

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LUXOTTICA OF AMERICA INC.,

Petitioner,

v.

E-VISION OPTICS, LLC,

Patent Owner.

Case No. IPR2024-01030

Patent No. 8,708,483

PATENT OWNER'S SUR-REPLY TO PETITIONER'S REPLY

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2001	<i>eVision Optics, LLC and Vision Smart Optics, Inc. v. Luxottica Group S.P.A. and Luxottica of America Inc.</i> , Case No. 8:23-cv-02013 AB (SHK) Order Denying Defendants' Motion to Stay, Dkt. 75 (Aug. 21, 2024 C.D. Cal.)
2002	<i>eVision Optics, LLC and Vision Smart Optics, Inc. v. Luxottica Group S.P.A. and Luxottica of America Inc.</i> , Case No. 8:23-cv-02013 AB (SHK) Order Re Civil Jury/Court Trial, Dkt. 54 (April 4, 2024 C.D. Cal.)
2003	<i>eVision Optics, LLC and Vision Smart Optics, Inc. v. Luxottica Group S.P.A. and Luxottica of America Inc.</i> , Case No. 8:23-cv-02013 AB (SHK) Order Scheduling Additional Dates and Correcting Scheduling Order, Dkt. 58 (April 18, 2024 C.D. Cal.)
2004	<i>eVision Optics, LLC and Vision Smart Optics, Inc. v. Lenovo Group, Ltd., et al.</i> , Case No. 8:23-cv-01860 AB (SHK) Defendants' Preliminary Invalidity Contentions (July 19, 2024 C.D. Cal.) (excerpted)
2005	<i>eVision Optics, LLC and Vision Smart Optics, Inc. v. Luxottica Group S.P.A. and Luxottica of America Inc.</i> , Case No. 8:23-cv-02013 AB (SHK) Defendants' Invalidity Contentions (July 12, 2024 C.D. Cal.)
2006	<i>eVision Optics, LLC and e-Vision Smart Optics, Inc. v. Lenovo Group, Ltd. et al.</i> , Case No. 8:23-cv-01860-AB-SHK, Order re Civil Jury/Court Trial, Dkt. 54 (April 3, 2024 C.D. Cal.)
2007	Lex Machina – Federal Court – Federal District Court Cases in C.D. Cal, Pending Between 2019-09-01 and 2024-09-19
2008	Vacancies in the Federal Judiciary 118th Congress, last updated on 9/23/2024, https://www.uscourts.gov/judges-judgeships/judicial-vacancies/current-judicial-vacancies
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2011	U.S. Patent Application Pub. No. 2006/0023158 A1, Eyeglasses With Electrical Components, Thomas A. Howell et al., dated Feb. 2, 2006 (“Howell-158”)
2012	U.S. Patent Application Pub. No. 2005/0264752 A1, Eyewear Supporting After-Market Electrical Components, Thomas A. Howell et al., dated Dec. 1, 2005 (“Howell-752”)
2013	U.S. Patent No. 6,491,394, Method For Refracting and Dispensing Electro-Active Spectacles, Ronald D. Blum et al., dated Dec. 10, 2002 (“Blum-394”)
2014	U.S. Patent Application Pub. No. 2005/0140924 A1, Electro-Active Multi-Focal Spectacle Lens, Ronald D. Blum et al., dated June 30, 2005 (“Blum-924”)
2015	<i>eVision Optics, LLC and Vision Smart Optics, Inc. v. Luxottica Group S.P.A. and Luxottica of America Inc.</i> , Case No. 8:23-cv-02013 AB (SHK) (IN CHAMBERS) Order Continuing Claim Construction Hearing, Dkt. 97 (Oct. 7, 2024 C.D. Cal.)
2016	<i>eVision Optics, LLC and e-Vision Smart Optics, Inc. v. Lenovo Group, Ltd. et al.</i> , Case No. 8:23-cv-01860-AB-SHK, (IN CHAMBERS) Order Continuing Claim Construction Hearing, Dkt. 74 (Oct. 7, 2024 C.D. Cal.)
2017	U.S. Patent No. 7,030,411, Electronic Unit Integrated Into A Flexible Polymer Body, Peter A. Krulevitch et al. dated Apr. 18, 2006 (“Krulevitch”)
2018	<i>eVision Optics, LLC and Vision Smart Optics, Inc. v. Lenovo Group, Ltd., et al.</i> , Case No. 8:23-cv-01860 AB (SHK), Dkt. 78, Order dated Dec. 4, 2024
2019	Declaration of Professor James H. Oliver, Ph.D
2020	<i>Curriculum Vitae</i> of Professor James H. Oliver, Ph.D.
2021	Point-to-point construction, Wiki page available online at: https://en.wikipedia.org/wiki/Point-to-point_construction

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2022	Air tightness vs water tightness, Physics Forum webpage available online at: https://www.physicsforums.com/threads/air-tightness-vs-water-tighness.142407/#post-1161525
2023	Exclusive Media Event Marks Debut of OAKLEY THUMP, available online at: https://www.globenewswire.com/news-release/2004/11/15/318738/2175/en/Exclusive-Media-Event-Marks-Debut-of-OAKLEY-THUMP.html
2024	Oakley Thump, available online at: https://museumoffailure.com/exhibition/oakley-thump
2025	Oakley Thump review: Oakley Thump, available online at: https://www.cnet.com/reviews/oakley-thump-review/

I. INTRODUCTION

Petitioner has not met its burden to prove, by a preponderance of the evidence, that challenged claims 3, 13, 16, and 19-37 are unpatentable.

