

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. IPR2024-01069

Patent No. 10,613,355

PATENT OWNER'S RESPONSE TO PETITION

Mail Stop PATENT BOARD
Patent Trial and Appeal Board
U.S. Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

TABLE OF CONTENTS

TABLE OF CONTENTS	i
EXHIBIT LIST	iii
I. INTRODUCTION	1
II. THE '355 PATENT	7
III. LEVEL OF ORDINARY SKILL IN THE ART	10
IV. OVERVIEW OF THE PRIOR ART	10
A. Howell-719	10
B. Sikonowiz	11
C. Eichelberger	11
D. Howell-158	12
E. Blum-130	14
V. INDEPENDENT CLAIMS 1, 13, AND 14 ARE PATENTABLE	16
A. Independent Claim 14 is Patentable Over the Cited Prior Art.	17
1. Grounds 4 and 5: Petitioner's Modification Eliminates the Capacitive Touch Switch	18
2. Ground 6: No Motivation to Combine Blum-130 and Howell-719	22
3. Ground 7: Petitioner's Reliance on Eichelberger is Misplaced	24
B. Independent Claims 1 and 13 are Patentable Over the Cited Prior Art	29
1. Grounds 1, 3, 6, and 7: Sikonowiz is Non-Analogous Art	30

Patent Owner’s Response to
Petition for Inter Partes Review
Patent No. 10,613,355

2.	Grounds 1 and 3: No Motivation to Combine Sikonowiz and Howell-719.....	34
3.	Grounds 6 and 7: No Motivation to Combine Sikonowiz and Blum-130.....	37
4.	Claim 13 is Patentable Because the Cited Prior Art Fail to Disclose a Method of Manufacturing Eyewear	39

VI. THE CHALLENGED DEPENDENT CLAIMS ARE PATENTABLE.41

VII. CONCLUSION.....42

CERTIFICATION OF WORD COUNT 1

CERTIFICATE OF SERVICE 2

TABLE OF AUTHORITIES

	Page(s)
Cases:	
<i>Activevideo Networks, Inc. v. Verizon Commc'ns, Inc.</i> , 694 F.3d 1312 (Fed. Cir. 2012).....	23
<i>Atoptech, Inc., v. Synopsys, Inc.</i> , IPR2014-01159, Paper 11 (PTAB Jan. 21, 2015)	27
<i>In re Bigio</i> , 381 F.3d 1320 (Fed. Cir. 2004).....	25
<i>In re Clay</i> , 966 F.2d 656 (Fed. Cir. 1992).....	26
<i>Dynamic Drinkware, LLC v. Nat'l Graphcis, Inc.</i> , 800 F.3d 1375 (Fed. Cir. 2015).....	16-17
<i>In re Klein</i> , 647 F.3d 1343 (Fed. Cir. 2011).....	25
<i>In re Magnum Oil Tools Int'l, Ltd.</i> , 829 F.3d 1364 (Fed. Cir. 2016).....	23
<i>In re Nat. Alts., LLC</i> , 659 Fed. App'x. 608 (Fed. Cir. 2016)	26
<i>SCHOTT Gemtron Corp. v. SSW Holding Co., Inc.</i> , IPR2013-00358, Paper 106 (Aug. 20, 2014)	26
<i>TorPharm, Inc. v. Ranbaxy Pharmaceuticals, Inc.</i> , 336 F.3d 1322 (Fed. Cir. 2003).....	40
<i>Vanguard Products Group, Inc. d/b/a Vanguard Protex Global v. InVue Security Products Inc.</i> , IPR2020-00018, Paper 7 (PTAB Mar. 31, 2020).....	28, 33-34

EXHIBIT LIST

Exhibit	Description
2001	U.S. Patent 4,254,451 (Cochran)
2002	U.S. Patent Pub. 2005/0230596 (Howell-596)
2003	U.S. Patent Publication 2011/0013136 (Archambeau-136)
2004	Declaration of Dr. James H. Oliver (Oliver Decl.)
2005	Curriculum Vitae of Dr. James H. Oliver
2006	Khandpur, R., <i>Printed Circuit Boards</i> (McGraw-Hill Professional, 2006)
2007	J.F. Humphries, <i>Conformal Coating of Printed Circuit Boards</i> , Electrolube, Articles-7, 2009, pp. 1–6

E-Vision Optics, LLC (“Patent Owner”) submits this Response to the Petition of Luxottica of America Inc. (“Petitioner”) seeking *inter partes* review (“IPR”) of U.S. Patent No. 10,613,355 (“the ’355 patent”).

I. INTRODUCTION

Patent Owner is an innovative research company that develops novel electronic eyeglasses that can provide many benefits to people in need of prescription glasses, individuals who enjoy wearing sunglasses, and users of consumer electronics.

The ’355 patent claims novel embodiments of electronic eyewear, which incorporate a capacitive touch switch and a moisture-proof “barrier layer” to seal electrical components and connections. Before the claimed invention, in some environments, particularly those having high humidity or causing the wearer to sweat, conventional electronic eyewear and frames suffered from shorting of electronic connections, which can cause electronic applications used with the eyewear to fail. The barrier layer of the patented invention can be incorporated into eyewear frames in a variety of ways and at different points of the manufacturing process.

Petitioner began providing electronic eyeglasses that, without authorization and despite prior discussions with Patent Owner regarding licensing Petitioner’s

patents, implemented Patent Owner's patented technology in Petitioner's own consumer electronics. Accordingly, on October 26, 2023, Patent Owner filed suit against Petitioner in the United States District Court for the Central District of California, asserting infringement of the '355 patent and other patents in Patent Owner's portfolio.

The Board should find the challenged claims patentable because the prior art fails, both alone and in combination, to disclose each limitation recited in all challenged claims.

Claim 14 is Patentable

First, claim 14 is patentable Petitioner because none of the prior art combinations Petitioner asserts against it (Grounds 4, 5, 6, and 7) discloses the required capacitive touch switch.

In its institution decision, the Board recognized this deficiency in Petitioner's Ground 5 combination. (*See* Paper 11 ("Institution Decision") at 29-30.) Claim 14 requires, among other electronic components, an accelerometer or a gyroscope and "a capacitive touch switch operably coupled to an electronic component." But Petitioner's proposed combination lacks a capacitive touch switch, as it has been replaced with an accelerometer or gyroscope. (*Id.* ("Petitioner appears to modify Howell-719's glasses to replace its switch with an accelerometer/gyroscope." "If so,

the glasses as modified by Petitioner do not include Howell-719's switch" and it is not clear "how the requirement for a capacitive touch switch is satisfied in this combination of references."); *see also* Petition at 47.) Ground 4, which Petitioner addresses together with Ground 5, is similarly faulty—i.e., it fails to satisfy the capacitive touch switch limitation. (*See* Petition at 42 ("Petitioner addresses Grounds 4 and 5 in parallel. The grounds differ only with respect to which reference—Howell-158 or Blum-130—supplies an accelerometer or gyroscope for element 14[b]. Otherwise, the analysis for claims 14–21 is the same for Grounds 4 and 5."))

Claim 14 is patentable over Ground 6 because a POSITA would not have been motivated to combine Howell-719's teachings with those of Blum-130. Unlike Howell-719, which relates to eyeglasses with a radio, Blum-130 and the '355 patent both disclose electro-active eyewear. As Petitioner recognizes, Blum-130 discloses various switches and their uses and functionalities, for example, a manual switch (which Petitioner attempts to replace) used to override a microgyroscope. (*See, e.g.*, EX-1006, 30:55-58.) Blum-130 even provides specific alternatives for the disclosed switches, for example, an eye-tracker instead of the manual switch to adjust the focusing power of the electro-active—the same purpose Petitioner proposes for the capacitive touch switch. (*Id.*, 30:65-31:1.) Based on Blum-130's teachings, a

POSITA would not have been motivated to use a capacitive touch switch. Thus, Ground 6 does not render obvious the claimed capacitive touch switch.

Ground 7 fails to render claim 14 obvious because it relies on non-analogous art (i.e., Eichelberger) for the capacitive touch switch limitation. The '355 patent relates to improved moisture-resistant eyewear that uses a moisture-proof “barrier layer” to seal electrical components and connections, such as an optical functional member and control electronics. (EX-1001, Title, Abstract, 2:23-28.) Eichelberger does not relate to moisture-resistant eyewear but is instead directed to a capacitive touch entry apparatus with a high degree of personal safety. (EX-1010, Title; 1:6-18.) Eichelberger seeks to address problems with conventional touch systems that use a matrix of electrodes on an insulating film, such as a plastic membrane—specifically, insufficient insulative thickness of an insulative plastic membrane and other deficiencies such as plastic appearance, high probability of damage during cleaning, and low possibility of integration with a display apparatus. (*Id.*, 1:6-34.) Because Eichelberger is non-analogous art, Ground 7 fails because the cited prior art combinations disclose the required capacitive touch switch of claim 14. And even if Eichelberger were analogous art, there still would have been no motivation to combine its teachings with those of Blum-130, for the same reasons discussed above with respect to Howell-719.

