UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RAVIN CROSSBOWS, LLC
Petitioner

v.

MCP IP, LLC
Patent Owner

Case No. IPR2024-00523
Patent No. 9,354,017

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

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I. INTRODUCTION

MCP's machinations to swear behind its claimed priority date to avoid Darlington are insufficient for this IPR proceeding. Much more significant, however, MCP's admission that "[t]he Mission Menace bow was designed and built in 2008 and the product was first shipped to customers on **September 26, 2008**," is fatal to the '017 Patent. POR, 7 (emphasis added). Because the provisional application that led to the '017 Patent was filed September 30, 2009, MCP's claimed September 26, 2008 sales invalidate the '017 Patent under the one-year sales bar of 35 U.S.C. § 102(b) (pre-AIA).

Of course, Petitioner is not asking this Board to hold the '017 Patent invalid based on the on-sale bar, but before turning to the merits of the arguments raised in the POR, the Board must be made aware of what has occurred during this IPR proceeding and its consequences to both (1) the ultimate validity of the challenged patent once this case returns to the district court and (2) any weight that should be given to MCP's purported swear-behind evidence.

MCP made critical admissions in its attempt to the patentability of the '017 Patent showing, unequivocally, that invalidating sales were made before the September 30, 2008, 1-year bar date. First, MCP admitted in its Patent Owner Response that the Mission Menace bow "***was first shipped to customers on September 26, 2008*[,]**" **four days *before* the 1-year bar date.** POR, 7 (emphasis

added). Second, sales records from Mr. Hoff's declaration, provided under oath, show [redacted]

These sales records are consistent with statements made by the inventor, Mr. McPherson, to the Trademark Office regarding the same Mission Menace bow. In his trademark application for "Menace," Mr. McPherson, under penalty of fine or imprisonment, unequivocally represented that the "first use anywhere" and "first use in commerce" of the Mission Menace bow was September 26, 2008, **four (4) days *before* the 1-year bar date**:[1]

FIRST USE ANYWHERE DATE	09/26/2008
FIRST USE IN COMMERCE DATE	09/26/2008

Relevant to this proceeding, despite representing to the Trademark Office that the first use of the "Menace" mark in commerce was September 26, 2008, in this IPR, likely now recognizing the implications of his admission, Mr. McPherson testified under oath that the Menace bow "became commercially available" on

[1] The continued assertion of MCP's patents is baseless and raises Rule 11 concerns. Ravin has asked MCP to dismiss its lawsuit. MCP refused, and Ravin provided a Rule 11 letter and motion, starting MCP's 21-day safe harbor period for withdrawing its claims.

October 1, 2008 (EX1017, 38:19-39:5). Both statements cannot be true. Either Mr. McPherson was untruthful in his statements to the Trademark Office, or he was untruthful in his cross-examination. Either situation raises serious issues. Mr. McPherson also disagreed with facts set forth by his own attorneys in the POR, which were made pursuant to the duties of 37 CFR § 42.11 and § 11.18. Specifically, Mr. McPherson said there is no evidence that "would support the statement that the Mission Menace bow was first shipped to customers on September 26th of 2008," ***as claimed in the Patent Owner Response,*** further testifying that he is not aware of any evidence that would support that statement. *Compare* EX1017, 37:10-18 *with* POR, 7. Again, both cannot be true. Either Mr. McPherson is incorrect, or his attorneys' statement in the POR is incorrect.

While Ravin is addressing these Rule 11 issues with the District Court in the parallel litigation, the Board also has the power to investigate these issues and determine whether sanctions are appropriate. 37 C.F.R § 42.11(d)(3). In the meantime, because MCP's declarants have made statements inconsistent with the pleadings, the public trademark records, and with the documentary evidence, Ravin will proceed with this IPR and continue challenging the swear behind efforts by MCP.

