

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NIKE INC.,
Petitioner,

v.

JEZIGN LICENSING, LLC,
Patent Owner.

Case IPR2017-00246
Patent 6,837,590 B2

Before KRISTEN L. DROESCH, PHILLIP J. KAUFFMAN, and
GEORGIANNA W. BRADEN, *Administrative Patent Judges*.

DROESCH, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a), 37 C.F.R. § 42.73

I. INTRODUCTION

We have jurisdiction to hear this *inter partes* review under 35 U.S.C. § 6, and this Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–3 (“the challenged claims”) of U.S. Patent No. 6,837,590 B2 (Ex. 1001, “the ’590 Patent”) are unpatentable.

A. Procedural History

Nike Inc. (“Petitioner”) filed a Petition for *inter partes* review of the challenged claims. Paper 3 (“Pet.”). Jezign Licensing, LLC (“Patent Owner”) timely filed a Preliminary Response. Paper 11. Pursuant to 35 U.S.C. § 314, we instituted trial on May 30, 2017, as to the challenged claims of the ’590 Patent (Paper 12, “Institution Decision” or “Dec.”) and on May 2, 2018, we modified the Institution Decision to institute review of all challenged claims on all grounds presented in the Petition (Paper 30, “SAS Order”). Accordingly, this *inter partes* review includes the following challenges: (1) claims 1 and 2 as unpatentable under 35 U.S.C. § 102(a) and (b)¹ in view of Shkalim²; (2) claim 3 as unpatentable under 35 U.S.C. § 103 in view of Shkalim and Powell³; (3) claims 1 and 2 as unpatentable under 35

¹ The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. § 100 *et seq.* effective on March 16, 2013. The ’590 patent issued from an application filed before March 16, 2013; therefore, we apply the pre-AIA versions of the statutory bases for unpatentability.

² Shkalim, EP 0 534 560 A1, published Mar. 31, 1993 (Ex. 1003, “Shkalim”).

³ Powell, U.S. 4,130,951, issued Dec. 26, 1978 (Ex. 1006, “Powell”).

U.S.C. § 102(a) and (b) in view of Chien⁴; (4) claim 3 as unpatentable under 35 U.S.C. § 103(a) in view of Chien and Powell; (5) claims 1 and 2 as unpatentable under 35 U.S.C. § 102(a) and (b) in view of Chiaramonte⁵; and (6) claim 3 as unpatentable under 35 U.S.C. § 103(a) in view of Chiaramonte and Powell. *See* Dec., 33; SAS Order, 2.

After institution of trial, Patent Owner filed a Patent Owner Response (Paper 16, “PO Resp.”), to which Petitioner filed a Reply (Paper 24, “Reply”). Petitioner relies on a Declaration of Lance Rake (Ex. 1002) to support its position. Petitioner also filed Objections to Evidence (Paper 17) and a Motion to Exclude Evidence (Paper 25). Patent Owner opposed the Motion to Exclude (Paper 27) and Petitioner submitted a Reply in support of its Motion to Exclude (Paper 29). An oral argument was held on February 28, 2018. A transcript of the oral argument is included in the record. Paper 30 (“Tr.”).

B. Related Matters

The parties identify the following district court cases that would affect or be affected by a decision in the instant proceeding: *Jezign Licensing, LLC v. Nike Inc.*, Case No. 16-cv-1192-TDC (D. Md.); and *Jezign Licensing, LLC v. Bebe Stores, Inc.*, Case No. 16-cv-1191-TDC (D. Md.). Pet. 1; Paper 5, 2. Patent Owner additionally identifies the following district court case: *Jezign Licensing, LLC v. Skechers U.S.A., Inc.*, Case No. 8:16-cv-1193 (D. Md.). Paper 5, 2.

⁴ Chien, U.S. 5,865,523, issued Feb. 2, 1999 (Ex. 1004, “Chien”).

⁵ Chiaramonte, Jr., U.S. 4,112,601, issued Sept. 12, 1978 (Ex. 1005, “Chiaramonte”).

C. The '590 Patent (Ex. 1001)

The '590 Patent is directed to “shoes including soles that are switchably illuminated.” Ex. 1001, 1:11–14. The '590 Patent describes as background that night safety for outdoor exercisers is an ongoing concern to motorists. *See id.* at 1:17–25. “Some athletic shoes include illuminated portions on the shoe upper,” “[o]ther athletic shoes contain illuminated portions in the heel,” and “still other athletic shoes contain illuminated regions in the instep portion of the sole.” *Id.* at 1:54–58. According to the '590 Patent, “[t]ypically, the light sources for these shoes are activated each time the wearer’s foot makes contact with a surface and they remain active for a very limited duration (strobe, blink or flash). Thus, the wearer has extremely limited control over the duration of illumination.” *Id.* at 1:58–63.

Figure 3 of the '590 Patent is reproduced below.

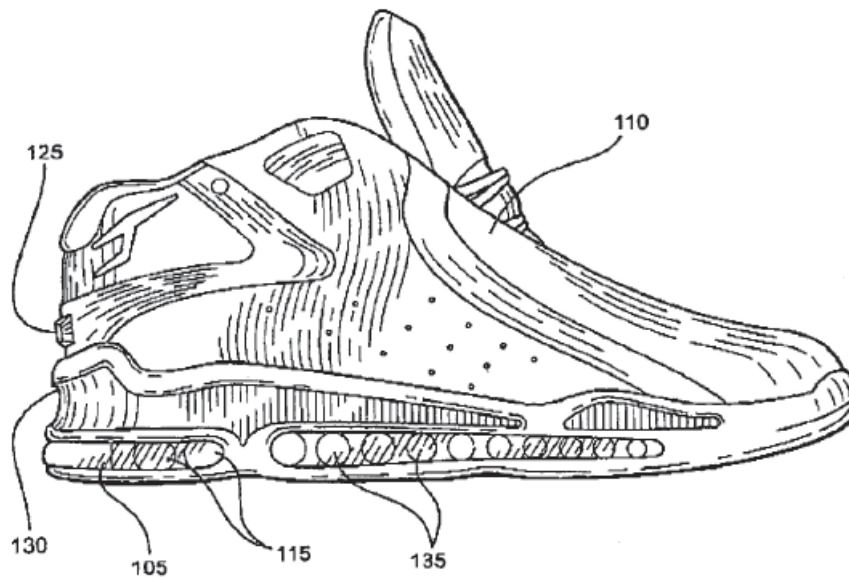


Figure 3 depicts “a side view of a shoe in accordance with the invention.” *Id.* at 2:25–26. The shoe of Figure 3 includes sole 105 attached to upper 110. *See id.* at 4:2–3. Sole 105 includes translucent perimeter surface 115. *See id.* at 4:3–4.

Figure 4 of the '590 Patent is reproduced below.

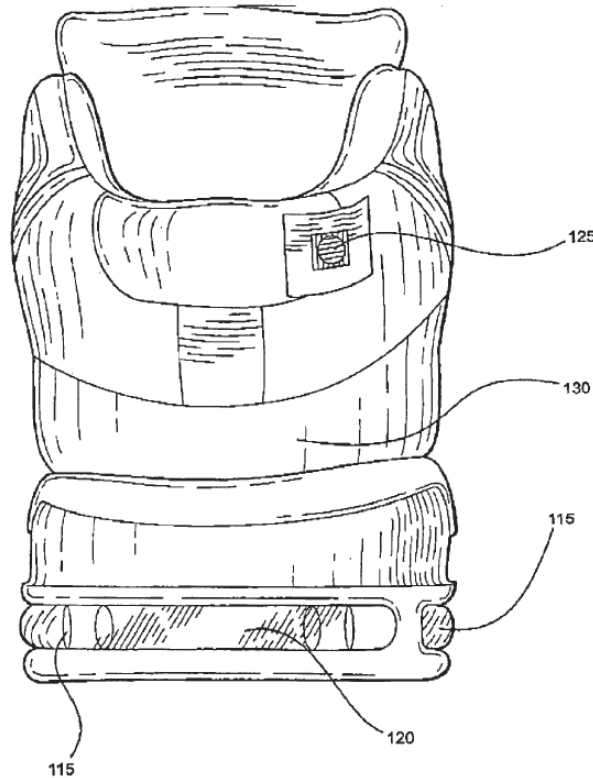


Figure 4 depicts “a rear view of shoe in accordance with the invention.” *Id.* at 2:27–28. Translucent perimeter surface 115 has light source 120 disposed therein, and preferably connected to push-button switch 125 disposed on rear quarter 130. *See id.* at 4:3–7. “[L]ight source **120** may comprise a plurality of light emitting devices **135** contiguously positioned so as to appear to form a substantially uniform illustration pattern across perimeter surface **115**.” *Id.* at 4:12–16.

The '590 Patent further discloses the shoe employs push-button switch 125 to facilitate continuous illumination of light source 120 when activated. *See Ex. 1001, 4:17–19.* “Continuous illumination provides greater user control of the duration and timing of illumination and provides increased visibility over prior art shoes that employ blinking, strobing,

flashing or intermittent light sources that are activated only when the wearer's foot makes contact with a surface." *Id.* at 4:19–25.

Figure 5 of the '590 Patent is reproduced below.

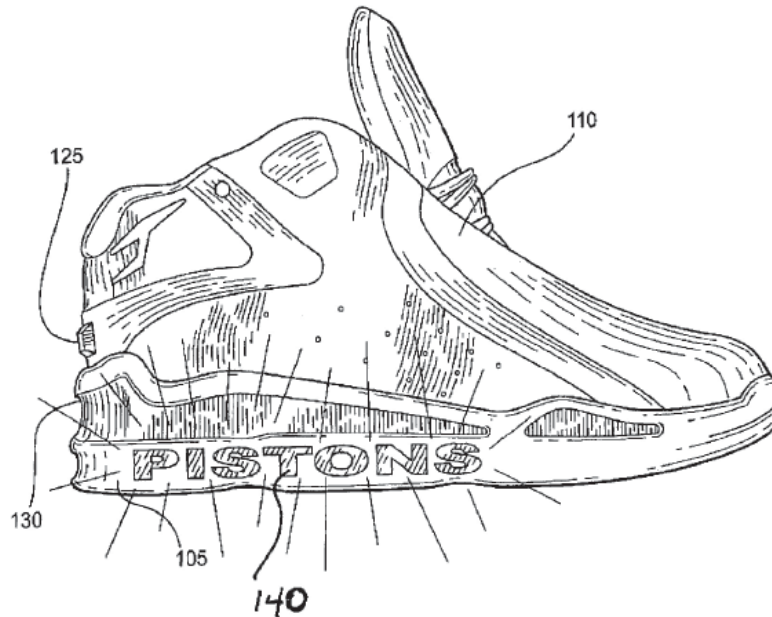


Figure 5 depicts “a side view of the shoe in accordance with an embodiment of the invention.” *Id.* at 2:29–30. “[S]ole **115** may be generally opaque and include translucent regions **140** variously shaped and arranged.” *Id.* at 4:26–29. For example, “translucent regions **140** may be in the shape of letters arranged to display a message, i.e., a word, phrase or a numeric phrase.” *Id.* at 4:29–31.

D. Challenged Claims

Challenged claims 1–3 of the '590 Patent are reproduced below:

1. An illuminated shoe comprising:
an upper;
a sole attached to said upper, the sole including a translucent perimeter surface;
a light source disposed within said sole; and
a push-button switch coupled to said light source to activate the light source such that the light source provides continuous illumination across a substantial portion of the perimeter surface regardless of whether the wearer is standing still or walking.
2. The illuminated shoe of claim 1 wherein said light source includes a plurality of contiguous light emitting devices disposed in said sole that form a substantially uniform illumination pattern across the perimeter surface.
3. An illuminated shoe comprising:
an upper;
a sole attached to said upper, the sole including an opaque perimeter surface having a plurality of translucent regions, the translucent regions being formed in the shape of alpha numeric characters and being arranged to spell a word;
a light source disposed within said sole such that said light source provides illumination to the plurality of translucent regions; and
a push-button switch coupled to said light source to facilitate activation of the light source for user selected periods of time independent of whether the wearer is standing still or walking.

