

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RAVIN CROSSBOWS, LLC,
Petitioner

v.

MCP IP, LLC,
Patent Owner

Case IPR2024-00524
Patent No. 9,909,831

PATENT OWNER'S SUR-REPLY

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I. INTRODUCTION

Petitioner's Reply is based on a pattern of willful blindness and irrelevant argument. Petitioner ignores key evidence of prior reduction to practice and arguments refuting its obviousness grounds, while posing largely irrelevant

arguments to distract from the failings of its Petition.^{1,2} In short, Petitioner does not refute either MCP's overwhelming evidence that Mr. McPherson reduced his reverse wrap invention to practice in thousands of production Menace and Monster bows

¹ Petitioner's disingenuous on-sale allegation is an example. Reply, 1-3. On-sale is irrelevant to this proceeding. Moreover, Petitioner's allegation willfully ignores the evidence. Both Mr. Hoff and Mr. McPherson testified the two bows Petitioner complains of were not sales, but rather given to Mr. McPherson, the inventor, the owner, and the CEO of Mathews, Inc. and Mission Archery at the time. EX1016, 13:13-17:12; EX1017, 30:16-33:16. Petitioner likewise omits that, by email before they filed their Reply, MCP clarified that the POR's statement that "[t]he Mission Menace bow was designed and built in 2008 and the product was first shipped to customers on September 26, 2008" was inaccurate. MCP's email to Petitioner setting the record straight is the first email in the email string forwarded from MCP's counsel to trials@uspto.gov on March 10, 2025, when MCP requested the Board's assistance with Petitioner's protective order breach.

² Petitioner filed its Rule 11 motion based on this 35 USC §102 theory in the parallel litigation on April 4, 2025. On April 8, 2025 the District Court denied Petitioner's Rule 11 motion before MCP filed a responsive brief.

prior to Darlington or MCP's arguments contesting the sufficiency of Petitioner's obviousness combination. The Challenged Claims are valid.

II. MCPHERSON CONCEIVED AND REDUCED HIS INVENTION TO PRACTICE BEFORE DARLINGTON

A. The Evidence Independently Demonstrates the Prior Conception and Reduction to Practice

Petitioner's argument against Mr. McPherson's conception and actual reduction to practice focuses on cherry picked buckets of evidence that Petitioner says do not "individually or collectively demonstrate[] the Menace or Monster bows met *all* limitations of any Challenge Claim." Reply, 4 (emphasis in original).³ Yet, in selecting its buckets, Petitioner has both ignored evidence and manufactured deficiencies where there are none.

The evidence MCP advanced here forms a common corpus – not distinct buckets. The common corpus of evidence applies to multiple examples of two bow models (Menace and Monster), where each Menace bow is materially the same and each Monster bow is materially the same. The evidence shows that these bows were designed, manufactured, and sold by Mr. McPherson's businesses prior to the Darlington reference and that the multiple examples embodied McPherson's patent.

³ All emphases added unless noted otherwise.

POR, 5-71; EX2002; EX2003; EX2013-EX2017; EX2019. This corpus includes independent third-party reviews of the two bow models, *i.e.*, the *Inside Archery* articles, and over forty pages of additional uncontroverted evidence documenting the structure, operation, and sales of three physical examples that each individually pre-date Darlington. EX2017, ¶¶3-5, App. A-C;⁴ EX2016, ¶¶17-18, 24-26; (serial numbers 937455 (“Menace ’455”), 940817 (“Menace ’817”), and 986775 (“Monster ’775”)). These three physical bows, and those shown in *Inside Archery*, are representative of tens-of-thousands of Menace and Monster bows produced and sold before Darlington. POR, 14.

Petitioner’s analysis by buckets is flat wrong and misleading. As detailed below, *infra* §II.D, the Menace bow tested by *Inside Archery* and the two physical Menace bows are materially the same, as are the Monster bow tested by *Inside Archery* and the physical Monster bow. Mr. Hoff’s declaration and sales data applies equally to each. Likewise, the analysis that Dr. Reinholtz details in his declaration applies equally to each. The photographs in the *Inside Archery* are relevant to the three physical bows, as are the videos showing operation of and the photographs of the three physical bows relevant to what is shown in the *Inside Archery* articles.

⁴ Documenting details of two Menace bows and one Monster bow (collectively “the physical bows”).

This corpus of evidence is so thorough that it stands on its own. One need not rely on Mr. McPherson's declaration to find that he conceived and reduced the claimed invention to practice before Darlington. EX2006. Mr. McPherson's testimony merely provides context to the narrative around the conception and reduction to practice, and is not itself relied on in any substantial way by the POR. POR, 2-5. The sales records, photographs, videos, and *Inside Archery* articles showing and describing the bows demonstrate Mr. McPherson's conception and actual reduction to practice of the reverse wrap invention prior to Darlington's priority date. *See, e.g.*, POR, 5-71 (every citation to EX2006 is corroborated by independent sources). None of this documentary evidence is testimony from or was produced by the inventor. *Id.*

In fact, Petitioner does little to dispute the evidence about the three physical bows that prove Mr. McPherson's prior conception and reduction to practice. Among other things, Petitioner does not dispute that the photographs and videos of the three physical bows accurately show the claimed geometry of the bow cams in brace and drawn conditions, as well as the rotation of the cams moving from brace to draw. Instead, Petitioner closes its eyes to all of the physical bow evidence to make baseless accusations about the *Inside Archery* articles and the POR's brief mention of CAD files. Reply, 4-8.

Evidence excerpted below shows the similarity between the patent embodiments, the as-sold Menace and Monster bows, and the images of those bows in the *Inside Archery* Articles, as well as the sale date of all bows in question.



[EX2002](#)

Retailer Name	[REDACTED]
7	[REDACTED]
1	[REDACTED]
7	INSIDE ARCHERY
	[REDACTED]

Shipped Date	12/20
	10/27/2008

[EX2016, App A: Inside Archery Shipping Record \(Menace\)](#)

Ship to :	INSIDE ARCHERY	Sold to :	IN
Contact :	[REDACTED]		
Phone :	[REDACTED]		
Ship Date	10/27/2008		
Item			
000001	PO: MNCR MENACE MAX 4 RH		
	Serial Number(s) 935923		
000002			

[EX2016, App B: Inside Archery Shipping Doc. \(Menace\)](#)

Menace RTP Corroboration Evidence (*Inside Archery*): EX2002; EX2016.



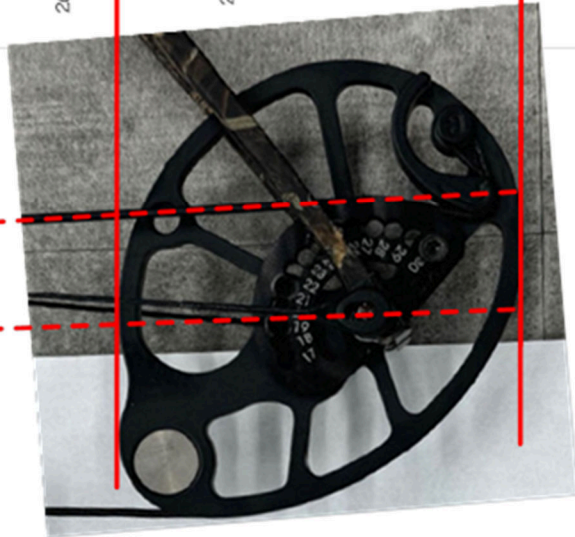
EX2017, App A:
Physical Menace '455
(Serial No.)

Order Date	Serial Number			Shipped Date	In
10/1/2007					
10/1/2007	937455			11/4/2008	

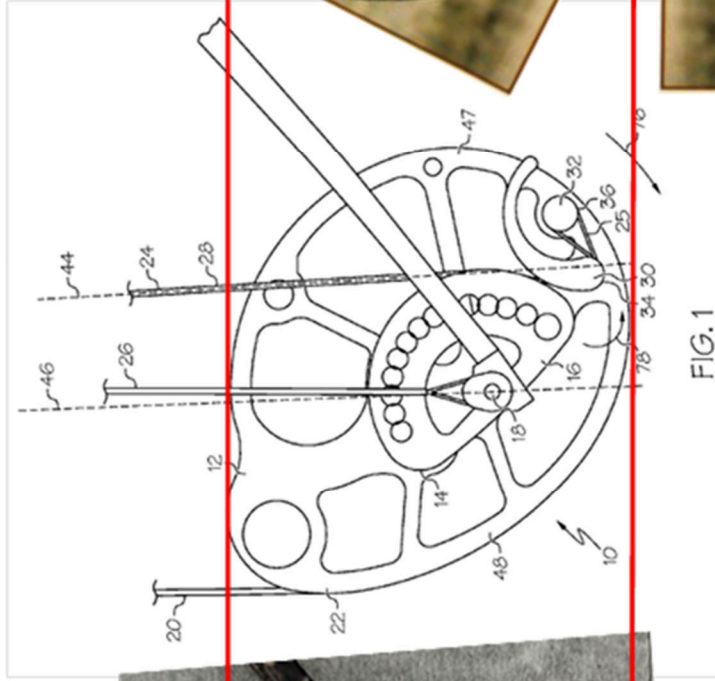
EX2016, App A:
Menace '455 Sales Record

Menace RTP Corroboration Evidence (Menace '455): EX2016; EX2017

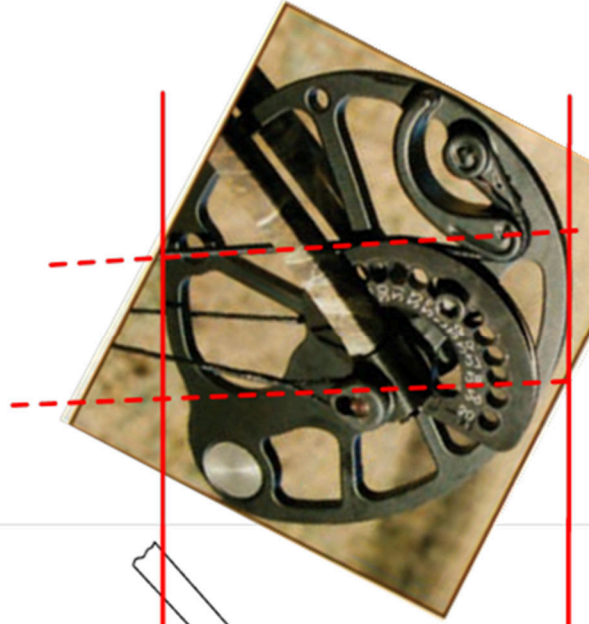
EX2017, App A:
Physical Menace '455
(lower cam)



'989 Patent

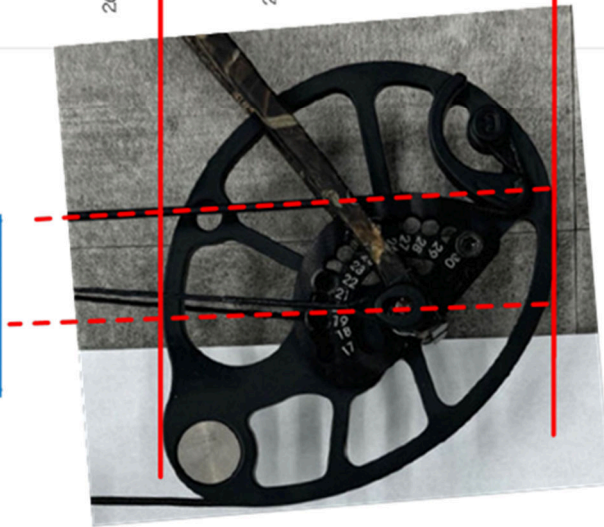


EX2002: 2008 Inside Archery
(close up lower cam)

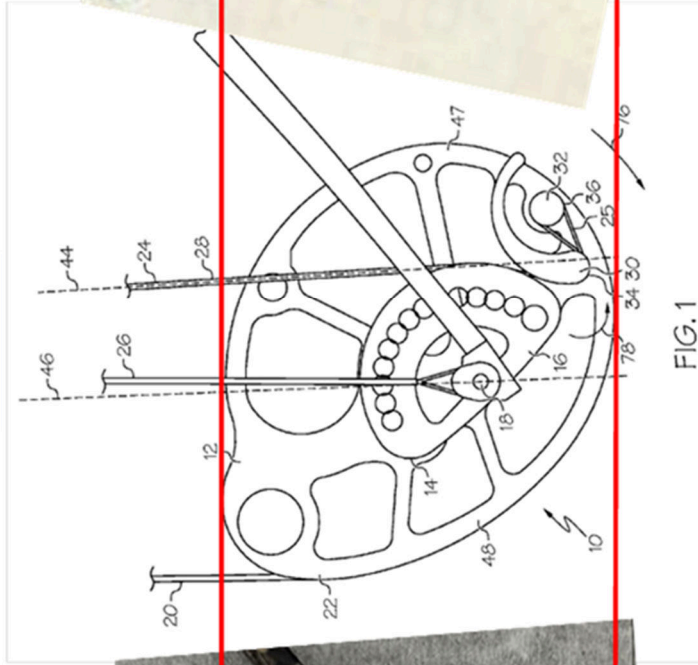


Menace RTP Corroboration Evidence: EX2002; EX2016; EX2017

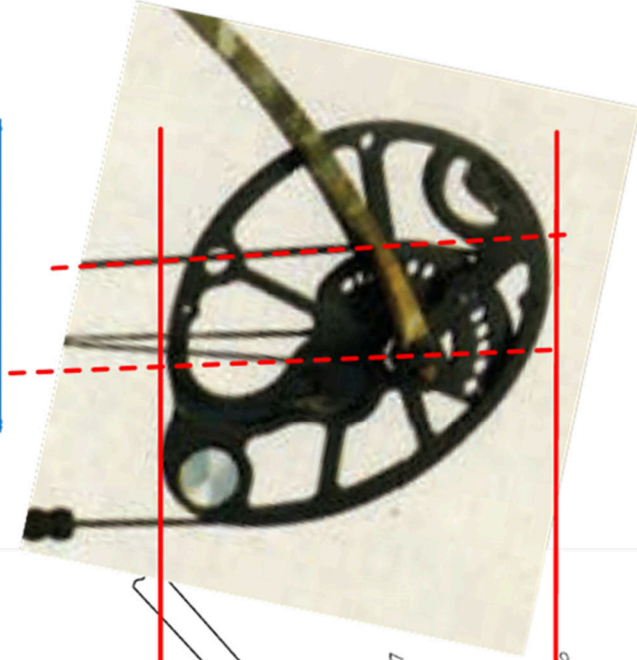
EX2017, App A:
Physical Menace '455
(lower cam)



'989 Patent



EX2002: 2008 Inside Archery
(full bow lower cam)



Menace RTP Corroboration Evidence: EX2002; EX2016; EX2017

By Bill Krenz

EX2003

Mathews founder and President **Matt McPherson** has been designing and producing compound bows since about 1970. He launched his very first bow company, McPherson Archery, in 1985.

