

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNDER ARMOUR, INC.
Petitioner

v.

ATHALONZ, LLC
Patent Owner

Case No. TBD
Patent No. 11,064,760

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 11,064,760**

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PETITIONER'S EXHIBITS

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

1014	FootJoy 51409
1015	FootJoy 1970 Product Catalog
1016	U.S. Patent No. D275146
1017	U.S. Patent No. D310294
1018	1971 Nike Cortez
1019	Publication No. 2009/0293307 (“Koyama”)
1020	RESERVED
1021	CAD Image of Heel Platform of Curry 4 FloTro

CLAIM LISTING

1. A pair of shoes comprises:
 - a left foot shoe including:
 - a left upper shoe portion; and
 - a left sole coupled to the left upper shoe portion, wherein a foot platform of the left sole provides an athletic positioning of a left big toe area of the left shoe at a lower position than a left heel area of the left shoe and at a lower position than an outer small toe area of the left shoe, wherein, from an inner edge to an outer edge of the left shoe, the left heel area has substantially no slope, and wherein, from the inner edge to the outer edge of the left shoe at a cross section at a ball of ball, a bottom of the left sole is substantially linear; and
 - a right foot shoe including:
 - a right upper shoe portion; and
 - a right sole coupled to the right upper shoe portion, wherein a foot platform of the right sole provides an athletic positioning of a right big toe area of the right shoe at a lower position than a right heel area of the right shoe and at a lower position than an outer small toe area of the right shoe and wherein, from an inner edge to an outer edge of the right shoe, the right heel area has substantially no slope, and wherein, from the inner edge to the outer edge of the right shoe at a cross section at a ball of ball, a bottom of the right sole is substantially linear.
2. The pair of shoes of claim 1, wherein the foot platform of the left sole comprises:
 - a heel section that, from the inner edge to the outer edge of the left shoe, has substantially no slope;
 - a toe section that provides the left big toe area of the left shoe at the lower position than the left heel area of the left shoe and at the lower position than the outer small toe area of the left shoe; and
 - a mid-foot section having a shape to transition from the heel section to the toe section.
3. The pair of shoes of claim 2, wherein the heel section of the foot platform of the left sole comprises:
 - a heel platform that includes a surface having substantially no slope from the inner edge to the outer edge of the left shoe and for a length of the surface, wherein, when the left shoe is worn, the heel platform supports a left heel of a wearer.

4. The pair of shoes of claim 2, wherein the toe section of the foot platform of the left sole comprises:
 - a stabilizing cup in the left big toe area, wherein, when the left shoe is worn, the stabilizing cup functions to, at least one of, stabilize and position a left big toe of a wearer in a particular location in the left big toe area.
5. The pair of shoes of claim 2, wherein the toe section of the foot platform of the left sole comprises:
 - a stabilizing cup in the left big toe area, wherein, when the left shoe is worn, the stabilizing cup functions to, at least one of, stabilize and position a left ball-of-foot of a wearer in a particular location in the left big toe area.
6. The pair of shoes of claim 1, wherein the foot platform of the left sole comprises:
 - a specific bottom that includes one of:
 - a sport specific tread pattern;
 - a spike pattern;
 - a sliding coupling pattern; and
 - a cleat pattern.
7. The pair of shoes of claim 1, wherein the foot platform of the right sole comprises:
 - a heel section that, from the inner edge to the outer edge of the right shoe, has substantially no slope;
 - a toe section that provides the right big toe area of the right shoe at the lower position than the left heel area of the right shoe and at the lower position than the outer small toe edge area of the right shoe; and
 - a mid-foot section having a shape to transition from the heel section to the toe section.
8. The pair of shoes of claim 7, wherein the heel section of the foot platform of the right sole comprises:
 - a heel platform that includes a surface having substantially no slope from the inner edge to the outer edge of the right shoe and for a length of the surface, wherein, when the right shoe is worn, the heel platform supports a right heel of a wearer.
9. The pair of shoes of claim 7, wherein the toe section of the foot platform of the right sole comprises:

a stabilizing cup in the right big toe area, wherein, when the right shoe is worn, the stabilizing cup functions to, at least one of, stabilize and position a right big toe of a wearer in a particular location in the right big toe area.

10. The pair of shoes of claim 7, wherein the toe section of the foot platform of the right sole comprises:

a stabilizing cup in the right big toe area, wherein, when the right shoe is worn, the stabilizing cup functions to, at least one of, stabilize and position a right ball-of-foot of a wearer in a particular location in the right big toe area.

11. The pair of shoes of claim 1, wherein the foot platform of the right sole comprises:

a specific bottom that includes one of:
a sport specific tread pattern;
a spike pattern;
a sliding coupling pattern; and
a cleat pattern.

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 ‘760 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))

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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 1-11 of U.S. Patent No 11,064,760 (“the ‘760 patent”) (Ex. 1001) pursuant to 35 U.S.C. §§ 311-19 and 37 C.F.R. § 42.1 *et seq.* The ‘760 patent is subject to pre-AIA 35 U.S.C. §§ 102 and 103.

I. INTRODUCTION

The ‘760 patent relates to athletic positioning footwear. The challenged claims of the ‘760 patent all recite a pair of shoes that include an upper section and a sole section wherein: (1) the platform of the sole section positions the big toe area at a lower position than both the heel area and the outer small toe area; (2) the heel area has substantially no slope from the inner edge to the outer edge; and (3) the bottom of the sole is substantially linear from the inner edge to the outer edge at the ball of the foot. Shoes having these characteristics, individually and collectively, were well-known in the art before the filing of the ‘760 patent. As shown below, U.S. Patent Publication No. 2004/0040181 (“Kim”), U.S. Patent No. 4,754,561 (“Dufour”), U.S. Patent No. 3,789,523 (“Rubin”), and U.S. Patent No. 4,535,554 (“De Obaldia”), each of which published more than a year before the filing date of the ‘760 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 ‘760 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 ‘760 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 1-11 of the ‘760 patent on the grounds set forth below and (ii) that those claims be found unpatentable.

Ground	Claim(s)	Basis for Unpatentability
1	1-3, 6-8, 11	Obvious Based on Kim
2	1-3, 6-8, 11	Obvious Based on Dufour
3	1-3, 6-8, 11	Obvious Based on Rubin
4	4, 5, 9, 10	Obvious Over Kim in View of De Obaldia
5	4, 5, 9, 10	Obvious Over Dufour in View of De Obaldia
6	4, 5, 9, 10	Obvious Over Rubin in View of De Obaldia

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 ‘760 patent as none of the references were considered during prosecution.

IV. SUMMARY OF THE ‘760 PATENT

A. Background of the Technology

The ‘760 patent generally relates to “athletic positioning footwear.” Ex. 1001 (the ‘760 patent), 1:43. The ‘760 patent acknowledges that prior art athletic footwear includes an upper, a sole, an insole, and some include cleats or spikes. *Id.*, 1:53-65. 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.*, 1:65-2:3, Figs. 1-2; Ex. 1002, ¶ 21. But allegedly, unlike the prior art, the footwear in the ‘760 patent positions the big toe area at a lower position than the heel area and the small toe area, and includes a sole with a bottom that is substantially linear from the inner edge of the shoe to the outer edge, at the ball of the foot. Ex. 1001, 10:10-13, 22:5-15, 22:26-35, 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 ‘760 patent, as shown in the references described below. Ex. 1002, ¶ 23.

B. The Claimed Subject Matter

The '760 patent contains eleven claims, where claim 1 is independent. This Petition challenges independent claim 1 and claims 2-11 which depend therefrom.

Claim 1 recites a pair of shoes comprising an upper section and a sole section, wherein the platform of the sole section positions the big toe area at a lower position than both the heel area and the outer small toe area, the heel area has substantially no slope from the inner edge to the outer edge, and the bottom of the sole is substantially linear from the inner edge to the outer edge, at the ball of the foot.

Claim 1 recites:

1. A pair of shoe comprises:

a left foot shoe including:

a left upper shoe portion; and

a left sole coupled to the left upper shoe portion, wherein a foot platform of the left sole provides an athletic positioning of a left big toe area of the left shoe at a lower position than a left heel area of the left shoe and at a lower position than an outer small toe area of the left shoe, wherein, from an inner edge to an outer edge of the left shoe, the left heel area has substantially no slope, and wherein, from the inner edge to the outer edge of the left shoe at a cross section at a ball of ball, a bottom of the left sole is substantially linear; and

a right foot shoe including:

a right upper shoe portion; and

a right sole coupled to the right upper shoe portion, wherein a foot platform of the right sole provides an athletic positioning of a right big toe area of the right shoe at a lower position than a right heel area of the right shoe and at a lower position than an outer small toe area of the

right shoe and wherein, from an inner edge to an outer edge of the right shoe, the right heel area has substantially no slope, and wherein, from the inner edge to the outer edge of the right shoe at a cross section at a ball of ball, a bottom of the right sole is substantially linear.

Dependent claims 2-11 all relate to aspects of the shoe, its components or materials recited in the independent claims, including the addition of a stabilizing cup in the big toe area, and specifying the type of bottom included in the sole section.

C. Prosecution History

U.S. Patent Application No. 16/152,538, which issued as the ‘760 patent, is a continuation of Application No. 14/159,860, filed on January 21, 2014, now Patent No. 10,092,061, which is a continuation of Application No. 13/867,406, filed on April 22, 2013, now Patent No. 8,631,592, which is a continuation of Application No. 13/355,778, filed on January 23, 2012, now Patent No. 8,938,893, which claims the benefit of U.S. Provisional Patent Application No. 61/450,485, filed March 8, 2011.

During prosecution of the ‘538 application, the Examiner initially rejected the claims on various grounds including anticipation and obviousness based on U.S. Patent Nos. 4,642,911 (“Talarico ‘911”) and 6,604,301 (“Manoli II”), and Publication Nos. 2009/0293307 (“Koyama”) and 2006/0090377 (“Segalin”). Ex. 1004, pp. 93-97. To overcome these rejections, the Applicant amended the claims to add a “foot platform” and argued, *inter alia*, that “the Office mischaracterize[ed]

the Applicant's claim 1 by ignoring the requirement that ... each of the left and right shoe includes a big toe area that is at a lower position than an outer small toe area.” *Id.*, pp. 73-85. After a similar rejection, the Applicant further amended the claims to add the limitation of “from the inner edge to the outer edge of the [left/right] shoe at a cross section at a ball of a ball,¹ a bottom of the left sole is substantially liner.” *Id.*, pp. 56-64.

In a subsequent action, the Examiner rejected claims 1-11 on the ground of non-statutory double patenting over the claims of U.S. Patent Nos. 8,631,592, 8,938,893, and 10,092,061. *Id.*, pp. 41-44. The Applicant filed a Terminal Disclaimer on March 12, 2021, and the Examiner subsequently issued a Notice of Allowance for all claims on March 24, 2021. *Id.*, pp. 8-12.

V. Prior Art

A. Effective Prior Art Dates

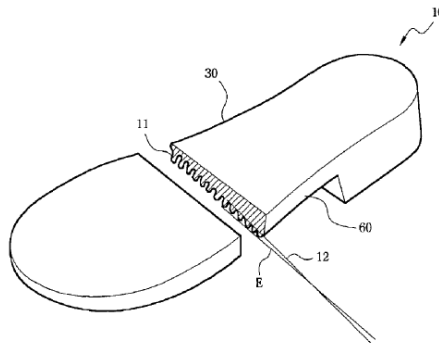
U.S. Patent Publication No. 2004/0040181 (“Kim”, Ex. 1005) published on March 4, 2004. U.S. Patent No. 4,754,561 (“Dufour”, Ex. 1006) issued July 5, 1988. U.S. Patent No. 3,789,523 (“Rubin”, Ex. 1007) issued February 5, 1974. U.S. Patent No. 4,535,554 (“De Obaldia”, Ex. 1008) issued on August 20, 1985. All constitute prior art to the ‘760 patent under pre-AIA 35 U.S.C. § 102(b).

