

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNDER ARMOUR, INC.
Petitioner

v.

ATHALONZ, LLC
Patent Owner

Case No. IPR2024-00636
Patent No. 10,674,786

SUPPLEMENTAL DECLARATION OF GRANT DELGATTY

I. ENGAGEMENT AND COMPENSATION

1. My name is Grant Delgatty. I have been retained by Under Armour, Inc. for the purpose of providing a supplemental declaration with respect to the unpatentability of U.S. Patent No. 10,674,786 (“’786 patent”).

2. In addition to the materials identified in my declaration dated March 4, 2024, I reviewed:

Exhibit No.	Description
IPR2024-00636 EX2008	Markison ’786 Declaration
IPR2024-00637 EX2008	Markison ’291 Declaration
IPR2024-00638 EX2008	Markison ’760 Declaration
IPR2024-00639 EX2008	Markison ’768 Declaration
IPR2024-00640 EX2009	Markison ’456 Declaration
EX1023	Markison Deposition Transcript
EX1032	Cross Section Definition
EX1033	Perspective Definition
EX1034	Langer Statistics

EX2015	Height Definition
N/A	The Institution Decisions for IPR2024-00636-640

II. “CONVENTIONAL” SHOES

3. Mr. Markison suggested that I failed to establish that a heel platform with a uniform height from an outer edge to an inner edge and from the front edge to the rear edge is a conventional feature of a shoe. EX2008, ¶168. I disagree that the evidence I provided in my initial declaration is insufficient. However, further evidence is provided below showing that the shoes I designed for Vans that were sold in the United States between 2002 and 2005 have a heel platform that has a uniform height from an outer edge to an inner edge and from the front edge to the rear edge, at least based on Patent Owner’s apparent interpretation of this limitation.







4. A heel platform with a uniform height from an outer edge to an inner edge and from the front edge to the rear edge is also shown in the images of the Nike 1977 Boston running shoe and the Nike 1971 Cortez included in my initial declaration. A POSITA would know that both the outsole and the midsole of these shoes are shown in the images, which depict a heel platform with a uniform height

from an outer edge to an inner edge and from the front edge to the rear edge, given that a conventional insole is flat.

5. Further evidence of the Nike Cortez's heel design is provided below, which further demonstrates that it has a heel platform with a uniform height from an outer edge to an inner edge and from the front edge to the rear edge.



6. U.S. Design Patent No. D275146 includes images of the sole of the Nike Air Force One shoe. Further evidence is provided below showing that Nike's Air Force One has a heel platform with a uniform height from an outer edge to an inner edge and from the front edge to the rear edge.



7. Further evidence is provided below showing that the 1970 FootJoy Style 51409 has a heel platform with a uniform height from an outer edge to an inner edge and from the front edge to the rear edge.



8. The images in U.S. Design Patent No. D310294 are described as a “golf shoe bottom,” which a POSITA would understand includes both the midsole and the outsole of the shoe. The images show a heel platform with a uniform height from an outer edge to an inner edge and from the front edge to the rear edge, given that a conventional insole is flat.

9. Images of the Athalonz EnVe shoe that I understand Mr. Markison has stated includes a consistent height heel platform throughout are below:



III. OPINIONS ON UNPATENTABILITY

A. The Claimed Slopes are Not Measured with Respect to the Bottom of the Cleats

10. I understand Mr. Markison opines that the '786 patent claims measure the slope relative to the bottom of the spikes of a shoe. EX2008, ¶¶179-80. In my opinion, Mr. Markison is incorrect.

11. Based on the teachings of the '786 patent and the state of the art described in the prior art references, a POSITA would understand that the '786 patent does not measure the slope relative to the bottom of the spikes of a shoe. Instead, the '786 patent claims measure the slopes relative to the bottom of the sole, and a POSTA would understand that the shoe's "sole" excludes spikes or cleats.

12. To understand whether the '786 patent includes cleat height as a reference point for measuring the claimed slopes, a POSITA would consider the relevant claim language. For example, claim 5 explains that the "sole" of claim element [5.2] "includes" two different parts: a "specific bottom" of claim element [5.3], and an "athletic positioning sole section" of claim element [5.4]. And the first, second, and third slopes of claim element [5.7] are specifically only found in the athletic positioning sole section—not the specific bottom (*i.e.*, cleats or spikes). EX1001, claim 5 ("an athletic positioning sole section having: ...a first slope...a second slope...and a third slope"); "); claim 8 ("the shoe of claim 5, wherein the

specific bottom comprises one of: a cleat pattern bottom; a baseball spike bottom....”).

13. The '786 patent discloses that “the integrated sole and insole may include an outsole of a rigid material (e.g., a sport specific bottom).” EX1001, 27:67-28:2, 28:32-34. But the permissive language that the sole “may” include a sport specific bottom indicates to a POSITA that the cleats are not required to be included as part of the sole generally, or the bottom outsole specifically. This is further confirmed by other disclosures in the '786 patent that Mr. Markison does not discuss, wherein the '786 patent: lists the sole and cleats as separate components of the shoe (*id.*, 1:51-53), describes the cleats as a distinct component that are “coupled to” (and thus not part of, or one in the same as) the sole (*id.*, 9:37-40), and visually depicts the athletic positioning sole and cleats as separate parts of the shoe (*id.*, Figs. 63-64). I also understand that, at his deposition, Mr. Markison agreed—contrary to the opinions expressed in his report—that the '291 patent (and thus the '786 patent that shares the same specification) describes the cleats as “a different item in the shoe than the athletic positioning sole.” EX1023, 84:19-85:22.

14. As further confirmation of the understanding a POSITA would have from the '786 patent, a POSITA would consider whether, in the field of athletic shoes, cleats are generally understood to be part of the sole. The prior art references confirm that they are not. Kim, Dufour, and Rubin each describe the cleats as

distinct components of the shoe that are merely connected to the bottom outsole, and that are located below the outsoles “bottom” or “lower” surface. EX1005, [0009] (cleats “extend[] from the lower surfaces of soles of the shoes”); EX1006, 4:9-11 (cleats are “fastened to the sole”); EX1007, 3:24-27 (cleats “project[] downwardly from the bottom of [the] sole”). Additionally, the figures in Kim, Dufour, and Rubin each confirm through the use of distinct reference numbers that the cleats and sole are different components of the shoe. EX1005, Figs. 1-2; EX1006, Fig. 10; EX1007, Fig. 1.