Petitioner's reply is rife with inaccuracies and misrepresentations of the Patent Owner's arguments, neglecting to address Patent Owner's pivotal contentions regarding the prior art's lack of disclosure and the absence of any motivation to combine its teachings.

Regarding the challenged claims, Petitioner erroneously asserts that Patent Owner's arguments are limited to lack of motivation to combine. (Reply, 1.) This is not the case. Patent Owner identified deficiencies in Grounds 2, 3, 8, and 9, including with the prior art's purported disclosure of a "sealed, moisture-resistant module attached to the frame," a "hermetically sealed" module, a "wear-resistant" module, and placement of the module "at least partially...behind the ear of a wearer." (POR, 24-37.)

With respect to independent claim 19, Petitioner's reply includes additional inaccuracies, alleging that Patent Owner advances "a new claim construction" that "contradict[s] PO's own infringement contentions." (Reply, 1.) But nowhere in Petitioner's analysis of claim 19 does Petitioner identify a new claim construction or even reference Patent Owner's contentions. (Reply, 17-22.)

Petitioner also repeatedly misconstrues Patent Owner's analysis of the prior art's applications and objectives, dismissing it as a flawed "non-analogous" argument. (Reply, 1, 7, 13.) But differing prior art fields and goals may establish a lack of motivation to combine. *See Polygroup Ltd. MCO v. Willis Elec. Co., Ltd.*, 759 Fed. App'x. 934, 942 (Fed. Cir. 2019) (finding the references' distinct fields of invention illustrated a lack of motivation to combine); *Securus Tech., Inc. v. Global Tel*Link Corp.*, IPR2015-00155, Paper 30 at 17 (PTAB Apr. 7, 2016) (holding that a POSITA would not have combined two references because the respondent's expert showed that they were "drawn from different fields"); *LG Display Co., Ltd. v. Innovative Display Tech. LLC*, IPR2014-01092, Paper 9 at 13-14 (PTAB Jan. 13, 2015) (finding no motivation to combine, noting that two references had "two very different goals").

Petitioner's grounds—especially its three- and even four-reference combinations—piece together teachings from disparate contexts with unrelated goals. As Dr. Oliver testified, a POSITA would neither be motivated to pursue such combinations nor possess a reasonable expectation of success in doing so.

Finally, Petitioner wrongly describes its expert's opinions as "unrebutted" (Reply, 1), despite that Dr. Oliver thoroughly refuted these opinions at length in his own detailed declaration. (*See generally* EX-2019.) "[A] tribunal is not required to accept expert testimony simply because...the declarant was not deposed." *Belden Inc.*

v. Berk-Tek LLC, No. 2014-1676, 2014-1677, slip op. at *12 (Fed. Cir. Apr. 17, 2015) (citing *Applied Med. Res. Corp. v. U.S. Surgical Corp.*, 147 F.3d 1374, 1379 (Fed. Cir. 1998)) (affirming a PTAB's rejection of expert testimony as "conclusory" and "not supported," even without cross-examination).

Petitioner's grounds rely on counter-intuitive combinations of prior art teachings which could only have been driven by impermissible hindsight. These grounds are fundamentally flawed, not only because they omit critical limitations of the challenged claims, but also because they fail to provide any persuasive rationale that would motivate a POSITA to pursue combinations that sacrifice key benefits, create cumbersome technology, and incorporate wasteful complexities.

II. PETITIONER HAS NOT SHOWN CLAIM 3 TO BE UNPATENTABLE

A. Ground 5: Howell-596 in View of Blum-741 and Spitzer Does Not Render Obvious Claim 3

A POSITA would have had no reason to consider, much less incorporate, Spitzer's flexible circuitry in Petitioner's proposed combination, because the combination of Howell-596's sealed modules and Blum-741's electro-active lenses does not result in any movable components. (POR, 18.) *See also, KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). In its reply, Petitioner repeats the same purported benefits that it identified in its petition. (Reply, 3.) But Petitioner's assertion that a POSITA would have been motivated "to enable component positioning without

imposing strain on the leads” is illogical because the components in Petitioner’s proposed combination would have been fixed. (POR, 18.)