¹ Petitioner believes “ball of ball” was meant to read “ball of foot.” *See, e.g.*, Ex. 1009, (Infringement Contentions, ‘760 chart, p. 28) (indicating “substantially linear ball of foot area”)

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, ¶ 37.

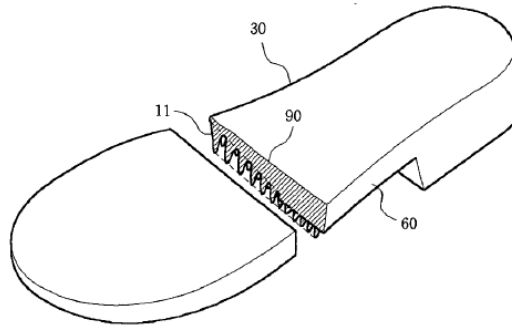
FIG. 2



Ex. 1005, Fig. 2.

The golf shoes include an upper portion and an outsole. The outsole 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.”), 27. Operably, the inclined lower surface “may be formed only at the front portion of the outsole.” *Id.*, ¶ 46; Ex. 1002, ¶ 38.

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, ¶ 39.

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, ¶ 40.

FIG.9

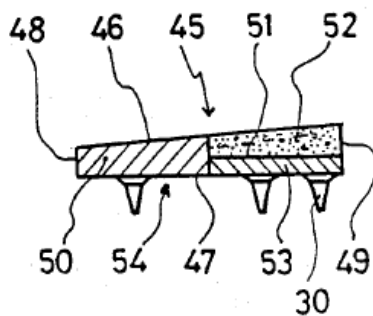
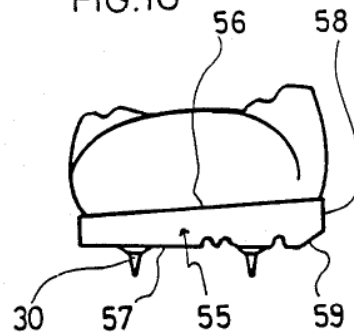


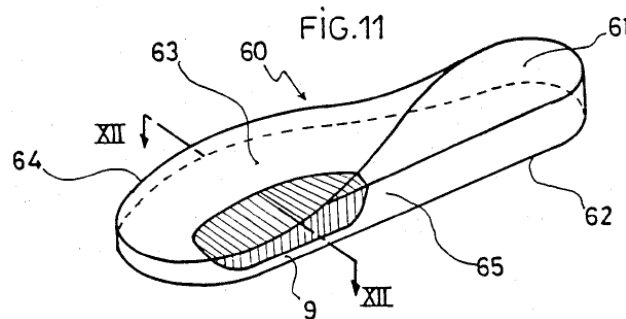
FIG.10



Ex. 1006, Figs. 9 and 10.

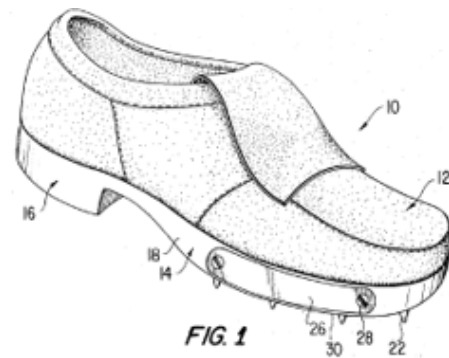
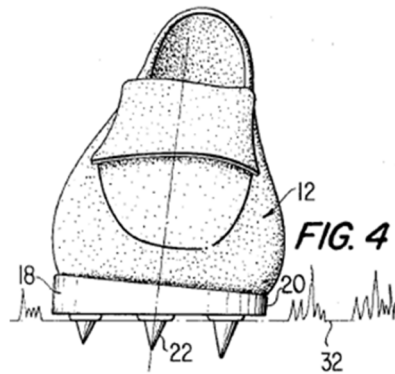
As shown in Figure 10, the sole transversely has a support surface 56 for the foot that provides the foot with a seating inclined with respect to the walking surface 57. *Id.*, 4:54-57.

Dufour further describes a support zone at the heel that remains substantially parallel 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.



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. Ex. 1007, 2:55-68.

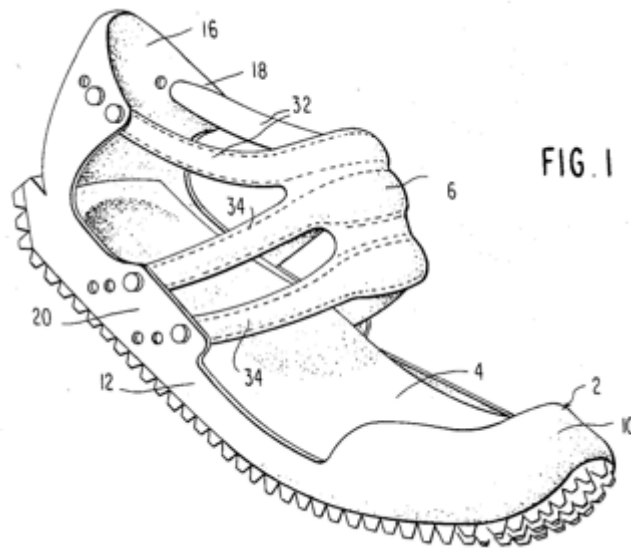


Id., Figs. 1 and 4.

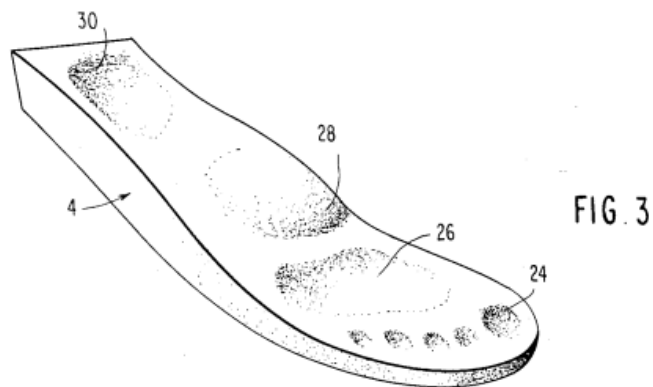
The outer side of the sole extends downwardly from the shoe upper to a lower elevation than the inner side of the sole. *Id.*, 3:9-15. This causes the rear foot of the golfer to tilt inward, which provides a more satisfactory weight distribution when hitting the ball. *Id.*, 3:56-65; (claim 1) (“when 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, ¶¶ 43-46.

E. Overview of De Obaldia

De Obaldia discloses an article of footwear that includes a molded body member 2, a molded foot support member 4 which supports the wearer’s foot, and a flexible harness 6, as depicted in Figure 1. Ex. 1008, Abstract, 2:23-44; Ex. 1002, ¶ 47.



As shown in Figure 3, “the upper surface of the foot support member is configured to correspond to and provide anatomical support for the wearer’s foot. Preferably, this configuration includes at least one toe recess 24, [and] a recess 26 for accommodating a ball of the wearer’s foot” *Id.*, 2:63-68; *see also* claims 5, 13; Ex. 1002, ¶ 48.



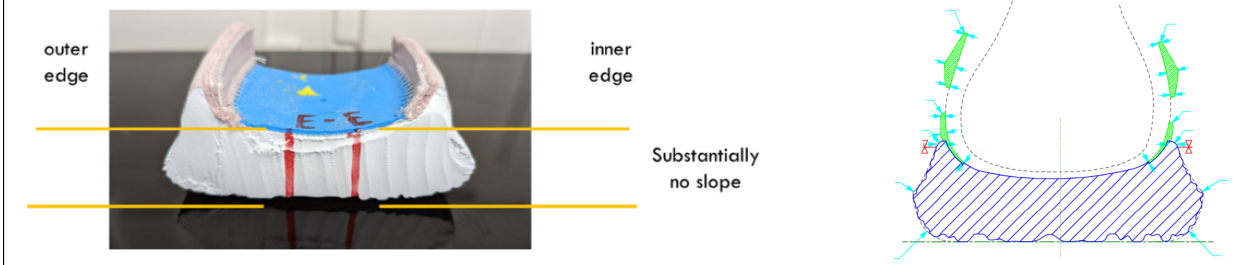
VI. CLAIM CONSTRUCTION UNDER 37 C.F.R. § 42.104(b)(3)

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. “Heel Area That Has Substantially No Slope from the Inner Edge to the Outer Edge”

Petitioner does not propose that the term “heel area that has substantially no slope from the inner edge to the outer edge” requires construction for purposes of this IPR. Patent Owner, however, appears to construe “inner” and “outer” edge of the heel area 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, and to construe this limitation to include a heel area that includes some degree of curvature and height change from its inner edge to its outer edge. 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.

For example, in the Curry 4 FloTro, from an inner edge to an outer edge of the left shoe, the left heel area has substantially no slope, as shown below.



Ex. 1009, Ex. B, pp. 23 (excerpt from Athalonz’s infringement contentions of this claim shown on left, above); Ex. 1021 (excerpt from a CAD drawing of accused product on right); Ex. 1002, ¶ 27.

For purposes of this IPR only, and without conceding alternative arguments in the counterpart litigation, *e.g.* that this term is indefinite and/or lacks 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).

B. “From the Inner Edge to the Outer Edge of the [Left/Right] Shoe at a Cross Section at a Ball of [Foot], a Bottom of the [Left/Right] Sole is Substantially Linear”

Petitioner does not propose that the term “from the inner edge to the outer edge of the [left/right] shoe at a cross section at a ball of [foot], a bottom of the [left/right] sole is substantially linear” requires construction for purposes of this IPR. Patent Owner, however, appears to construe this limitation to encompass a sole that is curved, textured and/or includes protrusions on the bottom of the sole, as shown in Ex. 1009, Ex. B, pp. 29-36.



Ex. 1009, Ex. B, pp. 28, 34; Ex. 1002, ¶ 27.

For purposes of this IPR only, and without conceding alternative arguments in the counterpart litigation, *e.g.* that this term is indefinite and/or lacks written description support, Under Armour applies Athalonz’s apparent construction in the litigation. *See NEC Display*, IPR2019-01123, Paper 7, pp. 12-14.

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 1-3, 6-8 and 11 are Obvious Over Kim

A POSITA would have found claims 1-3, 6-8 and 11 obvious over Kim. Ex. 1002, ¶ 60.

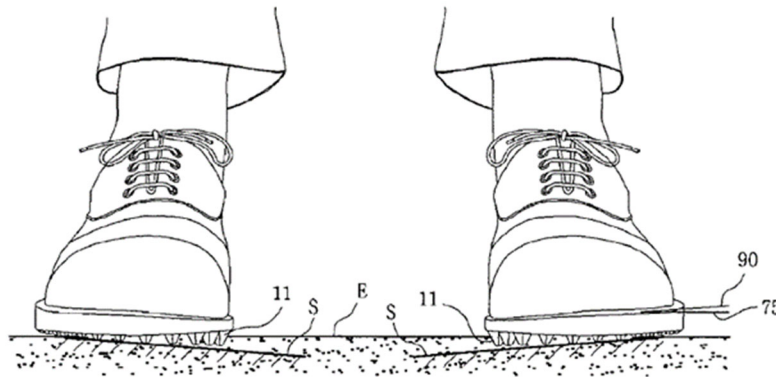
i. Independent Claim 1

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

1. [1.p] “A pair of shoes 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.