Claims 1 and 13 Are Patentable

Second, Grounds 1, 3, 6, and 7 fail because Petitioner cannot show that independent claims 1 and 13 are obvious since each ground impermissibly relies on non-analogous art for the conformal layer limitations of claims. Sikonowiz is directed to designing and manufacturing printed circuit boards (“PCBs”) and discloses applying a conformal coating to a PCB. (*See, e.g.*, EX-1002, ¶ 39; Petition at 5 (“[T]his book provides an in-depth guide to designing and manufacturing PCBs.”); EX-1005, 135-37.) But Sikonowiz does not teach or suggest any connection to eyewear or consumer electronics, let alone moisture-resistant eyewear. (EX-1005, 135-37.) Because Sikonowiz is non-analogous art, Petitioner’s Grounds 1, 3, 6, and 7 fail because no other cited prior art discloses the conformal layer limitations recited in claims 1 and 13: claim 1 – “a conformal layer over the electronic assembly to seal the electronic components; wherein the conformal layer is moisture proof and seals electrical connections of the electronic component;” and claim 13 – “depositing a conformal layer over at least a portion of the electronic assembly and at least a portion of the capacitive touch switch.”

Even if Sikonowiz were analogous, Petitioner’s Grounds 1, 3, 6, and 7 still fail because a POSITA would not have been motivated to combine its teachings with those of Petitioner’s other prior art references. For example, applying Sikonowiz’s

conformal coating to Howell-719's PCB, which includes speaker components, would negatively impact the functionality of the device. Similarly, Blum-130 discloses the need to reprogram the controller chip in situ, for example to update a prescription for electro-active eyewear. But a conformal coating would make such reprogramming impossible and thereby require repair work to address it. Petitioner's arguments overlook these deficiencies.

Grounds 1, 3, 6, and 7 additionally fail to render obvious claim 13—the only method claim in the '355 patent—because Petitioner fails to show that the cited prior art combinations disclose or suggest a method of manufacturing eyewear. Even though claim 13 specifically recites “[a] *method* of manufacturing an eyewear system comprising,” Petitioner completely overlooks this limitation and relies solely on disclosures related to eyewear. (*See, e.g.*, Petition at 32 (citing FIG. 1, ¶¶ [0027] – [0107]).)

Dependent Claims Are Patentable

Lastly, because the cited prior art does not render obvious independent claims 1 and 14, their dependent claims are likewise patentable.

Accordingly, the Board should find that Petitioner has not met its burden and that the challenged claims are patentable.

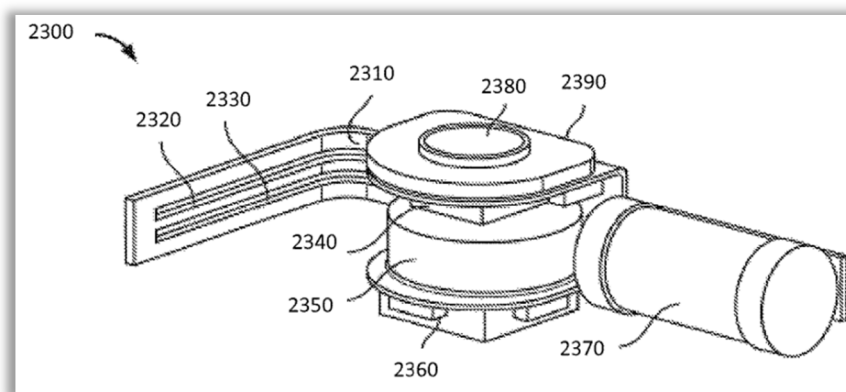
II. THE '355 PATENT

The '355 patent discloses improved eyewear intended to address issues with moisture, and which include an optical functional member, control electronics, and a sealed electrical connective element connecting the electronics to the optical functional member. (EX-1001, Title, Abstract, 2:23-28.) Before the claimed invention, it had been found that in some environments, particularly those having high humidity or causing the wearer to sweat, conventional electronic eyewear and frames might suffer from shorting of electronic connections and thus impede or cause the electronic application used with the eyewear to fail. (*Id.*, 2:23-28.) For example, because electronic eyewear is exposed to both moisture and liquids, which can come from “the natural environment (e.g., rain, snow),” “the human body in the form of oils and perspiration,” and “consumer products such as liquid lens cleaners and cosmetics,” ingress of such materials into and between the electronic components can cause damage, e.g., electrical short circuits. (*Id.*, 13:4-11.) Accordingly, there was a need for electronic eyewear and frames with fewer electrical contact points exposed to the environment and/or eyewear that involved fewer moving and/or open-and-shut electrical connections. (*Id.*, 2:29-35.)

The '355 patent therefore discloses moisture-resistant eyewear that uses a moisture-proof “barrier layer” to seal the electrical components and connections.

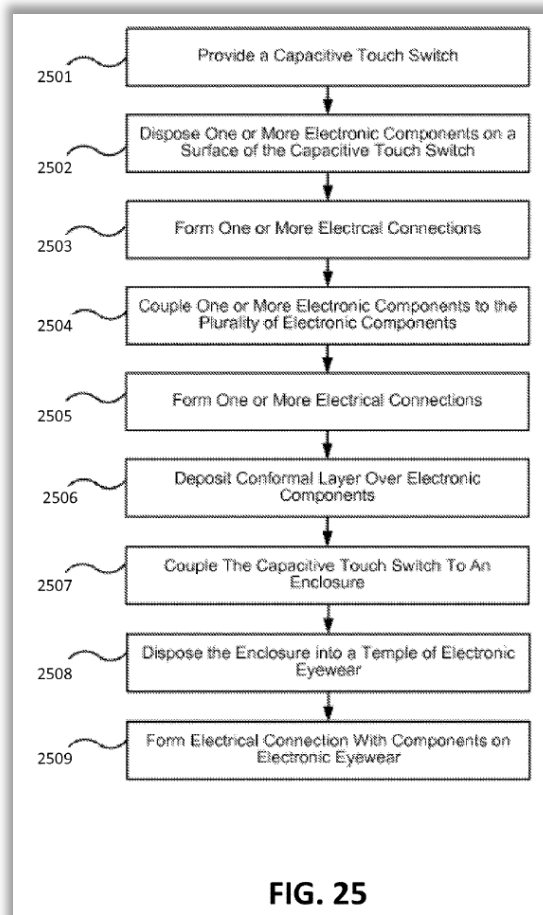
(E.g., EX-1001, cls. 1, 13, 23:36-46.) Electronic modules “may be sealed such that they are water resistant or water proof.” (*Id.*, 5:20-21; *see also id.*, 20:58-59.) The barrier layer may be incorporated in the frames in a variety of ways and at different points of the manufacturing process. (*See generally Id.*, 23:30-24:57.) For example, the '355 patent explains that the barrier layer may comprise: a polymer substance that may be applied between two components (*id.*, 23:46-52); a material with a thin enough viscosity that it can be applied or injected into areas between the components (*id.*, 23:64-24:19); or a soft and/or flexible material such that it does not damage the other components (*id.*, 24:20-32).

Figure 22, below, illustrates an exemplary embodiment of the patented invention in which a sealing diaphragm (2390) has been integrated with a manual switch (2380) attached to the top of the electronic module (2300), which is then sealed with an epoxy, silicone, or similar water-resistant material to prevent water from contacting the electronic components:



(*Id.*, FIG. 23, 24:58-25:9.) The module is shaped to fit into a universal frame. (*Id.*, 25:7-9.)

The '355 patent also discloses a method of forming moisture-resistant eyewear with electrical connections. (*Id.*, FIG. 25, 27:16-28:25.) Figure 25, below, shows a flow chart with exemplary steps for implementing the '355 patent's method:



(EX-1001, FIG. 25.)

