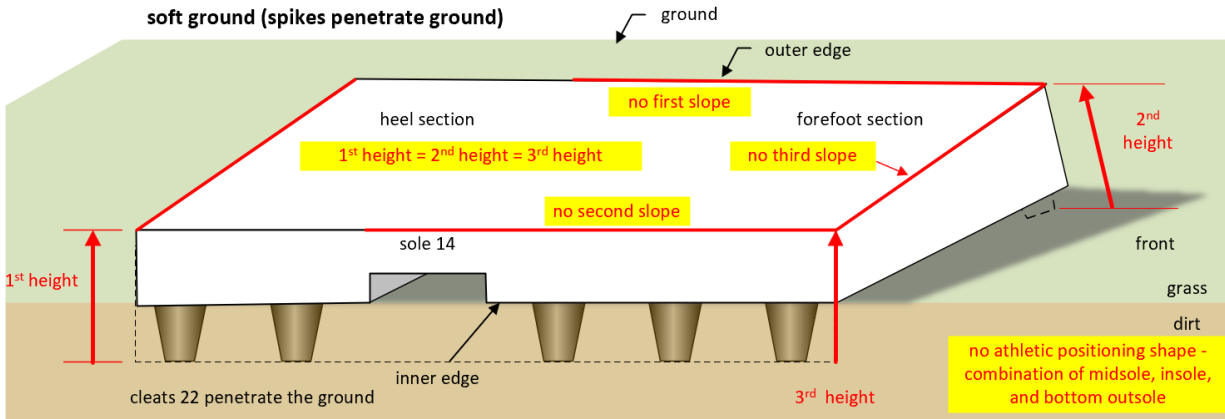


Id. As shown in the figure above, the heights at the front outer and inner edges of the outsole are the same. *Id.* ¶294; *see also id.* ¶148. Thus, the second and third heights are the same. *Id.* Accordingly, Rubin fails to disclose a second height greater than a third height. This is apparent when comparing the block diagram of Rubin to that of the '291 patent:



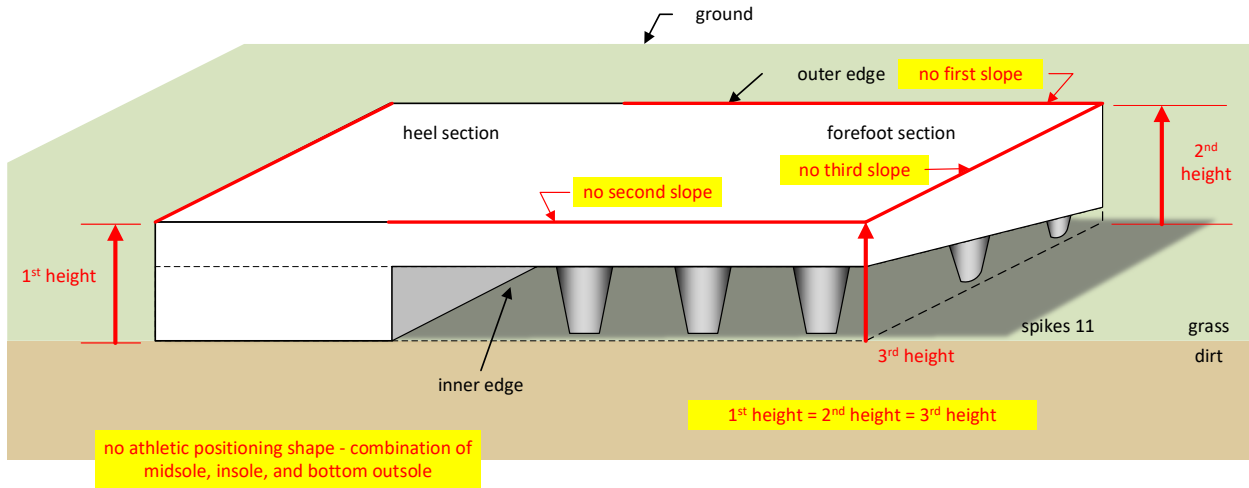
EX2008 ¶72.

Further, like in Kim, the relationship between the bottom of the cleats and upper surface of the sole of Rubin does not change even when Rubin's shoe is depressed into soft ground. EX2008 ¶283; *see also id.* ¶149. This includes the upper surface with respect to the ground, but not with respect to the bottom of the cleats. Like in Kim, nothing changes about the actual shoe of Rubin when it is on soft ground, as depicted in Figure 4, with respect to the claims. EX2008 ¶295. Because the second and third heights are measured from the bottom of the cleats to the top of the insole, their heights are the same, regardless of whether the shoe is on a hard surface or the cleats are depressed in to soft ground. *Id.* This can be seen in the block diagram below:



EX2008 ¶295.

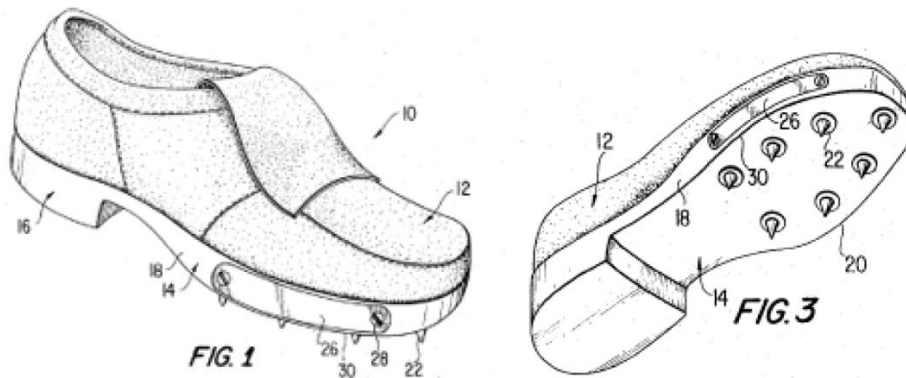
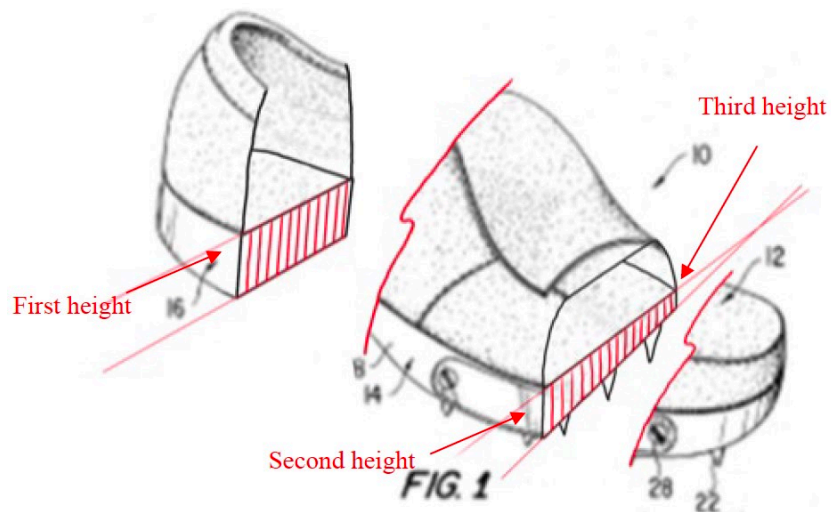
Finally, as Mr. Markison explains at length, Petitioner’s expert also relies on an interpretation of Rubin’s Figure 1 where it has no cleats and no slope for different length cleats in the heel. Even if this were true (which it is not, given the other figures and Rubin’s consistent disclosures, *supra* § II.C.3), such an arrangement of Rubin would not render claim 1 obvious. EX2008 ¶¶296; *see also id.* ¶¶152-155. Instead, as set forth in the block diagram below, a version of Rubin without spikes in the heel would still have the same height at the heel and at the inner and outer portions of the toe—that is, it would still not disclose a different second or third height or any resulting slope:



EX2008 ¶296; *see also id.* ¶¶152-155 (discussing this arrangement if it were tipped forward and why it would still not meet the claims).