Actually, to be correct, it's the Mathews McPherson Series Monster. In a strange twist of fate, Matt recently bought back the name of his original bow company and

Retailer Name	[REDACTED]	Shipped Date	Invoice
[REDACTED]			
19 [REDACTED]			
8 [REDACTED]			
7 INSIDE ARCHERY		3/23/2009	

EX2016 App C: Inside Archery

EX2016, App C: Inside Archery Shipping Record (Monster)

Sold to :IN

[illegible]

EX2016, App D: *Inside Archery*
Shipping Doc. (Monster)

Monster RTP Corroboration Evidence (*Inside Archery*): EX2003; EX2016.



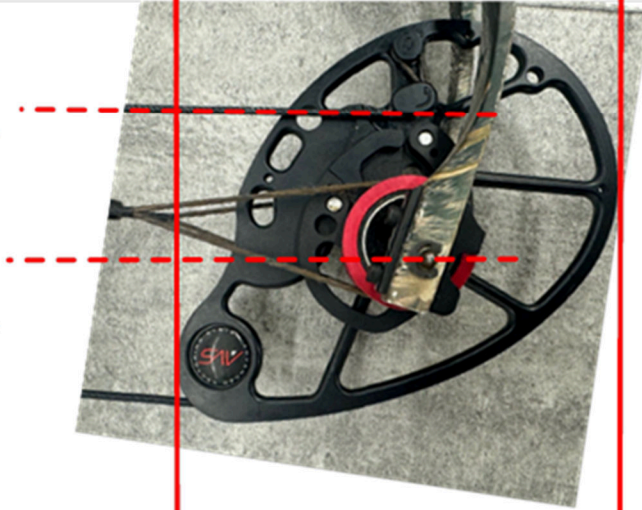
EX2017, App C:
Physical Monster '775
(Serial No.)

Order Date	Serial Number			Shipped Date	In
3/18/2009					
3/18/2009	986775			4/21/2009	

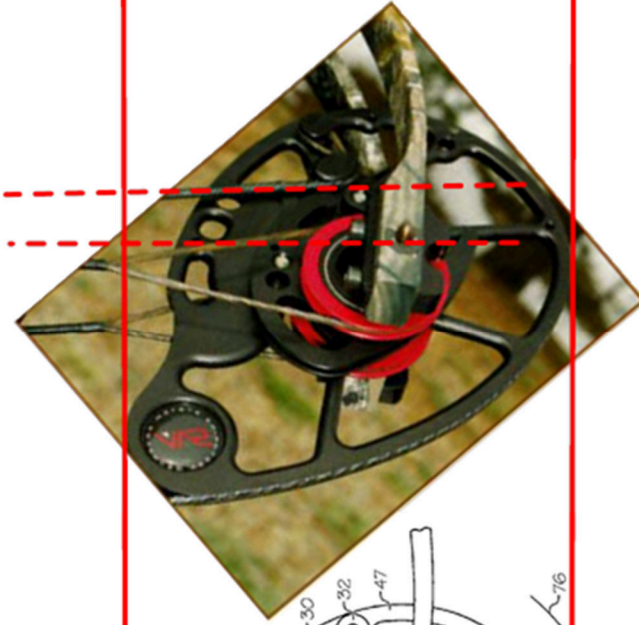
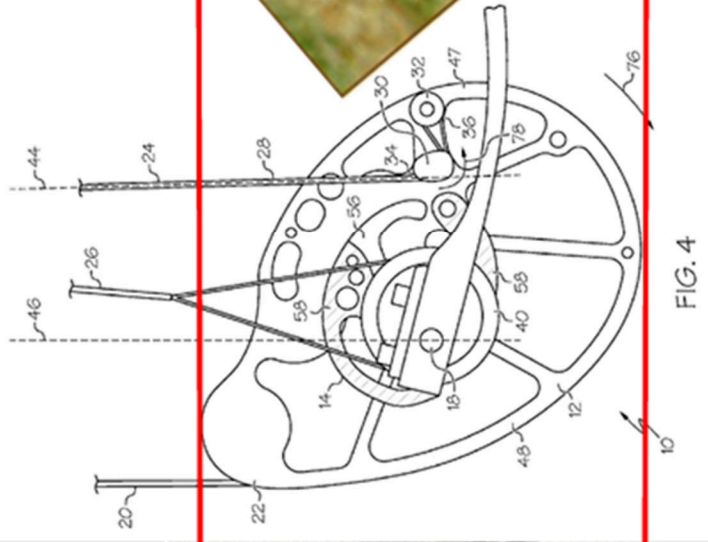
EX2016, App C: Monster '775 Sales Record

Monster RTP Corroboration Evidence (Monster '775): EX2016; EX2017

EX2017, App C:
Physical Monster '775
(lower cam)



'989 Patent



Monster RTP Corroboration Evidence: EX2003; EX2016; EX2017

B. Inside Archery

In attacking the 2008 *Inside Archery* article, Petitioner repeats its same debunked claim that the “article depict[s] an unstrung bow that is not in a ‘brace condition’ at all.” Reply, 5; EX2002, 2 (full page reproduced below); Pre-Institution Sur-Reply (Paper 8), 2-3. Petitioner doubles down on this ridiculous claim by asserting that the *Inside Archery* article “certainly could not teach a ‘drawn condition,’ having no string to possibly draw.” Id.

The second page of the 2008 *Inside Archery* article (reproduced below) includes two photographs of the strung Mission Menace bow – a close-up photograph of one cam and the full bow in the brace condition. Petitioner cannot, and does not, dispute that the full bow is strung. Both MCP’s POPR and POR replicated the same photograph of the full bow multiple times. POPR, 16, 20, 25; POR, 18, 25, 29, 32, 37, 44.

Specifications

2009 Mission Menace

Axle-to-Axle Length	31 inches
Brace Height	7.25 inches
Riser Geometry	1 inch reflex
Mass Weight	2.9 pounds
Lettoff	70 percent
Draw Lengths	17 to 30 inches
Draw Weights	16-52 pounds
Camo	RealTree Tree Advantage Max 4 HD

For more information, call 800-477-6644 or visit [missionarchery.com](http://www.missionarchery.com) or call (800) 269-2719.

Draw Length & Maximum Draw Weight

2009 Mission Menace

Draw Length	Maximum Draw Weight
17 inches	25.6 pounds
18 inches	30.2 pounds
20 inches	38.1 pounds
21 inches	40.9 pounds
22 inches	43.5 pounds
23 inches	46.0 pounds
24 inches	47.2 pounds
25 inches	48.0 pounds
26 inches	48.3 pounds
27 inches	48.5 pounds
28 inches	48.5 pounds
29 inches	48.5 pounds
30 inches	48.5 pounds

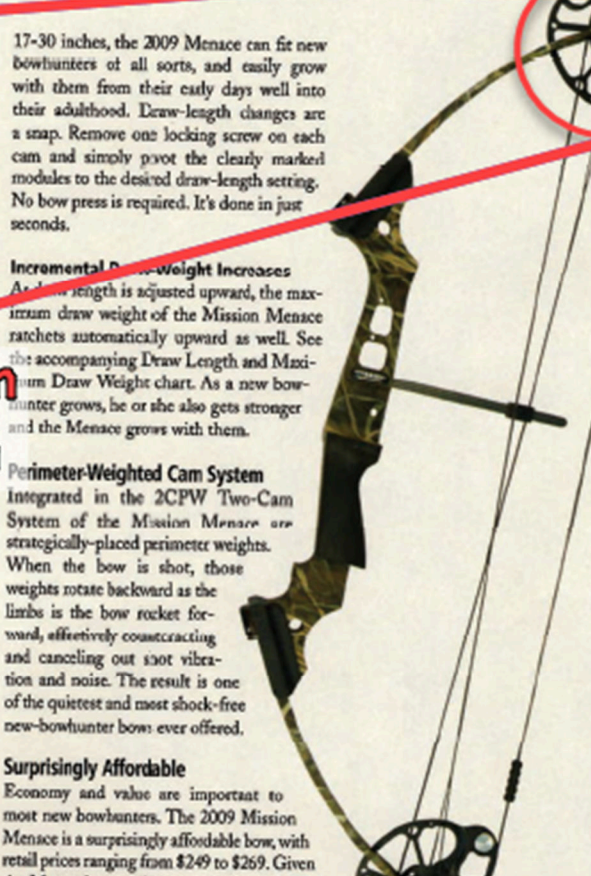
Sample bow sighted with digital draw-weight scale.

Arrow Speed

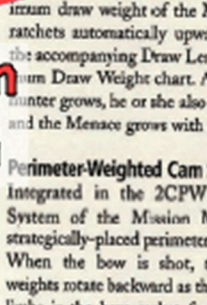
2009 Mission Menace

Draw Length	Draw Weight	Arrow	Arrow Weight	Arrow Speed
20 inches	38 pounds	19" 1816 Aluminum	326 grains	145 fps
		21" 1714 Aluminum	264 grains	155 fps
25 inches	48 pounds	24" 1916 Aluminum	396 grains	191 fps

Test Hogg Hunter Shooter Portable Shocking Machine and a Competition Electronic Pro Chronometer.



Full strung bow in brace (un-drawn) condition



The 2CPW Two-Cam System on the Mission Menace features easy-adjust pivoting draw-length modules. Note the beefy module-locking screw. That screw won't strip out no matter how many times you adjust it.

Close up cam photograph

been offered specifically for new bowhunters. The 2009 Mission Menace is a true beginner's bow. Its shock and the bow is quiet as a whisper. For a beginner bow, that's spectacular.

The new Menace is also packed with performance, the type of performance that can bring big smiles in the backyard or down a trophy buck in the field. See accompanying Arrow Speed chart.

Key Features and Benefits

Light and Compact

A light and compact bow can be a big plus to a new bowhunter. The 2009 Mission Menace weighs a mere 2.9 pounds and measures just 31" from axle to side. That means it's easy to hoot, handle and get around.

Youth-to-Adult Draw-Length Range

Versatility is the watchword for the Menace. With an astounding draw-length range of 17-30 inches, the 2009 Menace can fit new bowhunters of all sorts, and easily grow with them from their early days well into their adulthood. Draw-length changes are a snap. Remove one locking screw on each cam and simply pivot the clearly marked modules to the desired draw-length setting. No bow press is required. It's done in just seconds.

Incremental Draw-Weight Increases

As draw length is adjusted upward, the maximum draw weight of the Mission Menace ratchets automatically upward as well. See the accompanying Draw Length and Maximum Draw Weight chart. As a new bowhunter grows, he or she also gets stronger and the Menace grows with them.

Perimeter-Weighted Cam System

Integrated in the 2CPW Two-Cam System of the Mission Menace are strategically-placed perimeter weights. When the bow is shot, those weights rotate backward as the limbs of the bow rocket forward, effectively counteracting and canceling out shot vibration and noise. The result is one of the quietest and most shock-free new-bowhunter bows ever offered.

Surprisingly Affordable

Economy and value are important to most new bowhunters. The 2009 Mission Menace is a surprisingly affordable bow, with retail prices ranging from \$249 to \$269. Given the Menace's versatility, good looks and performance, that's an authentic value.

Petitioner provides no evidence or expert testimony to back up its outlandish claim that the close-up photograph of the cam, at the left side of the page, is unstrung. Petitioner's "unstrung bow" claim amounts to nothing more than unsubstantiated attorney argument and is entitled no weight. *Icon Health & Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1043 (Fed. Cir. 2017) ("[a]ttorney argument is not evidence"); *Gemtron Corp. v. Saint-Gobain Corp.*, 572 F.3d 1371, 1380 (Fed. Cir. 2009) ("attorney argument...is not evidence and cannot rebut...other admitted evidence").