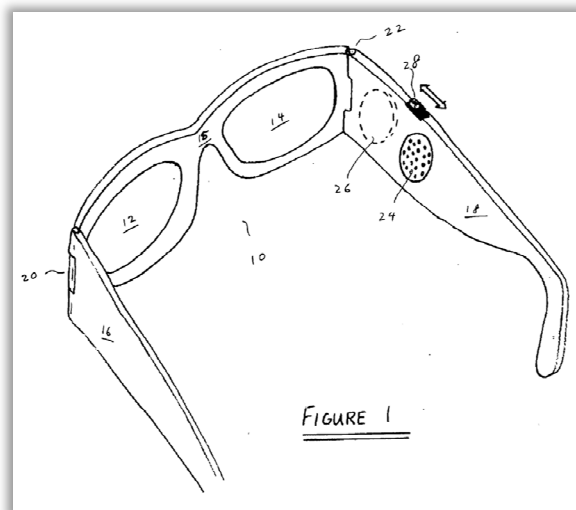
III. LEVEL OF ORDINARY SKILL IN THE ART

A POSITA at the time of the invention of the '355 patent would have had a bachelor's degree in mechanical engineering, electrical engineering, or computer engineering, or an equivalent degree and, in addition, approximately two years of work experience with embedded electronic devices. More advanced degrees or training in a related discipline or both can compensate for shorter work experience. (EX-2004, ¶¶29-32.) Patent Owner's expert, Dr. James Oliver, is qualified to offer opinions under this standard and the standard set forth by Petitioner. (*Id.*; *see also* Petition at 15-16.)

IV. OVERVIEW OF THE PRIOR ART

A. Howell-719

Howell-719 relates to eyeglasses for events. (EX-1004 ¶ 4.) Figure 1, reproduced below, shows a pair of glasses with a speaker in one of the temples.



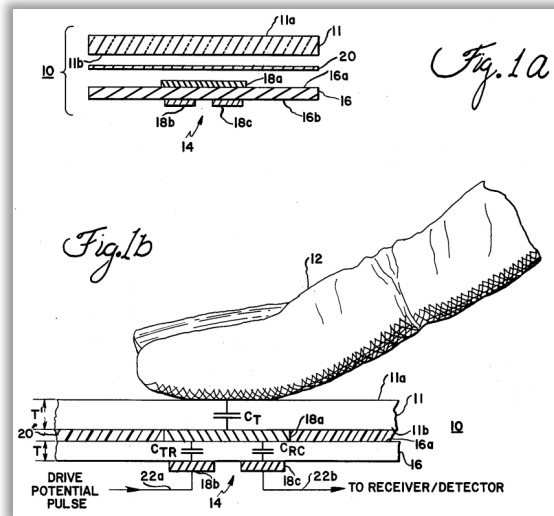
(EX-1004, FIG. 1.) Howell-719 discloses that the speaker is a part of a radio, and “[a]ll the electronics for the radio are at least partially embedded in the glasses.” (*Id.* ¶ 50.) “[T]he electronics can be on a printed circuit board, and the board is in one of the temples of the glasses.” (*Id.*) Howell-719 does not disclose or suggest a conformal layer.

B. Sikonowiz

Sikonowiz is a textbook titled “Designing and Creating Printed Circuits.” Petitioner includes only chapter nine, which is titled “Final Assembly.” (EX-1005, 122.) Petitioner’s expert, Dr. Feland, explains that “Sikonowiz focuses on designing and manufacturing PCBs.” (EX-1002, ¶ 39.) The provided chapter discusses conformal coatings but does not suggest or teach any application to eyewear or even consumer electronics. (*See generally* EX-1005.)

C. Eichelberger

Eichelberger is a patent directed only to a capacitive touch entry apparatus with a high degree of personal safety. (EX-1010, Title; 1:6-9.) Figures 1A and 1B, reproduced below, illustrate a capacitive touch entry panel comprising a substrate or panel of a transparent insulative material, with a surface that is contactable by a body part (e.g., finger), and at least one capacitive touch sensor on an insulative material layer 16.

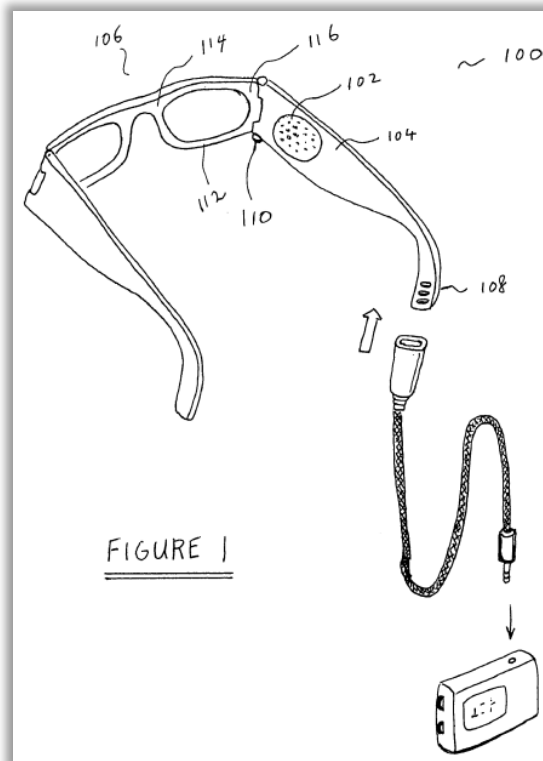


(EX-1010, FIGs 1A, 1B.)

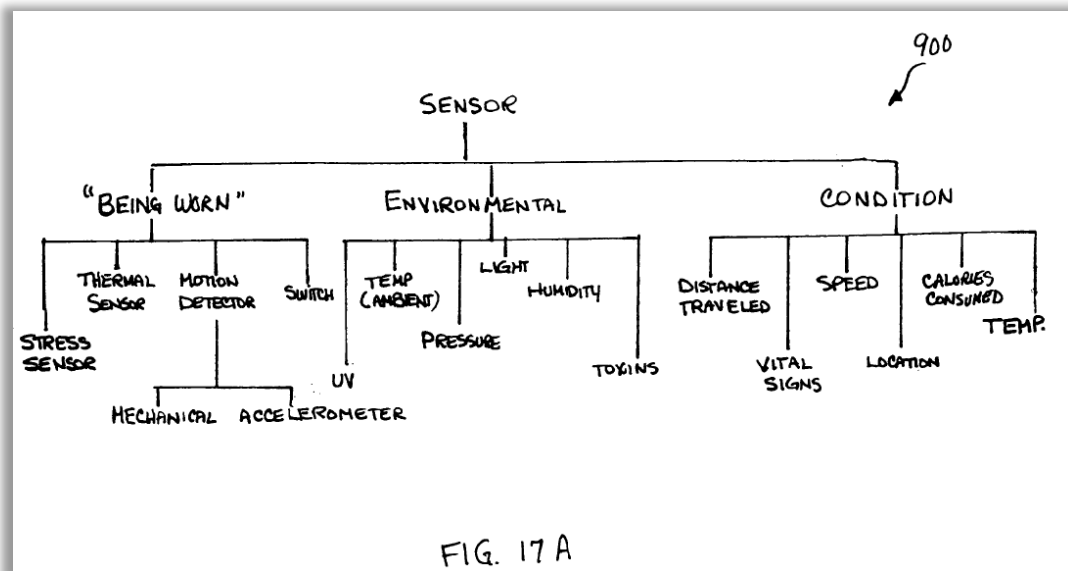
Eichelberger does not disclose or suggest any connection to eyewear.

D. Howell-158

Howell-158 relates to glasses with embedded electrical components. (EX-1007, ¶ [0004].) The glasses include a speaker electrically coupled to a connector, with both components at least partially embedded in the glasses, as well as a processor and a storage medium. (*Id.*, ¶¶ [0010]-[0012].) Figure 1, reproduced below, shows a speaker in one of the temples of the glasses. (*Id.*, ¶ [0020].)



(EX-1007, FIG. 1.) The glasses also include a sensor, which can be a “being worn” sensor, an environmental sensor, or a condition sensor. (*Id.*, ¶ [0018]; *see also id.*, ¶¶ [0038], [0161], [0167]-[0168].) Figure 17A, reproduced below, depicts the various sensors.

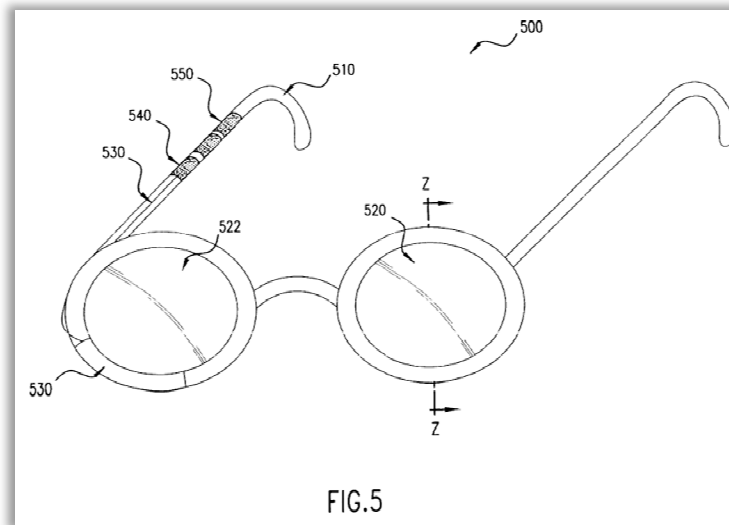


(EX-1007, FIG 17A.) As shown above, the “being worn” sensor can be “a thermal sensor, a motion detector, a stress sensor *or* a switch.” (*Id.*, ¶¶ [0162]-[0166].)