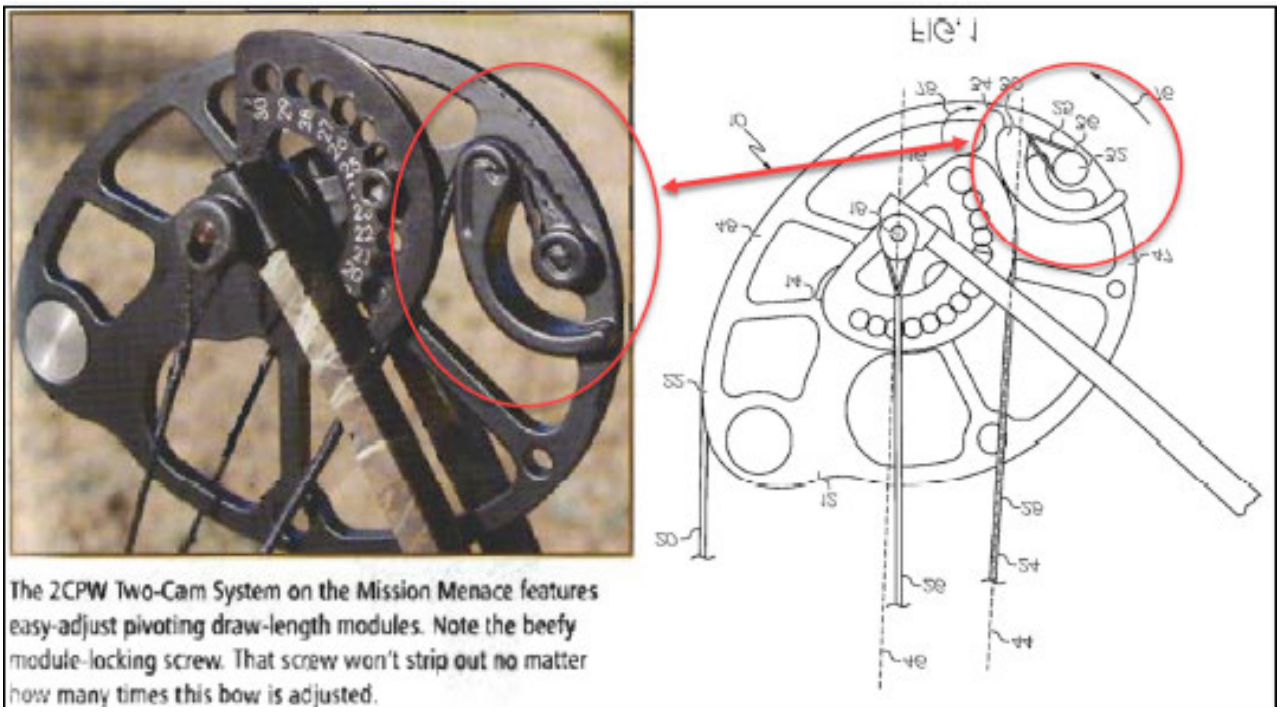
II. MCP'S SWEAR-BEHIND ATTEMPT FAILS

MCP identifies three buckets of evidence that purportedly support its position that the Menace and/or Monster bows satisfy the limitations of the '017 Patent claims: (1) the *Inside Archery* magazine, (2) the inventor's claim that Figures in the patent were based on CAD drawings of the Menace and Monster bows and (3) the testimony of MCP's expert Dr. Reinholtz. Because none of these sources individually or collectively demonstrates the Menace or Monster bows met ***all*** limitations of any Challenged Claim, MCP's swear-behind attempt fails. *See In re Steed*, 802 F.3d 1311, 1318 (Fed. Cir. 2015) ("To demonstrate an actual reduction to practice, the applicant must have . . . constructed an embodiment or performed a process that met ***all the limitations*** of the claim."); *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.,* 800 F.3d 1375, 1379 (Fed. Cir. 2015) (the Patent Owner has "the burden of going forward with evidence either that the prior art does not actually anticipate, or…that it is not prior art").

A. *Inside Archery*

MCP's reliance on the December 2008 and June 2009 issues of *Inside Archery* magazine provides insufficient support to swear behind *Darlington*. POR, 14-24. As explained in Petitioner's Reply to Patent Owner's Preliminary Response, the Challenged Claims recite certain configurations of a bow in the "drawn" and "brace" conditions. *See e.g.* Paper 2, claim 1(f) ("when the bow is ***drawn from the brace***

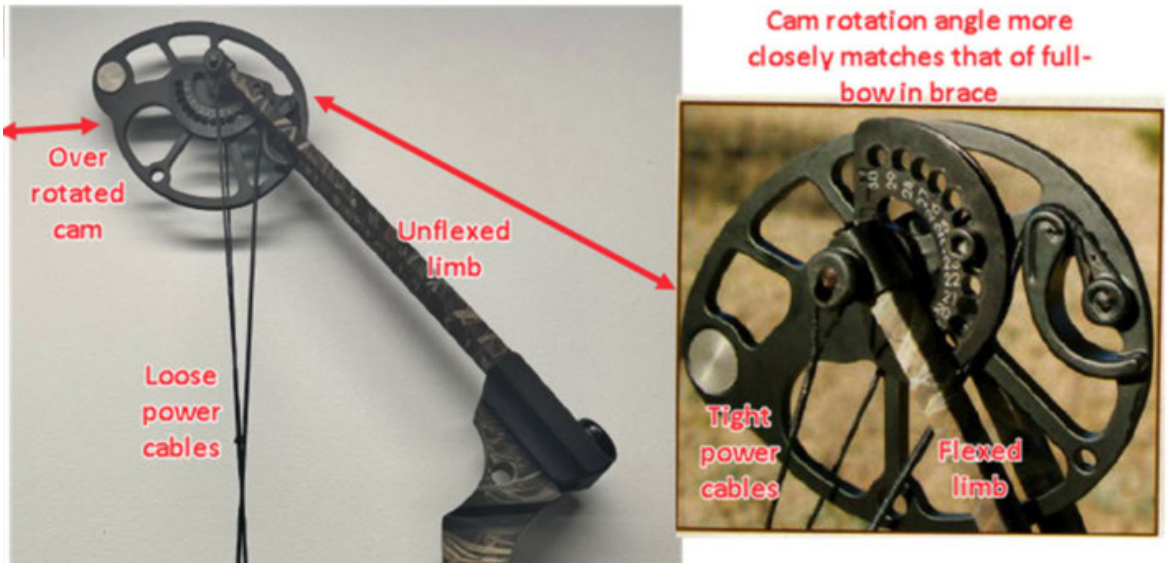
condition"); 12(e)(i) ("in the brace condition"). The images in the 2008 *Inside Archery* article depict an <u>unstrung</u> bow that is not in a "brace condition" at all, and certainly could not teach a "drawn condition," having no string to possibly draw. Paper 7, 1-5. Moreover, that particular bow in the article has not been located or produced.



POR, 21.

MCP does not provide testimony from *Inside Archery*, but instead took a photo of an unstrung Menace bow and compared it to the image in *Inside Archery*. *See* EX2018, 36 (Photo 12). MCP argues that (1) that Photo 12's cam is in a different orientation than a strung bow and (2) the tension in the power cables indicates that the *Inside Archery* bow is strung. Neither argument is supported by Photo 12. When

a bow is unstrung, the cams can rotate freely. In Photo 12, the cams have been intentionally rotated to distinguish the image from the article image. *Contra* POR, 21 n. 11. In addition, the Board can see for itself that the tension in the power cables appears identical in Photo 12 (left) and the *Inside Archery* image (right).



EX2018, 36 (excerpted).

Likewise, the June 2009 *Inside Archery* article fails to show a Monster bow in a drawn condition, as required by the claims. *See, e.g.,* 1(f) ("when the bow is drawn from the brace condition"); 12(pre) ("An archery bow having…a drawn condition"). Therefore, the *Inside Archery* articles alone fail to demonstrate a prior reduction to practice of each limitation of any claim.

B. The CAD Files

Next, MCP alleges the Figures in the '017 Patent "were generated based on the CAD models for the ***production bows***." POR, 8 (emphasis added). In support,

Patent Owner cites the declaration of Mr. McPherson, which suggests that the Figures were based on CAD drawings but does not say one way or the other whether the figures were based on the ***final*** CAD drawings for in-production bows.

