

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNDER ARMOUR, INC.
Petitioner

v.

ATHALONZ, LLC
Patent Owner

Case No. IPR2024-00638
Patent No. 11,064,760

PETITIONER'S REPLY TO ATHALONZ RESPONSE

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	CLAIM CONSTRUCTION	1
III.	ATHALONZ’S BIASED “EXPERT” OPINION IS ENTITLED TO LITTLE, IF ANY, WEIGHT	1
IV.	“CONVENTIONAL” SHOE TRAITS.....	3
V.	GROUND 1 – CLAIMS 1-3, 6-8, AND 11 ARE OBVIOUS OVER KIM....	5
	A. Kim Unequivocally Discloses a Big Toe Area at a Lower Position than the Heel.....	5
	B. Athalonz’s Misrepresents Kim’s Heel and Toe Sections.....	7
	C. Athalonz’s Fails to Address its “What If” Embodiments in Use and on Soft Ground	8
	D. The Claimed Heel and Toe Positions Should Not be Measured Relative to the Bottom of the Spikes.....	11
VI.	GROUND 2 – CLAIMS 1-3, 6-8, AND 11 ARE OBVIOUS OVER DUFOUR.....	16
	A. Dufour Figure 11 Conclusively Discloses the Claimed Toe and Heel Positions	16
	B. Athalonz Misinterprets Dufour Figures 1 and 9.	17
	C. Dufour Discloses “A Pair of Shoes”	19
	D. Dufour Discloses the Mid-Foot Section of Claims 2 and 7	20
VII.	GROUND 3 – CLAIMS 1-3, 6-8, AND 11 ARE OBVIOUS OVER RUBIN	22
	A. Rubin Unequivocally Discloses a Big Toe Area at a Lower Position than the Heel Area and the Small Toe Area.....	22
	B. Athalonz Misrepresents Rubin’s Heel and Toe Sections.....	23
	C. Athalonz’s Fails to Address its “What If” Embodiments When Used on Soft Ground	25
	D. The Claimed Heel and Toe Positions Should Not be Measured Relative to the Bottom of the Spikes.....	28
	E. Rubin Discloses “A Pair of Shoes”	28
VIII.	GROUNDS 4-6 – CLAIMS 4-5 AND 9-10 ARE OBVIOUS OVER KIM, DUFOUR, AND RUBIN EACH IN VIEW OF DE OBALDIA	29

IX.	SECONDARY CONSIDERATIONS DO NOT SUGGEST NON-OBVIOUSNESS.....	29
A.	Long-Felt, Unmet Need.....	29
B.	Skepticism by Others.	30
C.	Industry Praise and Unexpected Results.	30
D.	Copying.	31
X.	CONCLUSION.....	32

TABLE OF AUTHORITIES

Cases	Page(s)
<i>Bosch Auto. Serv. Sols., LLC v. Matal</i> , 878 F.3d 1027 (Fed. Cir. 2017)	30
<i>eBay Inc. et al. v. Global Equity Management (SA) Pty. Ltd.</i> , No. IPR2016-01829, Paper 63 (P.T.A.B. Apr. 19, 2018)	3
<i>EC Data Sys., Inc. v. J2 Global, Inc.</i> , 2014 WL 7171966 (P.T.A.B. Dec. 15, 2014).....	1, 2
<i>Ironworks Patents LLC v. Samsung Elecs. Co.</i> , 798 F. App'x 621 (Fed. Cir. 2020).....	12
<i>Joy Tech., Inc. v. Manbeck</i> , 751 F. Supp. 225 (D.D.C. 1990).....	30
<i>Ex Parte Magna Elecs., Inc.</i> , 2014 WL 2360424 (P.T.A.B. May 28, 2014).....	2, 3
<i>Superior Fireplace Co. v. Majestic Prods. Co.</i> , 270 F.3d 1358 (Fed. Cir. 2001)	12
<i>VSR Industries Inc. v. Cole Kepro International, LLC</i> , IPR2015-00182, Paper 33 (P.T.A.B. May. 25, 2016)	3
<i>Wyers v. Master Lock Co.</i> , 616 F.3d 1231 (Fed. Cir. 2010)	31
<i>ZUP, LLC v. Nash Mfg.</i> , 896 F.3d 1365 (Fed. Cir. 2018)	29
Other Authorities	
MPEP § 716.04	29

PETITIONER’S EXHIBITS

Exhibit No.	Description
1001	U.S. Patent No 11,064,760 (“the ’760 patent”)
1002	Declaration of Grant Delgatty
1003	Curriculum Vitae of Grant Delgatty
1004	Prosecution History Excerpts of U.S. Patent Application No. 16/152,538
1005	U.S. Patent Publication No. 2004/0040181 (“Kim”)
1006	U.S. Patent No. 4,754,561 (“Dufour”)
1007	U.S. Patent No. 3,789,523 (“Rubin”)
1008	U.S. Patent No. 4,535,554 (“De Obaldia”)
1009	Excerpts from Athalonz’s Infringement Contentions, served in <i>Athalonz, LLC v. Under Armour.</i> , Case No. 2:23-cv-00193 (E.D. Tex.).
1010	RESERVED
1011	RESERVED
1012	RESERVED
1013	1977 Nike Boston Running Shoe

1014	FootJoy 51409
1015	FootJoy 1970 Product Catalog
1016	U.S. Patent No. D275146
1017	U.S. Patent No. D310294
1018	1971 Nike Cortez
1019	Publication No. 2009/0293307 (“Koyama”)
1020	RESERVED
1021	CAD Image of Heel Platform of Curry 4 FloTro
1022	Supplemental Declaration of Grant Delgatty
1023	Transcript from the March 18, 2025, Deposition of Timothy Markison in IPR2024-00636, IPR2024-00637, IPR2024-00638, IPR2024-00639, and IPR2024-00640
1024	RESERVED
1025	Athalonz’s Second Supplemental Infringement Contentions, served in <i>Athalonz, LLC v. Under Armour</i> , Case No. 2:23-cv-00193 (E.D. Tex.)
1026	RESERVED
1027	“Athalonz Golf Shoes,” produced in <i>Athalonz, LLC v. Under Armour</i> , Case No. 2:23-cv-00193 (E.D. Tex.) at ATHALONZ0007372

1028	“From the ground up,” 2019 Sports Illustrated, M. Purkey, https://www.si.com/golf/gear/feature-2019-11-21-from-the-ground-up
1029	Transcript of Athalonz YouTube Channel Video Titled “Athalonz Technology Explained,” downloaded from https://www.youtube.com/watch?v=FNLC3D-5SZg
1030	Athalonz Blog Titled “Athalonz Shoes – Leveraging the Laws of Physics,” downloaded from https://www.athalonz.com/blogs/news/athalonz-shoes-leveraging-the-laws-of-physics-1?srsltid=AfmBOorlUcXLaaaGPUOPk35_JqoKeSAHebj9yRAB%E2%80%A6
1031	Plaintiff Athalonz, LLC’s First Amended Complaint, served in <i>Athalonz, LLC v. Under Armour</i> , Case No. 2:23-cv-00193 (E.D. Tex.)
1032	Britannica Dictionary, “cross section”
1033	Britannica Dictionary, “perspective”
1034	Compilation of Bernard Langer PGA Tour Statistics
1035	RESERVED
1036	Claim Charts for U.S. Patent No. 10,674,786; 11,013,291; and 11,064,760 for Athalonz Products, served in <i>Athalonz, LLC v. Under Armour</i> , Case No. 2:23-cv-00193 (E.D. Tex.)

I. INTRODUCTION

Athalonz fails to rebut Petitioner's showing that claims 1-11 of the '760 patent are obvious under the six Grounds raised in the Petition. In its Response, Athalonz resorts to unsupported interpretations of the '760 patent claims and inaccurate depictions of Petitioner's prior art. Despite its attempts at handwaving away or outright ignoring the prior art's express disclosures, Athalonz cannot avoid the conclusion that claims 1-11 would be obvious to a POSITA.

II. CLAIM CONSTRUCTION

While Athalonz submits a proposed construction for "athletic positioning," it suggests that its arguments for patentability still apply even if the Board disagrees, thereby agreeing with the Board that no construction is necessary. POR, 26. Petitioner disagrees with Athalonz's proposed construction at least because the remaining language of claim elements [1.4] and [1.10] would be rendered superfluous, and agrees with the Board that no construction is needed for the purposes of this IPR.