Id. at 4:60–6:10.

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are construed according to their broadest reasonable construction in light of the specification of the patent in which they appear. See 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S.Ct. 2131, 2144–46 (2016). Consistent with the broadest reasonable construction, claim terms are presumed to have their ordinary and customary meaning as understood by a person of ordinary skill in the art in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). “[T]he [S]pecification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (en banc) (quoting *Vitrionics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (1996)). An inventor may provide a meaning for a term that is different from its ordinary meaning by defining the term in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). Extrinsic evidence, such as dictionaries and expert testimony, may be useful, but it is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence. *Phillips v. AWH Corp.*, 415 F.3d at 1319. In addition, the Board may not “construe claims during [an *inter partes* review] so broadly that its constructions are unreasonable under general claim construction principles.” *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015), *overruled on other grounds by Aqua Prods., Inc. v. Matal*, 872 F.3d 1290 (Fed. Cir. 2017).

Petitioner proposes a construction for the term “sole,” recited in claims 1 through 3. Pet. 12–14. Petitioner contends that the broadest reasonable interpretation of “sole” is “the part of a shoe that sits below a wearer’s foot.” *Id.* at 12. Petitioner argues that “[t]he patent consistently and without exception uses the term ‘sole’ to refer to one or more regions below the wearer’s foot.” *Id.* Petitioner points to Figures 3 and 5 of the ’590 Patent which, according to Petitioner, show “the sole 105 occupies the entire space below the wearer’s foot while the remainder of the shoe is indicated as part of the upper 110.” *Id.* Petitioner also cites a dictionary definition, which defines “sole” as “the part of an item of footwear on which the sole rests and upon which the wearer treads.” *Id.* at 13 n.2 (citing Ex. 1013; Ex. 1002 ¶ 48).

Petitioner further argues “[t]o the extent Patent Owner argues that sole does not include a heel portion of a shoe, the embodiments disclosed in the ’590 patent indicate that such an interpretation is not consistent with the broadest reasonable construction of the term as used in the ’590 patent.” Pet. 13–14. In support of its argument, Petitioner directs attention to Figures 3 and 4 of the ’590 Patent and argues these figures depict sole 105 as including the rear portion of the shoe. *See id.* at 14 (reproducing Ex. 1001, Fig. 3; citing Ex. 1001, 4:1–3; Ex. 1002 ¶ 49).

For the purpose of the Institution Decision, we adopted “Petitioner’s proposed construction of “‘sole’—the part of a shoe that sits below a wearer’s foot—[as] the broadest reasonable interpretation of the term in light of the ’590 patent specification.” Dec. 9; *see id.* at 9–10 (citing Ex. 1001, Abstract, 1:11–14, 1:53–63, 2:7–16, 4:1–59, Figs. 3–5; Pet. 13 n.2; Ex. 3001).

Patent Owner contends that Petitioner's proposed claim construction for "sole," as adopted by the Board, is unreasonable. *See* PO Resp. 6. Patent Owner asserts that Petitioner's position is "that the term sole must include, or also means, heel." *Id.* at 7. "Patent Owner does not dispute the proposed construction of sole [] insofar as the sole is a portion of a shoe that sits below a wearer's foot," but "disagrees with Petitioner's position as adopted by the Board that sole and heel are the same parts of a shoe." *Id.* at 7–8. Patent Owner contends that the Board's determination that the '590 Patent does not include a special definition disavowing heel from the meaning of the term sole is not sufficient to find that sole means heel. *See id.* at 8. Patent Owner argues, "[n]o passage of the '590 Patent cited to by Petitioner or the Board indicates that Patent Owner intended for sole to mean heel." *Id.* Patent Owner contends that "Patent Owner did not use the term sole in a manner inconsistent with Patent Owner's position that heel has a meaning separate and distinct from sole." *Id.* at 8. Patent Owner further asserts "that the record does not include evidence sufficient to support a determination that a construction of sole meaning heel is reasonable." *Id.*

Patent Owner misapprehends Petitioner's proposed construction for "sole," and the Board's initial adoption thereof. Contrary to Patent Owner's argument, we understand that Petitioner does not assert "sole" to mean "heel," or is otherwise synonymous with "heel." *See* Pet. 12–14. Also contrary to Patent Owner's argument, the Board merely stated: "[t]he '590 patent does not define the term 'sole' or disavow the heel portion of the athletic shoe as being part of the sole," and that "Patent Owner fails to address the disclosures in the '590 patent or explain why the record as a whole, including the intrinsic evidence, requires a narrower construction of

the term ‘sole.’” Dec. 9–10. We reiterate that the ’590 Patent (to include the incorporated ’586 Patent) does not include a lexicographical definition that specifies that the heel is distinct from the sole. Further, as detailed below, the ordinary meaning of the heel being a portion of the sole is consistent with the Specification.

Related to its previous arguments addressing Petitioner’s position, Patent Owner further contends, “the intrinsic record is clear that a sole is different than a heel.” PO Resp. 10. In support of its position, Patent Owner alleges that U.S. Patent 5,285,586 (Ex. 3003, “the ’586 Patent”), incorporated by reference in the ’590 Patent, “explains the difficulties associated with providing lighting in shoes that do not include heels in their typical rigid and voluminous form.” *Id.* at 9. Also in support of its position, Patent Owner directs attention to an article allegedly explaining how difficult Petitioner found the task of incorporating illuminated sole technology. *See id.* at 9–10 (citing Ex. 2001).⁶ Patent Owner further asserts that the extrinsic record supports its position that a sole is a different part of a shoe than a heel. *Id.* at 10. Patent Owner contends that “it is common knowledge in the footwear industry that the heel is distinct from the sole and that the heel is only confined to the back portion of a shoe and not beyond.” *Id.* at 11. In further support of its position, Patent Owner reproduces a number of dictionary definitions for “sole” and “heel,” and provides numerous web addresses for websites related to footwear. *See id.* at 11–12. Patent Owner contends that its “construction is consistent with the customary meaning of sole in the art, and is consistent with its usage in the

⁶ Referred to by Patent Owner as Exhibit 3002.

intrinsic record.” *Id.* at 12. Patent Owner, therefore, concludes that “the Board must adopt Patent Owner’s proposed construction of sole, which excludes heel from its meaning.” *Id.*

We do not agree that Patent Owner’s proposed construction of “sole,” “which excludes heel from its meaning,” is consistent with the usage of these terms in the intrinsic record. *Id.* Intrinsic evidence includes the Specification and prosecution history. *See Phillips v. AWH Corp.*, 415 F.3d at 1316–17. As an initial matter, the article (Ex. 2001) cited by Patent Owner is extrinsic evidence, not intrinsic evidence. We consider as intrinsic evidence the ’590 Patent and the ’586 Patent, which is incorporated by reference in the ’590 Patent and brought to our attention by Patent Owner. *See Ex. 1001*, 3:56–58.

The ’590 Patent and ’586 Patent disclosures do not support Patent Owner’s position. Instead, as detailed below, the ’590 Patent and ’586 Patent disclose that the sole of an athletic shoe includes several portions, including a “heel portion.” *See, e.g., Ex. 3003*, 3:34–50.

The ’590 Patent utilizes the term “heel” in a single instance when disclosing known prior art, as follows: “Some athletic shoes include illuminated regions on the shoe upper. Other athletic shoes contain illuminated portions in the *heel*. While still other athletic shoes contain illuminated regions in the instep *portion of the sole*.” *Ex. 1001*, 1:54–58 (emphasis added). The ’590 Patent also discloses “an athletic shoe may be provided with a plurality of illuminated regions, including the tongue of the shoe, *the entire sole of the shoe or portions thereof*, the supporting material for the shoelace eyelets . . . as well as other regions.” *Ex. 1001*, 2:41–46 (emphasis added). Referring to Figure 3, the ’590 Patent discloses “[t]he

shoe includes a sole **105** attached to the upper **110**. Sole **105** includes a translucent perimeter surface **115** having a light source **120** disposed therein.” Ex. 1001, 4:1–4. Figures 3 and 4 of the ’590 Patent depict the translucent perimeter surface 115 of sole 105 at the back of the shoe (i.e., where the heel of a foot would be accommodated), and also along the side of shoe extending from the back of the shoe toward the front of the shoe (i.e., where the toe of a foot would be accommodated). *See id.* Figs. 3–4; *see also* Pet. 13–14 (reproducing Ex. 1001, Fig. 3 with annotations, citing Ex. 1002 ¶ 49, arguing Figure 3 depicts sole 105 as including the rear portion of the shoe); Reply 2–3 (reproducing Ex. 1001, Figs. 3–5, arguing light source 120 is placed at the heel portion of the sole, and the only location where the lead line for sole 105 is placed in Figures 3 and 5 is at the part of the shoe that Patent Owner contends is a heel). In sum, the ’590 Patent discloses that the sole of the athletic shoe includes several portions, and those portions of the sole are located at the back of the athletic shoe and between the back and the front of the athletic shoe.

The ’586 Patent, which is incorporated by reference in the ’590 Patent, discloses an athletic shoe including a resilient sole, including “*a heel portion 36 of the sole 22* where the sole is typically the thickest,” and a “midsole portion 23 of the sole of the shoe,” and “an outsole portion 24 underlying” the midsole portion. Ex. 3003, 3:34–50 (emphasis added); *see* Ex. 3003, Figs. 1–3. The ’586 Patent also utilizes the terms heel and sole when discussing known prior art as follows:

In a majority of the examples found in the prior art, the light emitting device, as well as the batteries, have been incorporated into the *heel portion of the sole of a dress shoe*. The advantage of this configuration is that the heel of a dress shoe generally

provides sufficient volume to easily accommodate the electronic apparatus and is constructed of a rugged non-resilient material that protects the light and battery.

Ex. 3003, 1:25–32 (emphasis added). In sum, the '586 Patent discloses that the sole of the athletic shoe includes several portions, including a heel portion of the sole.

As to the extrinsic evidence, Patent Owner does not file exhibits for the dictionary definitions and websites cited to support Patent Owner's arguments. *See* Reply 5. Our rules state that “[a]ll evidence must be filed in the form of an exhibit.” 37 C.F.R. § 42.61(a); *see also* Reply 5 (arguing Patent Owner did not submit the websites or their content as evidence). As such, Patent Owner's reproductions of dictionary definitions and provisions of numerous web addresses for website information do not constitute admissible evidence. *See* 37 C.F.R. § 42.63(a) (“Evidence that is not taken, sought, or filed in accordance with this subpart is not admissible.”); *see also* Reply 5 (arguing websites' content is not admissible evidence). Patent Owner's Exhibit 2001, an article relied upon by Patent Owner for allegedly explaining how difficult Petitioner found the task of incorporating illuminated sole technology into their shoes (*see* PO Resp. 9–10), does not provide illumination as to broadest reasonable meaning of sole because it does not include any mention the sole or heel of a shoe. *See* Ex. 2001. The additional extrinsic evidence of record—the contemporaneous dictionary definitions of “sole” in Exhibits 1013 and 3001—also do not exclude the heel from the ordinary meaning of “sole.”

For the foregoing reasons, we determine, based on the entirety of the record before us, that the broadest reasonable interpretation, in light of the '590 Patent Specification, of “sole” is “the portion of a shoe that sits below a

wearer's foot.” We further determine that the broadest reasonable interpretation, in light of the '590 Patent Specification, of “sole” does not exclude the heel, as urged by Patent Owner.