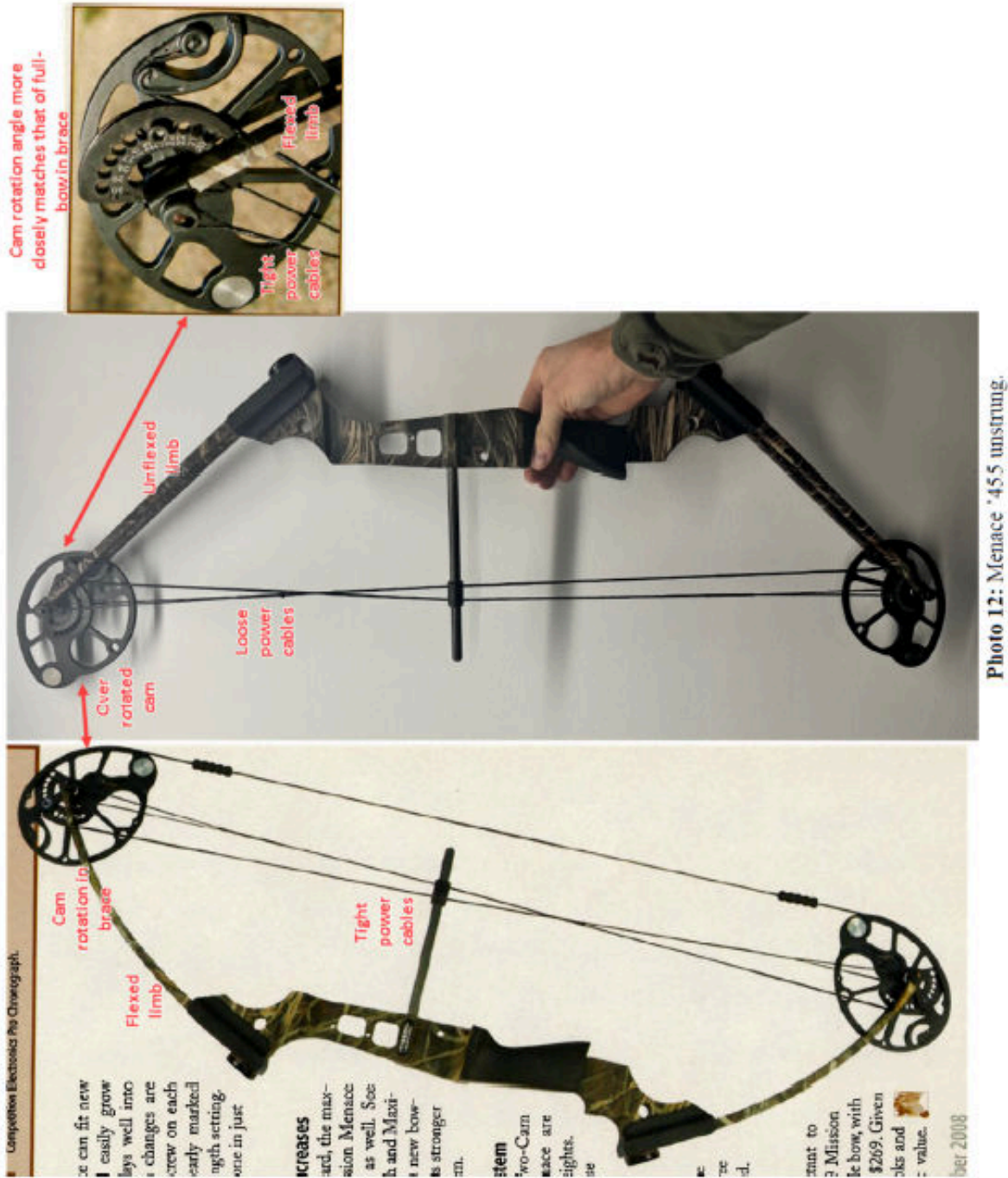
In contrast, MCP produced both evidence and expert testimony on this topic. See EX2017 (Appendices and videos); EX2018, ¶¶50-51. That evidence included twelve photographs and two videos of an identically configured Mission Menace bow—all of which was ignored by Petitioner—corroborating the fact that the close-up photograph of the cam shows a cam from a strung bow. EX2017, ¶3, App. A; EX2016, ¶¶16-17. EX2017 even includes a photograph of the Menace '455 bow next to the 2008 *Inside Archery* article for comparison.



Photo 7: Menace '455 bow lower cam in brace condition next to a cam photograph in 2009 Mission Menace article of the *Inside Archery* December 2008 issue.

Petitioner accuses MCP of “intentionally rotating” the cam in the photo of the unstrung Menace bow to distinguish it from the photo in the 2008 *Inside Archery* article. Reply, 6. Yet, again this accusation is made with no evidence, expert testimony or otherwise. Id.

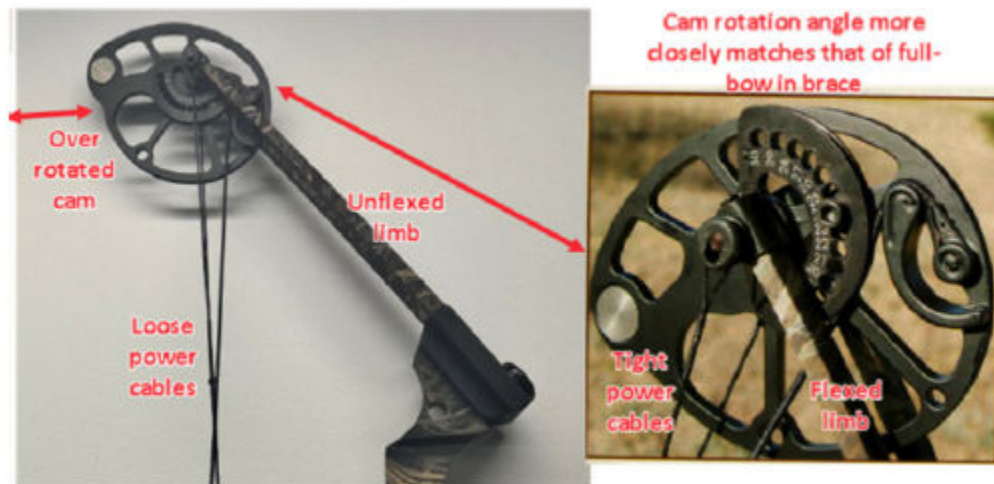
Petitioner goes so far as to employ its own deceptive editing of MCP’s evidence to support its accusation. Id. In its Reply, Petitioner completely removes the adjacent photograph of the full bow from the 2008 *Inside Archery* article to which Dr. Reinholtz compares the unstrung Menace bow. Id.; compare EX2018, ¶50 (page 36) with Reply, 6.



EX2002, full bow photo; EX2017, Appendix A, Photo 12; EX2002, cam photo

(annotated)

EX2018, ¶50 (page 36).



Reply, 6 (Petitioner's edited image).

Regarding the 2009 *Inside Archery* article, Petitioner observes that the article “fails to show a Monster bow in a drawn condition.” Reply, 6. This alleged deficiency is irrelevant. The law is established that evaluation of an actual reduction to practice is to be based on the evidence “as a whole,” not a single document. *Fleming v. Escort Inc.*, 774 F.3d 1371, 1377 (Fed. Cir. 2014). MCP submitted – and Petitioner ignored – four photographs of the physical Monster ’775 bow in the drawn condition as well as a video of the same bow being drawn from brace. EX2017, ¶5, App. C: Photos 6-9.

C. The Production Bows Match the Figures in the Patent

Petitioner's complaints about CAD files are a distraction and irrelevant.⁵ MCP demonstrated physical bows produced before Darlington's priority that match the figures in the patent. POR, 7-13; EX2017, App. A: Photos 3, 6, 11, App. B: Photos 2, 6, 8-10, App. C: Photos 2, 5, 8-9 (showing the physical bows next to the patent figures); EX2018, ¶¶38-51 ("Because of the similarity between the Menace '455 and FIGS. 1 and 2 of [the patent], it is my opinion that the production cams of the Menace bow embody [the patent]"), ¶¶52-60 (similar analysis of the Monster bow and the patent figures). MCP's POR even includes annotated versions of these figures with element numbering showing the correspondence between the cams and the patent drawings on a component-by-component basis. POR, 29-30, 57. Petitioner does not dispute this clear, direct match between the physical bows and MCP's patent figures.

⁵ Petitioner's assertion that no "CAD files [have] been produced to Petitioner in this IPR or in the parallel litigation" is false. Reply, 8. Native CAD files (Bates No. MCP_2_001304-5) and screenshots (Exhibit 5 to Dkt-52) were produced in the parallel litigation as early as October 2024.

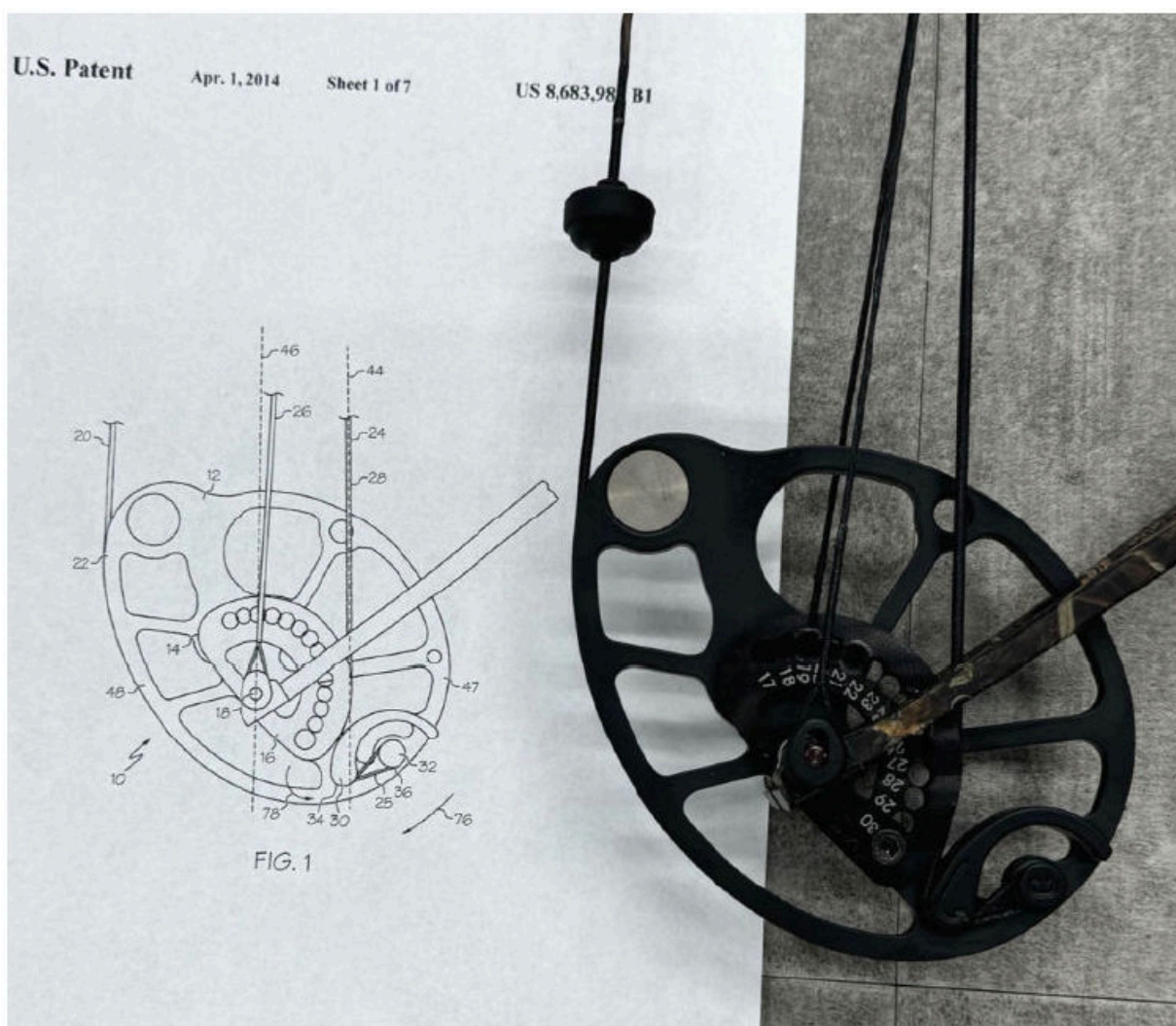


Photo 6: Menace '817 bow upper cam in brace condition next to FIG. 1 of US Pat. No. 8,683,989.

POR, 10.