2. Rubin Does Not Disclose a First Height Greater than a Second Height.

As an independent basis to reject Ground 3, Petitioner also fails to show that Rubin discloses a first height greater than a second height. Petitioner relies on the following exploded, annotated perspective view of Fig. 1 of Rubin, as well as unannotated versions of Figure 1:



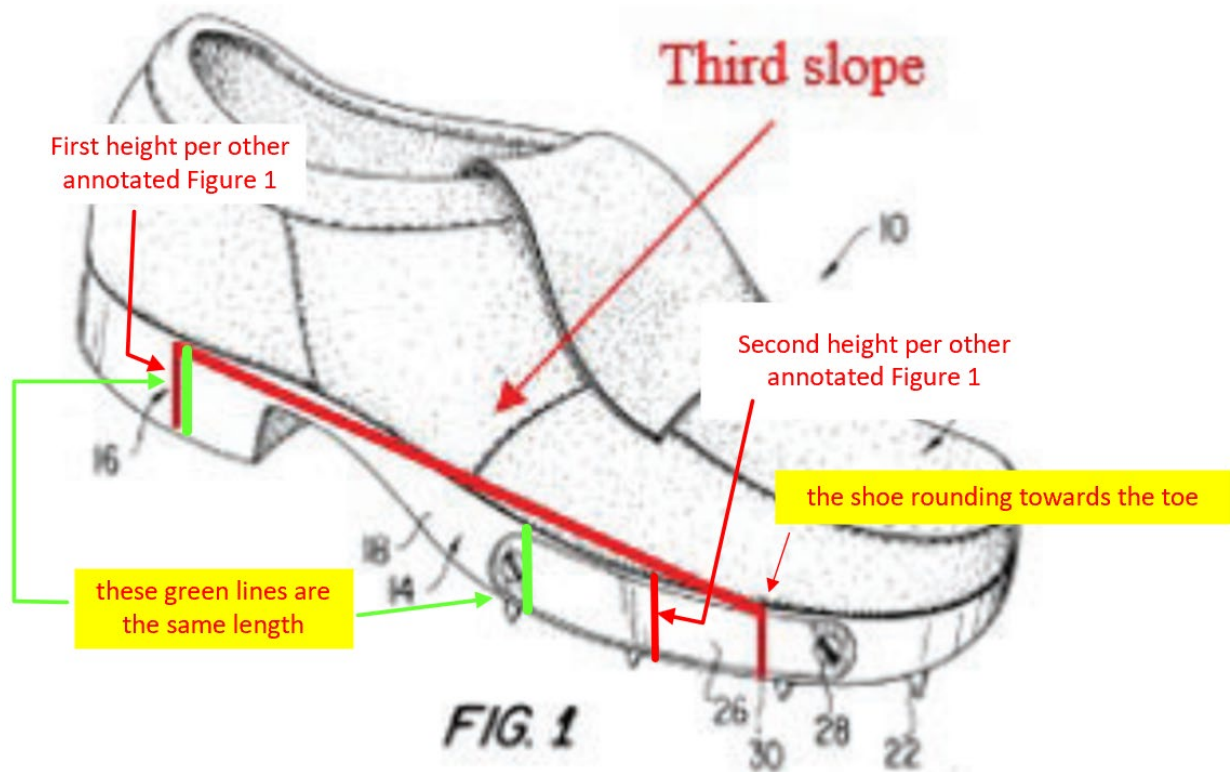
EX2008 ¶297 (citing Pet., 48). Petitioner then points to its expert’s testimony, which in turn points to the same figures, contending they show “the first height being greater than the second height.” Pet., 48; *see also* EX1002 ¶ 102. Petitioner’s expert contends that a “POSITA would understand this to be true based on the relative sizes, dimensions and shape of the sole depicted in Rubin.” EX1002 ¶ 102.

Petitioner’s argument is deficient for three reasons. First, Petitioner and its expert have misrepresented its annotations of Figure 1. Second, they leave out critical components of the heights (i.e., the different length cleats and the

correspondingly different thickness sole), rendering any comparison of the first and second heights utterly meaningless. Third, Petitioner ignores Rubin's disclosure that the upper surface of the outsole, where the foot rests, is substantially level. *See* EX2008 ¶299.

a. Petitioner misrepresents its annotations.

In Figure 1 of Rubin, even without the cleats, the illustration itself simply does not show a first height greater than a second height.



EX2008 ¶300. In the above annotated Figure 1, Petitioner's expert drew the third slope and the vertical red lines at the end of the third slope line, but did not label them. If the vertical red lines are meant to illustrate the first and second heights on

the outer edge of the sole without the cleats, then the second height is not in the same location as it was drawn in the above annotated figure 1. *Id.* ¶301.

Mr. Markison added where the second height was drawn in the dissected annotated version of Figure 1 above and it is in a different location than in the present annotated figure 1. *Id.* ¶302. Both representations of the second height are shown after the shoe starts to round towards the toe, which distorts the perspective view of heights. The vertical green lines added by Mr. Markison illustrate the first height in the heel near Mr. Delgatty's marking of the first height and the second height of the forefoot before the shoe bends towards the toes. The green lines are of the same length, thus the first and second heights are the same even without the cleats. *Id.* ¶303. Further, the red line added by Mr. Markison to show Mr. Delgatty's first marking of the second height is the same length as the two green vertical lines added by Mr. Markison. *Id.* ¶304. Thus, with the first marking of the first and second height, Mr. Delgatty shows that they are the same height.

b. Petitioner omits key components of the heights.

Regarding the omissions of the components of the heights, as described above, the claims of the '291 patent require that the first, second, and third height include the heights of all the parts that form each height: the midsole, insole, and bottom outsole. *See supra*, § VII.C.1. The specification of the '291 patent also clarifies that sports-specific bottoms, like cleats, are part of the outsole. *See id.*; EX2008 ¶305.