III. ATHALONZ'S BIASED "EXPERT" OPINION IS ENTITLED TO LITTLE, IF ANY, WEIGHT

Mr. Markison's assertions regarding the patentability of the claims should be afforded little, if any, weight because he is admittedly biased. In assessing the probative value of an expert's opinion, the Board must consider, *inter alia*, "the interest of the expert in the outcome of the case." *EC Data Sys., Inc. v. J2 Glob.,*

Inc., 2014 WL 7171966, at *4 (P.T.A.B. Dec. 15, 2014). Here, Mr. Markison is: 1) Athalonz's Founder and CEO; 2) Athalonz's largest shareholder; 3) a named inventor of the challenged patents; and 4) the prosecuting attorney of the challenged patents. EX1023, 11:11-18, 12:10-17. Mr. Markison will receive 30% of any compensation related to the Athalonz-Under Armour litigation if Athalonz's shareholders are paid, and he acknowledged that such compensation would be impossible if the challenged patents are invalidated. *Id.*, 15:15-1, 16:2-8. Mr. Markison admitted that the challenged patents provide Athalonz with a competitive advantage in the marketplace that would be impacted if they were invalidated. *Id.*, 18:5-16. In addition to financial interest, Mr. Markison acknowledged also having personal and professional interests in seeing the challenged patents be found valid due to the time he has invested in Athalonz, and his roles as the inventor and the attorney who drafted and prosecuted the challenged patents. *Id.*, 16:9-18.

With all these conflicting interests at stake, Mr. Markison has an unmistakable bias and self-interest in the outcome of this proceeding. *See, e.g., Ex Parte Magna Elecs., Inc.*, 2014 WL 2360424, at *3 (P.T.A.B. May 28, 2014) (expert who "was employed by Patent Owner...has a substantial interest in the outcome of the case"); *EC Data Sys., Inc.*, 2014 WL 7171966, at *4 (same). Mr. Markison's inability to provide an objective opinion is further supported by his testimony and Athalonz documents that directly contradict numerous statements in his declaration, as

explained in the sections below. Thus, Mr. Markison’s undeniably biased and unsupported opinions should be afforded little, if any, weight. *See, e.g., eBay Inc. et al. v. Glob. Equity Mgmt. (SA) Pty. Ltd.*, No. IPR2016-01829, Paper 63, 15 (P.T.A.B. Apr. 19, 2018) (giving less weight to expert’s testimony where expert was the named inventor on the challenged patent and a Director of the Patent Owner); *VSR Indus. Inc. v. Cole Kepro Int’l, LLC*, IPR2015-00182, Paper 33, 43 (P.T.A.B. May. 25, 2016) (testimony from the CEO of Patent Owner “is due less weight than a more objective source.”); *Ex Parte Magna*, 2014 WL 2360424, at *3 (the probative value of Petitioner’s expert opinion outweighed that of Patent Owner’s due to the expert’s employment by Patent Owner).

IV. “CONVENTIONAL” SHOE TRAITS

As Mr. Delgatty previously explained, he is aware of “conventional” shoe design traits (including having a heel platform that is substantially uniform in height throughout) based on his extensive experience and over 25 years in the industry. He included images of some shoes that he described as having these traits in his declaration. EX1002, ¶¶49-59.

As the Board previously recognized, “one skilled in the art would have presumed the heel section to be flat, absent any disclosure to the contrary.”¹

¹ See also related IPR2024-00640, Paper 8, 10 (Mr. Delgatty provided “ampl[e] support” and “evidence” supporting his conclusion that conventional shoes included a consistent height heel).

IPR2024-00637, Paper 8, 6. Regardless, Mr. Delgatty provides additional evidence further supporting his conclusions as to the commonality of these design traits and their inclusion in the shoes he cited in his initial declaration. EX1022, ¶¶3-9.

While Mr. Markison suggests that Mr. Delgatty fails to establish that a heel platform with substantially no slope throughout is a conventional feature of a shoe (EX2008, ¶168), Athalonz's documents and Mr. Markison's testimony (both before and after his declaration) prove otherwise.

For example, Mr. Markison and Athalonz have consistently stated that the Athalonz EnVe golf shoe has a "conventional" heel. *See* EX1027, 1 (the EnVe "includes ***a conventional heel section*** and an athletic positioning forefoot section that has a conventional heel section to toe section slope on the lateral side"); EX1028, 5 (Mr. Markison explaining that the heel of the EnVe "***is conventional*** but as you go forward in the shoe, it transitions you to the inside of your foot"). Athalonz and Mr. Markison also state that the "conventional" EnVe heel has a consistent height of 20.6 mm "throughout" the heel section. EX1036 (EX2014 Ex. F) 14-15; EX1023, 172:4-173:2; 176:6-180:16; 181:16-183:7 (Markison confirming all heel limitations in the '760, '291 and '786 patents are practiced by EnVe).

Similarly, Mr. Markison confirmed that he believes Athalonz's Mana Mangrove shoe also practices the claims of the asserted '760, '291 and '786 patents (EX1023, 175:3-19) and thus has a consistent height heel section. Yet Mr. Markison

previously described this shoe as including a “platform in the *heel section [that is] flat just like a normal heel in any kind of golf shoe.*” EX1029.

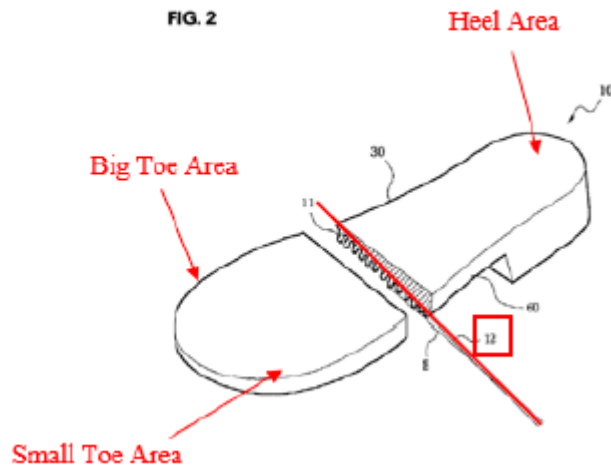
During his deposition, Mr. Markison directly contradicted his declaration by admitting that a “conventional” heel is “flat from the inside edge to the outside edge” on multiple occasions (EX1023, 99:1-16; 139:7-15), and described a “conventional” sole or insole as being “flat” or as having “roughly the same thickness” from the inside of the sole to the outside of the sole. *Id.*, 86:16-89:12; *see also* EX1030, 5-6 (contrasting Athalonz shoes with “a conventional pair of shoes with a flat sole”).

V. GROUND 1 – CLAIMS 1-3, 6-8, AND 11 ARE OBVIOUS OVER KIM

Athalonz fails to rebut Petitioner’s showing that Kim renders claims 1-3, 6-8, and 11 obvious, because Athalonz ignores Kim’s express disclosures, and its diagrams misrepresent Kim’s conventional heel section, fail to account for use in soft ground and fail to consider Kim’s flexible sole material. EX1022, ¶¶10-25.

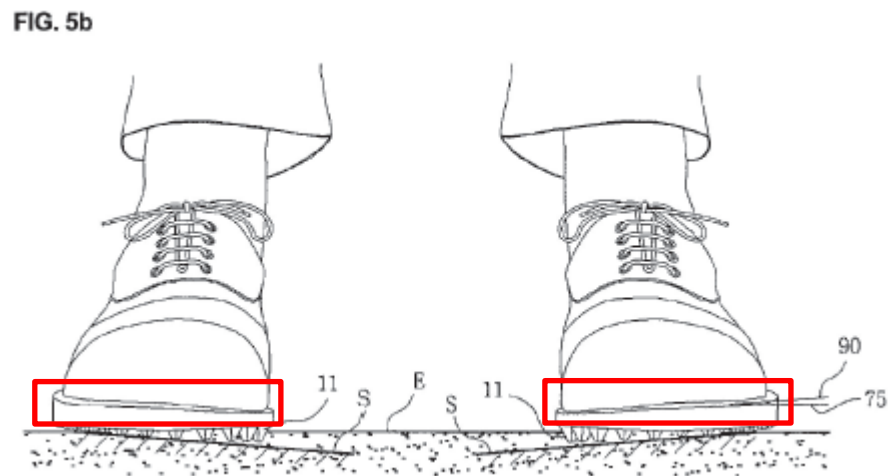
A. Kim Unequivocally Discloses a Big Toe Area at a Lower Position than the Heel

Athalonz’s argument that “the big toe position is the same as the position of the heel area is the same in all embodiments of Kim” (POR, 31) was already correctly rejected by the Board. Paper 8, 10 (“Kim also discloses a heel area taller than a toe area, as is typical in shoes.”). No POSITA could reasonably interpret the outsole shown in Figure 2 of Kim to support Athalonz’s position.



Petition, 18.

This conclusion is further supported by Figure 5b, which shows the top of a surface area on the part of the sole that sticks out beyond the upper, suggesting the shoes are tilted forward.



