

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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UNDER ARMOUR, INC.  
Petitioner

v.

ATHALONZ, LLC  
Patent Owner

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Case No. TBD  
Patent No. 10,674,786

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**PETITION FOR *INTER PARTES* REVIEW  
OF U.S. PATENT NO. 10,674,786**

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## PETITIONER'S EXHIBITS

| <b>Exhibit No.</b> | <b>Description</b>                                                                                                                       |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1001</b>        | U.S. Patent No 10,674,786 (“the ‘786 patent”)                                                                                            |
| <b>1002</b>        | Declaration of Grant Delgatty                                                                                                            |
| <b>1003</b>        | Curriculum Vitae of Grant Delgatty                                                                                                       |
| <b>1004</b>        | Prosecution History of U.S. Patent Application No. 13/355,801                                                                            |
| <b>1005</b>        | U.S. Patent Publication No. 2004/0040181 (“Kim”)                                                                                         |
| <b>1006</b>        | U.S. Patent No. 4,754,561 (“Dufour”)                                                                                                     |
| <b>1007</b>        | U.S. Patent No. 3,789,523 (“Rubin”)                                                                                                      |
| <b>1008</b>        | RESERVED                                                                                                                                 |
| <b>1009</b>        | Excerpts from Athalonz’s Infringement Contentions, served in <i>Athalonz, LLC v. Under Armour.</i> , Case No. 2:23-cv-00193 (E.D. Tex.). |
| <b>1010</b>        | RESERVED                                                                                                                                 |
| <b>1011</b>        | RESERVED                                                                                                                                 |
| <b>1012</b>        | RESERVED                                                                                                                                 |
| <b>1013</b>        | 1977 Nike Boston Running Shoe                                                                                                            |

|             |                                              |
|-------------|----------------------------------------------|
| <b>1014</b> | FootJoy 51409                                |
| <b>1015</b> | FootJoy 1970 Product Catalog                 |
| <b>1016</b> | U.S. Patent No. D275146                      |
| <b>1017</b> | U.S. Patent No. D310294                      |
| <b>1018</b> | 1971 Nike Cortez                             |
| <b>1019</b> | RESERVED                                     |
| <b>1020</b> | RESERVED                                     |
| <b>1021</b> | CAD Image of Heel Platform of Curry 4 FloTro |

## CLAIM LISTING

1. An apparatus comprises:
  - a heel platform section that has a uniform height from an outer edge to an inner edge of the apparatus at the rear edge of the apparatus, wherein the uniform height establishes a reference slope from the outer edge to the inner edge, the reference slope substantially parallel to a bottom surface of the apparatus;
  - a mid-foot section juxtaposed to the heel platform section; and
  - a toe section juxtaposed to the mid-foot section, wherein the mid-foot section and the toe section form an angled support platform that has a first slope along the inner edge of the apparatus from a front edge of the apparatus to the heel platform section, a second slope along the front edge of the apparatus from the inner edge to the outer edge of the apparatus, and a third slope along the outer edge of the apparatus from the front edge of the apparatus to the heel platform section, the first slope, second slope, and the third slope each greater than the reference slope, wherein the toe section is lower than the heel platform section as a result of the first, second, and third slopes.
2. The apparatus of claim 1 further comprises:
  - the heel platform section, the mid-foot section, and the toe section constituting at least one of an insole for footwear; and a sole of footwear.
3. The apparatus of claim 1 further comprises:
  - the heel platform section has a uniform platform height, wherein, from a front edge of the heel platform to the rear edge of the apparatus, the uniform platform height has the reference slope; and
  - the toe section and the mid-foot section having a second dimension at a front outer edge of the apparatus and a third dimension at a front inner edge of the apparatus.
4. The apparatus of claim 1 further comprises:
  - an insole on a first surface of the apparatus covering one or more of: at least a portion of the heel platform section; at least a portion of the mid-foot section; and at least a portion of the toe section.
5. A shoe comprises:
  - an upper shoe section; and
  - a sole coupled to the upper shoe section, wherein the sole includes:

a specific bottom; and  
an athletic positioning sole section having:  
a heel platform section that has a uniform height from an outer edge to an inner edge of the athletic positioning sole section at a rear edge of the athletic positioning sole section, wherein the uniform height establishes a reference slope from the outer edge to the inner edge, the reference slope substantially parallel to a bottom surface of the sole;  
a mid-foot section; and  
a toe section, wherein the mid-foot section and the toe section form an angled support platform that has a first slope along the inner edge of the athletic positioning sole section from a front edge of the athletic positioning sole section to the heel platform section, a second slope along the front edge of the athletic positioning sole section from the inner edge to the outer edge of the athletic positioning sole section, and a third slope along the outer edge of the athletic positioning sole section from the front edge of the athletic positioning sole section to the heel platform section, the first slope, second slope, and the third slope each greater than the reference slope.

6. The shoe of claim 5 further comprises:

the heel platform section has a uniform platform height, wherein, from a front edge of the heel platform to the rear edge of the athletic positioning sole section, the uniform platform height has the reference slope; and  
the toe section having a second dimension at a front outer edge of the apparatus and a third dimension at a front inner edge of the apparatus.

7. The shoe of claim 5 further comprises:

an insole on a first surface of the apparatus covering one or more of: at least a portion of the heel platform section; at least a portion of the mid-foot section; and at least a portion of the toe section.

8. The shoe of claim 5, wherein the specific bottom comprises one of:

a cleat pattern bottom; a baseball spike bottom; a basketball bottom; a tennis bottom; a golf bottom; an ice skate bottom; a ski boot bottom; a cross-trainer bottom; a running shoe bottom; a walking shoe bottom; a dress shoe bottom; and a snowboard boot bottom.

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## MANDATORY NOTICES

### A. Real Party-In-Interest (37 C.F.R. § 42.8 (b)(1))

Petitioner certifies that Under Armour, Inc. is the real party-in-interest.

### B. Related Matters (37 C.F.R. § (b)(2))

The ‘786 patent is currently involved in the following proceeding: *Athalonz, LLC v. Under Armour.*, Case No. 2:23-cv-00193 (E.D. Tex.).

### C. Counsel and Service Information (37 C.F.R. § 42.8(b)(3) and (4))

| Lead Counsel                                                                                                                                                                                                 | Backup Counsel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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Service information for lead and backup counsel is provided in the designation of lead and backup counsel, above. Petitioner consents to electronic service by email at the email addresses provided above.

**D. Payment of Fees Under 37 C.F.R. §§ 42.15(a) & 42.103**

The required fees are submitted herewith in accordance with 37 C.F.R. §§ 42.103(a) and 42.15(a). If any additional fees are due during this proceeding, the Office is authorized to charge such fees to Deposit Account No. 22-0261. Any overpayment or refund of fees may also be deposited in this Deposit Account.

Pursuant to 35 U.S.C. §§ 311-19 and 37 C.F.R. § 42.1 *et seq.*, Under Armour, Inc. (“Under Armour”) requests *inter partes* review (“IPR”) of claims 1-8 of U.S. Patent No 10,674,786 (“the ‘786 patent”) (Ex. 1001) pursuant to 35 U.S.C. §§ 311-19 and 37 C.F.R. § 42.1 *et seq.* The ‘786 patent is subject to pre-AIA 35 U.S.C. §§ 102 and 103.

## **I. INTRODUCTION**

The ‘786 patent relates to athletic positioning footwear. The challenged claims of the ‘786 patent recite a shoe that includes a heel platform section that has a uniform height from an outer edge to an inner edge at its rear, as well as a mid-foot section and a toe section, that together form an angled support platform, with a first slope along the inner edge of the toe section to the heel platform, a second slope along the toe section from the inner edge to the outer edge, and a third slope along the outer edge of the toe section to the heel platform, which places the toe section lower than the heel platform.

Shoes having these characteristics, individually and collectively, were well-known in the art before the filing of the ‘786 patent. As shown below, U.S. Publication No. 2004/0040181 (“Kim”), U.S. Patent No. 4,754,561 (“Dufour”), and U.S. Patent No. 3,789,523 (“Rubin”), each of which issued more than a year before the filing date of the ‘786 patent, teach or render obvious all of the claimed limitations as they are recited in the challenged claims.

## **II. GROUNDS FOR STANDING UNDER 37 C.F.R. § 42.104(a)**

Petitioner certifies that the ‘786 patent is available for IPR and that Petitioner is not barred or estopped from requesting IPR. This petition is being filed within one year of Petitioner being served with a complaint alleging infringement of the ‘786 patent.

## **III. IDENTIFICATION OF CHALLENGES UNDER 37 C.F.R. § 42.104(b) AND RELIEF REQUESTED**

### **A. Grounds for the Challenged Claims**

Petitioner requests (i) review of claims 1-8 of the ‘786 patent on the grounds set forth below and (ii) that those claims be found unpatentable.

| <b>Ground</b> | <b>Claim(s)</b>    | <b>Basis for Unpatentability</b>          |
|---------------|--------------------|-------------------------------------------|
| <b>1</b>      | <b>1-8</b>         | <b>Obvious Based on Kim</b>               |
| <b>2</b>      | <b>1-3, 5-6, 8</b> | <b>Obvious Based on Dufour</b>            |
| <b>3</b>      | <b>1-3, 5-6, 8</b> | <b>Obvious Based on Rubin</b>             |
| <b>4</b>      | <b>2, 4, 7</b>     | <b>Obvious Over Dufour in View of Kim</b> |
| <b>5</b>      | <b>2, 4, 7</b>     | <b>Obvious Over Rubin in View of Kim</b>  |

### **B. The Challenges Presented Are Not Cumulative**

The grounds for unpatentability presented in this Petition are neither cumulative nor redundant to the prosecution of the ‘786 patent as none of the references were considered during prosecution.

## **IV. SUMMARY OF THE ‘786 PATENT**

### **A. Background of the Technology**

The ‘786 patent generally relates to “athletic positioning footwear.” Ex. 1001 (the ‘786 patent), 1:31. The ‘786 patent acknowledges that prior art athletic footwear includes an upper, a sole, an insole, and some include cleats or spikes. *Id.*, 1:49-54. Prior art athletic shoes were also known to have a “sole and/or padded insole [that] provide a relatively flat platform for the foot” or alternatively, provide a “heel portion of the shoe [that is] higher than the toe portion of the shoe from a side perspective.” *Id.*, 1:54-59, Figs. 1-2; Ex. 1002, ¶ 21. But allegedly, unlike the prior art, the footwear in the ‘786 patent includes a mid-foot section and a toe section that form an angled support platform having a first slope along the inner edge of the shoe from the toe section to the heel section, a second slope from the inner edge to the outer edge of the toe section, and a third slope along the outer edge of the shoe from the toe section to the heel section which place the toe section lower than the heel section. Ex. 1001, 10:10-13, 22:6-15, 22:16-25, Figs. 5-7, 67-68; Ex. 1002, ¶ 22. However, footwear having a sole with this shape was well-known before the filing date of the ‘786 patent, as shown in the references described below. Ex. 1002, ¶ 23.

## **B. The Claimed Subject Matter**

The '786 patent contains nine claims, where claims 1 and 5 are independent. This Petition challenges independent claims 1 and 5, and claims 2-4 and 6-8 which depend therefrom.

Claim 1 recites an apparatus comprising a heel platform section of uniform height that establishes a reference slope, a mid-foot section, and a toe section, where the combination of the mid-foot section and the toe section forms an angled support platform that has a first slope along the inner edge of the apparatus from the toe section to the heel section, a second slope from the inner edge to the outer edge of the toe section, and a third slope along the outer edge of the apparatus from the toe section to the heel section. The first, second, and third slopes are each greater than the reference slope, and the toe section is lower than the heel section as a result of the first, second, and third slopes.

Claim 1 recites:

### **1. An apparatus comprises:**

a heel platform section that has a uniform height from an outer edge to an inner edge of the apparatus at the rear edge of the apparatus,

wherein the uniform height establishes a reference slope from the outer edge to the inner edge, the reference slope substantially parallel to a bottom surface of the apparatus;

a mid-foot section juxtaposed to the heel platform section; and

a toe section juxtaposed to the mid-foot section,

wherein the mid-foot section and the toe section form an angled support platform that has a first slope along the inner edge of the apparatus from a front edge of the apparatus to the heel platform section, a second slope along the front edge of the apparatus from the inner edge to the outer edge of the apparatus, and a third slope along the outer edge of the apparatus from the front edge of the apparatus to the heel platform section, the first slope, second slope, and the third slope each greater than the reference slope,

wherein the toe section is lower than the heel platform section as a result of the first, second, and third slopes.

Dependent claims 2-4 all relate to aspects of footwear, including an insole that covers at least a portion of the heel platform section, the mid-foot section, and the toe section.

Claim 5 is similar to claim 1 but is directed to a shoe that also comprises an upper shoe section and a sole that includes a specific bottom in addition to an athletic positioning sole section that has the same shape as that described in claim 1.

Claim 5 recites:.

5. A shoe comprises:

an upper shoe section; and

a sole coupled to the upper shoe section, wherein the sole includes:

a specific bottom; and

an athletic positioning sole section having:

a heel platform section that has a uniform height from an outer edge to an inner edge of the athletic positioning sole section at a rear edge of the athletic positioning sole section, wherein the uniform height establishes a reference

slope from the outer edge to the inner edge, the reference slope substantially parallel to a bottom surface of the sole;

a mid-foot section; and

a toe section, wherein the mid-foot section and the toe section form an angled support platform that has a first slope along the inner edge of the athletic positioning sole section from a front edge of the athletic positioning sole section to the heel platform section, a second slope along the front edge of the athletic positioning sole section from the inner edge to the outer edge of the athletic positioning sole section, and a third slope along the outer edge of the athletic positioning sole section from the front edge of the athletic positioning sole section to the heel platform section, the first slope, second slope, and the third slope each greater than the reference slope.

Dependent claims 6-8 all relate to aspects of the shoe, including an insole that covers at least a portion of the heel platform section, the mid-foot section, and/or the toe section, and specifying the type of bottom included in the sole section.

### **C. Prosecution History**

U.S. Patent Application No. 13/355,801, which issued as the '786 patent, claims the benefit of U.S. Provisional Patent Application No. 61/450,485, filed March 8, 2011.