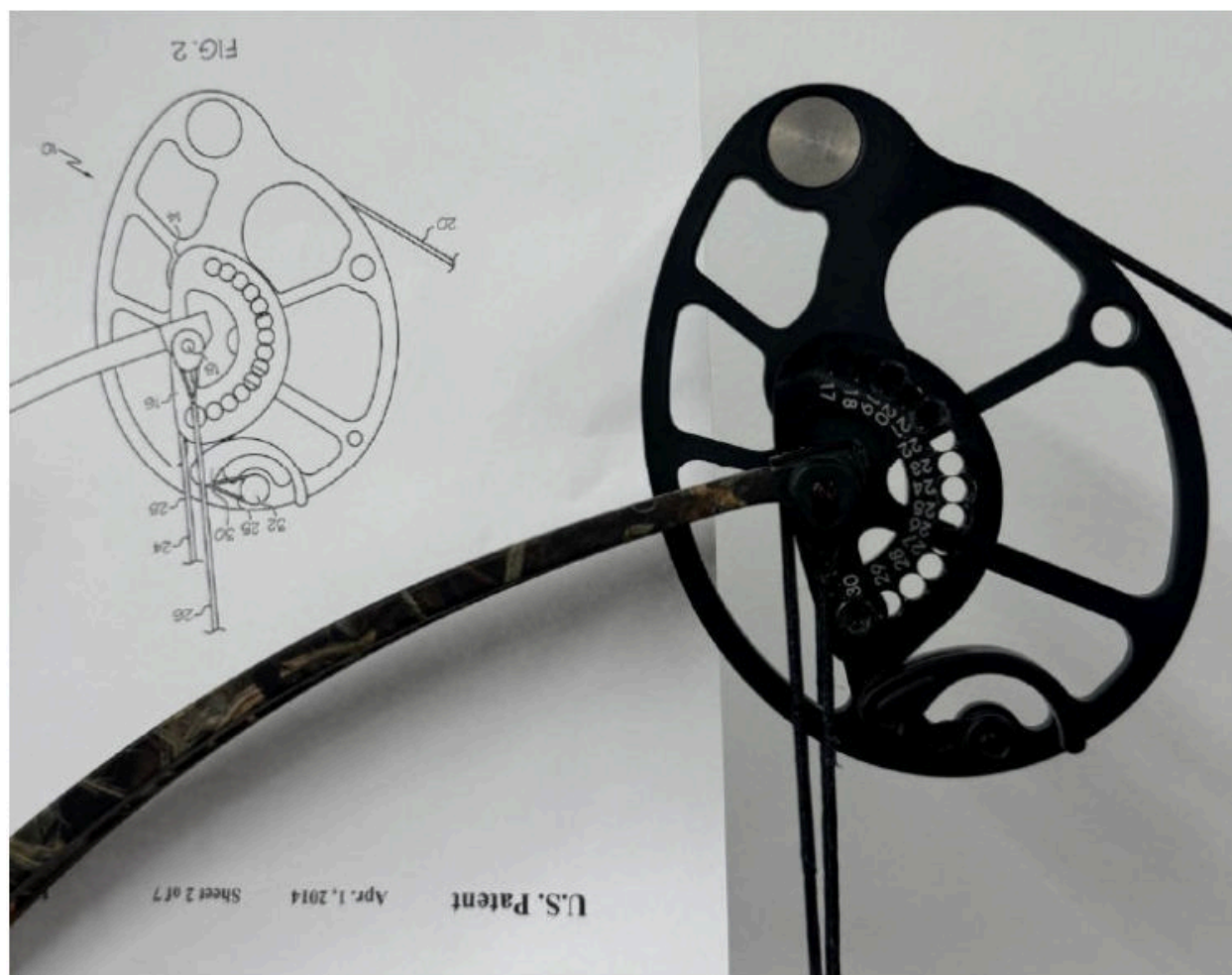


Photo 9: Menace '817 bow upper cam in drawn condition next to FIG. 2 of US Pat. No. 8,683,989.

POR, 11.

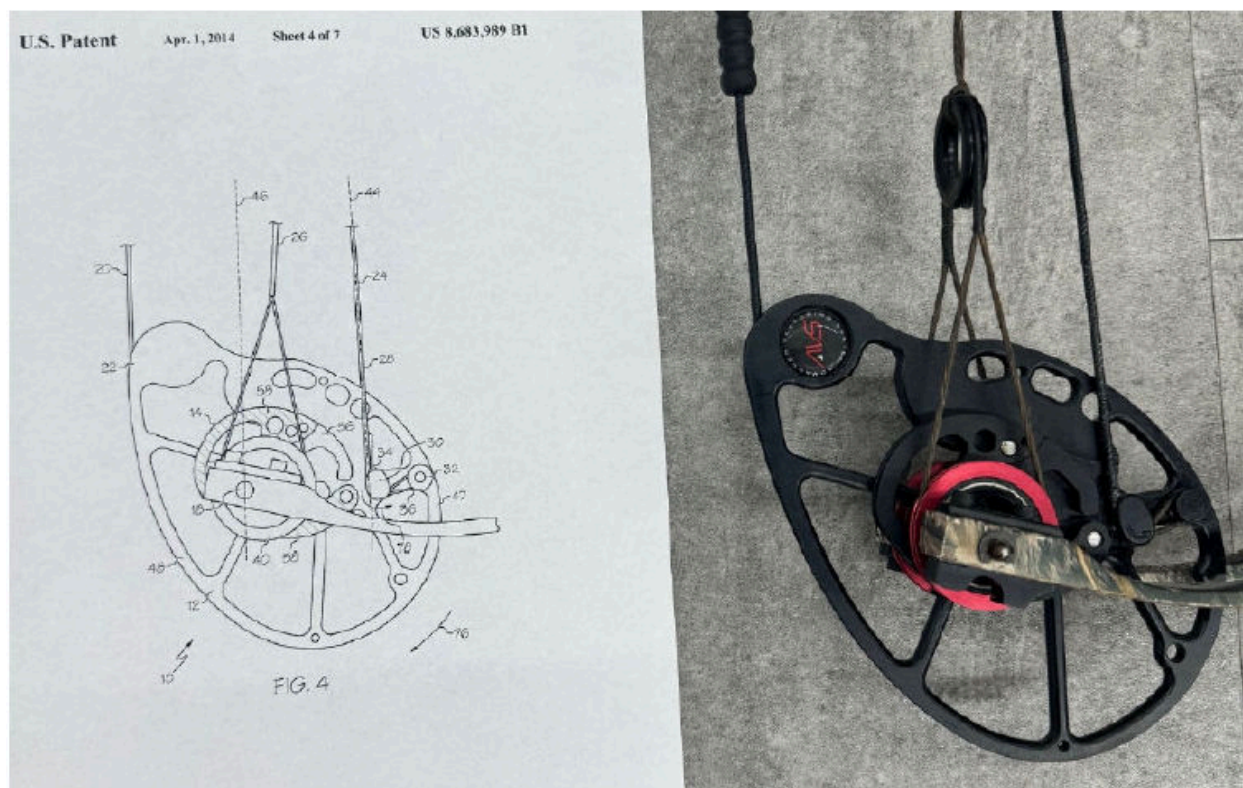


Photo 5: Monster '775 bow lower cam in brace condition next to FIG. 4 of US Pat. No. 8,683,989.

POR, 12.

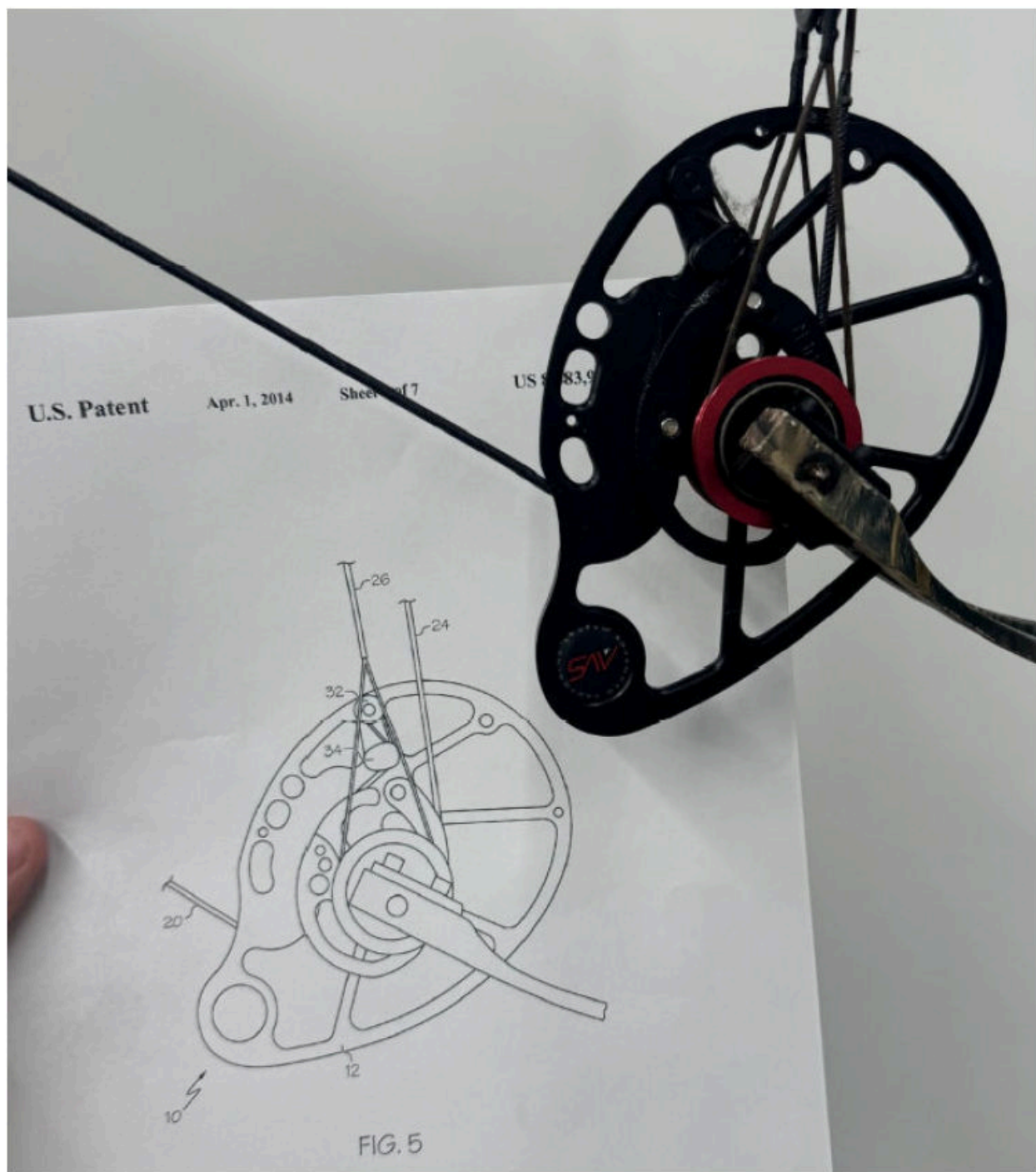


Photo 8: Monster '775 bow lower cam in drawn condition next to FIG. 5 of US Pat. No. 8,683,989.

POR, 13.

The bows reviewed by *Inside Archery* match the patent figures, too.

Enlargements of the *Inside Archery* photographs and the production bow photographs from EX2002, EX2003, and EX2017 are provided below alongside the patent figures to reinforce the correspondence of the Menace and Monster production bow's cams to the patent figures.