Petitioner has only pointed to a single part of the outsole: the upper portion above the cleats and below the insole. Petitioner's disregard for the height added by the cleats to its identified "second height" appears to be an attempt to decrease its height relative to the first height. *Id.*

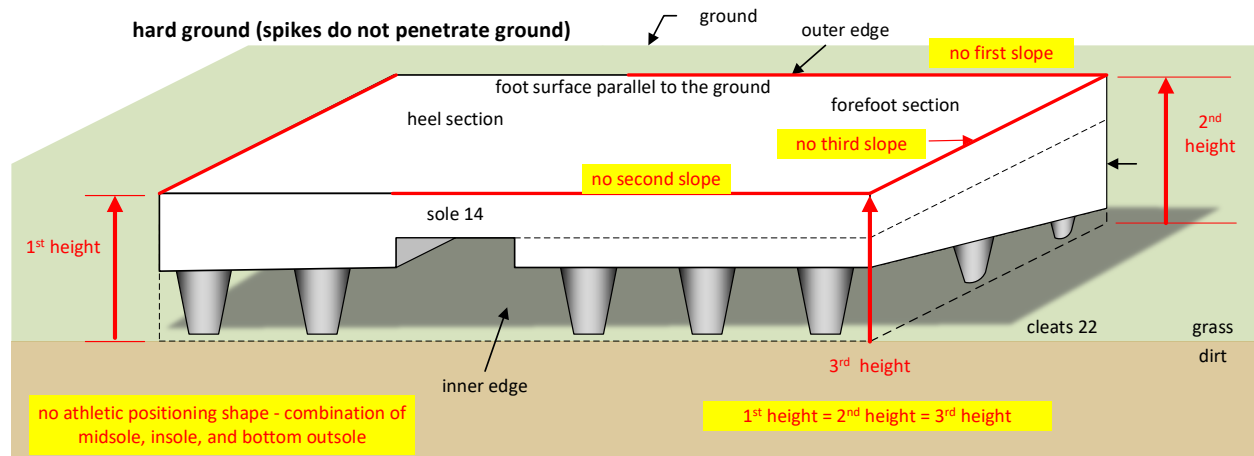
Furthermore, Petitioner ignores the height of the insole in its identification of the first and second heights. Petitioner even admits Rubin does not disclose an insole Pet. at 40, 43. Nevertheless, Petitioner makes no effort to show how the addition of the teachings of Kim to Rubin would impact the height of the insole and, therefore, the identified first and second heights. EX2008 ¶306.

Because Petitioner has failed to include the height of the cleats and the insole, two components the '291 patent contemplates as being included in each height, it is impossible to accurately compare the first and second heights and thereby determine whether the first height is greater than the second height, as is required by claim 1. *Id.* ¶307. As such, Petitioner cannot show the combination of Rubin and Kim render obvious a first height greater than a second height.

c. Petitioner ignores Rubin's disclosure that the top of the outsole is substantially level.

As discussed above, the relationship between the length of the spikes and the thickness of the sole in Rubin creates a foot platform which is "substantially level" with the ground on hard surfaces. *See supra*, II.C.3; EX1007, 3:29-37.

A POSITA would understand from Rubin's disclosure that "the foot of the wearer is substantially level" that the heel section of the shoe is at the same level as the toe section of the shoe. EX2008 ¶309. Again, this can be seen in the following figure, which represents Rubin's shoe, identifying where the reference, first, second, and third slopes are.



Id. As shown in the figure above, the first height is the same as second height. EX2008 ¶310. Thus, the second and third heights are the same. If the heel were higher, the foot of the wearer would be inclined to the ground, not substantially level in relation to it. *Id.* A POSITA would understand from Rubin's disclosure that the first height and the second height are the same on a hard surface, because the height of the heel and the toe are the same. *Id.* Accordingly, Rubin fails to disclose a first height greater than a second height.

As explained above, the relationship between the bottom of the cleats and the upper surface of the sole does not change even when the cleats penetrate the ground.

Id. ¶311. Accordingly, the height is not with respect to the ground, but with respect to the shoe itself. As such, a POSITA’s understanding that the first height is not greater than the second height would remain unchanged. *Id.*

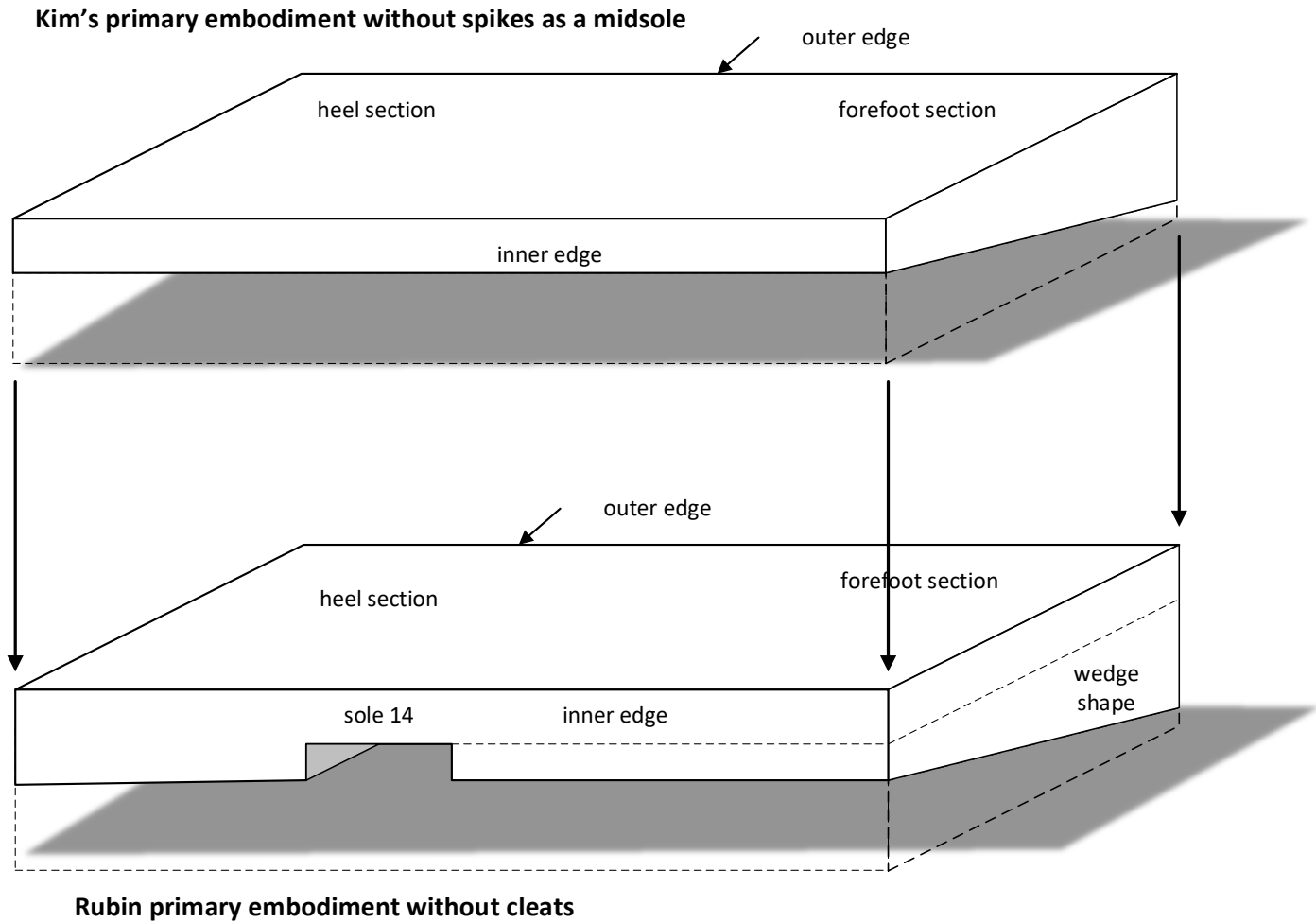
3. Rubin Does Not Disclose a First Slope, Second Slope, or Third Slope, as Required by Claim 1.