Petitioner also asserts, incorrectly, that Spitzer expressly motivates the combination by teaching the advantage of “a flat cross-section flex circuit in small spaces.” (Reply, 4; Petition, 45.) First, Spitzer includes no such teaching. (EX-1007, 9:60-61.) Spitzer merely states that *the strap* which may contain the flex circuit “may be flat if it contains Kapton flex circuitry, or it may have a rectangular or other cross-section.” (*Id.*) This disclosure does not reference space constraints or the “advantage” of a flat strap or circuitry, which is unsurprising; Spitzer would be unconcerned with space since its flex circuit spans the entire back of a person’s head. (*Id.*, Fig. 20, 9:49-61.) Second, Spitzer teaches that a “flat” strap is only possible if the flex circuit is made from Kapton. (*Id.*) But Spitzer discloses not only flexible circuitry “based on Kapton or other polymeric material,” but also “stranded insulated wire” and “coaxial cable.” (*Id.*, 7:44-60.) And Petitioner has made no argument that it would have been obvious to incorporate Kapton-based flexible circuitry, specifically, instead of other types of flexible circuitry that Spitzer discloses.

Next, Petitioner oversimplifies Patent Owner’s argument as supposedly based on “expens[e],” and cites two cases to support its assertion that the law does not exclude expensive solutions. (Reply, 4-5 (*citing Polaris Wireless, Inc. v. Trueposition,*

Inc., IPR2013-00323, Paper 62 at 36 (PTAB Nov. 3, 2014); *Orthopedic Equip. Co., Inc. v. United States*, 702 F.2d 1005, 1013 (Fed. Cir. 1983).) But these cases merely hold that expensive solutions should not necessarily be excluded. *See Polaris*, Paper 62 at 36; *Orthopedic*, 702 F.2d at 1013.

Petitioner overlooks the deeper, underlying issue at hand. (POR, 18-21.) Specifically, Patent Owner did not argue that a flex circuit would be a costly or expensive *improvement* or *solution*, as was the case in *Polaris* and *Orthopedic*. *Polaris*, IPR2013-00323, Paper 62 at 36; *Orthopedic*, 702 F.2d at 1013. Rather, Patent Owner argued (1) that a flex circuit would be *no improvement* and *no solution* due to the lack of movable or distributed components in Petitioner's proposed combination and (2) that inclusion of a flex circuit despite these issues would be "wasteful." (POR, 18-21.) Put simply, since there was no need or benefit to be achieved from including Spitzer's flex circuit in Petitioner's combination, a POSITA would not be motivated to do so. *See Virtek Vision Int'l ULC v. Assembly Guidance Sys., Inc.*, 97 F.4th 882, 886-87 (Fed. Cir. 2024) (finding that the mere existence of alternative arrangements does not suffice without articulating "any reason to substitute one for another or any advantages that would flow from doing so").

Petitioner argues that Howell-596 "clearly discloses distributing components, including a detection system 2102 [] and an opening 2104 covering a sensor [] across

different areas of a temple 2100.” (Reply, 6.) But Petitioner’s description of Figure 21 as illustrating a detection system and sensor spanning different areas of a temple is slightly misleading, as is its quote of Dr. Oliver’s testimony. (*See id.*)

In Figure 21, the opening 2104 and corresponding sensor Petitioner points to is not the same UV detection sensor that forms part of Petitioner’s alleged electronic module. (EX-1003, ¶ [0205].) Figure 21 is an embodiment having “opening 2104” on the *inside* of the temple piece, and a corresponding sensor beneath the opening which may detect whether the opening is blocked by the user’s head as a way of detecting whether the frames are “being worn.” (EX-1003, ¶ [0205].) Petitioner does not reference this “being worn” sensor in its petitioned grounds and has not identified the sensor as being included in the combination of prior art on which its challenge is based. (Petition, 44-46.) That is, Petitioner did not propose distributing components across the resulting eyewear. Rather, the components Petitioner proposes combining are Howell-596’s UV detection system and Blum-741’s electro-active lenses, which—unlike the adjustable, sliding transducer of Spitzer (EX-1007, 7:44-54)—are not described as movable within the frames and which are both located towards the front of the eyewear. (POR, 18-19; EX-1003, Fig. 1, ¶ [0073]; EX-1005, Fig. 1, 6:40-41.)

In addition, Petitioner incorrectly suggests that Dr. Oliver described Howell-596’s Figure 21 as achieving “robust placement” of the electronics, but Dr. Oliver was

not discussing Howell-596 at all. (Reply, 6 (*citing* EX-1024, 45:11-46:12).) In identifying *the challenges* encountered by the prior art (EX-1002, ¶ 27), Dr. Oliver explained that the prior art had struggled to achieve “robust placement” of electronics in eyewear—specifically, creating electronic eyewear that was both functional and aesthetically appealing. (EX-1024, 45:11-46:12.) Petitioner's poorly constructed combination of prior art elements merely confirms Dr. Oliver's opinion. Inclusion of Spitzer's flexible circuit in the proposed combination of Howell-596 and Blum-741 would have been cumbersome, ineffective, and wasteful, particularly because Petitioner's combination lacks movable and/or distributed components.

Petitioner next asserts that “[e]ven assuming Howell-596 only taught integrated components, PO still fails to demonstrate that Howell-596 teaches away from using a flex circuit.” (Reply, 6.) But that is not Patent Owner's burden. Throughout an *Inter Partes* Review, Petitioner bears the burden to prove unpatentability by a preponderance of the evidence. 35 U.S.C. § 316(e). That burden never shifts to Patent Owner. *See In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1375 (Fed. Cir. 2016). “This is especially true where the only issues to be considered are what the prior art discloses, ***whether there would have been a motivation to combine the prior art***, and whether that combination would render the patented claims obvious.” *Id.* at 1376 (emphasis added). Petitioner has not met its burden.