B. Principles of Law

A claim is unpatentable under 35 U.S.C. § 102 if a prior art reference discloses every limitation of the claimed invention, either explicitly or inherently. *Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1047 (Fed. Cir. 1995). If the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if that element is “inherent” in its disclosure. *In re Robertson*, 169 F.3d 743 (Fed. Cir. 1999). To establish inherency, the extrinsic evidence “must make clear that the missing descriptive matter is necessarily present,” or inherent, in the single anticipating reference. *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991). “Inherency, however, may not be established by *probabilities* or *possibilities*. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *Id.* at 1269 (quoting *In re Oelrich*, 666 F.2d 578, 581 (CCPA 1981) (emphasis added)). Inherent anticipation, however, does not require recognition in the prior art. *Schering Corp. v. Geneva Pharms.*, 339 F.3d 1373, 1377 (Fed. Cir. 2003) (“*Continental Can* does not stand for the proposition that an inherent feature of a prior art reference must be perceived as such by a person of ordinary skill in the art before the critical date”).

A claim is unpatentable under 35 U.S.C. § 103(a) if “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said

subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations. *See Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966).

“A determination of whether a patent claim is invalid as obvious under § 103 requires consideration of all four *Graham* factors, and it is error to reach a conclusion of obviousness until all those factors are considered.” *Apple v. Samsung Elecs. Co., Ltd.*, 839 F.3d 1034, 1048 (Fed. Cir. 2016) (en banc) (citations omitted). “This requirement is in recognition of the fact that each of the *Graham* factors helps inform the ultimate obviousness determination.” *Id.*

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (citing *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326–27 (Fed. Cir. 2008)) (discussing the burden of proof in *inter partes* review). Furthermore, Petitioner cannot satisfy its burden of proving obviousness by employing “mere conclusory statements.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016).

Thus, to prevail in an *inter partes* review, Petitioner must explain how the proposed combinations of prior art would have rendered the challenged claims unpatentable. At this final stage, we determine whether a preponderance of the evidence of record shows that the challenged claims would have been obvious over the proposed combinations of prior art.

We analyze the instituted grounds of unpatentability in accordance with the above-stated principles.

C. Level of Ordinary Skill in the Art

In determining whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention. *Graham*, 383 U.S. at 17. “The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry.” *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991). The person of ordinary skill in the art is a hypothetical person who is presumed to have known the relevant art at the time of the invention. *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995).

Petitioner asserts “[a] person of skill in the art at the time of the alleged invention of the ’590 patent would have had a bachelor’s degree in footwear, apparel, or industrial design or an equivalent field and 1–3 years of work experience in footwear, apparel, or industrial design, or a high school education with 2-4 years of work experience in footwear, apparel, or industrial design.” Pet. 4–5 (citing Ex. 1002 ¶ 28). Patent Owner does not dispute Petitioner’s description of a person of ordinary skill in the art. See PO Resp. 1–23. We adopt Petitioner’s description of a person of ordinary skill in the art.

D. Asserted Grounds of Unpatentability

1. Section 102 Unpatentability of Claims 1 and 2 as Anticipated by Shkalim

a. Overview of Shkalim (Ex. 1003)

Shkalim discloses “a lighted shoe which comprises lighting elements which can be easily and conveniently positioned in various positions.” Ex. 1003, 1:41–46. Figures 1(a) and 1(b) of Shkalim are reproduced below:

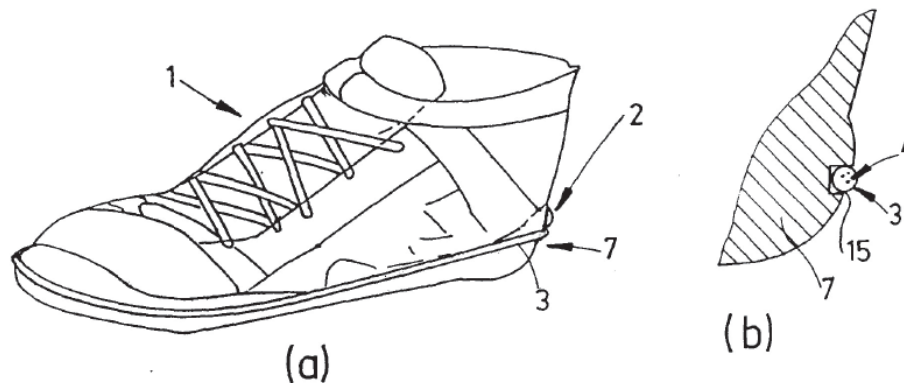


Figure 1(a) is a schematic perspective view of shoe 1, and Figure 1(b) is a partial cross-section of heel 7 of shoe 1 of Figure 1(a), seen from behind. See Ex. 1003, 2:39–43. Shkalim discloses that shoe 1 has on-off switch 2, which lights lighting elements 4 contained in transparent housing or cover 3. See *id.* at 3:6–9. Shkalim discloses that transparent cover 3, containing lighting elements 4, “is attached to the sole and heel by providing a ‘channel’ 15, into which cover 3 may be inserted.” *Id.* at 3:9–15.

“[C]hannel 15 will run . . . along substantially the whole sole of the shoe, and its depth will be such as to permit to house the cover 3.” *Id.* at 3:16–20. Shkalim also discloses that “[c]onnection between the cover 3 and the material of which the heel and sole are made[] can be effected by [gluing], by mechanical forces, by connecting elements, by incorporating the plastic material of cover 3 into the material of the heel, e.g., by heat, or by any other suitable methods.” *Id.* at 3:20–26.

Figures 2(a) and 2(b) of Shkalim are reproduced below:

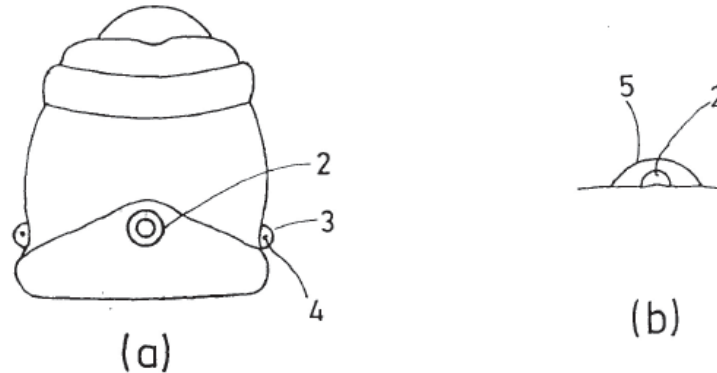


Figure 2(a) illustrates another embodiment of “a shoe . . . in which the cover 3 is not inserted into a ‘channel’, but is connected to the outer portion of the shoe.” Ex. 1003, 3:27–30. Figure 2(b) illustrates on-off switch 2 covered by elastic protective cover 5. *See id.* at 3:37–40.

Figure 5 of Shkalim is reproduced below:

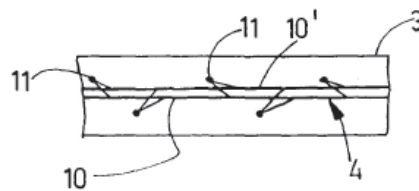


Figure 5 illustrates a segment of transparent cover 3, which contains lighting element 4. *See* Ex. 1003, 4:5–9. Shkalim discloses that lighting element 4 “comprises two electric wires 10 and 10’, to which a plurality of mini bulbs 11 are connected.” *Id.*

b. Analysis of Claims 1 and 2

Petitioner contends that Shkalim discloses “[a]n illuminated shoe comprising: an upper; a sole attached to said upper, the sole including a translucent perimeter surface,” as recited in claim 1. *See* Pet. 21–23. Petitioner bases its contention on Shkalim’s disclosures in Figures 1, 2, and 7 of a sole attached to the upper, Shkalim’s disclosure of a transparent housing

or cover 3 containing lighting elements inserted into channel 15 that runs along substantially the whole sole of the shoe, and Shkalim's disclosure that the connection between the cover and the material of heel and sole can be effected by incorporating the plastic material of cover 3 into the material of the heel. *See id.* (citing Ex. 1003, [57], 1:1–2, 1:5–10, 1:40–53, 3:6–34; Ex. 1002 ¶¶ 62, 63, 65). We find that Shkalim discloses “a light source disposed within said sole,” as recited in claim 1, based on Shkalim's disclosure of lighting elements 4 in transparent housing or cover 3, and channel 15 in the sole or heel to which housing or cover 3 may be inserted.⁷ *See* Pet. 23–24; Ex. 1003, 3:6–50, 4:5–9, Figs. 1(b), 2, 2(a), (b), 3, 5; Ex. 1002 ¶ 66.

Petitioner contends Shkalim discloses “a push-button switch coupled to the light source to activate the light source such that the light source provides continuous illumination across a substantial portion of the perimeter surface, regardless of whether the wearer is standing still or walking,” as recited in claim 1. *See* Pet. 24–26. Petitioner bases its contention on Shkalim's disclosure in Figure 1 of on-off switch 2 that lights lighting elements 4 contained in transparent housing or cover 3, and rechargeable battery 8 connected to lighting elements 4 and switch 2. *See id.* (citing Ex. 1003, Figs. 2(a), 2(b), 3, 4, 2:24–26, 3:6–10, 3:34–40, 3:55–4:4; Ex. 1002 ¶¶ 67–68). We agree with Petitioner and find that Shkalim's disclosures of transparent cover 3 containing lighting elements 4 in the channel 15 of sole, which runs along substantially the whole sole of the

⁷ Here, and through our analysis, we note that our Scheduling Order cautions Patent Owner “that any arguments for patentability not raised in the [Patent Owner's Response] will be deemed waived.” *See* Paper 13, 5; *see also See In re NuVasive, Inc.*, 842 F.3d 1376, 1380–81 (Fed. Cir. 2016).

shoe, meets the claims limitation of “the lighting elements provide illumination across a substantial portion of the perimeter surface” of the sole. *See* Pet. 25; Ex. 1003, 2:24–30, 3:15–25, 3:41–45, Fig. 3.

Petitioner further contends Shkalim’s switch 2 allows the user to turn the lights on and leave them on until the switch is used to turn them off based on Shkalim’s disclosure of the light switch provided on the shoe to connect and disconnect the rechargeable battery to the lighting element. *See id.* (citing Ex. 1003, 2:24–26). Petitioner then asserts that “Shkalim contains no teaching to suggest the wearer’s walking motion may cause the lights to turn on and off,” and, “[t]herefore, the light source provides continuous illumination across a substantial portion of the perimeter surface regardless of whether the wearer is standing still or walking.” *Id.* at 25–26 (citing Ex. 1003, 2:24–26; Ex. 1002 ¶¶ 69–70). We agree with Petitioner and adopt its position as our own.

Petitioner also asserts Shkalim discloses “wherein said light source includes a plurality of contiguous light emitting devices disposed in said sole that form a substantially uniform illumination pattern across a perimeter surface,” as recited in dependent claim 2. *See* Pet. 26–28. Petitioner bases its assertion on Shkalim’s disclosure in Figure 5 and disclosure of a plurality of mini-bulb light sources 11 contained in transparent housing or cover 3, and channel 15 containing transparent cover 3 that runs along substantially the whole sole of the shoe. *See id.* (reproducing Ex. 1003, Fig. 5; citing Ex. 1003, [57], 1:54–2:2, 2:24–30, 3:6–9, 3:15–25, 3:41–45, 4:5–9; Ex. 1002 ¶¶ 71–74). We agree with Petitioner and adopt its position as our own.

Patent Owner argues that “Shkalim does not teach having the lights built into the shoe, as claimed.” PO Resp. 14–15. Patent Owner contends

that “a light source disposed within said sole,” as recited in claim 1, requires “the light unit and all components [] already built into the shoe with no need to attach separable or removable components.” *Id.* at 14. Patent Owner contends that Shkalim differs from claim 1 because “it discloses having separable parts already made that then attach onto the shoe and not into the shoe.” *Id.* at 14; *see also id.* at 15 (“Shkalim teaches to have separable parts or components that attach and detach from the shoe and are not completely built within the shoe.”); Tr. 18:1–2 (“Shkalim has lights glued to the outside of the sole of the shoe.”); Tr. 24:1–10 (arguing Shkalim’s sole does not include the transparent cover added to the channel in the sole). Patent Owner also argues that Shkalim’s embodiments “showing ‘a cover integral with the plastic material of which the sole is made’ do not show a light source within a sole,” but instead “distinguishes the cover from the separate sole by indicating that they share the same material.” PO Resp. 15.