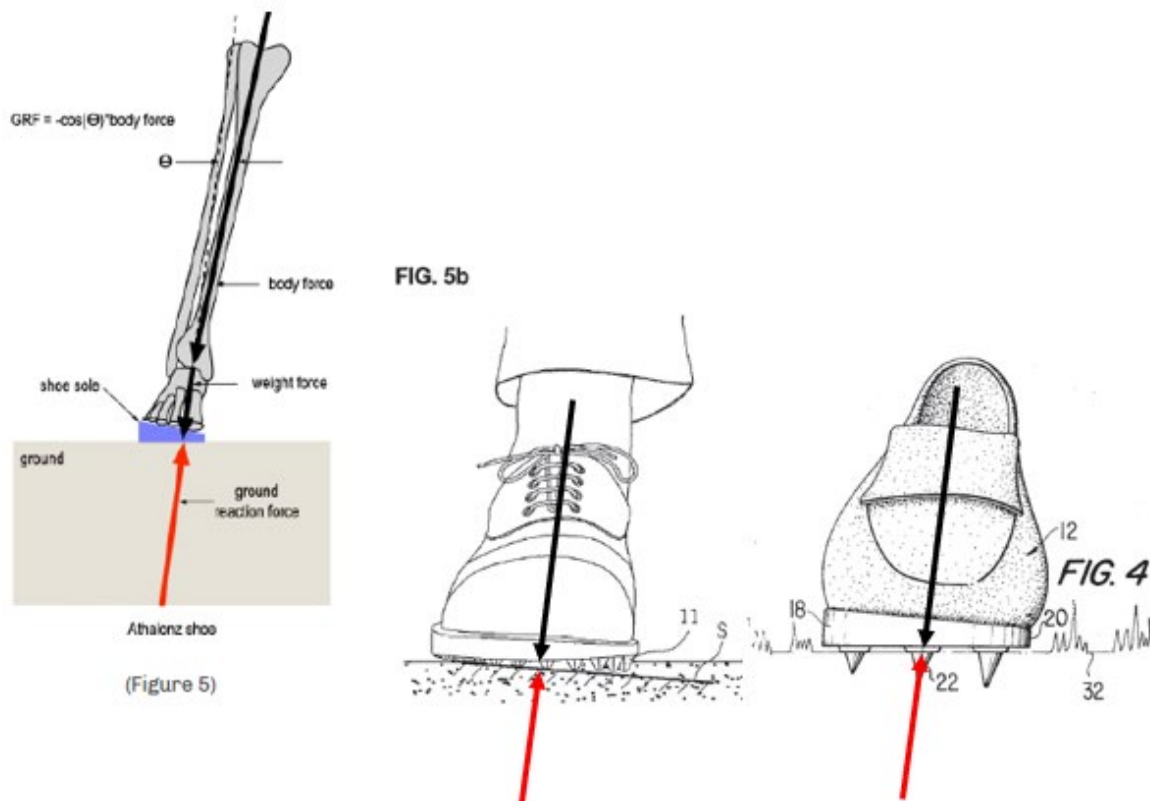
15. It is also my opinion that the dictionary definition for “height” that Mr. Markison relies on in the related IPR on the ’291 patent (IPR2024-00637, EX2008, ¶181) in fact supports that the claimed slopes should be measured with respect to heights that are themselves measured with respect to the ground. The dictionary definition explains that “height” can be “the extent of elevation above a level.” IPR2024-00637, EX2015. A POSITA would understand that the “level” is the ground, not the bottom of the cleats. A POSITA would reach this conclusion based on an understanding of what the “angled support platform” of claim 1 and the “athletic positioning sole section” of claim 5 purport to achieve. As Mr. Markison discusses, “[t]he concept of ‘athletic position’ in the specification generally describes a resulting position having the ‘heel higher than toes, knees bent, more weight on big toe and/or ball-foot, more weight on inside of leg versus outside of

leg,’ ‘knee position is aligned with ankles, and hips, and/or other athletic positioning characteristics.’” EX2008, ¶79. A POSITA would understand that, because the cleats would sink into soft ground, they would not contribute to the athletic positioning shape. A POSITA would understand that cleats serve a different purpose, for example, “prevent[ing] sliding during the rounding” by ensuring that the shoe “is firmly gripped on the ground.” EX1005, [0009], [0030]. Whether the heel is higher than the toes, with more weight on the big toe and on the inside of the foot, would be determined entirely by the shape of the platform/sole on which the foot sits. A POSITA could confirm this understanding by considering different shoes that all have the same sole shape, but with different length cleats of, for example, 0 inches, 0.5 inches, or 1 inch. In each case, the entire length of the cleats (or lack thereof) would sink into the ground, and whether the athletic positioning shape were achieved would be entirely dependent on the shape of the sole platform.

16. A POSITA would thus understand that, because the cleat height is irrelevant to forming the claimed angled support platform or athletic positioning sole section, the cleat height would not be included as the reference point for measuring the claimed slopes that define the athletic positioning shape.

17. I agree with Mr. Markison (EX1023, 133:13-141:13) that the placement of the wearer’s forefoot relative to the ground when using Athalonz’s technology shown in Fig. 5 below (EX1030, 5), is similar to that provided by the shoes in Rubin

and Kim when used on soft ground, thereby providing a similar ground reaction force in alignment with the wearer's body force, as shown below.