During prosecution of the '801 application, the Examiner initially rejected the pending claims based on U.S. Patent Publication No. 2006/0000114 ("Love") and U.S. Patent Publication No. 2010/0115793 ("Kraisosky"). To overcome these rejections, the Applicant amended independent claim 1 to add a heel platform section "that has a substantially uniform height from an outer edge to an inner edge of the

apparatus at the rear edge of the apparatus” and argued that Love “does not teach or suggest a heel platform that has a substantially uniform height across the back edge of the apparatus ... or throughout the entire heel platform.” Ex. 1004, pp. 411-423.

In subsequent office actions, the Examiner rejected the pending claims based on U.S. Patent Publication No. 2002/0139011 (“Kerrigan”), U.S. Patent Publication No. 2008/0163513 (“Chapman”) and Kraisosky. In response, the Applicant amended the claims to add, *inter alia*, wherein the uniform height of the heel platform “establishes a reference slope [that is] substantially parallel to a bottom surface of the apparatus,” and “wherein the toe section is lower than the heel platform section as a result of the first, second, and third slopes” to distinguish Chapman. *Id.*, pp. 100-108, 131-134. After filing an Appeal, the PTAB issued a decision reversing the Examiner’s rejections based on Chapman (*id.*, pp. 39-48) and a Notice of Allowance issued on January 30, 2020. *Id.*, pp. 8-14.

## **V. Prior Art**

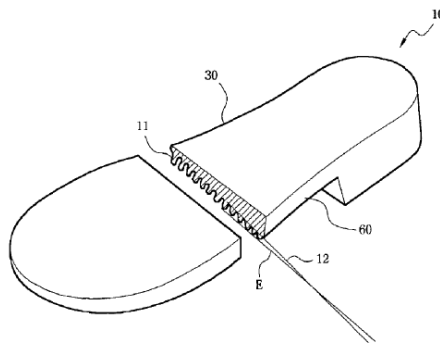
### **A. Effective Prior Art Dates**

U.S. Patent Publication No. 2004/0040181 (“Kim”, Ex. 1005) published on March 4, 2004. U.S. Patent No. 4,754,561 (“Dufour”, Ex. 1006) issued July 5, 1988. U.S. Patent No. 3,789,523 (“Rubin”, Ex. 1007) issued February 5, 1974. All constitute prior art to the ‘786 patent under pre-AIA 35 U.S.C. § 102(b).

## B. Overview of Kim

Kim discloses a pair of golf shoes that allow a golfer to concentrate his/her weight balance on the inner edges of the soles of the feet. Ex. 1005, ¶ 12. Kim explains that such a position “allow[s] the golfer to perform the swing motion while maintaining his/her stable motion.” *Id.*, ¶¶ 12, 15 (“allowing a golfer in the golf shoes to concentrat[e] his/her weight during the address and swing phases on the inner edges of the soles of the feet and assisting the golfer in performing a stable swing motion.”), 27; Ex. 1002, ¶ 36.

FIG. 2

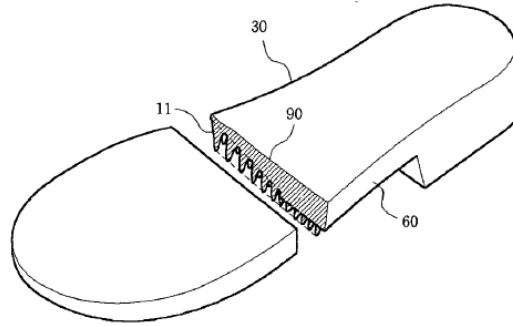


Ex. 1005, Fig. 2.

The golf shoes include an upper portion and an outsole, which includes an intermediate sole and an insole. *Id.*, ¶¶ 28, 29. The outsole further includes a lower surface that is inclined from its outer edge to its inner edge so that the outer edge has a thickness larger than that of the inner edge. *Id.*, ¶ 16 (“[p]referably, the lower surface of the outsole may be stepped upward from the outer edge to the inner

edge.”). Operably, the inclined lower surface “may be formed only at the front portion of the outsole.” *Id.*, ¶ 46; Ex. 1002, ¶ 37.

FIG. 3a

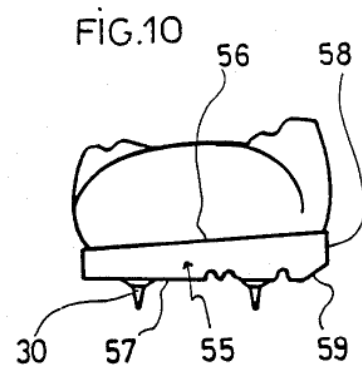
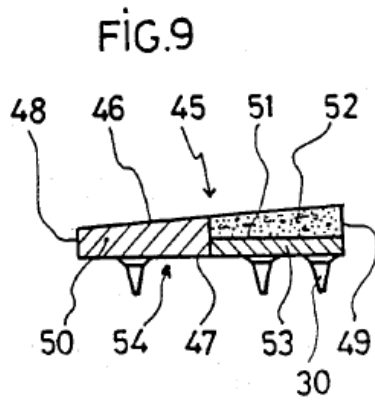


Ex. 1005, Fig. 3a.

Except for the outsole 10 including the inclined lower surface 12, the golf shoes disclosed in Kim are “substantially the same as conventional golf shoes.” *Id.*, ¶ 27; Ex. 1002, ¶ 38.

### C. Overview of Dufour

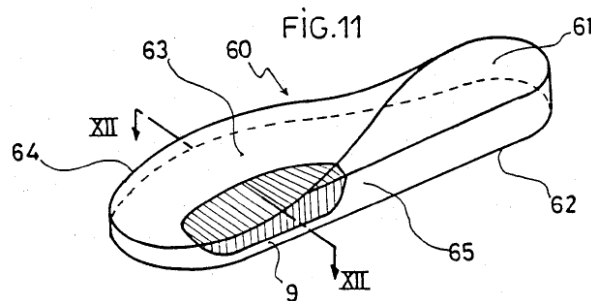
Dufour discloses a golf shoe, where the sole portion facilitates the rolling of the foot during a golfer’s swing movement. Ex. 1006, Abstract. In a preferred embodiment, the sole includes an interior support surface that is inclined with respect to a walking surface. *Id.*, 4:51-54. The inclined surface rises from the inner edge of the sole to the outer edge thereof. *Id.*, 4:54-57; Ex. 1002, ¶ 39.



Ex. 1006, Figs. 9 and 10.

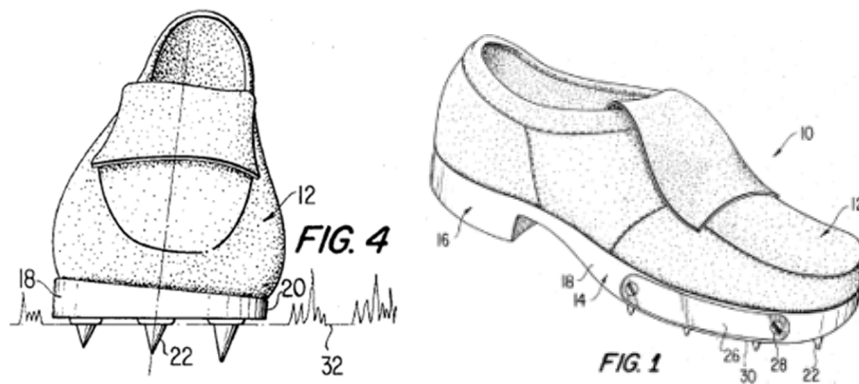
As shown in Figure 10, the sole transversely has a plantar support surface 56 for the foot, providing the later with a seating inclined with respect to the walking surface 57. *Id.*, 4:54-57; Ex. 1002, ¶ 40.

Dufour further describes a plantar support zone at the level of the heel that remains substantially parallel to the to the walking surface, while the front area is inclined upwards from the inner edge towards the outer edge, as shown in Figure 11. *Id.*, 5:7-14., Fig 11; Ex. 1002, ¶¶ 41-42.



#### D. Overview of Rubin

Rubin discloses a golf shoe designed to aid a golfer in assuming a proper stance, and thereby develop a more consistent swing. Ex. 1007, 1:5-22; Ex. 1002, ¶ 43. The golf shoe includes a conventional upper molded integrally with a sole, which has opposed inner and outer sides, and a conventional heel. *Id.*, 2:55-68; Ex. 1002, ¶ 44.



Ex. 1007, Figs. 1 and 4.

The outer side of the sole extends downwardly from the shoe upper to a lower elevation than the inner side of the sole. *Id.*, 3:9-15. This causes the rear foot of the golfer to tilt inward, which provides a more satisfactory weight distribution when hitting the ball. *Id.*, 3:56-65; (claim 1) (“when said shoe is worn on the foot of a golfer and the golfer assumes his stance on a golf playing surface it will create a toe-in effect to aid the golfer during his swing”); Ex. 1002, ¶¶ 45-46.

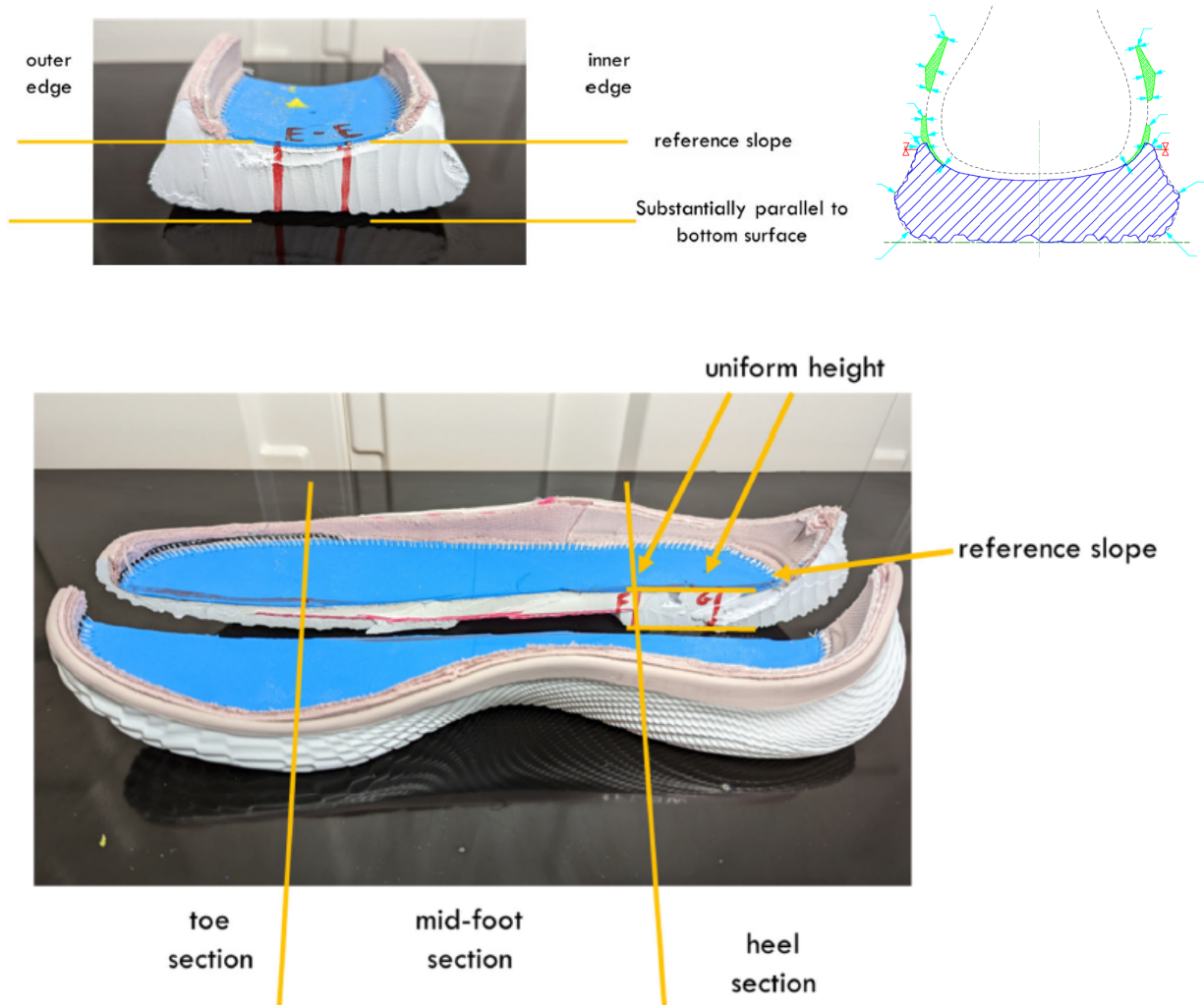
## VI. CLAIM CONSTRUCTION UNDER 37 C.F.R. § 42.104(b)(3)

Under any interpretation of the claims, including the standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1327 (Fed. Cir. 2005) (holding that words of a claim “are generally given their ordinary and customary meaning” as understood by a person of ordinary skill in the art in question at the time of the invention), all of the limitations of the challenged claims are met in the prior art as discussed below. The following constructions are offered for purposes of clarity only.

- A. “a heel platform section that has a uniform height from an outer edge to an inner edge ... wherein the uniform height establishes a reference slope from the outer edge to the inner edge, the reference slope substantially parallel to a bottom surface of the apparatus/sole” (claims 1 and 5) and “the heel platform section has a uniform platform height, wherein, from a front edge of the heel platform to the rear edge of the apparatus/athletic positioning sole section, the uniform platform height has the reference slope” (claims 3 and 6)**

Petitioner does not propose that these terms require construction for purposes of this IPR. Patent Owner, however, appears to construe “inner,” “outer,” “front” and “rear” edge of the heel platform/apparatus to mean the edges of the portion of the shoe where the heel of the foot sits, not the inner and outer-most edges of the shoe or apparatus, and to construe these limitations to include a heel platform section that includes some degree of curvature and height change from its inner edge to its outer edge and from front to back, and differences in shape between the top and bottom surfaces of the heel, as shown in Ex. 1009, Ex. C, pp. 17, 41. For example,

the accused Curry 4 FloTro includes a heel platform that includes some degree of curvature and height change from its inner edge to its outer edge and from front to back, and differences in shape in comparison to the bottom surface of the heel.