We do not agree with Patent Owner’s arguments because they are not commensurate in scope with the limitations of claims 1 and 2. Claims 1 and 2 recite “the sole including a translucent perimeter surface,” “a light source disposed within said sole” and “a plurality of contiguous light emitting devices disposed in said sole.” Claims 1 and 2 do not recite or require the light source to be “built into” the shoe or sole, and do not require the light source, the sole, and the translucent perimeter surface of the sole to be unitary or formed as one piece. Claims 1 and 2 also do not otherwise preclude the light source and translucent perimeter surface of the sole from being removable or separable components.

Related to its previous argument, Patent Owner contends that the Board improperly construed the record in a light most favorable to Petitioner

when “finding that ‘the light source . . . may be partially within the sole.’” PO Resp. 16 (citing Dec. 14). Patent Owner argues the “claims do not recite ‘partially’ in the sole—they recite ‘in’ or ‘within,’” and the ’590 Patent Specification and Drawings “show the lights in or within, not partially in the sole.” *Id.* at 15; *see also* Tr. 18:3–4, 19:1 (“[W]ithin doesn’t mean partially within.”); Tr. 23:21–23 (“[W]ithin is not partially within; it’s totally within. . . . It’s completely within.”).

We do not agree with Patent Owner’s arguments because they are premised incorrectly on a requirement that the “light source disposed within the sole,” as recited in claim 1, and the “plurality of contiguous light emitting devices disposed in said sole,” as recited in claim 2, must be embedded in the sole or disposed wholly, entirely, or completely within the sole. Claims 1 and 2 do not recite or require such limitations.

Patent Owner also argues that Shkalim “does not disclose lights disposed along a sole of a shoe, which according to the ’590 Patent improves wearer visibility.” PO Resp. 16. Patent Owner contends Figures 3 through 6 of Shkalim “show the lighting system located in the heel on the back of the shoe,” and Shkalim “states that ‘[i]t should be understood that it is not a primary object of the invention to provide light sources which are strong enough to be used to improve the visibility of the wearer.’” *Id.* (quoting Ex. 1003, 2:5–9).

We do not agree with Patent Owner’s arguments because Patent Owner’s arguments focus on Figures 3, 4, and 6 of Shkalim, and do not address Shkalim’s disclosure of transparent cover 3 containing lighting elements 4 inserted into channel 15 that runs along substantially the whole sole of the shoe. *See* Ex. 1003, Figs. 1(a), 1(b), 3:9–20; Reply 7 (citing Ex.

1003 Figs. 1(a), 3, 3:13–14, 3:20–26); *see also* Reply 9 (“[L]ight sources 4 inside cover 3 are within a channel 15 that extends the entire perimeter of the sole.”). Patent Owner’s arguments addressing wearer visibility and light strength also are not germane to the limitations of claims 1 and 2 because claims 1 and 2 do not recite any limitations related to wearer visibility or light source strength.

Finally, Patent Owner contends that Shkalim teaches away from using light emitting devices such as LEDs based on Shkalim’s discussion of a particular prior art reference and statement that “[a]lso positioning individual lighting elements, such as small L.E.D.s in the sole, is costly and complicated.” *See* PO Resp. 14 (citing Ex. 1003, 3:18–20); *see also* Ex. 1003, 3:5–20 (discussing the lighted shoe of EP-A-0 121 026). As an initial matter, Patent Owner’s arguments are misplaced because the question of whether a reference teaches away is not applicable to anticipation. *Celeritas Techs, Ltd. v. Rockwell Int’l. Corp.*, 150 F.3d 1354, 1361 (Fed. Cir. 1998). Moreover, when discussing its invention, Shkalim discloses, “[p]referably, the light sources are low-energy demanding sources such as mini-electric light bulbs, L.E.D.s. or the like light sources.” Ex. 1003, 2:3–5; *see id.* at 5:22–25 (“the light sources (11) are low-energy demanding sources such as mini electric-light bulbs, L.E.D.s or the like light sources.” (claim 2)).

For all of the foregoing reasons, and after having analyzed the entirety of the record, we determine Petitioner has established by a preponderance of the evidence that claims 1 and 2 are anticipated by Shkalim.

2. Section 103 Unpatentability of Claim 3 as Obvious over Shkalim and
Powell

a. Overview of Powell (Ex. 1006)

Powell discloses “disco dancing shoes having heel compartments containing battery powered flashlights.” Ex. 1006, 1:5–7. Figure 1 of Powell is reproduced below.

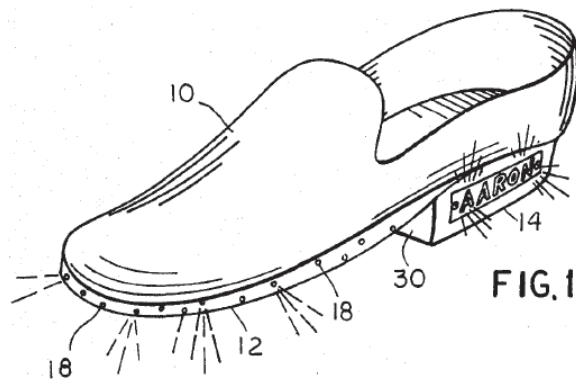


Figure 1 illustrates disco dancing shoe 10 with sole 12 and heel 14. See Ex. 1006, 1:60–61. Powell discloses the sole edge has small light emitting faces 18 at the ends of light transmitting optical fibers. See *id.* at 1:61–64, Fig. 2. Powell disclosed that heel 14 is composed of transparent plastic and is hollow. See *id.* at 1:67–2:2.

Figure 3 of Powell is reproduced below.

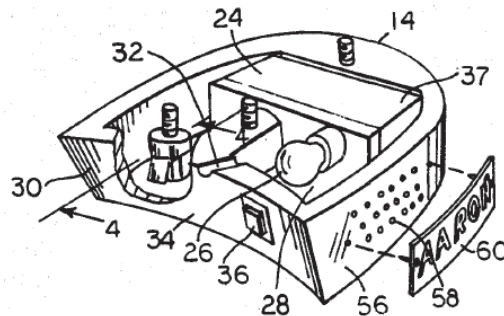


Figure 3 is an exploded view of heel 14 showing battery-powered flashlight 26 and illuminated compartment 28. See Ex. 1006, 1:52–53, 1:67–2:2.

Powell discloses that front wall 34 of heel 18 is provided with manual switch 36 for enabling battery lamp energizing circuit. *See id.* at 2:6–9, Fig. 5.

“The outer side wall 56 of heel 14 contains light port holes 58 that are covered with a transparent and/or translucent name plate or label 60, affixed to the heel 14 . . . bearing the wearer’s identification.” *Id.* at 2:24–27.

Powell discloses that “every time the wearer of shoe 10[] walks or taps the heel 14 on the dance floor[,], with the manual switch 28 closed[,], series circuit 38 [shown in Figure 5] in the heel 14[] is energized . . . , resulting in the flashing of lamp 26, and the illumination of identification label 60 on the heel side 56.” *Id.* at 2:28–36.

b. Analysis of Claim 3

Petitioner contends that both Shkalim and Powell teach “[a]n illuminated shoe comprising: an upper; a sole attached to said upper,” as recited in claim 3, based on Shkalim’s lighted shoe including a sole attached to the upper, and Powell’s lighted shoe of Figure 1 including sole attached to the upper. *See* Pet. 31 (citing Ex. 1006, 1:5, Fig. 1; Ex. 1002 ¶¶ 81–83; incorporating by reference Pet. 21–22). Petitioner asserts Shkalim teaches “a push button switch coupled to said light source to facilitate activation of the light source for user selected periods of time independent of whether the wearer is standing still or walking,” as recited in claim 3. *See id.* at 34.

Petitioner bases its contention on Shkalim’s disclosure of on-off switch 2 that lights lighting elements 4 contained in transparent housing or cover 3, and rechargeable battery 8 connected to lighting elements 4 and switch 2. *See id.* (citing Ex. 1002 ¶ 87; incorporating by reference Pet. 24–25). We agree with Petitioner’s assessment of Shkalim.

Patent Owner argues that “Powell discloses lights that are energized by movement of pressure from the wearer as opposed to a manually operated switch that turns continuous illumination in the sole on or off.” PO Resp. 16 (citing Ex. 1006, 1:36–40. Patent Owner concludes “there would have been no reason for one of ordinary skill in the art to look to Powell to modify the configuration taught by Shkalim to arrive with a reasonable expectation [of] success at the claimed combination of features recited in claim 3.” *Id.* at 16–17.

We do not agree with Patent Owner’s arguments as they are misplaced. Petitioner relies on Shkalim, not Powell, for teaching “a push button switch coupled to said light source to facilitate activation of the light source for user selected periods of time independent of whether the wearer is standing still or walking.” *See* Pet. 34; Reply 11. Also, we do not understand Petitioner to propose substituting Powell’s switch and lights energized by wearer movement or pressure for Shkalim’s push-button switch facilitating activation of the light source for user selected periods of time independent of wearer movement. *See* Pet. 34; Reply 11. We are not swayed by Patent Owner’s conclusory attorney arguments that there would have been no reason for one of ordinary skill in the art modify Shkalim in view of Powell, and there would not have been a reasonable expectation of success in making the modification. *See* PO Resp. 16–17; *Gemtron Corp. v. Saint-Gobain Corp.*, 572 F.3d 1371, 1380 (Fed. Cir. 2009) (unsworn attorney argument is not evidence). Rather, as discussed below, we agree with Petitioner’s position as supported by the declaration testimony of Mr. Lance Rake (“Mr. Rake”) (Ex. 1002).

Petitioner acknowledges that Shkalim does not teach the “sole including an opaque perimeter surface having a plurality of translucent regions, the translucent regions being formed in the shape of alpha numeric characters and being arranged to spell a word,” as recited in claim 3. *See* Pet. 31, 34. Petitioner asserts that Powell teaches this limitation based on Powell’s disclosure of shoes in which the heel is made of plastic containing a battery powered flashlight for illuminating a compartment therein, and having light transmitting holes in a side wall covered with a translucent name plate or name label. *See id.* at 32 (citing Ex. 1006, Abstract, 1:19–23, 1:41–43, 2:24–26, Figs. 1, 3; Ex. 1002 ¶ 84). Petitioner further asserts that both Shkalim and Powell teach “a light source disposed with said sole such that the light source provides illumination to the plurality of translucent regions,” as recited in claim 3. *See id.* at 33 (citing Ex. 1006, Abstract, 1:19–23, 1:41–43, 2:24–26, Figs. 1, 3; Ex. 1002 ¶ 86; incorporating by reference Pet. 23–24).

Petitioner contends that a person of ordinary skill in the art “would have been motivated to combine the illuminated nameplate on the sole of the Powell shoe with the illuminated sole of the Shkalim shoe” to arrive at the sole required by claim 3. Pet. 32 (citing Ex. 1002 ¶ 85). More specifically, Petitioner asserts combining the features of Shkalim and Powell “would have required nothing more than the application of ordinary skill, and would have been the simple substitution of one known element (a sole with a continuously illuminated translucent region) with another (a sole with translucent regions arranged to spell a word) with nothing more than predictable results.” *Id.* at 34 (citing Ex. 1002 ¶ 89). Petitioner further contends “[i]t would have been simple to modify the translucent portion of

Shkalim so as to create translucent letters to form a word.” *Id.* at 34–35 (citing Ex. 1002 ¶ 89; Ex. 1006, 2:24–27).