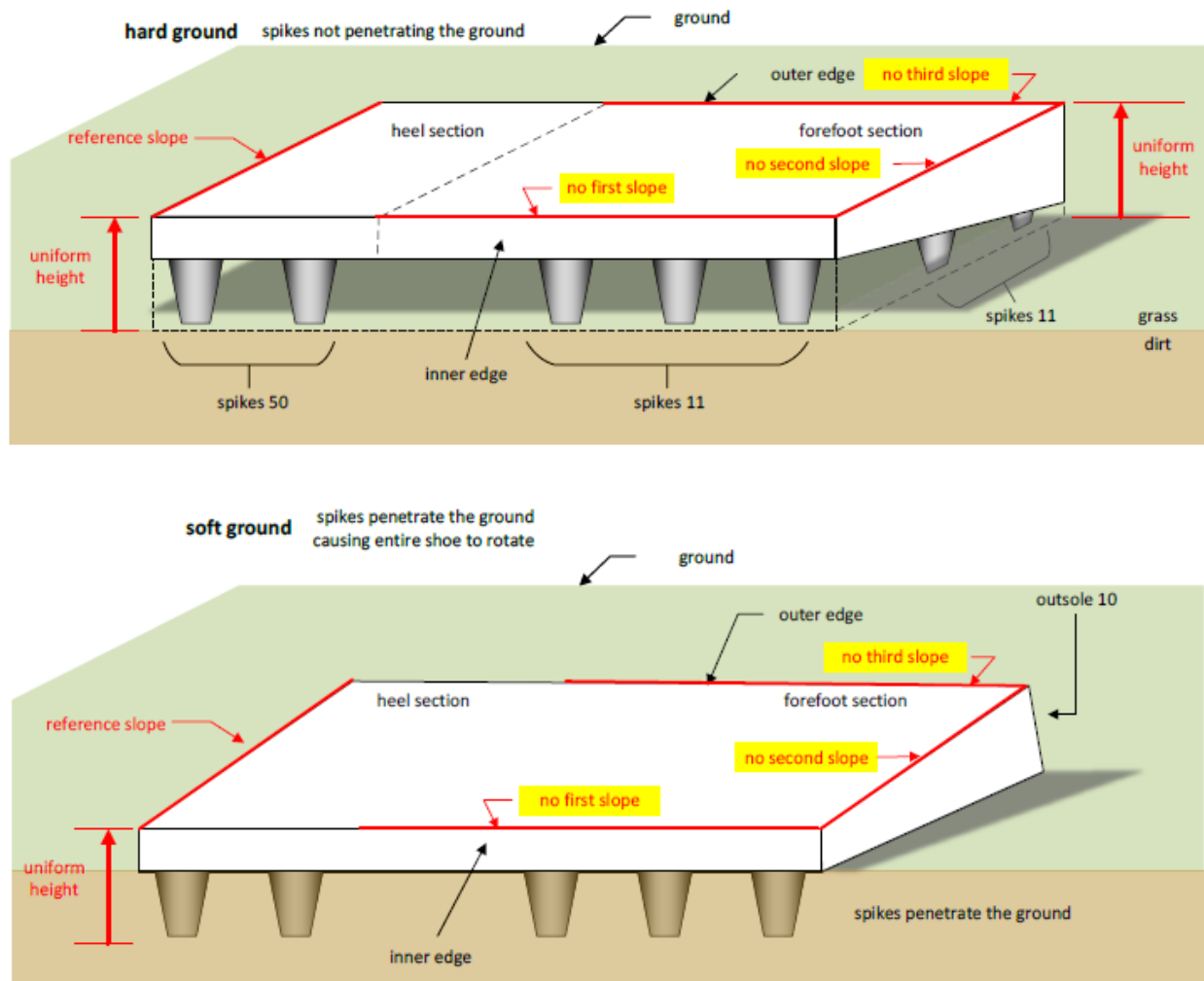


B. Ground 1: Claims 1-8 are Obvious Based on Kim

18. I understand that Mr. Markison created several diagrams that he claims illustrate Kim's shoe. In my opinion, because each diagram misrepresents and/or ignores Kim's express disclosures, Mr. Markison fails to show that the '786 patent is not obvious based on Kim.

19. Below are the diagrams Mr. Markison claims represent Kim's "primary embodiment," on both hard and soft ground. EX2008, ¶¶182, 189. But these diagrams depict Kim's shoe with a heel that has a consistent thickness and incline

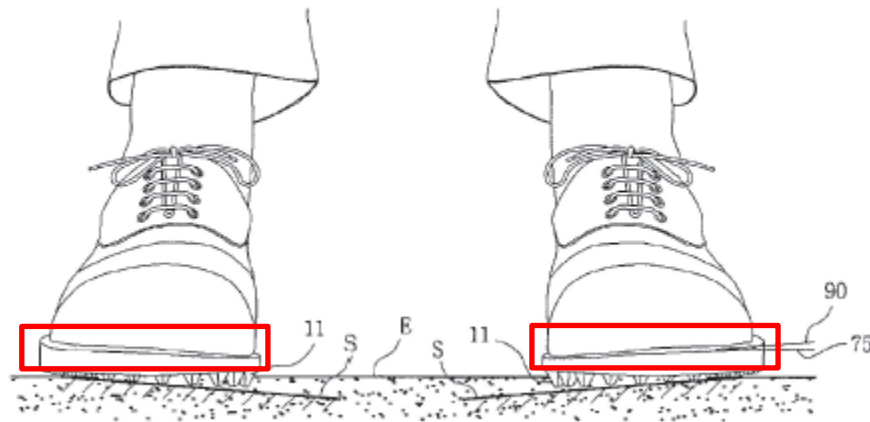
plane as the forefoot, and spikes in the heel, and therefore fail to account for Kim's express disclosure of a conventional heel with an inclined plane formed only at the front portion of the outsole (i.e., the forefoot section). EX1005, [0027], [0046].



20. As I explained above, a conventional heel would be flat with a uniform height from an outer edge to an inner edge and from the front edge to the rear edge. Additionally, Mr. Markison includes the height of the cleats in measuring the claimed slopes, which as I explained above, contradicts the understanding a POSITA would have that cleat height would be excluded.

21. Mr. Markison's suggestion that Kim's outsole is level from the heel forward to the toe section in unsupported, as Figure 2 clearly contradicts that conclusion. Figure 5b further supports that the heel section is taller than the toe section, showing the top of a surface area on the part of the sole that sticks out beyond the upper, suggesting the shoes are tilted forward.