Ex. 1009, Ex. C, pp. 17, 41 (excerpt from Athalonz's infringement contentions of this claim shown on top left and bottom, above); Ex. 1021 (excerpt from a CAD drawing of accused product on top right); Ex. 1002, ¶ 27.

For purposes of this IPR only, and without conceding alternative arguments in the counterpart litigation, *e.g.* that these terms are indefinite and/or lack written description support, Under Armour applies Athalonz’s apparent construction in the litigation. *See NEC Display Sols. of Am., Inc. v. Ultravision Tech.*, IPR2019-01123, Institution Decision, Paper 7, pp. 12-14 (P.T.A.B. Dec. 2, 2019).

## **VII. ARGUMENTS**

### **A. Statement of the Law**

All grounds rely on obviousness under 35 U.S.C. § 103. A claim is obvious when “the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.” 35 U.S.C. § 103(a); *see KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007).

For the grounds that rely on a single reference, the claims are obvious based on the reference in view of the “background knowledge possessed by a person having ordinary skill in the art.” *KSR*, 550 U.S. 398, 418 (2007); *Koninklijke Philips N.V. v. Google LLC*, 948 F.3d 1330, 1337 (Fed. Cir. 2020). And to the extent all limitations are found to be disclosed in the reference, “it is well settled that a disclosure that anticipates under § 102 also renders the claim invalid under § 103,

for anticipation is the epitome of obviousness.” *Real Time Data, LLC v. Iancu*, 912 F.3d 1368, 1373 (Fed. Cir. 2019).

**B. Level of Ordinary Skill in the Art**

A person of ordinary skill in the art 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. Ex. 1002 ¶ 31. Petitioner submits that the claims are obvious in view of any reasonable definition of a POSITA.

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

A POSITA would have found claims 1-8 obvious based on Kim. Ex. 1002 ¶ 56.

**i. Independent Claim 1**

Kim teaches and/or suggests all limitations of independent claim 1.

**1. [1.0] “An apparatus comprises:”**

To the extent the preamble is deemed limiting, Kim discloses “a pair of golf shoes” for “assisting a golfer in taking a stable position during address and swing motions.” Ex. 1005, Abstract; Fig. 5b; Ex. 1002, IX.A.a.

- Kim teaches and/or suggests a heel platform section that has a uniform height from the outer edge to the inner edge at the rear edge of the shoe, as shown in Figs 2 and 3a, and modified Fig. 2, below. Ex. 1002, IX.A.b; ¶ 54.

FIG. 2

Uniform height

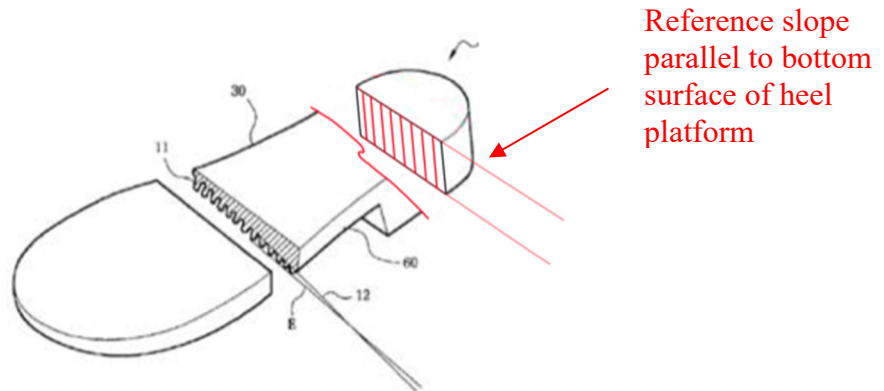
16

shoe ... is substantially the same as **conventional** golf shoes.” Ex. 1005, ¶ 27 (emphasis added). A POSITA would have known that conventional athletic shoes, including golf, basketball, running and skateboard shoes, included a heel platform with a uniform height from the outer edge to the inner edge. Ex. 1002, ¶¶ 47-52, 56.

3. [1.2] “wherein the uniform height establishes a reference slope from the outer edge to the inner edge, the reference slope substantially parallel to a bottom surface of the apparatus;”

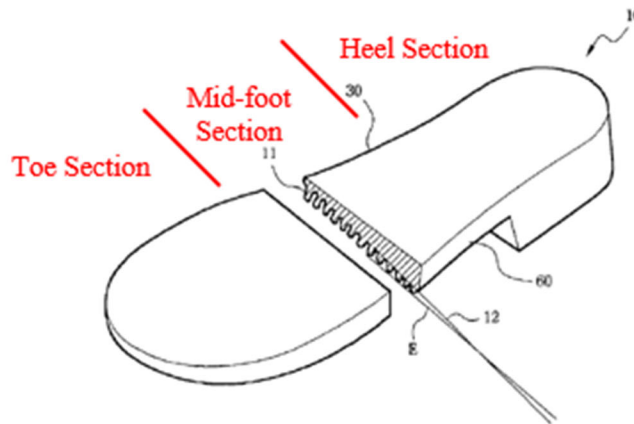
See limitation 1.1 above, describing Kim’s disclosure of a heel platform section that has a uniform height from the outer edge to the inner edge. A POSITA would understand that a uniform height of the heel platform establishes a reference slope from the outer edge to the inner edge of the heel platform that is substantially parallel to the bottom of the shoe. *Id.*, ¶ 57.

FIG. 2



4. [1.3] “a mid-foot section juxtaposed to the heel platform section; and”

Kim teaches and/or suggests a midfoot section juxtaposed to the heel platform section, as shown in annotated Figure 2 below. *Id.*, 1002, IX.A.d; ¶ 58.



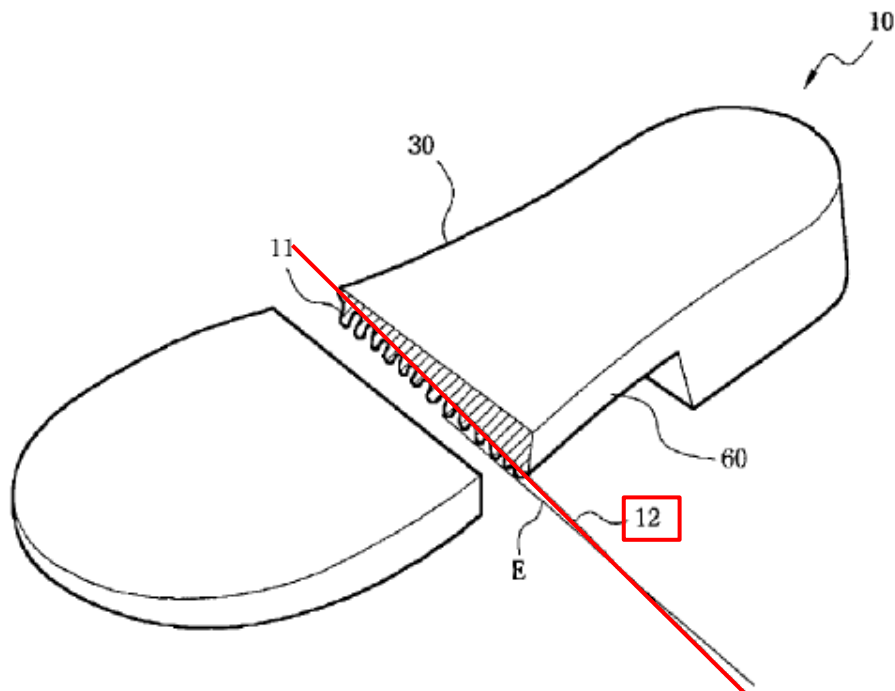
5. [1.4] “a toe section juxtaposed to the mid-foot section,”

See limitation 1.3 above. Kim teaches and/or suggests a toe section juxtaposed to the mid-foot section, as shown in annotated Figure 2 above. *Id.*, ¶ 59.

6. [1.5] “wherein the mid-foot section and the toe section form an angled support platform that has a first slope along the inner edge of the apparatus from a front edge of the apparatus to the heel platform section, a second slope along the front edge of the apparatus from the inner edge to the outer edge of the apparatus, and a third slope along the outer edge of the apparatus from the front edge of the apparatus to the heel platform section, the first slope, second slope, and the third slope each greater than the reference slope,”

Kim teaches and/or suggests an angled support platform as claimed. *Id.*, IX.A.f; ¶ 60.

**FIG. 2**



This is accomplished by the outer edge having a larger thickness than the inner edge, which causes lower surface 12 to be inclined, as shown *e.g.*, in Figure 2, above, and described below.

As shown in FIGS. 1 and 2, the golf shoe 100 in accordance with one embodiment of the present invention comprises an upper leather portion 20 and an outsole 10. The outsole 10 includes a lower surface 12 inclined from its outer edge 60 to its inner edge 30 so that the outer edge 60 has a thickness larger than that of the inner edge 30.

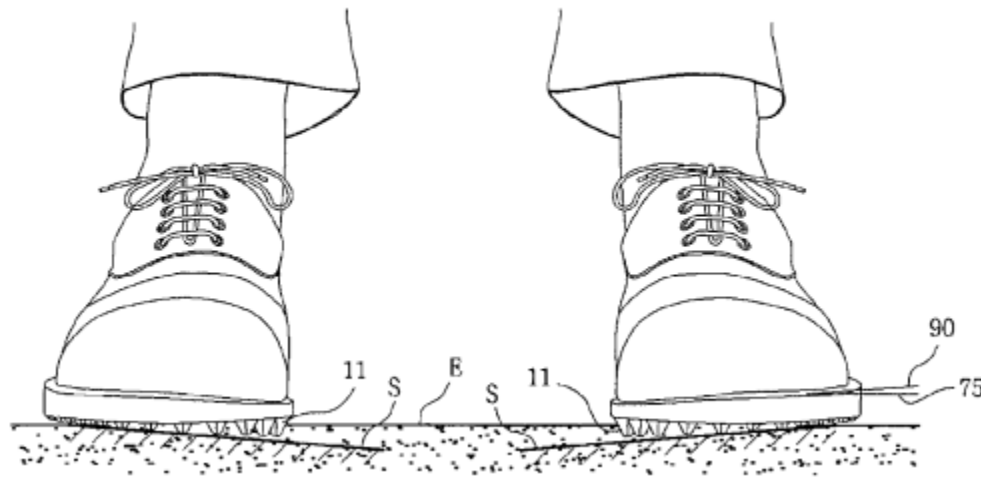
Ex. 1005, ¶ 27.

Disclosed is a pair of golf shoes, each comprising an outsole provided with a plurality of spikes protruded from a lower surface of the outsole, in which the lower surface of the outsole is inclined from an outer edge of the outsole to an inner edge of the outsole 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, and the spikes respectively have heights so that an upper surface of the outsole is substantially parallel with a ground. The golf shoes allow golfer's feet to be stably mounted on the surface of a green, thereby assisting a golfer in taking a stable position during address and swing motions.

*Id.*, Abstract, *see also* ¶ 15.

**FIG. 5b**



As shown in Figure 5b:

When the golfer in a pair of the golf shoes 100 of the present invention stands on the ground E of the green, since the height of the spikes 11 at the inner edge 30 of the outsole 10 is larger than that of the spikes 11 at the outer edge 60 of the outsole 10, the spikes 11 at the inner edge 30 penetrate the ground E of the green more deeply than the spikes 11 at the outer edge 60, and has a holding power stronger than the holding power of the spikes 11 at the outer edge 60. Thereby, both legs of the golfer in the stance position are close to each other toward the inner edges of the soles of the feet, thus allowing the weight balance of the golfer's body to be concentrated on the inner edges of the soles of the feet.

*Id.*, ¶ 36.

Kim also discloses an alternate embodiment shown in Figures 3a and 3b that includes an outsole that is thicker at its outer edge than its inner edge in addition to spikes that become longer at the outer edge. *Id.*, ¶ 41.

FIG. 3a

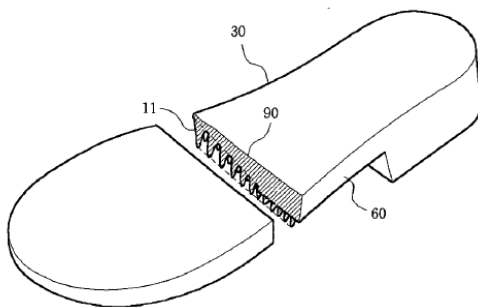
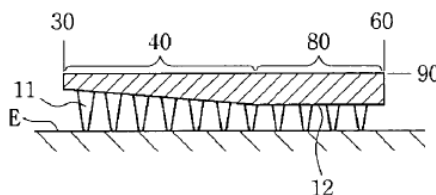


FIG. 3b



As shown in Figures 2 and 3A, the heel area is also elevated as compared to the front portion of the outsole. *Id.*, Fig. 2. Accordingly, in each embodiment, Kim discloses a first slope along the inner edge of the shoe from the toe section to the heel platform section, a second slope at the toe section of the shoe from the inner edge to the outer edge, and a third slope along the outer edge of the shoe from the toe section to the heel platform section. A POSITA would have known that slopes inherently form between areas of incline and/or different thickness in a shoe sole, as shown for example, in the figures below.<sup>1</sup> Ex. 1002, ¶ 61.

<sup>1</sup> See also Ex. 1009, Ex. A at pp. 42-43 (showing Patent Owner's assertion that claimed first, second and third slopes are necessarily present).