Petitioner asserts that it was known in the prior art, including Shkalim and Powell, to add lights to shoes to enhance aesthetic appeal and appearance. Pet. 35–36 (citing Ex. 1003, 1:1–5, Ex. 1006, 1:31–35; Ex. 1014, 2:10–15; Ex. 1002 ¶¶ 90–92). Petitioner relies on Mr. Rake to support its position. Mr. Rake generally testifies that during the late 1990s, ordinary artisans in the field of apparel design recognized the rise in consumer demand for personalized apparel and that this era of increased attention on personalization would have motivated a person of ordinary skill in the art to incorporate Powell’s name plate into the light-up athletic shoes disclosed by Shkalim. Ex. 1002 ¶¶ 93–95 (citing Exs. 1015, 1016). Petitioner then argues,

[g]iven the similarities in the structure and function between Powell and Shkalim, as well as their aesthetic objectives and the robust consumer demand for personalized goods, a person of ordinary skill would have been motivated to incorporate into Shkalim the translucent regions being formed in the shape of alpha numeric characters and being arranged to spell a word of Powell.

Pet. 35; Ex. 1002 ¶ 89 (Petitioner’s declarant Mr. Rake stating the same).

On the foregoing bases, we agree with Petitioner that the combination of Shkalim and Powell teaches or suggests the limitations recited in claim 3. Moreover, we determine Petitioner has provided sufficient articulated reasoning with rational underpinning to establish that a person of ordinary skill in the art would have modified the teachings of Shkalim in view of Powell’s teachings of a sole including an opaque perimeter surface having a plurality of translucent regions formed in the shape of alpha numeric

characters and arranged to spell a word. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (quoting *Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). Accordingly, after having analyzed the entirety of the record, we determine Petitioner has established by a preponderance of the evidence that the subject matter of claim 3 would have been obvious over Shkalim and Powell.

3. *Section 102 Unpatentability of Claims 1 and 2 as Anticipated by Chien*
a. Overview of Chien (Ex. 1004)

Chien discloses a lighted shoe with electro-luminescent (EL) light strips. *See Ex. 1004*, 1:12–13. Figure 10 of Chien is reproduced below:

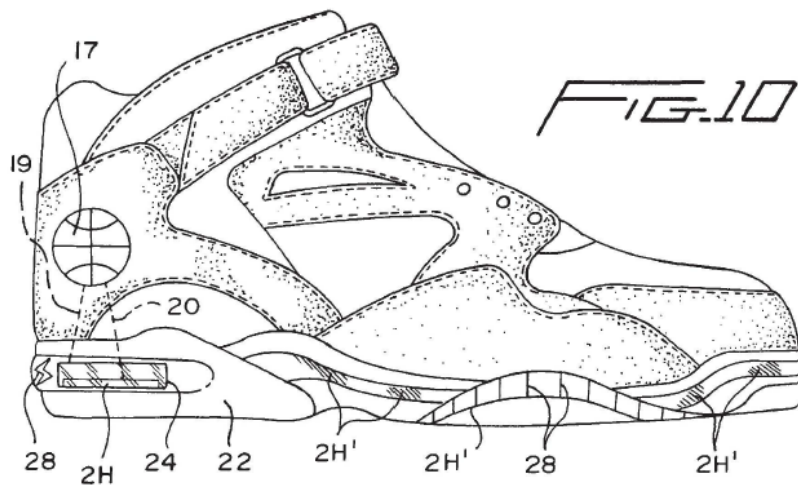


Figure 10 illustrates a side view of a shoe with multiple EL light strips 2H and 2H' on the bottom portion of the shoe. *See Ex. 1004*, 2:59–60, 4:12–17. Chien discloses that EL light strips can be turned on and off by means of a switch. *See id.* at 3:35–36. Chien discloses, in one embodiment, a switch, a function interface, and a dry battery are contained in a housing consisting of hollow base and elastic semi-spherical cover 17. *See Ex. 1004*, 2:45–46, 3:42–45, Fig. 4. A pattern may be formed on the external surface of the elastic semi-spherical cover 17 so that it looks like a ball. *See id.* at 3:48–51;

Fig. 10. “[A] user can easily press the elastic semi-spherical cover **17** in order to press the switch.” *Id.* at 3:46–47. Function interface provides a plurality of options for lighting EL strips, including a “permanent ‘ON’” option. *See id.* at 3:27–33.

Chien discloses, in another embodiment, the power source and circuit components may be placed in the bottom of the shoe. *See id.* at 2:47–48, 3:52–54, Fig. 5. The switch is connected to the function interface by wire 19, and is connected to EL light strip 2H by wires 20. *See id.* at 3:53–56, Figs. 5, 6, 10. All other circuitry, including the function interface and switch, the dry battery, and EL strip 2H are mounted in the bottom of the shoe by defining power pack in one side of a hollow heel and covering the power pack with EL strip 2H. *See id.* at 3:56–61. Light emitted by EL strip 2H is visible through transparent wall 18 from the exterior of sports shoe heel 22. *See id.* at 3:61–64, Figs. 5, 6, 10.

Figure 7 of Chien is reproduced below:

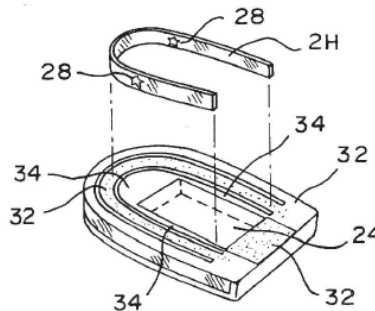


Figure 7 is a perspective view of a portion of shoe bottom. *See Ex. 1004*, 2:51–52. Figure 7 shows transparent area, solid supports 34 for strengthening the hollow transparent portion of the shoe bottom housing power pack 24 before insertion of EL strip 2H that includes screen printing 28. *See id.* at 4:1–8. A layer of glue or double sided adhesive tape 32 may

be placed on the top surface of solid supports 34 and/or at the periphery of the shoe bottom structure to attach it to the shoe. *See id.* at 4:8–11.

Figure 8 of Chien is reproduced below:

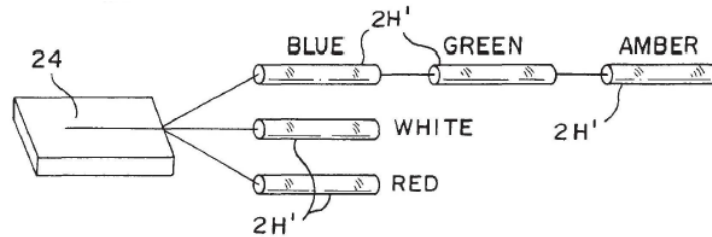


Figure 8 is a schematic diagram showing a multiple EL strip arrangement. *See Ex. 1004, 2:53–55.* Figure 8 shows “a plurality of EL strips 2H' . . . connected to power pack” that “can have different colors and can be placed anywhere in the bottom or upper portion of the shoe.” *Id.* at 4:12–15.

Figure 9 of Chien is reproduced below:

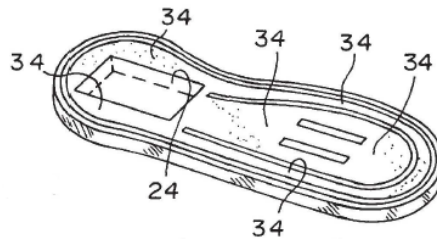


Figure 9 is a side view showing the multiple EL strips of Figure 8 applied to the shoe. *See Ex. 1004, 2:57–58.* “An example of a shoe bottom with multiple strips 2H' is shown in FIGS. 9 and 10.” *Id.* at 4:16–17. Chien further discloses:

18. In a shoe, comprising: a shoe bottom; . . . the shoe bottom includes at least one transparent area, and the electro-luminescent element is substantially fixed within the shoe bottom and light emitted from the electro-luminescent element is visible through the at least one transparent area of the shoe bottom.

19. A shoe as claimed in claim 18, further comprising at least one additional transparent area and at least one additional

electroluminescent elements visible through said at least one additional transparent area.

Ex. 1004, 6:14–35 (Claims 18 and 19).

b. Analysis of Claim 1

Petitioner contends that Chien discloses “[a]n illuminated shoe comprising: an upper; a sole attached to said upper, the sole including a translucent perimeter surface,” as recited in claim 1. *See* Pet. 40–42. Petitioner bases its contention on Chien’s disclosures of the lighted shoe illustrated in Figures 1, 5, 6, 7, and 10, including a sole attached to the upper and transparent area 18 in the sole. *See id.* (citing Ex. 1004, Abstract, 1:13–14, 1:44–47, 1:53–66, 2:18–20, 3:2–10, 3:61–63, 4:1–3, 4:14–15, 4:41–55, 6:26–34 (claims 18–19); Ex. 1002 ¶¶ 100–103). Petitioner asserts that Chien discloses “a light source disposed within said sole,” as recited in claim 1. *See id.* at 42–43. Specifically, Petitioner asserts: (1) “Chien discloses illuminating shoes by using ‘a flexible paper-thin EL strip’ positioned ‘inside a transparent heel or on the side of the shoe’s surface;’” and (2) “[t]he embodiment of Figure 10 shows EL strips contained in both the heel portion (2H) and along the perimeter surface of the sole (2H’).” *Id.* at 42–43 (citing Ex. 1004, 1:44–49, 1:62–67, 3:51–64, 5:28–30, Figs. 1, 6, 10; Ex. 1001, Fig. 4; Ex. 1002 ¶¶ 104–105). We agree with Petitioner and adopt its position as our own.

Petitioner contends that Chien discloses “a push-button switch coupled to the light source to activate the light source,” as recited in claim 1, based on Chien’s disclosure of EL light strip 2H coupled to a push-button switch including semi-spherical cover 17 that must be pressed by a wearer to activate the switch. *See* Pet. 43–44 (citing Ex. 1004, 3:36–38, 3:45–47,

3:55–56, 4:66–67, 5:1–2; Ex. 1002 ¶¶ 106–107). Petitioner also asserts that Chien discloses “the light source provides continuous illumination across a substantial portion of the perimeter surface,” as recited in claim 1. Petitioner contends that EL strips 2H and 2H' shown in Figure 10 of Chien would provide continuous illumination across a substantial portion of the perimeter surface based on Chien's disclosure of the push-button switch connected to a function interface that provides a plurality of options including “permanent ON” mode. *See id.* at 44–45 (citing Ex. 1004, 1:37–47, 1:62–67, 3:27–33, 3:54–55, Fig. 2, claims 18–19; Ex. 1002 ¶ 108). We agree with Petitioner and find that Chien's continuous illumination is provided “regardless of whether a wearer is standing still or walking,” as required by claim 1, because Chien discloses that the push-button switch controls the lighting of the EL light strips, and discloses a function interface configured to cause the EL strips to be permanently on until the mode is changed via the push-button switch. *See* Pet. 45; Ex. 1004, 3:27–41, 3:46–51; Ex. 1002 ¶ 109.

Patent Owner argues that “Chien differs from the '590 Patent at least insofar as the light source . . . is within the heel or outside of the shoe surface as opposed to the sole.” PO Resp. 18. Patent Owner contends that Figure 6 of Chien shows the power source and circuit components only in the heel of the shoe and not the sole. *See id.* at 18–19.

We do not agree with Patent Owner's arguments because, as discussed above in Section II.A., the broadest reasonable interpretation of “sole” does not exclude the heel. Thus, we find that Chien's disclosure of EL light strip 2H within the heel also discloses a light source within the sole.

Patent Owner also contends that Chien differs from claim 1 because “it discloses having separable parts already made that then attach onto the

shoe and not into the shoe.” PO Resp. 18. We do not agree with Patent Owner’s arguments because, as explained previously, they are not commensurate in scope with the limitations of claim 1. Claim 1 does not include any limitations requiring the light source, sole, and transparent perimeter surface to be unitary or formed as a single piece. Claim 1 also does not preclude separable parts.