Howell-158 does not disclose or suggest capacitive touch switches or conformal layers to protect electronics. (*See generally id.*)

E. Blum-130

Blum-130 relates to a system, apparatus, and method for correcting vision using an electro-active lens. (EX-1006, 1:36–39.) Figure 5, reproduced below, shows electro-active eyewear, which contains electro-active lenses that are electrically coupled by connecting wires to an electro-active eyewear controller and power source. (*Id.*, 6:16-21.)



(EX-1006, FIG 5.) The controller contains at least one processor and a memory component. (*Id.*, 6:22-25.) Blum-130 also includes a microgyroscope and a manual switch, which is used to override the microgyroscope. (*Id.*, 30:49-58.) However, Blum-130 discloses that the switch need not be on the glasses themselves, and can be, for example, “in a separate module, possibly in a pocket in the user’s clothing.” (*Id.*, 29:49-51.)

Blum-130 provides an “approach towards the selection, dispensing, activating, and programming of electro-active eyewear.” (*Id.*, 3:16-18.) For example, the electro-active eyewear controller can be originally programmed by the eyecare specialist or technician when first dispensed, and as the patient’s needs change, the same controller can be reprogrammed to provide a different correction, even without removal from the electro-active eyewear. (*Id.*, 6:48-58.)

Blum-130 does not disclose or suggest a capacitive touch switch or conformal layers.

V. INDEPENDENT CLAIMS 1, 13, AND 14 ARE PATENTABLE

Petitioner challenges claims 1–21 of the '355 patent (all claims) under seven grounds that include various combinations of seven references, as shown below. (Petition at 17.)

Ground	References	Basis	Challenged Claims
1	Howell-719 and Sikonowiz	§ 103	1, 3-13
2	Howell-719, Sikonowiz, Thomas, and Vogt	§ 103	4
3	Howell-719, Sikonowiz, and Eichelberger	§ 103	13
4	Howell-719, Sikonowiz, and Howell-158	§ 103	14-21
5	Howell-719, Sikonowiz, and Blum-130	§ 103	14-21
6	Blum-130 in view of Sikonowiz and Howell-719	§ 103	1-21
7	Blum-130 in view of Sikonowiz and Eichelberger	§ 103	13, 14, 18

None of the asserted grounds renders independent claims 1, 14, and 13 obvious. “In an *inter partes* review, the burden of persuasion is on petitioner to prove unpatentability by a preponderance of the evidence, and that burden never shifts to the patentee. ‘Failure to prove the matter as required by the applicable standard means that the party with the burden of persuasion loses on that point—thus, if the fact trier of the issue is left uncertain, the party with the burden loses.’” *Dynamic*

Drinkware, LLC v. Nat'l Graphics, Inc., 800 F.3d 1375, 1378-79 (Fed. Cir. 2015)
(internal quotations and citations omitted).

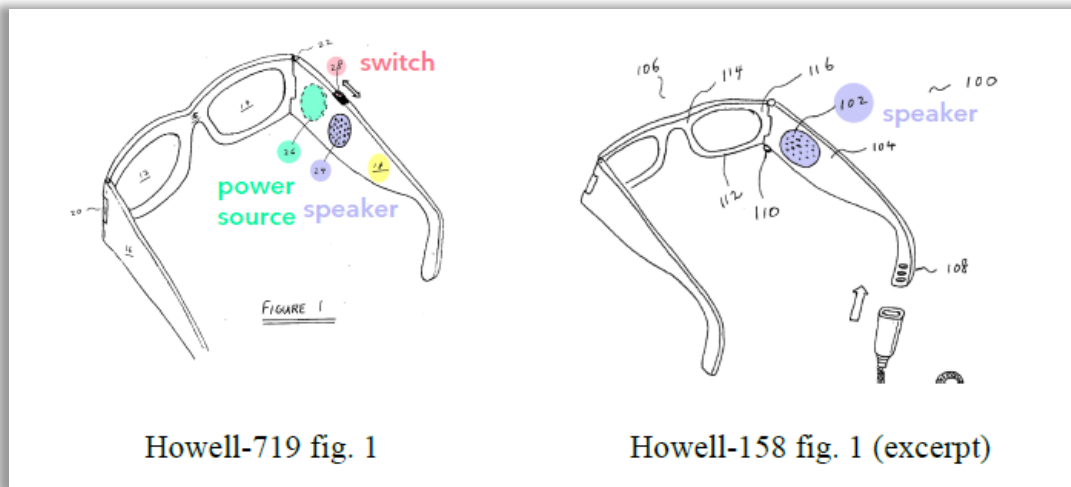
First, Grounds 4, 5, 6, and 7 fail to render obvious each element of claim 14 because Petitioner's proposed combinations either eliminate the required capacitive touch switch or rely on non-analogous art, i.e., Eichelberger. Second, Grounds 1, 3, and 7 fail to render obvious the conformal layer limitations of independent claims 1 and 13 because Petitioner (again) relies on non-analogous art, i.e., Sikonowiz. Third, even assuming Eichelberger and Sikonowiz were analogous, there was no motivation to combine their teachings with those of Petitioner's other prior art references, and Petitioner fails to adequately explain any rationale for doing so.

A. Independent Claim 14 is Patentable Over the Cited Prior Art.

Claim 14 requires, in relevant part, "a plurality of electronic components . . . comprising . . . at least one of an accelerometer or a gyroscope ...; and a capacitive touch switch operably coupled to an electronic component in the plurality of electronic components." (EX-1001, 30:15–28.) However, Petitioner's prior art combinations in Grounds 4, 5, 6, and 7—the only grounds asserted against claim 14—do not disclose or suggest the claimed capacitive touch switch.

1. Grounds 4 and 5: Petitioner's Modification Eliminates the Capacitive Touch Switch

Petitioner addresses Grounds 4 and 5 in parallel and employs the same analysis. (Petition at 42 (“Petitioner addresses Grounds 4 and 5 in parallel. The grounds differ only with respect to which reference—Howell-158 or Blum-130—supplies an accelerometer or gyroscope for element 14[b]. Otherwise, the analysis for claims 14–21 is the same for Grounds 4 and 5.”); *see also* EX-1002, ¶ 116.)



(Petition at 44 (Petitioner's annotated figures intended to show Howell-719 and Howell-158 disclose similar glasses in support of the combined analysis).) Therefore, Patent Owner addresses Grounds 4 and 5 together, and both grounds fail because neither discloses a capacitive touch switch.

In the Institution Decision, the Board correctly questioned Petitioner's purported combination of references (i.e., Howell-719, Sikonowiz, and Blum-130) to

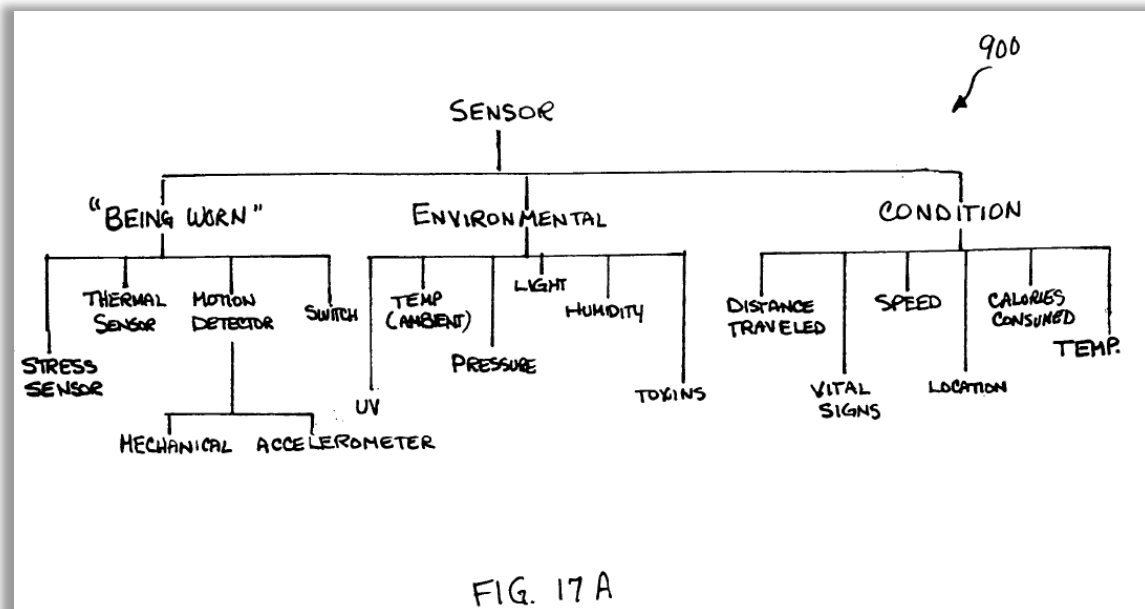
invalidate claim 14 in Ground 5. (Paper 11 at 30.) Specifically, the Board explained that “Petitioner relies on Howell-719 to disclose a switch that the user operates ‘to control audio while wearing the glasses’” and Blum-130 “to disclose glasses including an accelerometer or gyroscope that allows the user to control a switch, thereby ‘allowing the user to use a head movement to change the functionality of the glasses.’” (*Id.* at 29.) The Board further noted that:

Petitioner argues that it would have been obvious to an ordinarily skilled artisan to “[i]ncorporat[e] [Blum’s] accelerometer- or gyroscope-based switch controls into Howell-719” as “a simple substitution of one known alternative (accelerometer/gyroscope-based motion detector allowing for head movement to activate switch) for a component (physical switches) *serving the same purpose* (allowing the user to activate switch to control functionality while the user is wearing the glasses and cannot see the switches) with the added benefit of handsfree control.