FIG. 2

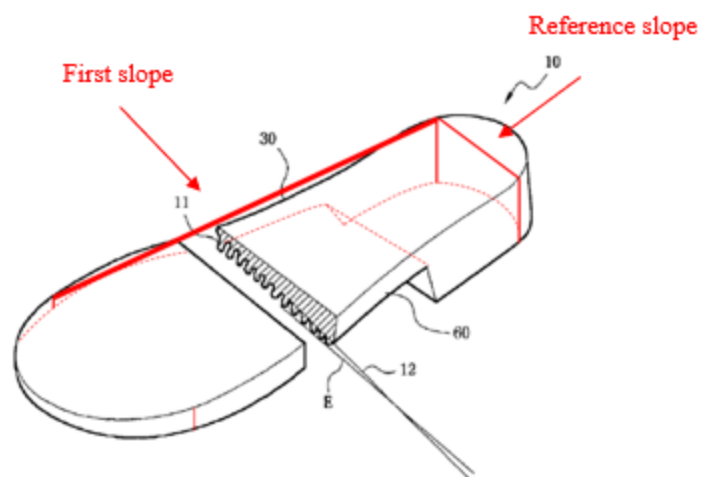


FIG. 2

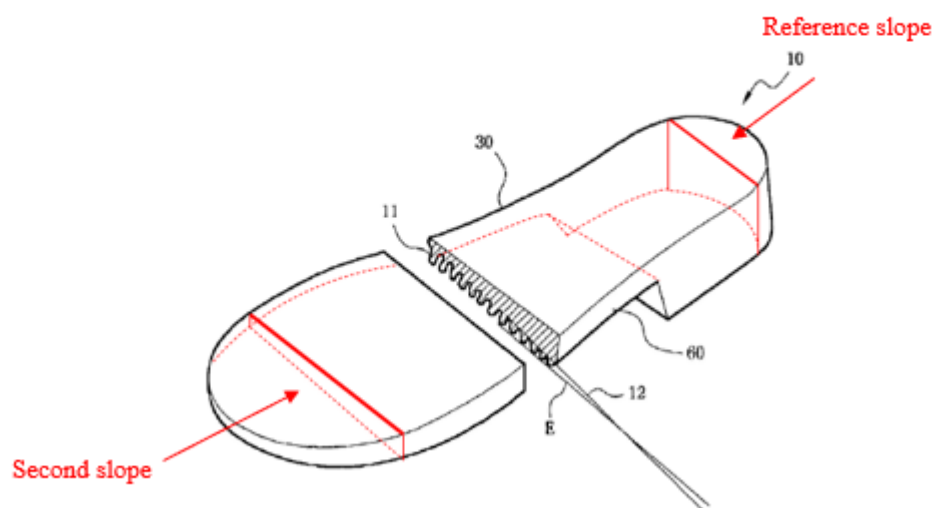
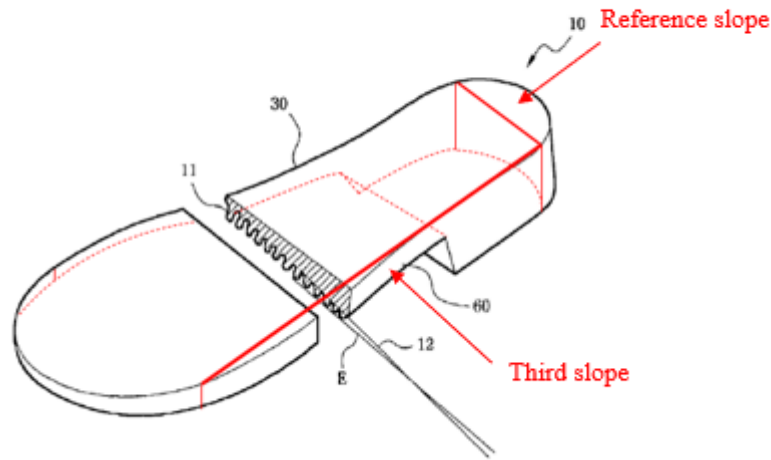


FIG. 2



A POSITA would also understand that each the first, second, and third slopes are greater than the reference slope (*see* limitation 1.1 above), which is substantially parallel to the bottom surface of the shoe. *Id.*, ¶ 62.

7. [1.6] “wherein the toe section is lower than the heel platform section as a result of the first, second, and third slopes.”

*See* Figs. 2, 3a, 5b, *see also* limitation 1.5 above, describing Kim’s disclosure of a heel section that is elevated as compared to the toe section. A POSITA would understand that the toe section is lower than the heel section a result of the first, second, and third slopes. *Id.*, ¶ 63.

- ii. **Claim 2: The apparatus of claim 1 further comprises: the heel platform section, the mid-foot section, and the toe section constituting at least one of an insole for footwear; and a sole of footwear.**

*See* limitations 1.0 – 1.6 above, describing Kim’s disclosure of a heel platform section, a mid-foot section, and a toe section. In addition to “outsole 10,” Kim also

teaches and/or suggests a golf shoe having “an insole (not shown) arranged on the bottom of the inside of the upper leather portion.” Ex. 1005, ¶ 28; Ex. 1002, IX.A.g. A POSITA would therefore understand that heel platform section, a mid-foot section, and a toe section would constitute at least one of an insole for footwear, and a sole of footwear. Ex. 1002, ¶¶ 64-65.

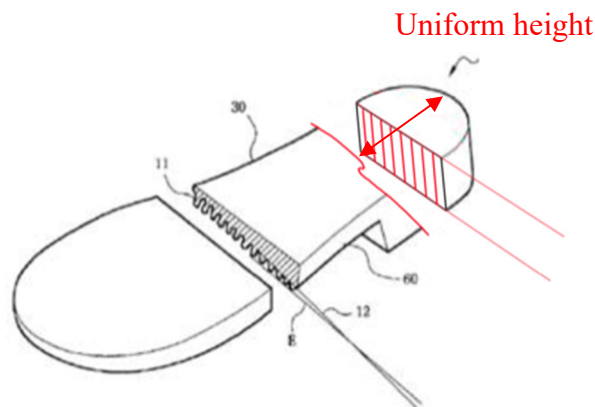
### iii. Claim 3

Kim teaches and/or suggests all limitations of dependent claim 3.

1. [3.1] “The apparatus of claim 1 further comprises: the heel platform section has a uniform platform height, wherein, from a front edge of the heel platform to the rear edge of the apparatus, the uniform platform height has the reference slope; and”

*See* limitation 1.1 above, describing Kim’s disclosure of a heel platform section that has a uniform height from the outer edge to the inner edge at the rear of the shoe.

FIG. 2



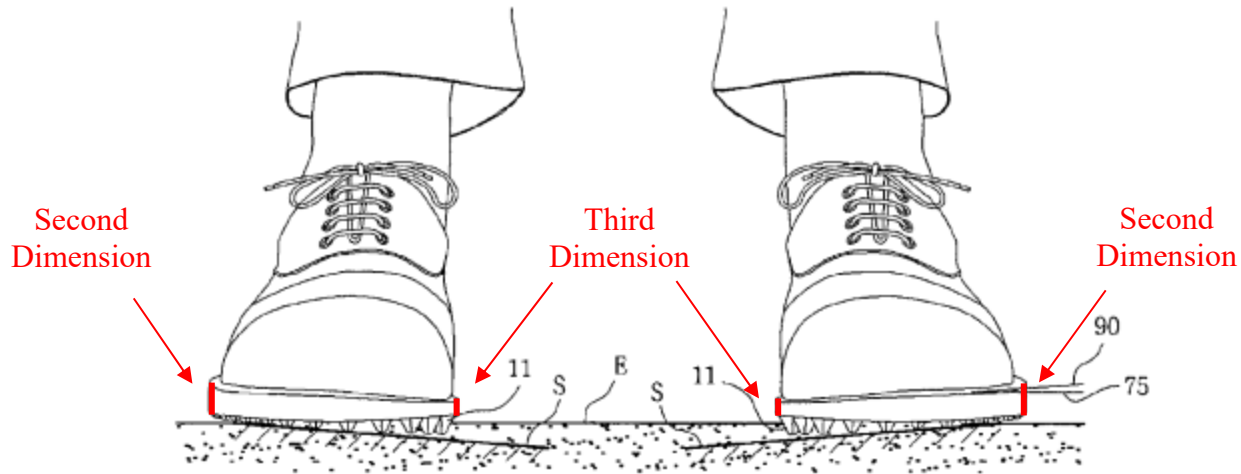
Kim also teaches and/or suggests that the uniform height extends from the front edge of the heel platform section to the rear edge of the shoe, such that the entirety of the heel platform has the reference slope. *Id.*, ¶ 66. This is confirmed by Kim’s disclosure that “the inclined plane may be formed only at the front portion of the outsole.” Ex. 1005, ¶ 46.

Kim also explains that “[e]xcept for the outsole including the inclined lower surface, the golf shoe ... is substantially the same as **conventional** golf shoes.” *Id.*, ¶ 27 (emphasis added). A POSITA would have known that conventional athletic shoes, including golf, basketball, running and skateboard shoes, included heel platform sections with uniform heights from the front edge of the heel platform section to the rear edge of the shoe. Ex. 1002, ¶¶ 47-52, 67.

2. [3.2] “the toe section and the mid-foot section having a second dimension at a front outer edge of the apparatus and a third dimension at a front inner edge of the apparatus.”

Kim expressly teaches that “the outsole 10 at the outer edge has a thickness larger than that of the outsole 10 at the inner edge 30.” Ex. 1005, ¶ 32; *see also* limitation 1.5 above, describing Kim’s disclosure of outsole that includes a lower surface that is inclined from its outer edge to its inner edge. A POSITA would understand that the inclined lower surface creates a second dimension at the front outer edge of the shoe, and a third dimension at a front inner edge of the shoe. Ex. 1002, ¶ 68.

FIG. 5b



- iv. **Claim 4: The apparatus of claim 1 further comprises: an insole on a first surface of the apparatus covering one or more of: at least a portion of the heel platform section; at least a portion of the mid-foot section; and at least a portion of the toe section.**

See Ex. 1005, ¶ 28 and limitation 1.5 above, describing Kim’s disclosure of an insole “arranged on the bottom of the inside of the upper leather portion 20.” Although not shown, Kim expressly describes that the shoe 100 includes an insole at the bottom of the inside of the upper leather portion 20 (which covers the full extent of the shoe. A POSITA would understand that the insole likewise covers one or more of at least a portion of the heel platform section, at least a portion of the mid-foot section, and at least a portion of the toe section. This is true of any insole. *Id.*, ¶ 69.

## v. Independent Claim 5

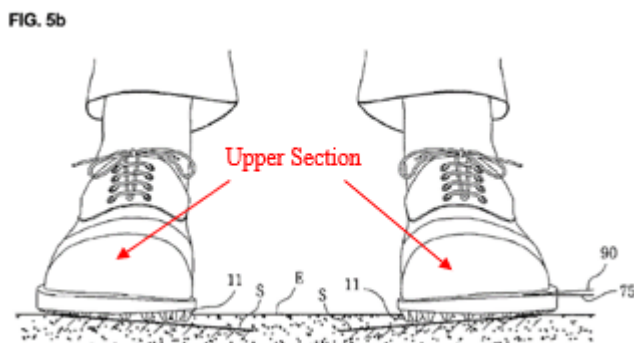
Kim teaches and/or suggests all limitations of independent claim 5. Limitations 5.5 – 5.7 are nearly identical to those in claim 1 and are therefore invalid for the same reasons.<sup>2</sup>

### 1. [5.0] “A shoe comprises:”

See limitation 1.0 above, describing Kim’s disclosure of a pair of golf shoes. *Id.*, ¶ 70.

### 2. [5.1] “an upper shoe section; and”

Kim teaches and/or suggests a golf shoe having an “upper leather portion 20 for accommodating a golfer’s foot,” as depicted in Figure 5b. Ex. 1005, ¶¶ 27-28; Figs. 1; 5b; Ex. 1002, IX.A.m.

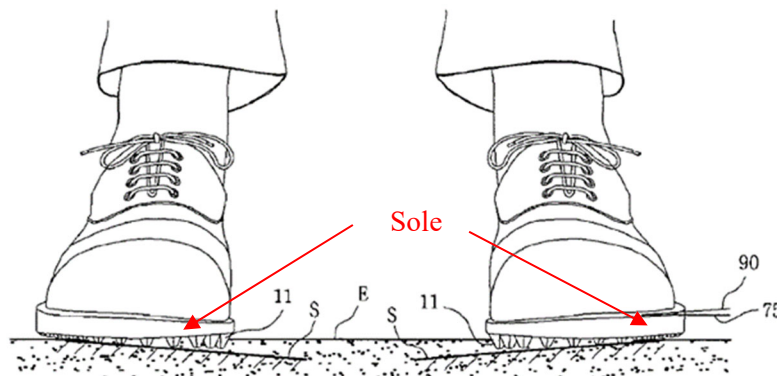


<sup>2</sup> Claim 5 and its dependent claims substitute an “athletic positioning sole section” for the “apparatus” of claim 1.

3. [5.2] “a sole coupled to the upper shoe section, wherein the sole includes:”

Kim teaches and/or suggests a pair of golf shoes having an “outsole 10 attached to the lower surface of the upper leather portion.” Ex. 1005, ¶ 27; *see also* ¶¶ 14, 28-29; Abstract; Figs. 1-3B; Ex. 1002, IX.A.n; ¶ 71.

FIG. 5b



4. [5.3] “a specific bottom; and”

Kim discloses a pair of golf shoes having an outsole “provided with a plurality of spikes protruded from a lower surface of the outsole.” Ex. 1005, Abstract, *see also* ¶ 15, Figs. 1-5b; Ex. 1002, IX.A.o.

5. [5.4] “an athletic positioning sole section having”

Claim 1 defines the “athletic positioning sole section” based on limitations 5.5 – 5.7, below. Ex. 1002, ¶ 72.

6. [5.5] “a heel platform section that has a uniform height from an outer edge to an inner edge of the athletic positioning sole section at a rear edge of the athletic positioning sole section, wherein the uniform height establishes a reference slope from the outer edge to the

inner edge, the reference slope substantially parallel to a bottom surface of the sole;”

See corresponding discussion for limitations 1.1 – 1.2 above. *Id.*, ¶ 73.

7. [5.6] “a mid-foot section; and”

See corresponding discussion for limitation 1.3 above. *Id.*, ¶ 74.

8. [5.7] “a toe section, wherein the mid-foot section and the toe section form an angled support platform that has a first slope along the inner edge of the athletic positioning sole section from a front edge of the athletic positioning sole section to the heel platform section, a second slope along the front edge of the athletic positioning sole section from the inner edge to the outer edge of the athletic positioning sole section, and a third slope along the outer edge of the athletic positioning sole section from the front edge of the athletic positioning sole section to the heel platform section, the first slope, second slope, and the third slope each greater than the reference slope.”

See corresponding discussion for limitations 1.4 – 1.6 above. *Id.*, ¶ 75.