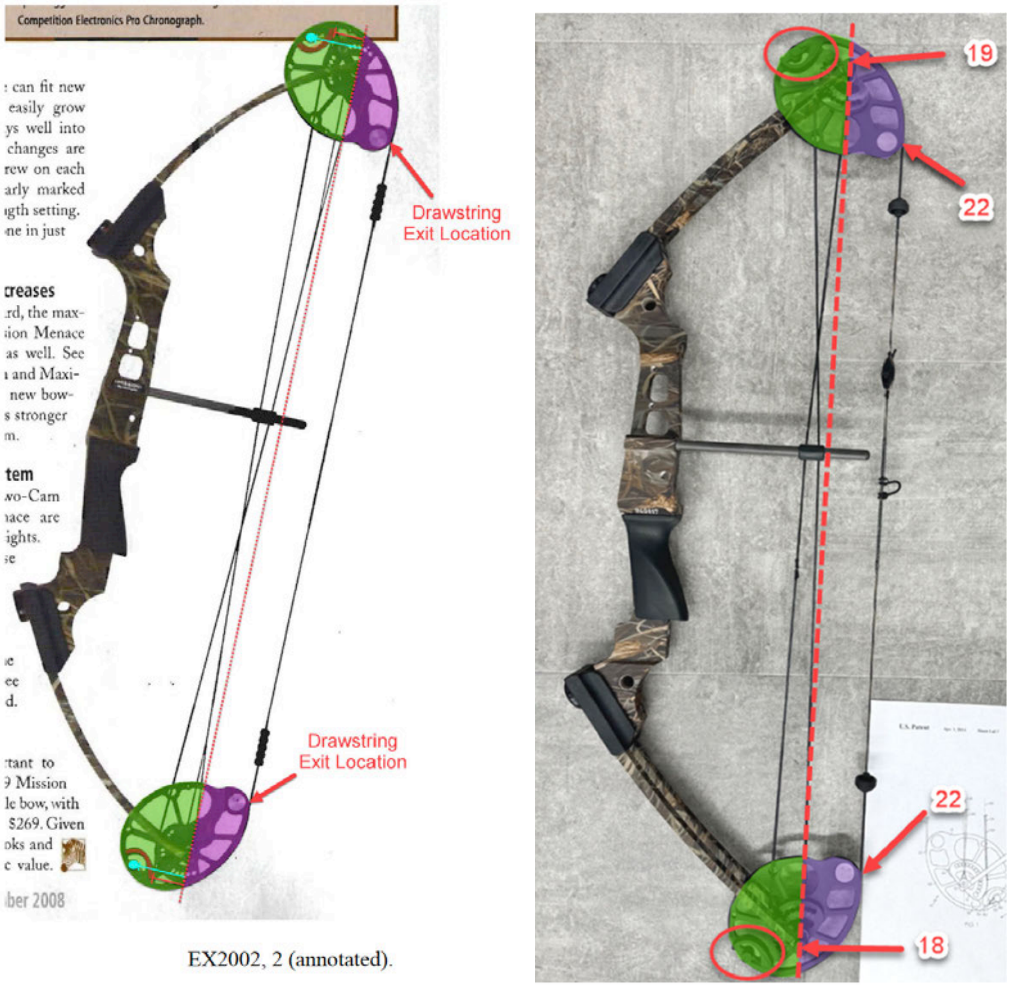
When asked at his deposition, Mr. McPherson testified that (1) he did not recall sending CAD drawings to the patent attorney (EX1017, 29:6-10; (2) if CAD drawings were sent to the patent attorney, he was probably not the one who sent them (29:11-15); (3) he does not recall telling someone to send the CAD drawings to the patent attorney (30:13-15); and (4) he was [redacted] (29:23-30:1). Mr. McPherson's only real support for why he believed the Figures might be based on the CAD drawings is that [redacted] *Id.*, 28:19-29:2. Of course they would be—he is the sole named inventor on the patent. But that has nothing to do with whether the ***claims*** of the patent were reduced to practice.

Mr. McPherson was also asked which CAD drawings would have been sent to the prosecuting patent attorney and specifically whether "those [would] be the final CAD drawings of the in-production bows or [would be] perhaps an earlier version of the CAD drawings?" EX1017, 28:4-8. Mr. McPherson responded, "Likely, all of the above, all the way to the beginning." *Id.*, 28:9-10. He also testified that for some of his bows there are over 100 prototypes and "of course" the CAD drawings changed throughout the design process for his Reverse Wrap invention.

Id., 17:4-18:16. All of this undercuts MCP's claim that the Figures were specifically based on the ***production*** bows. And, notably, Mr. McPherson's declaration does not include any CAD files, ***nor have any CAD files been produced to Petitioner in this IPR or in the parallel litigation***, leaving the Board to rely only on the inventor's uncorroborated say-so. *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1171-72 (Fed. Cir. 2006) ("[e]ven the most credible inventor testimony is *a fortiori* required to be corroborated by independent evidence").

C. Dr. Reinholtz's Depictions of the Menace and Monster Bows

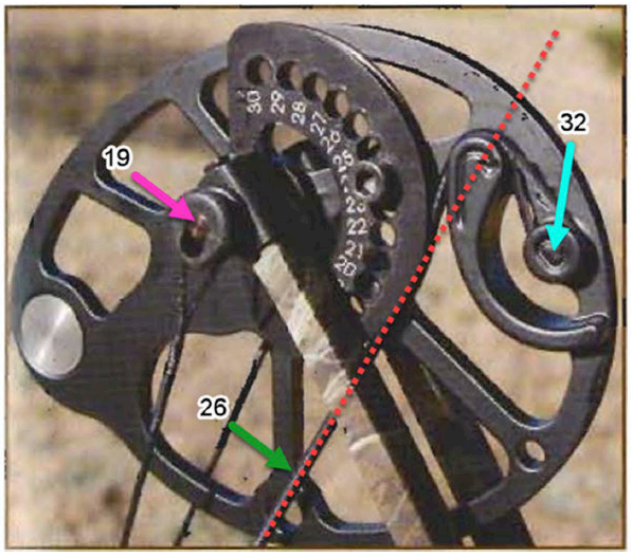
Even with access to a physical bow and the testimony of a purported expert, MCP cannot demonstrate that the Menace and Monster bows met every limitation of the Challenged Claims of the '017 Patent. For instance, independent claim 12 recites a bow comprising an "axle plane." *See e.g.* claim 12(b)(ii) ("the first axle and the second axle defining an **axle plane**"). MCP relies on the imaginary dashed lines that Dr. Reinholtz added to the figures taken from *Inside Archery* articles, allegedly "representing an edge view of the axle plane:"