As discussed previously, the first and second heights in Rubin are the same, as are the second and third heights, regardless of whether the shoe is on a hard surface or dug into soft ground. *See supra*, VII.C.2. Accordingly, whether on a hard or soft surface, any line between any of the first, second, and third heights would be parallel to the bottom of the cleats and have no slope. EX2008 ¶312. Therefore, Rubin does not disclose the first, second, or third slopes required by claim 1.

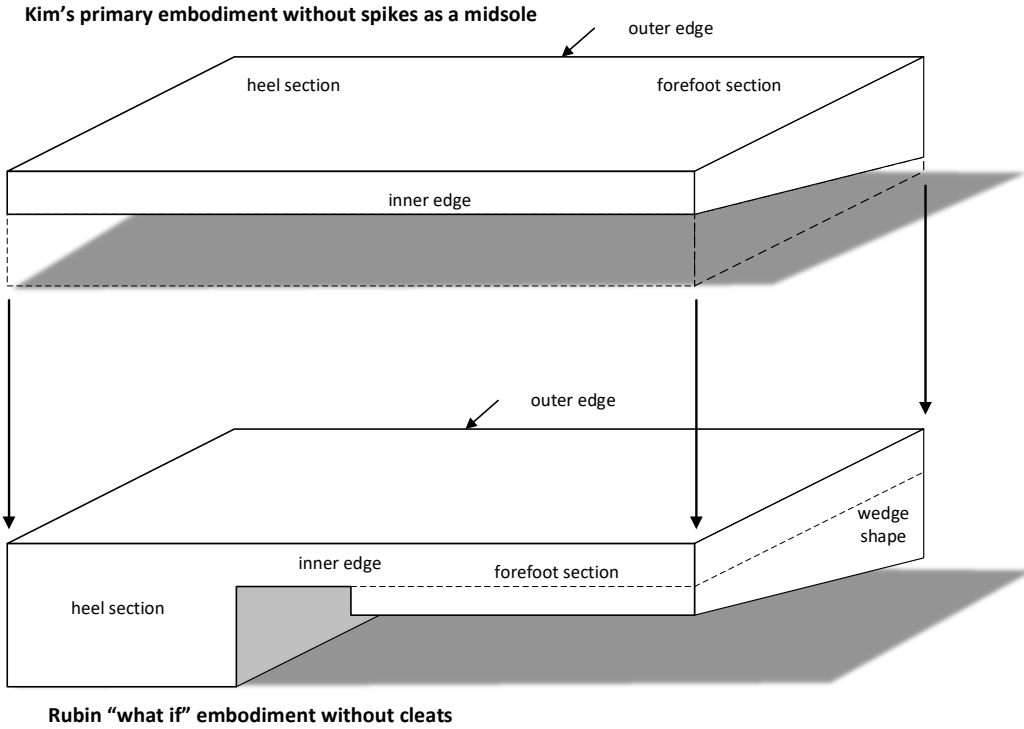
4. A POSITA Would Not Have Combined Dufour with Kim and the Combination Fails to Render the Claims Obvious.

Petitioner acknowledges that Rubin does not disclose a golf shoe with a midsole or an insole and instead relies on the sole of Rubin as a bottom outsole with for claim 1. Petitioner’s expert treats the intermediate sole of Kim as a midsole—that is, is the part of Kim’s outsole that does not include the spikes. EX2008 ¶313. As the following figures illustrate, however, a combination of Kim and Rubin as suggested by the Petitioner would make no sense to a POSITA. *Id.* ¶¶316-326. These figures represent the two embodiments of Kim (the primary and “what if”

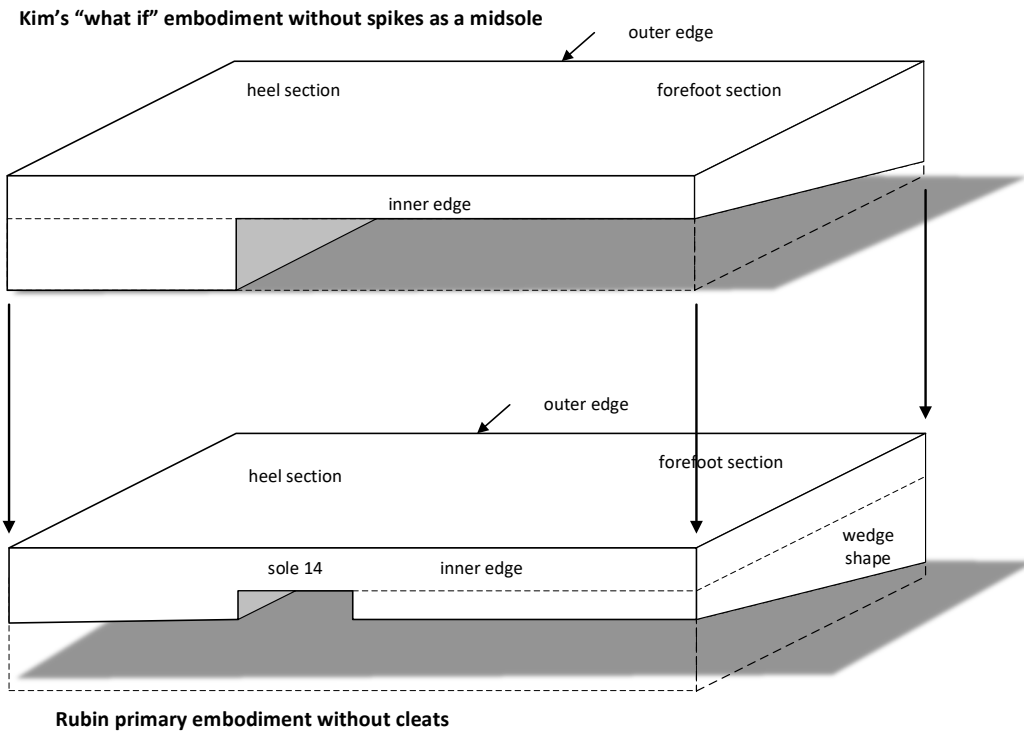
embodiments) combined with the two embodiments of Rubin (Figs. 8-10 and Figs. 11-12):