For all of the foregoing reasons, after having analyzed the entirety of the record, we determine Petitioner has established by a preponderance of the evidence that claim 1 is anticipated by Chien.

c. Analysis of Claim 2

Petitioner contends that Chien discloses “wherein said light source includes a plurality of contiguous light emitting devices disposed in said sole that form a substantially uniform illumination pattern across the perimeter surface,” as recited in claim 2. *See* Pet. 45 (citing Ex. 1002 ¶ 110). Specifically, Petitioner contends that “Figure 10 of Chien shows a plurality of EL light strips 2H and 2H' placed contiguously along the perimeter surface of the shoe sole.” *Id.* (citing Ex. 1004, Fig. 10). In support of its assertion, Petitioner quotes Chien’s following disclosure:

In addition, as schematically illustrated in FIG. 8, a plurality of EL strips 2H' can be connected to the power pack. These strips can have different colors and can be placed anywhere in the bottom or upper portion of the shoe. An example of a shoe bottom with multiple strips 2H' is shown in FIGS. 9 and 10.

Ex. 1004, 4:12–17; *see* Pet. 46 (citing Ex. 1004, Fig. 8). Also in support of its assertion, Petitioner quotes the recitations of claims 18 and 19 of Chien. *See* Pet. 46 (quoting Ex. 1004, 6:26–34). Petitioner further contends that “[t]he EL light strips 2H and 2H' are shown in Figure 10 as producing a

uniform illumination pattern across the perimeter surface.” *Id.*; Ex. 1002 ¶ 111 (Mr. Rake stating the same). Petitioner also asserts that “[m]ultiple identical EL strips each configured to display a single color would create a uniform illumination pattern across the area they occupied,” based on Chien’s disclosure that the lights can either display solid colors or be combined to produce a rainbow effect. Pet. 46 (citing Ex. 1004, 2:6–12, 4:12–17; Ex. 1002 ¶ 111).

Patent Owner argues that Chien: (1) “fails to disclose light sources that are plural and contiguously arranged;” (2) does not disclose contiguous lights;” and (3) “does not teach the contiguous lights being positioned behind a translucent perimeter surface . . . in the sole.” PO Resp. 18.

Although Chien discloses EL strips 2H’ “can be placed anywhere in the bottom or upper portion of the shoe,” (Ex. 1004, 4:12–15, Figs. 9, 10; *see* Pet. 46) and we agree with Petitioner that “Figure 10 of Chien shows a plurality of EL light strips 2H and 2H’ placed contiguously *along* the perimeter of the shoe sole” (Pet. 46 (emphasis added)), we do not agree that Chien discloses a plurality of EL light strips “disposed in the sole that form a substantially uniform illumination pattern across the perimeter surface,” as required by claim 2.

First, Petitioner does not direct us to sufficient factual basis to support its assertion that “[t]he EL light strips 2H and 2H’ are shown in Figure 10 as producing a uniform illumination pattern across the perimeter surface.” Pet. 46 (citing Ex. 1002 ¶ 111). Antecedent basis for “the perimeter surface,” recited in claim 2, is provided by the recitation in claim 1 of “the sole including a translucent perimeter surface.” Petitioner identifies a transparent heel or a transparent wall 18 of heel 22 as disclosing “a translucent perimeter

surface,” recited in claim 1. *See* Pet. 41–42. Chien, however, does not disclose a plurality of light strips disposed in the sole that form a substantially uniform illumination pattern across the transparent wall 18 of heel 22 because Chien only discloses light strip 2H disposed in the sole that illuminates transparent wall 18 of heel 22. *See* Ex. 1004, 1:44–47, 1:62–66, 3:52–4:11, Figs. 5, 6, 7, 10. For these same reasons, we do not agree with Petitioner’s argument, and identical declarant testimony, that “[m]ultiple identical EL strips each configured to display a single color would create a uniform illumination pattern across the area they occupied.” Pet. 46; Ex. 1002 ¶ 111. Although Petitioner equates a single displayed color with a uniform illumination pattern, Chien does not disclose multiple identical EL strips 2H’ disposed in said sole that form an illumination pattern across the transparent wall 18 of heel 22, i.e., the translucent perimeter surface. Chien, discloses only light strip 2H disposed in the sole capable of forming an illumination pattern across the transparent wall 18 of heel 22. *See* Ex. 1004, 1:44–47, 1:62–66, 3:52–4:11, Figs. 5, 6, 7, 10.

When addressing “the sole including a transparent perimeter surface,” recited in claim 1, Petitioner also directs attention to Chien’s following disclosure: “In the case of a surface application, the light strip or strips may be put into a transparent soft/stitchable material.” *See* Pet. 41 (quoting Ex. 1004, 2:18–20). To the extent that Petitioner identifies the “transparent soft/stitchable material” as disclosing the “translucent perimeter surface” of claim 1, Chien does not disclose a plurality of light strips disposed in the sole, because Chien discloses light strips are disposed in the transparent soft/stitchable material that is applied to the surface of the shoe. *See* Ex. 1004, 2:18–27, 2:64–3:5, Fig. 1.

Also when addressing “the sole including a transparent perimeter surface,” recited in claim 1, Petitioner directs attention to the recitations of claims 18 and 19 of Chien. *See* Pet. 41–42 (citing Ex. 1004, 6:26–34). To the extent that Petitioner asserts that claims 18 and 19 of Chien disclose more than one transparent area in the shoe bottom (i.e., sole), we do not agree. Rather, claim 19 does not state that the additional transparent surface is in the shoe bottom, i.e., sole. *See* Dec. 23.

Petitioner also relies on the testimony of its declarant, Mr. Rake, to support its arguments that “[t]he EL light strips 2H and 2H' are shown in Figure 10 as producing a uniform illumination pattern across the perimeter surface.” Pet. 46 (citing Ex. 1002 ¶ 111, Ex. 1004, 2:6–12, 4:12–17). Mr. Rake’s testimony, however, is identical to Petitioner’s arguments. *Compare* Pet. 46, *with* Ex. 1002 ¶ 111. We give Petitioner’s aforementioned declarant’s testimony little weight regarding this issue because Mr. Rake does not provide sufficient underlying facts to support his testimony. *See* Ex. 1002 ¶ 111; 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”).

In response to Patent Owner’s arguments, Petitioner reproduces Figure 10 of Chien with color annotations and asserts that Petitioner’s annotated Figure 10 shows: (1) “several light sources (2H’) having the colors listed in Figure 8 (red and the sequence blue-green-amber) and disposed in various locations in the sole;” and (2) “three contiguous (e.g., blue-green-amber) lights.” Reply 12–13 (citing Pet. 39–40). Petitioner reproduces Figures 5, 7, and 9 and further contends that “Figures 5, 7 and 9 show how deeply into the sole Chien places its light sources, *e.g.*, in the

back of the shoe ‘covering the power pack [24]’ and visible through wall 18 (3:61–63), and/or with analogous locations toward the front of the shoe (see Chien’s claim 19).” *Id.* at 13–14.

We do not agree with Petitioner’s arguments based on Petitioner’s reproduction of Chien’s Figure 10 with added colors to indicate Petitioner’s asserted locations of certain colored lights in Figure 10. Petitioner’s arguments amount to mere attorney argument. See Reply 12–13; *Gemtron v. Saint-Gobain*, 572 F.3d at 1380 (unsworn attorney argument is not evidence). In addition, neither Figure 10 of Chien, nor Petitioner’s reproduction of Figure 10 with added colors, disclose EL light strips 2H’ “disposed in . . . the sole.” See Reply 13; Ex 1004, Fig. 10. Chien’s Figure 10, which is described as “[a]n example of a shoe bottom with multiple strips 2H’ (Ex. 1004, 4:16–17) and “a perspective view showing bottom of shoe illustrated in FIG. 9, with multiple strips” (Ex. 1004, 2:58–59), does not make clear that EL light strips 2H’ are disposed in the sole as opposed to disposed on the outer surface of the sole. See Ex. 1004, 2:58–59; see also Tr. 30:1–13 (addressing whether Figure 10 discloses EL lights strips 2H’ on the outside or the inside of the sole). It is well established that ambiguous references are insufficient to support anticipation. See *Wasica Finance GmbH v. Continental Automotive Sys., Inc.*, 853 F.3d 1272, 1284 (Fed. Cir. 2017).

We also do not agree that Chien’s disclosure at column 3, lines 61–63 supports Petitioner’s assertion that “Figures 5, 7 and 9 show how deeply into the sole Chien places its light sources, *e.g.*, in the back of the shoe ‘covering the power pack [24]’ and visible through wall 18 (3:61–63), and/or with analogous locations toward the front of the shoe (see Chien’s claim 19).”

Reply 13. Column 3, lines 61 through 63 of Chien discloses only light strip 2H, not plural light sources, covering the power pack 24 and visible through wall 18 of heel 22. Figure 5 is a bottom view of a shoe, and includes labels for wall 18, light strip 2H, and battery 6, but does not include labels for plural light sources, such as EL strips 2H'. See Ex. 1004, 2:46–47, 3:52–64, Fig. 5. Figure 7 is a perspective view of a portion of shoe bottom, and includes labels for light strip 2H, screen printing 28 on light strip 2H, housing power pack 24, solid supports 34, and layer of glue or adhesive tape 32, but does not include labels for plural light sources, such as EL strips 2H'. See Ex. 1004, 2:51–52, 4:1–11, Fig. 7. Figure 9 of Chien, described as “an example of a shoe bottom with multiple strips 2H” (Ex. 1004, 4:16–17), includes labels for housing power pack 24 and solid supports 34. Figure 9 of Chien, however, does not include any labels for multiple EL strips 2H', and, therefore, renders unclear the location of multiple EL strips 2H' in Figure 9. It is settled law that ambiguous references are insufficient to support anticipation. See *Wasica Finance GmbH v. Continental Automotive Sys., Inc.*, 853 F.3d 1272, 1284 (Fed. Cir. 2017).

Similarly, we do not agree that claim 19 of Chien supports Petitioner's assertion that “Figures 5, 7 and 9 show how deeply into the sole Chien places its light sources *e.g.*, in the back of the shoe ‘covering the power pack [24]’ and visible through wall 18 (3:61–63), and/or with analogous locations toward the front of the shoe (*see* Chien's claim 19).” Reply 13. As explained previously, “claim 19 does not state that the additional transparent surface is in the shoe bottom,” i.e., sole. Dec. 23.

For the foregoing reasons, after having analyzed the entirety of the record, we determine Petitioner has failed to establish by a preponderance of the evidence that claim 2 is anticipated by Chien.

4. Section 103 Unpatentability of Claim 3 as Obvious over Chien and Powell

Petitioner contends that both Chien and Powell teach “[a]n illuminated shoe comprising: an upper; a sole attached to said upper,” as recited in claim 3, based on Chien’s disclosures of the lighted shoe in Figures 1, 6, and 10 depicting a sole attached to the upper, and Powell’s lighted shoe in Figure 1 depicting a sole attached to the upper. *See* Pet. 47 (citing Ex. 1002 ¶¶ 113–115; incorporating by reference Pet. 31, 40–41). Petitioner asserts that Chien teaches “a push button switch coupled to said light source to facilitate activation of the light source for user selected periods of time independent of whether the wearer is standing still or walking,” as recited in claim 3. *See id.* at 49. Petitioner bases its contention on Chien’s disclosure of push-button switch 14 concealed by semi-spherical cover 17 and coupled to EL light strips 2H and 2H', and operable in a “permanent on” mode. *See id.* (citing Ex. 1002 ¶ 119; incorporating by reference Pet. 43–45). We agree with Petitioner and adopt its position as our own.