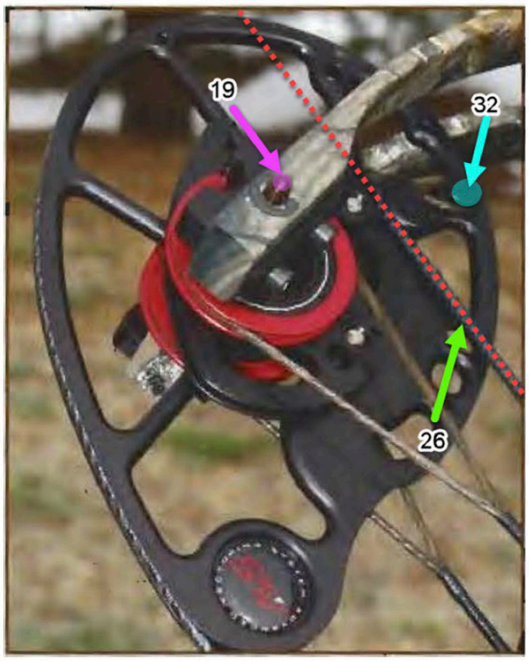
EX2002, 2 (annotated).

POR, 38-40. MCP fails to provide evidence that the Menace or Monster Bows teach the ’017 Patent’s claimed axle planes. Neither MCP nor Dr. Reinholtz provides any explanation for why a PHOSITA would have purportedly understood that the dashed line would have defined a plane, or that it would have been oriented specifically as annotated by Dr. Reinholtz. EX2018, ¶¶ 73-74. In this, Dr. Reinholtz’s opinion on what a PHOSITA would have understood is wholly conclusory and entitled to no weight. *Xerox Corp. v. Bytemark, Inc.,* IPR2022-00624, Paper 9 (August 24, 2022) (Precedential). EX2018, ¶¶ 71-73, 91.

Similar issues appear in other claims, such as "wherein, **<u>in the brace condition</u>**, the elongate straight portion **<u>defines a plane.</u>**" '017 Patent, claim 2. For this limitation, MCP provides the following two figures, also taken from *Inside Archery* articles:



EX2002, 2 (annotated).



EX2003, 1 (annotated).

POR, 42-43. Again, Dr. Reinholtz's opinion on these limitations is conclusory, adding imaginary lines "approximating the plane" without explanation. Such opinions should be afforded no weight. *Id.*; EX2018, 67. MCP's failure to provide sufficient evidence showing the Menace and Monster bows teach the claimed "planes" of the '017 Patent's independent claims defeat MCP's attempt to swear behind *Darlington*.

III. MCP'S EVIDENCE REGARDING THE PRIORITY DATE IS PLAGUED WITH CREDIBILITY ISSUES

Even if MCP could show that the Menace or Monster bows meet every limitation of the '017 Patent claims (it cannot), credibility issues plague its declarants from their efforts to dance-around the on-sale bar admissions.

In its POR, MCP unequivocally states that "[t]he Mission Menace bow was designed and built in 2008 and the product was first shipped to customers on September 26, 2008." POR, 7. September 26, 2008 is the priority date MCP advocates for in its POR. It cannot now ask the Board to choose another date merely to avoid on-sale bar issues. Indeed, this was not merely a drafting mistake. MCP relies on this same date again and again: in the POR (POR, 7), in Mr. Hoff's declaration (EX2016, ¶12), in an Appendix of allegedly un-editable sales records (EX2016, App A), and even in proceedings with the Trademark Office over the "Menace" trademark (EX1018) (attesting that the Menace mark was "first used ***in commerce*** at least as early as 09/26/2008")(emphasis added). Every single one of these statements was provided under oath (EX2006; EX2016) or similar duty of candor. 37 C.F.R. § 11.18 and § 41.11. But at some point between submitting its POR and the depositions of Mr. McPherson and Mr. Hoff, MCP realized its fatal

error.[2] The provisional application that led to the '017 Patent was filed September 30, 2009. The September 26, 2008, sales that MCP relies on invalidates the '017 Patent under the one-year sales bar of 35 U.S.C. § 102(b) (pre-AIA).[3]

To avoid these problems, MCP attempted to re-write history during the depositions of Mr. McPherson and Mr. Hoff. Mr. McPherson testified contrary to the POR, contrary to the un-editable sales records, and contrary to declarations made to the Trademark Office. Specifically, Mr. McPherson testified:

(1) That nothing in his declaration "would support the statement that the Mission Menace bow was first shipped to customers on September 26th of 2008," contrary to what his attorneys said in the Patent Owner Response and that he is not aware of any evidence that would support that statement. *Compare* EX1017, 37:10-18 *with* POR, 7.

(2) That he was "absolutely not" a customer when he acquired two Mission Menace bows on September 26, 2008, (EX1017, 37:19-22), contrary to the sales records, the POR, and Mr. Hoff's statements.

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[2] This is no small error. Not only are the challenged patents invalid, but MCP never disclosed these sales or the statements made to the Trademark Office during prosecution despite its duty to do so, which raises antitrust and inequitable conduct concerns.

[3] Through its anticipated Rule 11 motion in the parallel litigation, Petitioner will raise this argument in the district court. Because the Board cannot decide the one-year-bar question, this Reply does not address every excuse raised by Mr. McPherson and Mr. Hoff in their depositions.