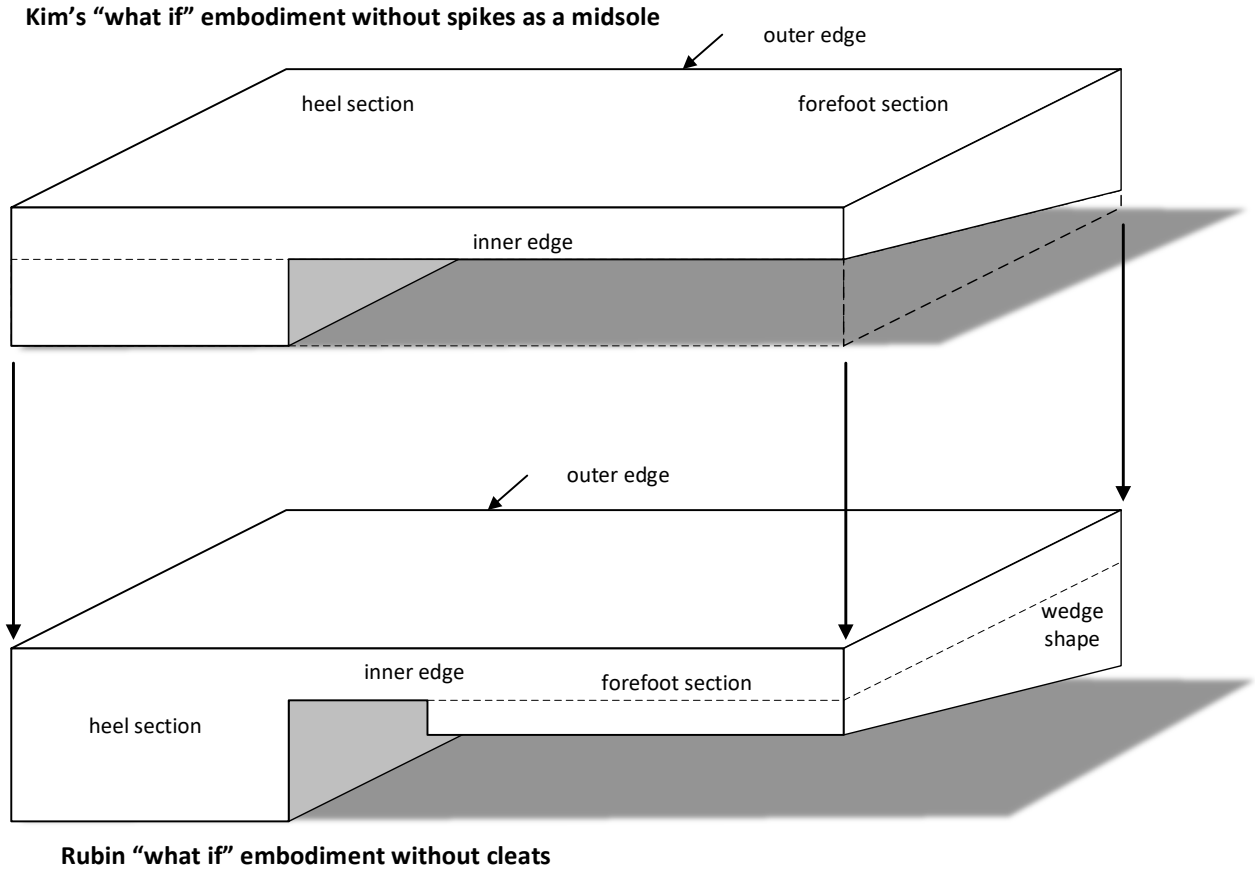
EX2008 ¶¶327-328.



EX2008 ¶¶329-330.

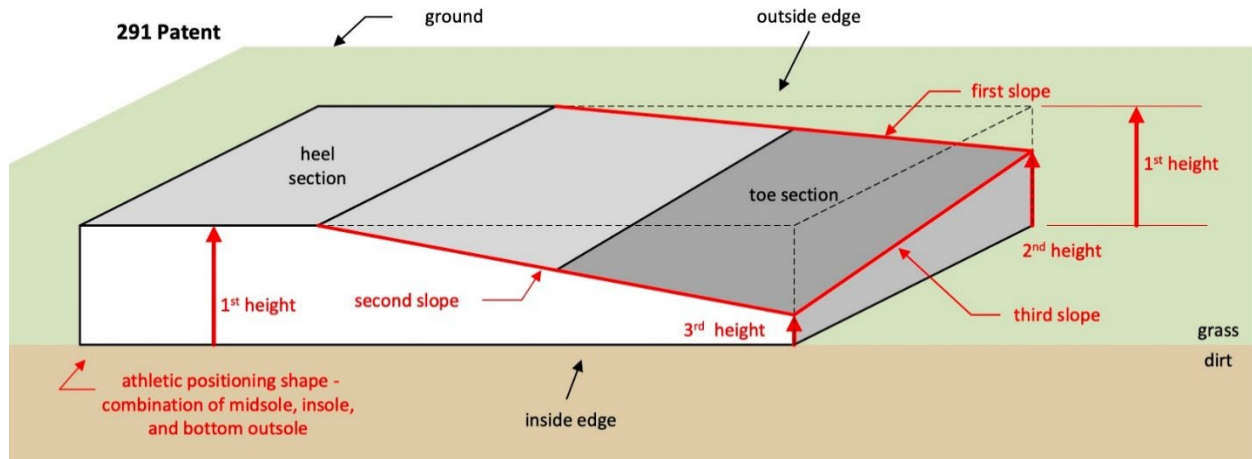


EX2008 ¶¶331-332.



EX2008 ¶¶333-334.

As Mr. Markison explains in detail, a POSITA would not have found creating any of these combinations obvious. *Id.* ¶¶317-334. Moreover, none of these combinations satisfy the claimed requirements in any event, illustrated in the block diagram below.



See EX2008 ¶72. Because a POSITA would not have combined Kim with Rubin and the combination still fails to meet the claims, Ground 3 fails.

5. Claims 2-5 are Patentable Over Rubin in View of Kim.

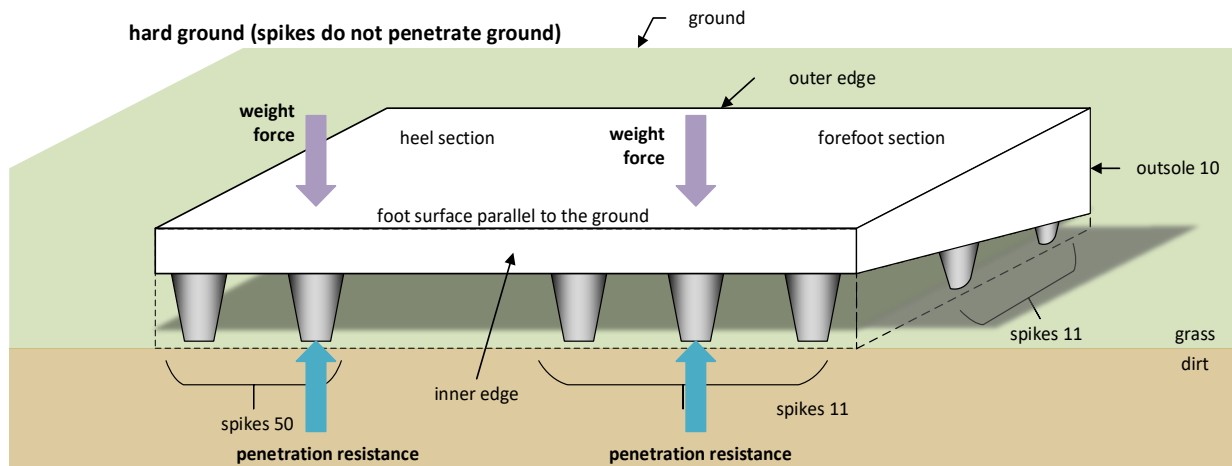
Because independent claim 1 is patentable over the combination of Dufour in view of Kim, the more specific dependent claims are also patentable for the same reasons. EX2008 ¶336.