(*Id.* (emphasis added)). Based on this reasoning, the Board concluded that “Petitioner’s modification is to replace Howell-719’s ‘physical switch’ with Blum[130]’s ‘accelerometer/gyroscope-based motion detector,’” which eliminates the capacitive touch switch. Therefore, “it is not clear... how the requirement for a capacitive touch switch is satisfied in this combination of references.” (*Id.*).

The Board was correct on this point. The asserted combination of references fails to (and cannot) satisfy the claimed capacitive touch switch in addition to an accelerometer or a gyroscope. Indeed, Petitioner's explicit rationale, i.e., a capacitive touch switch serves the same purpose as an accelerometer or a gyroscope, confirms that the modified eyewear does not include both as required by claim 14. Petitioner also does not offer any other motivation to combine Howell-719 and Blum-130 in this manner. (*See generally* Petition.)

The Board's reasoning equally applies to Ground 4, which relies on Howell-719 to disclose a switch (again) and Howell-158 to supply an accelerometer "to detect whether a user is wearing the glasses." (Petition at 43-44.) Like in Ground 5, Petitioner's modification replaces Howell-719's switch ("ready to be worn" sensor that activates the switch to turn on the audio) with Howell-158's accelerometer ("being worn" detector) "using a simple substitution" of one known alternative for another to serve the same purpose. (*Id.* at 44.) Because the accelerometer-based motion detector allows for head movement to activate switch to control functionality, there is no need for a capacitive touch switch. Howell-158 confirms this and specifically states that "[t]he 'being worn' operation can be performed using, for example, a thermal sensor, a motion detector, a stress sensor *or* a switch," as illustrated by Figure 17A reproduced below. (EX-1007, ¶ 162 (emphasis added).)



(EX-1007, FIG 17A.)

Howell-158 does not disclose or suggest a motion detector, such as an accelerometer, in addition to a switch, as required by claim 14. Indeed, fault-tolerance is the only redundancy that Howell-158 discloses, i.e., pairs of the same sensor and not a combination of different sensors. (*Id.*, ¶ [0169] (“The sensors can be provided in a redundant or fault-tolerant manner. For example, sensors can come in pairs in the glasses. When one malfunctions, the other one will take over its operation.”).) Accordingly, Petitioner’s Ground 5 fails to satisfy the capacitive touch switch limitation (14[d]).

Because Petitioner's proposed modifications eliminate the required capacitive touch switch, Petitioner has not shown that independent claim 14 is obvious under Grounds 4 and 5.

2. Ground 6: No Motivation to Combine Blum-130 and Howell-719

Independent claim 14 is also patentable over the cited prior art combination in Ground 6 (i.e., Blum-130, Sikonowiz, and Howell-719) because Petitioner's motivation for combining Blum-130's teachings with those of Howell-719 is flawed.

First, Petitioner's argument is identical to and relies solely on its expert's testimony, which is wholly unsupported:

A POSITA would have been motivated to use such a capacitive touch switch with Blum-130's glasses. A person needing Blum-130's electro-active lenses would be expected to require frequent switching operations to change the lenses' focal distance as the person looked at objects at different distances. Manual switches relying on mechanical movement to close a circuit are susceptible to wear, fatigue, and loosening, which, over the course of repeated switching operations, can lead to eventual failure. Capacitive touch switches do not rely on mechanical movement, eliminating this source of failure. Additionally, using a capacitive touch switch permits the glasses to have a switch without a protruding button that would disrupt the typical smooth, slim profile of glasses.

(EX-1002, ¶148.) Because Dr. Feland's testimony is "conclusory and factually unsupported," it should be given little to no weight. *Activevideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1327–28 (Fed. Cir. 2012). Because Petitioner's argument regarding the alleged motivation to combine Blum-130 and Howell-719 is conclusory, it must also be rejected. *See In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016) (declaring that "a petitioner cannot employ mere conclusory statements").

Second, of all the available options for a switch, a POSITA would not have been motivated to use a capacitive touch switch. Both Blum-130 and the '355 patent disclose electro-active eyewear, whereas Howell-719 is directed to eyewear with a speaker. (*See, e.g.*, EX-1006, Abstract; EX-1001, 2:18-22, 2:50-62.) As such, a POSITA would not have found Howell-719's disclosures suitable for Blum-130's electro-active eyewear. Moreover, as Petitioner recognizes, Blum-130 discloses different types of switches and their associated benefits in electro-active eyewear, including the manual switch, which Petitioner argues a POSITA would have been motivated to replace with Howell-719's capacitive touch switch. (*See, e.g.*, EX-1006, 30:55-58 ("The manual switch...used for overriding the microgyroscope for certain visual functions at or above the 180, such as working on a computer.").) In fact, Blum-130 discloses specific alternative to the manual switch, i.e., an eye-tracker, for

the same purpose Petitioner proposes for the capacitive touch switch. (*Id.*, 30:65-31:1.)

Additionally, Blum-130 discloses that “the switch is analog not digital, and provides *continuous variance of the focal length of the lens by adjusting a knob or lever much like a volume control on a radio.*” (EX-1006, 28:55-58 (emphasis added).) To enable continuous variance functionality in a capacitive touch switch, a POSITA would have needed to include multiple capacitive touch switches, or at least a very complex touch switch with slider capabilities, which would have been cost-prohibitive. (EX-2004, ¶73.) As a result, and contrary to Petitioner's assertions, a POSITA would not have been motivated to replace any of Blum-130's switch options with a capacitive touch switch. (*Id.*)

Ground 6 fails because a POSITA would not have been motivated to incorporate Howell-719's switch into Blum-130's eyewear. Accordingly, Petitioner's cited prior art combination in Ground 6 does not render obvious the claimed capacitive touch switch.

3. Ground 7: Petitioner's Reliance on Eichelberger is Misplaced

Claim 14 is patentable over the cited prior art combination in Ground 7 (Blum-130, Sikonowiz, and Eichelberger) because Eichelberger is non-analogous art. And

even if Eichelberger were analogous art, there still would have been no motivation to combine its teachings with Blum-130.

a) Eichelberger is Non-Analogous Art

A “reference qualifies as prior art for an obviousness determination . . . only when it is analogous to the claimed invention.” *In re Klein*, 647 F.3d 1343, 1348 (Fed. Cir. 2011). An obviousness ground that relies on non-analogous art fails. *Id.* at 1352. Two separate tests define the scope of analogous art: “(1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor’s endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.” *Id.*; *see also In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004).

The “field of endeavor” test asks if the structure and function of the prior art is such that it would be considered by a POSITA because of the similarity to the structure and function of the claimed invention. *Bigio*, 381 F.3d at 1325–27. In deciding “which fields a [POSITA] would reasonably be expected to look for a solution to the problem facing the inventor,” common sense must be applied. *Id.* at 1326 (citations and quotation marks omitted).

As for the “reasonably pertinent” test, a reference is reasonably pertinent if “it is one which, because of the matter with which it deals, logically would have

commended itself to an inventor's attention in considering his problem." *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992). In making this determination, the purposes of the invention and the prior art are important, i.e., if a reference has "the same purpose as the claimed invention, the reference relates to the same problem, and that fact supports use of that reference in an obviousness rejection." *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992).