Petitioner further argues that, as a rule, references in an obviousness combination need not be analogous to each other. (Reply, 7 (citing *Sanofi-Aventis Deutschland GmbH v. Mylan Pharms. Inc.*, 66 F.4th 1373, 1380 (Fed. Cir. 2023); *Corephotonics, Ltd. v. Apple Inc.*, 84 F.4th 990, 1007 (Fed. Cir. 2023)).) But neither *Sanofi-Aventis* nor *Corephotonics* supports Petitioner's assertion. First, the purported quote appears in neither case, and Patent Owner could not source the quoted language. Second, both cases are irrelevant here, since both addressed the sufficiency of a petitioner's showing that the prior art references were analogous to the challenged patent, as required for a Section 103 ground. *Sanofi-Aventis*, 66 F.4th at 1380; *Corephotonics*, 84 F.4th at 1007.

Contrary to Petitioner's argument, whether prior art references are in the same field or share the same goals may be directly relevant to whether a POSITA would have had reason to combine their teachings. *Polygroup*, 759 Fed. App'x. at 942 (holding different fields of inventions illustrated that there was no motivation to combine); *Securus*, IPR2015-00155, Paper 30 at 17 (holding a POSITA would not have combined two references "drawn from different fields"); *LG Display*, IPR2014-01092, Paper 9 at 13-14 (finding no motivation to combine two prior art references with "two very different goals"). In its response, Patent Owner highlighted the distinct fields and goals of Howell-596 and Blum-741, providing essential context for why a POSITA

would have understood their teachings to be incompatible and why a POSITA would not have been motivated to combine them. (POR, 22-23.)

Finally, Petitioner does not dispute Patent Owner's argument that to use Spitzer's cumbersome strap to connect lenses with a sealed module while preserving wearability and aesthetics would have required substantial redesign—if it were even possible to begin with. (POR, 20-21.) In fact, Petitioner fails even to address the necessary reconstruction or redesign and therefore fails to meet its burden to establish a motivation to combine. (POR, 21; *see also Apple, Inc. v. Uusi, LLC*, No. IPR2019-00358, 2020 WL 4546916, at *36-37 (PTAB Aug. 4, 2020) (no motivation to combine and no reasonable expectation of success where “the proposed combination would have involved unduly complex redesign”).) Although a POSITA is credited with “ordinary creativity” (Reply, 14), this does not lessen Petitioner's burden to establish that a POSITA would have and could have made the necessary modifications. *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1075 (Fed. Cir. 2015) (citing *KSR Int'l*, 550 U.S. at 417) (“The Supreme Court's passage does not establish that it suffices for obviousness that a variation of the prior art would predictably work, but requires consideration of whether, in light of factors such as ‘design incentives and other market forces,’ the hypothetical skilled artisan would recognize the potential benefits and pursue the variation.”).

A POSITA would not have been motivated to implement the teachings of Spitzer in the combination of Howell-596 and Blum-741.

B. Ground 9: Blum-741 in View of Hattori-912 and Spitzer Does Not Render Obvious Claim 3

1. The proposed combination fails to render obvious a sealed moisture resistant module attached to the frame.

Petitioner again fails to clearly articulate what in the combination of Blum-741, Hattori-912, and Spitzer it believes to be the “sealed moisture-resistant module attached to the frame.” (Reply, 9-11; Petition, 78.) It remains unclear whether Petitioner asserts: (1) that the integrated semiconductor circuit 20, alone, is the claimed sealed moisture-resistant module—which is allegedly sealed by virtue of being placed in eyewear frames containing a waterproof ring; or (2) that the resulting combination’s temple would contain a “recess sealed by a waterproof ring” with inserted electronic components and that, altogether, this assembly allegedly forms the sealed module. (Reply, 10-11.) Accordingly, Petitioner has not met its burden to clearly articulate its ground for obviousness. *Lowe’s Home Centers, LLC v. Epistar Corp.*, IPR2018-00932, Paper 7 at 19 (PTAB Nov. 1, 2018) (citing *TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1066 (Fed. Cir. 2016)) (“It is Petitioner’s burden to explain specifically how the references would be combined to produce the claimed invention”); *Pers. Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 994 (Fed. Cir. 2017) (“[T]he Board nowhere

clearly explained, or cited evidence showing, *how* the combination of the two references was supposed to work.”); *ActiveVideo Networks, Inc. v. Verizon Comms., Inc.*, 694 F.3d 1312, 1327 (Fed. Cir. 2012) (no invalidity where defendant’s expert “failed to explain...how any specific combination would operate or read on the asserted claims”).)