(3) That the Menace bow "became commercially available" when "the first customer actually placed an order for a Mission Menace bow," on October 1, 2008 (EX1017, 38:19-39:4), even though he told the Trademark Office the Menace was "first used ***in commerce*** at least as early as 09/26/2008").

Likewise, Mr. Hoff's declaration alleges that [redacted] But when faced with these statements in his deposition, he could not backpedal fast enough. [redacted]

[redacted] The Board should put zero credibility in Mr. Hoff's statements.

The statements Mr. McPherson made to the Trademark Office and the statements Mr. McPherson made under oath in this proceeding cannot both be true. For purposes of this proceeding, it does not matter which time he was telling the truth and which time he was lying. These inconsistencies have destroyed his credibility. This Board is "entitled to weigh the credibility of the witnesses" and to "evaluate their assertions accordingly." *Trustees of Columbia Univ. in the City of New York v. Illumina, Inc.*, 620 F. App'x 916, 922 (Fed. Cir. 2015) (citing *Inwood Labs., Inc. v. Ives Labs., Inc.,* 456 U.S. 844, 856 (1982) ("Determining the weight and credibility of the evidence is the special province of the trier of fact.")). Accordingly, the testimony of Mr. McPherson and Mr. Hoff is not credible and can be disregarded. Absent their testimony, Patent Owner has failed to meet its burden of coming forward with competent evidence that *Darlington* is not prior art. *Dynamic Drinkware,* 800 F.3d at 1379.

IV. MCP MISREPRESENTS THE PETITION'S MAPPING

It is well-established that where, as here, the validity challenge is based on a combination of references, arguments that "attack the disclosures of the two references individually" lack merit. *Bradium Techs. LLC v. Iancu*, 923 F.3d 1032, 1050 (Fed. Cir. 2019). "The question in an obviousness inquiry is whether it would

have been obvious to a person of ordinary skill in the art to combine the relevant disclosures of the two references, not whether each individual reference discloses all of the necessary elements." *Game & Tech. Co., Ltd. v. Wargaming Grp. Ltd.*, 942 F.3d 1343, 1352 (Fed. Cir. 2019).

The Petition's showing that the '017 Patent is unpatentable cannot be overcome "by attacking [*Darlington* and *Islas*] individually where the [Petition] is based upon the teachings of a combination of references." *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (citing *In re Keller*, 642 F.2d 413, 425 (CCPA 1981)). But this is exactly what MCP does; MCP invites the Board to err by "looking at the references individually." *Palo Alto Networks, Inc. v. Centripetal Networks, LLC,* 122 F.4th 1378, 1386 (Fed. Cir. 2024); POR, 96 ("neither Darlington nor Islas teach this concept."). It is sufficient that the Petition's modified *Darlington+Islas* cam teaches an "end of a power cable that wraps in one direction around a cam and an opposite direction around a capstan," as freely admitted by MCP. *Id.* ("So that begs the question of which reference teaches a wrapping (take-up) end of a power cable that wraps in one direction around a cam and an opposite direction around a capstan, **as in Petitioner's modified cam**.") (emphasis added).

A. Cable Wrapping Direction

MCP fails to address the combination presented in the Petition. The Petition applies *Islas*'s teaching of a power cable wrapped in a direction (counter-clockwise)

opposite the rotational direction of the cam to *Darlington*'s bow (clockwise). Paper 2, 24-35, 43-45. In the proposed combination, "…all of the physical components necessary were already found in *Darlington*, and the modification per *Islas* would have only required minor reconfigurations of those physical components."); EX1003, 57. In the combination, "…**only** the rotational direction of [*Islas's*] power cable around the orange element is being combined…" with hardware components already present in *Darlington's* bow. EX1003, 53. *Islas* teaches that reverse wrapping power cables was known. *Islas's* wrap direction would have been advantageously applied to *Darlington's* power cable 30. Paper 2, 27, 36-40. This is the combination that MCP must attempt to rebut.

MCP's accusation that the Petition "used McPherson's patent as a roadmap" is false and predicated on the assumption that *Islas's* power cable would be bodily incorporated into *Darlington's* bow. "The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference[.]" *Allied Erecting & Dismantling Co., Inc. v. Genesis Attachments, LLC*, 825 F.3d 1373, 1381 (Fed. Cir. 2016) (quoting *In re Keller*, 642 at 425); *see also In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012) ("It is well-established that a determination of obviousness based on teachings from multiple references does not require an actual, physical substitution of elements."). Again, the Petition does not seek to import *Islas's* power cable because *Darlington* already

provided all necessary power cables. Because *Islas's* power cables would not be used in the *Darlington+Islas* combination, MCP's attacks regarding cable wrapping directions in the Petition's combination lack merit. POR, 88-96.

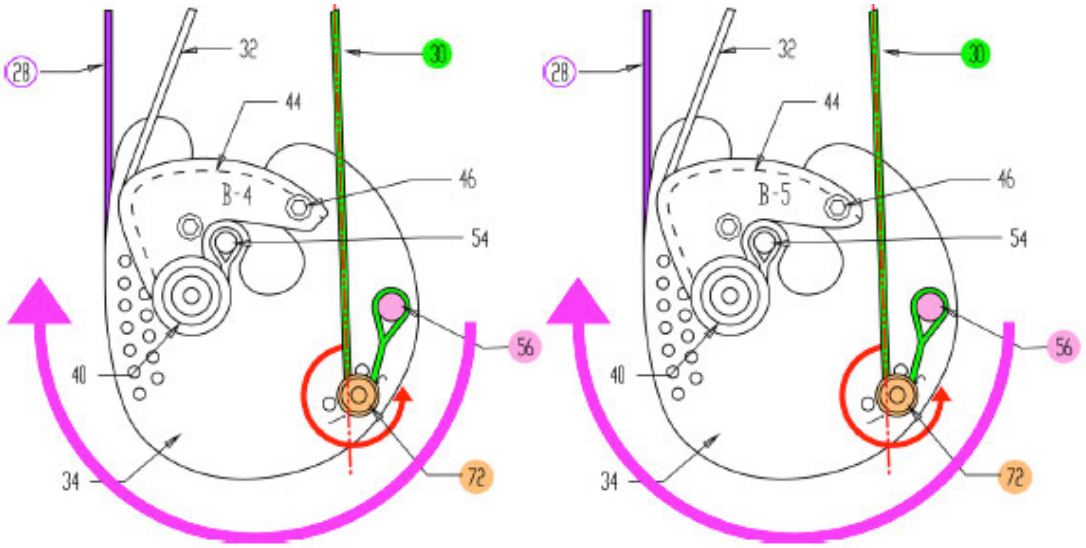
MCP also argues that it is improper to use the let-out end of *Islas*'s power cable to modify the take-up end of *Darlington's* power cable. POR, 88-90, 92-96. But no power cable, capstan, anchor, or any other component of *Islas* is being combined into *Darlington's* bow; *Darlington* already provides every component necessary to reject the independent claims.