D. Grounds 1-3 All Fail to Render Claims 1-5 Obvious Under the Correct Construction of “Athletic Positioning”

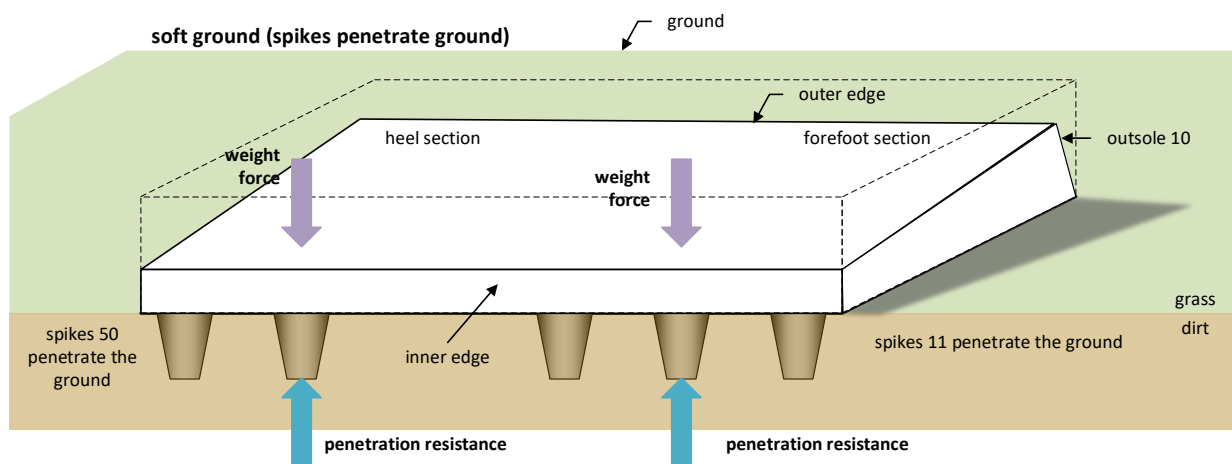
All of the arguments above assume Petitioner’s constructions are correct and there is no need to construe any claim terms. However, independent claim 1 and all dependent claims require an “athletic positioning shape.” Under the correct construction, this requires a heel section higher than the toe section and the outside edge of the toe section higher than the inside edge of the toe section. *Supra* ¶ VI.B. Applying this construction, Petitioner fails to prove that any of the three prior art references render claims 1-5 obvious. EX2008 ¶¶337-338.

Neither Kim nor Rubin disclose or render obvious an athletic positioning shape. Instead, Kim and Rubin disclose an entire sole section at a single height parallel to the bottom surface of the shoes, which is true regardless of a hard or soft surface. EX2008 ¶¶110, 112, 148, 149.

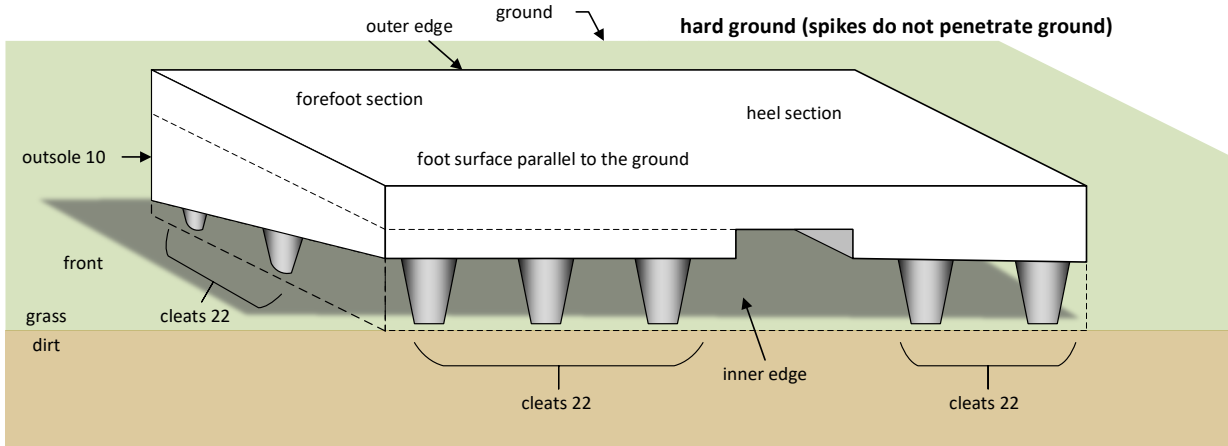
Kim (hard surface)



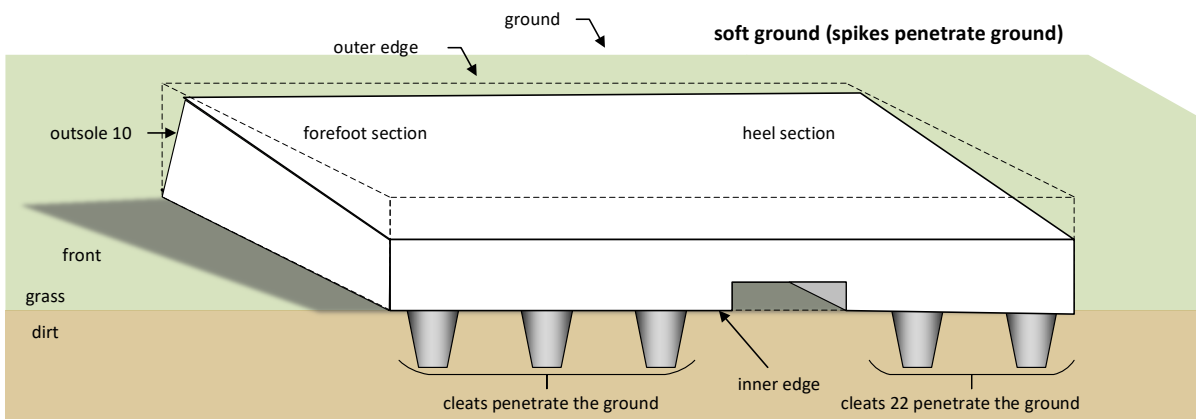
Kim (soft surface)



Rubin (hard surface)