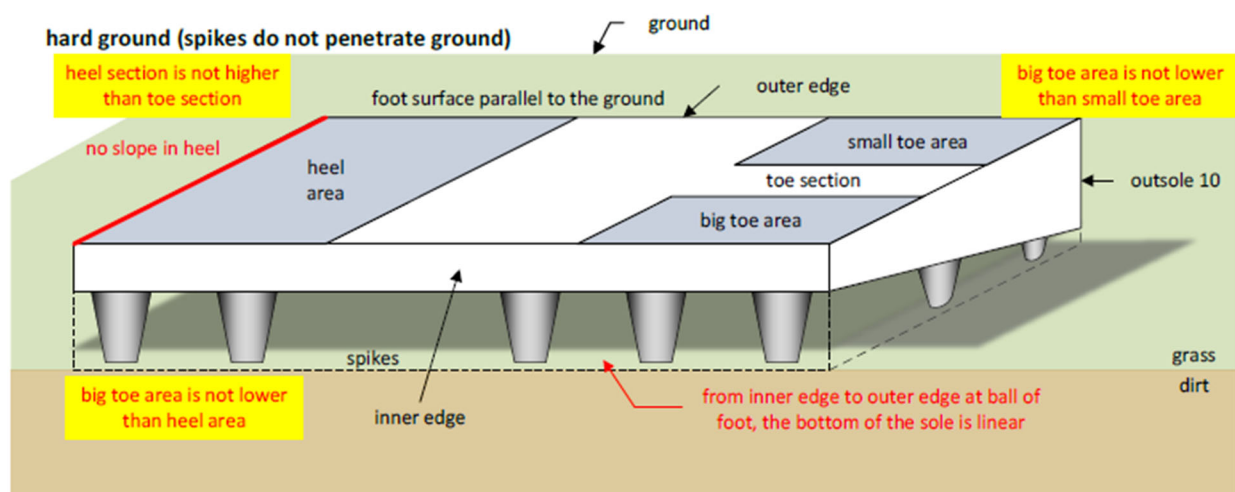
EX1022, ¶10; EX2010, 80:14-81:22 (Mr. Delgatty confirming same at deposition).

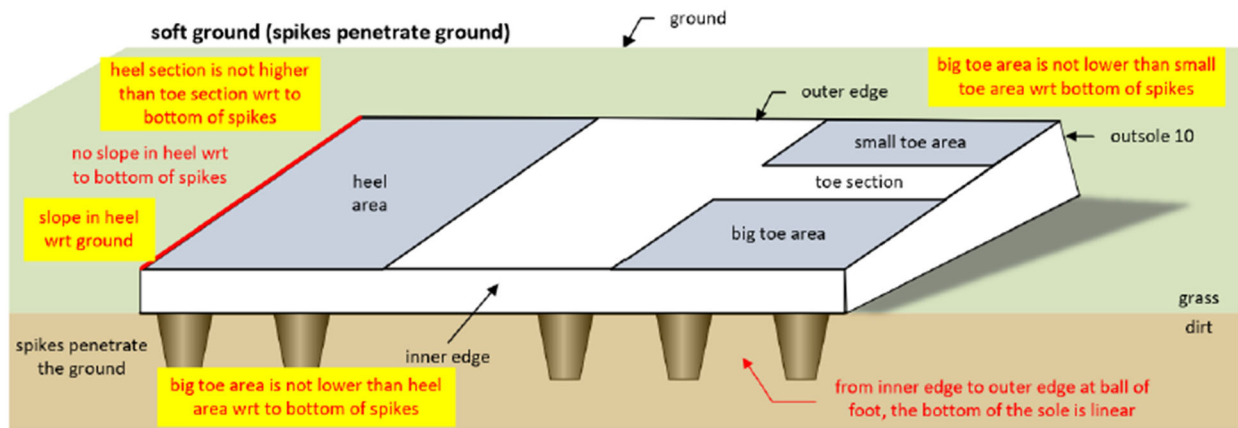
Athalonz reliance on Figures 3b and 4a-c (POR, 32-33) is misplaced. Each of these figures is a “cross section,” which a POSITA would understand includes

only the inside of the object at that section. EX1022, ¶11; EX1032 (“cross section” - “a view or drawing that shows what the *inside* of something looks like after a cut has been made across it.”) (emphasis added); EX1023, 115:14-116:15 (Markison agreeing), 119:12-120:12 (Markison agreeing that a “cross section” view in Fig. 63 of the ’291 patent shows only the inside of the object). In contrast, a “perspective” view is defined as “a way of *showing depth* or distance in a painting or drawing by making the objects that are far away smaller and making the objects that are closer to the viewer larger.” EX1033 (emphasis added). Thus, these images would not include “some representation of the heel” above the cross section, as Athalonz suggests (POR, 33).

B. Athalonz’s Misrepresents Kim’s Heel and Toe Sections

Reproduced below are Athalonz’s annotated diagrams of Kim’s shoe positioned on hard ground and on soft ground. POR, 34-35, 39.



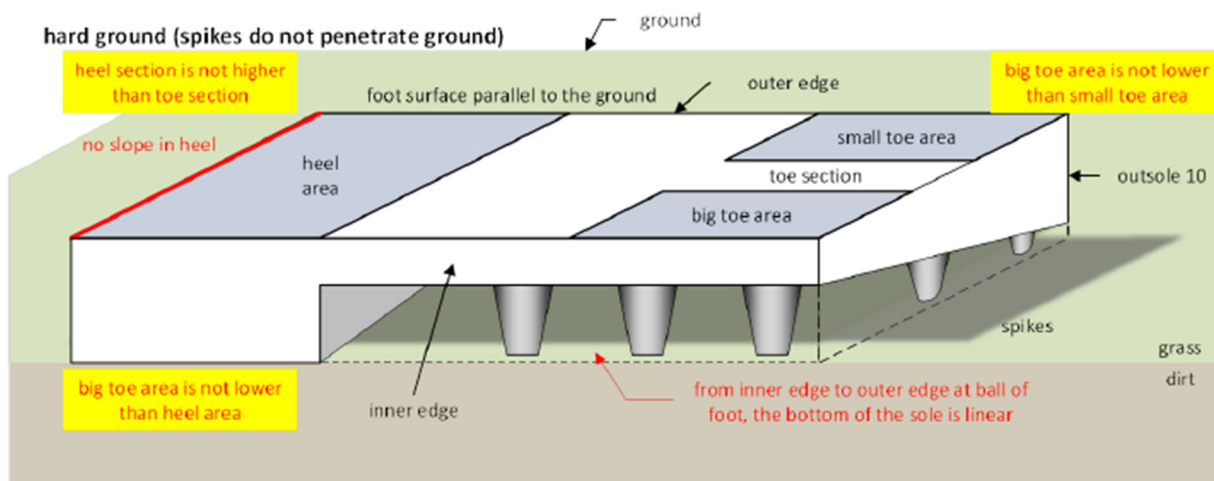


Immediately clear is Athalonz’s misrepresentation of Kim’s heel section being at the same level as the toe section (discussed above) and having an identical thickness and inclined surface as the forefoot section. Kim discloses that “the inclined plane may be formed only at the front portion of the outsole,” and that “[e]xcept for the outsole 10 including the inclined lower surface 12, the golf shoe 100 of the present invention is substantially the same as conventional golf shoes.” EX1022, ¶10 (citing EX1005, [0027], [0046]). From this, the Board correctly concluded that Kim’s heel is flat. Paper 8, 6; *see also* EX1023, 99:1-17 (Markison agreeing that Kim’s conventional heel “would be flat from the inside edge to the outside edge”). EX1022, ¶¶12-14.

C. Athalonz’s Fails to Address its “What If” Embodiments in Use and on Soft Ground

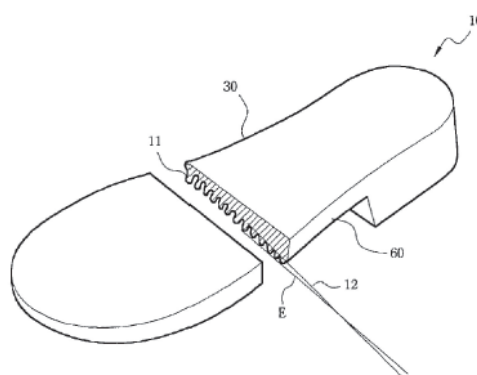
Attempting to address the above deficiency, Athalonz provides diagrams (reproduced below) that depict Kim’s shoe with a conventional flat heel. POR, 36-38; EX2008, ¶¶120, 192-201. While Athalonz references these diagrams as

undisclosed “what if” embodiments (POR, 36-37), Mr. Markison admitted that the conventional heel disclosed in Kim has this design. EX1023, 97:5-99:17.



This figure misrepresents Kim’s disclosure that the heel section is higher than the toe section, as discussed above. Even when the spikes are included, the forefoot and toe area of Kim is clearly lower than the heel, as shown in, e.g., Figure 2.