Similarly, MCP's argument that "it makes no sense to wrap *Darlington's* take-up end to function like *Islas'* let-out end, because the wrapping directions of each serve different functions" is of no moment. POR, 95. The function of *Darlington's* cable is not being modified. The PHOSITA understood that there are two sides of the (already-present) capstan that the cable could contact first– from the "outside" surface, wrapping inwards and (only other option), the "inside" surface, wrapping outwards as in *Islas*. Paper 2, 25-31; EX1003, 51-57. MCP's claim that the power cables of *Darlington* perform distinct functions is nonsense. MCP's own expert admitted during his deposition that each of the power cables perform the *same* functions (providing deflection and coordinating motion of the cams) and are merely vertically reversed from one another. EX1019, 33:8-34:5. Thus, any prior art cable orientation (such as described in *Islas*) is applicable to *Darlington's* power cables,

regardless of which end of which cable is being modified, because there is no distinction in power cable function. *Contra*, POR, 95. In any event, MCP identifies no limitations requiring the power cables to perform any particular function.

B. Anchor Positioning

MCP contends that "neither Darlington nor Islas disclose an anchor 56 (asserted as the claimed terminal) near the periphery of a pulley," but does not identify which claim language requires an anchor to be near the periphery. POR, 82-83. To the extent MCP is addressing the requirement that the terminal's position be located on the opposite side of the "elongate portion" of the power cable from the axle, that limitation is met by the proposed *Darlington+Islas* bow. *See*, e.g., Claim 2.



Paper 2, 45-48 (illustrating the pink terminal on an opposite side of cable 30 from the axle within 40). Even if the claims require the anchor to be near the periphery of

a pulley, the anchor of the proposed *Darlington+Islas* bow would satisfy that requirement. Paper 2, 42-43; EX1003, 60 (describing "positioning the terminal anchor towards the periphery of the cam"). In any event, it would have been obvious to a PHOSITA that the precise location of the terminal could be adjusted as a matter of design choice. Paper 2, 43; EX1003, 54-57.

V. MCP FAILS TO REBUT THE PETITION'S MOTIVATIONS TO COMBINE

MCP fails to rebut the Petition's argument that a PHOSITA would have been motivated to combine the teachings from *Islas* with those of *Darlington*. POR, 97-108. MCP forgets that a PHOSITA "is also a person of ordinary creativity, not an automaton." *KSR Int'l Co. v. Teleflex Inc*., 550 U.S. 398, 421 (2007). "[I]n many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle." *Id*. at 420. Here, modifying the cam elements from *Darlington* based on *Islas*'s teaching that a power cable can be wrapped in a direction opposite the rotational direction of the cam would improve the bow's safety, maintainability, design simplicity, manufacturing cost, and/or maximum angular sweep allowed. Paper 2, 36-43 *citing* EX1003, 51-60.

The Petition and Lange Declaration are clear that "a PHOSITA would have utilized any necessary ordinary skills of a PHOSITA, such as changing the relative distances between the capstan and terminal, the sizes of any of the elements illustrated, the angle of the power cable, and/or the shape of draw length module 44

such that the bow was both operable and provided the desired improvements detailed below in safety, simplicity, maintenance, and draw length." Paper 2, 39-40 ("A PHOSITA would have additionally made any other necessary or desired modifications to facilitate this rearrangement of *Darlington's* bow such that the resulting bow would have been operable…") *citing* EX1003, 54 (noting that "*Darlington* is specifically intended to be modified"). MCP's attacks on the Petition's motivations ignore the role of the PHOSITA in combining the references, and fail to show any purported "design problems," much less any that a PHOSITA of ordinary creativity would not have been well-equipped to address as a matter of simple design choice. POR, 107-108.

A. The Petition's Motivations to Combine the References

The Petition lays out three reasons a PHOSITA would have been motivated to modify *Darlington* based in *Islas*'s teachings: (1) increased safety and maintainability, (2) design simplification, resulting in reduced manufacturing cost and (3) increased the maximum angular sweep of rotatable members. Paper 2, 36-43; EX1003, 51-60. Mr. Lange's declaration supports each of these motivations which would improve in durability, cost, performance, and profitability. EX1003, 59-60. Mr. Lange further notes that the modification would have:

> "increased the maximum rotation allowable for the pulleys to sweep from brace to full-draw without the power cable contacting other portions of the cam assembly, again desirably increasing arrow velocity

> without increasing the size of the cams. The rotational limit of the original *Darlington* design would have been overcome by wrapping the power cable the opposite direction, towards the edge of the pulley, getting the end of the power cable and the terminal out of the way of the rotation of the pulley. For a given cam size, this would have resulted in a larger amount of force being imparted to a fired arrow, which was highly desirable in the market for both consumers and bow manufacturers."

Id. Dr. Reinholtz agreed with this motivation during deposition, stating "clearly, it can be beneficial to increase the angular sweep of the rotatable member" EX1019, 62:4-20, 63:19-23.