Patent Owner argues that Powell is deficient for the same reasons as those presented by Patent Owner addressing the ground of unpatentability over Shkalim and Chien. *See* PO Resp. 19. Patent Owner asserts, “there would have been no reason for one of ordinary skill in the art to look to Powell to modify the configuration taught by Chien to arrive with a

reasonable expectation [of] success at the claimed combination of features recited in claim 3.” *Id.*

For the same reasons as those addressed above in Section II.D.2.b, we do not agree with Patent Owner’s arguments addressing the alleged deficiencies of Powell. Also, for the reasons discussed below, we are not swayed by Patent Owner’s conclusory attorney argument that there would have been no reason for one of ordinary skill in the art to look to Powell to modify the configuration taught by Chien, and that there would not have been a reasonable expectation of success in making the modification. *See* PO Resp. 19; Reply 14; *Gemtron v. Saint-Gobain*, 572 F.3d at 1380.

Petitioner acknowledges that Chien does not teach the “sole including an opaque perimeter surface having a plurality of translucent regions, the translucent regions being formed in the shape of alpha numeric characters and being arranged to spell a word,” as recited in claim 3. *See* Pet. 47, 49. Petitioner asserts that Powell teaches this limitation. *See id.* at 48 (reproducing Ex. 1006, Fig. 1; citing Ex. 1002 ¶ 116; incorporating by reference Pet. 31–32). We agree with Petitioner and find that both Chien and Powell teach “a light source disposed with said sole such that the light source provides illumination to the plurality of translucent regions,” as recited in claim 3. *See* Pet. 49; Ex. 1002 ¶ 118.

Petitioner contends that a person of ordinary skill in the art at the time of the invention “would have been motivated to combine the illuminated nameplate on the sole of the Powell shoe with the illuminated sole of the Chien shoe” to arrive at the sole required by claim 3. Pet. 48 (citing Ex. 1002 ¶ 117). More specifically, Petitioner asserts combining the features of Chien and Powell “would have required nothing more than the application of

ordinary skill, and would have been the simple substitution of one known element (a sole with a continuously illuminated translucent region) with another (a sole with translucent regions arranged to spell a word) with nothing more than predictable results.” *Id.* at 50 (citing Ex. 1002 ¶ 121; Ex. 1006, 2:24–27). Petitioner further contends “[i]t would have been simple to modify the translucent portion of Chien so as to create translucent letters to form a word.” *Id.*

Petitioner asserts that it was known in the prior art, including Chien and Powell, to add lights to shoes to enhance aesthetic appeal and appearance. Pet. 50–51 (citing Ex. 1004, 1:15–22, 2:18–27, 4:1–11; Ex. 1002 ¶¶ 122–123; incorporating by reference Pet. 34–38). Petitioner further asserts that “during the late 1990s, ordinary artisans in the field of apparel design recognized the rise in consumer demand for personalized apparel” and that “[t]his era of increased attention on personalization . . . would have motivated a person of ordinary skill in the art to incorporated Powell’s name plate into the light-up athletic shoes disclosed by Chien.” Pet. 51–52 (citing Ex. 1002 ¶¶ 123–124; Ex. 1015; Ex. 1016; incorporating by reference Pet. 34–38). Petitioner argues,

[g]iven the similarities in the structure and function between Powell and Chien, as well as their aesthetic objectives and the robust consumer demand for personalized goods, a person of ordinary skill would have been motivated to incorporate into Chien the translucent regions being formed in the shape of alpha numeric characters and being arranged to spell a word of Powell.

Pet. 50; Ex. 1002 ¶ 121 (Mr. Rake stating the same).

On the foregoing bases, with agree with Petitioner’s position, as supported by the testimony of Mr. Rake, that the combination of Chien and

Powell teaches or suggests the limitations recited in claim 3. We also determine that Petitioner set forth sufficient articulated reasoning with rational underpinning to establish that a person of ordinary skill in the art would have modified the teachings of Chien in view of Powell's teachings of a sole including an opaque perimeter surface having a plurality of translucent regions formed in the shape of alpha numeric characters and arranged to spell a word. *See KSR*, 550 U.S. at 418 (quoting *Kahn*, 441 F.3d at 988). Accordingly, after having analyzed the entirety of the record, we determine Petitioner has establish by a preponderance of the evidence that the subject matter of claim 3 would have been obvious over Chien and Powell.

*5. Section 102 Unpatentability of Claims 1 and 2 as Anticipated
by Chiaramonte*

a. Overview of Chiaramonte (Ex. 1005)

Chiaramonte discloses that “[p]latform shoes have developed in various forms and one of which is the ‘wedge’ wherein the sole, instep and heel are integral and in appearance present a solid.” Ex. 1005, 1:13–15. Chiaramonte discloses “a pair of shoes of platform configuration wherein the riser is made of light transmitting material adapted to receive and be illuminated by light beam thereto.” *Id.* at 1:62–65. Chiaramonte discloses that the shoe platform has a chamber into which a light modulator is inserted, and that “the light modulator unit involves a high intensity light source that intermittently discharges light through a light change means which filters the light so as to sequentially produce variations in color.” *Id.* at 1:65–2:4.

Figure 1 of Chiaramonte is reproduced below.

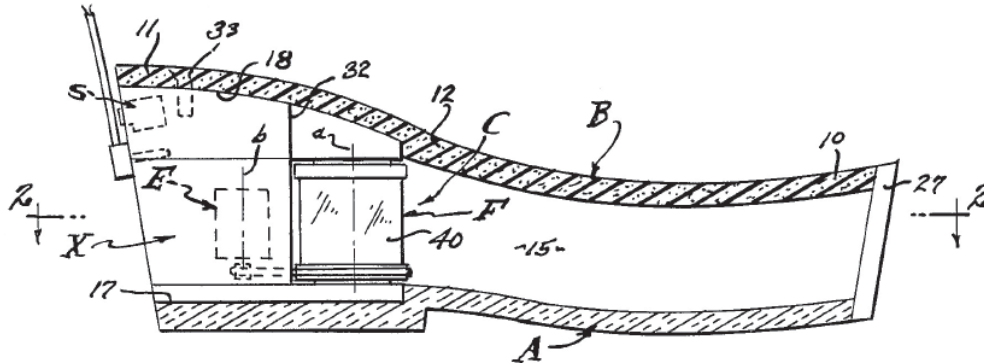


Figure 1, illustrates a wedge-shaped platform shoe, including “a sole-heel A, an instep B, and a riser C therebetween chambered or of shell-form to receive the light modulator unit X that is insertable into the heel portion of the chamber.” *Id.* at 2:16–18, 2:29–34. “The sole-heel A and instep B are comprised of heel, toe and arch sections joined by a perimeter wall 15 that comprises the riser C.” *Id.* at 2:48–50.

Figures 3 and 4 of Chiaramonte are reproduced below.

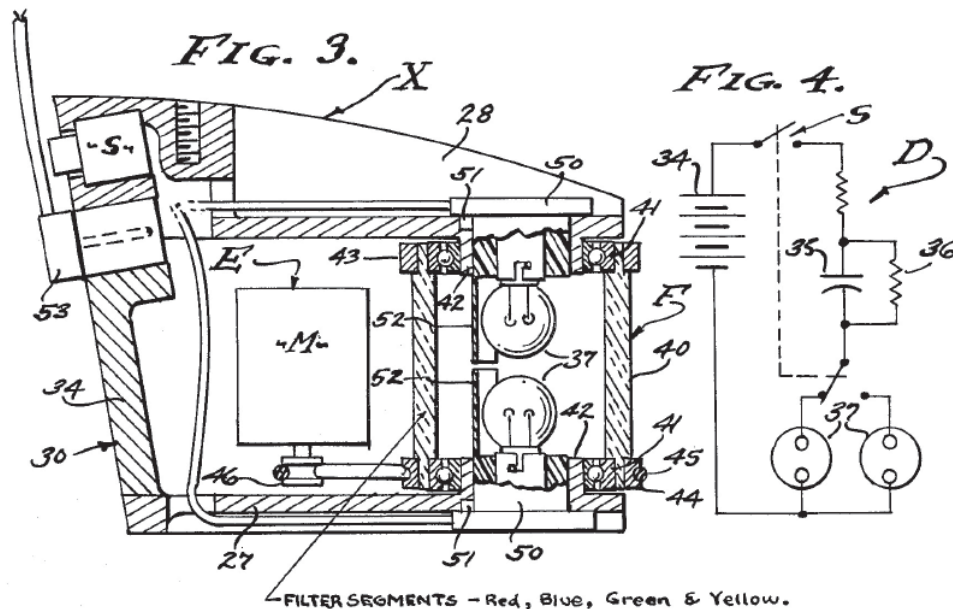


Figure 3 is an enlarged view of light modulator unit X removed from the receptacle in the shoe platform, and Figure 4 is a diagram of the high

intensity illumination circuit. *See id.* at 2:21–26. Chiaramonte discloses light modulator unit X comprises a body 30 to house power source or control D and motor means E for light change means F. *See id.* at 3:36–39.

Chiaramonte discloses light modulator unit X includes a three-way switch S exposed externally for manual engagement at the rear of the platform. *See id.* at 3:51–56. Chiaramonte discloses that “light change means F is a dynamic color filter that moves between the lamp 37 and the two interfaces 21 at the opposite side walls 15.” *Id.* at 3:56–59. Chiaramonte discloses that “dynamic color variations are made visible through the transparent platform of light conductive material.” *Id.* at 4:26–30, *see also id.* at 3:4–9 (“A feature of this invention is the transmission of light through the wall 15 of the riser C, for the purpose of brilliantly illuminating same. In practice, clear acrylic plastic material is employed therefor and which conducts light within its solid substance configuration and along its curvilinear extent.”). Chiaramonte discloses that there is a pair of lamps 37 in circuit with the controlling discharge circuit D. *See id.* at 4:15–19. Chiaramonte discloses switch S has an off position and alternatively selective on positions for the two coaxial lamps 37. *See id.* at 4:23–25.

b. Analysis of Claims 1 and 2

Petitioner contends that Chiaramonte discloses “[a]n illuminated shoe comprising: an upper; a sole attached to said upper, the sole including a translucent perimeter surface,” as recited in claim 1. *See Pet.* 55–57.

Petitioner bases its contention on Chiaramonte’s disclosure of a lighted shoe platform structure, inherent disclosure of a shoe upper, and disclosure of sole-heel A, instep B and riser C forming the sole of the shoe, and a clear acrylic plastic material employed for transmitting light through wall 15 of

riser C. *See id.* (citing Ex. 1005, 1:5–7, 1:36–42, 1:58–65, 2:29–50; 3:4–9, 4:26–40; Ex. 1002 ¶¶ 130–133; *In re Baxter Travenol Labs.*, 952 F.2d 388, 390 (Fed. Cir. 1991); *In re Preda*, 401 F.2d 825, 826 (CCPA 1968)).

Petitioner asserts that Chiaramonte discloses “a light source disposed with said sole,” as recited in claim 1, based on Chiaramonte’s disclosure of light modulator unit X containing lamps 37 providing light and placed in the back portion of the sole within riser C. *See id.* at 57–58 (citing Ex. 1005, 3:18–35, Figs. 1–3; Ex. 1002 ¶ 134). We agree with Petitioner and adopt its position as our own.

Petitioner further contends that Chiaramonte discloses “a push-button switch coupled to the light source to activate the light source such that the light source provides continuous illumination across a substantial portion of the perimeter surface, regardless of whether the wearer is standing still or walking,” as recited in claim 1. *See* Pet. 58–60. Petitioner bases its contention on Chiaramonte’s disclosure of switch S that has on and off positions, and that activates coaxial lamps 37. *See id.* at 58–59 (citing Ex. 1005, 4:23–25, 3:35–45, Figs. 1, 3, 4; Ex. 1002 ¶¶ 135–136). Petitioner contends that Chiaramonte discloses the light source provides continuous illumination regardless of whether the wearer is standing still or walking because Chiaramonte discloses switch S has off and on positions, and a light source that is on provides continuous illumination regardless of the position of the wearer. *See id.* at 59 (citing Ex. 1005, 1:42–55, 1:58–2:8, 4:26–40; Ex. 1002 ¶ 137). Petitioner further asserts that Chiaramonte discloses that the light source provides illumination across a substantial portion of the perimeter surface because Chiaramonte discloses that light modulator unit X transmits light into the body of a shoe structure, particularly riser C of a shoe

platform comprising the sole of the shoe. *See id.* at 59–60 (citing Ex. 1005, 1:35–37, 1:43–48, 3:4–9, 3:18–35, 3:36–44, 4:4–9, 4:14–15, 4:20–25; Ex. 1002 ¶ 138). We agree with Petitioner and adopt its position as our own.