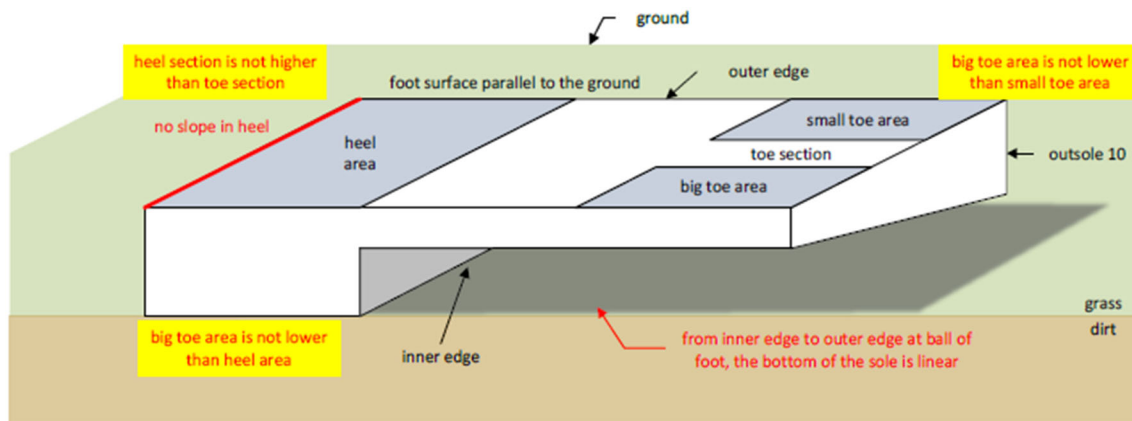
FIG. 2



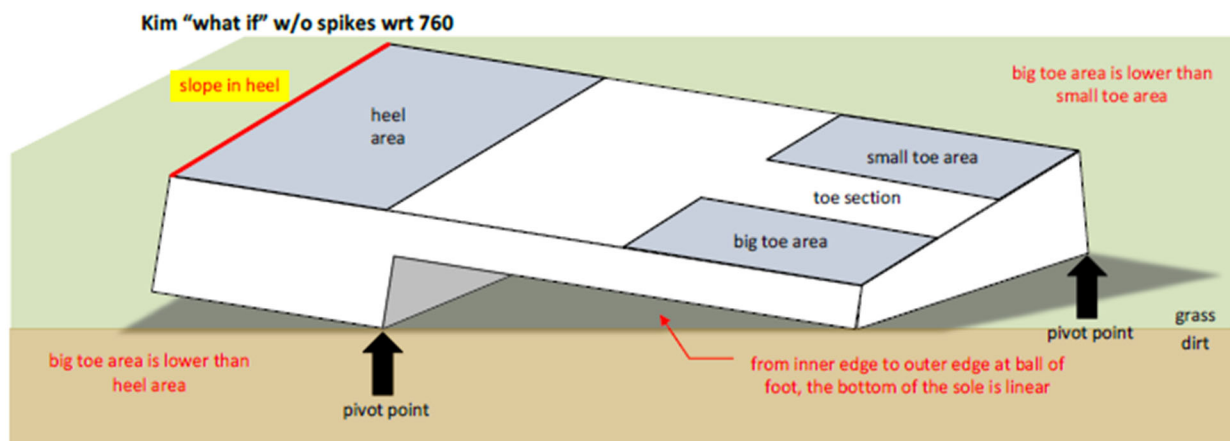
Athalonz’s diagram above is also admittedly on hard ground. POR, 37. It ignores that the spikes would enter soft ground when worn, causing the big toe area

to be lower than the heel area and the small toe area—a scenario never directly addressed by Athalonz in the POR. EX1022, ¶¶15-16.

In the “what if embodiment” shown below without spikes, Athalonz fails to explain why the foot surface is shown parallel to the ground.



A POSITA would understand that, when worn, the toe area would be on the ground, and thus lower than the heel, and based on the sloped forefoot, the big toe would be lower than the small toe. EX1022, ¶16. This scenario is allegedly shown by Mr. Markison:



EX2008, ¶197.

While not addressed in the POR, Mr. Markison suggests that this embodiment would not meet the claims because “two pivot points” would cause a “slope in the heel of the shoe sole.” EX2008, ¶119-121, 197-99. But Mr. Markison cites no support in Kim for this conclusion. At deposition, Mr. Markison recognized that to pivot in this manner, Kim’s sole must be rigid. EX1023, 103:3-104:20. Yet, Kim expressly discloses that the “outsole 10 of the golf shoe 10 is made of synthetic rubber” (EX1005, [0040]), which Mr. Markison admits may be flexible. EX1023, 100:3-17. Mr. Markison also admitted that he “hadn’t considered” whether the pivot points would exist for a flexible rubber sole. *Id.*, 104:21-105:2.

As Mr. Delgatty explains, a POSITA would understand that a shoe sole made of synthetic rubber would flex rather than pivot due to the golfer’s downward weight forces on the heel and toe sections, allowing the toe section to extend downwards into the ground while the heel section also remains flat on the ground. Indeed, this is the only reasonable interpretation of Kim’s disclosure that when standing on soft ground, “the golfer can maintain his/her stable position during and after the swing motion.” EX1022, ¶¶17-18; EX1005, [0037].

D. The Claimed Heel and Toe Positions Should Not be Measured Relative to the Bottom of the Spikes

To the extent Athalonz suggests that Kim does not invalidate the claims because the toe and heel positions should be measured relative to the “bottom of the

shoe” or “bottom of the spikes” and not the ground (POR 35, EX2008 ¶¶120-121, 193) this is unsupported by the claims and is nonsensical. EX1022, ¶19.

Claim 1 requires that the forefoot platform of the sole provide the big toe area at a lower position than the heel area and the small toe area. A POSITA would recognize that the “sole” of the shoe does not include the spikes and that the claimed heel and toes positions should be measured relative to one another when the shoe is being used as intended, *i.e.* when golfing on soft ground. EX1022, ¶20.

First, the ’760 patent distinguishes between the “sole” and “cleats” as separate components of the shoe. EX1001, 1:62-64 (listing “sole” and “cleats” separately), 9:53-61 (the sole is “***coupled to***” the specific sport bottom, which includes the cleats or spikes). Sport specific bottom 190 is also shown and described throughout the ’760 patent as a separate component from sole 10,² suggesting that these components—each with its own reference number—are separate and distinct structures. *See Ironworks Pats. LLC v. Samsung Elecs. Co.*, 798 F. App’x 621, 625 (Fed. Cir. 2020) (finding the enumeration of elements in patent figures relevant to whether they are the same or different components); *Superior Fireplace Co. v. Majestic Prods. Co.*, 270 F.3d 1358, 1374 (Fed. Cir. 2001) (same). Indeed, at deposition Mr. Markison agreed that the ’760 patent describes the cleats as “a

² *See, e.g.*, EX1001, Figs. 63-66, 111, 20:53-21:10, 21:26-22:467, 33:21-24.

different item in the shoe than the athletic positioning sole.” EX1023 84:19-85:22, 82:2-14, 83:7-84:14; EX1022, ¶21.

The related ’786 patent confirms this understanding, which includes an “athletic positioning sole section” that provides the same sloped sole as in claim 1 of the ’760 patent;³ the ’786 claims also include a “sport specific bottom” as a separate, distinct component, wherein the sport specific bottom comprises the cleats or spikes. ’786 patent, claims 5, 8.

Second, the prior art consistently describes the sole and cleats as separate components of a shoe, illustrating the industry understanding of these terms. EX1022, ¶22. Kim explains that the spikes “protrude” or “extend” from the “outsole” and are located below the outsole’s “lower surface,” and Kim describes the elements using distinguishing references numbers for the sole (10) and spikes (11, 50). EX1005, [0009], Figs. 1-2, [0014]-[0015], [0030], claim 1; EX1023, 90:18-92:16 (Markison agreeing as to Kim’s disclosures).

Dufour similarly explains that the spikes are separate components “fastened to” the sole, and consistently uses distinguishing reference numbers to identify the sole (2, 20, 31, 39, 45, 55) and spikes (10, 24, 30) as distinct components. EX1006, 4:9-11, Figs. 1-4, 7, 9-10, claim 18; EX1023, 106:9-108:7 (Markison agreeing as to

³ Athalonz interprets the claim scope of the ’760 and ’786 patents identically. *See* identical product measurements allegedly proving infringement of both patents, EX1025, Ex. B, 33-34, Ex. C, 44-46; EX1023, 205:7-207:15.

Dufour's disclosures). And Rubin discloses cleats that "project[] downwardly from," and are located below, "the bottom of [the] sole," and consistently uses distinguishing reference numbers for the sole (14) and cleats (22). EX1007, 2:12-16; 3:24-27, Figs. 1-4, claim 3; EX1023, 120:13-122:7 (Mr. Markison agreeing as to Rubin's disclosures); EX1022, ¶22.