"Petitioner bears the burden of showing by a preponderance of evidence that the asserted prior art references are analogous art." *SCHOTT Gemtron Corp. v. SSW Holding Co., Inc.*, IPR2013-00358, Paper 106, 26 (Aug. 20, 2014); *In re Nat. Alts., LLC*, 659 Fed. App'x. 608, 613-14 (Fed. Cir. 2016) (nonprecedential). Here, Petitioner failed to do so. Eichelberger is non-analogous art. Rather than showing by a preponderance of evidence that Eichelberger is analogous, Petitioner merely asserts, in two conclusory statements, that all cited prior art is analogous: "The *references* are analogous art because they are from the same field as the '355 patent, e.g., eyewear and/or consumer electronics... They are also pertinent to a problem the inventor was focused on, e.g., adding electronics to eyewear or sealing eyewear electronics to resist moisture." (Petition at 18 (emphasis added).) Petitioner fails to analyze any of the references, including Eichelberger, specifically. Thus, it is unclear whether Petitioner contends that Eichelberger is "from the same field as the '355

patent, e.g., eyewear and/or consumer electronics” or “pertinent to a problem the inventor was focused on, e.g., adding electronics to eyewear or sealing eyewear electronics to resist moisture.” (*Id.*)

Petitioner's only support for the assertion that Eichelberger is analogous art is a single paragraph from Dr. Feland's declaration, which is nearly identical to the corresponding language in the petition, and which provides no additional substance. (*Compare* EX-1002, ¶25, *with* Petition at 18.) Because Dr. Feland's opinion on this issue is a regurgitation of the petition itself, it should be given minimal if any weight. *See Atoptech, Inc., v. Synopsys, Inc.*, IPR2014-01159, Paper 11 at 20 (PTAB Jan. 21, 2015) (finding testimony that “simply repeats verbatim the Petition's conclusion ... is conclusory in nature and entitled to little, if any, weight”). Nonetheless, Eichelberger does not satisfy either prong of the test for analogous art, i.e., it is neither (1) from the field of eyewear and/or consumer electronics nor (2) pertinent to adding electronics to eyewear or sealing eyewear electronics to resist moisture.

The '355 patent's field is “various types of eyewear including electronic functional members, including, for example, electronic focusing eyeglasses, electroactive eyeglasses, electronic eyewear providing 3D capabilities, etc.” (EX-1001, 18-22.) Eichelberger's field, on the other hand, is “capacitive touch entry structures and more particularly [] a structure allowing capacitive touch entry of data while

providing a high degree of safety to user personnel.” (EX-1010, 1:6-9.) Eichelberger is further directed to capacitive touch structures for appliances. (*Id.*, 7:32-40.) The reference does not relate to or even mention eyewear.

Eichelberger is also not reasonably pertinent to the problem the '355 patent seeks to address (i.e., moisture-proof eyewear). Instead, Eichelberger is focused on addressing the need for a capacitive touch structure with “capacitive touch entry sensors so positioned as to provide a high degree of user safety and sensor reliability, with low manufacturing costs.” (*Id.*, 1:56-60.) Eichelberger, therefore, attempts to solve problems with conventional touch entry systems, “utiliz[ing] a matrix of electrodes [overlaid] by an insulating film, such as a plastic membrane,” which provide “insufficient insulative thickness.” (*Id.*, 1:10-34.) Eichelberger also addresses other deficiencies associated with conventional touch entry systems, such as “a plastic appearance; a high probability of damage during cleaning (which may allow touch pad potentials to be received by user personnel); and low possibility of integration with display apparatus.” (*Id.*) Eichelberger does not relate to or address moisture-resistant eyewear or methods of making such eyewear. (EX-2004, ¶ 81.)

Because Ground 7 relies on non-analogous art, it must be rejected. *See Vanguard Products Group, Inc. d/b/a Vanguard Protex Global v. InVue Security Products Inc.*, IPR2020-00018, Paper 7 at 14–18 (PTAB Mar. 31, 2020) (denying

institution because the cited prior art was non-analogous to the challenged patent). A POSITA would not be expected to rely on Eichelberger in combination with Blum-130.

Even if Eichelberger were analogous art, there still would have been no motivation to combine its teachings with those of Blum-130, for the same reasons discussed above with respect to Howell-719. *Supra* §V.A.2. For example, Blum-130 discloses electro-active eyewear, like the '355 patent, and specifically teaches different types of switches and their benefits and role, including the manual switch that Petitioner seeks to replace. *Supra* §V.A.2 (citing, e.g., EX-1006, 30:55-58.) Therefore, a POSITA would have found Blum-130's teachings more suitable than those of Eichelberger's, which are limited to capacitive touch entry systems. Additionally, because Blum-130 discloses that the switch must "provide[] continuous variance of the focal length of the lens by adjusting a knob or lever much like a volume control on a radio" (*Id.*, citing EX-1006, 28:55-58), a POSITA would not have been motivated to use a capacitive touch switch. (EX-2004, ¶¶74, 83.) Thus, Petitioner's combination in Ground 7 does not render obvious the claimed capacitive touch switch.

B. Independent Claims 1 and 13 are Patentable Over the Cited Prior Art.

Claim 1 recites an eyewear system comprising, in relevant part, "a conformal layer over the electronic assembly to seal the electronic components; wherein the

conformal layer is moisture proof and seals electrical connections of the electronic component; wherein the conformal layer is disposed in an enclosure of the eyewear frame.” (EX-1001, 29:9–14.) Claim 13 recites a “method of manufacturing an eyewear system comprising,” in relevant part, “depositing a conformal layer over at least a portion of the electronic assembly and at least a portion of the capacitive touch switch.” (*Id.*, 30:9–14.) None of Petitioner’s asserted grounds renders obvious the conformal layer limitations of claims 1 and 13 because Sikowiz is non-analogous art.

1. Grounds 1, 3, 6, and 7: Sikowiz is Non-Analogous Art

Petitioner relies on Sikowiz for all grounds. With respect to claim 1 under Ground 1, Petitioner admits that Howell-719 fails to disclose claim limitations 1[e]–1[g] relating to a conformal layer. (*See* Petition at 26.) Similarly, in Ground 6, Petitioner admits that Blum-130 fails to disclose the elements of claim 1 “relating to the capacitive touch switch (1[c]) and the conformal layer (1[e]–1[g]).” (Petition at 57.) In each case, Petitioner uses Sikowiz to try to fill the gap with respect to the conformal layer limitations. (*See* Petition at 26 & 58; *see also id.* at 57 (stating that “Howell-719 discloses a capacitive touch switch,” for Ground 6).)

Petitioner also relies on Sikowiz for the conformal layer limitations of independent claim 13 in Grounds 1, 3, and 7. (*See, e.g., id.* at 34 (“Sikowiz

motivates depositing a conformal coating over Howell-719's PCB."); *id.* at 41 ("For the same reasons discussed in Ground 1, *supra* §§VII.A.5, VII.L.3, Sikonowiz motivates depositing a conformal coating over a PCB."); *id.* at 67 ("For the same reasons discussed in Ground 6, *supra* §XI.G.3, Sikonowiz motivates depositing a conformal coating over the PCB.") Thus, without Sikonowiz, none of Petitioner's prior art combinations in Grounds 1, 3, 6, and 7 discloses or suggests the conformal layer limitations of claims 1 and 13 (i.e., limitations 1[e]-1[g] and 13[c]).

But Sikonowiz is not analogous art. As discussed above, Petitioner failed to analyze whether any of the cited prior art is analogous, and instead merely asserted that "[t]he *references* are analogous art because they are from the same field as the '355 patent, e.g., eyewear and/or consumer electronics...They are also pertinent to a problem the inventor was focused on, e.g., adding electronics to eyewear or sealing eyewear electronics to resist moisture." (Petition at 18 (emphasis added).) As such, it is unclear (again) whether Petitioner contends that Sikonowiz is "from the same field as the '355 patent, e.g., eyewear and/or consumer electronics" or "pertinent to a problem the inventor was focused on, e.g., adding electronics to eyewear or sealing eyewear electronics to resist moisture." (*Id.*)

With respect to the first prong, as Petitioner and its expert admit, Sikonowiz is "focuse[d] on designing and manufacturing PCBs." (EX-1002, ¶ 39; *see also*

Petition at 5 (“[T]his book provides an in-depth guide to designing and manufacturing PCBs.”).) Sikonowiz does not mention eyewear or consumer electronics. On the other hand, the ’355 patent is directed to “various types of eyewear including electronic functional members, including, for example, electronic focusing eyeglasses, electroactive eyeglasses, electronic eyewear providing 3D capabilities, etc.” (EX-1001, 1:18-22; *see also id.*, Abstract (“Eyewear including an optical functional member, control electronics, and a sealed electrical connective element connecting the electronics to the optical functional member.”).) Unlike Sikonowiz, the ’355 patent does not relate to designing and manufacturing PCBs.