Based on Chiaramonte’s Figure 3 and the disclosure of two coaxial lamps 37 that provide illumination across light conductive translucent perimeter wall 15 made of clear acrylic plastic material, and switch S that has selective on and off positions for coaxial lamps 37, Petitioner argues that Chiaramonte meets claim 2. Pet. 60–61 (citing Ex. 1005, 1:35–37, 3:4–9, 4:23–25; Ex. 1002 ¶ 140). We agree with Petitioner and find that Chiaramonte discloses “wherein said light source includes a plurality of contiguous light emitting devices disposed in said sole that form a substantially uniform illumination pattern across a perimeter surface,” as recited in dependent claim 2.

Patent Owner argues that Chiaramonte: (1) teaches lights partially in the heel and not in the sole; (2) does not teach lights being completely within the heel; and (3) does not teach lights being built completely within the sole. *See* PO Resp. 21. Patent Owner contends that “the heel is confined to only the back part of a shoe.” *Id.* Patent Owner asserts that the ’590 Patent lighting system “is *within* the sole, not *partially disposed* in the sole.” *Id.*; *see also* Tr. 23:21–23 (“[W]ithin is not partially within; it’s totally within. . . . It’s completely within.”).

We do not agree with Patent Owner’s arguments because, as discussed above in Section II.A., the broadest reasonable interpretation of “sole” does not exclude the heel. *See also* Reply 15 (asserting that Patent Owner’s arguments are tied to its claim construction argument for “sole.”). Rather, we find Chiaramonte’s disclosure of two lamps 37 within the heel

portion of the sole also discloses a light source within the sole. See Reply 16.

Patent Owner also contends that Chiaramonte differs from claims 1 and 2 because “it teaches to have a separable part already made that is then inserted into the heel of the shoe in a heel chamber structure.” PO Resp. 20; *see id.* at 21 (“Chiaramonte only teaches of the lights being built as detachable separable pieces in the heel.”). As explained previously, we do not agree with Patent Owner’s arguments because they are not commensurate in scope with the limitations of claims 1 and 2 because claims 1 and 2 do not require the sole and the light source or the plurality of light emitting devices to be unitary or formed as a single piece. Claims 1 and 2 also do not otherwise preclude a separable light source or separable plurality of light emitting devices.

Patent Owner further asserts that Chiaramonte does not teach “individual lights arranged in a contiguous manner behind a translucent window along the perimeter of the sole that is manually activated through an on or off switch.” See PO Resp. 20. We do not agree with Patent Owner’s argument because it is not commensurate in scope with the limitations of claims 1 and 2. Claims 1 and 2 do not recite or otherwise require “lights arranged in a contiguous manner *behind a translucent window along the perimeter of the sole.*” PO Resp. 20 (emphasis added). Claims 1 and 2 instead recite “the sole including a translucent perimeter surface,” “a light source disposed with said sole,” and “said light source includes a plurality of contiguous light emitting devices disposed in said sole.” Ex. 1001, 4:61–5:8. As pointed out by Petitioner, Chiaramonte discloses two coaxial lamps

37 disposed in the sole of the shoe, and the sole of the shoe includes translucent wall 15 of riser C. *See* Pet. 58–60.

Patent Owner also contends that it is not clear whether Chiaramonte discloses a manually operated switch for its lights or if the lights are energized through movement. *See* PO Resp. 20. We do not agree. As pointed out by Petitioner, Chiaramonte discloses switch S having on and off positions for two coaxial lamps 37, and switch S can be activated when the wearer of the shoe toggles the switch. *See* Pet. 58–59; *see also* Reply 16–17 (citing PO Resp. 12, 20; Ex. 1005, 3:54–56, 4:23–25; reproducing Ex. 1005, Figs. 1, 2, and a portion of Fig. 3 with annotations; asserting that Chiaramonte discloses a three-way switch exposed externally for manual engagement, and has off and on positions to for the two coaxial lamps 37).

For the foregoing reasons, after having analyzed the entirety of the record, we determine Petitioner has establish by a preponderance of the evidence that claims 1 and 2 are anticipated by Chiaramonte.

*6. § 103 Unpatentability of Claim 3 as Obvious over
Chiaramonte and Powell*

Petitioner contends that both Chiaramonte and Powell teach “[a]n illuminated shoe comprising: an upper; a sole attached to said upper,” as recited in claim 3, based on Chiaramonte’s disclosures of the lighted platform shoe, and inherent disclosure an upper attached to the sole, and Powell’s lighted shoe in Figure 1 depicting a sole attached to the upper. *See* Pet. 61–63 (citing Ex. 1002 ¶¶ 142–145; incorporating by reference Pet. 31, 55–56). Petitioner asserts that Chiaramonte teaches “a push button switch coupled to said light source to facilitate activation of the light source for user selected periods of time independent of whether the wearer is standing still

or walking,” as recited in claim 3. *See id.* at 63. Petitioner bases its contention on Chiaramonte’s teaching of switch S that has on and off positions that activate coaxial lamps 37. *See id.* (citing Ex. 1002 ¶ 147; incorporating by reference Pet. 58–60). We agree with Petitioner’s assessment of Chiaramonte.

Patent Owner argues that Powell is deficient for the same reasons as those presented by Patent Owner addressing the ground of unpatentability over Shkalim and Powell. *See* PO Resp. 21–22. Patent Owner asserts, “there would have been no reason for one of ordinary skill in the art to look to Powell to modify the configuration taught by Chiaramonte to arrive with a reasonable expectation [of] success at the claimed combination of features recited in claim 3.” *Id.* at 22.

For the same reasons as those addressed above in Section II.D.2.b, we do not agree with Patent Owner’s arguments addressing the alleged deficiencies of Powell. Also, for the reasons discussed below, we are not swayed by Patent Owner’s conclusory attorney argument that there would have been no reason for one of ordinary skill in the art to look to Powell to modify the configuration taught by Chiaramonte, and there would not have been a reasonable expectation of success in making the modification. *See* PO Resp. 19; Reply 18; *Gemtron v. Saint-Gobain*, 572 F.3d at 1380.

Petitioner acknowledges that Chiaramonte does not teach the “sole including an opaque perimeter surface having a plurality of translucent regions, the translucent regions being formed in the shape of alpha numeric characters and being arranged to spell a word,” as recited in claim 3. *See* Pet. 62–64. Petitioner asserts that Powell teaches this limitation. *See id.* at 62 (citing Ex. 1002 ¶ 144; incorporating by reference Pet. 31–32). Petitioner

further asserts that both Chiaramonte and Powell teach “a light source disposed with said sole such that the light source provides illumination to the plurality of translucent regions,” as recited in claim 3. *See id.* at 63 (citing Ex. 1002 ¶ 146; incorporating by reference Pet. 33, 57–58). Based on the explicit disclosure of Chiaramonte and Powell, we agree with Petitioner.

Petitioner contends that a person of ordinary skill in the art at the time of the invention “would have found it obvious to combine the illuminated nameplate on the sole of the Powell shoe with the illuminated sole of the Chiaramonte shoe” to arrive at the sole required by claim 3. Pet. 62–63 (citing Ex. 1002 ¶ 145). More specifically, Petitioner asserts combining features of Chiaramonte and Powell “would have required nothing more than the application of ordinary skill, and such a combination would have required the simple substitution of one known element (an entirely translucent sole) with another (a sole with translucent regions arranged to spell a word) with nothing more than predictable results.” *Id.* at 64 (citing Ex. 1002 ¶ 149). Petitioner further contends “[i]t would have been simple to modify the translucent portion of Chiaramonte so as to create translucent letters to form a word.” *Id.* (citing Ex. 1002 ¶ 149; Ex. 1006, 2:24–27).

Petitioner also asserts that “shoe designers had been adding lights to the soles of shoes for decades prior to 2000 [to] enhance aesthetic appeal and to meet market demand for personalized goods.” Pet. 65 (citing Ex. 1002 ¶ 150; incorporating by reference Pet. 34–38). Petitioner argues “given the growing trend toward personalized goods that existed in the marketplace at the time of the invention, a person of ordinary skill would have had ample reason to incorporate Powell’s personalization technique.” *Id.* (citing Ex. 1002 ¶ 150; Ex. 1015; Ex. 1016). Petitioner argues,

[g]iven the similarities in the structure and function between Powell and Chiaramonte, as well as their aesthetic objectives, a person of ordinary skill would have been motivated to incorporate into Chiaramonte the translucent regions being formed in the shape of alpha numeric characters and being arranged to spell a word of Powell.

Pet. 64–65; Ex. 1002 ¶ 149 (Mr. Rake stating the same).

On the foregoing bases, we agree with Petitioner’s position, as supported by the testimony of Mr. Rake, that the combination of Chiaramonte and Powell teaches or suggests the limitations recited in claim 3. Moreover, we determine Petitioner has provided a sufficiently articulated reasoning with rational underpinning to establish that one with ordinary skill in the art would have modified the teachings of Chiaramonte in view of Powell’s teachings of a sole including an opaque perimeter surface having a plurality of translucent regions formed in the shape of alpha numeric characters and arranged to spell a word. *See KSR*, 550 U.S. at 418 (quoting *Kahn*, 441 F.3d at 988). Accordingly, after having analyzed the entirety of the record, we determine Petitioner has establish by a preponderance of the evidence that the subject matter of claim 3 would have been obvious over Chiaramonte and Powell.

E. Petitioner’s Motion to Exclude Evidence

Petitioner moves to exclude Exhibit 2001 in its entirety pursuant to Rules 401, 402, 403, 602, 801, and 802 of the Federal Rules of Evidence. Paper 25. Patent Owner opposes Petition’s Motion to Exclude. Paper 27. We do not rely on Exhibit 2001 in reaching our Decision. Accordingly, we dismiss Petitioner’s Motion to Exclude Evidence as moot.

III. CONCLUSION

Petitioner has shown by a preponderance of the evidence that claims 1–3 are unpatentable under 35 U.S.C. §§ 102 and 103.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1 and 2 have been shown to be unpatentable under 35 U.S.C. § 102 as anticipated by Shkalim;

FURTHER ORDERED that claim 3 has been shown to be unpatentable under 35 U.S.C. § 103 as obvious over Shkalim and Powell;

FURTHER ORDERED that that claim 1 has been shown to be unpatentable under 35 U.S.C. § 102 as anticipated by Chien;

FURTHER ORDERED that that claim 2 has not been shown to be unpatentable under 35 U.S.C. § 102 as anticipated by Chien;

FURTHER ORDERED that claim 3 has been shown to be unpatentable under 35 U.S.C. § 103 as obvious over Chien and Powell;

FURTHER ORDERED that claims 1 and 2 have been shown to be unpatentable under 35 U.S.C. § 102 as anticipated by Chiaramonte;

FURTHER ORDERED that claim 3 has been shown to be unpatentable under 35 U.S.C. § 103 as obvious over Chiaramonte and Powell; and

FURTHER ORDERED that because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2017-00246
Patent 6,837,590 B2

PETITIONER:

Edward H. Sikorski
James M. Heintz
DLA Piper LLP
Ed.sikorski@dlapiper.com
Jim.heintz@dlapiper.com
Nike-Jezign-IPR2017-00246@dlapiper.com

PATENT OWNER:

Joseph J. Zito
Richard A. Castellano
DNL ZITO
jzito@dnlzito.com
rcastellano@dnlzito.com

Paul Grandinetti
mail@levygrandinetti.com