Third, a POSITA would understand that the shape and orientation of the sole (*i.e.*, the platform on which an athlete stands) in relation to the **ground** is what determines if the foot is placed in an athletic position when in use. EX1022, ¶23. Cleats serve to provide traction, not athletic positioning. Whether or not a shoe has cleats, an athlete's foot will be positioned the same with respect to the surface of the ground when in use, and thus obtain the same positioning benefits the '760 patent purports to provide. *Id.* This understanding is consistent with the Board's finding that "the golfer's stance on the softer grass surface in Kim's Figure 5b most certainly [satisfies the claimed three slopes]." Paper 8, 6. A POSITA would thus understand that because the cleats' height does not contribute to the athletic positioning shape when in use on soft ground (the surface on which golf is played), it would not be included in the measurement of the claimed heel and toe positions. EX1022, ¶24.

Indeed, Mr. Markison admitted when comparing the placement of the forefoot relative to the ground when using Athalonz's technology shown in Fig. 5 below (EX1030, 5), with the shoes in Rubin and Kim when used on soft ground, similar

beneficial ground reaction forces are created “by angling” the foot’s interaction with the ground. EX1023, 133:13-141:13.

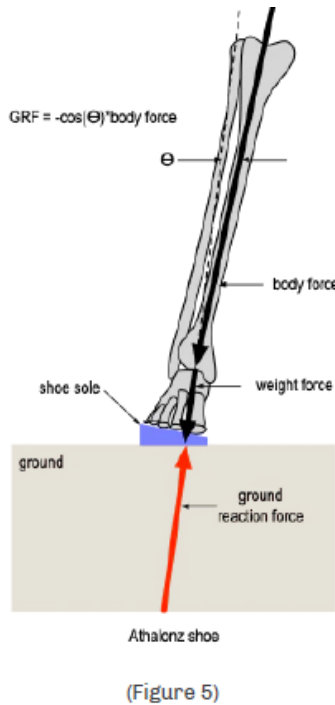
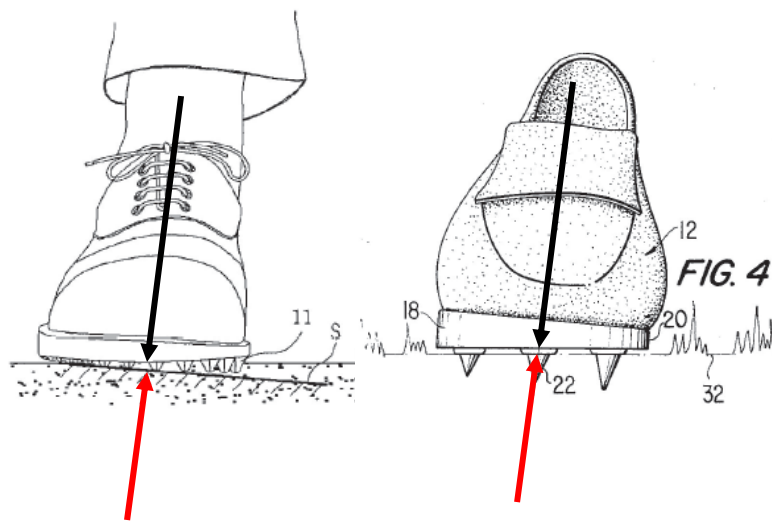


FIG. 5b



EX1022, ¶25.

Finally, Athalonz’s inclusion of the cleats’ height is inconsistent with its own litigation position. In its infringement contentions, Athalonz admittedly measured the claimed toe and heel positions of the accused shoes at the vertical red lines it drew onto the dissected shoe sections. EX1025, 108-109; EX1023, 187:7-191:16. For Petitioner’s accused shoes that have cleats (e.g., HOVR Drive 2), Athalonz did not include the height of the cleats in the measurement of the claimed toe and heel

positions, as is apparent by the vertical red lines drawn only on the midsole and outsole material. *See* EX1025, 114-115.

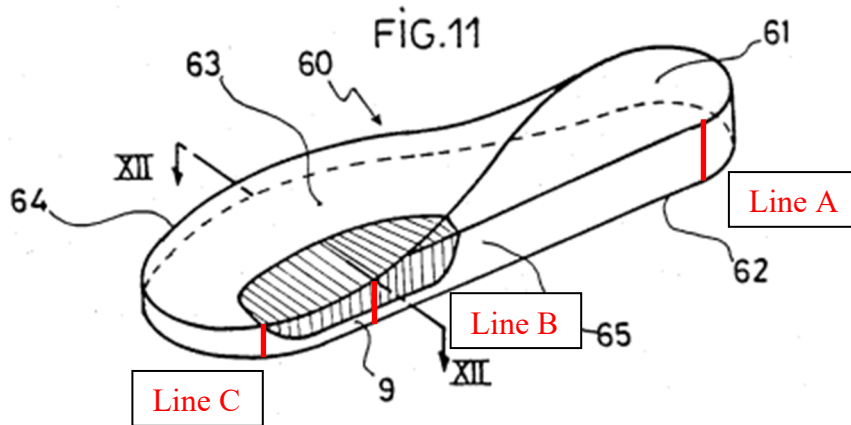
VI. GROUND 2 – CLAIMS 1-3, 6-8, AND 11 ARE OBVIOUS OVER DUFOUR

Athalonz’s arguments on Ground 2 are based on misinterpretations of Dufour’s figures, which, contrary to its assertions, disclose all of the claimed toe and heel positions through multiple embodiments.

A. Dufour Figure 11 Conclusively Discloses the Claimed Toe and Heel Positions

As the Board previously concluded with respect to Dufour in Petitioner’s related IPR on the ’291 patent, “the heel area visually appears to be higher than the toe area in Figures 11 and 12 Thus, we reject the notion that the toe area in Dufour is the same height as the heel area.” IPR2024-00637, Paper 8, 8. Athalonz has presented no evidence that alters this conclusion. Rather, Mr. Markison admitted that the height of the toe section (line C) is smaller than the thickness of the heel section at line A, as depicted below.⁴ EX1023, 116:17-119:10.

⁴ Mr. Markison’s clear bias was evident in his suggestion that Line B and Line A in annotated Figure 11 are “the same [length]” (*id.*)—as it is quite apparent from Figure 11 that this is false. *See also* EX2010, 104:18-105:16 (Mr. Delgatty explaining a POSITA would know height shown at cross section XII-XII is lower than heel).



The analysis of DuFour can end here, as Mr. Markison admits that the embodiment shown in Figure 11 has all the claimed relative positions of the toes and heel.

As Mr. Delgatty explains, a POSITA would not interpret Figure 12 as Athalonz suggests (POR, 43-45), but instead would understand that the outer edge of the toe section as cross section XII-XII would have a smaller height than the heel section, as Figure 11 shows. EX1022, ¶¶26-28. Regardless, the cross section of Figure 12 is not the only location at which a POSITA would measure the height of the toe section. Rather, the toe section includes points closer to the front of the shoe than where XII-XII is shown, and as stated above, Mr. Delgatty and Mr. Markison agree that the toe section there has a smaller height than the heel section. EX1002, Section IX.B.e; EX1023, 116:17-119:10.

B. Athalonz Misinterprets Dufour Figures 1 and 9.

Dufour's Figures 1 and 9 also disclose the claimed toe and heel positions. Athalonz's suggestion that, "the heel at the inner edge of the shoe (left side of the figures) is at the same height as the big toe area, and the heel at the outer edge of the

shoe (right side of the figures) is at the same height as the small toe area” (POR, 43) is wrong, and rests on Athalonz’s misinterpretation of Figure 9’s “cross section” as showing the full length of Dufour’s shoe. EX1022, ¶¶29-30.

Dufour expressly states that that Figure 9 is a “cross section view[] along line VI–VI in FIG. 1,” as opposed to Figures 1 and 11, which are “perspective” views. EX1006, 3:12, 3:20-21, 3:28. Athalonz’s argument with respect to Figure 9 is based on its misinterpretation of Figure 9’s cross section (*i.e.*, internal) view as a perspective view that shows a depth or distance down the length of Dufour’s shoe. *See* POR, 42-43.