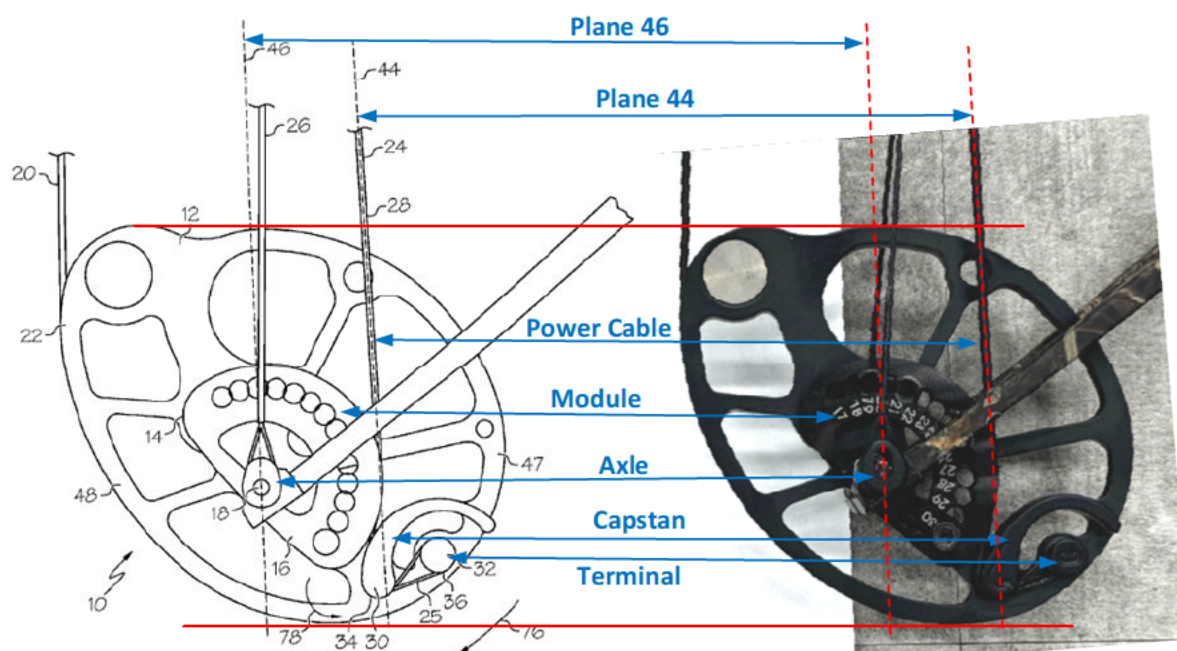
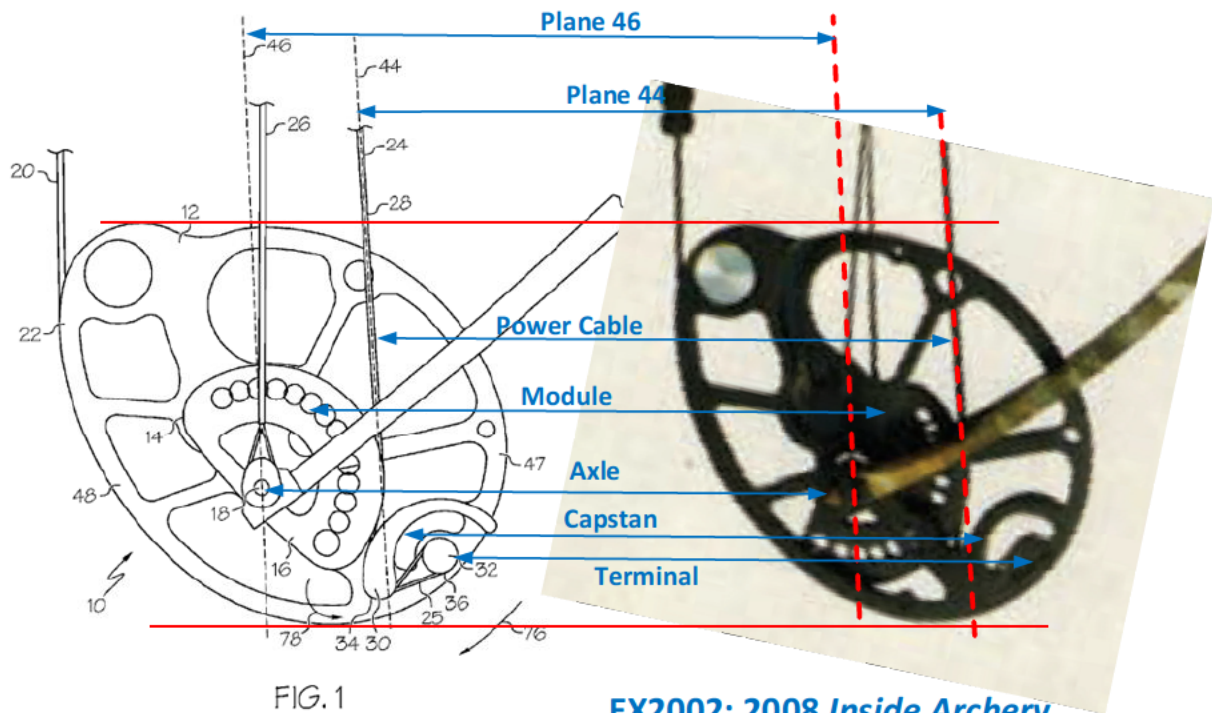
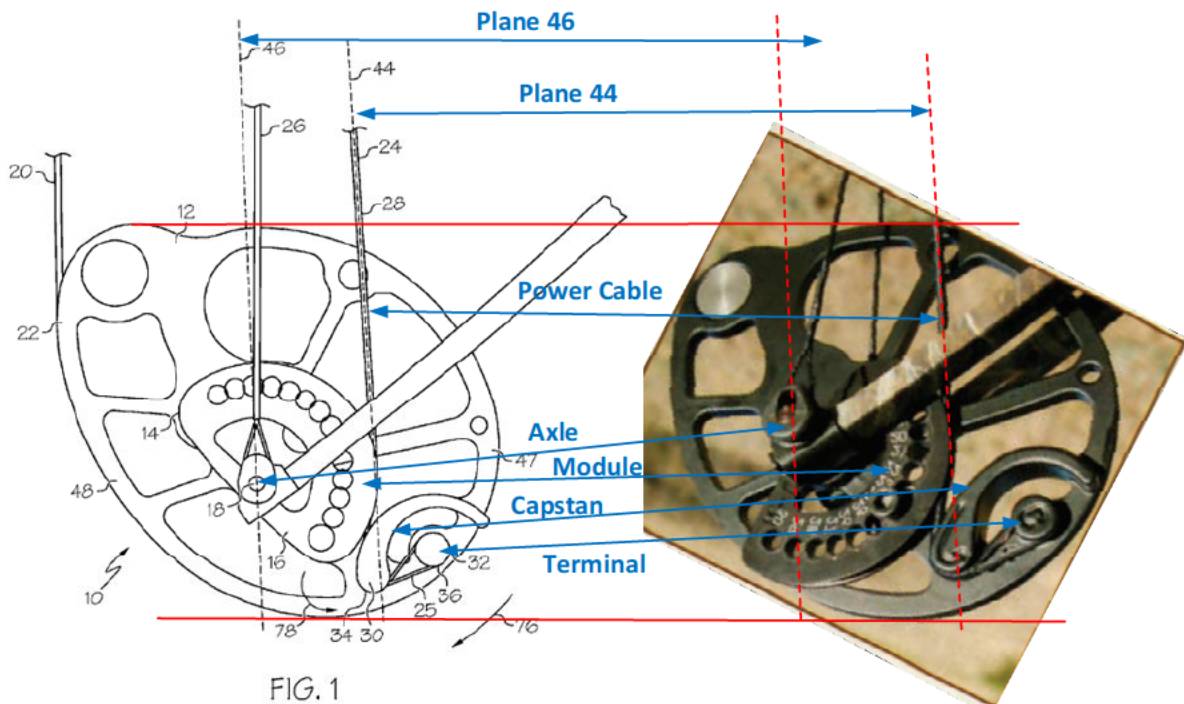


FIG. 1

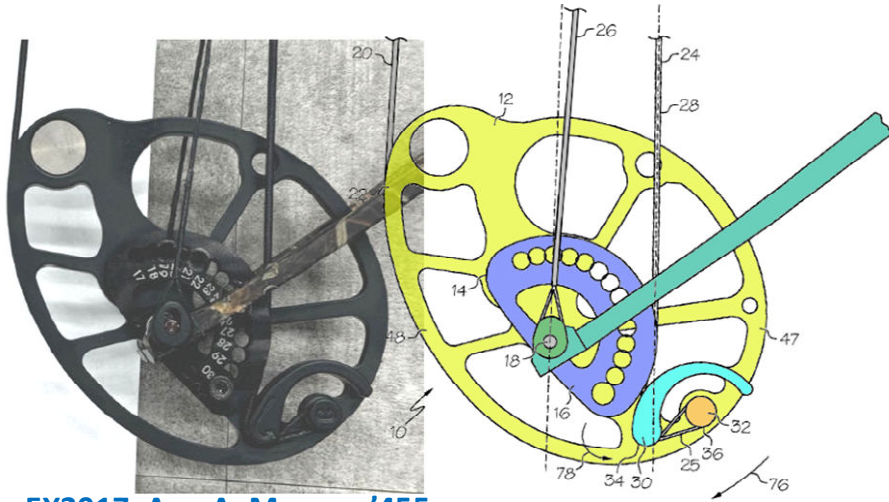
EX2017, App A: Menace '455
(lower cam)



EX2002: 2008 Inside Archery
(full bow lower cam)

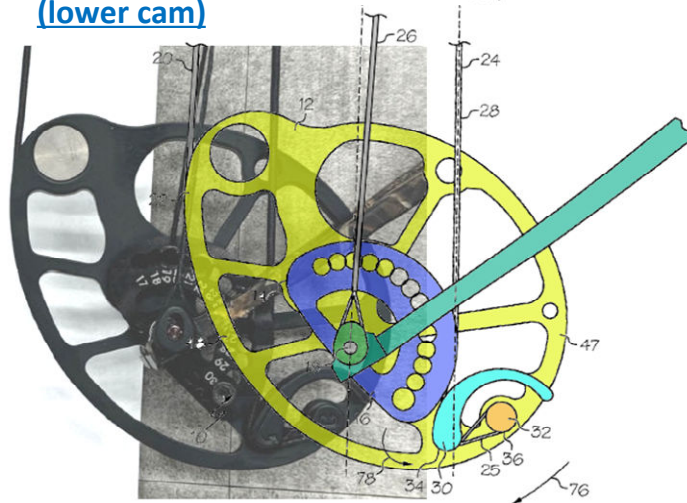


EX2002: 2008 Inside Archery
(close up lower cam)



EX2017, App A: Menace '455
(lower cam)

FIG. 1



EX2017, App A: Menace '455
(lower cam)

FIG. 1

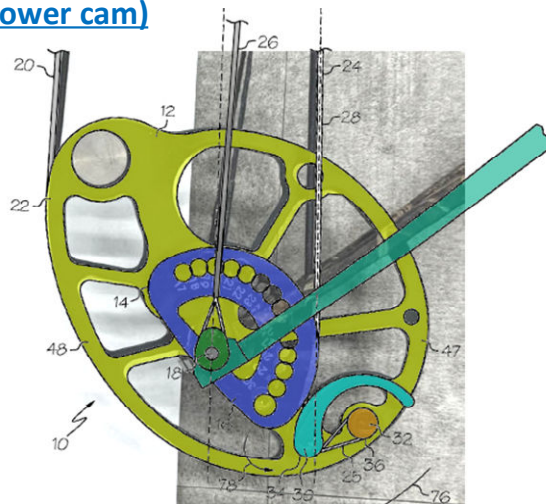
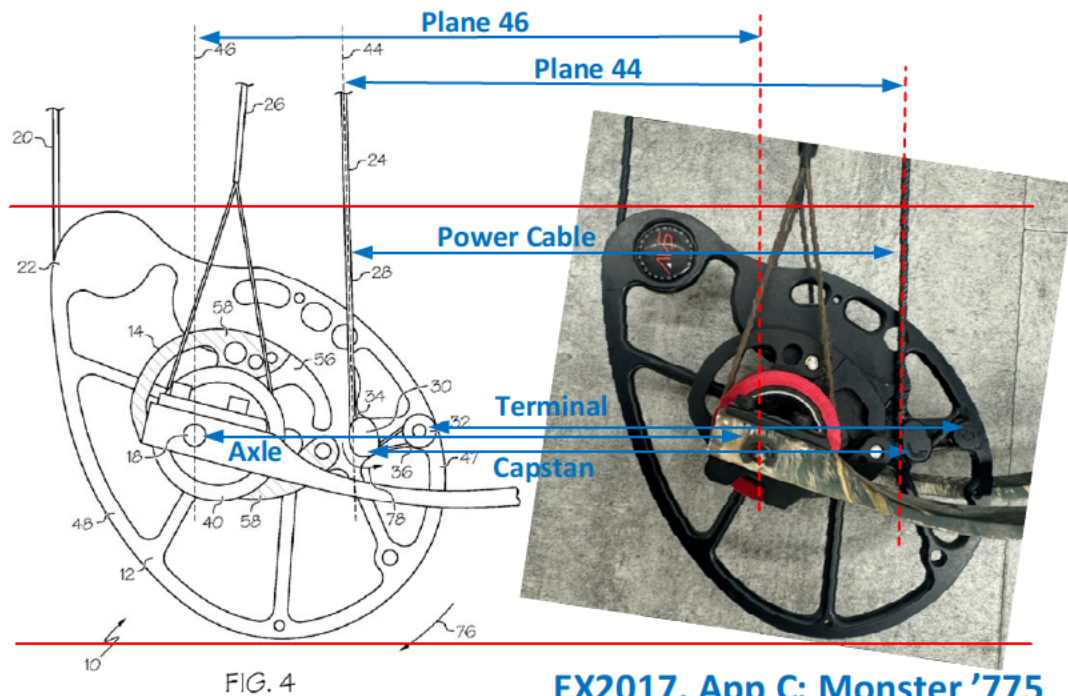
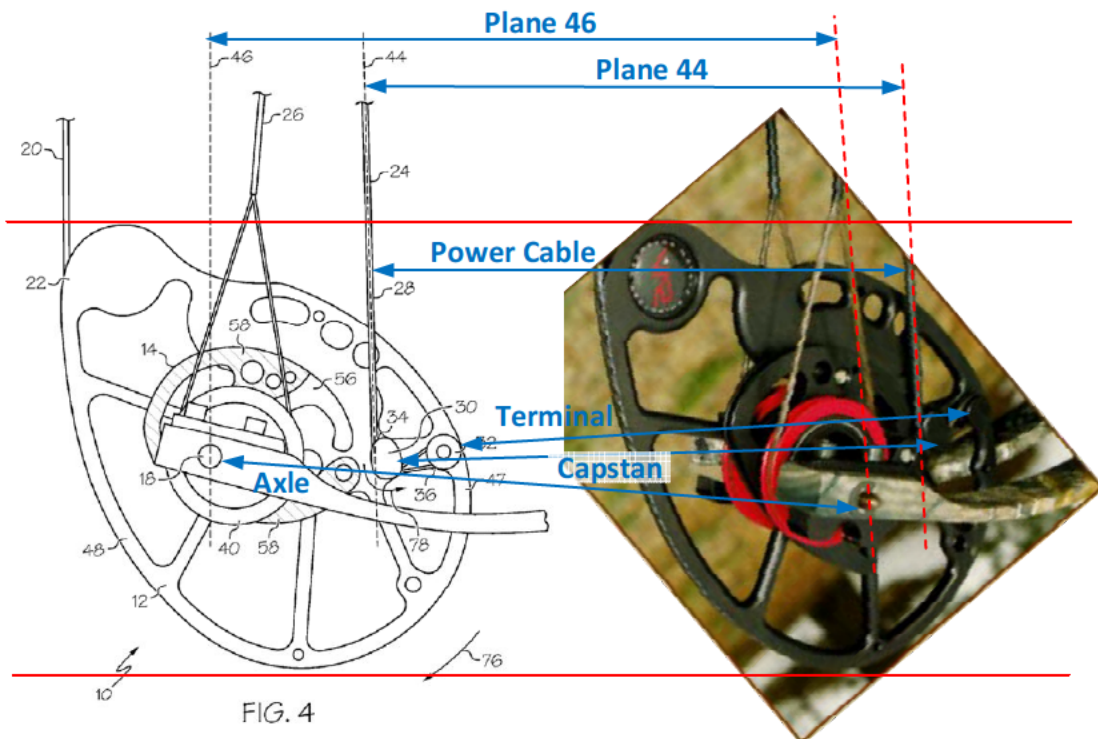


FIG. 1

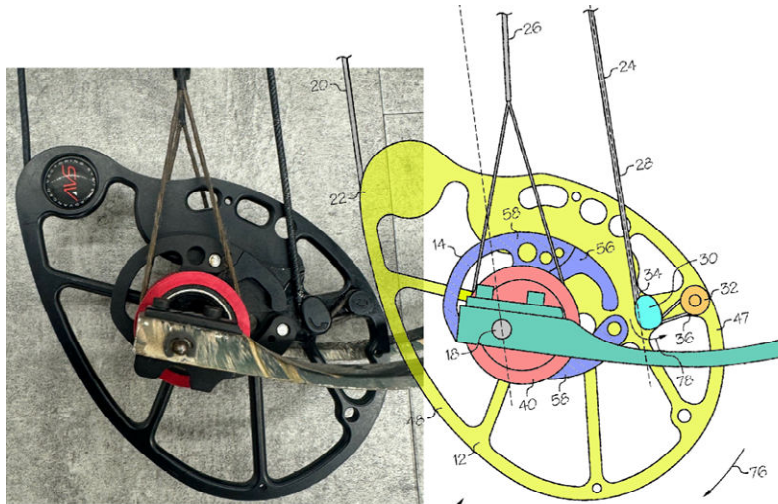
EX2017, App A: Menace '455
(lower cam)



