

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

REVVO TECHNOLOGIES, INC.

Petitioner,

v.

TIRE STICKERS LLC.

Patent Owner.

IPR2025-00631

Patent 11,124,027

**PATENT OWNER'S PRELIMINARY RESPONSE
TO PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 11,124,027**

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Exhibit No.	Description
2020	Webster's Dictionary Definition of "rigid"
2021	Webster's Dictionary Definition of "contour"
2022	Webster's Dictionary Definition of "durometer"
2023	Webster's Dictionary Definition of "elastomer"
2024	Revvo's Claim Construction Chart and Evidence, <i>Cerebrum Sensor Techs., Inc. v. Revvo Techs., Inc.</i> , C.A. No. 24-cv-245 (D. Del. Dec. 20, 2024)

I. Introduction

Patent Owner Tire Stickers LLC (“Patent Owner” or “Tire Stickers”) respectfully submits this Preliminary Response to the Petition for *inter partes* review (Paper 1, “Petition”) filed by Revvo Technologies, Inc. (“Revvo” or “Petitioner”) against claims 1-3, 5, 7-9, 11-13, and 15-22 (“the challenged claims”) of U.S. Patent No. 11,124,027 B2 (“’027 patent”) (EX1001). The Board should deny institution because Revvo has not met the requirements for institution and its burden of showing a reasonable likelihood of prevailing in proving unpatentability of any of the challenged claims.¹

As a foundational failure by Revvo, the Petition fails to explain why Revvo is pursuing IPR institution based on claim constructions that Revvo has contended are wrong in co-pending federal district court litigation. Thus, the Petition is deficient under 37 C.F.R. § 42.104(b)(3).

As another foundational failure by Revvo under 35 U.S.C. § 325(d), the Petition presents cited references that are merely cumulative of the prior art already considered during prosecution, as is more fully discussed herein.

¹ The Petition is deficient for additional reasons that are not set forth in this Preliminary Response. Patent Owner reserves the right to present additional arguments during trial should review be instituted.

As another foundational failure by Revvo, as discussed further below, the Board should exercise its discretion to deny the Petition because Revvo ignored the most pertinent portion(s) of the cited references.²

The '027 patent discloses innovative display assemblies configured for attachment with a vulcanized rubber article (e.g., a tire) and provided in the form of different material layers, including an outer layer with a display and an adhesive layer for bonding with the vulcanized rubber article. (*E.g.*, EX1001, *e.g.*, Abstract,

² Revvo should not be permitted to supplement the record to address these fundamental failures in its Petition. *See Actavis, Inc. v. Research Corporation Technologies, Inc.*, IPR2014-01126, Paper 22 at 13 (Jan. 9, 2025) (“[A] party may only submit supplemental information after a trial has been instituted (37 C.F.R. § 42.123) while we must decide whether to institute a trial based on ‘the information presented in the petition’ (35 U.S.C. § 314(a)). Because the Petition and the accompanying evidence are insufficient to qualify the LeGall thesis as a § 102(b) prior art, we deny the Petition regarding this ground.”) (denying institution); *see also Nanobebe v. Mayborn*, IPR2023-00465, Paper 21 at 5 (Aug. 17, 2023) (The Board cannot “simply correct errors and omissions in a petition using supplemental information that results in the addition of a new analysis.”).

1:62-2:2, 2:10-12, 2:25-32, and 4:56-59.) The “display assemblies as disclosed herein are constructed in a manner that facilitates use of the same once applied for a long duration, e.g., the life of the vulcanized article, without sacrificing the integrity *and/or* aesthetic appearance of the display assembly.” (*Id.* at 2:39-45 (emphasis added).) To achieve such “integrity and/or aesthetic appearance,” the ’027 patent discloses a “barrier layer 24 is formed from a material capable of providing properties of *shock absorbance, elastomeric expansion and/or contraction properties compatible with the vulcanized rubber article that the display assembly is to be attached therewith*, and a desired degree of conformity between the adjacent surfaces of the display layer and the outer surface of a vulcanized rubber article (so as to maximize the surface contact area between the display assembl[y] and vulcanized rubber article).” (*Id.* at 6:19-28 (emphasis added).) The ’027 patent contains 23 claims, including independent Claim 1 and its dependent challenged Claims 2-3, 5, and 7-9; independent Claim 11 and its dependent challenged Claims 12-13; independent Claim 15 and its dependent challenged Claims 16-18; and independent Claim 19 and its dependent challenged Claims 20-22.

Independent Claim 1, for example, recites an assembly for attachment with a vulcanized rubber which comprises, among other things, an outer layer, an adhesive layer adhered to an interface surface of the outer layer, and a portion of the outer layer adjacent the interface surface that comprises a barrier material composition.

(EX1001, Claim 1 (emphasis added).) As recited in both the preamble and the body of Claim 1, Claim 1 makes clear that the “barrier material composition” is in an assembly for attachment with a vulcanized rubber article.³ (*Id.*) The assembly can include an element disposed within a cavity. (EX1001, Claims 7-8.)

For at least the reasons discussed below, all grounds presented by Revvo fail to show a reasonable likelihood of prevailing with respect to any of the challenged claims of the '027 patent.⁴

³ Similarly, that is also expressed in all of the other challenged claims, as the barrier material composition is in an assembly for attachment with a vulcanized rubber article (or tire). (EX1001 at Claims 1, 11, 15, and 19.)

⁴ It is improper to incorporate arguments by reference from other documents into the Petition. 37 C.F.R. § 42.6(a)(3); *see also, e.g., Avant Tech., Inc. v. Anza Tech., Inc.*, IPR2018-00828, Paper 7, at 16-18 (Oct. 16, 2018). The Board's practice has been to consider only arguments that are expressly set forth in the Petition. *Id.* at 17. For example, “[the] practice of citing the [expert] Declaration to support conclusory statements that are not otherwise supported in the Petition also amounts to incorporation by reference.” *Id.* Accordingly, the Board should not consider any arguments made in the Declaration of Mr. Tim Donley (EX1003) that are not

With regard to Ground 1, Revvo cites one reference (Wilson) with respect to challenged Claims 1, 5, 7-9, 11-13, and 15-22 of the '027 patent. But this reference fails to disclose common elements among the independent Claims 1, 11, 15, and 19. Specifically, Wilson fails to disclose at least the “barrier material composition” of Claim Element 1[b][ii], Claim Element 11[d], and Claim Element 15[e], or “material composition that acts as a barrier” of Claim Element 19[d].⁵ Revvo points to the patch “base” in Wilson as allegedly satisfying the “barrier material composition” of the challenged claims of the '027 patent.

But Revvo ignores the most pertinent portions of Wilson – column 3:41-42, 3:60-61, 7:36-42, 8:26-30, and 9:16-18 – that speak to this issue, and thus fails to carry its burden that a person of ordinary skill in the art (“POSA”) would understand

expressly set forth in the Petition. Those arguments are identified and nevertheless discussed herein.

⁵ For purposes of this response only, this response shall refer to either or both of a “barrier material composition” and “material composition that acts as a barrier” as a “barrier material composition.”

Wilson to teach Claim Elements 1[b][ii], 11[d], 15[e], or 19[d].⁶ At those portions of Wilson ignored by Revvo – columns 3:41-42, 3:60-61, 7:36-42, 8:26-30, and 9:16-18 – Wilson teaches “rigid” patch base shapes rather than any kind of a “barrier material composition” with the desired properties of shock absorbance, elastomeric contraction and/or expansion as properly construed for the challenged claims of the ’027 patent.⁷ See *Chemours Co. FC, LLC v. Daikin Indus. Ltd.*, 4 F.4th 1370, 1376 (Fed. Cir. 2021) (reversing PTAB decision because “the Board appears to have ignored the express disclosure in [the prior art] that teaches away from the claimed invention”); accord *Andrea Electronics Corp. v. Apple, Inc.*, App. No. 2021-1248, 2022 WL 1197341, at *5 (Fed. Cir. April 22, 2022). For example, according to Wilson column 9:16-18, although the housing is “another material more *rigid* than the material of patch 402,” the patch, including its base (EX1009 at Figure 20) are nonetheless “rigid.” That is consistent with Wilson’s description of the “rigid” base as pre-formed to match the “contour” of an innerliner of a tire, as described at two

⁶ Patent Owner does not acquiesce to, and reserves the right to address, Revvo’s definition of a POSA. The Petition fails to meet the requirements for institution under any definition of a POSA.