- vi. Claim 6: The shoe of claim 5 further comprises: the heel platform section has a uniform platform height, wherein, from a front edge of the heel platform to the rear edge of the athletic positioning sole section, the uniform platform height has the reference slope; and the toe section having a second dimension at a front outer edge of the apparatus and a third dimension at a front inner edge of the apparatus.**

See corresponding discussion for limitations 3.1 – 3.2 above. The limitations of claim 6 are nearly identical to those in claim 3, and therefore invalid for the same reasons.<sup>3</sup> *Id.*, ¶ 76.

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<sup>3</sup> See note 2.

- vii. Claim 7: The shoe of claim 5 further comprises: an insole on a first surface of the apparatus covering one or more of: at least a portion of the heel platform section; at least a portion of the mid-foot section; and at least a portion of the toe section.**

*See* corresponding discussion for claim 4 above. The limitations of claim 7 are identical to those in claim 4, and therefore invalid for the same reasons. *Id.*, ¶ 77.

- viii. Claim 8: The shoe of claim 5, wherein the specific bottom comprises one of: a cleat pattern bottom; a baseball spike bottom; a basketball bottom; a tennis bottom; a golf bottom; an ice skate bottom; a ski boot bottom; a cross-trainer bottom; a running shoe bottom; a walking shoe bottom; a dress shoe bottom; and a snowboard boot bottom.**

*See* limitation 5.3 above, describing Kim’s disclosure of an outsole “provided with a plurality of spikes protruded from a lower surface of the outsole.” Ex. 1005, Abstract, *see also* ¶ 15, Figs. 1-5b; Ex. 1002, ¶ 78.

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

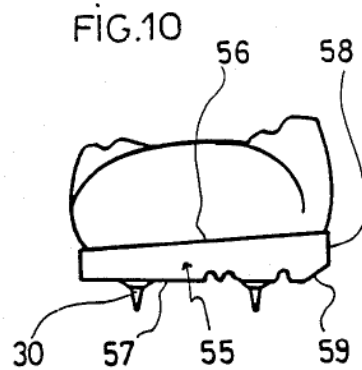
A POSITA would have found claims 1-3, 5-6, and 8 obvious based on Dufour. Ex. 1002, ¶ 79.

**i. Independent Claim 1**

Dufour teaches and/or suggests all limitations of independent claim 1.

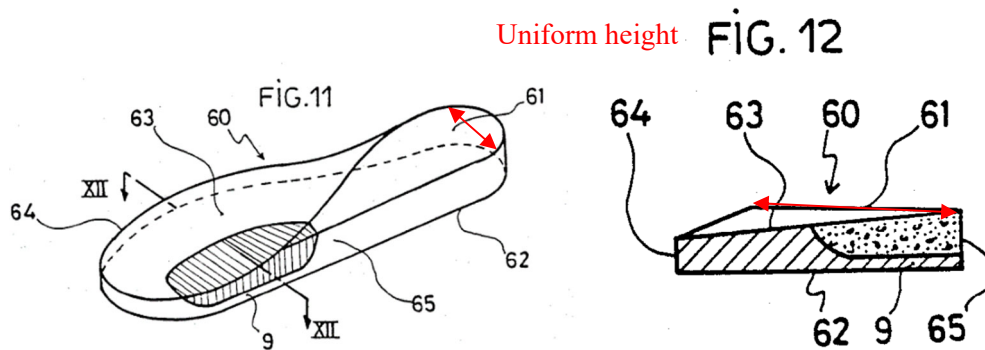
1. [1.0] “An apparatus comprises:”

To the extent the preamble is deemed limiting, Dufour discloses “golf shoes.” Ex. 1006, Abstract, 1:5-10; Fig 10; Ex. 1002, IX.B.a.



2. [1.1] “a heel platform section that has a uniform height from an outer edge to an inner edge of the apparatus at the rear edge of the apparatus,”

Dufour teaches and/or suggests a heel platform section that has a uniform height from the outer edge to the inner edge at the rear edge of the shoe, as shown in Figures 11-13. Ex. 1002, IX.B.b.



While Figure 12 shows a cross section of the sole taken at the forefoot area, it also depicts the heel area having a uniform height from the outer edge to the inner edge at the upper edge of the image (the red arrow in Figure 12 shows the top of the heel area in the background of the cross section, and corresponds to the area of the red arrow in Figure 11). This is confirmed by Dufour’s disclosure that “plantar

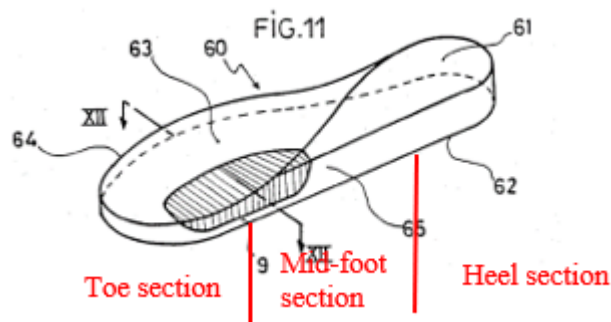
support zone 61 at the level of the heel remains substantially parallel to the walking surface.” Ex. 1006, 5:7-14.

3. [1.2] “wherein the uniform height establishes a reference slope from the outer edge to the inner edge, the reference slope substantially parallel to a bottom surface of the apparatus;”

*See* limitation 1.1 above, describing Dufour’s disclosure of a heel platform section that has a uniform height from the outer edge to the inner edge. A POSITA would understand that a uniform height of the heel platform establishes a reference slope from the outer edge to the inner edge of the heel platform that is substantially parallel to the bottom of the shoe. Ex. 1002, ¶ 80.

4. [1.3] “a mid-foot section juxtaposed to the heel platform section; and”

Dufour teaches and/or suggests a midfoot section juxtaposed to the heel platform section, as shown in annotated Figure 11 below.; *Id.*, IX.B.d.; ¶ 81.



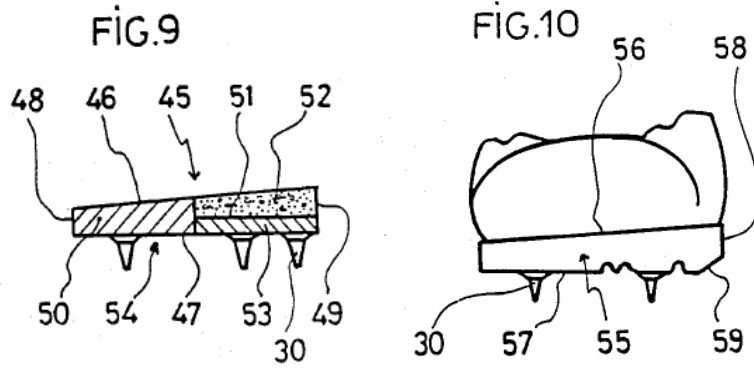
5. [1.4] “a toe section juxtaposed to the mid-foot section,”

*See* limitation 1.3 above. Dufour teaches and/or suggests a toe section juxtaposed to the mid-foot section, as shown in annotated Figures 11 and 13 above.

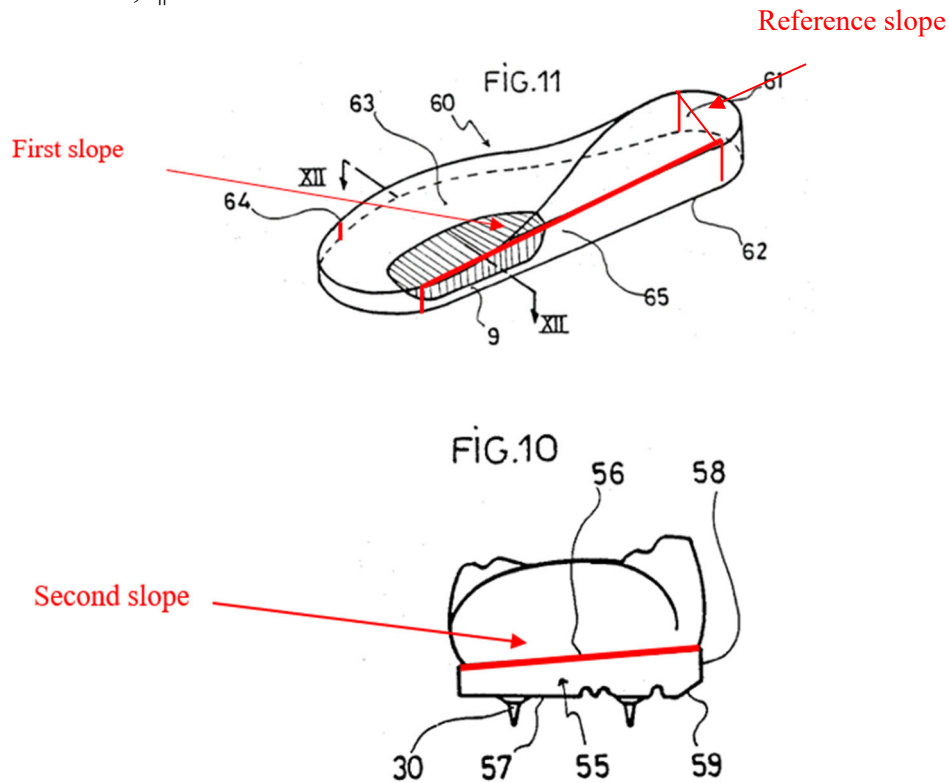
Ex. 1002, IX.B.e.

6. [1.5] “wherein the mid-foot section and the toe section form an angled support platform that has a first slope along the inner edge of the apparatus from a front edge of the apparatus to the heel platform section, a second slope along the front edge of the apparatus from the inner edge to the outer edge of the apparatus, and a third slope along the outer edge of the apparatus from the front edge of the apparatus to the heel platform section, the first slope, second slope, and the third slope each greater than the reference slope,”

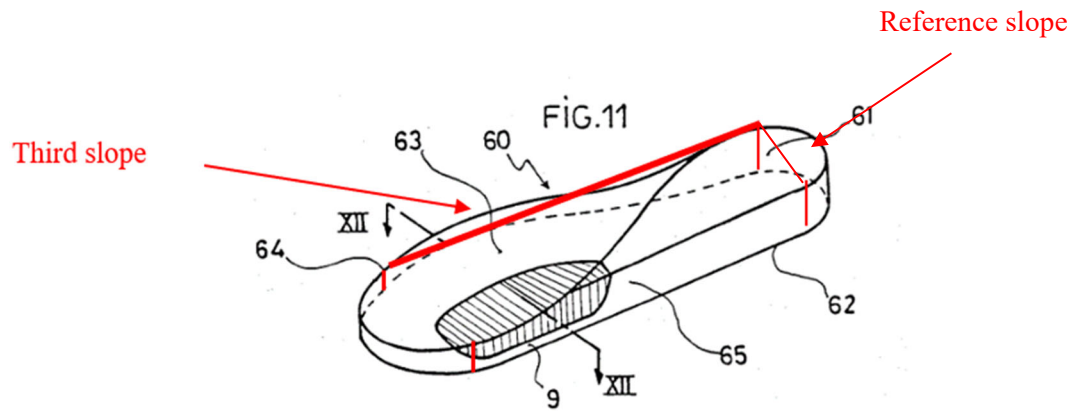
Dufour teaches and/or suggests a sole having an inside support surface that is inclined with respect to the walking surface. Ex. 1006, 4:51-54. For the left shoe, Dufour explains that “the incline of the surface rises from the right inner edge 48 of said sole to the outer edge 49 thereof.” *Id.*, 4:51-57, 4:66-5:2 (“[a]s assembled in FIG. 10, the sole 55 transversely has a plantar support surface 56 for the foot, providing the latter with a seating inclined with respect to the walking surface.”), 5:11-14 (“while the support surface in the front area of the foot is inclined upwards from the inner edge towards the outer edge”), Figs. 9-10; Ex. 1002 IX.B.f.



A POSITA would have known that slopes inherently form between areas of incline and/or different thickness in a shoe sole, as shown for example, in the figures below. Ex. 1002, ¶ 82.<sup>4</sup>



<sup>4</sup> See note 1.



A POSITA would also understand that each the first, second, and third slopes are greater than the reference slope (see limitation 1.1 above), which is substantially parallel to the bottom surface of the shoe. *Id.*, ¶ 83.

7. [1.6] “wherein the toe section is lower than the heel platform section as a result of the first, second, and third slopes.”

See Figs 9-11, *see also* limitation 1.5 above, describing Dufour’s disclosure of a heel section that is elevated as compared to the toe section. A POSITA would understand that the toe section is lower than the heel section as a result of the first, second, and third slopes. *Id.*, ¶ 84.

- ii. **Claim 2: The apparatus of claim 1 further comprises: the heel platform section, the mid-foot section, and the toe section constituting at least one of an insole for footwear; and a sole of footwear.**

See limitations 1.0 – 1.6 above, describing Dufour’s disclosure of a heel platform section, a mid-foot section, and a toe section as features of a golf shoe sole. A POSITA would understand that the heel platform section, the mid-foot section,

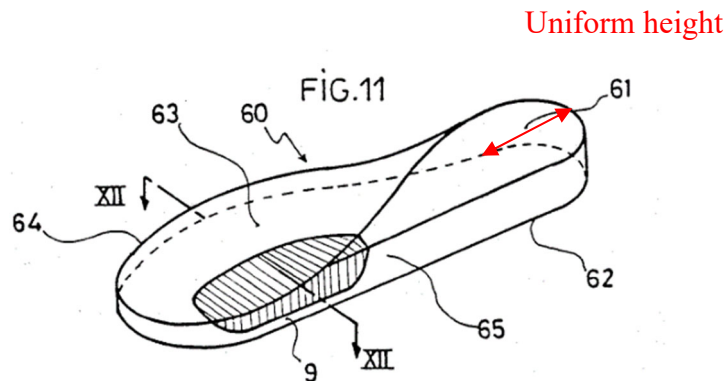
and the toe section constitute at least one of an insole for footwear; and a sole of footwear. *Id.*, ¶ 85.

### iii. Claim 3

Dufour discloses all limitations of dependent claim 3.