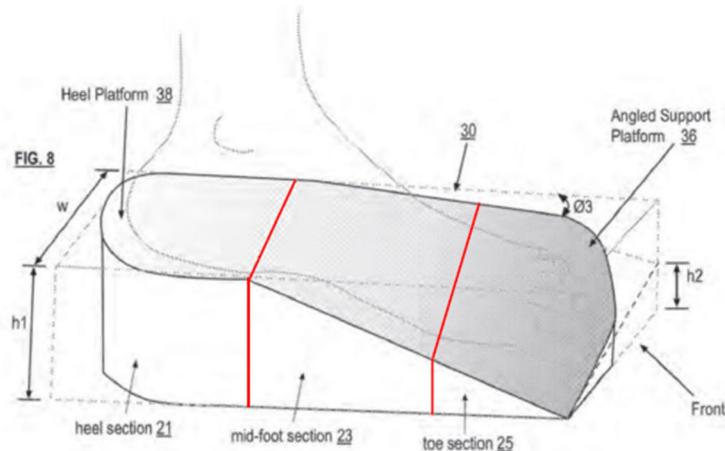
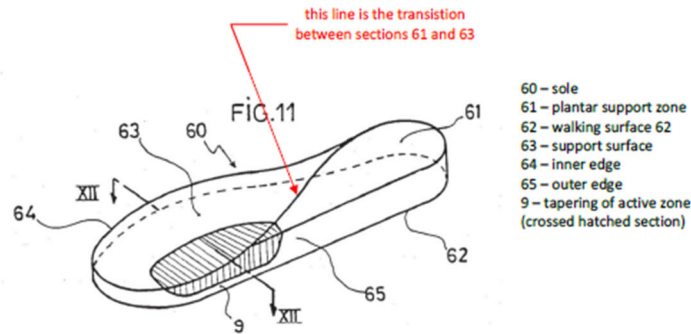
As discussed in Section V.A, a POSITA would understand that a cross sectional view includes only the inside of the object at that section. This understanding is further supported by Figure 1 (below), which discloses a sole having a heel height greater than a toe height. EX1022, ¶31.

right shoe), which would seem to be satisfied merely by a manufacturer making a left and a right shoe.”

Paper 8, 12-13 fn. 1. Athalonz has presented no evidence that alters this conclusion, instead focusing precisely on what the Board found the claims are not directed to. POR, 46-47. EX1022, ¶32.

D. Dufour Discloses the Mid-Foot Section of Claims 2 and 7

Athalonz’s argument that Dufour fails to disclose a midfoot section because it “discloses only two sections of its sole, not three” (POR, 50), is misplaced. There is no requirement in the claims that there be three distinctly identifiable sole sections. Athalonz’s reliance on ’760 patent Figure 8 proves as much. While Athalonz claims Dufour falls short by only having a plantar support section 61 and support surface 63, it ignores that Figure 8 of the ’760 patent similarly identifies only a heel platform 38 and angled support platform 36, wherein the latter is arbitrarily labeled as having a “midfoot section” and a “toe section.” EX1022, ¶33.



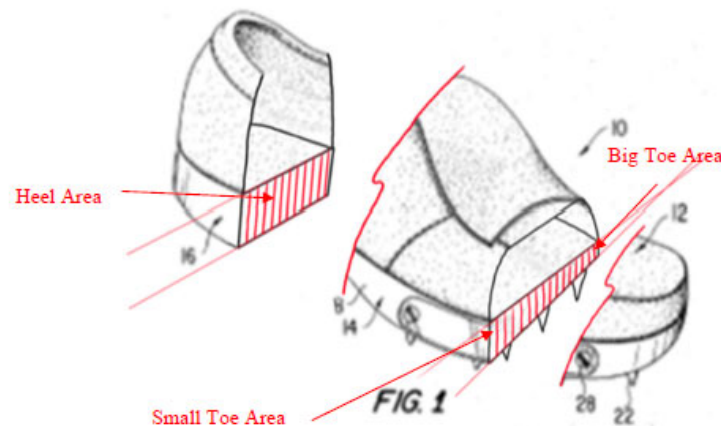
That Dufour does not explicitly call out the heel, mid-foot, and toe sections as in Figure 8 is irrelevant. As Mr. Delgatty previously explained, the mid-foot section is a necessary element of every shoe. EX1002, ¶88; EX1022, ¶33. The mid-foot section is simply the section of the sole where the mid-foot sits, and Dufour plainly discloses such a section in Figure 11 that transitions from the consistent height plantar support zone 61 (which comprises the entire heel section) to the angled support surface 63 (which comprises the entire toe section), as required by claims 2 and 7. EX1022, ¶33.

VII. GROUND 3 – CLAIMS 1-3, 6-8, AND 11 ARE OBVIOUS OVER RUBIN

Athalonz fails to rebut Petitioner’s showing of obviousness based on Rubin. Athalonz misrepresents Rubin’s conventional heel section, ignores clear disclosures in Rubin’s figures, and fails to account for Rubin’s flexible sole material.

A. Rubin Unequivocally Discloses a Big Toe Area at a Lower Position than the Heel Area and the Small Toe Area

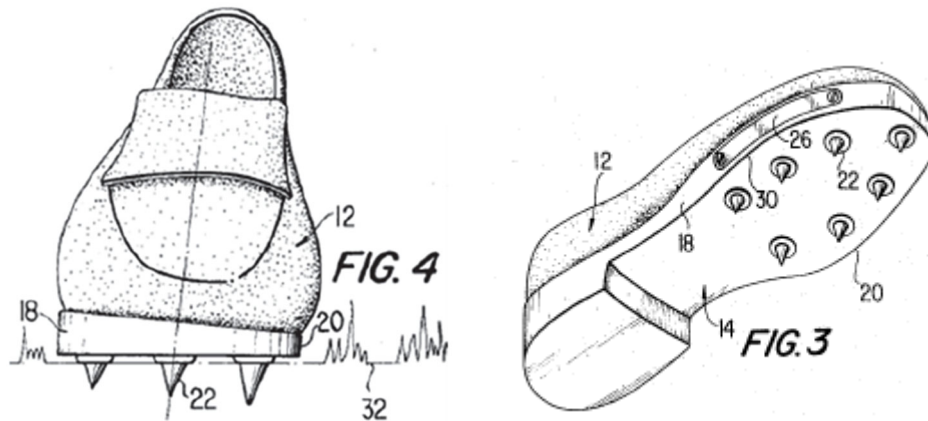
Athalonz argues that Rubin fails to disclose the big toe area at a lower position than the heel area and the small toe area (POR, 53-61-64), despite Rubin’s figures clearly disclosing this design. Athalonz focuses only on Mr. Delgatty’s annotated Figure 1 (POR, 61), while wholly ignoring Rubin’s disclosures in other figures and the specification, disclosing the claimed design, as shown below. EX1002, 73-75 (citing Figs. 1, 3-4, 2:60-68, 3:9-15, 3:56-65, cl. 1).



Petition, 42.⁵

⁵ Athalonz’s suggestion that Mr. Delgatty’s annotated Figure 1 is improper because it is based on only on “eyeballing of external features” (POR 64) is wrong. Rubin

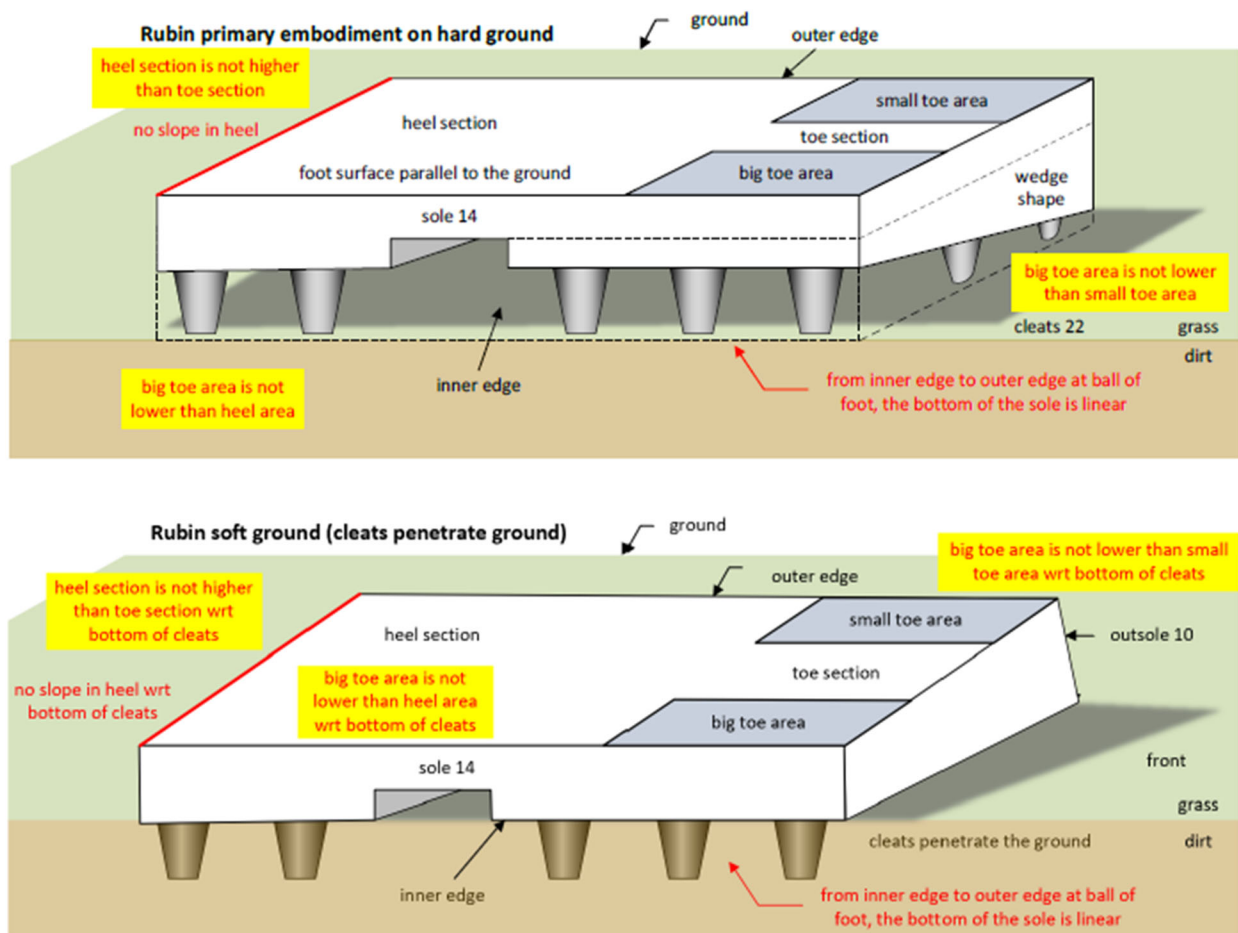
It is clear in Figure 4 (below) that the big toe area is at a lower position than the small toe area. EX1002, IX.C.e. And Mr. Markison admitted that Figure 3 depicts a heel area having a greater height than the small toe area. EX1023, 132:7-133:9. No further analysis is needed.