As for the second prong, Sikonowiz is not reasonably pertinent to the particular problem with which the inventors were involved. The ’355 patent is directed to the problem of moisture in eyewear in certain environments, such as those having high humidity or causing the wearer to sweat, which led conventional electronic eyewear and frames to suffer from shorting of electronic connections, thereby impeding or causing electronic applications used with the eyewear to fail. (’355 patent, 52:23-28.) Electronic eyewear is exposed to liquids, which can come from “the natural environment (e.g., rain, snow),” “the human body in the form of oils and perspiration,” and “consumer products such as liquid lens cleaners and cosmetics.” (*Id.*, 13:4-11.) As such, the ’355 patent is intended “to address pressing needs of making

electronic eyewear more moisture resistant and *more robust*,” and does so by disclosing eyewear with a moisture-proof layer to seal electrical components and connections. (*E.g., Id.*, cls. 1, 13, 5:23-26, 23:36-46 (emphasis added).) In fact, the '355 patent specifically discloses sealing electronic modules to make them water-resistant or water-proof. (*E.g., id.*, 5:20-21, 20:58-59; *see also id.*, 17:16-18 (explaining that the electronic components are sealed “to inhibit undesirable effects of liquid and moisture”).) The '355 patent did not solve the problem simply by applying a conformal layer to a PCB. Such an oversimplification also greatly minimizes the intricacies of designing and creating moisture-resistant and moisture-proof electronic eyewear. (EX-2004, ¶96.)

Sikonowiz, on the other hand, discloses that conformal coatings protect a PCB from “environmental hazards such as moisture, dirt, and chemicals.” (EX-1005, 136.) Sikonowiz does not address or mention use of a conformal coating to apply a water-proof seal to consumer electronics or to mitigate undesirable effects of liquids on eyewear. (EX-1005.)

Because Sikonowiz is non-analogous art, a POSITA would not have relied on Sikonowiz. Accordingly, Grounds 1 and 6 in the petition fail to render claims 1 and 13 obvious since none of the other cited prior art discloses or suggests the conformal layer limitations 1[e]-1[g]. *See, e.g., Vanguard Products Group, Inc. d/b/a Vanguard*

Protex Global v. InVue Security Products Inc., IPR2020-00018, Paper 7 at 14–18 (PTAB Mar. 31, 2020) (denying institution because the cited prior art was non-analogous to the challenged patent).

2. Grounds 1 and 3: No Motivation to Combine Sikonowiz and Howell-719

Even if Sikonowiz were analogous art, there still would have been no motivation to combine its teachings with those of Howell-719, and Petitioner fails to articulate any sufficient rationale for doing so.

As previously discussed, Petitioner relies on Howell-719 for all elements of independent claims 1 and 13, except for the conformal layer limitations. To satisfy the conformal layer limitations, Petitioner argues that because Sikonowiz discloses a conformal layer over a PCB, “[i]t would have been obvious to a POSITA to coat Howell-719’s PCB and mounted electronics with a conformal coating, as described in Sikonowiz.” (Petition at 24-25.)

But Howell-719 discloses eyewear with a radio, including a speaker, wherein all of the electronics for the radio, not just those for controlling the speaker, are at least partially embedded in the glasses and are on a PCB. (EX-1004, FIG. 1, ¶50.) This means that Howell-719’s speaker components, such as the voice coil, magnet, and wiring, are integrated with the PCB. As such, applying a conformal layer to the PCB with those components would have adversely impacted the speaker’s

functionality. (EX-2004, ¶101.) For example, conformal coatings can dampen vibrations of the speaker diaphragm, negatively affecting sound quality and clarity. (*Id.*, ¶102; EX-1019, 5-2-5-3.) Applying a conformal coating to a speaker is also problematic for other reasons, such as flexibility, since speakers often have moving parts and a rigid conformal coating might restrict their movement, leading to reduced performance or damage. (EX-2004, ¶102.)

Other critical considerations include application complexity or removal difficulty of the conformal coating. (*Id.*, ¶103; EX-2006, 361-62.) For example, for any repair work, polyurethane coating would need to be stripped chemically or burned away with a soldering iron, whereas epoxy coating “must be burned away with a soldering iron” since it is so impervious and “cannot be chemically stripped for repair work.” (*See* EX-1005, 136-37; EX-2006, 361-62.) As for the application complexity of the conformal coating, polyurethanes, for example, are particularly sensitive to moisture and can cause blistering under humid conditions, which can eventually lead to circuit failure. (EX-2004, ¶103; EX-2006, 362.) Thus, polyurethane formulations require careful application and close control of coating and curing environments. (*Id.*) Neither the petition nor Dr. Feland’s declaration addresses any of these drawbacks of Petitioner’s proposed combination.

Additionally, Sikonowiz does not disclose or suggest applying a conformal coating to a capacitive touch switch. (*See* EX-1005, 136 (“[A] conformal coating covers not only the circuit board but the components mounted on it as well.”).) Nor does Petitioner explain why a POSITA would be motivated to deposit a conformal layer over a capacitive touch switch. (EX-2004, ¶¶106-107.) For example, adding a conformal layer to a capacitive touch switch would deprecate the performance of the switch since it is based on a capacitance change when touched. (*Id.*; *see also* EX-2007 at 5 (stating that a “high dielectric constant can produce stray unwanted capacitance effects between surface tracks that run close and parallel to one another – this can alter the tuned characteristics of the circuit”).) Therefore, a POSITA would not have been motivated to deposit a conformal layer on a capacitive touch switch, as Petitioner suggests.

Notably, none of Petitioner's cited prior art discloses that conformal layers were “broadly usable in eyewear,” contrary to Petitioner's assertions. (Petition at 23.) If that were the case, Petitioner would have specifically identified such disclosures, and Petitioner does not. Sikonowiz—Petitioner's sole reference for the conformal layer limitations—does not disclose or suggest applying conformal coatings to electronic components in eyewear or consumer electronics. (*See* EX-1005.)

Because there was no motivation to combine Sikonowiz's teachings with those of Howell-719, Petitioner has not shown that independent claims 1 and 13 are obvious under Grounds 1, 3, 4 and 5.

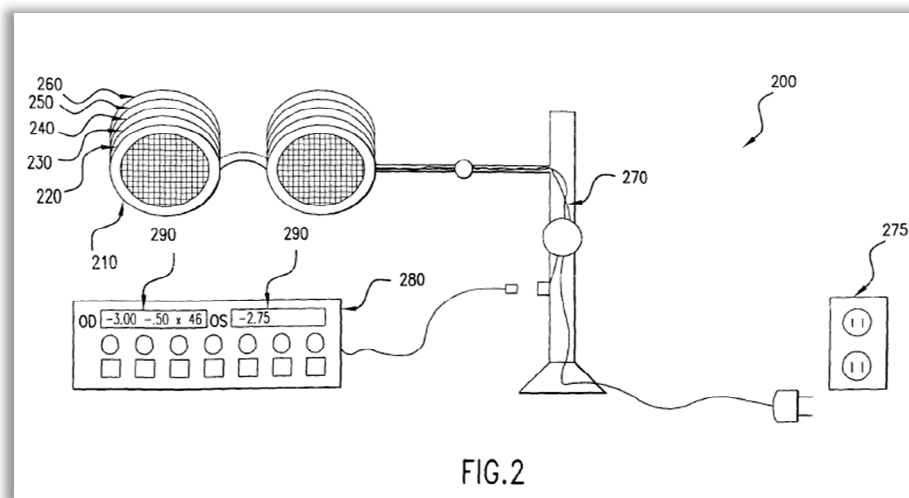
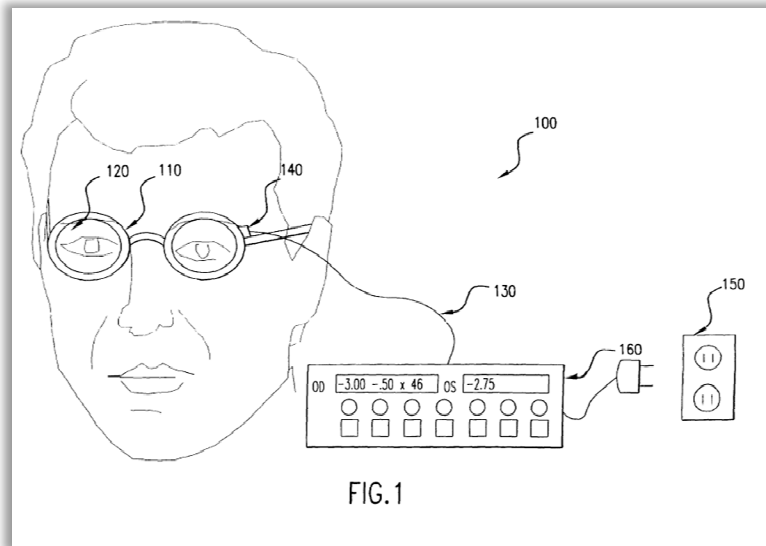
3. Grounds 6 and 7: No Motivation to Combine Sikonowiz and Blum-130

There was also no motivation to combine Sikonowiz's teachings with those of Blum-130. Petitioner argues that a "POSITA would have been motivated to mount Blum-130's electronic components on a printed circuit board as Howell-719 teaches" and "cover the PCB and mounted electronics with a conformal coating." (Petition at 56) But this rationale is flawed.