FIG. 5b

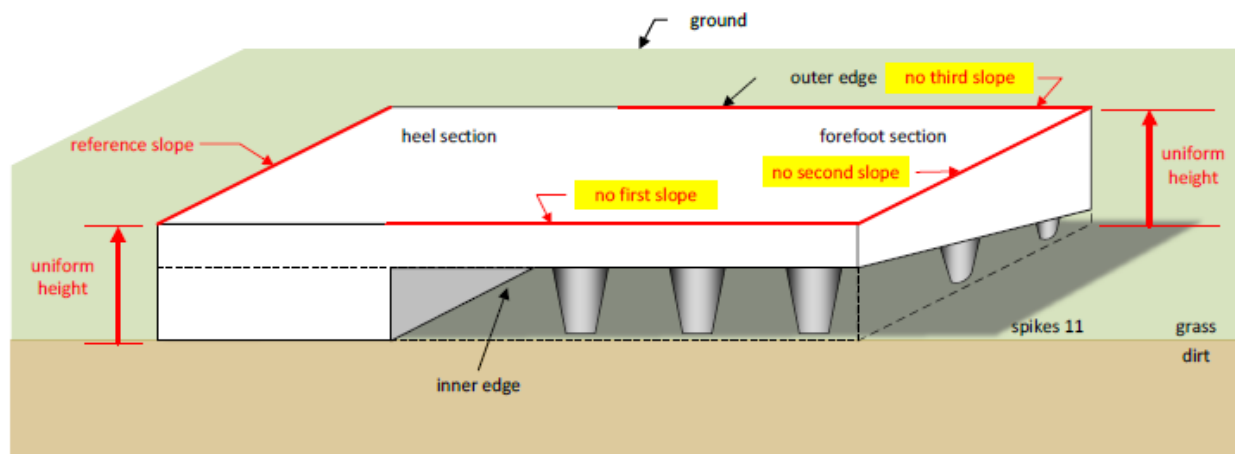


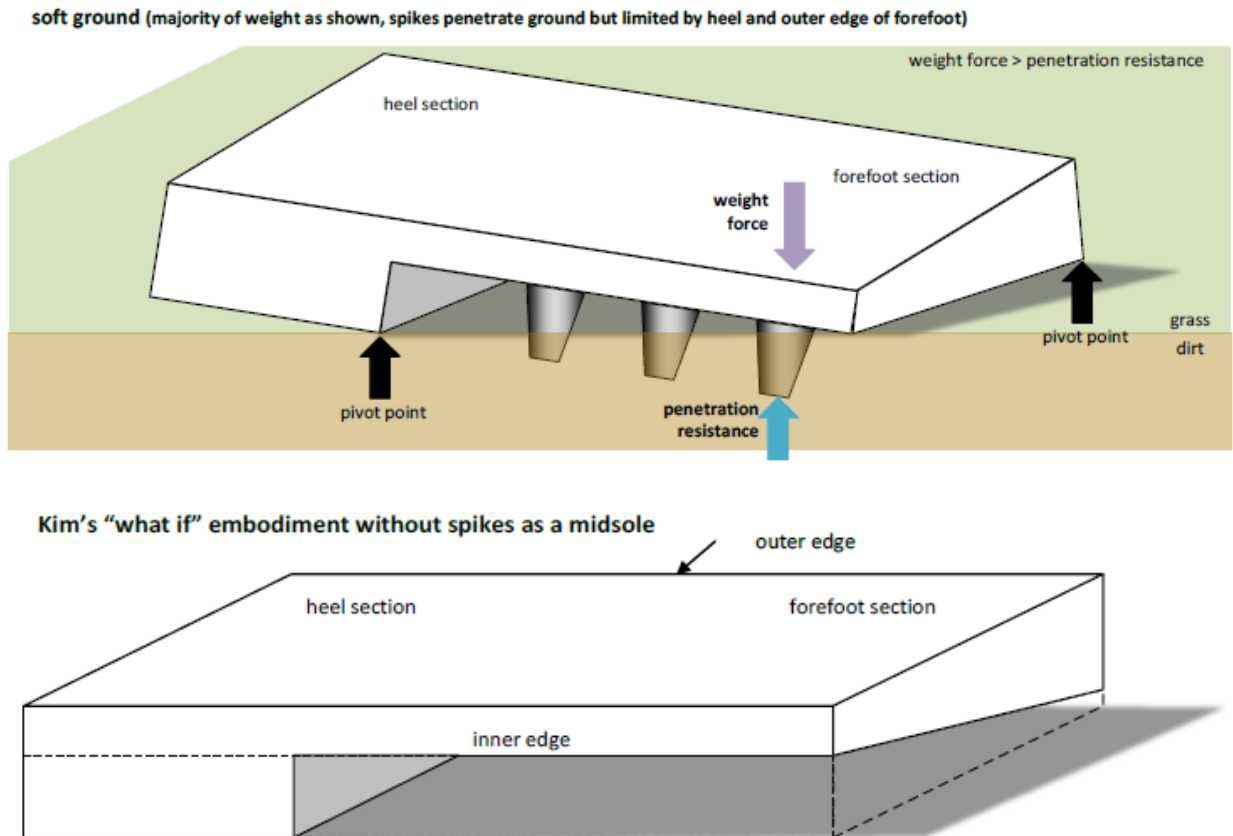
22. Mr. Markison's assertion that Kim would not in fact have a conventional flat and raised heel as shown in Figure 2 because there would be a gap between the bottom of the forefoot and the ground, or "only a small portion of the heel would be in contact with the ground" is unsupported. This conclusion assumes that the sole is rigid and would not flex. This is incorrect, as Kim expressly discloses that the "outsole 10 of the golf shoe 10 is made of synthetic rubber." EX1005, [0040].

23. As I explained in my previous declaration, such a design is also standard in golf shoes, for example, as shown in the 1970 FootJoy Style 51409.

EX1002, ¶51. Therefore, it is my opinion that these diagrams cannot demonstrate that Kim does not meet the reference slope limitations of claim elements [1.2] and [5.5], and the first, second, and third slope limitations of claim elements [1.5] and [5.7].

24. Below are the diagrams Athalonz and Mr. Markison claims represent Kim's "what if embodiment," on both hard and soft ground. POR, 42-43; EX2008, ¶¶120, 196. It is my opinion that these diagrams cannot demonstrate that Kim does not meet the reference slope limitations of claim elements [1.2] and [5.5], and the first, second, and third slope limitations of claim elements [1.5] and [5.7].





25. First, Mr. Markison includes the height of the cleats in measuring the claimed slopes, which as I explained above, contradicts the understanding a POSITA would have that cleat height would be excluded.