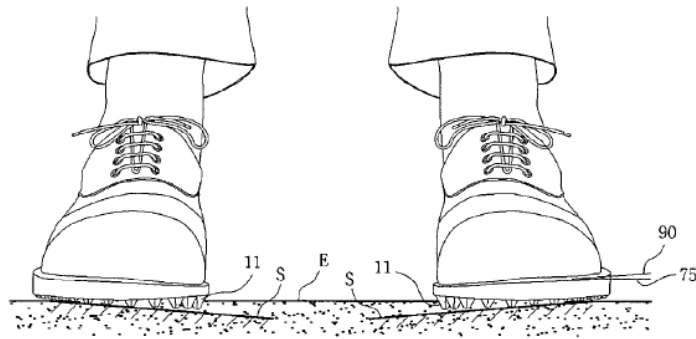
FIG. 5b



2. [1.1] “a left foot shoe including;”

Kim teaches and/or suggests a left foot shoe. Ex. 1005, Fig. 5b; Abstract; Ex. 1002, IX.A.b.

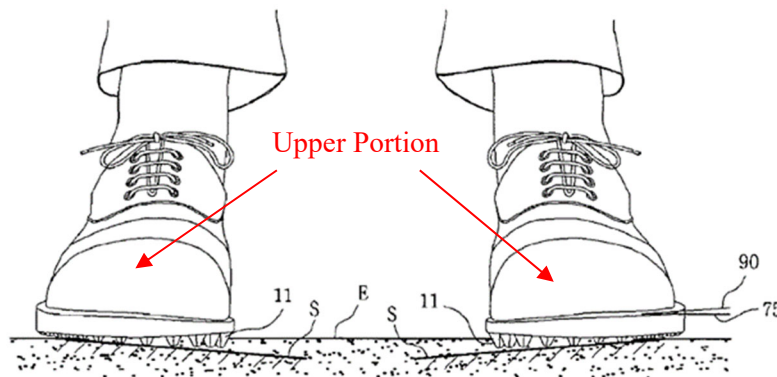
FIG. 5b



3. [1.2] “a left upper shoe portion;”

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; Fig. 5b; Ex. 1002, IX.A.c.

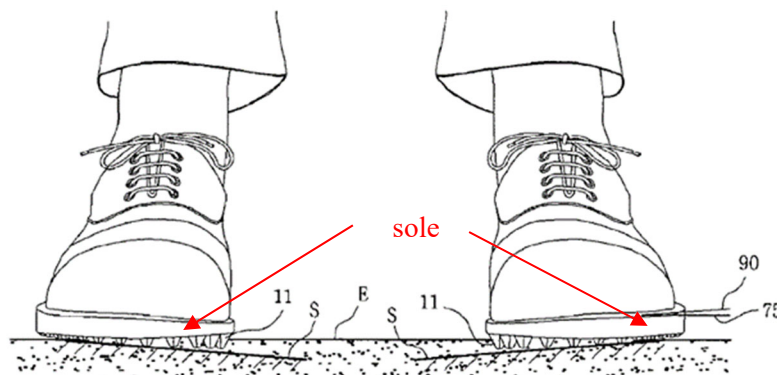
FIG. 5b



4. [1.3] “a left sole coupled to the left upper shoe portion,”

Kim discloses a pair of golf shoes, each having an “outsole 10 attached to the lower surface of the upper leather portion.” Ex. 1005, ¶ 28; *see also*, ¶¶ 14, 27; Abstract; Figs. 1-3B; Ex. 1002, IX.A.d.

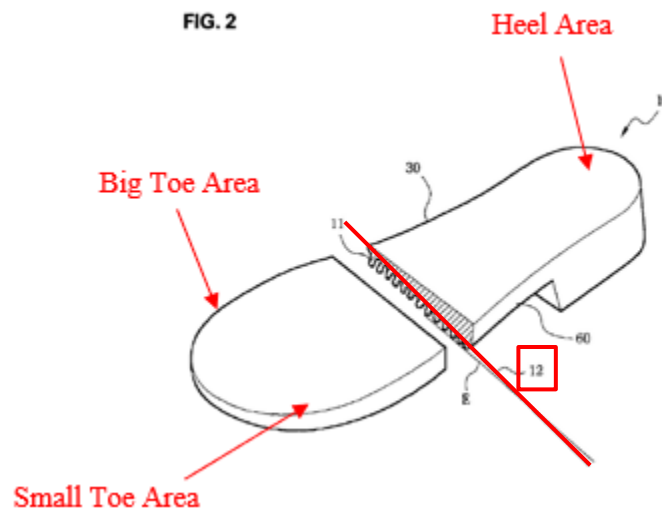
FIG. 5b



5. [1.4] “wherein a foot platform of the left sole provides an athletic positioning of a left big toe area of the left shoe at a

lower position than a left heel area of the left shoe and at a lower position than an outer small toe area of the left shoe,”

Kim teaches and/or suggests a foot platform, including an outsole that includes a lower surface 12 that is inclined between its outer and inner edge. Ex. 1002, IX.A.e. This is accomplished by the outer edge having a larger thickness than the inner edge, as shown *e.g.*, in Figure 2, 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.

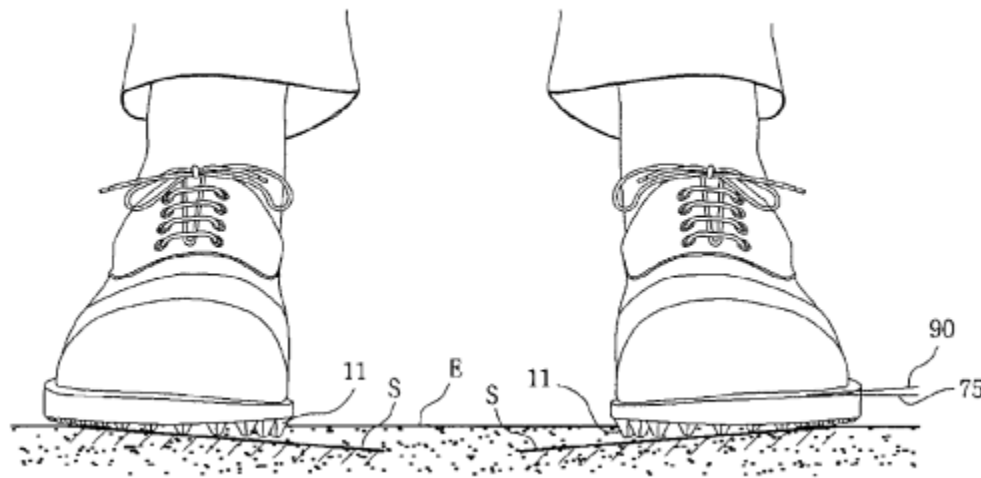
Ex. 1005, ¶ 27.

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; Ex. 1002, IX.A.e.

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. Ex. 1005, ¶ 41.

FIG. 3a

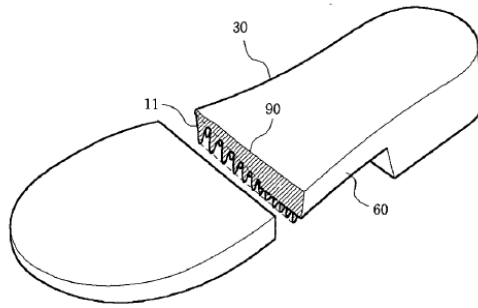
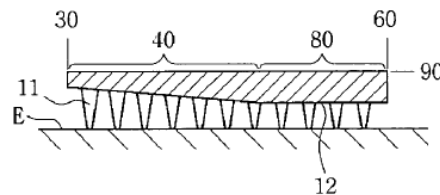


FIG. 3b

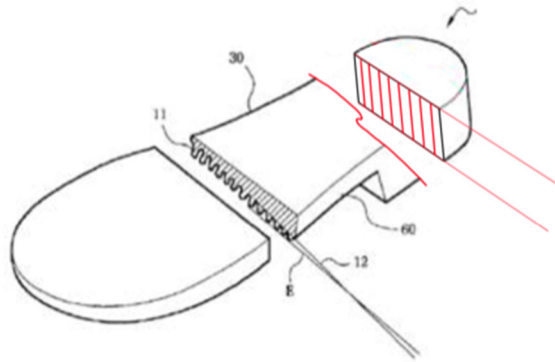


As shown in Figures 2 and 3A, the heel area is also elevated as compared to the front inner edge of the outsole. *Id.*, Fig. 2. Accordingly, in each embodiment, Kim discloses a sole that places the front inner edge, or big toe area, at a lower position than both the front outer edge (small toe area), and the heel area. Ex. 1002, IX.A.e.

6. [1.5] “wherein, from an inner edge to an outer edge of the left shoe, the left heel area has substantially no slope,”

Kim teaches and/or suggests that the heel area has substantially no slope from the inner edge to the outer edge, as shown in Figs. 2 and 3a, and modified Fig. 2, below. Ex. 1002, IX.A.f.

FIG. 2



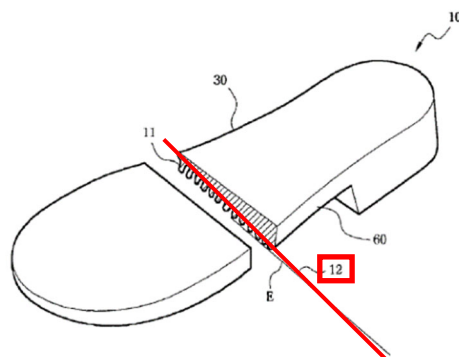
Ex. 1002, ¶ 61. This is confirmed by Kim’s disclosure that “the inclined plane may be formed only at the front portion of the outsole.” Ex. 1005, ¶ 46. Kim also explains that “[e]xcept for the outsole including the inclined lower surface, the golf shoe ... is substantially the same as *conventional* golf shoes.” *Id.*, ¶ 27 (emphasis added). A POSITA would have known that conventional athletic shoes, including golf, basketball, running and skateboard shoes included heel areas with substantially no slope from the inner edge to the outer edge. Ex. 1002, ¶¶ 49-54, 62-63.

7. [1.6] “and wherein, from the inner edge to the outer edge of the left shoe at a cross section at a ball of [foot], a bottom of the left sole is substantially linear;² and”

Kim teaches and/or suggests that the bottom of the outsole in Figure 2 is substantially linear from the inner edge to the outer edge “at a cross section at a ball of [foot].” *Id.*, IX.A.g.

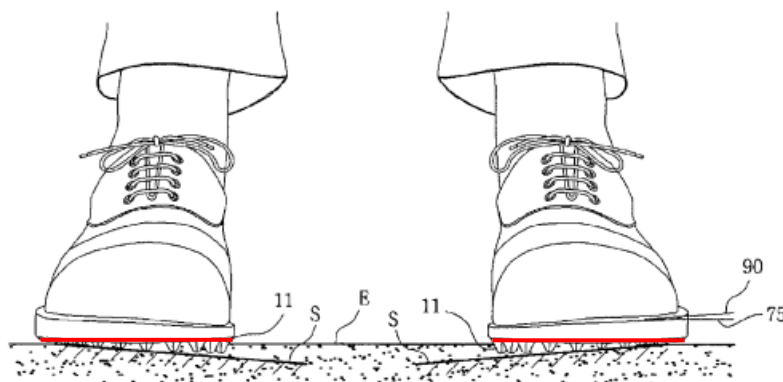
² This limitation was added during prosecution to distinguish prior art reference Publication No. 2009/0293307 (“Koyama”), Ex. 1019, that discloses a shoe having

FIG. 2



As shown in Figure 2, a POSITA would understand that outsole 10 has a linear bottom surface from the inner edge to the outer edge at the ball of the foot, as indicated by line 12. *Id.*, ¶ 64. This feature is also described and shown with respect to Fig. 5b:

FIG. 5b



“In FIGS. 5a and 5b, the reference numeral 90 denotes a line representing the level of the golfer’s feet being parallel with the ground E, and the reference numeral

a “protrusion strip 46” that extended out from the bottom of the outsole, as shown in Figs. 2 and 3. Ex. 1004, pp. 57-64. This requirement that the bottom of the shoe sole is substantially linear at the ball of the foot encompasses most, if not all, standard shoe designs, Ex. 1002, ¶ 55-59, especially in light of Patent Owner’s apparent construction of this limitation as discussed in Section VI.B, above.