Dr. Reinholtz opines without factual support that the proposed combination would "dramatically increase the possibility of the cable rub and derailment due to cam lean and unconstrained cable motion." EX2018, 9, 114-116; POR 105. However, PHOSITAs at the time of the '017 Patent would have recognized that any "wear, friction, and potential for unwanted contact between power cable 30 and other portions of the bow" would have been a desirable improvement to *Darlington's* unmodified design, and that the proposed modification would not have increased cam lean or chance of derailment. EX1003, 58. In his deposition, Dr. Reinholtz agreed that avoiding interference between mechanical elements is a desirable design goal, stating "[a]s you draw the bow, you don't want two components to interfere with each other. That will create an impact, wear -- if it's the cable that's being

contacted, it will create potential wear on the cable.· So avoiding that kind of contact or interference is [] an important consideration in design of the bow." EX1019, 12:20-13:6.

Additionally, Dr. Reinholtz's attempt to determine the maximum angular sweep and arrow velocity possible in the *Darlington+Islas* bow based on exemplary figures provided in the Petition betray his unfamiliarity with well-known motivations in the field of archery and highlight MCP's misunderstanding of a proper prior art combination. EX2018, 131-139; Paper 2, 29-35 ("The first proposed modified bow illustrated above, as well as the second, alternative example illustrated below, **are not intended to be limiting**. A PHOSITA would have been capable of designing a wide array of embodiments that modify the *Darlington* power cable to wrap around its capstan in the direction opposite its draw rotation as taught by *Islas*…A PHOSITA would have additionally made any other necessary or desired modifications to facilitate this rearrangement of *Darlington's* bow…such as changing the relative distances between the capstan and terminal, the sizes thereof, the angle of the power cable, and/or the shape of draw length module 44."); EX1003, 54.

Further, Dr. Reinholtz admits that elimination of section 42 would have resulted in material savings, directly supporting one of the Petition's motivations to

combine – design simplification, resulting in reduced manufacturing cost. EX2018, 140; Paper 2, 37-40.

B. Section 42

MCP asserts that removing section 42 from the *Darlington+Islas* bow would "create[] an undesirable gap," warned against in *Darlington*. POR, 105. The Petition identifies an operable bow omitting section 42 that a PHOSITA would recognize as providing clear benefits including simplification of the bow's design and reduced manufacturing costs. Paper 2, 37-40. Further, as ignored in MCP's POR, the Petition explains that *Darlington* merely describes the lack of such gaps as being "preferable," and that "such details are neither required for operability nor necessarily present in all embodiments." Paper 2, 41-42. Presenting an embodiment as a preference does not constitute teaching away. *See DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009) ("A reference does not teach away . . . if it merely expresses a general preference for an alternative invention but does not 'criticize, discredit, or otherwise discourage' investigation into the invention claimed." (quoting *In re* Fulton, 391 F.3d 1195, 1201 (Fed. Cir. 2004)).

Further, the Petition and Mr. Lange explained that the *Darlington+Islas* bow would not include any such gap, but rather actually *reduce* the likelihood of discontinuous draw, because it includes fewer sections between which such gaps

could exist. Paper 2, 42-44; EX1003, 64. Additionally, as explained in the Petition, A PHOSITA would have recognized the exact placement, arrangement, and relative sizes of any bow elements are design choices, obvious to a PHOSITA to modify to accommodate any desired configuration or embodiment, including the expressly-described design lacking any undesirable gaps. Paper 2, 41-43; EX1003, 54-57, 60.

MCP also incorrectly contends that the "Darlington pulley is predisposed to excessive cam lean, making the proposed combination less safe and more prone to cable wear, derailment and high maintenance costs." POR, 104-105; EX2018, 128-129. Dr. Reinholtz explains "every bow potentially has some [cam] lean,[] and as long as it's well-controlled and not-significant, [] the cables can have long life." EX1019, 43:2-5. Dr. Reinholtz admits that in the figures of *Darlington* and *Islas* "it would be difficult to quantify" the cam lean of the combined bow. *Id.*, 45:7-9. The only numbers Dr Reinholtz is able to arrive at are based on presuming drawings are made to scale, which the *Darlington* and *Islas* figures are not. *Id.*, 50:17-18 ("The numbers I arrive at are based on the scaled drawings."). Thus, MCP's arguments regarding cam lean should be dismissed as contrived conjecture.

MCP's mechanical advantage attacks also fails to recognize that design decisions often entail tradeoffs between simultaneous advantages and disadvantages, which does not obviate a motivation to combine references. *Corephotonics, LTD. v. Apple Inc.*, No. 2020-1961, 2021 WL 4944471, Slip. Op., at 6 (Fed. Cir. Oct. 25,

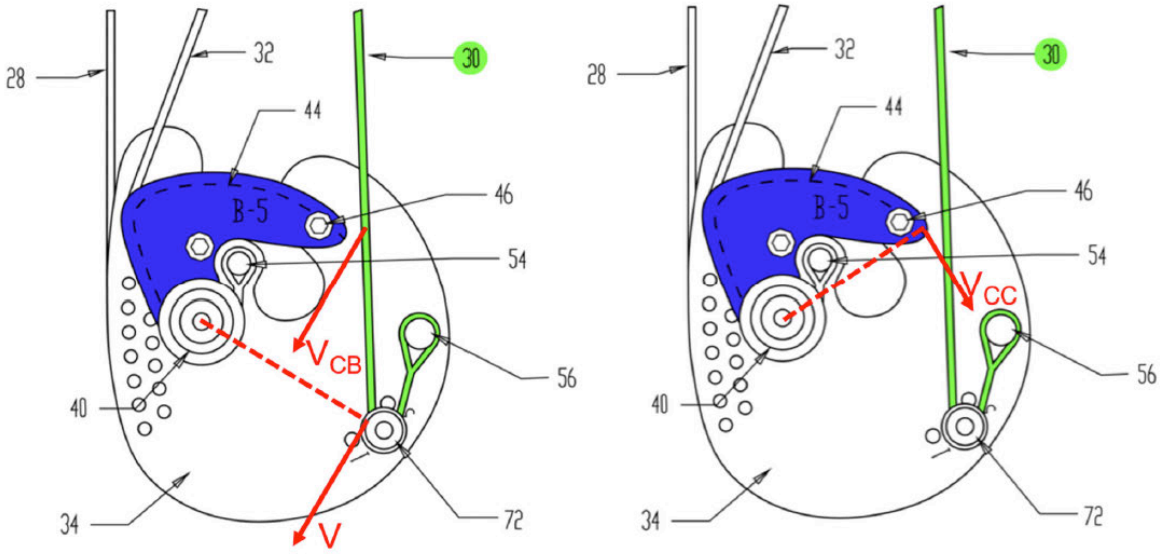
2021) ("it is a commonplace fact that design decisions entail making tradeoffs among multiple objectives") (not reported in Fed. Rptr.), *citing Allied,* 825 F.3d at 1381 ("[a] given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine"). Such a tradeoff analysis between the manufacturing cost and speed of a bow is laid out plainly in the Petition. Paper 2, 36-43. Mr. Lange explains that *Darlington's* bow modified by the teachings of *Islas* strikes a balance between cost and power motivations known to a PHOSITA is sufficient to support a motivation of the combination. EX1003, 54-57. Mr. Lange identified a predictable result from the combination, and MCP does not dispute the predictable result. *Id.*