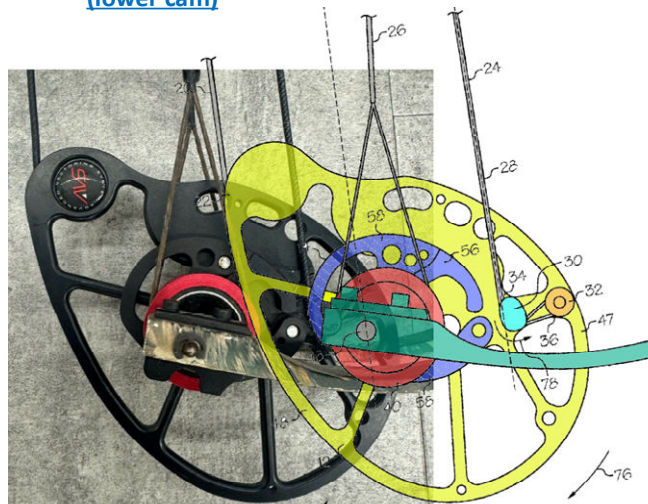
EX2017, App C: Monster '775
(lower cam)



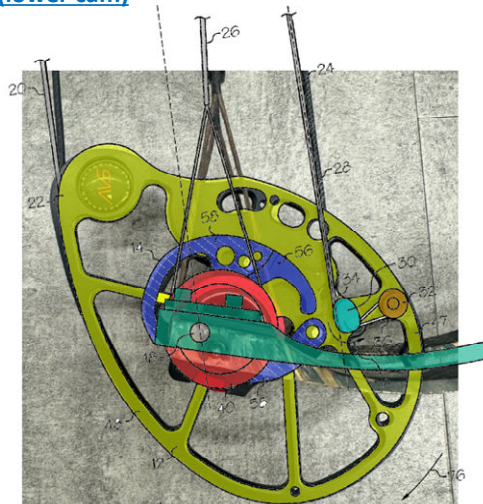
EX2013, 2009 Inside Archery
(close up lower cam)



EX2017, App C: Monster '775
(lower cam)



EX2017, App C: Monster '775
(lower cam)



EX2017, App C: Monster '775 (lower cam)

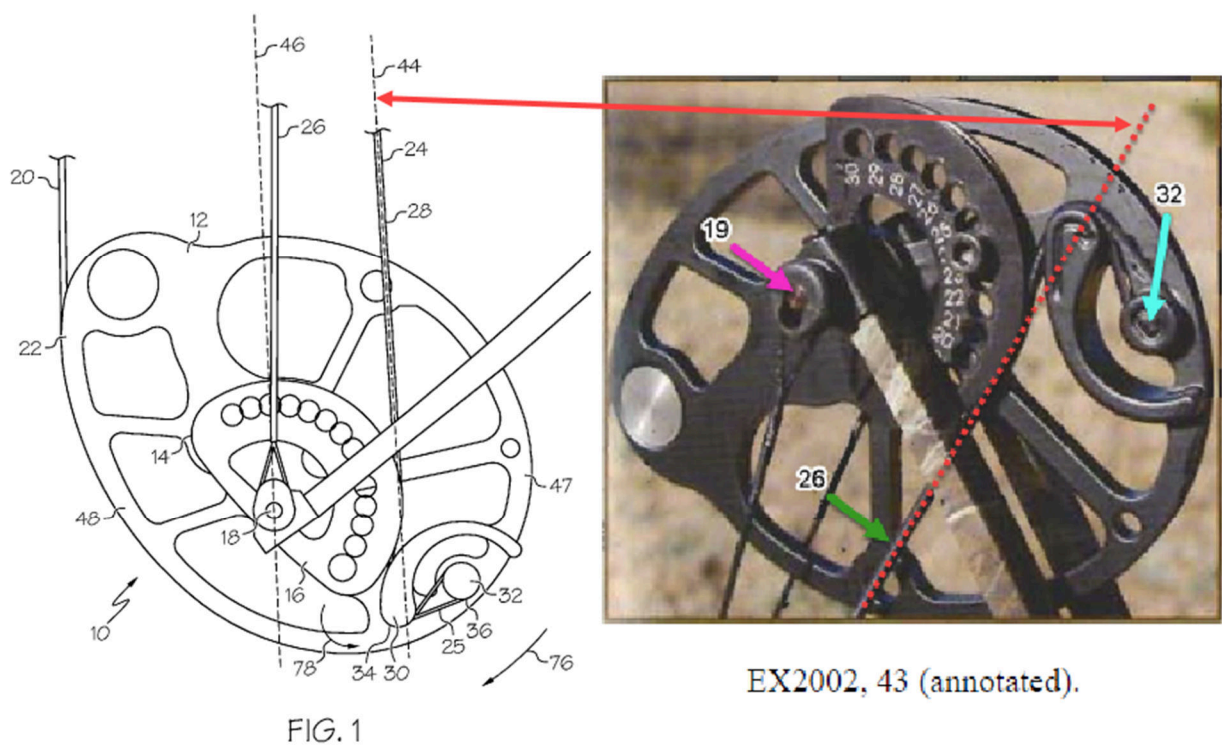
D. MCP's Evidence Shows The Menace and Monster Bows Embodied All Claim Limitations

Petitioner argues that MCP has not shown the Menace and Monster bows embodied claim limitations 11(b)(ii) and claim 13 because Dr. Reinholtz uses “imaginary dashed lines” to indicate various “planes” formed by components of the bows. Reply, 8-10. To be clear, the planes in the claim limitations at issue are intangible (imaginary) references recited to define relative positions of cam components.⁶ The planes are not structural components of the bow itself, and Petitioner admits as much in its own mapping of the same claim limitations to its asserted references. *See e.g.*, Pet., 69-71.

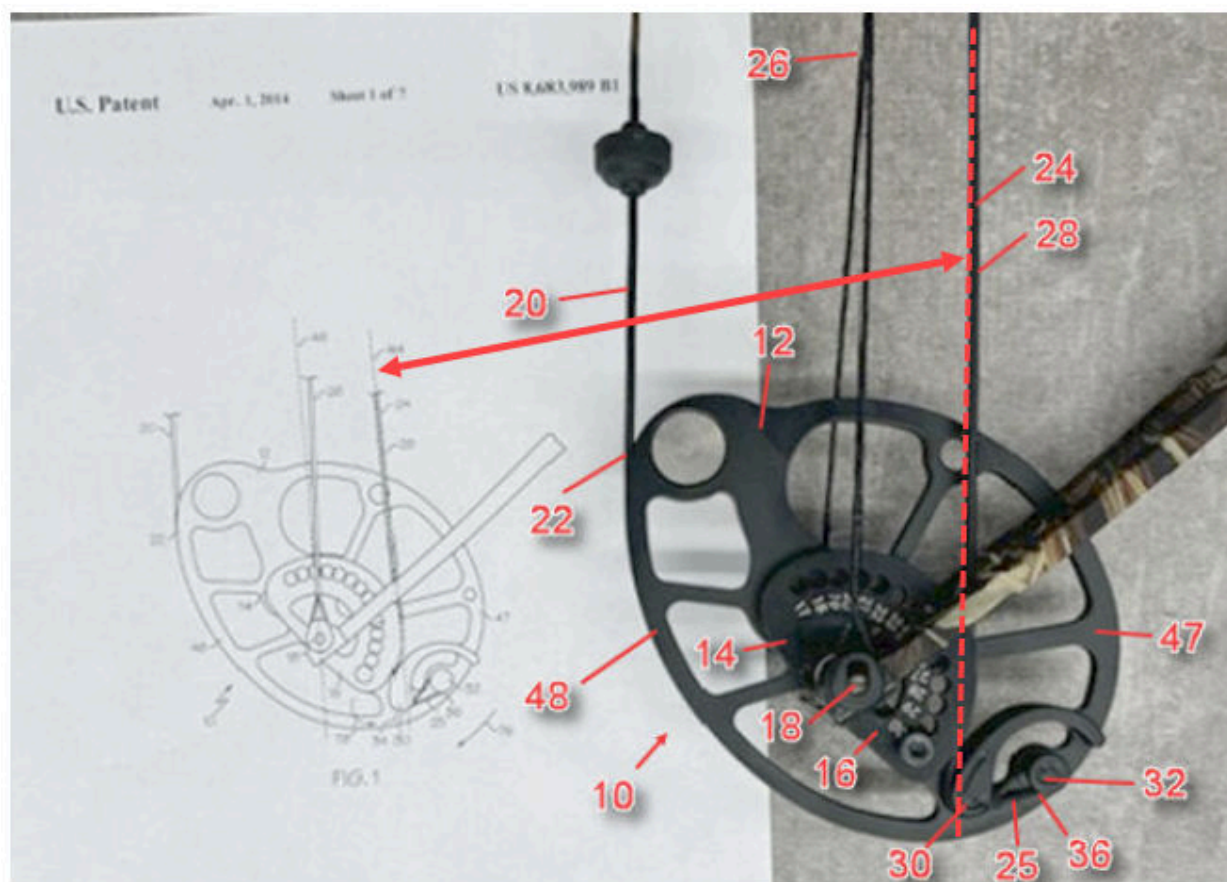
Moreover, Reinholtz's annotated photographs simply mirror the planes represented by elements 44 and 46 depicted in the patent figures to clearly demonstrate how McPherson's bows embodied his invention. The fact that McPherson's bows embodied these particular claim limitations is self-evident to any

⁶ Claim limitations 12(b)(ii) and 19(b)(ii) merely define a plane formed by the bows two axles that used by other limitations to define component positions. *See* EX2018, ¶¶72-73, 91. In Claim 13 a plane defined by the elongate straight portion of the power cable is used to define relative positions of the first axle and the terminal on opposite sides of the plane. *See* EX2018, ¶¶67, 90.

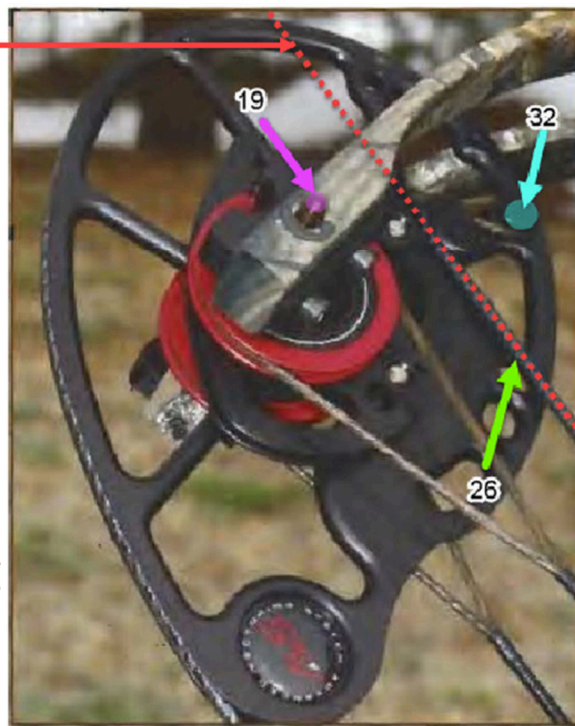
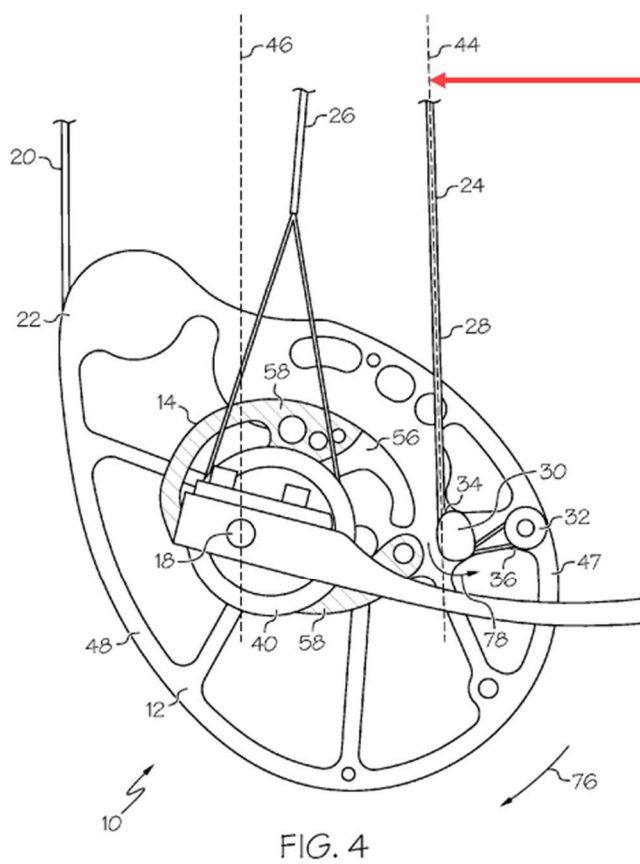
ordinary observer at least because the physical bow cams closely match the patent figures. *See Supra* §II.A; POR, 7-13; EX2018, ¶¶38-60.



EX1001, FIG. 1; EX2018, ¶67.



EX2017, App. A, Photo 6 (lower cam annotated).



EX1001, FIG. 4; EX2018, ¶90.