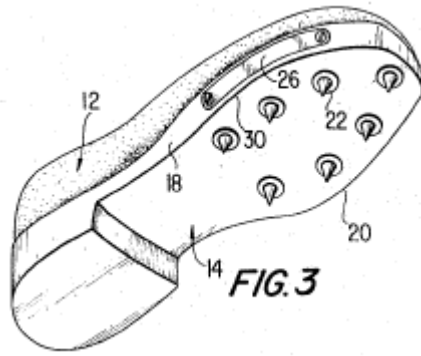
B. Athalonz Misrepresents Rubin's Heel and Toe Sections

Like Ground 1, Athalonz misleadingly depicts Rubin's disclosures using diagrams like the those reproduced below. POR, 56, 58.

expressly discloses that the golfer's foot will tilt inwardly due to Rubin's wedge-shaped sole (EX1002, Section IX.C.e (citing EX1007, 3:56-65, claim 1) and shows and states that it has a conventional flat heel (EX1002, Section IX.C.f (citing EX1007, 2:60-68, Figure 3)), as depicted in the annotation. EX1022, ¶45-46.



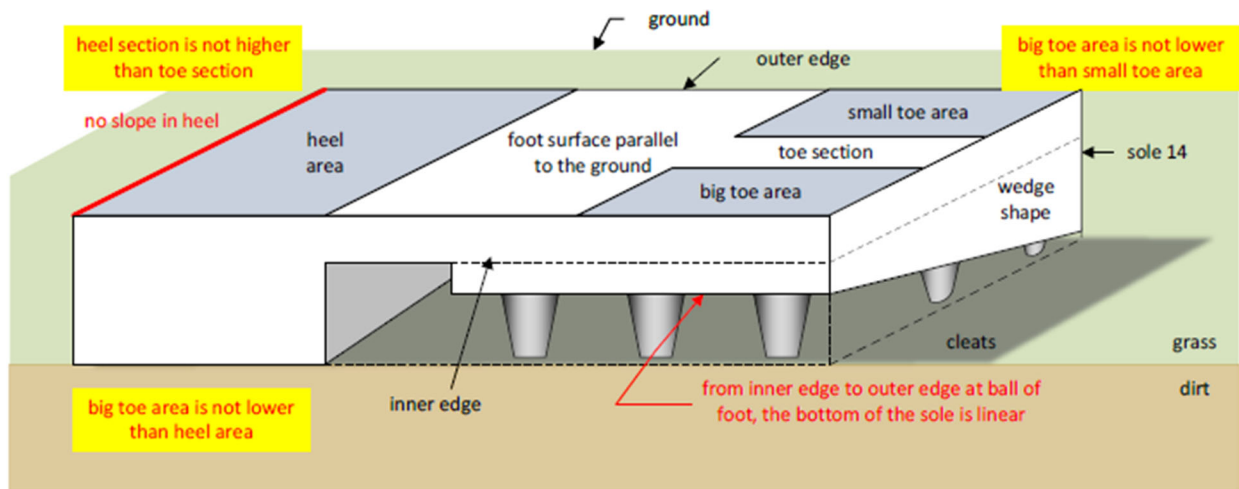
These diagrams improperly depict Rubin's heel section as having the same height as the toe section (discussed above), and with an identical thickness and angling as the forefoot section from the inside to outside edge. This is inconsistent with Rubin's disclosure of a flat heel (EX1007, 2:66-67) as shown in Figure 3, *e.g.*, below. EX1022, ¶¶34-36.



A POSITA would also understand Rubin’s disclosure of a “conventional” heel suggests that the heel has a consistent thickness from the inside to outside edge. *See* Section IV. Nor does Rubin disclose a shoe with spikes in the heel section, as Athalonz suggests. EX1007, Fig. 3. Athalonz’s arguments made with respect to its proposed claim construction for “athletic positioning” (*see* POR, 64-65), rely on the same diagrams as above, and fail for the same reasons. EX1022, ¶¶37-38.

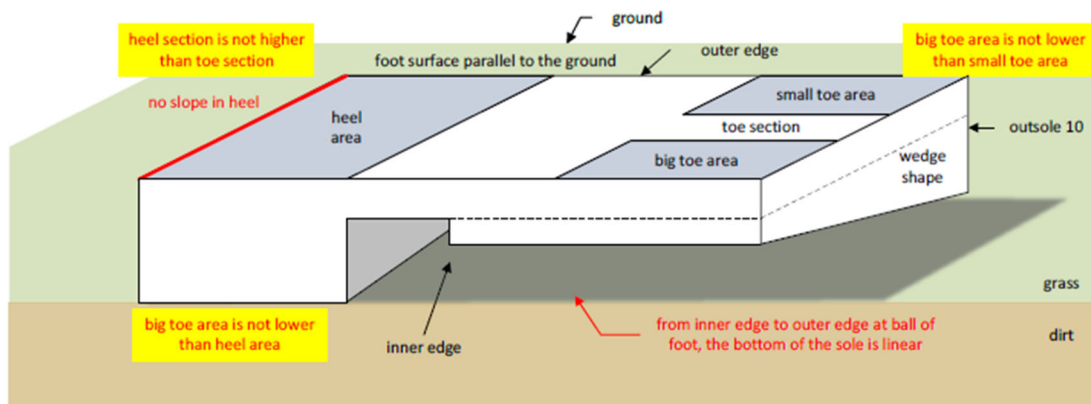
C. Athalonz’s Fails to Address its “What If” Embodiments When Used on Soft Ground

Attempting to address the above deficiency, Athalonz provides diagrams (reproduced below) that depict Rubin’s shoe with a conventional flat and raised heel without spikes. POR, 56-60; EX2008, ¶¶258-277. While Athalonz references these diagrams as undisclosed “what if” embodiments (*see* POR, 59-60), Athalonz does not refute that Figure 3 depicts a flat heel without spikes, and Mr. Markison admitted a “conventional” heel “would be flat from the inside edge to the outside edge.” EX1023, 97:5-99:17.

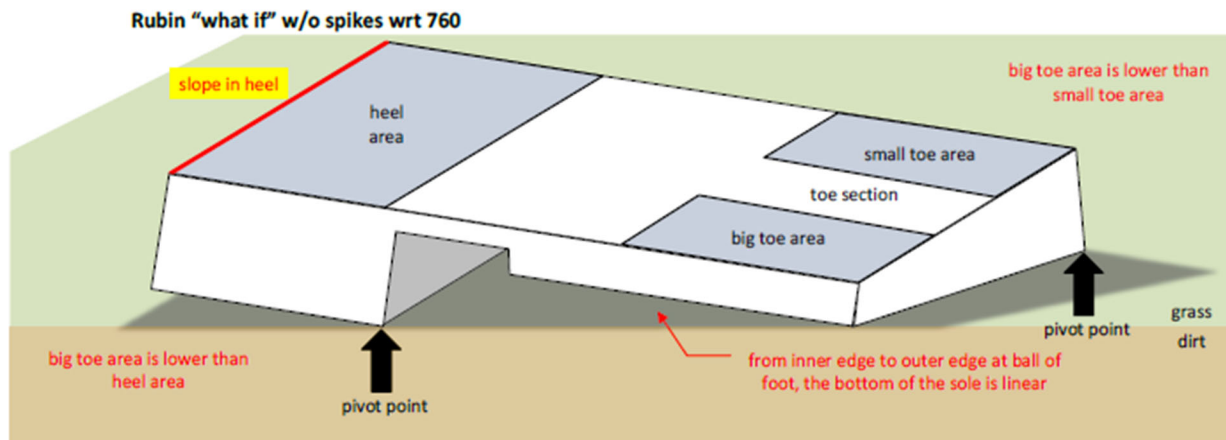


This figure misrepresents Rubin’s disclosure that the heel section is higher than the toe section, as discussed above. EX1022, ¶38. Athalonz’s diagram is also admittedly on hard ground. POR, 60. It ignores that, when worn, the spikes would enter soft ground, causing the big toe area to be lower than the heel area and the small toe area—a scenario never directly addressed by Athalonz in the POR. EX1022, ¶40.