75 denotes a line being parallel with a line (S) representing the level of the bottoms of the spikes 11.” Ex. 1005, ¶ 39; Ex. 1002, IX.A.g. Furthermore, Kim discloses an otherwise “conventional golf shoe” (Ex. 1005, ¶ 27), and a POSITA would have known that conventional athletic shoes, including golf, basketball, running and skateboard shoes, have sole bottoms that are substantially linear at the balls of the feet. Ex. 1002, ¶¶ 55-59, 65.

8. [1.7] “a right foot shoe including:”

See limitations 1.p and 1.1 above, describing Kim’s disclosure of a pair of golf shoes, which include a left and right foot shoe. Ex. 1002, ¶ 66.

9. [1.8] “a right upper shoe portion; and”

See limitation 1.2 above, describing Kim’s disclosure of an upper leather portion. *Id.*, ¶ 67.

10.[1.9] “a right sole coupled to the right upper shoe portion,”

See limitation 1.3 above, describing Kim’s disclosure of an outsole attached to the upper portion. *Id.*, ¶ 68.

11.[1.10] “wherein a foot platform of the right sole provides an athletic positioning of a right big toe area of the right shoe at a lower position than a right heel area of the right shoe and at

a lower position than an outer small toe area of the right shoe and”

See limitation 1.4 above, describing Kim’s disclosure of an outsole having an inclined lower surface that places the front inner edge at a lower position than the front outer edge and the heel area. *Id.*, ¶ 69.

12.[1.11] “wherein, from an inner edge to an outer edge of the right shoe, the right heel area has substantially no slope, and”

See limitation 1.5 above, describing Kim’s disclosure of a heel area with substantially no slope from the inner edge to the outer edge. *Id.*, ¶ 70.

13.[1.12] “wherein, from an inner edge to an outer edge of the right shoe at a cross section at a ball of [foot], a bottom of the right shoe is substantially linear.”

See limitation 1.6 above, describing Kim’s disclosure of shoes including sole bottoms that are substantially linear at the balls of the feet. *Id.*, ¶ 71.

ii. Claim 2

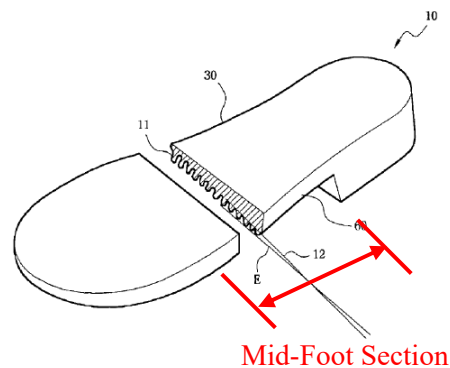
Kim teaches and/or suggests all limitations of dependent claim 2. The following limitations of claim 2 are identical to those in claim 1, and therefore invalid for the same reasons:

- [2.1] The pair of shoes of claim 1, wherein the foot platform of the left sole comprises: a heel section that, from the inner edge to the outer edge of the left shoe, has substantially no slope;
- [2.2] a toe section that provides the left big toe area of the left shoe at the lower position than the left heel area of the left shoe and at the lower position than the outer small toe area of the left shoe; and

See the corresponding discussions above for limitations 1.4 and 1.5, respectively. *Id.*, ¶ 72.

1. [2.3] “a mid-foot section having a shape to transition from the heel section to the toe section.”

FIG. 2



Kim teaches and/or suggests a mid-foot section having a shape to transition from the heel section to the toe section, as shown above. Ex. 1002, IX.A.o. A POSITA would understand that the golf shoes in Figure 2 include a mid-foot section having a shape to transition from the heel section to the toe section, as is necessary in any shoe. *Id.*, ¶ 73; *see also* Ex. 1005, ¶ 27 (“the golf shoe ... is substantially the same as conventional golf shoes.”).

- iii. **Claim 3: The pair of shoes of claim 2, wherein the heel section of the foot platform of the left sole comprises: a heel platform that includes a surface having substantially no slope from the inner edge to the outer edge of the left shoe and for a length of**

the surface, wherein, when the left shoe is worn, the heel platform supports a left heel of a wearer.

See limitation 1.5 above, describing Kim's disclosure of a heel area with substantially no slope from the inner edge to the outer edge. Kim also teaches and/or suggests that the heel section shown in Figure 2 and 3a has substantially no slope for a length of the surface. Ex. 1002, ¶ 74.

FIG. 2

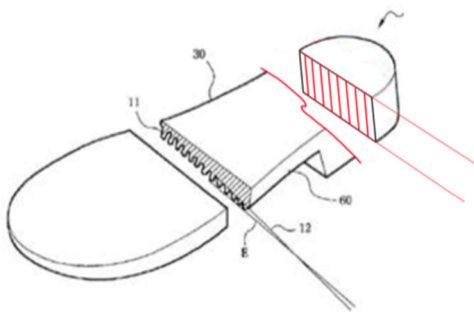
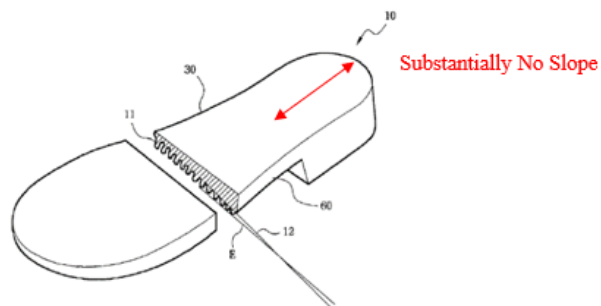


FIG. 2



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 golf shoes included heel areas with substantially no slope for a length of their surface. Ex. 1002, ¶¶ 74-75. A POSITA would also understand that the heel platform supports the heel of a wearer when worn, as is true of any shoe. *Id.*

iv. Claim 6: The pair of shoes of claim 1, wherein the foot platform of the left sole comprises: a specific bottom that includes one of:

a sport specific tread pattern; a spike pattern; a sliding coupling pattern; and a cleat pattern.

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* Figs. 1-5b; Ex. 1002, IX.A.q.

v. Claim 7

Kim teaches and/or suggests all limitations of dependent claim 7. The following limitations of claim 7 are nearly identical to those in claims 1 and 2, and are therefore invalid for the same reasons³:

- [7.1] The pair of shoes of claim 1, wherein the foot platform of the right sole comprises: a heel section that, from the inner edge to the outer edge of the right shoe, has substantially no slope;
- [7.2] a toe section that provides the right big toe area of the right shoe at the lower position than the right heel area of the right shoe and at the lower position than the outer small toe area of the right shoe; and
- [7.3] a mid-foot section having a shape to transition from the heel section to the toe section.

See the corresponding discussions above for limitations 1.4-1.5 and 2.3, respectively. Ex. 1002, ¶ 76.

vi. Claim 8: The pair of shoes of claim 7, wherein the heel section of the foot platform of the right sole comprises: a heel platform that includes a surface having substantially no slope from the

³ Claims 1-3 and 6 are specific to the left foot shoe, while claims 7-8 and 11 are specific to the right foot shoe. Petitioner’s arguments for the left and right foot shoes are the same throughout all asserted grounds.

inner edge to the outer edge of the right shoe and for a length of the surface, wherein, when the right shoe is worn, the heel platform supports a right heel of a wearer.

Kim teaches and/or suggests all limitations of dependent claim 8, which are nearly identical to claim 3 and therefore invalid for the same reasons.⁴ Ex. 1002, ¶ 77.

vii. Claim 11: The pair of shoes of claim 1, where the foot platform of the right sole comprises: a specific bottom that includes one of: a sport specific tread pattern; a spike pattern; a sliding coupling pattern; and a cleat pattern.

Kim teaches and/or suggests all limitations of dependent claim 11, which are nearly identical to claim 6 and therefore invalid for the same reasons.⁵ Ex. 1002, ¶ 78.

D. Ground 2: Claims 1-3, 6-8, and 11 are Obvious Over Dufour

A POSITA would have found claims 1-3, 6-8 and 11 obvious over Dufour. Ex. 1002, ¶ 79.

i. Independent Claim 1

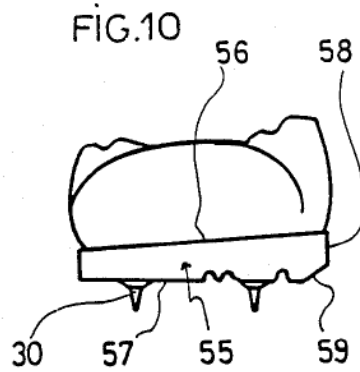
Dufour teaches and/or suggests all limitations of independent claim 1.

1. [1.p] “A pair of shoes comprises:”

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

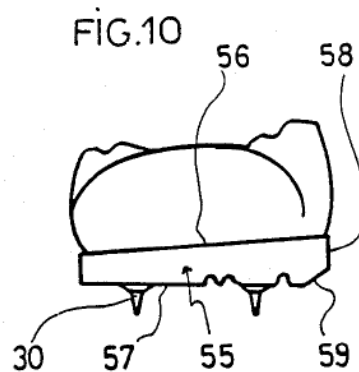
⁴ See *supra*, note 2.

⁵ See *supra*, note 2.

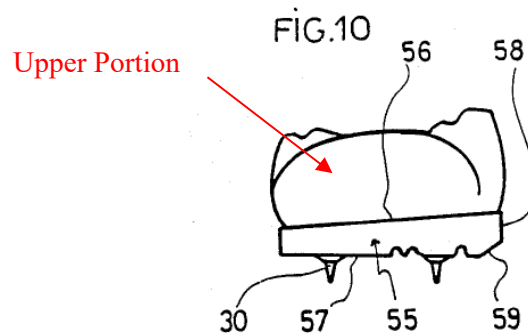


2. [1.1] “a left foot shoe including;”

Dufour discloses a left foot shoe, as depicted in Figures 10 and 13. Ex. 1006, 3:43-44 (“a left shoe ... is preferably described”). Ex. 1002, IX.B.b.



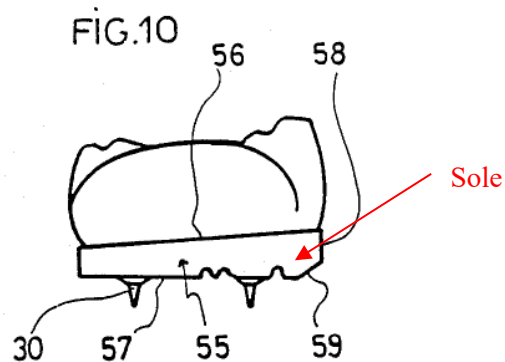
3. [1.2] “a left upper shoe portion;”



Dufour teaches and/or suggests an upper shoe portion, as depicted in Figures 10 and 13-14. Ex. 1002, IX.B.c.