The Petition also explains the relationship between the removal of section 42 and the desirability of increasing the maximum rotation of *Darlington's* pulley. Paper 2, 37-39.

C. Dr. Reinholtz's Improper Accusations

Throughout his Declaration, Dr. Reinholtz attacks the *Darlington+Islas* combination based on measurements and calculations of ***exemplary*** figures. EX1003, 118-123 (regarding "knife edges"), 128-129 (regarding cam lean), 132-134 (regarding maximum angular sweep), 137-139 (regarding energy storage and velocity); EX2019, 48:21-49:24 (admitting to using such improper measurements and calculations), 66:23-25 (admitting that scale matters for measurements and

calculations). For example, regarding the following figures, Dr. Reinholtz states "I measured both the distance between the cam centers and the maximum change in distance between the take-up and let-out power cables."



EX2018, 121-122 (red annotations added by Dr. Reinholtz).

As the Petition repeatedly explains, the *Darlington+Islas* figures are demonstratives illustrating the combined bow and are not necessarily drawn to scale. Paper 2, 28-31, 53. A PHOSITA would have made any necessary or desired modifications to *Darlington's* bow, "such as changing the relative distances between the capstan and terminal, the sizes thereof, the angle of the power cable, and/or the shape of draw length module 44." Paper 2, 29 *citing* EX1003, 54. As such, Dr. Reinholtz's conclusions regarding the *Darlington+Islas* bow based on relative dimensions of exemplary figures are irrelevant.

VI. CONCLUSION

For the reasons provided above and in the Petition and supporting evidence, Petitioner respectfully requests cancellation of the Challenged Claims.

Respectfully submitted,

ERISE IP, P.A.

BY: */s/ Adam P. Seitz*

Adam P. Seitz, Reg. No. 52,206
Adam.Seitz@eriseip.com
Erise IP, P.A.
7015 College Blvd., Suite 700
Overland Park, KS 66211
P: (913) 777-5600
F: (913) 777-5601

COUNSEL FOR PETITIONER

UPDATED EXHIBIT LIST

Previously Filed by Petitioner:

Exhibit 1001	U.S. Patent No. 9,354,017 B2 to McPherson ("*McPherson*")
Exhibit 1002	File History of U.S. Patent No. 9,354,017 ("*'017 File History*")
Exhibit 1003	Declaration of Joshua Lange, P.E. ("*Decl.*")
Exhibit 1004	U.S. Patent No. 8,205,607 B1 to Darlington ("*Darlington*")
Exhibit 1005	U.S. Patent Application Publication No. 2008/0135032 A1 to Islas ("*Islas*")
Exhibit 1006	U.S. Patent No. 6,470,870 B1 to Schaar ("*Schaar*")
Exhibit 1007	Browning Compound Bow User Guide ("*Browning Manual*")
Exhibit 1008	Bear Archery Owner's Manual ("*Bear Manual*")
Exhibit 1009	U.S. Patent Application Publication No. 2010/0154769 A1 to Grace, Jr. ("*Grace*")
Exhibit 1010	U.S. Patent No. 7,997,259 B2 to Wilson ("*Wilson*")
Exhibit 1011	U.S. Patent Application Publication No. 2009/0288650 A1 to Batdorf ("*Batdorf*")
Exhibit 1012	Diamond Archery Nuclear Ice Instructions ("*Diamond Manual*")
Exhibit 1013	Preliminary Pretrial Conference Order, 23-cv-142-jdp, ("*Preliminary Pretrial Conference Order*")
Exhibit 1014	File History of U.S. Patent No. 8.683,989
Exhibit 1015	Email from Board

Currently Filed by Petitioner:

Exhibit 1016	Deposition Transcript of Jerrod Hoff dated February 7, 2025
Exhibit 1017	Deposition Transcript of Matthew McPherson dated February 7, 2025
Exhibit 1018	Menace Trademark Application
Exhibit 1019	Deposition Transcript of Dr. Charles Reinholtz dated February 11, 2025

CERTIFICATION OF WORD COUNT

The undersigned certifies pursuant to 37 C.F.R. § 42.24 that the foregoing Petitioner's Reply to Patent Owner's Response, excluding any table of contents, mandatory notices under 37 C.F.R. § 42.8, certificates of service or word count, or appendix of exhibits, contains 5,539 words according to the word-processing program used to prepare this document (Microsoft Word).

Dated: March 6, 2025

/s/ Adam P. Seitz
Adam P. Seitz, Reg. No. 52,206

ATTORNEY FOR PETITIONER

CERTIFICATE OF SERVICE ON MCP
UNDER 37 C.F.R. § 42.6

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on March 6, 2025, the foregoing *Petitioner's Reply to Patent Owner's Response* was served via electronic filing with the Board and via Electronic Mail on the following practitioners of record for MCP:

Joshua A. Griswold
Kenneth Hoover
Carl E. Bruce
Matthew A. Colvin
Fish & Richardson P.C.
IPR56402-00051IP1@fr.com

/s/ Adam P. Seitz
Adam P. Seitz, Reg. No. 52,206

ATTORNEY FOR PETITIONER