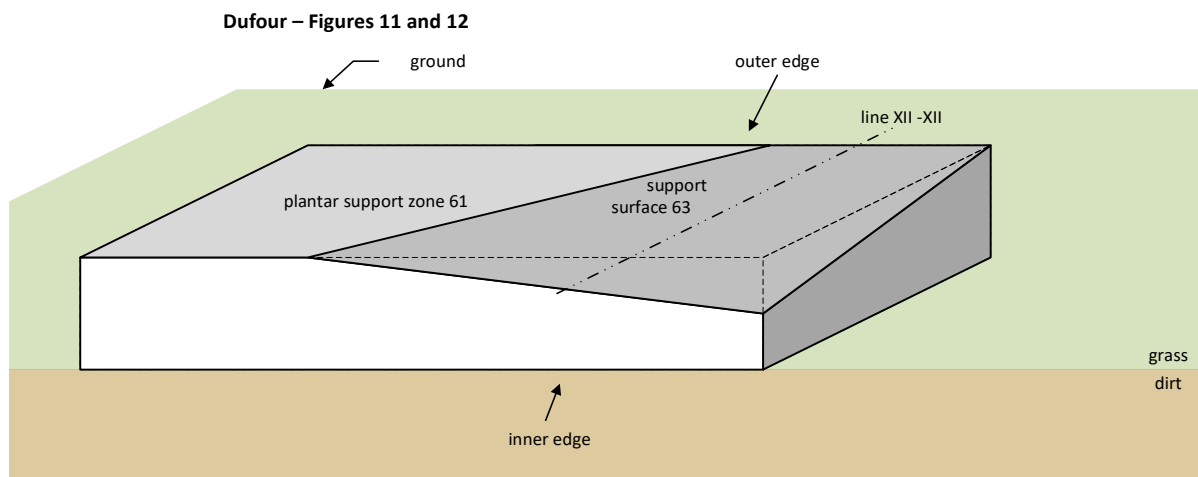
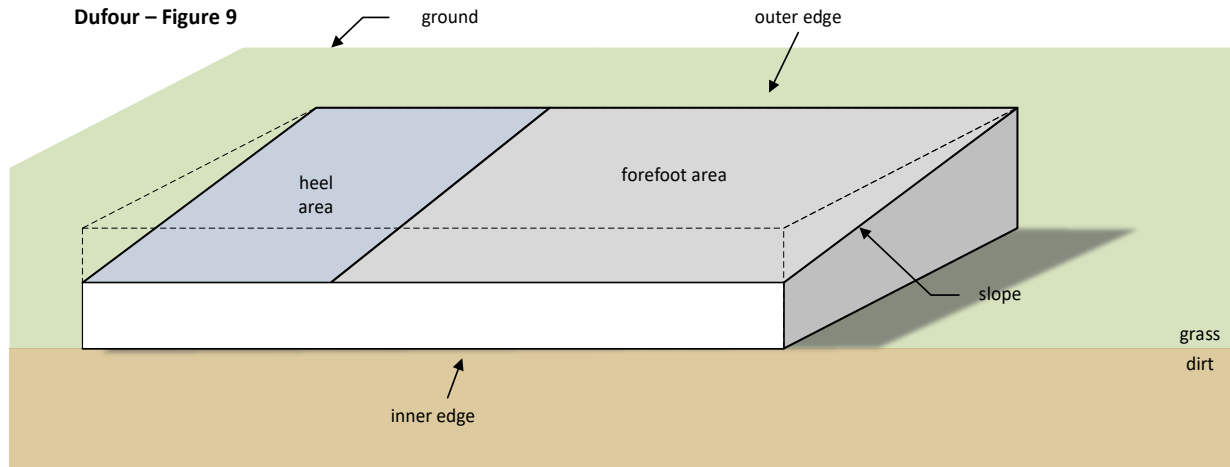
Rubin (soft surface)



Even on soft surfaces if the slopes are measured relative to the ground and not the bottom of the shoe, Kim and Rubin’s inner edge and outer edge remain at the same height at the heel section and the toe section, and therefore do not disclose the three dimensional shape required by the term “athletic positioning sole section.” *Id.* For this reason, Grounds 1 and 3 fail.

Dufour also fails to disclose an “athletic positioning sole section.” Neither the Figure 8-10 or Figure 11-12 embodiment discloses the required heel, outer, and inner

toe height and slopes. Instead, under all circumstances, the heel height is the same as the outer toe height. EX2008 ¶¶128, 134.



For this reason, Ground 2 also fails.

VIII. SECONDARY CONSIDERATIONS OF NONOBVIOUSNESS

For the reasons given above, the challenged claims of the '291 patent are not obvious over the prior art on which Petitioner relies. However, in addition to those arguments, secondary considerations of nonobvious, discussed further below, also demonstrate that the challenged claims are not obvious.

The objective evidence of nonobviousness includes, among other factors, long felt but unsolved need, skepticism by others, industry praise, and copying. *See, e.g., In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998). Secondary considerations may be accorded substantial weight when there is a “nexus between the evidence and the merits of the claimed invention.” *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed. Cir. 2010) (citations omitted). “A patent owner is entitled to a presumption of nexus when it shows that the asserted objective evidence is tied to a specific product that embodies the claimed features, and is coextensive with them.” *Volvo Penta of the Ams., LLC v. Brunswick Corp.*, 81 F.4th 1202, 1210 (Fed. Cir. 2023) (internal quotation marks and citation omitted).

As discussed below, the requisite nexus exists here, owing to the legally and factually sufficient connection between the evidence of non-obviousness and the patented invention. *See Demaco Corp. v. F. Von Langsdorff Licesning Ltd.*, 851 F.2d 1378, 1392 (Fed. Cir. 1988). In particular, 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. EX2008 ¶341; EX2014.

A. Petitioner’s Expert Failed to Consider Any Evidence of Secondary Considerations.

Secondary considerations of nonobviousness must be considered in every case where present. *Apple Inc. v. Samsung Elecs. Co., Ltd.*, 839 F.3d 1034, 1048 (Fed. Cir. 2016) (en banc) (citations omitted). This requirement arises from the fact that

every factor “helps inform the ultimate obviousness determination.” *Id.* (citations omitted). Secondary considerations may be the most probative evidence of nonobviousness. *Crocs, Inc. v. ITC*, 598 F.3d 1294, 1310 (Fed. Cir. 2010).

Mr. Delgatty did not perform any analysis of any of the secondary considerations. In fact, at his deposition, Mr. Delgatty admitted that his declaration acknowledged that secondary considerations were “something you’re supposed to consider for obviousness.” EX2010 117:14-118:2. He even read descriptions of several of the factors which were *included in his declaration*. *Id.*, 120:17-121:21. Yet, when asked whether he applied any secondary considerations or even analyze whether any evidence of secondary considerations existed, he replied, “I didn’t apply any.” *Id.*, 121:17-122:1. Mr. Delgatty’s stunted obviousness analysis is infirm for his failure to perform any assessment of the secondary considerations of nonobviousness.

As discussed below, numerous secondary considerations weigh heavily in favor of a finding that the invention embodied in the ’291 patent was *not* obvious.

B. Long-Felt, Unmet Need

The age of the references on which Petitioner relies demonstrates that there was a long-felt need for an athletic shoe that put an athlete in a better athletic position. Rubin was filed in October 1972 (39 years prior to the priority date of the ’291 patent); Dufour was filed in May 1987 (24 years prior to the priority date of the

'291 patent); and Kim was filed in July 2003 (8 years prior to the priority date of the '291 patent). EX2008 ¶342.