4. [1.3] “a left sole coupled to the left upper shoe portion,”

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

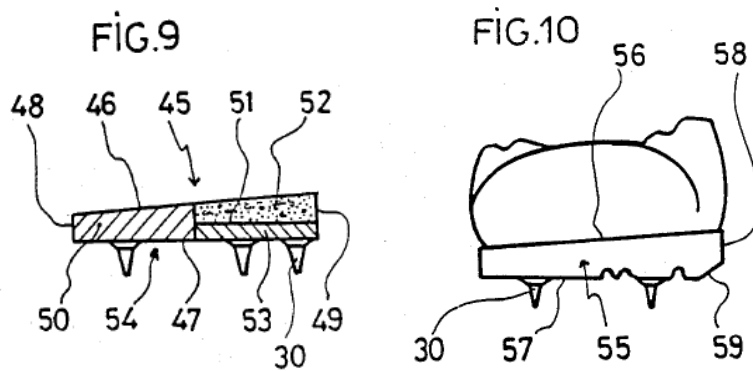


5. [1.4] “wherein a foot platform of the left sole provides an athletic positioning of a left big toe area of the left shoe at a lower position than a left heel area of the left shoe and at a lower position than an outer small toe area of the left shoe,”

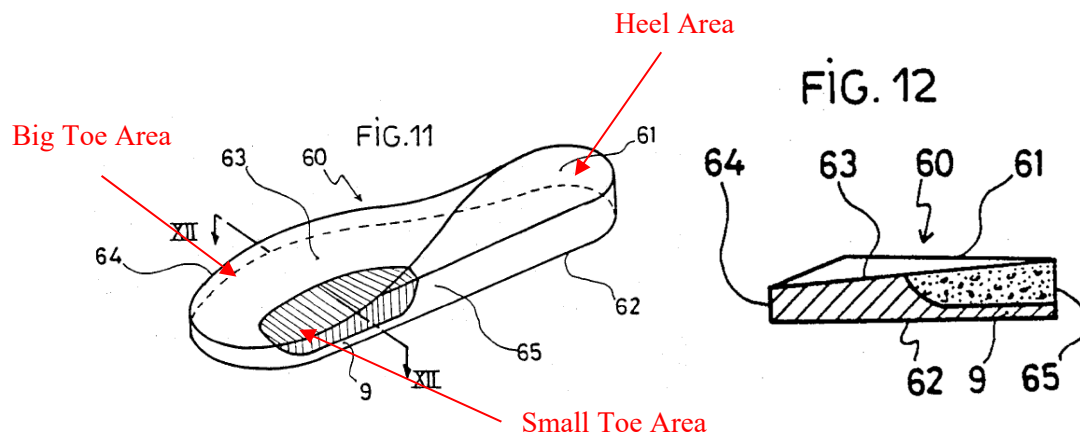
Dufour teaches and/or suggests a sole having an inside support surface that is inclined with respect to the walking surface. Ex. 1006, 4:51-54. For the left shoe, Dufour explains that “the incline of the surface 46 rises from the right inner edge 48 of said sole to the outer edge 49 thereof.” *Id.*, 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. Dufour therefore describes

a sole that positions the big toe area at a lower position than the outer small toe area.

Ex. 1002, IX.B.e.



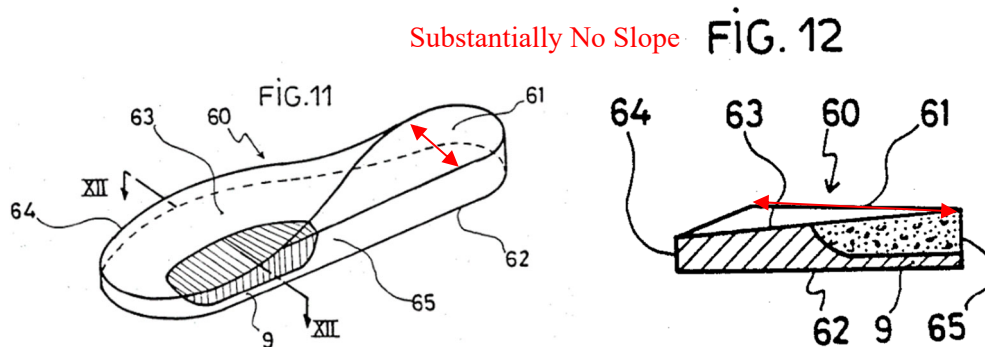
Dufour also teaches and/or suggests that the big toe area is at a lower position than the heel area, as depicted in Figures 11-13. *Id.*, see also Ex. 1006, 5:15-24.



Dufour explains that this sole shape provides “internal support of the foot in a transverse direction” based on its inclination, which “promote[s] support for the feet with respect to the ground during the first phase [of a golf swing] called the ‘address’ of the swing.” Ex. 1006, 2:61-67.

6. [1.5] “wherein, from an inner edge to an outer edge of the left shoe, the left heel area has substantially no slope,”

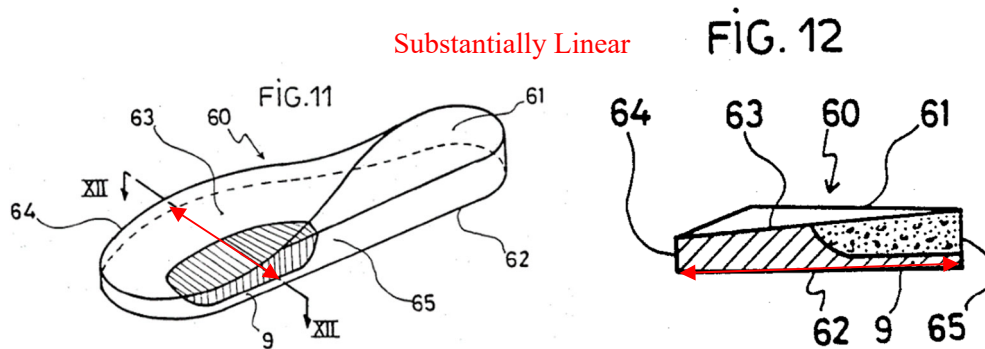
Dufour teaches and/or suggests that the heel area shown in Figures 11-13 has substantially no slope from the inner edge to the outer edge. Ex. 1002, IX.B.f.



While Figure 12 shows a cross section of the sole taken at the forefoot area, it also depicts the heel area having no slope at the upper edge of the image (the red arrow in Fig 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 Fig. 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 62.” Ex. 1006, 5:7-14.

7. [1.6] “and wherein, from the inner edge to the outer edge of the left shoe at a cross section at a ball of [foot], a bottom of the left sole is substantially linear; and”

Dufour teaches and/or suggests that the bottom of the outsole in Figures 11-12 is substantially linear from the inner edge to the outer edge at a cross section at a ball of the foot. Ex. 1002, IX.B.g.



8. [1.7] “a right foot shoe including:”

Dufour teaches and/or suggests a right foot shoe. Ex. 1002, ¶ 80; Ex. 1006, 3:44-48 (“of course, the characteristics presented below can be applied to a right shoe ... without departing from the framework of the invention.”).

To the extent Dufour suggests providing the described features to only one of the shoes (left or right, but not both), it would have been obvious to a POSITA to apply these features to both shoes to provide the associated benefits for both feet, *e.g.* the transverse seating for the foot having an inclined support surface from the inner edge to the outer edge, as shown in Figs. 11-12, that provides for an improved golf stance. Ex. 1002, ¶ 81.

9. [1.8] “a right upper shoe portion; and”

See limitation 1.2 above, describing Dufour’s disclosure of an upper shoe portion. *Id.*, ¶ 82.

10. [1.9] “a right sole coupled to the right upper shoe portion,”

See limitation 1.3 above, describing Dufour’s disclosure of a sole coupled to an upper shoe portion. *Id.*, ¶ 83.

11.[1.10] “wherein a foot platform of the right sole provides an athletic positioning of a right big toe area of the right shoe at a lower position than a right heel area of the right shoe and at a lower position than an outer small toe area of the right shoe and”

See limitation 1.4 above, describing Dufour’s disclosure of a sole having an inclined support surface that positions the big toe area at a lower position than the outer small toe area and the heel area. *Id.*, ¶ 84.

12.[1.11] “wherein, from an inner edge to an outer edge of the right shoe, the right heel area has substantially no slope, and”

See limitation 1.5 above, describing Dufour’s disclosure of a sole having substantially no slope from the inner edge to the outer edge. *Id.*, ¶ 85.

13.[1.12] “wherein, from an inner edge to an outer edge of the right shoe at a cross section at a ball of [foot], a bottom of the right shoe is substantially linear.”

See limitation 1.6 above, describing Dufour’s disclosure of shoes including sole bottoms that are substantially linear at the balls of the feet. *Id.*, ¶ 86.

ii. Claim 2

Dufour teaches and/or suggests all limitations of dependent claim 2. The following limitations of claim 2 are identical to those in claim 1, and therefore invalid for the same reasons:

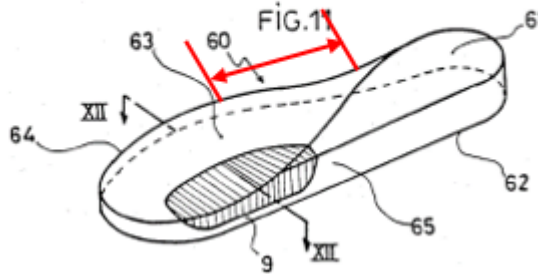
- [2.1] The pair of shoes of claim 1, wherein the foot platform of the left sole comprises: a heel section that, from the inner edge to the outer edge of the left shoe, has substantially no slope;

- [2.2] a toe section that provides the left big toe area of the left shoe at the lower position than the left heel area of the left shoe and at the lower position than the outer small toe area of the left shoe;

See the corresponding discussions above for limitations 1.4 and 1.5, respectively. *Id.*, ¶ 87.

1. [2.3] “a mid-foot section having a shape to transition from the heel section to the toe section.”

Mid-Foot Section

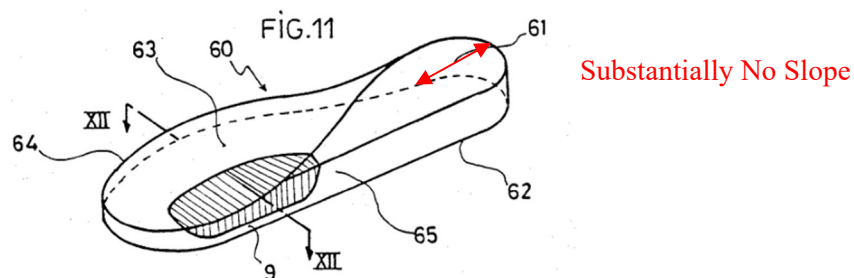


Dufour teaches and/or suggests a mid-foot section having a shape to transition from the heel section to the toe section, as shown above. Ex. 1002, IX.B.o. A POSITA would understand that the shoes shown in Figures 11-13 include a mid-foot section having a shape to transition from the heel section to the toe section, as is necessary in any shoe. *Id.*, ¶ 88.

- iii. **Claim 3: The pair of shoes of claim 2, wherein the heel section of the foot platform of the left sole comprises: a heel platform that includes a surface having substantially no slope from the inner edge to the outer edge of the left shoe and for a length of**

the surface, wherein, when the left shoe is worn, the heel platform supports a left heel of a wearer.

See limitation 1.5 above, describing Dufour's disclosure of a heel area with substantially no slope from the inner edge to the outer edge. Dufour also teaches and/or suggests that the heel section has substantially no slope for a length of the surface. Ex. 1002, IX.B.p.



A POSITA would also understand that the heel platform supports the heel of a wearer when worn, as is true of any shoe. Ex. 1002, ¶ 89; Ex. 1006, 3:51-53 (“[t]his sole ... [is] intended to accommodate and support the golfer’s left foot”); 5:7-14.

iv. Claim 6: The pair of shoes of claim 1, wherein the foot platform of the left sole comprises: a specific bottom that includes one of: a sport specific tread pattern; a spike pattern; a sliding coupling pattern; and a cleat pattern.

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.q.

v. Claim 7

Dufour teaches and/or suggests all limitations of dependent claim 7. The following limitations of claim 7 are nearly identical to those in claims 1 and 2, and are therefore invalid for the same reasons⁶:

- [7.1] The pair of shoes of claim 1, wherein the foot platform of the right sole comprises: a heel section that, from the inner edge to the outer edge of the right shoe, has substantially no slope;
- [7.2] a toe section that provides the right big toe area of the right shoe at the lower position than the right heel area of the right shoe and at the lower position than the outer small toe area of the right shoe;
- [7.3] a mid-foot section having a shape to transition from the heel section to the toe section.