26. As these diagrams show, when Kim's conventional heel is accounted for and the cleats are excluded as the reference point for the claimed slope measurements, Kim's shoe has first, second, and third slopes each greater than the reference slope, that form the claimed athletic positioning shape where the big toe is lower than the small toe, which is lower than the heel. However, Athalonz is incorrect that, on soft ground, "this would result in the heel lifting off the ground, leaving the heel section of the shoe parallel with the toe section and no 'second

slope” and thus that there is no claimed second slope. POR, 42 (citing EX2008, ¶¶119-120).

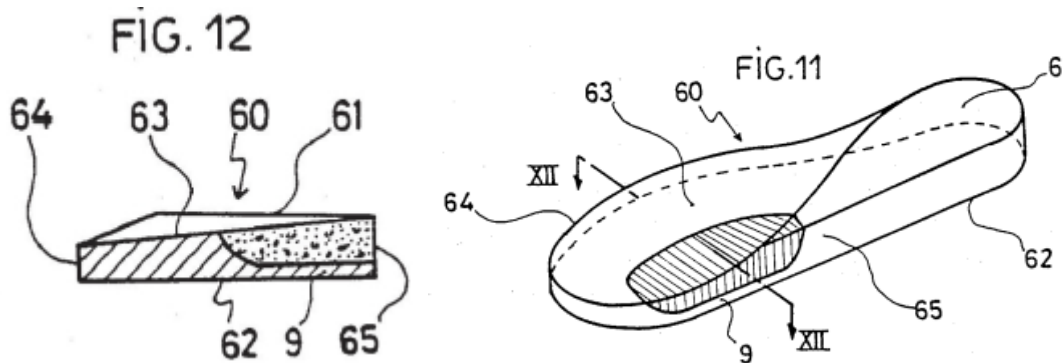
27. A POSITA would understand that Kim’s shoe would not create the pivot points that Mr. Markison identifies, as Kim discloses that the “outsole 10 of the golf shoe 10 is made of synthetic rubber.” EX1005, [0040]. A POSITA would understand that the design choice to use synthetic rubber for the outsole would allow Kim’s sole to flex, rather than pivot, when the cleats depress into soft ground. Not only is this a well-understood function of shoe design, but it is consistent with Kim’s disclosure that the shoe will allow the golfer to maintain a stable position during and after the swing motion (EX1005, [0037]), which would not be the case if the golfer’s heel were lifted off the ground at varying degrees from the inner to outer edge.

28. In light of Kim’s disclosures, a POSITA would understand Kim’s shoe to be designed such that the downward weight force on the heel section would keep the heel in place flat on the ground while the cleats in the forefoot section depress into the ground. In that scenario, the heel section would maintain a reference slope substantially parallel to the bottom of the sole, and thus first, second, and third slopes each greater than the reference slope.

C. Ground 2: Claims 1-3, 5-6, and 8 are Obvious Based on Dufour

29. There is an inconsistency between the depictions of the shoe of the sole depicted in Figures 11 and 12 of Kim. Figure 12 purports to show the heel section

61, as if it were a perspective view looking down the length of the shoe, as shown below.



30. However, based on the shape of the sole shown in Figure 11, a POSITA would understand that in Figure 12, the outer edge (65) should show a decrease in height from the heel (61) to the toe, in a similar but less pronounced fashion as the decrease in height shown at the inner edge (64) from the heel (61) to the toe. Line XII-XII of Figure 11, where the cross section of Figure 12 was taken, is depicted as being past the intersection point of the flat heel section (61) and angled forefoot section (63) at the outer edge (65), at which point the outer edge (65) begins to decrease in height.

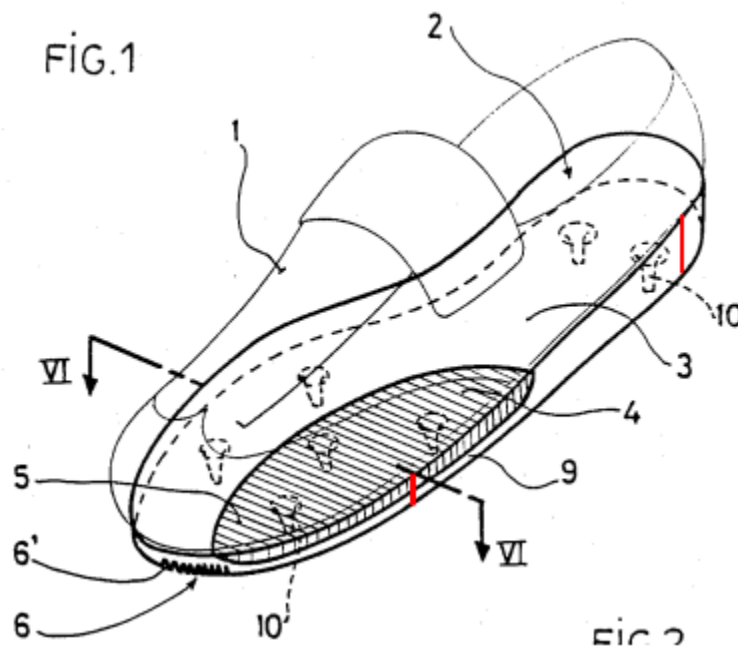
31. Thus, Mr. Markison's suggestion that Dufour's Figure 12 discloses that "the height of the outer edge 65 of the plantar support zone 61 and of support surface 63 is the same" (EX2008, ¶234) is wrong.

32. Mr. Markison's suggestion that Dufour's Figure 9 discloses an incline plane that "runs the length of the sole" (*id.*, ¶224) is unsupported. Nowhere in

Dufour does it suggest that. Rather, Dufour discloses that Figure 9 is a depiction of a cross section of the sole. EX1006, 3:20-21.

33. A POSITA would understand that a cross section shows only an internal view of a structure, consistent with the dictionary definition of the term: “a view or drawing that shows what the *inside* of something looks like after a cut has been made across it.” EX1032 (emphasis added). Mr. Markison appears to conflate a cross section view with a perspective view, which is defined as: 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). While a perspective view may illustrate the dimensions of Dufour’s sole at points other than at line VI–VI in Figure 1, a POSITA would understand that the disclosed cross section view does not.

34. That Dufour does not disclose an inclined plane down the length of the sole to the heel is consistent with Dufour’s other disclosures. For example, Figure 1 teaches a heel section that has a uniform height and is thicker than the toe section at all corresponding points from the inside to outside edge of the sole, as shown below.