Petitioner cites high-level descriptions in Patent Owner’s July 2024 infringement contentions as supposed justification for its own high-level argument. (Reply, 8-10.) But whereas Patent Owner’s contentions are understandably non-specific—they were served less than four months after the first amended complaint was filed and while discovery was still ongoing—Petitioner was required to adequately articulate its grounds in the petition. *Lyft, Inc. v. Quartz Auto Techs., LLC*, IPR2020-01450, Paper 7 at 18 (PTAB Mar. 4, 2021) (denying institution where petitioner “[did] not articulate adequately how it propose[d] to modify one of the references or to combine the two references’ teachings”).

To the extent Petitioner relies on the combination of Hattori-912’s semiconductor integrated circuit, hollow part 30, and frame parts 1-a and 1-b as the alleged module, Patent Owner’s infringement contentions do not support Petitioner’s argument. In its infringement contentions, Patent Owner cited publicly available websites demonstrating that the infringing frames are water-resistant, as well as photos

of deconstructed eyeglasses. (EX-1024, 6-19.) But whereas Patent Owner may yet receive further discovery as to whether or how the accused PCB may have been sealed during manufacturing, the prior art disclosure on which Petitioner relies will not change. (*Id.*) Patent Owner's contentions were reasonably specific while relying on publicly available information. But these higher-level statements are not inconsistent with Patent Owner's arguments, here.

The district court has not construed any claim terms, and Patent Owner's preliminary infringement contentions based on publicly available information should not be used to impermissibly broaden the scope of the claims. Petitioner's assertion is unsupported by the term's plain meaning, the intrinsic record, and Petitioner's briefing. Petitioner cites two cases—both are inapposite. (Reply, 12-13 (citing *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001); *Commscope Techs. LLC v. Dali Wireless Inc.*, 10 F.4th 1289, 1299 (Fed. Cir. 2021)).) In *Amazon.com*, the Federal Circuit noted that claim terms must be construed consistently for purposes of infringement and invalidity analyses. 239 F.3d at 1351-52. But Patent Owner's contentions are not inconsistent with its argument here, the claims have not yet been construed by the district court, and the litigation is stayed pending the outcome of this proceeding. *e-Vision Optics, LLC et al. v. Luxottica Grp. S.P.A. et al.*, No. 8:23-cv-02013 AB, (SHKx) (C.D. Cal. Jan. 17, 2025), Dkt. 121.

In *CommScope*, the court held that patent owner could not simultaneously argue infringement by the accused product and validity over anticipating prior art, where the accused and prior art functionality were shown to be the same. *CommScope*, 10 F.4th at 1299. Petitioner has made no such showing here. Petitioner asserts a combination of prior art containing a hollowed-out frame, semiconductor integrated circuit, and “waterproof ring and/or coating.” (Petition, 55-56.) Petitioner identifies no similar waterproof ring in Patent Owner's contentions and Hattori-912 teaches nothing more than a “protective film” without specifying where the film is applied and from what the film is designed to protect. (EX-1006, 65.) Without sufficient detail, not only does the prior art not disclose the claim limitation, but it also cannot be compared to the products accused in the district court.

To the extent Petitioner relies on a combination of Hattori-912's integrated circuit, the hollow part, and both frame pieces as the “sealed moisture resistant module,” then it alleges that the entirety of the frame is a module. (POR, 24-28.) As such, the proposed module could not be “attached to the frame” or “disposed within the first temple,” as further recited by claim 1. (POR, 24-28.)

Petitioner's two-sentence alternative argument in the petition that Hattori-912's “protective film” discloses a sealed, moisture-resistant module is still deficient. (POR, 26-27.) While Dr. Oliver confirmed that “[c]onformal layers *can* protect from many

different things: chemical, abrasion, wear, vapor” (EX-1024, 32:12-21 (emphasis added)), Hattori-912 does not disclose a conformal layer, and the petition does not reference a conformal layer. Instead, Hattori-912 discloses only a “protective film.” (EX-1006, 65.) A protective film need not be a conformal coating, and even if it was, Hattori-912 does not provide sufficient detail to inform a POSITA that application of such a film would result in a sealed, moisture-resistant module. (POR, 26-27; EX-2019, ¶86.)

Accordingly, Petitioner's proposed combination fails to disclose or render obvious a sealed, moisture-resistant module as claimed.

2. A POSITA would not have been motivated to combine the teachings of Blum-741, Hattori-912, and Spitzer.

Petitioner still fails to carry its burden to show why a POSITA would have been motivated to combine the specific references of Ground 9—i.e., why a POSITA would have incorporated Spitzer's teachings in Blum-741, as modified by Hattori-912. (Petition, 78; Reply, 13-14.) In the petition, Petitioner merely cross-referenced its earlier argument under Ground 5 that a POSITA would have been motivated to implement Spitzer's teachings within Howell-596, as modified by Blum-741. (Petition, 78.) This “borrowing” of rationale for a different primary reference and different combination of references is insufficient to meet Petitioner's burden. *See In re Magnum Oil Tools Int'l*, 829 F.3d at 1378.