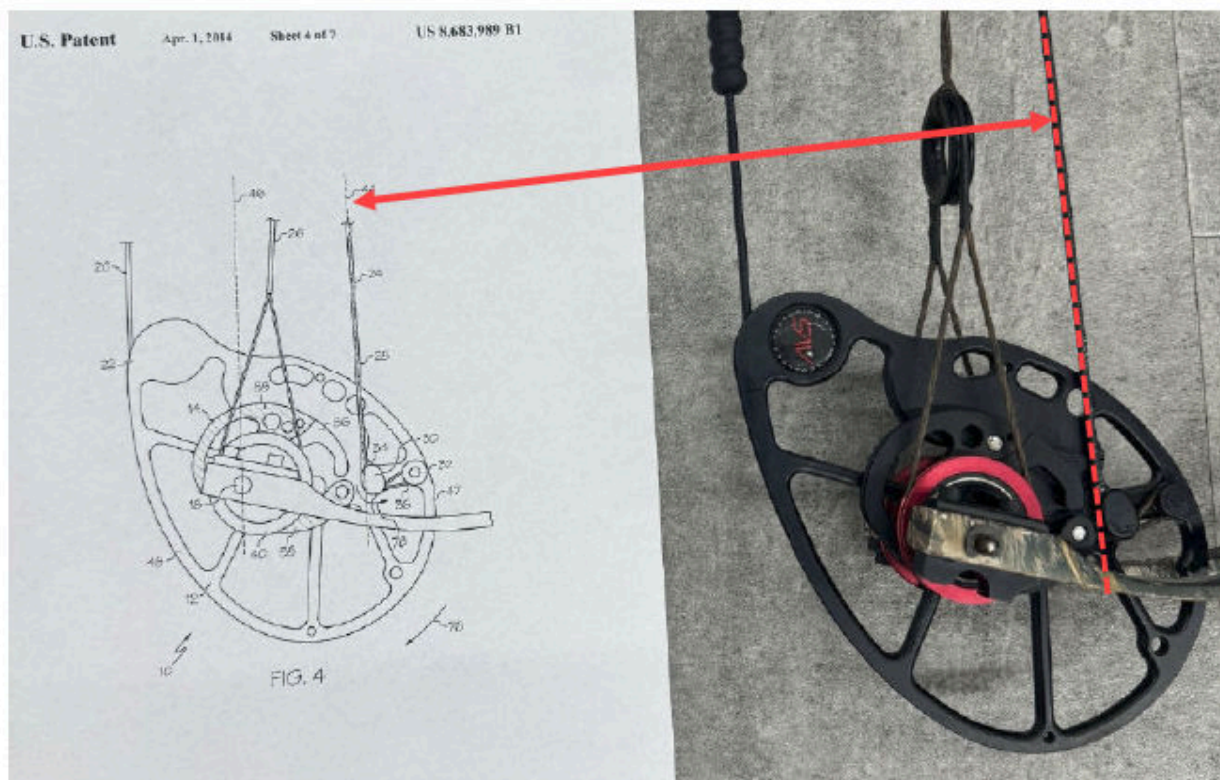
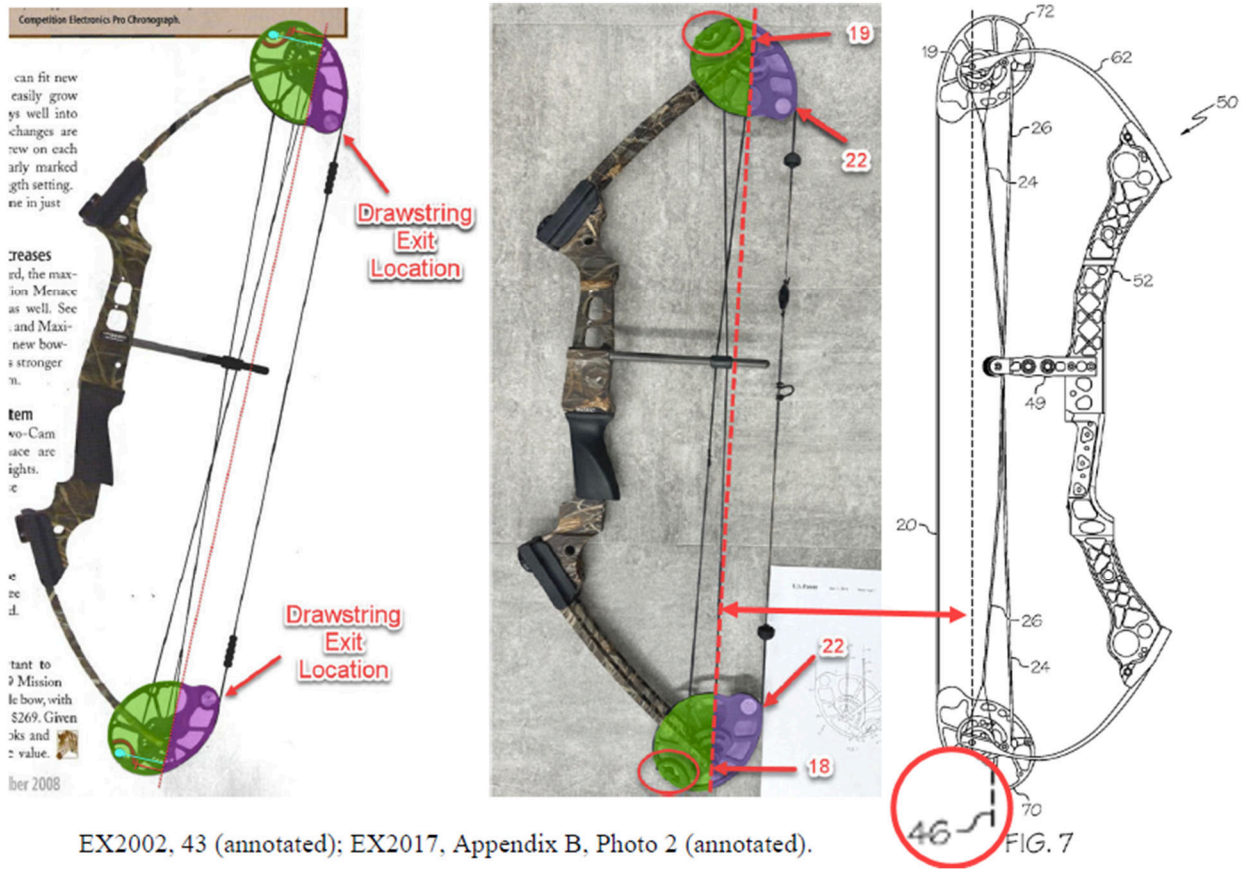
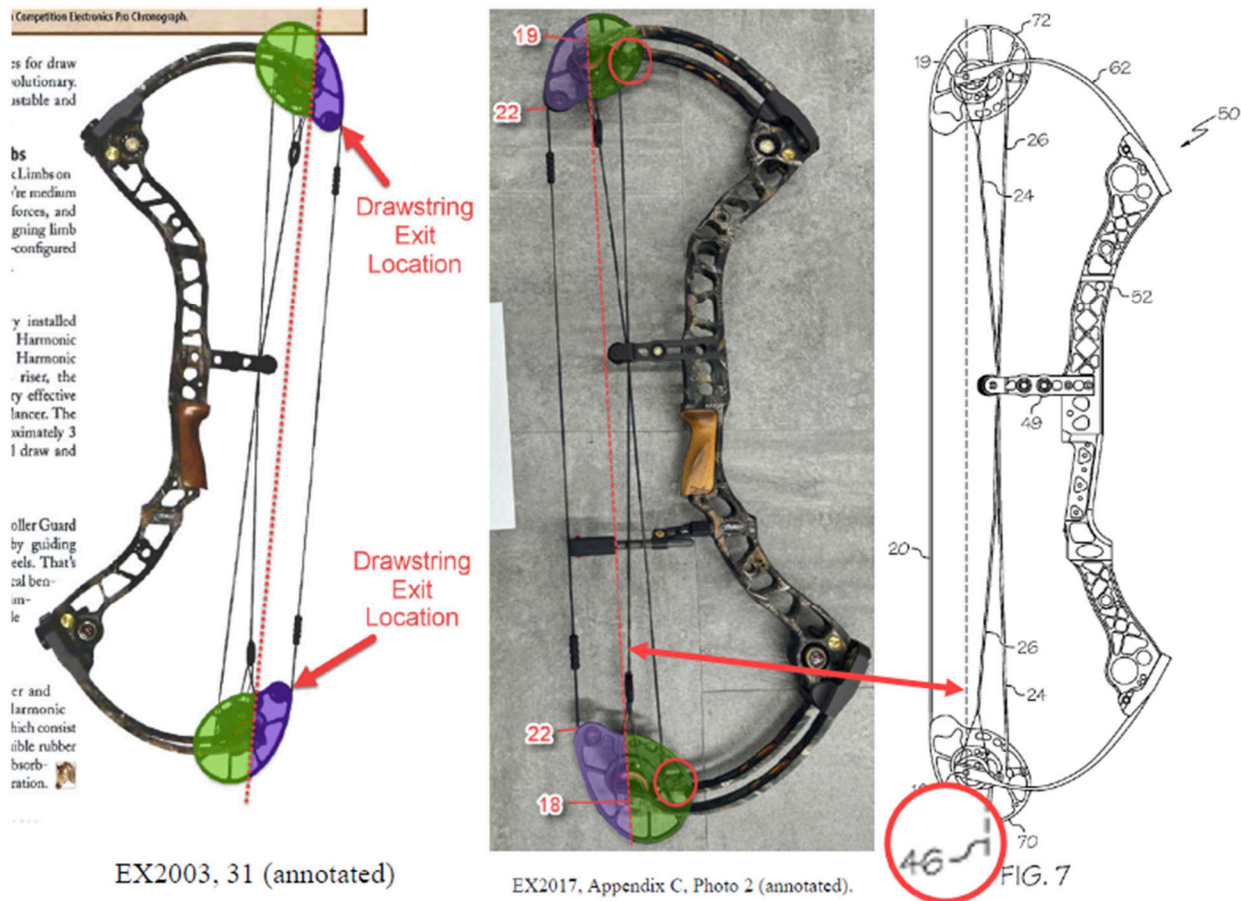


Photo 5: Monster '775 bow lower cam in brace condition next to FIG. 4 of US Pat. No. 8,683,989.



EX2002, 43 (annotated); EX2017, Appendix B, Photo 2 (annotated).

EX2018, ¶73; EX1001, FIG. 7.



EX2018, ¶91; EX1001, FIG. 7.

Petitioner further argues that Reinholtz’s testimony drawing dashed lines to indicate planes formed by physical bow components is “wholly conclusory and entitled to no weight.” Reply, 9, 10. Petitioner is wrong. Dr. Reinholtz explains that the plane extending from the power cable’s elongate portion “would be perpendicular to the cam (e.g., extending into/out of the photograph) **because the plane is used to define locations of features on the cam.**” EX2018, ¶67. Similarly, Reinholtz explains the direction of the axle plane based on the direction of the axles’

axis of rotation and that the parallel axles inherently define the axle plane. EX2018, ¶¶72, 91.

Petitioner's argument is also disingenuous. The testimony of Petitioner's own expert regarding the planes recited in the same claim limitations is less comprehensive than Dr. Reinholtz's. *Compare* EX2018, ¶¶67, 72-73, 90-91 *with* EX1003, ¶¶73, 81; *see also* EX2018, ¶¶39-60. Any argument that Dr. Reinholtz's testimony should be excluded as conclusory on these claim limitations applies equally or more to Mr. Lange's, and consequently, the petition fails to show these claim limitations are taught by its prior art.

III. CREDIBILITY

In a last-ditch effort, Petitioner wastes its time on a trumped-up on-sale bar allegation **that is not before the board**. Petitioner's allegations are based, in part, on an inaccurate statement in the POR that "product was first shipped to customers on September 26, 2008." Reply, 12, citing POR, 7. Petitioner, however, ignores that MCP had informed them that the statement was inaccurate before Petitioner filed its

reply.⁷ As MCP's email to Petitioner explained, the statement was an inaccuracy – as the entire record, and Mr. Hoff's testimony, unequivocally establish that the September 26, 2008 bows were not shipped to customers, but rather provided to Mr. McPherson. *See also*, EX1016, 14:17-25 and 35:15-24 (Mr. Hoff discussing bows provided to Mr. McPherson based on associated customer number).

Petitioner's attempt to create a credibility issue, where none exists, only exposes its own willful disregard for the truth. An actual examination of the record, uncontroverted and fully ignored by Petitioner, shows that the only credibility shortfall lies with Petitioner.

Here are the facts.

- Mathew McPherson is the sole named inventor of the '831 Patent. EX1001.
- Mr. McPherson was the chief Engineer, CEO, and owner of Mathews Archery and Mission Archery, the companies that developed the Menace bows. EX2006, ¶2; EX1017, 29:17; EX2019.

⁷ As noted above, the PTAB has MCP's email to Petitioner regarding the inaccuracy in the POR. The email is the first email in the email string forwarded from MCP's counsel to trials@uspto.gov on March 10, 2025, when MCP requested the Board's assistance with Petitioner's protective order breach.

- Mr. McPherson personally designed the “reverse wrap” cams used in the Menace bows, which are claimed in the ’831 Patent. EX1017, 10:10-14; EX2006, ¶6.
- The record shows that, on September 26, 2008, [REDACTED]
[REDACTED]
[REDACTED] EX1017, 30:16-32:10. This was recorded Mathew’s inventory/ERP system as “shipped” under a customer code used internally for documenting bows retained within the company. EX2016, 19; EX1016, 14:17-25 (Mr. Hoff explaining the bows were provided to Mr. McPherson), 35:15-24 (explaining the internal customer code).
- No other Menace bows were “shipped” before October 3, 2008. EX2016, 19 (App. A).
- No payment was made for the two bows in question. As the CEO, owner, chief engineer, and inventor, Mr. McPherson does not need to buy test bows from his own company. EX1017, 37:19-22 (Mr. McPherson was “Absolutely not” a customer of his own company).