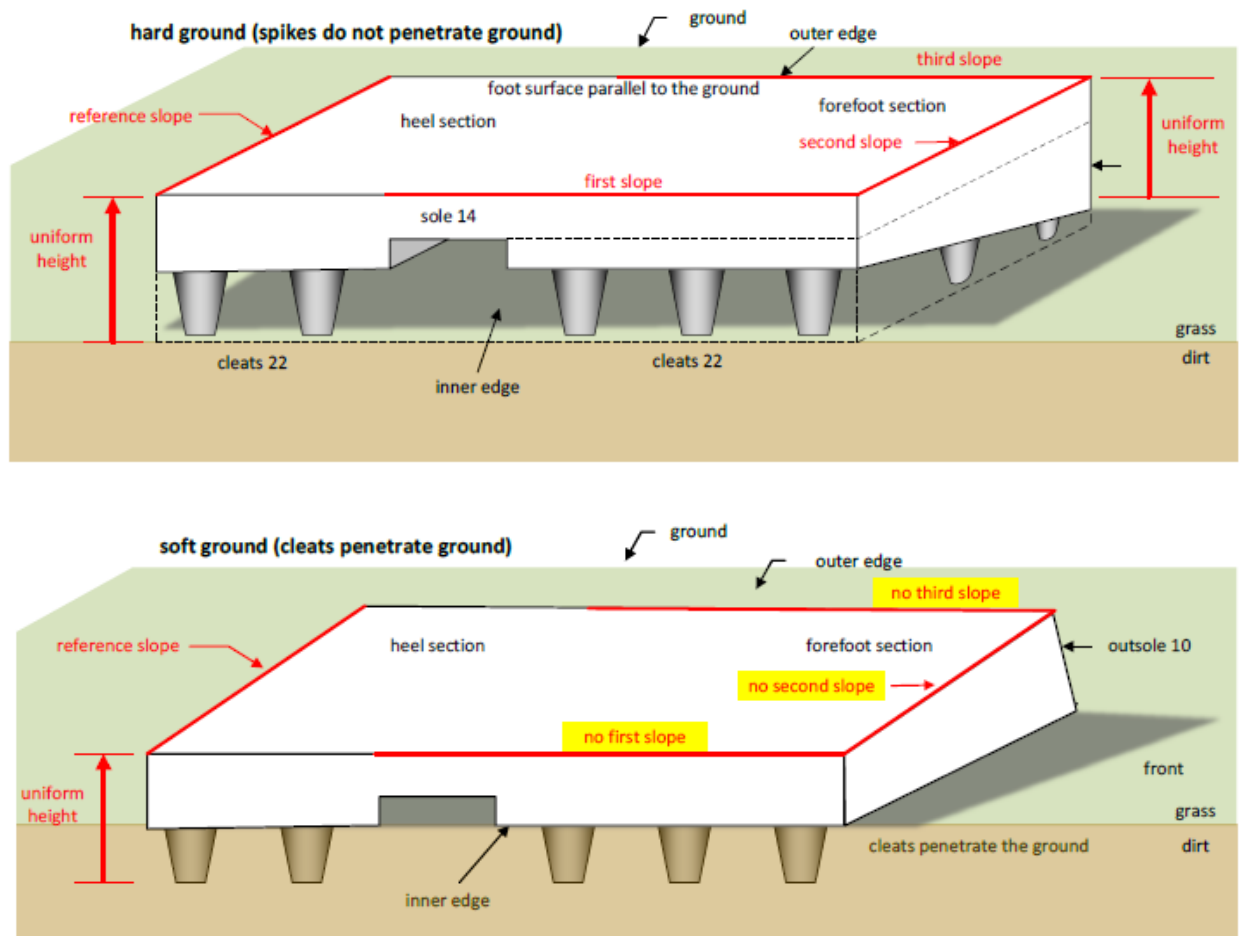
35. I also disagree with Mr. Markison's claim that I ignored the claim limitations and "fail[ed] to show the three separate sections in Dufour that collectively form the three slopes or the angled support platform in the claims." EX2008, ¶¶251-252. I identified Dufour's mid-foot and toe sections in my prior declaration. EX1002, Section IX.B.d-e. As I previously explained, the mid-foot and toe sections comprise the angled support platform of claim 1 and the athletic positioning sole section of claim 5, and form the corresponding first, second, and third slopes of claim elements [1.5] and [5.7]. EX1002, Section IX.B.f, IX.B.r.

D. Ground 3: Claims 1-3, 5-6, and 8 are Obvious Based on Rubin

36. I understand that Mr. Markison created a number of diagrams that he claims illustrate Rubin's shoe. In my opinion, because each diagram misrepresents

and/or ignores Rubin's express disclosures, Mr. Markison fails to show that the '786 patent is not obvious based on Rubin.

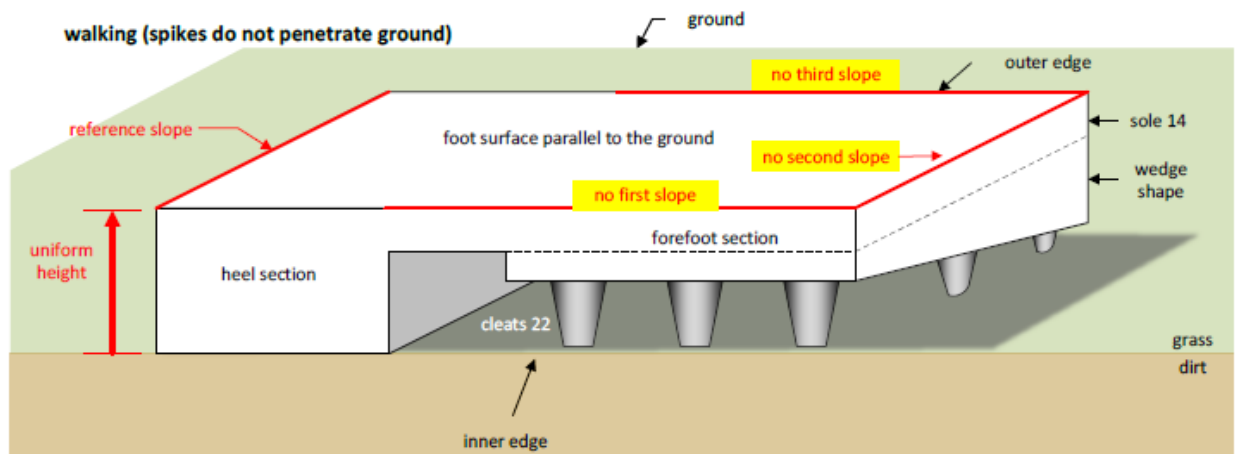
37. Below are the diagrams Mr. Markison claims represent Rubin, on both hard and soft ground. EX2008, ¶¶279, 286.