See the corresponding discussions above for limitations 1.4 -1.5 and 2.3, respectively. Ex. 1002, ¶ 90.

vi. Claim 8: The pair of shoes of claim 7, wherein the heel section of the foot platform of the right sole comprises: a heel platform that includes a surface having substantially no slope from the inner edge to the outer edge of the right shoe and for a length of the surface, wherein, when the right shoe is worn, the heel platform supports a right heel of a wearer.

Dufour teaches and/or suggests all limitations of dependent claim 8, which are nearly identical to claim 3 and therefore invalid for the same reasons.⁷ *Id.*, ¶ 91.

vii. Claim 11: The pair of shoes of claim 1, where the foot platform of the right sole comprises: a specific bottom that includes one

⁶ See *supra*, note 2.

⁷ See *supra*, note 2.

of: a sport specific tread pattern; a spike pattern; a sliding coupling pattern; and a cleat pattern.

Dufour teaches and/or suggests all limitations of dependent claim 11, which are nearly identical to claim 6 and therefore invalid for the same reasons.⁸ *Id.*, ¶ 92.

E. Ground 3: Claims 1-3, 6-8, and 11 are Obvious Over Rubin

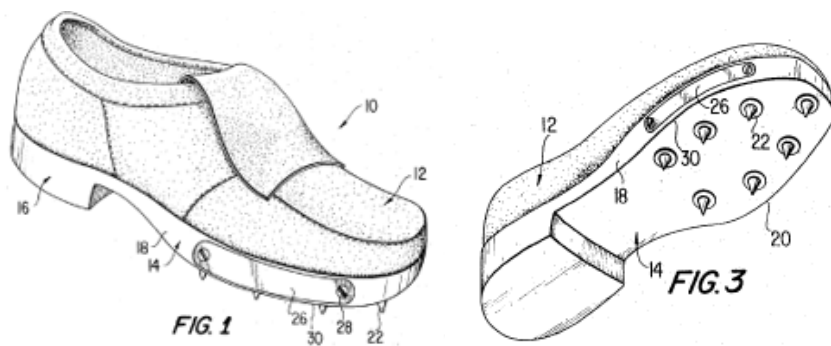
A POSITA would have found claims 1-3, 6-8 and 11 obvious over Rubin. *Id.*, ¶ 93.

i. Independent Claim 1

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

1. [1.p] “A pair of shoes comprises:”

To the extent the preamble is deemed limiting, Rubin discloses golf shoes designed to aid a golfer in assuming a proper stance, and thereby develop a more consistent swing. Ex. 1002, IX.C.a; Ex. 1007, 1:5-22, 1:63-68; Figs 1-4.



To the extent Rubin does not expressly disclose a “pair” of shoes having the disclosed features, it would have been obvious to provide both left and right shoes

⁸ See *supra*, note 2.

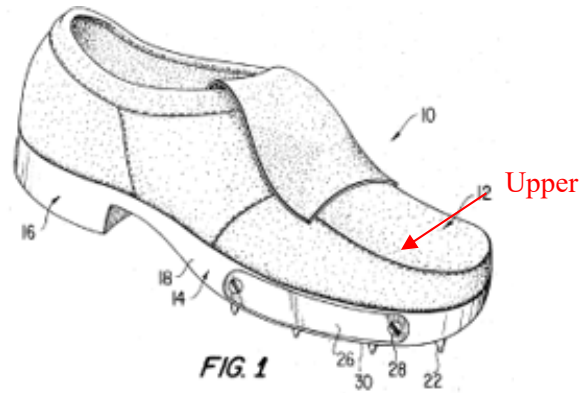
with the disclosed features based on Rubin's teachings and the knowledge of a POSITA. For example, Rubin explains that providing a built-up sole at the outer edge so that the bottom of the sole converges toward the inner side of the shoe, which provides "toe-in effect," results in an improved golf stance. *Id.*, 3:9-15; 2:3-11, Abstract. It would have been obvious to apply these features to both shoes to provide the associated benefits for both feet, *i.e.* to provide the golfer's weight to be placed on the inside of both feet. Ex. 1002, ¶ 94. This would improve the golfer's stance and weight distribution even further. *Id.*

2. [1.1] "a left foot shoe including:"

Rubin discloses golf shoes designed to aid a golfer in assuming a proper stance. While Rubin expressly depicts and describes a shoe "to be worn on the right foot of the golfer, assuming that he is right handed," (Ex. 1007, 3:5-8) a POSITA would understand that a similarly designed shoe including a built up sole on the outer side would also be worn on the left foot to provide the additional benefits described above. Ex. 1002, ¶ 95.

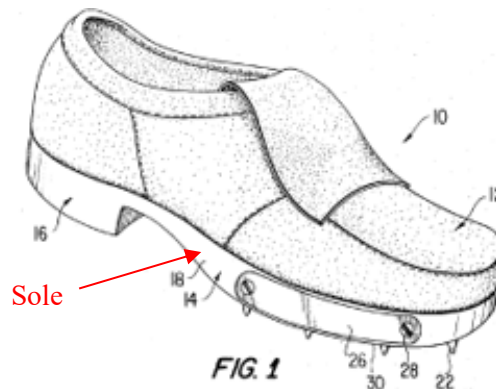
3. [1.2] “a left upper shoe portion:”

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.c.



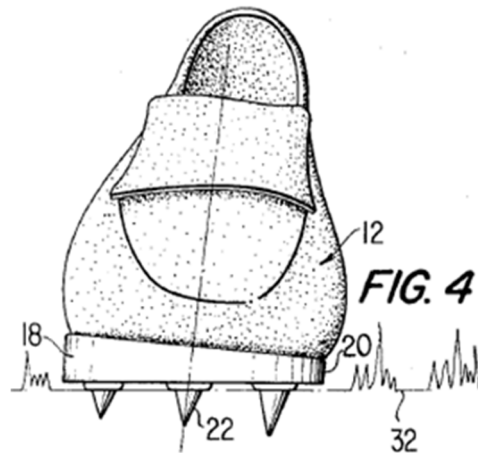
4. [1.3] “a left sole coupled to the left upper shoe portion,”

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; Ex. 1002, IX.C.d.



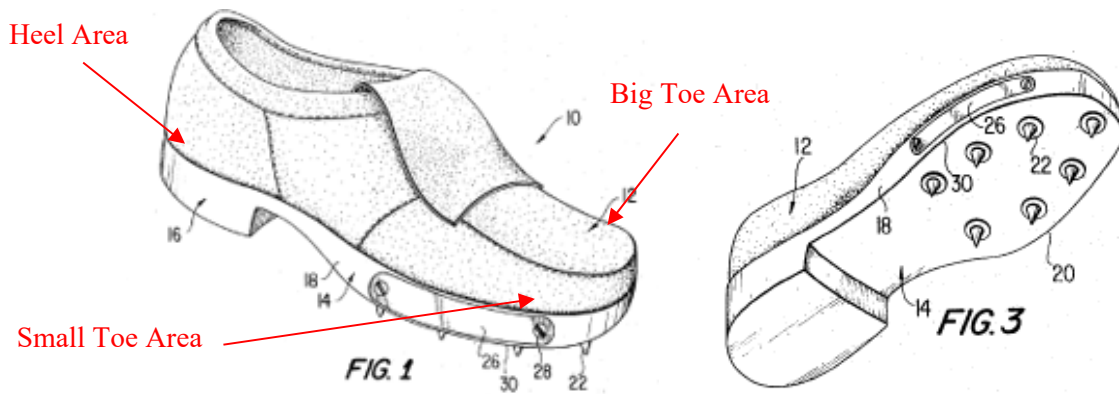
5. [1.4] “wherein a foot platform of the left sole provides an athletic positioning of a left big toe area of the left shoe at a

lower position than a left heel area of the left shoe and at a lower position than an outer small toe area of the left shoe,”

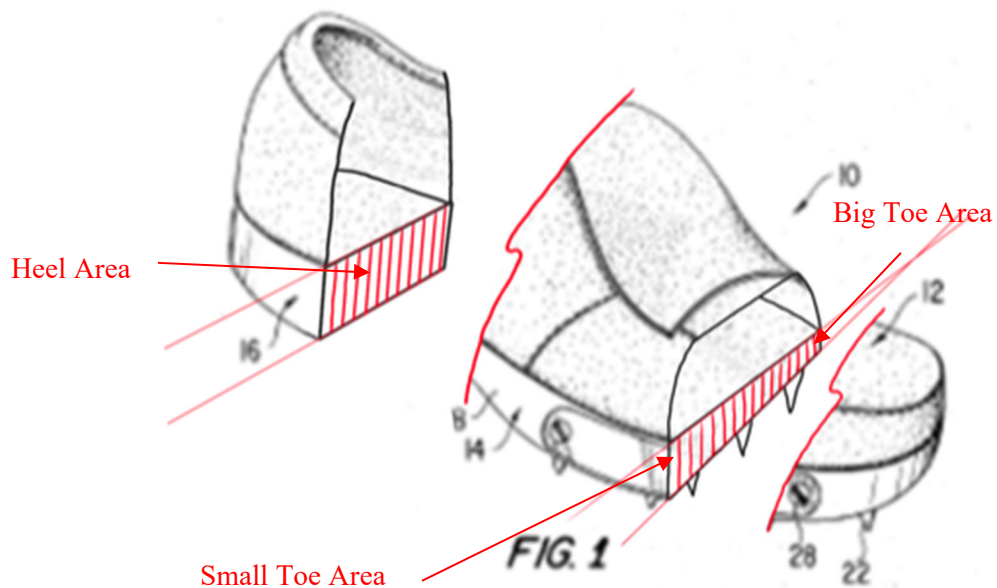


Rubin teaches and/or suggests a sole wherein the “the outer side 18 of the sole 14 extends downwardly from the shoe upper 12 to a lower elevation than the inner side 20 of the sole 14.” Ex. 1007, 3:9-12. Rubin explains that the shoe has the appearance of a built-up sole along the outer side so that the 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 sole that positions the big toe area at a lower position than the outer small toe area when the golfer assumes his/her stance. Ex. 1002, IX.C.e.



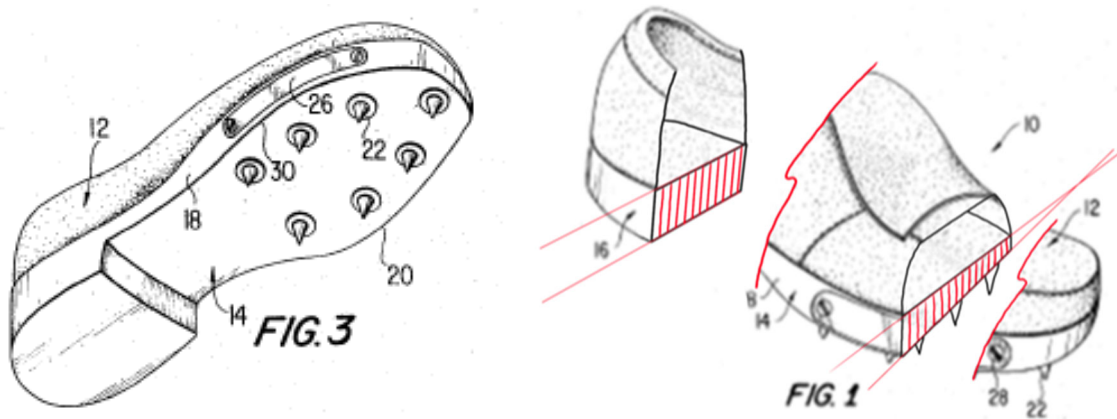
Rubin also teaches and/or suggests that the big toe area is at a lower position than the heel area, as depicted in Figures 1 and 3, above, and in modified Figure 1, below. *Id.*



Id., ¶ 96.