⁷ Revvo argues that base portion of patch 10 in Wilson is the portion of interest. (Petition at 27.)

other portions of Wilson ignored by Revvo. (EX1009 at 3:41-42, 3:60-61.) Wilson's "contour" of the base as "rigid" thus teaches away from the "barrier material composition" with the desired properties of shock absorbance, elastomeric contraction and/or expansion as properly construed for the challenged claims in the '027 patent.

Revvo's only argument is that the mention of "rubber" is sufficient to describe a "barrier material composition."⁸ (Petition at 26-27.) That is refuted by Wilson's description of the patch base as "rigid" having a pre-formed "contour" as was described above. Moreover, in yet other portions of Wilson, again ignored by Revvo, Wilson describes patch "walls" as having "elasticity and extensibility" but not the patch "base," precisely because the patch base lacks such elasticity and extensibility properties. (EX1009 at 7:36-42.)

⁸ As further discussed herein, Revvo ignores the fact that in Wilson "In a preferred embodiment, the rubber patch is vulcanized and then assembled to the vulcanized tire." (EX1009 at 3:42-44.) Thus, it is not merely rubber as analyzed by Revvo, but vulcanized rubber. (*Id.*) Moreover, Revvo's expert never opines on the inherent properties of such vulcanized rubber as mentioned in Wilson. (EX1003 at ¶¶ 103 and 202.) Revvo's expert thus does not address Wilson's patch base as taught. (*Id.*)

Revvo's argument also is refuted by the '027 patent's teaching that the barrier material composition in the challenged claims must be compatible with the vulcanized rubber article. (EX1001 at 6:19-28.) That is also expressed in the challenged claims, as the barrier material composition is in an assembly for attachment with a vulcanized rubber article (or tire). (*Id.* at Claims 1, 11, 15, and 19.) Thus, there is nothing in Wilson that indicates any kind of a "barrier material composition," as recited in the challenged claims, with the desired properties of shock absorbance, elastomeric contraction and/or expansion in an assembly for attachment with a vulcanized rubber article. Rather, as was described above, Wilson teaches away from any such "barrier material composition" by instead teaching a "rigid" patch base pre-formed to match the "contour" of the tire.

With regard to Ground 2, Revvo cites two references (Wilson and DiRocco) with respect to dependent Claims 12 of the '027 patent. Although relying on Wilson as the primary reference for Ground 2, Revvo similarly fails to address Wilson as was described above for Ground 1, and thus the Petition fails as to Ground 2 as well.

With regard to Ground 3, Revvo cites one reference (Bielicki) with respect to challenged Claims 1-3, 5, and 7 of the '027 patent. But this reference fails to disclose at least the "barrier material composition" of Claim 1. Here again, Revvo fails to address the most pertinent portions of Bielicki – column 4:44-5:14 – that speaks to this issue, and thus fails to carry its burden that a POSA would understand Bielicki

to teach the barrier material composition of Claim Element 1[b][ii]. Revvo only focuses on the portion that says “[t]he inner layer 15 is [] a rubber material with a lower durometer than the outer layer 13.” (Petition at 59.) Revvo completely ignores the rest of Bielicki column 4:44-5:14, which further describes the purpose of this durometer difference: “... Therefore, in the preferred embodiment, the [laser] ablation rate of the outer layer is lower than the [laser] ablation rate [sic: of the ablation rate] of the inner layer 15.”⁹ (EX1004.) This description in Bielicki has nothing to do with the recited “barrier material composition” properties of the layers for purposes of shock absorbance, elastomeric contraction and/or expansion as properly construed for the challenged claims of the ’027 patent.¹⁰ Rather, this

⁹ The Petition mentions the role of a laser ablation rate in Bielicki, but never with respect to the “barrier material composition” issue. (Petition at 47 and 64.)

¹⁰ The Petition argues that “durometer provides a relative measure of the elastic properties of a rubber.” (Petition at 59 citing (EX1003, ¶200.)) As the Petition and the declaration it relies upon ignore Bielicki’s fuller description of durometer as a hardness measure for laser ablation rate, which has nothing to do with the “barrier material composition” of the challenged claims, their conclusory assertions should be ignored. *See TQ Delta, LLC v. Cisco Sys., Inc.*, 942 F.3d 1352, 1358 (Fed. Cir. 2019) (“Conclusory expert testimony does not qualify as substantial evidence.”)

description in Bielicki concerns the relative “hardness” of the layers for purposes of laser ablation rate. (EX1004 at 4:49-50 (“The term durometer is used in the art to signify a measurement of the hardness of a rubber material.”)) Also ignored by Revvo, Bielicki describes the inner layer 15 as both preferably black and “may also serve to block ultraviolet light that may cause staining of the outer white layer.” (EX1004 at 5:22-25.) This description in Bielicki has nothing to do with the desired “barrier material composition” properties of shock absorbance, elastomeric contraction and/or expansion of the layers.¹¹ Once again, Revvo’s argument also is refuted by the ’027 patent’s teaching that the barrier material composition must be compatible with the vulcanized rubber article. (EX1001 at 6:19-28.) Thus, there is nothing in Bielicki that indicates any kind of a “barrier material composition” with the desired properties of shock absorbance, elastomeric contraction and/or expansion

¹¹ Again, although irrelevant to a “barrier material composition” with the desired properties of shock absorbance, elastomeric contraction and/or expansion in an assembly for attachment with a vulcanized rubber article (or tire) in the challenged claims of the ’027 patent, as the Petition and the declaration it relies upon ignore Bielicki’s fuller description of the inner layer 15 in terms of color and resistance to ultraviolet rays, their conclusory assertions should be ignored. *See TQ Delta*, 942 F.3d at 1358.

in an assembly for attachment with a vulcanized rubber article as in the challenged claims. Rather, as was described above, Bielicki teaches away from the “barrier material composition” by instead teaching an inner layer as merely having a lower “hardness” (durometer) for laser ablation purposes.

With regard to Ground 4, Revvo cites three references (Bielicki, Patch Rubber Brochure and/or Tire-Track Brochure) with respect to Claims 1-3, 5, 7, 11-13, 15, and 16 of the '027 patent. Although relying on Bielicki as the primary reference for Ground 4, Revvo similarly fails to address Bielicki, as was described above for Ground 3, and thus the Petition fails as to Ground 4 as well.¹²

With regard to Ground 5, Revvo cites three references (Bielicki, Patch Rubber Brochure and/or Tire-Track Brochure, and Brown) with respect to Claims 7-9, 14, and 16-23 of the '027 patent. Although relying on Bielicki as the primary reference for Ground 5, Revvo similarly fails to address Bielicki, as was described above for Grounds 3 and 4, and thus the Petition fails as to Ground 5 as well.¹³

¹² See Petition at 70 (“All Ground 3 opinions under Bielicki for claim elements 1[a] and 1[b] are incorporated here and not repeated.”)

¹³ See Petition at 80 (relying on discussion of limitation 1[b][ii] and claim 5 under Ground 3, and limitation 11[d] under Ground 4) and at 85 (relying on discussion of

Accordingly, institution of *inter partes* review of the '027 patent should be denied.