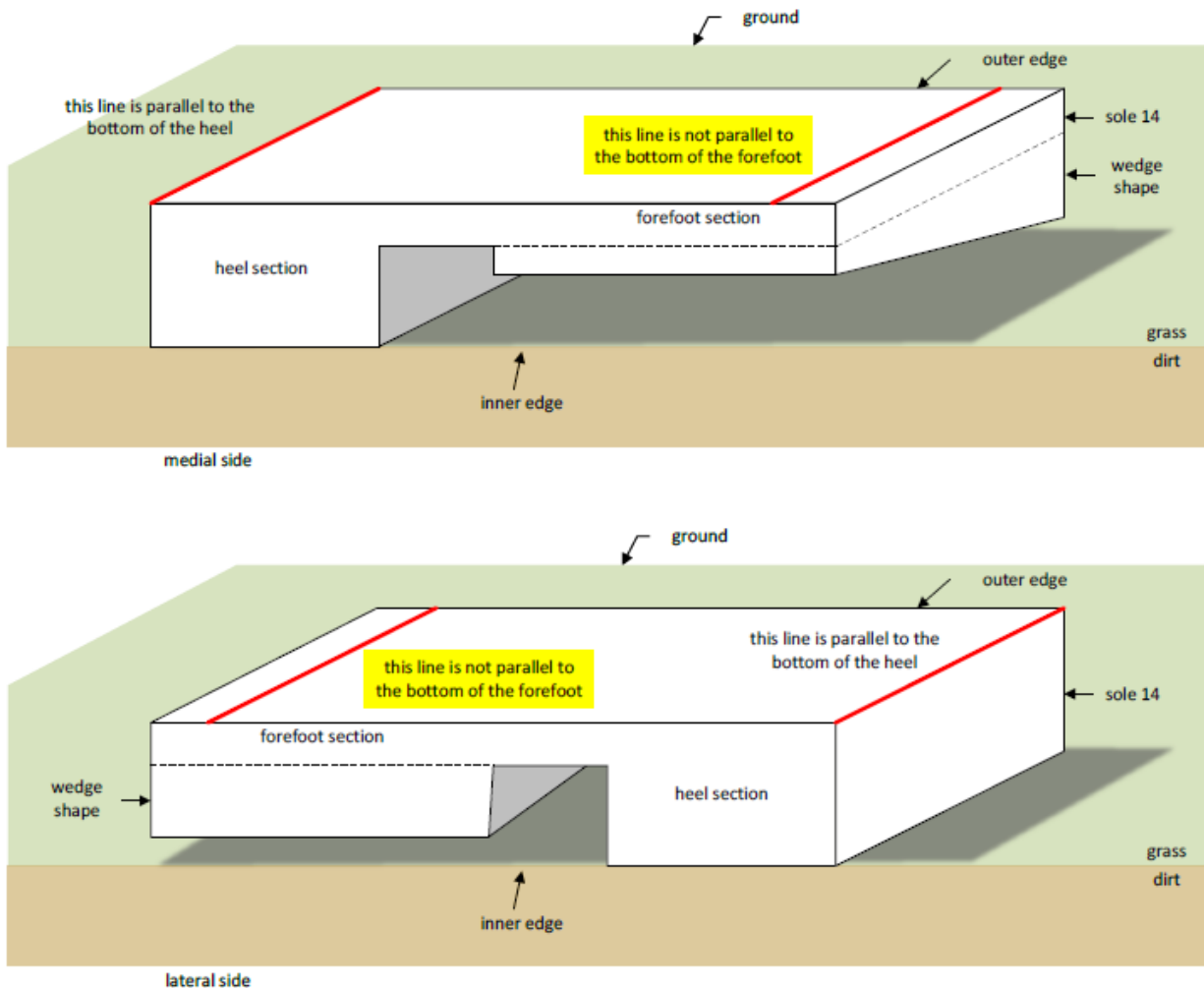


38. But these diagrams depict Rubin's shoe with a heel that has as having the same height as the toe section and a consistent thickness and incline plane as the forefoot, and spikes in the heel, and therefore fail to account for Rubin's express disclosure of a conventional flat heel, and Rubin Figure 3. EX1005, [0027], [0046].

39. As I explained above, a conventional heel would be flat with a uniform height from an outer edge to an inner edge and from the front edge to the rear edge. Additionally, Mr. Markison includes the height of the cleats as the reference point for measuring the claimed slopes, which as I explained above, contradicts the understanding a POSITA would have that cleat height would be excluded. Therefore, it is my opinion that these diagrams cannot demonstrate that Rubin does not meet the slope limitations of claims 1 and 5.

40. Below are the diagrams Mr. Markison claims represent Rubin with its conventional heel without spikes. EX2008, ¶¶293, 305. It is my opinion that these diagrams cannot demonstrate that Rubin does not meet the slope limitations of claims 1 and 5.





41. Mr. Markison incorrectly asserts that these embodiments fail to meet claims 1 and 5 because “the bottom surface of the sole 14 is not a flat plane that is parallel to the back edge of the heel section.” EX2008, ¶306.

42. First, I disagree that the reference slope must be parallel to the bottom surface of the apparatus/sole throughout the entire shoe. The reference slope of claim elements [1.2] and [5.5] is determined based on the uniform height of the heel platform section. A POSITA would understand that where the claims require the reference slope to be parallel to the bottom surface of the apparatus/sole, that

measurement would be taken at the location of the reference slope, i.e., the heel, not the forefoot.

43. But even if the reference slope does need to be parallel to the entire bottom surface of the apparatus/sole, including at the forefoot section, Rubin would still meet claims 1 and 5.