In the “what if embodiment” shown below without spikes, Athalonz fails to explain why the foot surface is shown parallel to the ground.



A POSITA would understand that, when worn, the toe area would be on the ground, and thus lower than the heel, and based on the sloped forefoot, the big toe area would be lower than the small toe area. EX1022, ¶41. This scenario is allegedly shown by Mr. Markison.



EX2008, ¶274. While not addressed in the POR, Mr. Markison suggests that this embodiment would not meet the claims because “two pivot points” would cause a “slope in the heel of the shoe sole.” EX2008, ¶¶154-155, 272-277.⁶ But Mr. Markison cites no support in Rubin for this conclusion. Like Kim, Rubin expressly discloses that “[s]ole 14 should be sufficiently flexible to enable the wearer latitude to flex the shoe when walking” EX1007, 2:59-67; *see also* EX1023, 122:8-123:4 (Mr. Markison agreeing that the sole of Rubin is made of a flexible material).

⁶ While paragraphs 271-277 of Mr. Markison’s report discuss “Kim,” Petitioner understands Mr. Markison to be referring to Rubin.

As Mr. Delgatty explains, a POSITA would understand that Rubin’s flexible sole would allow the toe section of the sole to extend downwards and onto the ground while the heel section also remains flat on the ground. EX1022, ¶¶40-43. Thus, Athalonz’s diagrams likewise fail to rebut that Rubin meets the toe and heel positioning limitations of claim elements [1.4] and [1.10], and instead confirm that when the Rubin’s conventional heel and flexible sole are accounted for, the claim limitations are met. Petition, 40-42, 44; EX1022, ¶44.

D. The Claimed Heel and Toe Positions Should Not be Measured Relative to the Bottom of the Spikes

To the extent Athalonz suggests that Rubin does not invalidate the claims because the toe and heel positions should be measured relative to the “bottom of the shoe” or “bottom of the spikes” and not the ground (POR 53-56,64, EX2008 ¶¶154-155, 270) this is unsupported by the claim and is nonsensical for the reasons described in Section V.D. EX1022, ¶47.

E. Rubin Discloses “A Pair of Shoes”

Just like with Dufour, above, Athalonz has presented no evidence that alters the Board’s conclusion about what the claims require with respect to a “pair” of shoes (Paper 8, 12-13 fn. 1), instead focusing precisely on what the Board found the claims are not directed to. POR, 66-67; EX1022, ¶48.

VIII. GROUNDS 4-6 – CLAIMS 4-5 AND 9-10 ARE OBVIOUS OVER KIM, DUFOUR, AND RUBIN EACH IN VIEW OF DE OBALDIA

Athalonz does not dispute that De Obaldia discloses the stabilizing cup of claims 4-5 and 9-10, nor that a POSITA would combine that aspect of De Obaldia with each of the Kim, Dufour, and Rubin shoes. POR, 69. EX1022, ¶49.

IX. SECONDARY CONSIDERATIONS DO NOT SUGGEST NON-OBVIOUSNESS

Mr. Delgatty has considered the alleged secondary considerations of nonobviousness raised in the POR and he maintains his conclusion that the challenged claims are obvious.⁷ EX1022, ¶50.

A. Long-Felt, Unmet Need.

A showing of long-felt, unmet need depends on at least three factors: (1) the need must have been a persistent one that was recognized by skilled artisans; (2) the need must not have been satisfied by another before the applicant's invention; and (3) the invention must in fact satisfy the long-felt need. MPEP § 716.04. Athalonz fails to show a persistent need recognized by a POSITA, why the cited prior art in the grounds above did not meet such a need, nor evidence of how the alleged invention did. EX1022, ¶51. Athalonz's assertion that the filing dates of Petitioner's references demonstrate a long-felt need is also contradicted by its own statements

⁷ Athalonz bears the burden to produce evidence of secondary considerations. *ZUP, LLC v. Nash Mfg.*, 896 F.3d 1365, 1373 (Fed. Cir. 2018). Mr. Delgatty had no ability, and no obligation, to attempt to preemptively address evidence of secondary considerations in his initial declaration that Athalonz had not yet offered.

that the references are “directed to a different solution” than the problem solved by the ’760 patent. POR, 31, 41, 52.

B. Skepticism by Others.

Athalonz relies entirely on the unsupported personal beliefs of Mr. Markison for why its baseball shoe was met with limited success in 2015. POR, 83 (citing EX2008, ¶344). Absent evidence that the limited success was due to a disbelief in the technical merits of the ’760 patent, as opposed to other economic or commercial factors, Athalonz fails to demonstrate a skepticism by others regarding the patented invention. EX1022, ¶52; *Joy Tech., Inc. v. Manbeck*, 751 F. Supp. 225, 232 (D.D.C. 1990) (“There is no evidence showing skepticism related to any technical reasons why one of ordinary skill in the art could not have made the claimed invention. The evidence of skepticism does not have substantial weight.”).

C. Industry Praise and Unexpected Results.

Athalonz’s evidence of alleged industry praise and unexpected results is unreliable. The Board should not credit Athalonz’s extensive reliance on hearsay statements that Mitch McDowell and Ryan Steenberg allegedly made to one another, with no supporting evidence for their truthfulness or accuracy. *Bosch Auto. Serv. Sols., LLC v. Matal*, 878 F.3d 1027, 1037 (Fed. Cir. 2017) (affirming Board’s decision to discredit hearsay evidence of secondary considerations).

Athalonz's reliance on the alleged success Bernhard Langer has had since switching to Athalonz's shoes is belied by the statistical evidence of his performance. According to the PGA Tour's official stats, compiled in EX1034, while Mr. Langer's driving accuracy has increased since his switch to Athalonz's shoes, his driving distance, longest drives, greens in regulation percentage, scrambling percentage, putting average, scoring average, and birdie average have all decreased. To the extent these results were "unexpected," they are not the type that support a finding of non-obviousness.

Finally, Mr. Markison admitted that the article on which Athalonz relies purporting to praise Athalonz's shoes was written as a result of Athalonz's marketing department's solicitation for reviews. EX1023, 217:20-219:1; EX1022, ¶53.

D. Copying.

"Copying requires evidence of efforts to replicate a specific product, which may be demonstrated through internal company documents, direct evidence such as disassembling a patented prototype, photographing its features, and using the photograph as a blueprint to build a replica, or access to the patented product combined with substantial similarity to the patented product." *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed. Cir. 2010). Athalonz provides no such evidence. In fact, Athalonz failed to include any technical analysis of Petitioner's products, or

any evidence that Petitioner's shoes practice the asserted patents or have a similar design as Athalonz's products. EX1022, ¶54; EX1023, 220:3-223:12.

X. CONCLUSION

For the reasons stated above, claims 1-11 of the '760 patent are unpatentable.

DATED: April 9, 2025

Respectfully submitted,

/Frank C. Cimino/

Reg. No. 39,945

VENABLE LLP

600 Massachusetts Ave., NW

Washington, DC 20001

CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE, together with all exhibits and other documents filed therewith, was served to Patent Owner by causing it to be sent by email to counsel for Patent Owner at the following email addresses:

Michael Matulewicz-Crowley - mmatulewicz-crowley@reichmanjorgensen.com

Christine E. Lehman - clehman@reichmanjorgensen.com

Connor S. Houghton - choughton@reichmanjorgensen.com

Date: April 9, 2025

/Frank C. Cimino/
Reg. No. 39,945
VENABLE LLP
600 Massachusetts Ave., NW
Washington, DC 20001
T 202-344- 4569
F 202-344-8300

CERTIFICATE OF WORD COUNT

The undersigned hereby certifies that the foregoing PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE contains 5599 words according to the word processing program used to prepare it.

Date: April 9, 2025

/Frank C. Cimino/
Reg. No. 39,945
VENABLE LLP
600 Massachusetts Ave., NW
Washington, DC 20001
T 202-344-4569
F 202-344-8300