II. The '027 Patent

Among other things, the '027 patent teaches and claims an improved display assembly with “barrier material composition” for attachment to a vulcanized rubber article. (EX1001 at 6:19-28, 6:33-39, 8:62-9:3, 9:9-16.) The '027 patent teaches that “barrier layer 24 is formed from a material capable of providing properties of shock absorbance, elastomeric expansion and/or contraction properties.” (*Id.* at 6:19-22.). These properties are “compatible with the vulcanized rubber article that the display assembly is to be attached therewith, and a desired degree of conformity between the adjacent surfaces of the display layer and the outer surface of a vulcanized rubber article (so as to maximize the surface contact area between the display assembl[y] and vulcanized rubber article).” (*Id.* at 6:22-28.) The '027 patent clarifies that not just any rubber will have such properties. Rather, although “[e]lastomeric materials useful for forming the intermediate layer 24 include and are not limited to gum rubber, vulcanized natural rubber SBR, nitrile rubber, polyurethane, or comparable materials,” they further have “properties of high elongation, conformity and

limitation 1[b][ii] and claim 5 under Ground 3 and limitation 11[d] under Ground 4).

chemical resistance to notable mold release agents common in the vulcanized rubber of pneumatic tires, and combinations thereof.” (*Id.* at 6:40-47.)

As further discussed below, cumulative of the prior art considered during prosecution, the Petition presents cited references that still suffer from the same problem of merely relying on “rigid” rubber with a “contour” to match the tire (Wilson) or rubber with laser ablation rate resistance (Bielicki), rather than a “barrier material composition” with suitable properties of shock absorbance, elastomeric expansion and/or contraction properties in an assembly for attachment with a vulcanized rubber article as in the challenged claims.

III. The Cited References

A. Wilson

Wilson is directed to a monitoring device and patch assembly that includes a patch that removably and re-attachably holds the monitoring device, using a variety of mechanisms, such as pins, screws, or an interference fit. (EX1009, *e.g.*, Abstract, 1:19-28, 2:2-15, 3:35-41, 5:25-36, and 7:28-47.)

The patch includes, among other things, a housing for holding the monitoring device and a patch base, the patch base being the portion of interest for this dispute based on Revvo's arguments. (*Id.* at 3:35-41 and 7:13-15.) The patch also includes, among other things, a patch base side “approximating the contour of an innerliner of a tire (not shown).” (*Id.* at 3:41-42; also 3:60-61.) The patch base thus has a “rigid”

contour, although the housing is made of material “more rigid than the material of [the] patch.” (*See id.* at 9:16-18.) “In a preferred embodiment, the rubber patch is vulcanized and then assembled to the vulcanized tire.” (EX1009 at 3:42-44.)

To compensate for the rigidity of the patch base, in an embodiment where an interference fit is used for seating the monitoring device in the patch, tube walls with “sufficient elasticity and extensibility” may be used. (*Id.* at 7:36-42); *see also* Abstract (mentioning “resilient tube”).¹⁴ Such walls may also be capable of “absorb[ing] vibrational forces.”¹⁵ (*Id.* at 8:26-30.) Nowhere does Wilson describe the patch base as having such “elasticity” or “extensibility.”

¹⁴ Wilson describes patch walls as having “resiliency” in another portion. (EX1009 at 7:40-47.) Although Wilson refers to “patch 202,” the context is clearly referring to the patch “walls.” (*Id.*)

¹⁵ Revvo only acknowledges the mention in Wilson column 8:26-27 of “Patch 202 has rounded and curved walls and surfaces.” (Petition at 37.) Revvo completely ignores the rest of Wilson column 8:26-30, which describes the tube section, but not the patch base (the portion of interest here according to Revvo), as absorbing vibrational forces. (EX1009.)

As was discussed in Section II above, the '027 patent uses a “barrier material composition” for the portion of the outer layer of interest, rather than a rigid portion as in Wilson.

B. DiRocco

Nowhere does Revvo argue that DiRocco discloses a “barrier material composition.” (Petition at 45-46.) DiRocco thus fails to supplement the deficiencies identified above for Wilson.

C. Bielicki

Bielicki is directed to a method of manufacturing a tire tracking unit with an outer layer and an inner layer, which method includes, among other things, using a laser to “to ablate the outer layer in the form of the selected pattern to expose an inner layer of the unit which has a contrasting color.” (EX1004, *e.g.*, Abstract.) The outer layer has “a lower ablation rate (i.e. is more difficult to ablate) than the inner layer for ensuring durability and wear and tear protection for the resulting pattern for maintaining accuracy and recognition.” (*Id.* at 2:17-23.) “The method starts by providing the multi-layered rubber ID unit 10 which has an outer layer 13 of one color, *e.g.* white, and at least one inner layer 15 of a contrasting color, *e.g.* black.” (*Id.* at 3:30-34.) The “ID unit is thus Scanned with the laser beam 22 to ablate the outer layer 13 in the form of the selected pattern 12,14,16, to expose the inner layer 15 of contrasting color.” (*Id.* at 3:43-45.)

To achieve the above method step of laser ablation, Bielicki teaches that “The inner layer 15 is also a rubber material with a lower durometer than the outer layer 13. Therefore, in the preferred embodiment, the ablation rate of the outer layer is lower.” (*Id.* at 4:58-61.) “An outer layer with an ablation rate that is higher than that of the inner layer would result in the easy wearing away of the outer layer. An outer layer with a lower ablation rate than the inner layer has the advantages of providing durability for the engraved pattern.” (*Id.* at 5:15-20.)

Nowhere does Bielicki teach that inner layer 15 – the portion of interest according to Revvo¹⁶ – is a barrier material composition with the desired properties of shock absorbance, elastomeric contraction and/or expansion that is compatible with the vulcanized rubber article. Bielicki teaches away from any such notion by describing a “bottom layer 17 beneath inner layer 15, which acts as a bonding layer between the ID unit and a tire.” (*Id.* at 3:33-35.)

As was discussed above for Wilson, not every “rubber” is suitable for a barrier material composition with the desired properties of shock absorbance, elastomeric contraction and/or expansion that is compatible with the vulcanized rubber article.

¹⁶ Revvo argues that “Accordingly, Bielicki’s inner layer 15 satisfies this claim limitation.” (Petition at 60 (referring to limitation 1[b][ii]).) Nowhere does Revvo make the same argument for Bielicki’s outer layer 13.

Thus, similarly, nowhere does Bielicki teach a “barrier material composition” with the desired properties of shock absorbance, elastomeric contraction and/or expansion for attachment with a vulcanized rubber article (or tire). That is expressed in the challenged claims, as the barrier material composition in an assembly for attachment with a vulcanized rubber article (or tire). (*Id.* at Claims 1, 11, 15, and 19.)

As was discussed in Section II above, the '027 patent uses a “barrier material composition” for the portion of the outer layer of interest, rather than a layer of lower durometer for laser ablation purposes as in Bielicki.

D. Patch Rubber Brochure

Revvo argues that “[e]ach of these references [Bielicki and Patch Rubber Brochure-EX1005] are directed to similar (if not identical) ID units.”¹⁷ (Petition at 66.) Nowhere does Revvo argue that the Patch Rubber Brochure discloses a “barrier material composition.” (Petition at 77, 80 and 85.) The Patch Rubber Brochure thus fails to supplement the deficiencies identified above for Bielicki.

¹⁷ For purposes of this response only, Patent Owner will accept that representation without conceding it.

E. Tire-Track Brochure

Revvo argues that “[e]ach of these references [Bielicki and Tire-Track Brochure-EX1007] are directed to similar (if not identical) ID units.”¹⁸ (Petition at 66.) Nowhere does Revvo argue that the Tire-Track Brochure discloses a “barrier material composition.” (Petition at 77, 80 and 85.) The Tire-Track Brochure thus fails to supplement the deficiencies identified above for Bielicki.

F. U.S. Patent No. 6,546,982 (Brown)

Nowhere does Revvo argue that Brown (EX1008) discloses a “barrier material composition.” (Petition at 77, 80 and 85.) Brown thus fails to supplement the deficiencies identified above for Bielicki.

IV. The Board Should Exercise Its Discretion to Deny the Petition for Several Reasons Addressed in Patent Owner's Separately Filed Discretionary Denial Brief.

For the reasons set forth by Patent Owner's separately filed discretionary denial brief, the Board should exercise its discretion to deny the Petition consistent with the Memorandum, “Interim Processes for PTAB Workload Management,” dated March 26, 2025, issued by the Acting Under Secretary Stewart of Commerce

¹⁸ For purposes of this response only, Patent Owner will accept that representation without conceding it.

for Intellectual Property and Acting Director of the United States Patent and Trademark Office.