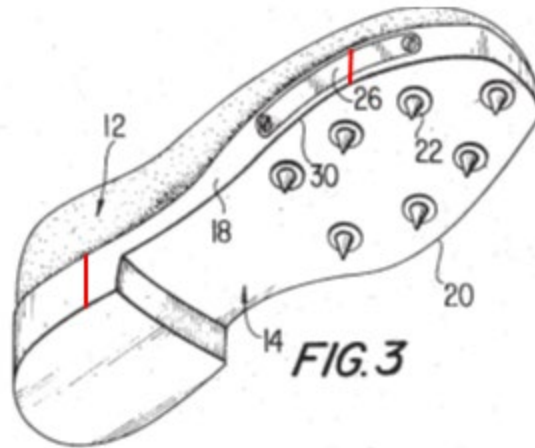
44. Notably, Mr. Markison's diagrams above are illustrated on hard ground, not soft ground. He does not discuss Rubin on soft ground, where, when worn, the spikes would enter soft ground, causing the big toe area to be lower than the heel area and the small toe area, except for his claim that "if the sole without the cleats tilts forward, the reference slope is no longer parallel [to] the ground." EX2008, ¶311. This appears to be based on Mr. Markison's incorrect assertion that that on soft ground, the heel section would lift off the ground due to pivot points. *Id.*, ¶154. A POSITA would understand that Rubin's shoe would not create the pivot points that Mr. Markison identifies, as Rubin discloses that "[s]ole 14 should be sufficiently flexible to enable the wearer latitude to flex the shoe when walking but yet rigid enough to preclude undue roll of the shoe when used by the golfer once he has assumed a proper stance over a golf ball." EX1007, 2:59-67.

45. A POSITA would understand that the design choice to use flexible material for the outsole would allow Rubin's sole to flex, rather than pivot, when the cleats depress into soft ground. This a well-understood function of shoe design, as

a POSITA would understand that golf shoes would not be designed with a rigid material that causes the heel to lift off the ground when on soft ground.

46. In light of Rubin's disclosures, a POSITA would understand Rubin's shoe to be designed such that the downward weight force on the heel section would keep the heel in place flat on the ground while the cleats in the forefoot section depress into the ground. In that scenario, the heel section would maintain a uniform height from an outer edge to an inner edge and from the front edge to the rear edge (providing the zero degree reference slope), while the angled, depressed forefoot section would have the non-zero degree first, second, and third slopes, as required by claim elements [1.1]-[1.2], [1.5], [5.5], [5.7].

47. Mr. Markison's suggestion that the image of the toe section appearing to have a smaller height than the heel section in Figure 1 of Rubin only due to the "shoe rounding towards the toe" (EX2008, ¶¶312-315) is wrong. A POSITA would not interpret Figure 1 in that way. Furthermore, Figure 3, which discloses the same embodiment as Figure 1, makes it apparent that the heel section has a greater height than the outside of the toe section, as shown below, when the measurement is taken at a position well-before any arguable "rounding" of the toe begins in the image.



48. Mr. Markison’s suggestion that Rubin teaches the wearer’s entire foot, is “substantially level” with the ground and therefore the heel must be the same height as the toe (EX2008, ¶¶142-143) is incorrect. Rubin’s only disclosures regarding keeping the wearer’s foot level are with respect to the Rubin’s different length spikes on the outside and inside of forefoot such that the foot is not tilted toward the inside of the shoe when walking on hard ground. *See, e.g.*, EX1007, 3:29-37. Nothing in Rubin suggests the heel and toes are at the same level, a conclusion which is expressly contradicted by Rubin’s own Figures 1 and 3.

E. Grounds 4-5 – Claims 2, 4, and 7 are Obvious Over Dufour in View of Kim and Over Rubin in View of Kim

49. Mr. Markison does not dispute that Kim discloses the insole of claims 2, 4, and 7, nor that a POSITA would combine that aspect of Kim with each of Dufour and Rubin’s shoes. EX2008, ¶317. Therefore, for the same reasons as described above with respect to claims 1 and 5, as well as the reasons set out in my prior declaration (EX1002, 80-86), it is my opinion that Mr. Markison fails to rebut

Petitioner's showing of obviousness for claims 2, 4, and 7 based on Dufour in view of Kim and based on Rubin in view of Kim.

F. Mr. Markison's Proposed Construction Does Not Change the Outcome

50. Mr. Markison's arguments made with respect to its proposed claim construction for "athletic positioning sole section" (EX2008, ¶¶318-319) merely incorporate the same diagrams and arguments discussed above, and thus likewise fail for the same reasons.

IV. SECONDARY CONSIDERATIONS

51. I have considered the alleged secondary considerations of nonobviousness raised by Mr. Markison. They did not alter my opinion regarding the invalidity of the challenged claims.

52. 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 met that need.

53. Athalonz relies entirely on the unsupported personal beliefs of Mr. Markison for why its baseball shoe was met with limited success in 2015, and provides no evidence that its limited success was due to a disbelief in the technical merits of the '786 patent, as opposed to other economic or commercial factors.

54. I understand that Mr. Langer's performance got worse, not better, after switching to Athalonz's products (*see* EX1034) and the article on which Athalonz's

relies regarding alleged praise of Athalonz's shoes was written as a result of Athalonz's marketing department's solicitation for reviews of its shoes. EX1023, 217:20-219:1

55. Athalonz provided no evidence supporting its allegation that Under Armour copied its products or patents, nor provided any technical analysis of Under Armour's products.

V. CONCLUSION

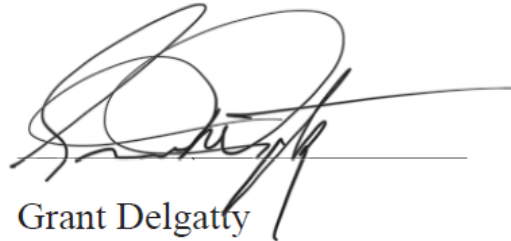
56. For the reasons set forth above, it is my opinion that claims 1-8 of the '786 patent are rendered obvious by the prior art.

57. In signing this declaration, I understand that the declaration will be filed as evidence in a contested case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I acknowledge that I may be subject to cross-examination in this case.

I declare that all statements made herein of my knowledge are true, that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

DATED: April 9, 2025

Respectfully submitted,



Grant Delgatty