6. [1.5] “wherein, from an inner edge to an outer edge of the left shoe, the left heel area has substantially no slope,”

Rubin teaches and/or suggests a heel area that has substantially no slope from the inner edge to the outer edge, as shown, e.g. in Figure 3 and modified Figure 1, below. Ex. 1002, IX.C.f, ¶ 97.

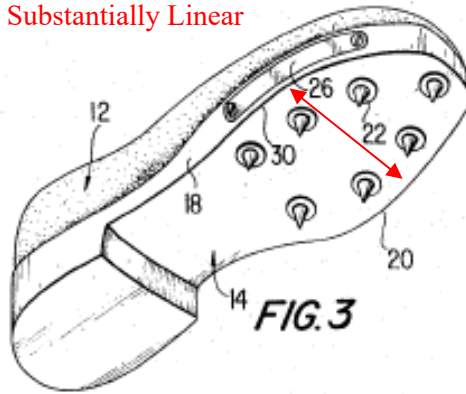


Rubin also discloses that a “conventional heel” is molded integrally with the sole. Ex. 1007, 2:67-68. A POSITA would understand that a conventional heel of a shoe has substantially no slope from the inner edge to the outer edge. Ex. 1002, ¶¶ 49-54, 98.

7. [1.6] “and wherein, from the inner edge to the outer edge of the left shoe at a cross section at a ball of [foot], a bottom of the left sole is substantially linear; and”

Rubin teaches and/or suggests that the bottom of the outsole in Figure 3 is substantially linear from the inner edge to the outer edge at a cross section at a ball of the foot. Ex. 1002, IX.C.g.

Substantially Linear



8. [1.7] “a right foot shoe including:”

Rubin teaches and/or suggests a right foot shoe. Ex. 1007, 3:5-8; Ex. 1002, ¶ 99.

9. [1.8] “a right upper shoe portion; and”

See limitation 1.2 above, describing Rubin’s disclosure of an upper shoe portion. Ex. 1002, ¶ 100.

10. [1.9] “a right sole coupled to the right upper shoe portion,”

See limitation 1.3 above, describing Rubin’s disclosure of a sole coupled to a upper shoe portion. *Id.*, ¶ 101.

11. [1.10] “wherein a foot platform of the right sole provides an athletic positioning of a right big toe area of the right shoe at a lower position than a right heel area of the right shoe and at a lower position than an outer small toe area of the right shoe and”

See limitation 1.4 above, describing Rubin’s disclosure of a sole that positions the big toe area at a lower position than the outer small toe area and the heel area. *Id.*, ¶ 102.

12.[1.11] “wherein, from an inner edge to an outer edge of the right shoe, the right heel area has substantially no slope, and”

See limitation 1.5 above, describing Dufour’s disclosure of heel area having substantially no slope from the inner edge to the outer edge. *Id.*, ¶ 103.

13.[1.12] “wherein, from an inner edge to an outer edge of the right shoe at a cross section at a ball of [foot], a bottom of the right shoe is substantially linear.”

See limitation 1.6 above, describing Dufour’s disclosure of shoes including sole bottoms that are substantially linear at the balls of the feet. *Id.*, ¶ 104.

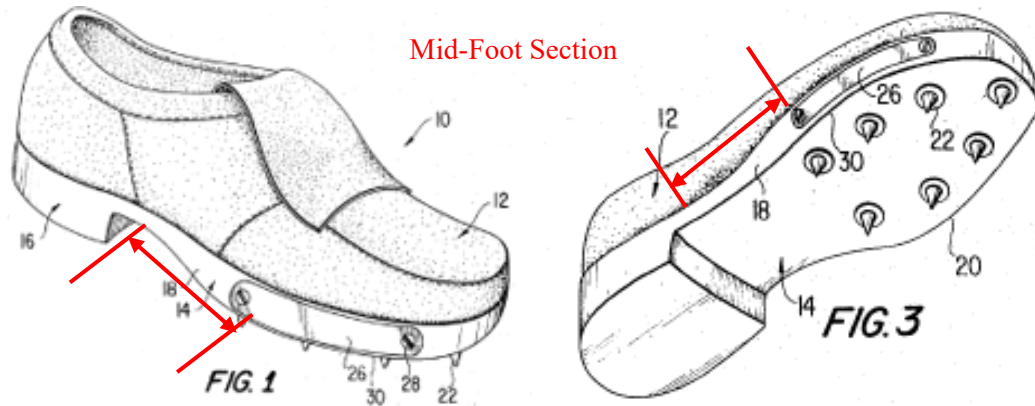
ii. Claim 2

Rubin teaches and/or suggests all limitations of dependent claim 2. The following limitations of claim 2 are identical to those in claim 1, and therefore invalid for the same reasons:

- [2.1] The pair of shoes of claim 1, wherein the foot platform of the left sole comprises: a heel section that, from the inner edge to the outer edge of the left shoe, has substantially no slope;
- [2.2] a toe section that provides the left big toe area of the left shoe at the lower position than the left heel area of the left shoe and at the lower position than the outer small toe area of the left shoe

See the corresponding discussions above for limitations 1.4 and 1.5, respectively. *Id.*, ¶ 105.

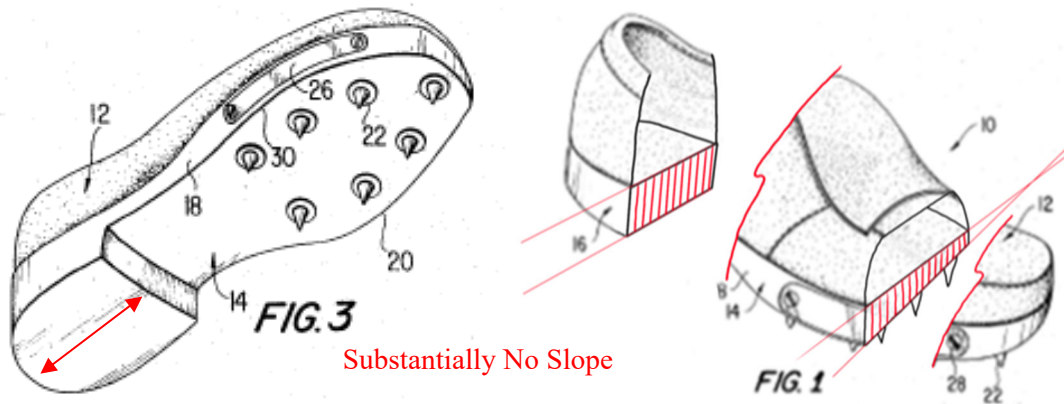
1. [2.3] “a mid-foot section having a shape to transition from the heel section to the toe section.”



Rubin teaches and/or suggests a mid-foot section having a shape to transition from the heel section to the toe section, as shown above. A POSITA would understand that the shoes shown in Figures 1 and 3 include a mid-foot section having a shape to transition from the heel section to the toe section, as is necessary in any shoe. Ex. 1002, ¶ 106.

- iii. **Claim 3: The pair of shoes of claim 2, wherein the heel section of the foot platform of the left sole comprises: a heel platform that includes a surface having substantially no slope from the inner edge to the outer edge of the left shoe and for a length of the surface, wherein, when the left shoe is worn, the heel platform supports a left heel of a wearer.**

See limitation 1.5 above, describing Rubin’s disclosure of a heel area with substantially no slope from the inner edge to the outer edge. Rubin also teaches and/or suggests that the heel section shown in Figures 1 and 3 has substantially no slope for a length of the surface. Ex. 1002, IX.C.p, ¶ 107.



Rubin also discloses a “conventional heel ... molded integrally with [the] sole.” Ex. 1007, 2:67-68. A POSITA would have known that a conventional heel had substantially no slope for a length of its surface. Ex. 1002, ¶ 108. A POSITA would also understand that the heel platform supports the heel of a wearer when worn, as is true of any shoe. *Id.*

iv. Claim 6: The pair of shoes of claim 1, wherein the foot platform of the left sole comprises: a specific bottom that includes one of: a sport specific tread pattern; a spike pattern; a sliding coupling pattern; and a cleat pattern.

Rubin discloses a golf shoe that includes a plurality of cleats projecting downwardly from the bottom of the sole. Ex. 1007, 3:24-25; Figs 3-4; Ex. 1002, IX.C.q.

v. Claim 7

Rubin teaches and/or suggests all limitations of dependent claim 7. The following limitations of claim 7 are nearly identical to those in claims 1 and 2, and are therefore invalid for the same reasons⁹:

- [7.1] The pair of shoes of claim 1, wherein the foot platform of the right sole comprises: a heel section that, from the inner edge to the outer edge of the right shoe, has substantially no slope;
- [7.2] a toe section that provides the right big toe area of the right shoe at the lower position than the right heel area of the right shoe and at the lower position than the outer small toe area of the right shoe;
- [7.3] a mid-foot section having a shape to transition from the heel section to the toe section.

See the corresponding discussions above for limitations 1.4-1.5 and 2.3, respectively. Ex. 1002, ¶ 109.

- vi. Claim 8: The pair of shoes of claim 7, wherein the heel section of the foot platform of the right sole comprises: a heel platform that includes a surface having substantially no slope from the inner edge to the outer edge of the right shoe and for a length of the surface, wherein, when the right shoe is worn, the heel platform supports a right heel of a wearer.**

Rubin teaches and/or suggests all limitations of dependent claim 8, which are nearly identical to claim 3 and therefore invalid for the same reasons.¹⁰ *Id.*, ¶ 110.

- vii. Claim 11: The pair of shoes of claim 1, where the foot platform of the right sole comprises: a specific bottom that includes on of:**

⁹ See *supra*, note 2.

¹⁰ See *supra*, note 2.

a sport specific tread pattern; a spike pattern; a sliding coupling pattern; and a cleat pattern.

Rubin teaches and/or suggests all limitations of dependent claim 11, which are nearly identical to claim 6 and therefore invalid for the same reasons.¹¹ *Id.*, ¶ 111.

F. Ground 4: Claims 4-5 and 9-10 are Obvious Over Kim in View of De Obaldia

Claims 4-5 and 9-10 depend from claims 2 and 7 and add an additional limitation: “a stabilizing cup” in the big toe area to stabilize and/or position the big toe or the ball-of-foot of the wearer. Claims 4-5 and 9-10 are obvious under pre-AIA 35 U.S.C. §103 by Kim in view of De Obaldia. *Id.*, ¶¶ 112-13.

Overview of the Combination

The combination of Kim and De Obaldia renders claims 4-5 and 9-10 obvious. Kim discloses a pair of golf shoes wherein the sole has an inclined lower surface from its outer edge to its inner edge, but does not expressly disclose a stabilizing cup in the big toe area. De Obaldia does. *Id.*, ¶ 114.

Rationale (Motivation) Supporting Obviousness

It would have been obvious to incorporate recesses for the wearer’s toe(s) and balls of the feet, like that described in De Obaldia, into the pair of shoes disclosed in

¹¹ See *supra*, note 2.

Kim. A POSITA would have found it obvious to have combined the teachings of Kim and De Obaldia with predictable outcomes. *Id.*, ¶ 115.

Kim and De Obaldia are both in the same field (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.*, ¶ 116. A POSITA would have naturally looked to De Obaldia when considering ways to improve the Kim sole design. *Id.* A POSITA would understand that including recesses for the toe(s) and or balls of the feet provides several benefits. *Id.* For example, as De Obaldia explains, these recesses provide increased anatomical support for the wearer's foot. Ex., 1008, 1:14-18, 2:63-68.