1. [3.1] “The apparatus of claim 1 further comprises: the heel platform section has a uniform platform height, wherein, from a front edge of the heel platform to the rear edge of the apparatus, the uniform platform height has the reference slope; and”

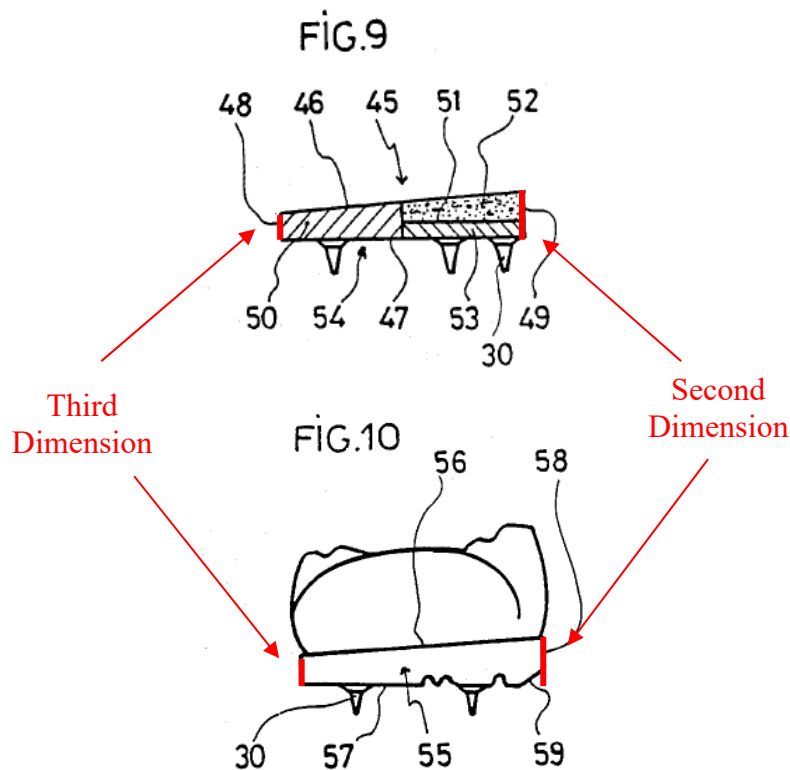
See limitation 1.1 above, describing Dufour’s disclosure of a heel platform section that has a uniform height from the outer edge to the inner edge at the rear of the shoe. *Id.*, ¶ 86.



Dufour also teaches and/or suggests that the uniform height extends from the front edge of the heel platform section to the rear edge of the shoe, such that the entirety of the heel platform has the reference slope. *Id.*, ¶ 87. This is confirmed by Dufour’s disclosure that “plantar support zone 61 at the level of the heel remains substantially parallel to the walking surface.” Ex. 1006, 5:7-14.

2. [3.2] “the toe section and the mid-foot section having a second dimension at a front outer edge of the apparatus and a third dimension at a front inner edge of the apparatus.”

See limitation 1.5 above, describing Dufour’s disclosure of an inside support surface that is inclined with respect to the walking surface. A POSITA would understand that the inclined support surface forms a second dimension at the front outer edge of the shoe, and a third dimension at a front inner edge of the shoe, as shown below. Ex. 1002, ¶ 88.



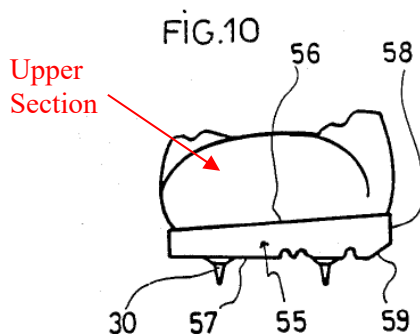
#### iv. Independent Claim 5

Dufour teaches and/or suggests all limitations of independent claim 5. Limitations 5.5 – 5.7 are nearly identical to those in claim 1, and therefore invalid for the same reasons.<sup>5</sup>

1. [5.0] “A shoe comprises:”

See limitation 1.0 above, describing Dufour’s disclosure of golf shoes. *Id.*, ¶ 89.

2. [5.1] “an upper shoe section; and”

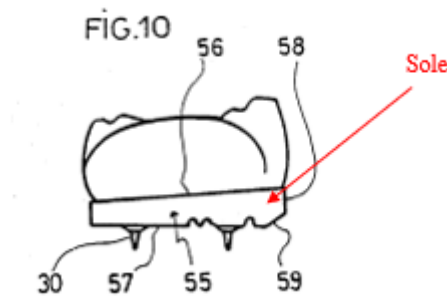


Dufour teaches and/or suggests an upper shoe section, as depicted in Figures 10 and 13-14. *Id.*, IX.B.1.

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<sup>5</sup> Claim 5 and its dependent claims merely substitute an “athletic positioning sole section” for the “apparatus” of claim 1.

3. [5.2] “a sole coupled to the upper shoe section, wherein the sole includes:”



Dufour teaches and/or suggests a sole 55 attached to an upper shoe section, as depicted in Figures 10 and 13-14. Ex. 1006, 4:67-5:2; Ex. 1002, IX.B.m; ¶ 90.

4. [5.3] “a specific bottom; and”

Dufour teaches and/or suggests golf shoes that are “advantageously provided with gripping means such as spikes or projecting parts suitable to ensure sound anchoring with the ground,” as shown in Figures 9 and 10. Ex. 1006, 2:46-54; *see also* (claim 18) (“Golf shoe according to claim 1 or 2, wherein the walking surface of the sole is provided with a certain number of spikes.”); Ex. 1002, IX.B.n.

5. [5.4] “an athletic positioning sole section having”

Claim 1 defines the “athletic positioning sole section” based on limitations 5.5 – 5.7, below. Ex. 1002, ¶ 91.

6. [5.5] “a heel platform section that has a uniform height from an outer edge to an inner edge of the athletic positioning sole section at a rear edge of the athletic positioning sole section, wherein the uniform height establishes a reference slope from the outer edge to the inner edge, the reference slope substantially parallel to a bottom surface of the sole;”

*See* corresponding discussion for limitations 1.1 – 1.2 above. *Id.*, ¶ 92.

7. [5.6] “a mid-foot section; and”

See corresponding discussion for limitation 1.3 above. *Id.*, ¶ 93.

8. [5.7] “a toe section, wherein the mid-foot section and the toe section form an angled support platform that has a first slope along the inner edge of the athletic positioning sole section from a front edge of the athletic positioning sole section to the heel platform section, a second slope along the front edge of the athletic positioning sole section from the inner edge to the outer edge of the athletic positioning sole section, and a third slope along the outer edge of the athletic positioning sole section from the front edge of the athletic positioning sole section to the heel platform section, the first slope, second slope, and the third slope each greater than the reference slope.”

See corresponding discussion for limitations 1.4 – 1.6 above. *Id.*, ¶ 94.

- v. **Claim 6: The shoe of claim 5 further comprises: the heel platform section has a uniform platform height, wherein, from a front edge of the heel platform to the rear edge of the athletic positioning sole section, the uniform platform height has the reference slope; and the toe section having a second dimension at a front outer edge of the apparatus and a third dimension at a front inner edge of the apparatus.**

See corresponding discussion for limitations 3.1 – 3.2 above. The limitations of claim 6 are nearly identical to those in claim 3, and therefore invalid for the same reasons.<sup>6</sup> *Id.*, ¶ 95.

- vi. **Claim 8: The shoe of claim 5, wherein the specific bottom comprises one of: a cleat pattern bottom; a baseball spike bottom; a basketball bottom; a tennis bottom; a golf bottom; an ice skate bottom; a ski boot bottom; a cross-trainer bottom; a running shoe bottom; a walking shoe**

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<sup>6</sup> See note 2.

**bottom; a dress shoe bottom; and a snowboard boot bottom.**

See limitation 5.3 above, describing Dufour's disclosure of a pair of golf shoes that are "advantageously provided with gripping means such as spikes or projecting parts suitable to ensure sound anchoring with the ground." Ex. 1006, 2:46-54; *see also* (claim 18) ("Golf shoe according to claim 1 or 2, wherein the walking surface of the sole is provided with a certain number of spikes." Ex. 1002, ¶ 96.

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

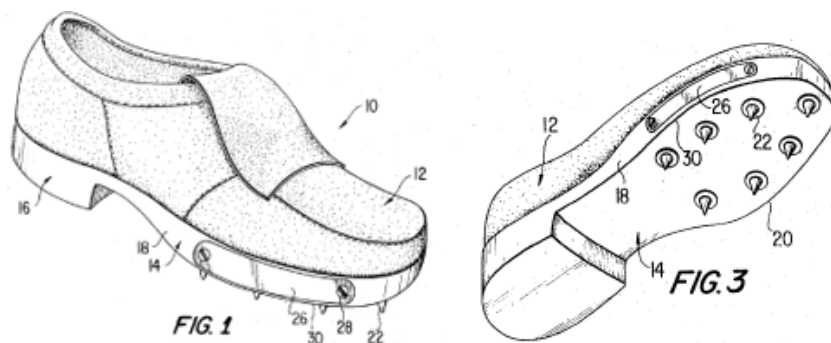
A POSITA would have found claims 1-8 obvious over Rubin. Ex. 1002, ¶ 97.

**i. Independent Claim 1**

Rubin teaches and/or suggests all limitations of independent claim 1.

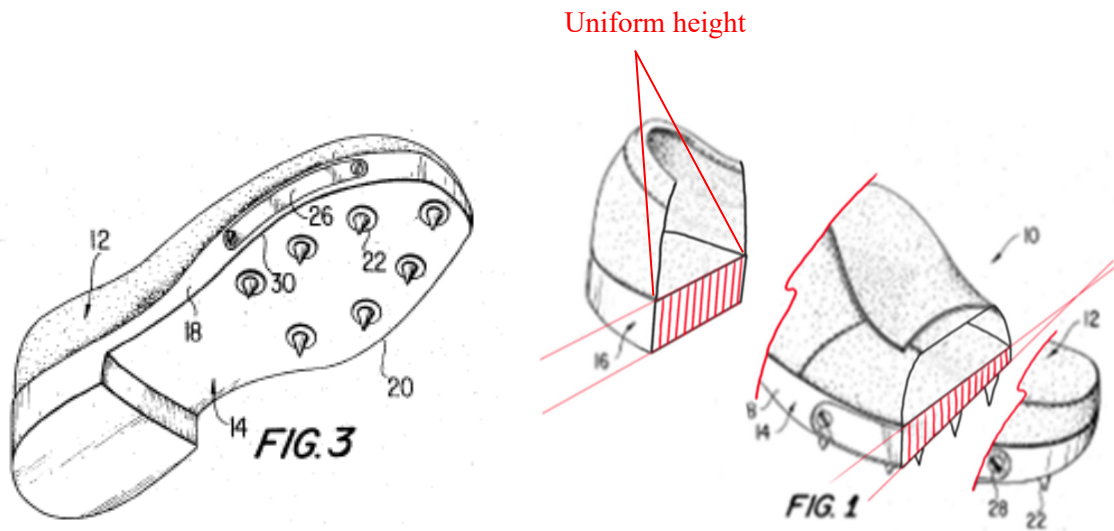
1. [1.0] "An apparatus comprises:"

To the extent the preamble is deemed limiting, Rubin discloses golf shoes. Ex. 1007, 1:5-22, 1:63-68; Figs 1-4; Ex. 1002, IX.C.a.



2. [1.1] “a heel platform section that has a uniform height from an outer edge to an inner edge of the apparatus at the rear edge of the apparatus,”

Rubin teaches and/or suggests a heel platform section that has a uniform height from the outer edge to the inner edge at the rear edge of the shoe, as shown, *e.g.*, in Figure 3 and modified Figure 1, below. Ex. 1002, IX.C.b, ¶ 98.



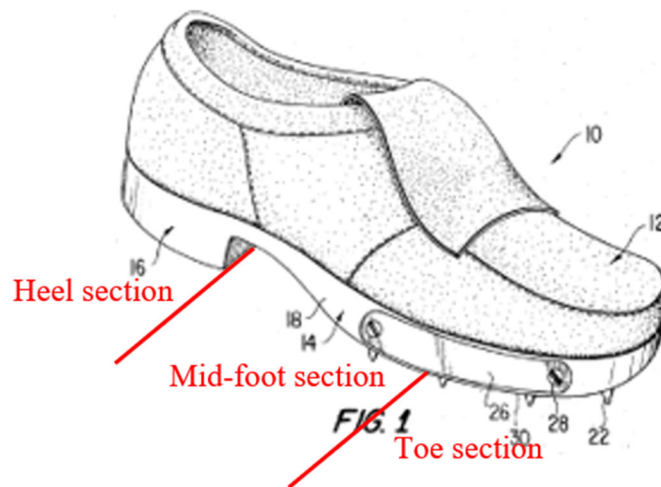
Rubin also discloses that a “conventional heel” is molded integrally with the sole. Ex. 1007, 2:67-68. A POSITA would have known that conventional athletic shoes, including golf, basketball, running and skateboard shoes, included heel platforms having a uniform height from the outer to the inner edge. Ex. 1002, ¶¶ 47-52, 99.

3. [1.2] “wherein the uniform height establishes a reference slope from the outer edge to the inner edge, the reference slope substantially parallel to a bottom surface of the apparatus;”

See limitation 1.1 above, describing Dufour's disclosure of a heel platform section that has a uniform height from the outer edge to the inner edge. A POSITA would understand that a uniform height of the heel platform establishes a reference slope from the outer edge to the inner edge of the heel platform that is substantially parallel to the bottom of the shoe. *Id.*, ¶ 100.

4. [1.3] “a mid-foot section juxtaposed to the heel platform section; and”

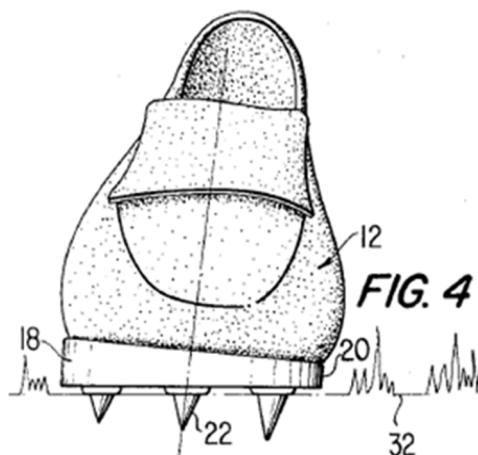
Rubin teaches and/or suggests a midfoot section juxtaposed to the heel platform section, as shown in annotated Figure 1 below. *Id.*, IX.C.d, ¶ 101.