For example, in *In re Magnum*, the Federal Circuit overturned a Board's finding of obviousness, where the petitioner failed to "explain[] why borrowing the rationale for combining the first set of references equally applies to the second set of references." *Id.* Specifically, because Petitioner "attempted to incorporate its arguments based on [a first reference] to its obviousness analysis based on [a second reference], without presenting particularized arguments explaining why those arguments...would be cross-applicable," Petitioner "failed to articulate a motivation to combine." *Id.* at 1379; *Sanofi-Aventis*, 66 F.4th at 1378-80. Patent Owner raised this deficiency in its response (POR, 28), and Petitioner does not dispute it. On this basis alone, Ground 9 must fail.

Petitioner's only reply to Patent Owner's response on Ground 9 is its claim that Patent Owner does not adequately credit a POSITA's ability. (Reply, 14.) While a POSITA is credited with "ordinary creativity," this does not lessen Petitioner's burden to establish that a POSITA would have been motivated to apply the disclosures in the first place. *Pers. Web Techs.*, 848 F.3d at 993 (insufficient to allege "that a skilled artisan, once presented with the two references, would have understood that they could be combined"); *Belden*, 805 F.3d at 1073 ("[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the

combinations or modifications of prior art to arrive at the claimed invention.”)
(emphasis in original).

III. PETITIONER HAS NOT SHOWN CLAIM 13 TO BE UNPATENTABLE

A. Ground 2: Howell-596 Does Not Render Obvious A Hermetically Sealed Module

The parties' dispute as to whether Howell-596 discloses a “hermetically sealed” module turns on a disagreement about whether “hermetically sealing [is] conventional and equivalent to waterproofing.” (Reply, 14.) It is not.

Based on the petition and Patent Owner's response, the parties agreed that a “hermetic seal” refers to an airtight seal. (Petition, 28 (“Something that is hermetically sealed is sealed so as to be airtight.”); *see also* EX-1010, 269 (defining “hermetic seal” as “airtight”); EX-1002, ¶103.) Dr. Oliver testified that a POSITA would have understood an airtight seal provides a higher degree of protection than a waterproof seal, and that while an airtight seal is often waterproof, the reverse is not necessarily true. (EX-2019, ¶¶95-97.) Dr. Oliver explained this is because water molecules are larger than air molecules. (*Id.* (citing EX-2022, 2, 4).)

Neither Petitioner nor Dr. Feland directly responded to Dr. Oliver's testimony or rebutted it. Instead, in its reply, Petitioner asserts that the '483 patent's specification equates waterproofing with a hermetic seal. (Reply, 14-16.) But the quoted patent disclosures are consistent with Dr. Oliver's testimony that while a hermetic seal may

afford water protection, waterproofing does *not* provide an airtight seal. (*See* EX-1001, 6:47-53, 9:15-18, 10:47-50.) Because Howell-596 discloses only a waterproof module, Howell-596 does not suggest a hermetically sealed module.

While Petitioner belatedly attempts to rely on Dr. Feland's allegation that a POSITA would have been motivated to hermetically seal the module, the petition contains no such argument. (Petition, 28-29.) Petitioner's untimely attempt to rely on Dr. Feland, as well as its belated claims that hermetic sealing techniques were within the knowledge of a POSITA, should be rejected since Petitioner did not include such arguments in the petition. *Wasica Finance GMBH v. Continental Automotive Sys., Inc.*, 853 F.3d 1272, 1285 (Fed. Cir. 2017) (quoting *Smithkline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1319 (Fed. Cir. 2006)) ("Our law is well established that arguments not raised in the opening brief are waived."). In any event, Dr. Feland's single-sentence argument is unsupported by sufficient rationale that a POSITA would have been motivated to apply an unnecessary hermetic seal within Howell-596's specific application. Moreover, Dr. Oliver's testimony disproves Petitioner's argument. (POR, 30 (citing EX-2019, ¶95).)

Epstein and the other related cases Petitioner cites are inapposite. (Reply, 15-16.) In those cases, a patent owner argued that the prior art lacked sufficient detail as to "**how** to implement *the features of the references*." *In re Epstein*, 32 F.3d 1559,

1568 (Fed. Cir. 1994) (emphasis added). Here, the critical point is that a hermetic seal is not *a feature of the reference* at all, because Howell-596 does not disclose a hermetic seal. (POR, 29-31.) One need not consider whether sufficient detail exists regarding how to implement such a hermetic seal, because Howell-596 does not disclose one in the first place. Accordingly, Ground 2 does not render obvious claim 13.

B. Ground 8: The Combination of Blum-741 and Hattori-912 Does Not Render Obvious All Limitations of Claim 13

Ground 8 fails against claim 13 for three independent reasons—only one of which is addressed in Petitioner's reply. (*Compare* POR, 30-31 *with* Reply, 17.) Like claim 2, Claim 13 depends from Claim 1. As discussed above, the alleged combination of Blum-741 and Hattori-912 fails to render obvious the sealed, moisture-resistant module of claim 1, and a POSITA would not have been motivated to combine their teachings. Section II(B), *supra*. Petitioner does not address these arguments under claim 13 in its reply.