V. The Petition is Deficient Under 37 C.F.R. § 42.104(b)(3)

The rules regarding the content of a petition, and what claim construction information must be included, are clear: “A petition must set forth “[h]ow the challenged claim is to be construed.”” 37 C.F.R. § 42.104(b)(3). Here, Revvo has failed to meet this foundational requirement in its Petition.

The Petition fails to explain why Revvo is not using its proposed claim construction for “barrier material composition” / “material composition that acts as a barrier” in co-pending federal district court litigation, which is “a material composition that blocks or is intended to block passage of discoloring chemicals, particularly antioxidants, within vulcanized rubber articles such as vulcanized rubber tires.” (EX1024 at 8.) Revvo fails to explain why its position is different in the two proceedings.¹⁹

¹⁹ Revvo also fails to explain why its claim constructions in the district court have shifted. (*Compare* EX1024 at 8 *with* EX2024 at 12-13.) Clearly, Revvo’s shifting sands approach to claim construction demonstrates that Revvo is merely trying to adjust its prior art position rather than construe the claim language with legal integrity.

Having repeatedly rejected precisely this sort of Petitioner gamesmanship with claim construction by denying institution under 37 C.F.R. § 42.104(b)(3), the Board should also do so here.²⁰ *See Orthopediatrics Corp. v. K2M, Inc.*, IPR2018-01546, Paper 10 (PTAB Feb. 14, 2019); *10x Genomics, Inc. v. President and Fellows of Harvard College*, IPR2023-01299, Paper 15 (PTAB Mar. 14, 2024).

Revvo's failure to meet this basic requirement warrants denying institution, and Revvo should be left with the consequences of its strategic choice to not straightforwardly address claim constructions in its Petition. *See Orthopediatrics*, IPR2018-01546, Paper 10 at 11; *10x Genomics*, IPR2023-01299, Paper 15 at 13.

VI. The Petition Should Be Denied Under 35 U.S. Code § 325(d)

Revvo's own arguments show that the cited references are merely cumulative of the prior art already considered during prosecution. Revvo argues that "During prosecution, the applicant amended the Challenged Claims ... based on the argument that the prior art failed to disclose an 'outer layer' that comprises a 'barrier material composition.'" (Petition at 5.) But, as was discussed above, none of the cited

²⁰ As further discussed herein in Section VII.A.1.a and Section VII.A.1.b, Revvo also fails to acknowledge or explain why it is treating the claim term "elastomeric" the same as the separate claim term "barrier material composition" / "material composition that acts as a barrier."

references in the Petition disclose such an “outer layer” with a “barrier material composition” adjacent the interface between the outer layer and an adhesive layer.

The cumulative nature of the cited references in the Petition is more fully discussed herein in Section VII.A.2.

VII. The Petition Fails to Show a Reasonable Likelihood of Prevailing on Any of the Challenged Claims

For an *inter partes* review to be instituted, a petition must “show[] that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). For at least the reasons discussed below, the Petition and supporting evidence fail to show that there is a reasonable likelihood that Revvo will prevail with respect to any of the independent challenged claims 1, 11, 15, or 19, and thus the Petition should be denied.

A. None of the Cited References Discloses Certain Limitations of Independent Claims 1, 11, 15, and 19²¹

Institution should be denied because the Petition fails to specify where each element of independent Claims 1, 11, 15, and 19 is found in the cited references, as required by 37 C.F.R. § 42.104(b)(4). *See also id.* §§ 42.104(b)(5), 42.22(a)(2); 35

²¹ Again, the Petition is deficient for additional reasons that are not set forth in this Preliminary Response. Patent Owner reserves the right to present additional arguments during trial should review be instituted.

U.S.C. § 312(a)(3); *Amazon Web Servs., Inc. v. Saint Regis Mohawk Tribe*, IPR2019-00103, Paper 22 at 15-19 (May 10, 2019). Because the remaining challenged claims all depend from either independent Claims 1, 11, 15, or 19, Revvo's obviousness conclusions set forth in Grounds 1-5 with respect to the dependent claims also fails for at least the reasons set forth with respect to independents Claims 1, 11, 15, and 19.

1. None of the Cited References Discloses the “barrier material composition” in Claim Elements 1[b][ii], 11[d], 15[e], and 19[d]

Claim Element 1[b][ii] recites “at least a portion of the outer layer adjacent the interface surface comprises a barrier material composition.” (EX1001 at 15:25-27.) Claim Element 11[d] recites “wherein the outer layer comprises a barrier material composition.” (*Id.* at 16:10-11.) Claim Element 15[e] recites “at least a portion of the outer layer comprises a barrier material composition.” (*Id.* at 16:28-29.) Claim Element 19[d] recites “the outer layer comprises a material composition that acts as a barrier.” (*Id.* at 16:44-45.) None of the references cited in the Petition disclose the recited limitation “barrier material composition.”²²

²² Again, for purposes of this response only, this response shall refer to either or both of a “barrier material composition” and “material composition that acts as a barrier” as a “barrier material composition.”

a. The Petition Ignores the Most Pertinent Portions of Wilson Which Teach Away from the “Barrier Material Composition”

Revvo cites six lines of Wilson which state:²³

Although any method for assembling *the vulcanized rubber patch* to the vulcanized tire, one acceptable and preferred method is set forth in U.S. Pat. No. 5,971,046; the disclosures of which are incorporated herein by reference. In accordance with the referenced application, the patch may be a *rubber selected from the group consisting of* Ethylene Propylene Diene Monomer (EPDM) rubber, butyl rubber, natural rubber, neoprene and mixtures thereof.

(Petition at 26-27 (citing EX1009 at 3:49-55) (emphasis added).) But, inexplicably, nowhere in the Petition does Revvo acknowledge the existence of other portions of the actual properties of the patch in Wilson, for example:

Housing 410 may be fabricated from the same material as protective body 406 or another material *more rigid than the material of patch* 402. In one embodiment of the invention, housing 410 is encapsulated around the upper portion of patch 402. In other embodiments, housing

²³ Revvo's entire application of “barrier material composition” is at pages 26-27 of the Petition with regard to Wilson.

410 may be adhesively connected or mechanically connected to patch 402.

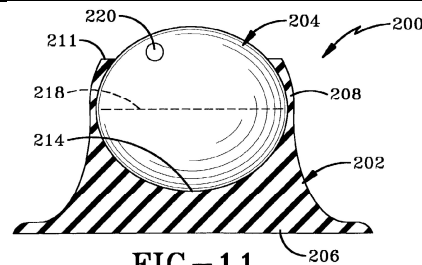
(EX1009 at 9:16-21.) Thus, Revvo ignores the portion of Wilson that describes the patch as “rigid,” although the housing is “more rigid.” (*Id.*) The ordinary meaning of “rigid” is, among other things, “lacking or devoid of flexibility.” (EX2020 at 3.) But Revvo also ignores other portions of Wilson that describe the patch in terms consistent with that “rigid” description. For example, Revvo ignores repeated descriptions of the patch as having a pre-formed “contour” to match the tire:

FIG. 1 shows a rubber patch 10 of the present invention ... The *patch* has a second opposite side 18 *approximating the contour* of an innerliner of a tire (not shown). In a preferred embodiment, the rubber patch is vulcanized and then assembled to the vulcanized tire ... The second side 18 of the *patch* 10 approximates the contour of an innerliner of a tire. The *contour* of the second side 18 preferably is radiused to have about the same radius as the tire to which it is assembled, the radius being larger for larger tires. For very large tires, such as for off-the-road tires, the radius may be eliminated altogether, so that there is no contour and the opposite side is flat, having no contour.

(EX1009 at 3:35-67 (emphasis added).) The ordinary meaning of “contour” is, among other things, the “shape” or “form” of something. (EX2021 at 3.) Thus, the Wilson patch is both “rigid” and has a “contour” to match the tire; neither of which are discussed by Revvo. That rigid contour of the Wilson patch teaches away from a “barrier material composition” with the desired properties of shock absorbance, elastomeric contraction and/or expansion. (EX2020 at 3.)