5. [1.4] “a toe section juxtaposed to the mid-foot section,”

See limitation 1.3 above. Rubin teaches and/or suggests a toe section juxtaposed to the mid-foot section, as shown in annotated Figure. *Id.*, IX.C.e, ¶ 102.

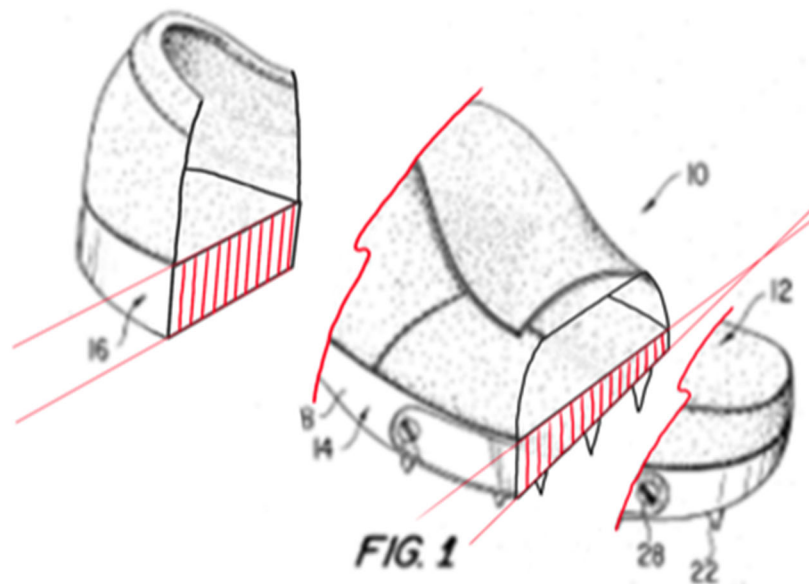
6. [1.5] “wherein the mid-foot section and the toe section form an angled support platform that has a first slope along the inner edge of the apparatus from a front edge of the apparatus to the heel platform section, a second slope along the front edge of the apparatus from the inner edge to the outer edge of the apparatus, and a third slope along the outer edge of the apparatus from the front edge of the apparatus to the heel platform section, the first slope, second slope, and the third slope each greater than the reference slope,”



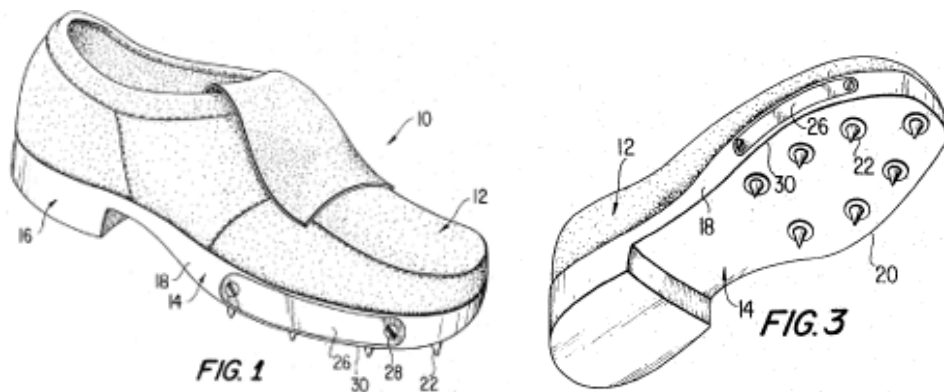
Rubin teaches and/or suggests a sole wherein the “the outer side 18 of the sole 4 extends downwardly from the shoe upper 12 to a lower elevation than the inner side 20 of the sole 14.” Ex. 1007, 3:9-12. Rubin explains that the shoe has the appearance of a built-up sole along the outer side so that the planar bottom of the sole will converge towards the inner side of the sole. *Id.*, 3:11-15.

When the shoe is worn, the foot of the golfer is tilted inwardly because of the wedge-shaped sole, which provides a more satisfactory weight distribution when hitting the ball. *Id.*, 3:56-65; (claim 1) (“when said shoe is worn on the foot of a golfer and the golfer assumes his stance on a golf playing surface it will create a toe-

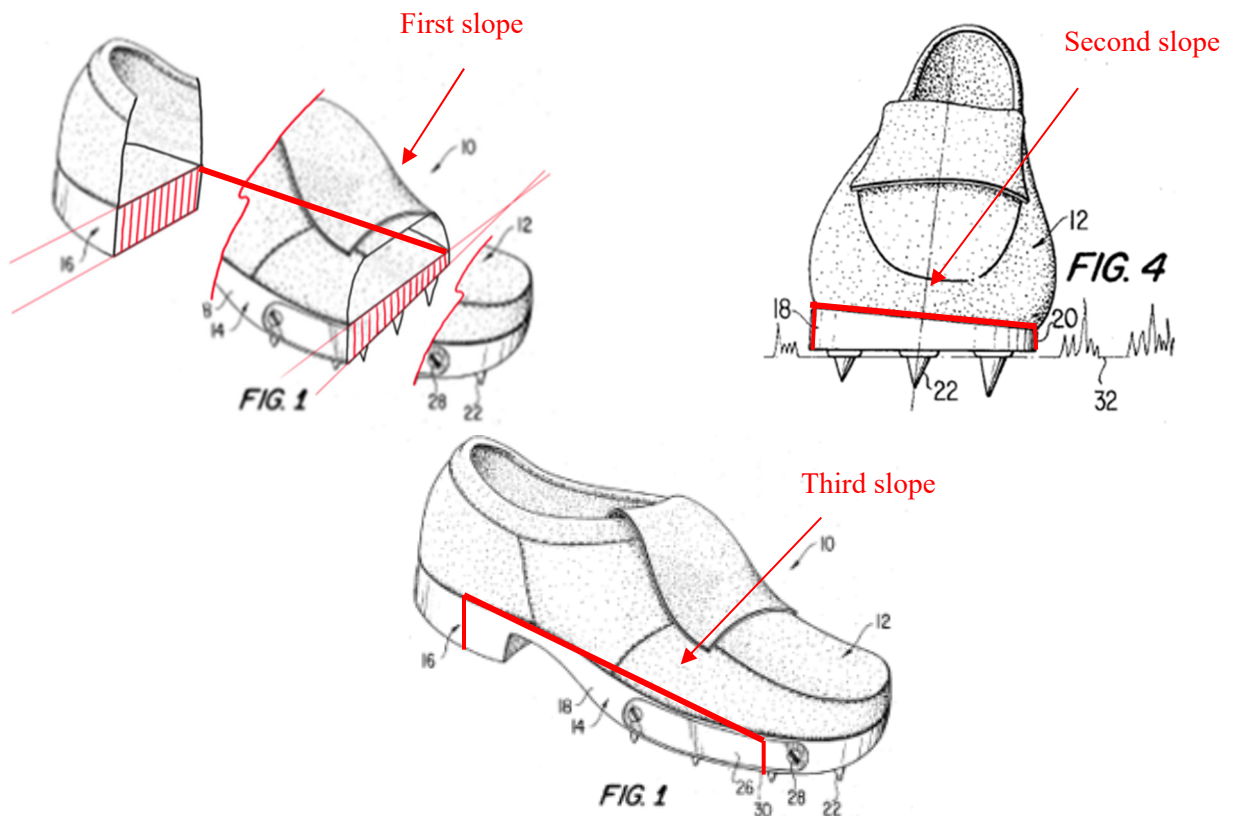
in effect to aid the golfer during his swing”). Thus, Rubin teaches and/or suggests a second slope at the toe section of the shoe from the inner edge to the outer edge. Ex. 1002, IX.C.f.



Rubin also teaches and/or suggests that the heel platform is greater in height than the inner front edge of shoe and the outer front edge of the shoe, as depicted above, and in Figures 1 and 3 below. *Id.*



A POSITA would have known that slopes inherently form between areas of incline and/or different thickness in a shoe sole, as shown for example, in the figures below.<sup>7</sup> Ex. 1002, ¶ 103.



A POSITA would also understand that each the first, second, and third slopes are greater than the reference slope (*see* limitation 1.1, above), which is substantially parallel to the bottom surface of the shoe. *Id.*, ¶ 104.

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<sup>7</sup> See note 1.

7. [1.6] “wherein the toe section is lower than the heel platform section as a result of the first, second, and third slopes.”

See limitation 1.5 above, describing Rubin’s disclosure of a heel section that is elevated as compared to the toe section. A POSITA would understand that the toe section is lower than the heel section a result of the first, second, and third slopes. *Id.*, ¶ 105.

- ii. **Claim 2: The apparatus of claim 1 further comprises: the heel platform section, the mid-foot section, and the toe section constituting at least one of an insole for footwear; and a sole of footwear.**

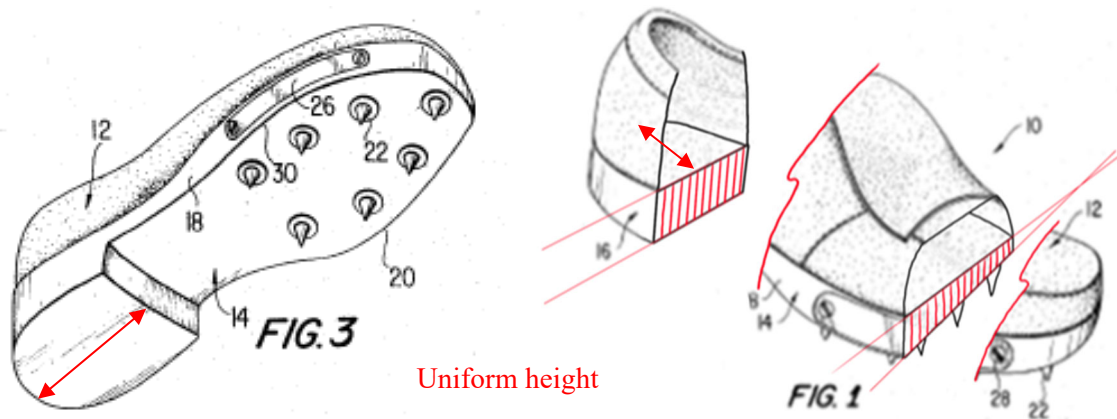
See limitations 1.0 – 1.6 above, describing Rubin’s disclosure of a heel platform section, a mid-foot section, and a toe section as features of a golf shoe sole. A POSITA would understand that the heel platform section, the mid-foot section, and the toe section constitute at least one of an insole for footwear; and a sole of footwear. *Id.*, ¶ 106.

### iii. Claim 3

Rubin discloses all limitations of dependent claim 3.

1. [3.1] “The apparatus of claim 1 further comprises: the heel platform section has a uniform platform height, wherein, from a front edge of the heel platform to the rear edge of the apparatus, the uniform platform height has the reference slope; and”

See limitation 1.1 above, describing Rubin’s disclosure of a heel platform section that has a uniform height from the outer edge to the inner edge at the rear of the shoe. *Id.*, IX.C.i.

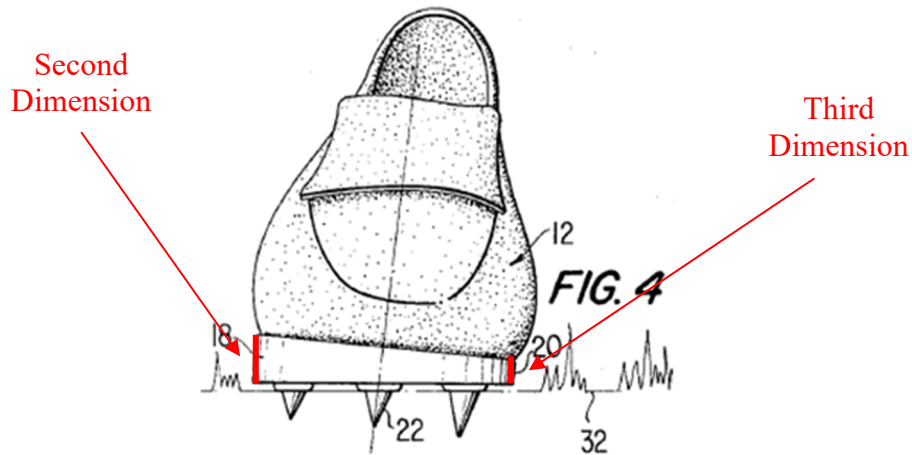


Rubin also teaches and/or suggests that the uniform height extends from the front edge of the heel platform section to the rear edge of the shoe, such that the entirety of the heel platform has the reference slope. *Id.*, ¶ 107. Rubin explains that a “conventional heel” is molded integrally with the sole. Ex. 1007, 2:67-68. A POSITA would have known that conventional athletic shoes, including golf, basketball, running and skateboard shoes, included heel platform sections with uniform heights from the front edge of the heel platform section to the rear edge of the shoe. Ex. 1002, ¶¶ 47-52, 108.

2. [3.2] “the toe section and the mid-foot section having a second dimension at a front outer edge of the apparatus and a third dimension at a front inner edge of the apparatus.”

See limitation 1.5 above, describing Rubin’s disclosure of a sole having an outer side that extends downwardly to a lower elevation than the inner side. A POSITA would understand that a sole that extends downwardly to a lower elevation on the outer side than the inner side creates a second dimension at the front outer

edge of the shoe, and a third dimension at a front inner edge of the shoe, as shown below. *Id.*, ¶ 109.



#### vii. Independent Claim 5

Rubin teaches and/or suggests all limitations of independent claim 5. Limitations 5.5 – 5.7 are nearly identical to those in claim 1, and therefore invalid for the same reasons.<sup>8</sup>

##### 3. [5.0] “A shoe comprises:”

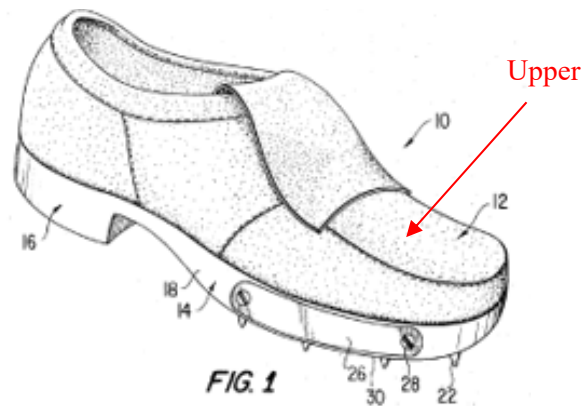
*See* limitation 1.0 above, describing Dufour’s disclosure of golf shoes. Ex. 1002, ¶ 110.