Blum-130 specifically discusses the need to reprogram the controller chip, for example to update a prescription for electro-active lenses:

In another inventive embodiment, the electro-active eye wear controller may be originally programmed by the eyecare specialist or technician when first dispensed, and later the same controller, or a component thereof, can be reprogrammed to provide a different correction, as the patient's needs change. This electro-active eyewear controller may be extracted from the eyewear, placed in the refractor's controller/programmer (shown in FIGS. 1 and 2) and reprogrammed during the examination, or *reprogrammed, in situ*, by the refractor without removal from the electro-active eyewear.

(EX-1006, 6:48-58 (emphasis added).) The referenced Figures 1 and 2 are reproduced below.



(EX-1006, FIGs. 1, 2.)

If a POSITA were to mount the controller on a PCB and apply a conformal coating as Petitioner suggests, doing so would prevent an electrical connection to the controller necessary to reprogram it. (EX-2004, ¶115.) In that case, any

reprogramming would require maintenance and therefore repair work, an added expense. (*Id.*) But as explained in Petitioner's own cited art, conformal coatings need to be chemically stripped away or burned away before any repair work can occur. (*See, e.g.*, EX-1005, 136 (“[E]poxy resin is so impervious, it cannot be chemically stripped for repair work. Instead, it must be burned away with a soldering iron.”); *id.*, 137 (“When circuits must be repaired, polyurethane conformal coatings may be stripped chemically or burned away with a soldering iron... Removal of a silicone coating for repair work is difficult, however, and requires that the film be cut away.”).) To avoid this additional work and enable seamless reprogramming, a POSITA would therefore not have applied a conformal layer to the electronics taught by Blum-130's eyewear. (EX-2004, ¶¶116-117.)

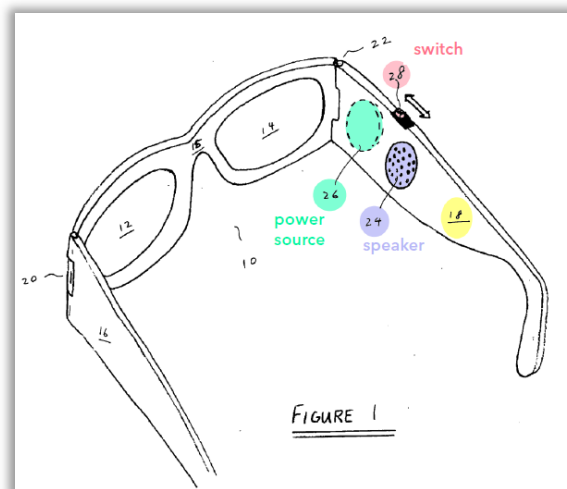
Because there was no motivation to combine Blum-130's teachings with those of Sikonowiz, Petitioner has not shown that independent claims 1 and 13 are obvious under Grounds 6 and 7.

4. Claim 13 is Patentable Because the Cited Prior Art Fail to Disclose a Method of Manufacturing Eyewear

Even though claim 13 requires “[a] method of manufacturing an eyewear system,” Petitioner fails to address this requirement in Grounds 1, 3, 6, and 7 and does not show where in Howell-719 or Blum-130 a *method* such as manufacturing steps is taught or suggested. Thus, claim 13 is additionally patentable because none of the

cited art discloses a “method for manufacturing eyewear.” See *TorPharm, Inc. v. Ranbaxy Pharmaceuticals, Inc.*, 336 F.3d 1322, 1327 (Fed. Cir. 2003) (“[T]here are no per se rules relating the patentability of product and process in either direction...a process yielding a well-known product may yet be nonobvious.”) (citation omitted).

In Grounds 1 and 3, Petitioner contends that “Howell-719 discloses an eyewear system and its construction.” (Petition at 32.) But none of the materials Petitioner points to (Figure 1, paragraphs [0027] – [0107], and section VII.A.1 of the petition) even mention a method. The claimed steps, for example, “depositing a conformal layer over at least a portion of the electronic assembly and at least a portion of the capacitive touch switch,” would not have been obvious to a POSITA simply by looking at Figure 1 or paragraphs [0027] – [0107].



(Petitioner at 10 (EX-1004, FIG. 1 with Petitioner's annotations).) Because Howell-719 does not even disclose a conformal layer, this step would not have been apparent

or obvious from the identified structures. (*See also id.* at 34 (relying on Sikonowiz for this limitation).) The word “method” appears in only *two* unrelated and irrelevant passages in the body of Howell-719, excluding the titles of other references. (*See id.*, ¶¶ [0018], [0111]).)

Similarly, in Grounds 6 and 7, Petitioner claims that “Blum-130 discloses an eyewear system and its construction.” (Petition at 60 (citing EX-1006 FIG. 21 and §XI.A.1); *id.* at 66 (“See Ground 6, Claim 13. *Supra* §XI.G.1.”); *see also id.* at 52 (Section XI.A.1 states that “Figure 21 shows ‘electro-active eyewear 2100’ with ‘frames 2110’” and cites EX-1006, 29:66–30:1).) Again, this is not true. Figure 21 and the referenced portion of Blum-130 specifically deal with an eyewear system and not a method. (*See* EX-1006, 29:66–30:1 (“FIG. 21 is a perspective view of another inventive embodiment of electro-active eyewear 2100. In this illustrative example, frames 2110 contain electro-active lenses.”).)

Since Petitioner ignores this method requirement, Grounds 1, 3, 6, and 7 fail to show that each and every limitation of claim 13 is obvious.

VI. THE CHALLENGED DEPENDENT CLAIMS ARE PATENTABLE

Because the asserted prior art does not render obvious independent claims 1 and 14, Petitioner's challenges to the '355 patent's dependent claims fail for the same reasons under all grounds (**Grounds 1-7**). Specifically, Petitioners cannot

show that claims 2-12, which depend on claim 1, and claims 15-21, which depend on claim 14, are obvious. *See* §V.

VII. CONCLUSION

For the foregoing reasons, Petitioner fails to demonstrate by a preponderance of the evidence that any of the challenged claims are invalid.

Date: March 31, 2025

Respectfully submitted,

KING & SPALDING LLP

BY: /Brian Eutermoser/
Brian Eutermoser
Registration No. 64,058

*Attorney for Patent Owner
e-Vision Optics, LLC*

CERTIFICATION OF WORD COUNT

The undersigned hereby certifies that the portions of the above-captioned **PATENT OWNER'S RESPONSE** specified in 37 C.F.R. § 42.24 have **xxxxxx** words, in compliance with the 14,000 word limit set forth in 37 C.F.R. § 42.24. This word count was prepared using Microsoft Word 365 v.2022.

Date: March 31, 2025

Respectfully submitted,

KING & SPALDING LLP

BY: /Brian Eutermoser/

Brian Eutermoser

Registration No. 64,058

*Attorney for Patent Owner
e-Vision Optics, LLC*

CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing **PATENT OWNER'S RESPONSE** and all supporting **EXHIBITS 2004 – 2007** were served by filing the documents through the Patent Trial and Appeal Case Tracking System (P-TACTS) on March 31, 2025 and courtesy copies were also served via electronic mail, in their entireties on the following:

Ali S. Razai (Reg. No. 60,771)
ali.razai@morganlewis.com
Benjamin B. Anger (Reg. No. 62,207)
ben.anger@morganlewis.com
MLB-Luxottica-IPR-483@morganlewis.com
Morgan, Lewis & Bockius LLP
600 Anton Boulevard, Suite 1800
Costa Mesa, CA 92626-7653
Phone: (714) 830-0600
Fax: (714) 830-0700

*Counsel for Petitioner
Luxottica of America Inc.*

Alexander B. Stein (Reg. No. 71,397)
alexander.stein@morganlewis.com
Jacob L. Peterson (Reg. No. 65,096)
jacob.peterson@morganlewis.com
Morgan, Lewis & Bockius LLP
1301 Second Avenue, Suite 3000
Seattle, WA 98101
Phone: (206) 274- 6400
Fax: (206) 274-640

Date: March 31, 2025

KING & SPALDING LLP

BY: /Brian Eutermoser/
Brian Eutermoser
Registration No. 64,058

*Attorney for Patent Owner
e-Vision Optics LLC.*