Other portions of Wilson ignored by Revvo also teach away from the base of the Wilson patch being a “barrier material composition.” Wilson teaches that the patch base remains in the rigid contour configuration, although upright walls may have sufficient elasticity:

The *walls* of tube section 208 have sufficient elasticity and extensibility such that opening 212 may be stretched open to accommodate monitoring device 204 to seat monitoring device 204 within patch 202 as depicted in FIG. 11. The elasticity of the *walls* allows them to return to their resting position to trap monitoring device 204



with an interference fit within patch 202 ... Tube section 208 may also be configured to absorb vibrational forces.	
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(EX1009 at 7:36-42, 8:26-30, and Figure 11.)

Clearly, the reason that Revvo ignores all of these portions of Wilson is that,²⁴ rather than further describing the Wilson patch as a “barrier material composition” with the desired properties of shock absorbance, elastomeric contraction and/or expansion, Wilson describes its patch as rigid with a contour matching the tire’s inner liner.

Instead of properly addressing Wilson, Revvo resorts to flawed, reductionist logic that Patent Owner “further confirmed the inherent elastomeric properties of rubber that are known to a POSA in its infringement contentions.” (Petition at 26.) Patent Owner did no such thing. Nowhere did the Patent Owner say that all elastomeric materials are suitable as a “barrier material composition.” Revvo quotes a portion of the Patent Owner’s infringement contentions as: “[c]omprised of rubber,

²⁴ Revvo’s proffered expert also ignores Wilson columns 3:41-42, 3:60-61, 7:36-42, 8:26-30, and 9:16-18, and thus his testimony should be ignored. *See TQ Delta*, 942 F.3d at 1358.

the dock in the Accused Revvo Tire Sensor Products is elastomeric and mitigates transmission of shock forces from the tire to the housing when the dock retaining member is attached to the tire and the housing is attached to the dock retaining member.” (Petition at 26 (quoting EX1025 at 3.)) Noticeably, the infringement contention states that the accused dock is both elastomeric “and” mitigates transmission of shock forces from the tire to the housing. (*Id.*) Nowhere does that say that all elastomeric materials will mitigate transmission of shock forces from the tire to the housing.

In fact, in an act of misdirection, Revvo actually quotes from the infringement contentions concerning Claim Element 1[a], rather than the portion of the infringement contentions concerning Claim Element 1[b][ii] with its “barrier material composition.” (Petition at 27 (quoting EX1025 at 3.)) In that correct section of the infringement contentions for Claim Element 1[b][ii], the Patent Owner states the “barrier material composition” properties of the infringing products:

Revvo’s own core technical documents (examples cited below) confirm that a portion of the black Revvo Dock at an interface with the cushion gum comprises a barrier material composition, for example, formed from a material capable of providing properties of shock absorbance, elastomeric expansion and/or contraction properties compatible with the tire ... For example, the dock is made of elastomeric material

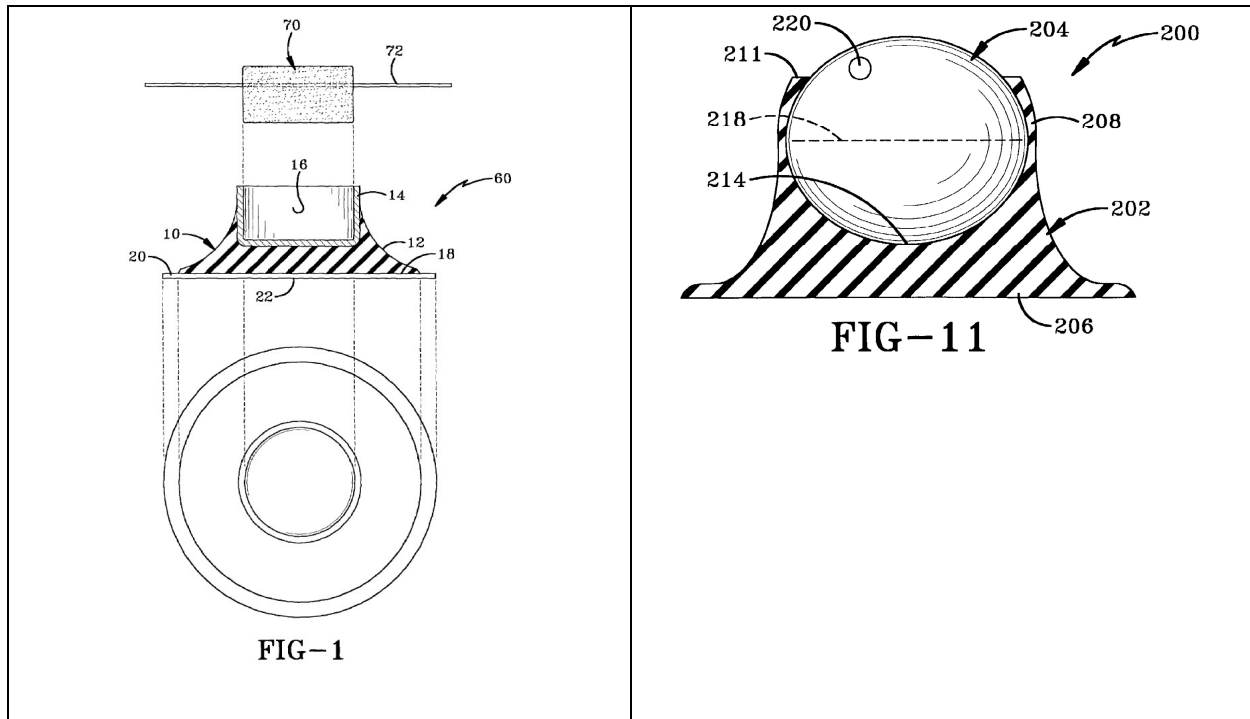
providing properties of elastomeric expansion and/or contraction
properties compatible with the tire, as seen below.

(EX1025 at 17.) Notably, unlike the “rigid”/“contour” of the Wilson patch, the accused Revvo dock is formed of a flexible material, as shown in the infringement contentions for the “barrier material composition”:



(EX1025 at 20-22.)²⁵ Nowhere does Wilson show anything of such properties, e.g., patch 202 in Figures 1 and 11 in Wilson:

²⁵ Notwithstanding Revvo's designation of these docks as HIGHLY CONFIDENTIAL, Revvo filed this pictures in the public domain in Exhibit 1025.



(EX1009 at Figure 1 and Figure 11.)

Revvo attempts to equate “elastomeric” with “barrier material composition.” (Petition at 27 (“Any of these rubbers disclosed by Wilson would satisfy the claimed ‘barrier material composition’ because they are elastomeric materials ...”)) But that argument is refuted by the ’027 patent. The ’027 patent recognizes that not all elastomeric materials are suitable as a “barrier material composition,” both in the claim language and the written description. For example, Claim Element 1[a] recites “an outer layer of elastomeric material ...” (EX1001 at 15:22.) Claim Element 1[b][ii] further recites “wherein at least a portion of the outer layer adjacent the interface surface comprises a barrier material composition.” (*Id.* at 15:25-27.) Thus, the outer layer must satisfy both the separate limitations of “elastomeric” and

“barrier material composition.”²⁶ The written description of the '027 patent also recognizes that not all elastomeric materials are suitable as a “barrier material composition”:

Elastomeric materials useful for forming the intermediate layer 24 include and are not limited to gum rubber, vulcanized natural rubber SBR, nitrile rubber, polyurethane, or comparable materials *having*

²⁶ Separate claim limitations are to be construed to avoid one of them being superfluous. *See Fellowes, Inc. v. Otter Products, Inc.*, IPR2020-00852, Paper 16 at 5-6 (October 29, 2020) (“Petitioner argues, a material is ‘hard’ within the meaning of the challenged claims as long as it is harder than the specified ‘stretchable cushion layer’ and, thereby, functions to provide ‘rigidity to the protective enclosure.’ A different claim phrase requires ‘the hard shell cover’ to provide ‘rigidity to the protective enclosure.’ Petitioner’s proposed construction renders superfluous the word ‘hard,’ which appears nine times in Claim 1.”) (denying institution); *Ruckus Wireless, Inc. v. XR Communications, LLC*, IPR2018-01016, Paper 17 at 13 (Oct. 31, 2018) (“The use of different language by the patentee in claims 20 and 52 strongly supports concluding that the patentee intended to convey a different meaning than the language in claim 1 and supports construing claim 1 as argued by Patent Owner.”) (denying institution).

properties of high elongation, conformity and chemical resistance to notable mold release agents common in the vulcanized rubber of pneumatic tires, and combinations thereof.