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 toe and/or ball-of-foot recesses, like those disclosed in De Obaldia,

into the pair of shoes disclosed in Kim. Ex. 1002, ¶ 117. Kim’s multi-layered sole could easily be modified to include the recesses disclosed in De Obaldia to stabilize and position the big toe and the ball of the foot in a particular location. *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

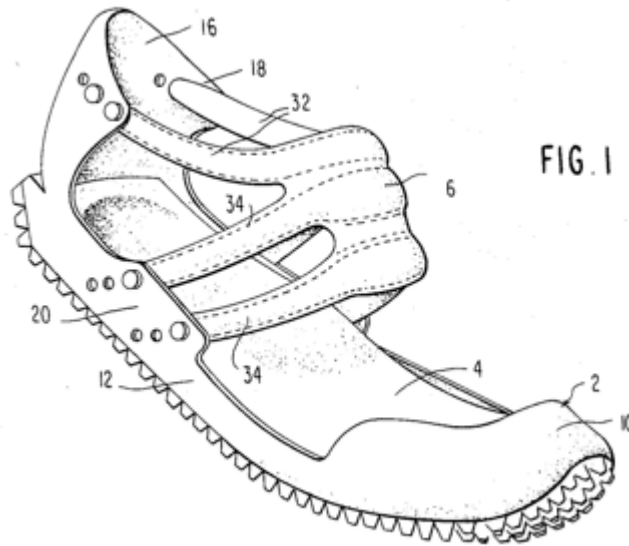
Kim and De Obaldia are analogous art because they are in the same field as the ‘760 patent (Ex. 1001, ’760 patent at Abstract, Title) (Ex. 1005, Kim at Abstract, Title) (Ex. 1008, De Obaldia at Abstract, Title), and all three relate to shoe designs that incorporate soles/insoles that improve foot positioning and/or support. *Id.*, ¶ 118.

Claims 4, 5, 9, and 10 are Obvious Over Kim in View of De Obaldia

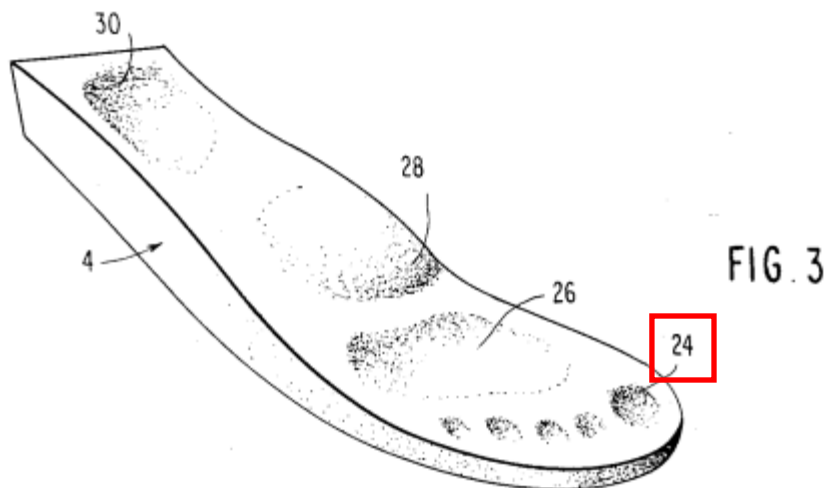
- i. **Claim 4 - The pair of shoes of claim 2, wherein the toe section of the foot platform of the left sole comprises: a stabilizing cup in the left big toe area, wherein, when the left shoe is worn, the stabilizing cup functions to, at least one of, stabilize and position a left big toe of a wearer in a particular location in the left big toe area.**

Kim teaches and/or suggests all elements of dependent claim 2, as described in Ground 1 above. Kim does not, however, disclose a “stabilizing cup” in the big toe area that functions to “at least one of, stabilize and position” the big toe in a particular location. De Obaldia discloses this feature. *Id.*, ¶ 119.

De Obaldia discloses an article of footwear that includes a molded body member 2, a molded foot support member 4, which supports the wearer's foot, and a flexible harness 6, as depicted in Figure 1. Ex. 1008, Abstract, 2:23-44



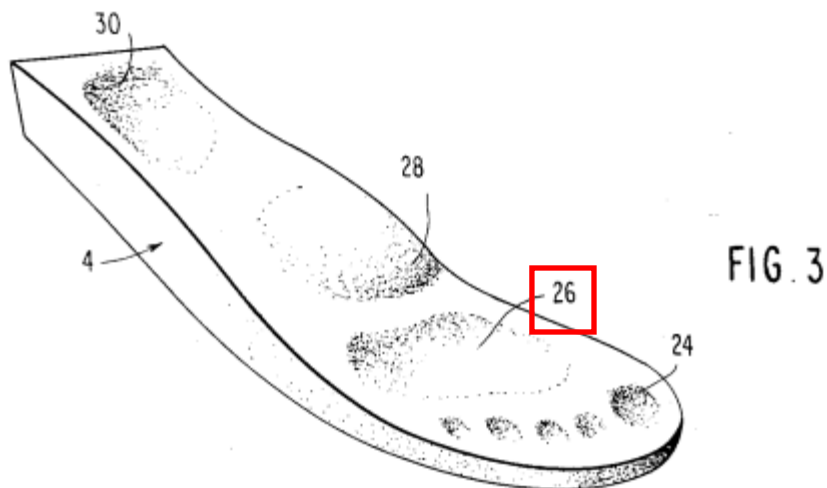
As shown in Figure 3, “the upper surface of the foot support member is configured to correspond to and provide anatomical support for the wearer’s foot. Preferably, this configuration includes at least one *toe recess 24*, [and] a recess 26 for accommodating a ball of the wearer’s foot” *Id.*, 2:63-68; *see also* claims 5, 13.



- ii. **Claim 5 - The pair of shoes of claim 2, wherein the toe section of the foot platform of the left sole comprises: a stabilizing cup in the left big toe area, wherein, when the left shoe is worn, the stabilizing cup functions to, at least one of, stabilize and position a left ball-of-foot of a wearer in a particular location in the left big toe area.**

Kim teaches and/or suggests all elements of dependent claim 2, as described in ground 1 above. Kim does not disclose a “stabilizing cup” in the big toe area that functions to “at least one of, stabilize and position” the ball of the foot in a particular location in the big toe area. De Obaldia discloses this feature. Ex. 1002, ¶ 120.

As shown in Figure 3, “the upper surface of the foot support member is configured to correspond to and provide anatomical support for the wearer’s foot. Preferably, this configuration includes at least one toe recess 24, [and] a *recess 26 for accommodating a ball of the wearer’s foot*” *Id.*, 2:63-68; *see also* claims 5, 13.



iii. Claims 9 and 10

Claims 4 and 5 are specific to the left foot shoe, while claims 9 and 10 are specific to the right foot shoe. Petitioner's arguments for the left and right foot shoes are synonymous, rendering claims 9 and 10 obvious based on the disclosures and analysis for claims 4 and 5 above. *Id.*, ¶¶ 121-22.

G. Ground 5: Claims 4-5 and 9-10 are Obvious Over Dufour in View of De Obaldia

Claims 4-5 and 9-10 are obvious under pre-AIA 35 U.S.C. §103 by Dufour in view of De Obaldia. Ground 5 is similar to Ground 4 and relies on De Obaldia for the same disclosure of stabilizing cups, but substitutes Dufour as the primary reference. For the reasons described below, a POSITA would have been motivated to combine the teachings of Dufour with De Obaldia. *Id.*, ¶¶ 123-25.

Rationale (Motivation) Supporting Obviousness

It would have been obvious to incorporate recesses for the wearer's toe(s) and balls of the feet, like that described in De Obaldia, into the golf shoe disclosed in Dufour. A POSITA would have found it obvious to have combined the teachings of Dufour and De Obaldia with predictable outcomes. Ex. 1002, ¶ 126.

Dufour and De Obaldia are both in the same field (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.*, ¶ 127. A POSITA would have naturally looked to De Obaldia when considering ways to improve the Dufour sole design. *Id.* A POSITA would understand that including recesses for the toe(s) and or balls of the feet provides several benefits. *Id.* For example, as De Obaldia explains, these recesses provide increased anatomical support for the wearer's foot, useful, for example, when jogging. Ex., 1008, 1:14-18, 2:63-68.

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 toe and/or ball-of-foot recesses, like those disclosed in De Obaldia, into the pair of shoes disclosed in Dufour. Ex. 1002, ¶ 128. Dufour's sole could easily be modified to include the recesses disclosed in De Obaldia to stabilize and position the big toe and the ball of the foot in a particular location. *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 De Obaldia are analogous art, because they are in the same field as the '760 patent (Ex. 1001, '760 patent at Abstract, Title) (Ex. 1006, Dufour at Abstract, Title) (Ex. 1008, De Obaldia at Abstract, Title), and all three related to shoe designs that incorporate soles/insoles that improve foot positioning and/or support. *Id.*, ¶ 129.

Claims 4, 5, 9, and 10 are Obvious Over Dufour in View of De Obaldia

See Ground 4, above, describing De Obaldia's disclosures relevant to claims 4, 5, 9 and 10. *Id.*, ¶¶ 130-33.

H. Ground 6: Claims 4-5 and 9-10 are Obvious Over Rubin in View of De Obaldia

Claims 4-5 and 9-10 are obvious under pre-AIA 35 U.S.C. §103 by Rubin in view of De Obaldia. Ground 6 is similar to Grounds 4 and 5 and relies on De Obaldia for the same disclosure of stabilizing cups, but substitutes Rubin as the primary reference. For the reasons described below, a POSITA would have been motivated to combine the teachings of Rubin with De Obaldia. Ex. 1002, ¶¶ 134-36.

Rationale (Motivation) Supporting Obviousness

It would have been obvious to incorporate recesses for the wearer's toe(s) and balls of the feet, like that described in De Obaldia, into the into the golf shoes disclosed in Rubin. A POSITA would have found it obvious to have combined the teachings of Rubin and De Obaldia with predictable outcomes. *Id.*, ¶ 137.

Rubin and De Obaldia are both in the same field (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.*, ¶ 138. A POSITA would have naturally looked to De Obaldia when considering ways to improve the Rubin sole design. *Id.* A POSITA would understand that including recesses for the toe(s) and or balls of the feet provides several benefits. (Expert Decl.) For example, as De Obaldia explains, these recesses provide increased anatomical support for the wearer's foot, useful, for example, when jogging. Ex., 1008, 1:14-18, 2:63-68.

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 toe and/or ball-of-foot recesses, like those disclosed in De Obaldia, into the pair of shoes disclosed in Rubin. Ex. 1002, ¶ 139. Rubin’s sole or insole could easily be modified to include the recesses disclosed in De Obaldia to stabilize and position the big toe and the ball of the foot in a particular location. *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 De Obaldia are analogous art because they are in the same field as the ‘760 patent (Ex. 1001, ’760 patent at Abstract, Title) (Ex. 1007, Rubin at Abstract, Title) (Ex. 1008, De Obaldia at Abstract, Title), and all three related to

shoe designs that incorporate soles/insoles that improve foot positioning and/or support. *Id.*, ¶ 140.

Claims 4, 5, 9, and 10 are Obvious Over Dufour in View of De Obaldia

See Ground 4, above, describing De Obaldia’s disclosures relevant to claims 4, 5, 9 and 10. *Id.*, ¶¶ 141-44.

VIII. THE BOARD SHOULD INSTITUTE UNDER 35 U.S.C. § 314

Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) weighs against exercising discretion to deny this Petition. 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 recently 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 ‘760 patent. IPR2016-01357, Paper 19, at 16-18 (P.T.A.B. Sept. 6, 2017).

IX. CONCLUSION

For the reasons stated above, Petitioner submits that claims 1-11 of the '760 patent are unpatentable. Accordingly, Petitioner requests institution of *Inter Partes* Review.

DATED: March 4, 2024

Respectfully submitted,

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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:

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GARLICK & MARKISON
2025 GUADALUPE STREET, SUITE 260
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CERTIFICATE OF WORD COUNT

The undersigned hereby certifies that the foregoing petition for *inter partes* review contains 11,190 words according to the word processing program used to prepare it.

Date: March 4, 2024

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