Moreover, golf shoes that incorporate the concepts of Rubin, Dufour, and Kim are not prevalent in the market, if they even exist at all. *Id.* ¶343. Petitioner's expert, Mr. Delgatty, admitted in his deposition that he was unaware of any products in the market that embody the concepts of any of the prior art asserted against these claims. EX2010, 123:8-124:6. This suggests that the concepts disclosed in these patents have not been accepted as solving the problem of the need for putting the golfer into a better athletic position.

The combination of the recognition of the problem nearly four decades prior to the filing of the '291 patent and the lack of solutions in the market in the intervening time period indicates that there was a long-felt and unmet until the '291 patent was filed.

C. Skepticism by Others

Athalonz introduced a baseball shoe in 2015 that embodied the invention of the '291 patent, and was met with limited success. EX2008 ¶344. At that time, the industry did not believe that the shoes would improve athletic positioning. This lack of success was largely attributable to the fact that, until that time, achieving a better athletic position was viewed primarily as a problem for the athlete to solve with their body. *Id.*

D. Industry Praise and Unexpected Results

In addition, in 2018, Athalonz released the EnVe golf shoe, which embodied the invention of the '291 patent. EX2008 ¶341. The Athalonz golf shoes were praised by people in the industry, including by Bernhard Langer and professional World Long Drive (WLD) athletes. EX2013.

For example, Mitch McDowell, who was a teaching pro and WLD athlete, took a prototype of the EnVe golf shoes, which embodied the '291 patent's invention, to a competition the summer of 2018. Another 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. *See* EX2008 ¶¶345-348.

Initially, the other WLD athletes did not believe Mr. Steenberg's shoes could make such a difference. However, one by one, the other WLD players began wearing Athalonz golf shoes. By the middle of the 2019 WLD season, approximately half of all WLD athletes were wearing Athalonz golf shoes that embodied the invention of the '291 patent. In addition, a majority of the top ten men and women were wearing

Athalonz golf shoes, including the men's and women's 2019 WLD champions. *Id.* ¶¶349-350.

In 2020, after more than 40 years wearing Adidas golf shoes, Bernhard Langer switched to Athalonz golf shoes, which embodied the invention of the '291 patent. Mr. Langer made the switch to Athalonz golf shoes because he hit the ball better in them than when he wore other golf shoes. He has repeatedly touted the benefits of the athletic positioning created for him personally by the Athalonz shoe embodying the invention of the '291 patent. EX2008 ¶350; *see also* EX2013.

E. Copying

There is substantial evidence that Under Armour, the Petitioner here, copied Athalonz's patented technology claimed in the '291 patent. EX2008 ¶352. In August 2013, Athalonz (then known as Ad-Mark Athletic Ventures) met with personnel from Under Armour and gave a detailed presentation about the company, its products, and its patents. *See* EX2012; EX2008 ¶353. The presentation included detailed figures straight from the patents, and described in detail why the concept of "athletic positioning" claimed in the '291 patent was important for improving athletic performance. EX2008 ¶354. Indeed, Athalonz presented specific concepts and figures that were part of the patent applications that became the '291 patent, including its figures disclosing athletic positioning:

Creating A Solution

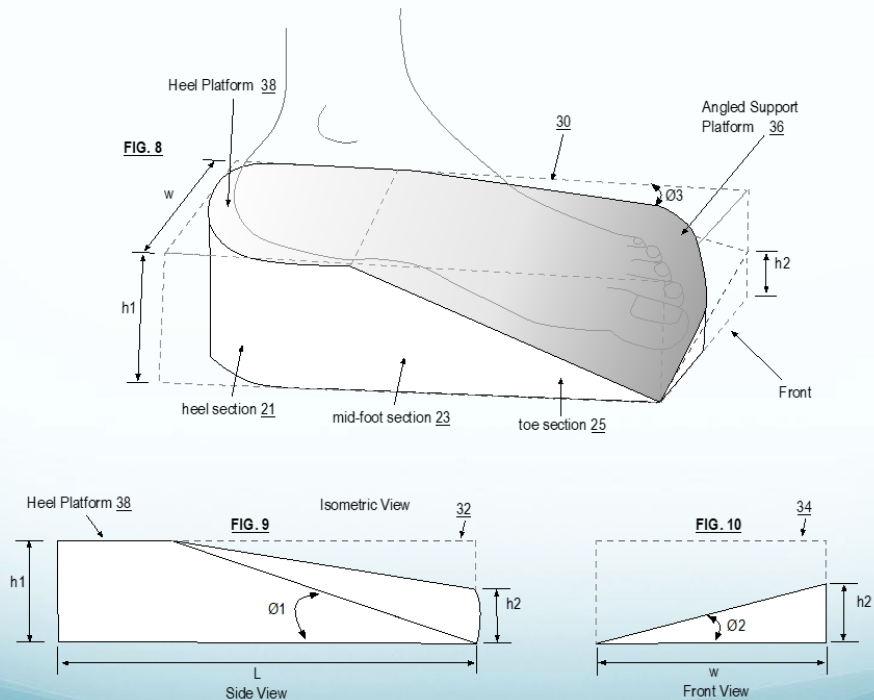
- We created a sole and/or an insole that provides:
 - a linear heel section that is higher than the toe section (i.e., downward slope from heel to toe); and
 - The inner edge of the ball of the foot and/or big toe portion of the toe section is lower than the outer edge of the toe section (i.e., inward slope from outside edge of front foot area to inside edge of front foot area);
- **Our Athletic Positioning Concept gives the athlete the optimal foot positioning for an optimal Athletic Start;**

AdMark Athletic Ventures Confidential Information

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EX2012, 13.

Athletic Positioning with Heel Platform



AdMark Athletic Ventures Confidential Information

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Id., 54. And Athalonz offered Under Armour the opportunity to acquire or license Athalonz's technology. *Id.*, 47-49; EX2008 ¶356.

Under Armour continued to engage with Athalonz after the presentation, including receiving physical sample products of the Athalonz shoes in 2014 to test internally before deciding whether to license or partner with Athalonz on its technology. *Id.* ¶357. However, Under Armour eventually stopped responding to Athalonz, and instead proceeded to release infringing products that copied the athletic positioning claimed in the '291 patent. *Id.* ¶358; EX1009. Under Armour's

copying is strong evidence of secondary considerations of nonobviousness. EX2008 ¶359.

F. Conclusion

The above secondary considerations are further evidence that the challenged claims of the '291 patent are not obvious over the prior art cited by Petitioner.

IX. CONCLUSION

For the reasons stated above, the Board should deny institution of IPR.

Dated: January 3, 2025

By: /Michael Matulewicz-Crowley/
Michael Matulewicz-Crowley
Counsel for Patent Owner

CERTIFICATE OF COMPLIANCE

The undersigned hereby certifies that Patent Owner's Response (the "POR") consists of 13,513 words, excluding the table of contents, certificate of service, this certificate of compliance, or table of exhibits. The POR complies with the type-volume limitation of 14,000 words as mandated in 37 C.F.R. § 42.24. In preparing this certificate, counsel has relied on the word count of the word-processing system used to prepare this paper (Microsoft Word).

Dated: January 3, 2025

Respectfully submitted,

/Michael Matulewicz-Crowley/
Michael Matulewicz-Crowley
Counsel for Patent Owner

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6, the undersigned certifies that on January 3, 2025
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