Additionally, Patent Owner asserted that Ground 8 fails to disclose or render obvious a hermetically sealed module. (POR, 30-31.) While Petitioner cross-references its analysis under Ground 2 for purposes of Ground 8 on this issue, Howell-596 (Ground 2) and Hattori-912 (Ground 8) are not the same. Hattori-912's disclosure is even more distinguishable from claim 13, because Hattori-912 merely discloses either eyewear frame pieces which are joined together using a waterproof ring or

coating a circuit with a protective film. (Petition, 75-76.) Neither of these suggests that the frames or circuit would necessarily be hermetically sealed.

Accordingly, Ground 8 also does not render obvious claim 13.

IV. PETITIONER HAS NOT SHOWN CLAIM 16 TO BE UNPATENTABLE

A. Ground 2: Howell-596 Does Not Render Obvious a Wear Resistant Module

Petitioner's reply merely reiterates the argument made in its petition and fails to address Patent Owner's and Dr. Oliver's rebuttals, which demonstrate that Howell-596 fails to render obvious a wear-resistant module. (Reply, 16-17.) Both Patent Owner and Dr. Oliver explained that because Howell-596's module "is fixed within the eyewear frame," a POSITA would not have expected the housing to have any "relative motion... with another surface" and, therefore, would not understand a need for wear-resistant housing. (POR, 32 (citing EX-1002, ¶102).) Dr. Feland's speculation to the contrary is only that—speculation. (*See* Reply, 17 (citing EX-1002, ¶104).) Accordingly, Petitioner has not met its burden to show claim 16 to be unpatentable.

B. Ground 8: The Combination of Blum-741 and Hattori-912 Does Not Render Obvious All Limitations of Claim 16

Ground 8 fails against claim 16 for two independent reasons—neither of which is addressed in Petitioner's reply under claim 16. (*Compare* POR, 33 *with* Reply, 17.) Like Claim 3, claim 16 depends from Claim 1. As discussed above, the alleged combination of Blum-741 and Hattori-912 fails to render obvious the sealed, moisture

resistant module of claim 1, and a POSITA would not have been motivated to combine their teachings. Section II(B), *supra*.

Petitioner does not address these arguments under claim 16 in its reply. (Reply, 17.) Rather, Petitioner cross-references its analysis of claim 16 under Ground 2 (Howell-596). (*Id.*) But Petitioner's analysis of Howell-596 under Ground 2 is irrelevant to Ground 8 (Blum-741 and Hattori-912) and the rebuttal arguments Patent Owner raises.

Accordingly, Ground 8 also does not render obvious claim 16.

V. PETITIONER HAS NOT SHOWN INDEPENDENT CLAIM 19 OR ITS DEPENDENTS TO BE UNPATENTABLE

Petitioner fails to meet its burden to show that: (1) under Ground 3, a POSITA would have modified Howell-596 to place its UV detection system either partially or entirely behind the ear; or (2) that Ground 8's combination of Blum-741 and Hattori-912 discloses a sealed, moisture-resistant module or that a POSITA would have been motivated to combine the prior art teachings.

In the introduction to its reply, Petitioner asserts that Patent Owner argues a new claim construction that "conflict[s] with the prior art, and contradict[s] PO's own infringement contentions." (Reply, 1.) But nowhere in the rest of the brief does Petitioner identify the purportedly new claim construction. And Petitioner does not

reference Patent Owner's contentions in its discussion of claim 19. Petitioner's assertions are unsupported.

A. Ground 3: A POSITA Would Not Have Been Motivated To Place Howell-596's UV Detection System Behind The Ear

Nothing in Petitioner's reply counters the fact that locating Howell-596's UV detection system behind the ear of the wearer would obscure the UV sensor and render the resulting system unfit for its intended purpose—i.e., monitoring the user's exposure to radiation. (POR, 34; EX-1003, Title, Abstract.)

Petitioner cites Figure 21 of Howell-596 as allegedly motivating the placement. (Reply, 18-19.) But Petitioner omits the fact that “opening 2104” and the corresponding sensor, which Figure 21 places behind the ear of the wearer, is *intended to be hidden* from external UV radiation. (See EX-1003, Fig. 21, [0205].) Figure 21 shows “an inner side of the temple...that faces inward when being worn.” (*Id.*) As a result, the optical sensor is “blocked by the user's head or hair when the eyeglass frame is being worn” and receives light when not being worn. (*Id.*) That is, this external sensor functions as an on/off sensor. (See *id.*)

Critically, Howell-596 expressly teaches that this sensor is distinct from the UV detection system which Petitioner alleges to be the claimed module. (EX-1003, [0205].) And even the Figure 21 embodiment places this UV detection system for monitoring radiation exposure at the front of the temple piece. (*Id.*, Fig. 21, [0205].)

Indeed, Howell-596's description of this "being worn" sensor only supports Patent Owner's argument that a POSITA would not be motivated to place the UV detection system behind the ear of the wearer, because the sensor would be hidden by the user's hair or head. (*See id.*; *Motorola Mobility LLC v. Largan Precision Co., Ltd.*, IPR2022-01210, Paper 54 at 39 (PTAB Jan. 24, 2024) ("A proposed combination that sacrifices these objectives through tradeoffs is not what [the prior art] contemplates."); *Sigray, Inc. v. Carl Zeiss X-Ray Microscopy, Inc.*, IPR2022-00218, Paper 35 at 62 (PTAB May 22, 2023) (finding lack of motivation to combine where the combination "would have been less effective").)