(EX1001 at 6:40-47 (emphasis added).) If all “elastomeric” materials were suitable as a “barrier material composition,” the above portion of the written description of the ’027 patent could have stopped before the bold, italicized language. But it did not because not all such elastomeric materials have the properties of a “barrier material composition” with suitable properties of shock absorbance, elastomeric contraction and/or expansion in an assembly for attachment with a vulcanized rubber article (or tire).²⁷ (*See id.*). That is also consistent with the prosecution history, discussed more fully below in Section VII.A.2, in which the applicant distinguished

²⁷ The ordinary dictionary definition of “elastomer” is “an elastic rubberlike substance ...” (EX2023 at 3.) Not all such substances would be a “barrier material composition” as construed. Chewing gum, for example, is an elastic substance resembling rubber, but no one would say that chewing gum would be a suitable “barrier material composition” for attachment to a tire as here.

the DeTrano reference disclosing an “elastomeric barrier layer formulation” as not disclosing a “barrier material composition.”²⁸ (e.g., EX1002 at 37.)

Nowhere does Revvo's expert address the differences between “elastomeric” according to its dictionary definition and “barrier material composition” as properly construed. (EX1003.) Nowhere does Revvo's expert address the differences between “elastomeric” according to Patent Owners' proposed construction of “elastomeric”

²⁸ Revvo's expert makes the same mistake, ignoring both the claim language, the specification, and prosecution history distinctions between “elastomeric” and “barrier material composition,” and doing so in conclusory fashion. (EX1003 at ¶ 114 (“any rubber material (as an elastomeric material) would necessarily have some properties of shock absorption, elastomeric expansion and/or contraction.”)). As such, his declaration should be disregarded. *See Daihen Corp. v. Reno Tech., Inc.*, IPR2019-00248, Paper No. 13 at 3-5 (Jul. 25, 2019) (expert's conclusory declaration did not show a claim limitation to be necessarily present in the asserted prior art reference) (denying request for rehearing of decision denying institution); *Fellowes*, IPR2020-00852, Paper 16 at 5-6; *Ruckus Wireless*, IPR2018-01016, Paper 17 at 13.

as “rubbery material,”²⁹ on the one hand, and “barrier material composition” as properly construed, on the other hand. (*Id.*; EX1026.)

Finally, Revvo makes a false equivalence argument between the rubber mentioned in Wilson and the rubber mentioned in DeTrano, which was addressed during prosecution.³⁰ (Petition at 27.) The Petition quotes from DeTrano that “one preferred barrier layer 22 is composed of a blend of halobutyl rubber such as chlorobutyl rubber and natural rubber.” (Petition at 27 (citing EX1012 at 4:28-30.)) But nowhere does the Petition or its expert declaration say that DeTrano and Wilson disclose the same rubber formulation. (*Id.*; *see also* EX1003, ¶118.) As was discussed above, Wilson teaches a patch with a “rigid” rubber that has a “contour” to fit the tire inner lining.

Wilson thus fails to disclose the limitations “barrier material composition” and “material composition that acts as a barrier” of Claim Elements 1[b][ii], 11[d], 15[e], and 19[d].

²⁹ This construction was non-final because, as Revvo well knows, the claim construction was served but not filed with the Court. (EX1026.)

³⁰ The DeTrano reference, cited during the prosecution history of the '027 patent, is discussed more fully below in Section VII.A.2 regarding the prosecution history of the '027 patent.

b. The Petition Ignores the Most Pertinent Portions of Bielicki Which Teach Away from the “Barrier Material Composition”

Revvo cites the following lines of Bielicki which state:³¹

The term durometer is used in the art to signify a measurement of the hardness of a rubber material ... The inner layer 15 is [] a rubber material with a lower durometer than the outer layer 13 ...

(Petition at 59 (citing EX1004 at 4:44-55 and 4:56-5:2 (emphasis added)).) But, inexplicably, nowhere in the Petition does Revvo acknowledge the existence of other portions of the actual properties of the inner layer 15 in Bielicki, for example:

AS shown in FIG. 1, the unit or patch comprises an outer layer 13 of *high durometer* rubber material ... [A] higher durometer rubber has a *lower ablation rate* than a lower durometer rubber ... Therefore, in the preferred embodiment, the *ablation rate* of the outer layer is lower than the ablation rate of the ablation rate of the inner layer 15 ... Alternatively, the outer layer 13 may also have durometer properties comparable to the inner layer 15, and therefore, have an ablation rate

³¹ Revvo's entire application of “barrier material composition” is at pages 59-60 of the Petition with regard to Bielicki. The rest of the Petition relies on that 2-page discussion. (Petition at 77, 80, and 85.)

when scanned by the *laser beam* 22 which is at most Substantially the same as the ablation rate of the inner layer 15. This still means that the *outer layer 13 is ablated less easily than the inner layer 15, or that the ablation rates are about the same.*

(EX1004 at 4:44-5:14 (emphasis added).) Thus, Revvo ignores the portion of Bielicki that describes the outer layer as “high durometer” while the inner layer has a “lower” durometer for laser “ablation rate” purposes. According to Bielicki, “[t]he term durometer is used in the art to signify a measurement of the hardness of a rubber material.” (EX1004 at 4:49-50.) Thus, Bielicki merely mentions an outer layer with high “hardness” and an inner layer with lower “hardness” for laser ablation purposes. That has nothing to do with “barrier material composition” with suitable properties of shock absorbance, elastomeric contraction and/or expansion in an assembly for attachment with a vulcanized rubber article (or tire) as in the challenged claims of the '027 patent. (*See id.*) Nowhere does Revvo or its expert address this difference between “barrier material composition” properties as in the challenged claims and the “hardness” for laser ablation purposes as in Bielicki.³² (Petition at 59-60; EX1003 at ¶¶199-200.)

³² Bielicki describes the inner layer 15 as both preferably black and “may also serve to block ultraviolet light that may cause staining of the outer white layer.” (EX1004

Nowhere does Bielicki describe any actual durometer numbers for the outer layer and inner layer that would allow a POSA to reach a conclusion that the inner layer has a “barrier material composition” with suitable properties of shock absorbance, elastomeric contraction and/or expansion in an assembly for attachment with a vulcanized rubber article (or tire) as in the challenged claims.³³ (EX1004.) Nowhere does Revvo or its expert address any actual durometer numbers that are necessarily present in Bielicki or even may be in Bielicki that that would allow a POSA to reach a conclusion that the inner layer has a “barrier material composition” with suitable properties of shock absorbance, elastomeric contraction and/or expansion in an assembly for attachment with a vulcanized rubber article (or tire) as in the challenged claims. (Petition at 59-60; EX1003 at ¶¶199-200.)

Clearly, the reason that Revvo ignores all of these portions of Bielicki is that,³⁴ rather than further describing the Bielicki inner layer as a “barrier material

at 5:22-25.) This description has nothing to do with the desired “barrier material composition” properties of the layers as construed. (*See id.*)

³³ Another definition of “durometer” is “an instrument for measuring hardness ...” (EX2022 at 3.)

³⁴ Revvo’s proffered expert also ignores the Bielicki portions ignored by Revvo, and thus his testimony should also be ignored. *See TQ Delta*, 942 F.3d at 1358.

composition” with the desired properties of shock absorbance, elastomeric contraction and/or expansion in an assembly for attachment with a vulcanized rubber article (or tire) as in the challenged claims, Bielicki describes the inner layer as merely having a lower “hardness” (durometer) for laser ablation purposes. Bielicki thus teaches away from the “barrier material composition” of the challenged claims.