##### 4. [5.1] “an upper shoe section; and”

Rubin teaches and/or suggests a golf shoe that includes “a conventional upper 12,” as depicted in Figure 1. Ex. 1007, 2:60-64; Ex. 1002, IX.C.1.

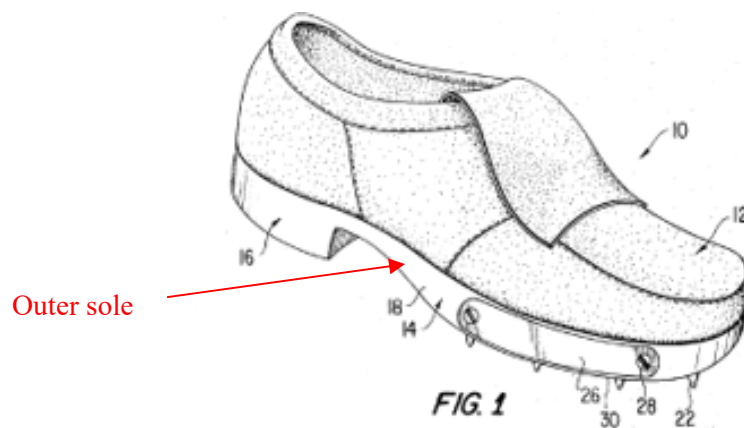
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<sup>8</sup> Claim 5 and its dependent claims merely substitute an “athletic positioning sole section” for the “apparatus” of claim 1.



5. [5.2] “a sole coupled to the upper shoe section, wherein the sole includes:”

Rubin teaches and/or suggests a golf shoe having a “sole 14 which can be molded integrally with upper 12 from such material as poly vinyl chloride.” Ex. 1007, 2:60-63; *see also* Ex. 1002, IX.C.m; ¶ 111.



6. [5.3] “a specific bottom; and”

Rubin discloses a golf shoe that includes a plurality of cleats projecting downwardly from the bottom of the sole. Ex. 1007, 3:24-35; Figs. 3-4; Ex. 1002, IX.C.n.

7. [5.4] “an athletic positioning sole section having”

Claim 1 defines the “athletic positioning sole section” based on limitations 5.5 – 5.7, below. Ex. 1002, ¶ 112.

8. [5.5] “a heel platform section that has a uniform height from an outer edge to an inner edge of the athletic positioning sole section at a rear edge of the athletic positioning sole section, wherein the uniform height establishes a reference slope from the outer edge to the inner edge, the reference slope substantially parallel to a bottom surface of the sole;”

*See* corresponding discussion for limitations 1.1 – 1.2 above. *Id.*, ¶ 113.

9. [5.6] “a mid-foot section; and”

*See* corresponding discussion for limitation 1.3 above. *Id.*, ¶ 114.

10. [5.7] “a toe section, wherein the mid-foot section and the toe section form an angled support platform that has a first slope along the inner edge of the athletic positioning sole section from a front edge of the athletic positioning sole section to the heel platform section, a second slope along the front edge of the athletic positioning sole section from the inner edge to the outer edge of the athletic positioning sole section, and a third slope along the outer edge of the athletic positioning sole section from the front edge of the athletic positioning sole section to the heel platform section, the first slope, second slope, and the third slope each greater than the reference slope.”

*See* corresponding discussion for limitations 1.4 – 1.6 above. *Id.*, ¶ 115.

**viii. Claim 6: The shoe of claim 5 further comprises: the heel platform section has a uniform platform height, wherein, from a front edge of the heel platform to the rear edge of the athletic positioning sole section, the uniform platform height has the reference slope; and the toe section having a**

**second dimension at a front outer edge of the apparatus and a third dimension at a front inner edge of the apparatus.**

*See* corresponding discussion for limitations 3.1 – 3.2 above. The limitations of claim 6 are nearly identical to those in claim 3, and therefore invalid for the same reasons.<sup>9</sup> *Id.*, ¶ 116.

- ix. Claim 8: The shoe of claim 5, wherein the specific bottom comprises one of: a cleat pattern bottom; a baseball spike bottom; a basketball bottom; a tennis bottom; a golf bottom; an ice skate bottom; a ski boot bottom; a cross-trainer bottom; a running shoe bottom; a walking shoe bottom; a dress shoe bottom; and a snowboard boot bottom.**

*See* limitation 5.3 above, describing Rubin’s disclosure a golf shoe that includes a plurality of cleats at the bottom of the sole. *Id.*, ¶ 117.

**F. Ground 4: Claims 2, 4 and 7 are Obvious Over Dufour in View of Kim**

Claims 4 and 7 are obvious under pre-AIA 35 U.S.C. §103 by Dufour in view of Kim. *Id.*, ¶ 118.

**Overview of the Combination**

The combination of Dufour and Kim renders claims 2, 4 and 7 obvious. Dufour discloses a golf shoe, but does not expressly disclose an insole. Kim does. *Id.*, ¶ 119.

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<sup>9</sup> *See* note 2.

## **Rationale (Motivation) Supporting Obviousness**

It would have been obvious to incorporate an insole, like that described in Kim, into the golf shoes disclosed in Dufour. A POSITA would have found it obvious to have combined the teachings of Dufour and Kim with predictable outcomes. *Id.*, ¶ 120.

Dufour and Kim are both in the same field (golf shoe design), and both disclose similar improvements over typical shoes, namely, a sloped sole configured to provide enhanced positioning or support for the wearer's feet. *Id.* ¶ 121. A POSITA would have naturally looked to Kim when considering ways to improve the Dufour sole design. *Id.* A POSITA would understand that an insole is a common shoe component that provides several benefits, such as providing additional cushioning, comfort and/or stability in the shoe. *Id.* Indeed, Kim explains that, “except for the outsole 10 including the inclined lower surface 12, the golf shoe 100 of the present invention is substantially the same as conventional golf shoes,” and includes “an insole ... arranged on the bottom of the inside of the upper leather portion,” and an “intermediate sole.” Ex. 1005, ¶¶ 27-29.

## **Graham Factors**

The **level of ordinary skill** is as proposed in Section VII.B.

The **scope and content of the prior art** are discussed throughout the Ground.

The **differences between the prior art and the claims** are discussed in the “Overview of the Combination” and below.

Petitioner is not aware of any **secondary considerations** that would make an inference of non-obviousness more likely.

### **Reasonable Expectation of Success**

A POSITA would have had a reasonable expectation of success in incorporating an insole, like that disclosed in Kim, into the golf shoe disclosed in Dufour. Ex. 1002, ¶ 122. Dufour’s sole could easily be modified to include the insole disclosed in Kim while maintaining the athletic positioning shape. *Id.* The art was relatively predictable in the relevant timeframe. *Id.* A POSITA would also have been able to make any necessary modifications to the shoe or shoe components to implement this Ground. *Id.*

### **Analogous Art**

Dufour and Kim are analogous art, because they are in the same field as the ‘786 patent (Ex. 1001, ’786 patent at Abstract, Title), (Ex. 1006, Dufour at Abstract, Title), (Ex. 1005, Kim at Abstract, Title), and all three relate to golf shoe designs that incorporate soles that improve foot positioning and/or support. *Id.*, ¶ 123.

### **Claims 2, 4 and 7 are Obvious Over Dufour in View of Kim**

- i. Claim 2: The apparatus of claim 1 further comprises: the heel platform section, the mid-foot section, and the toe section**

**constituting at least one of an insole for footwear; and a sole of footwear.**

Dufour discloses all elements of independent claim 1, including a sole of footwear, as indicated in Section VII.D above. Dufour does not, however, expressly disclose the heel platform section, the mid-foot section, and the toe section constituting an insole. To the extent claim 2 requires *both* a sole for footwear and an insole for footwear, Kim discloses this common shoe feature. *Id.*, IX.D.a; ¶ 124. Kim teaches and/or suggests an article of footwear that includes an insole. *Id.*, IX.B.d; ¶ 82. Kim discloses a golf shoe having “an insole (not shown) arranged on the bottom of the inside of the upper leather portion.” Ex. 1005, ¶ 28. Ex. 1002, IX.A.d.

**ii. Claim 4: The apparatus of claim 1 further comprises: an insole on a first surface of the apparatus covering one or more of: at least a portion of the heel platform section; at least a portion of the mid-foot section; and at least a portion of the toe section.**

See discussion for claim 2 above regarding Kim’s teaching and/or suggestion of the heel platform section, the mid-foot section, and the toe section constituting an insole. A POSITA would understand that the insole covers one or more of at least a portion of the heel platform section, mid-foot section, and the toe section. This arrangement is typical of shoes that include an insole and is required for the insole to be effective. *Id.*, ¶ 125.

**iii. Claim 7: The shoe of claim 1 further comprises: the athletic positioning shape including the heel section, a mid-foot section,**

**and a toe section, wherein the mid-foot section is between the heel section and the toe section, and wherein the heel section has the first height throughout.**

The limitations of claim 7 are identical to those in claim 4, and therefore invalid for the same reasons. *Id.*, ¶ 126. See corresponding discussion for claim 4 above.

**G. Ground 5: Claims 2, 4 and 7 are Obvious Over Rubin in View of Kim**

Claims 2, 4 and 7 are obvious under pre-AIA 35 U.S.C. §103 by Rubin in view of Kim. Ex. 1002, ¶ 127. Ground 5 relies on Rubin as the primary reference, and similar to ground 2, relies on Kim for the disclosure of an insole. For the reasons described below, a POSITA would have been motivated to combine the teachings of Rubin with Kim. *Id.*, ¶ 128.

**Rationale (Motivation) Supporting Obviousness**

It would have been obvious to incorporate an insole, like that described in Kim, into the golf shoe disclosed in Rubin. A POSITA would have found it obvious to have combined the teachings of Rubin and Kim with predictable outcomes. *Id.*, ¶ 129.

Rubin and Kim are both in the same field (golf shoe design), and both disclose similar improvements over typical shoes, namely, a sole configured to provide enhanced positioning or support for the wearer's feet. *Id.*, ¶ 130. A POSITA would have naturally looked to Kim when considering ways to improve the Rubin sole

design. *Id.* A POSITA would understand that an insole is a common shoe component that provide several benefits, such as providing additional cushioning, comfort and/or stability in the shoe. *Id.* Indeed, Kim explains that, “except for the outsole 10 including the inclined lower surface 12, the golf shoe 100 of the present invention is substantially the same as conventional golf shoes,” and includes “an insole ... arranged on the bottom of the inside of the upper leather portion,” and an “intermediate sole.” Ex. 1005, ¶¶ 27-29.

### ***Graham Factors***

The **level of ordinary skill** is as proposed in Section VII.B.

The **scope and content of the prior art** are discussed throughout the Ground.

The **differences between the prior art and the claims** are discussed in the “Overview of the Combination” and below.

Petitioner is not aware of any **secondary considerations** that would make an inference of non-obviousness more likely.

### **Reasonable Expectation of Success**

A POSITA would have had a reasonable expectation of success in incorporating an insole, like that disclosed in Kim, into the golf shoe disclosed in Rubin. Ex. 1002, ¶ 131. Rubin’s sole could easily be modified to include the insole disclosed in Kim while maintaining the athletic positioning shape. *Id.* The art was relatively predictable in the relevant timeframe. *Id.* A POSITA would also have

been able to make any necessary modifications to the shoe or shoe components to implement this Ground. *Id.*

### **Analogous Art**

Rubin and Kim are analogous art, because they are in the same field as the ‘786 patent (Ex. 1001, ‘786 patent at Abstract, Title), (Ex. 1007, Rubin at Abstract, Title), (Ex. 1005, Kim at Abstract, Title), and all three relate to golf shoe designs that incorporate soles that improve foot positioning and/or support. *Id.*, ¶ 132.

### **Claims 2, 4 and 7 are Obvious Over Rubin in View of Kim**

#### **i. Claims 2, 4 and 7**

*See* Ground 4 above, describing Kim’s disclosures relevant to claims 2, 4 and 7, respectively. *Id.*, ¶ 133.

## **II. THE BOARD SHOULD INSTITUTE UNDER 35 U.S.C. § 314**

*Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (P.T.A.B. Mar. 20, 2020) (precedential) weighs against exercising discretion in this case. Specifically, factors 1-4 and 6 weigh against denial because in the corresponding litigation, the case is in its early stages and few resources have been invested by the Parties or the Court. Discovery has only just begun, and claim construction briefing is not scheduled to start until August, 2024, and will continue until well after the Institution Decision for this Petition. Trial is not currently scheduled until March 2025. Petitioner also plans to seek a stay of the litigation in view of this IPR, and the merits of the Petition

are particularly strong, as demonstrated by the above Grounds and declarations in support thereof. Additionally, the *Gen. Plastic Indus. Co. v. Canon Kabushiki Kaisha* factors weigh against discretionary denial because there is no prior petition filed on the challenged claims of the '786 patent. IPR2016-01357, Paper 19, at 16-18 (P.T.A.B. Sept. 6, 2017).

### III. CONCLUSION

For the reasons stated above, Petitioner submits that claims 1-8 of the '786 patent are unpatentable. Accordingly, Petitioner requests institution of *Inter Partes* Review.

DATED: March 4, 2024

Respectfully submitted,

/Frank C. Cimino/

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T 202-344-4569

F 202-344-8300

## **CERTIFICATE OF SERVICE**

The undersigned hereby certifies that the foregoing petition for *inter partes* review, together with all exhibits and other documents filed therewith, was served by Federal Express on March 4, 2024, on the Patent Owner's counsel of record at the U.S. Patent and Trademark Office having the following address:

Timothy W. Markison  
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## **CERTIFICATE OF WORD COUNT**

The undersigned hereby certifies that the foregoing petition for *inter partes* review contains 10,680 words according to the word processing program used to prepare it.

Date: March 4, 2024

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