Howell-833 provides no additional support for Petitioner's argument, since a UV sensor, alone, is not the UV detection system Petitioner has alleged to be the claimed module. (Reply, 19-20 (citing EX-1004, Fig. 4).) Howell-833 could employ a UV sensor in much the same way as Howell-596's Figure 21 embodiment, where placement at the tip of the frame is intended to hide the sensor when being worn. (*See* EX-1003, [0205].) Regardless, neither Howell-596 nor Howell-833 teaches placing the UV detection system (i.e., alleged module) behind the wearer's ear.

Petitioner also seems to argue that the entirety of the alleged electronic module would be disposed behind the wearer's ear. (Reply, 20-21.) If that is true, then there is no question the UV detection system would be incapable of functioning as intended,

since it would be blocked by the wearer's ear (and/or hair) and incapable of detecting UV radiation. (POR, 34; EX-1024, 52:18-22 ("If you place the opening for the sensor at the end piece, you have obstructions from – from light, from hair, from head covering. It would obviate the functionality of the sensor, in this case a UV sensor.").) A POSITA would not have been motivated to modify the system in a way that renders it useless. *Motorola*, IPR2022-01210, Paper 54 at 39; *Sigray*, IPR2022-00218, Paper 35 at 62.

Petitioner asserts that its single-sentence "obvious to try" rationale is unrebutted (Reply, 21), but the entirety of Patent Owner's and Dr. Oliver's response on this claim rebuts this rationale. That is, it would not have been obvious, nor would a POSITA have been motivated to try, placing the UV detection system in a location where it could not function as intended. (POR, 34; *In re Mercier*, 515 F.2d 1161, 1166 (CCPA 1975) (finding that reliance on "isolated teachings of the prior art without considering the overall context within which those teachings are presented" is improper and indicative of hindsight).) Moreover, the mere existence of an alternative arrangement does not suffice without articulating "any reason to substitute one for another or any advantages that would flow from doing so." *Virtek Vision Int'l*, 97 F.4th at 886-87. While the '483 patent acknowledges the availability of the temple's end piece for placement of electronics (Reply, 21-22), a POSITA would have understood that, within

the context of Howell-596's UV detection system, such a location would be unworkable. (*Id.*; *Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1332 (Fed. Cir. 2019) (affirming that a POSITA would have been dissuaded from including a sensor that added complexity and decreased efficiency); *Arctic Cat Inc. v. Bombardier Rec. Prods. Inc.*, 876 F.3d 1350, 1360-63 (Fed. Cir. 2017) (holding a POSITA "would not have been motivated to combine" when the combination is "unlikely to be productive of the result sought").)

Accordingly, a POSITA would not have been motivated to place Howell-596's UV detection system either partially or entirely behind the wearer's ear.

B. Ground 8: The Alleged Combination of Blum-741 and Hattori-912 Does Not Render Obvious All Limitations of Claim 19

Ground 8's challenge of claim 19 relies on the same combination of prior art—Blum-741 and Hattori-912—as it does in its Ground 9 challenge of claim 3. As discussed above, the combination fails to render obvious a sealed, moisture-resistant module (claim 19), and a POSITA would not have been motivated to combine the prior art teachings. Section II(B), *supra*. Accordingly, Ground 8 does not render obvious all limitations of claim 19.

VI. PETITIONER HAS NOT SHOWN CLAIMS 20-37 TO BE UNPATENTABLE

Because Petitioner has not met its burden with respect to independent claim 19 (Section V, *supra*), Petitioner's challenge of dependent claims 20-37 also fails.

Petitioner incorrectly states that Patent Owner's arguments with respect to dependent claims 21, 32, and 35 are limited to those arguments made regarding independent claim 19. (Reply, 22.) For claim 21, a POSITA would not have been motivated to combine the teachings of Howell-596 with those of Blum-741 and Spitzer. (POR, 38.) For claim 32, Howell-596 does not disclose or suggest the hermetically sealed module. (POR, 38-39.) For claim 35, Howell-596 does not teach or suggest the substantially wear resistant module. (POR, 39.)

VII. CONCLUSION

For the above reasons, the Board should issue a Final Written Decision finding the challenged claims patentable over the grounds in the Petition.

Respectfully submitted,

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Date: August 4, 2025

CERTIFICATION OF WORD COUNT

The undersigned hereby certifies that the portions of the above-captioned **PATENT OWNER'S SUR-REPLY TO PETITIONER'S REPLY** specified in 37 C.F.R. § 42.24 have 5,548 words, in compliance with the 5,600 word limit set forth in 37 C.F.R. § 42.24. This word count was prepared using Microsoft Word 365 v.2022.

Date: August 4, 2025

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing **PATENT OWNER'S SUR-REPLY TO PETITIONER'S REPLY** were served by filing this document through the Patent Trial and Appeal Case Tracking System (P-TACTS), as well as by delivering a copy via electronic mail on August 4, 2025, in their entirety on the following:

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