Again, instead of properly addressing Bielicki, Revvo resorts to flawed, reductionist logic that “In its infringement contentions, [Patent Owner] further confirmed the inherent properties of rubber.” (Petition at 60.) Patent Owner did no such thing. Nowhere did the Patent Owner say that all elastomeric materials are suitable as a “barrier material composition.” Again, Revvo quotes a portion of the Patent Owner’s infringement contentions as: “[c]omprised of rubber, the dock in the Accused Revvo Tire Sensor Products is elastomeric and mitigates transmission of shock forces from the tire to the housing when the dock retaining member is attached to the tire ...” (Petition at 60 (quoting EX1025 at 3.)) Noticeably, the infringement contention states that the accused dock is both elastomeric “and” mitigates transmission of shock forces from the tire to the housing. (*Id.*) Nowhere does that say that all elastomeric materials will mitigate transmission of shock forces from the tire to the housing.

In fact, again in an act of misdirection, Revvo actually quotes from the infringement contentions concerning Claim Element 1[a], rather than the portion of

the infringement contentions concerning Claim Element 1[b][ii] with its “barrier material composition.” (Petition at 60 (quoting EX1025 at 3.)) In that correct section of the infringement contentions for Claim Element 1[b][ii], the Patent Owner states the “barrier material composition” properties of the infringing products:

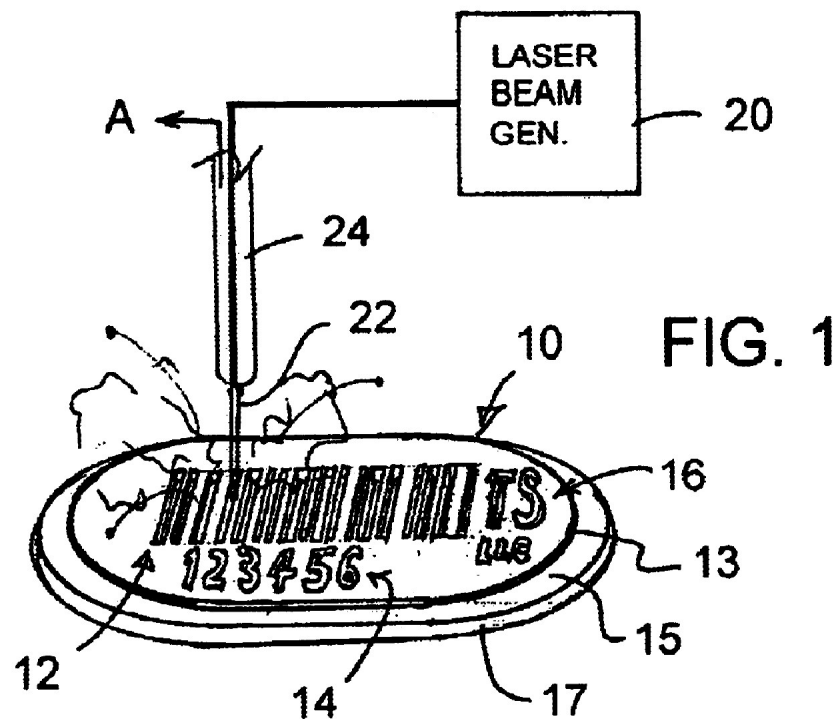
Revvo's own core technical documents (examples cited below) confirm that a portion of the black Revvo Dock at an interface with the cushion gum comprises a barrier material composition, for example, formed from a material capable of providing properties of shock absorbance, elastomeric expansion and/or contraction properties compatible with the tire ... For example, the dock is made of elastomeric material providing properties of elastomeric expansion and/or contraction properties compatible with the tire, as seen below.

(EX1025 at 17.) Notably, unlike the lower “hardness” of the Bielicki inner layer for laser ablation rate purposes, the accused Revvo dock is formed of a flexible material, as shown in the infringement contentions for the “barrier material composition”:



(EX1025 at 20-22.)³⁵ Nowhere does Bielicki show anything of such properties, e.g.,
Figure 1 (inner layer 15) in Bielicki:

³⁵ Again, notwithstanding Revvo's designation of these docks as HIGHLY CONFIDENTIAL, Revvo filed this pictures in the public domain in Exhibit 1025.



(EX1004 at Figure 1.)

Agan, Revvo attempts to equate “elastomeric” with “barrier material composition.” (Petition at 59 (“Any rubber, as an elastomeric material, would have” barrier material properties.)) But that argument is refuted by the ’027 patent, as was discussed in the previous section. The ’027 patent recognizes that not all elastomeric materials are suitable as a “barrier material composition,” both in the claim language and the written description. For example, Claim Element 1[a] recites an “elastomeric material” while Claim Element 1[b][ii] further recites a “barrier material composition.” (*Id.* at 15:22, 15:25-27.) Thus, the outer layer must satisfy both the separate limitations of “elastomeric” and “barrier material composition,” both of which must be satisfied without rendering them superfluous. *See Fellowes,*

IPR2020-00852, Paper 16 at 5-6. The written description of the '027 patent also recognizes that not all elastomeric materials are suitable as a “barrier material composition.” (EX1001 at 6:40-47 (emphasis added.)) Not all such elastomeric materials have the properties of a “barrier material composition” with suitable properties of shock absorbance, elastomeric contraction and/or expansion in an assembly for attachment with a vulcanized rubber article (or tire) as in the challenged claims. (*See id.*) As was discussed in the previous section, this is all consistent with the prosecution history.

Bielicki thus fails to disclose the limitations “barrier material composition” and “material composition that acts as a barrier” of Claim Elements 1[b][ii], 11[d], 15[e], and 19[d].

c. The Petition Does Not Put Forward Other References for the “Barrier Material Composition”

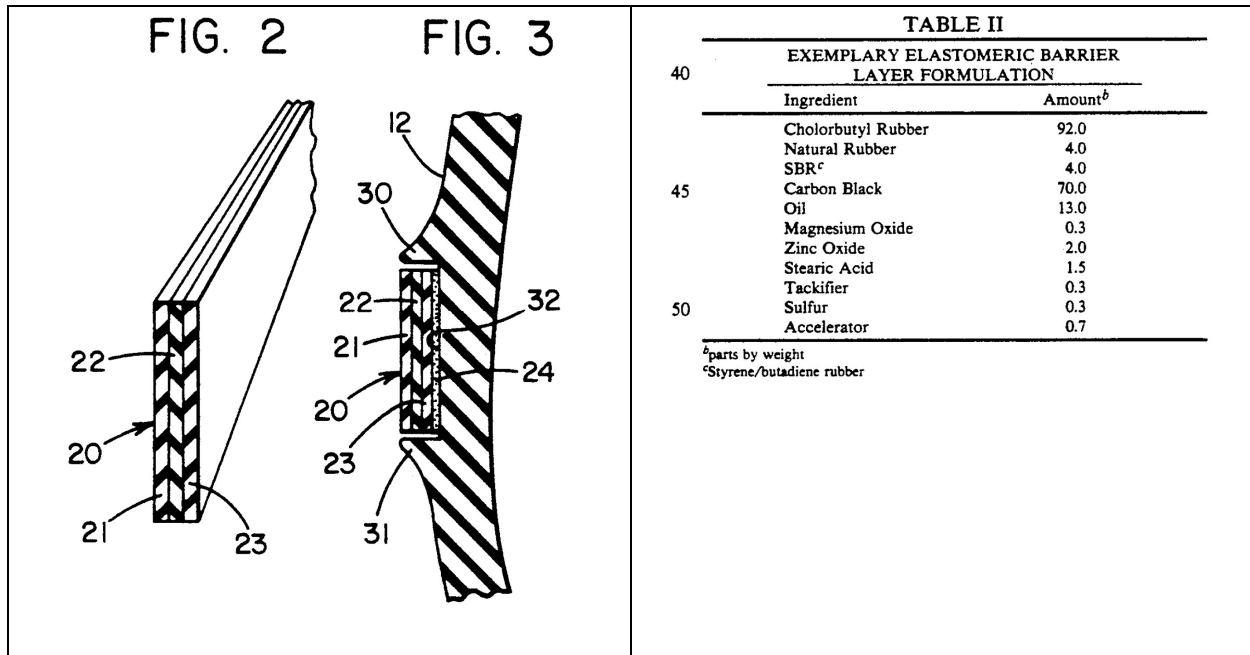
The Petition only relies on Wilson or Bielicki for Claim Elements 1[b][ii], 11[d], 15[e], and 19[d], including the “barrier material composition”:

Ground	Claim(s)	Basis for Challenge
1	1, 5, 7-9, 11-13, 15-22	Obviousness by <u>Wilson</u>
2	12	Obviousness by <u>Wilson</u> in view of <u>DiRocco</u>
3	1-3, 5, and 7	Obviousness by <u>Bielicki</u>
4	1-3, 5, 7, 11-13, 15, and 16	Obviousness by <u>Bielicki</u> in view of the <u>Patch Rubber Brochure</u> and/or the <u>Tire-Track Brochure</u>
5	7-9, 14, 16-23	Obviousness by <u>Bielicki</u> in view of the <u>Patch Rubber Brochure</u> and/or the <u>Tire-Track Brochure</u> , and <u>Brown</u>

(Petition at 4, 26-27, 59-60, 77, 80, and 85.)

2. Substantially the Same Art and Arguments Regarding the Challenged Claims Were Previously Before the Office

Wilson and Bielicki are also cumulative to the references and arguments considered by the Patent Office during prosecution with regard to the challenged claims, including Claim Elements 1[b][ii], 11[d], 15[e], and 19[d]. *See* 35 U.S.C. § 325(d). Specifically, the Examiner cited a similar elastomeric rubber configuration described in DeTrano (EX1012) before allowing the claims of the '027 patent. (EX1002 at 15, 37, and 53-54.) DeTrano's elastomeric rubber configuration is illustrated in its Figure 2 (which was cited by the Examiner) and Table II below:



(EX1005 at Figure 2 and Table II; EX1002 at 53-54.) In a portion of DeTrano actually acknowledged by Revvo, DeTrano states that “one preferred barrier layer 22 is composed of a blend of halobutyl rubber such as chlorobutyl rubber and natural rubber.” (Petition at 27 (citing EX1012, 4:28-30.)) However, unacknowledged by Revvo (Petition at 26-27), nowhere does DeTrano describe such blend as a barrier material composition with shock absorbance, elastomeric expansion and/or contraction properties in an assembly for attachment with a vulcanized rubber article (or tire) as in the challenged claims. Rather, as conceded by Revvo, the purpose of such blend in DeTrano “is to prevent certain ingredients in tire 10, such as antioxidants, from reaching and discoloring visible layer 21.” (Petition at 31 (quoting EX1012 at 4:25-28).) Not all such materials will be a “barrier material composition” with suitable properties of shock absorbance, elastomeric expansion

and/or contraction properties in an assembly for attachment with a vulcanized rubber article (or tire). (*See id.*) Revvo therefore does not apply DeTrano as actually taught by DeTrano.³⁶

During prosecution, the applicant distinguished DeTrano consistently. The applicant specifically distinguished DeTrano on the argument that:

Applicant has amended independent claims 1, 11, and 19 to recite the feature that the outer layer of the assembly comprises a ***barrier material composition*** (to mitigate the unwanted migration of material from the vulcanized rubber article or tire). Applicant submits that DeTrano fails to disclose a decorative applique construction comprising the feature

³⁶ Nor does Revvo's expert opine that the antioxidant migration prevention property mentioned in DeTrano necessarily discloses a "barrier material composition" with suitable properties of shock absorbance, elastomeric expansion and/or contraction properties in an assembly for attachment with a vulcanized rubber article (or tire) as in the challenged claims. (EX1003 at ¶ 128.) Indeed, "barrier material composition" is not coextensive with such migration properties as some challenged claims (all of which recite a "barrier material composition") recite such migration properties while others do not. (Compare EX1001 at Claim 1 (no recitation of migration properties) with Claims 11, 15, and 19 (recitation of migration properties).)

not recited in the above-noted independent claims, and as such fails to properly anticipate the subject matter of such claims. In view thereof, Applicant submits that its assembly as recited in amended independent claims 1, 11 and 19 is properly novel over DeTrano, and respectfully requests that the rejection of such claims under 35 U.S.C. § 102 based on DeTrano be reconsidered and withdrawn.

(EX1002 at 37 (emphasis added).)

Revvo fails to distinguish either Wilson or Bielicki from DeTrano, with its elastomeric rubber configuration, or explain how the Examiner erred in a manner material to the patentability of the challenged claims. This is ground for denial of the Petition. *See Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8-9 (Feb. 13, 2020) (precedential). Nowhere does Revvo distinguish DeTrano from Wilson or Bielicki.

At least because none of the cited references discloses Claim Elements 1[b][ii], 11[d], 15[e], and 19[d], and because substantially the same art and/or arguments regarding these elements were previously before the Office, the Board should not institute IPR.

B. Revvo Fails to Show That a POSA Would Have Combined the Cited References to Arrive at the Claimed Invention

Revvo fails to show that a POSA would have combined and modified the teachings of the cited references to arrive at the invention claimed in independent Claims 1, 11, 15, or 19. Because the remaining challenged claims all depend from these claims, Revvo's obviousness conclusions with regard to these claims also fails.

"[C]onclusory assertion . . . about general knowledge in the art without evidence on the record" is insufficient to show obviousness. *See K/S Himpp v. Hear-Wear Techs., LLC*, 751 F.3d 1362, 1365-66 (Fed. Cir. 2014). Obviousness requires the identification of a reason that would have motivated a POSA to make the necessary modification to arrive at the invention. *K/S Himpp v. Hear-Wear Techs., LLC*, 751 F.3d 1362, 1365-66 (Fed. Cir. 2014); *InTouch Techs., Inc. v. VGO Commc'ns, Inc.*, 751 F.3d 1327, 1351 (Fed. Cir. 2014); *see also In re Stepan Co.*, 868 F.3d 1342, 1345-46 (Fed. Cir. 2017) (obviousness requires finding both that a skilled artisan would have been motivated to combine the teachings of the prior art and that the skilled artisan would have had a reasonable expectation of success in doing so).

As discussed above in Section VII.A.1.a and Section VII.A.1.b, the Petition fails to specify where the Claim Elements 1[b][ii], 11[d], 15[e], and 19[d] are disclosed in the cited references. Indeed, none of the cited references discloses these

claim limitations. Revvo also fails to show that this missing limitations would have been obvious. In fact, as was discussed above in Section VII.A.1.a and Section VII.A.1.b, the only cited references for Claim Elements 1[b][ii], 11[d], 15[e], and/or 19[d] – Wilson and Bielicki – teach away from these claim limitations in portions of these references ignored by the Petition. Nowhere does the Petition argue that these references could be modified to reach Claim Elements 1[b][ii], 11[d], 15[e], and 19[d].

For at least the reasons above, the Petition has not shown that Claim Elements 1[b][ii], 11[d], 15[e], or 19[d] would have been obvious.

VIII. Conclusion

For at least the reasons discussed above, Patent Owner respectfully requests that the Board deny the Petition for *inter partes* review.

Respectfully submitted,

Dated: June 17, 2025

By: /Christopher D. Bright/
Christopher D. Bright
Reg. No. 46,578
Counsel for Patent Owner

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), the undersigned certifies that the foregoing Patent Owner's Preliminary Response contains, as measured by the word-processing system used to prepare this paper, 9,103 words. This word count does not include the items excluded by 37 C.F.R. § 42.24.

Respectfully submitted,

Dated: June 17, 2025

By: /Christopher D. Bright/
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CERTIFICATE OF SERVICE

I certify that on June 17, 2025, I caused to be served a true and correct copy of the foregoing Patent Owner's Preliminary Response, and supporting Exhibits 2020-2024, by electronic means at the following addresses of record:

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