No on-sale bar allegation can survive with these facts—but Petitioner is undeterred. Petitioner continues its disingenuous argument by asserting that the

inaccuracy in the POR was not merely error because “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).” Reply, 12. The statement in the POR was an unfortunate error, but it was an error that Patent Owner corrected, and it is not supported by Mr. Hoff’s declaration or its Appendix. The Appendix referenced by Petitioner is the appendix to Mr. Hoff’s declaration and simply contains computer records Mr. Hoff testifies to. EX2016. Moreover, Mr. Hoff’s declaration said only that 12,110 bows were “**produced** and shipped” over a nine-month timeframe – “between September 26, 2008 and June 29, 2009” – and does not specify to who or when any particular bow was shipped. When asked at his deposition, Mr. Hoff further explained [REDACTED]

[REDACTED]

EX1016, 14:5-11, 29:5-14. Mr. Hoff also noted the records themselves identify the internal customer code for the September 26, 2008, bows, as Mathews’ “internal customer number primar[ily] used [] to get things out of [] inventory.” *Id.*, 38:15-22. It is an unquestionable fact that neither Mr. Hoff nor the computer records in his appendix show bows sold to bonafide customers or transferred outside of the Mathews organization before October 3, 2008.

Petitioner’s allegations are wrong and immaterial to this proceeding.

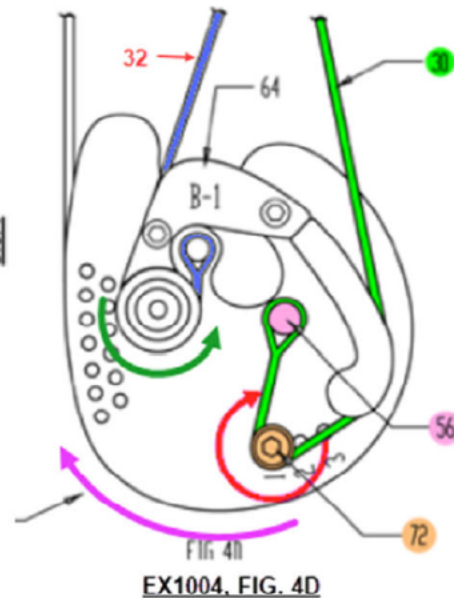
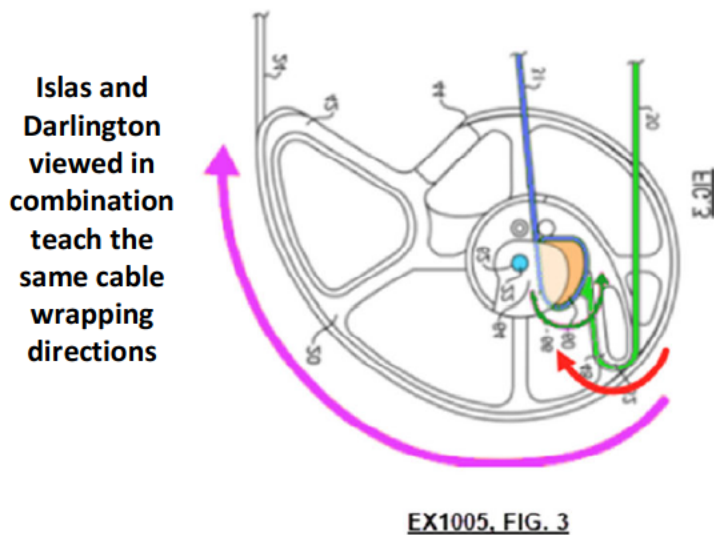
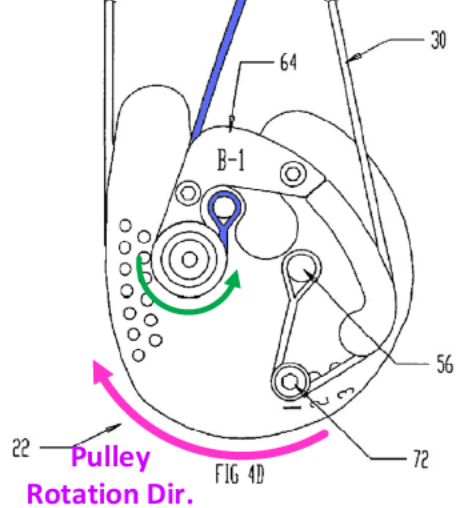
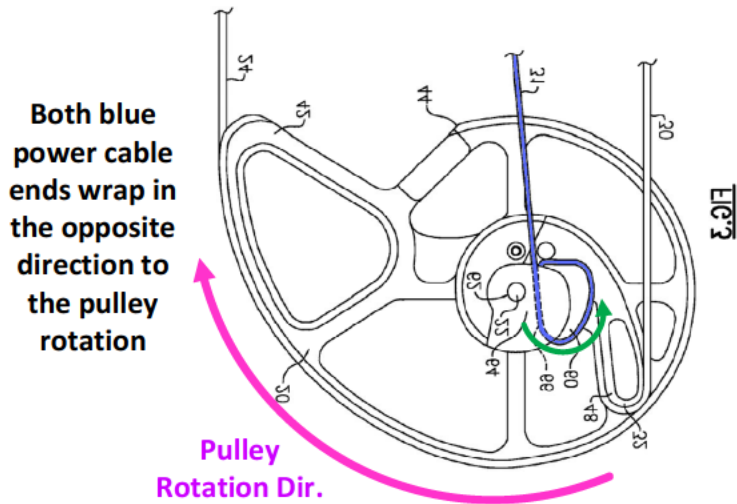
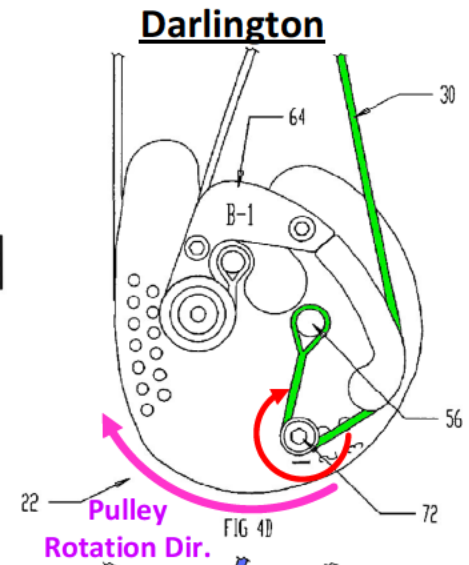
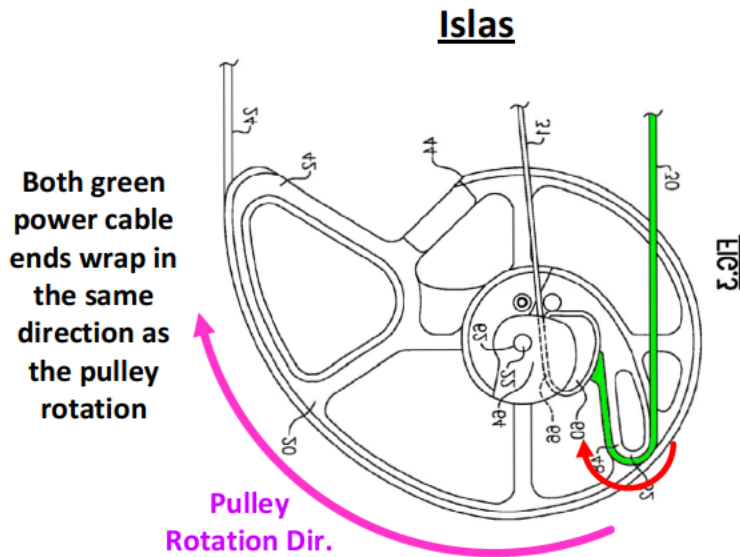
IV. FAILURE OF PETITIONER'S OBVIOUSNESS

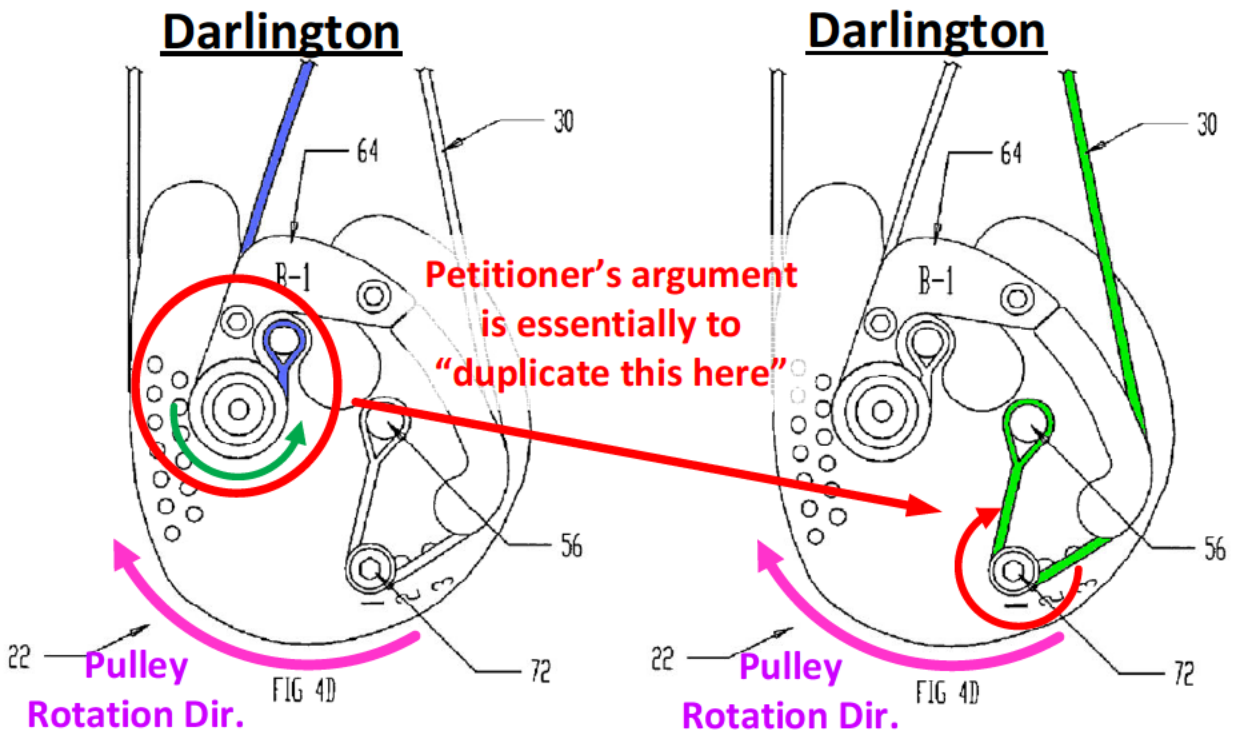
Contrary to Petitioner's assertion, MCP does not improperly attack Petitioner's mapping by attacking the references individually. Reply, 15. Rather, MCP exposes Petitioner's willful blindness to the content of its references. POR, 78, 84, 85. To wit, Petitioner emphasizes that the *only* concept from Islas that it applies in its combination with Darlington is the "rotational direction of [Islas's] power cable." Reply, 16; EX1003, ¶55. Yet, the POR demonstrates the fallacy of this assertion in that: 1) Islas does not disclose a power cable rotational direction different from Darlington; and 2) changing a power cable rotational direction is *not the only modification* Petitioner made to Darlington's pulley in creating its "modified pulley." POR, 78, 82-90.

A. Cable Wrap Direction

Petitioner asserts "*Islas* teaches that reverse wrapping power cables was known. *Islas*' wrap direction would have been advantageously applied to *Darlington*'s power cable 30." Reply, 16. Neither is true. Comparing the references side-by-side make clear the fact that Petitioner ignores—there is no distinguishable difference in the power cable wrapping *directions* disclosed in the references. Both disclose the *same wrapping directions*, and so there is no reason to apply Islas' wrap direction to Darlington. POR, 82-85 (citing EX2018, ¶¶111-113); EX2020;

EX2021; EX2012, 41:18-42:16, 73:9-74:17 (both experts agree on cable wrap directions). This common wrapping direction is clear from the following series of images of Islas and Darlington. *Id.* As demonstrated by the series of images below, Petitioner is essentially arguing it would have been obvious to combine Darlington with itself. *Id.*





Petitioner further ignores the function of the cams and power cable ends described in each reference and a POSITA's understanding of these details. POR, 86. As explained in the POR, a POSITA would understand the Darlington and Islas cable wrap directions in view of how the different power cable ends interact with pulley components based on the cable end wrap directions to either wrap or unwrap portions of the power cables as the pulley rotates during draw. POR, 86-90; EX2018, ¶¶111-113 (referencing animations of Darlington and Islas pulley rotation during draw). Petitioner provides no contradicting expert testimony. Instead, Petitioner asserts only attorney argument dismissing this functional difference as being "of no moment" because the "the function of *Darlington's* cable is not being modified" in

its modified pulley. Reply, 17. But, this misses the point. It is precisely because the POSITA understood the functions of the power wrapping directions for Darlington and Islas's power cable ends that the POSITA necessarily also understood that there was no reason to combine Islas with Darlington. POR, 87-90. In other words, the prior art does not teach or suggest applying reverse wrap to a wrapping end of a power cable. POR, 86-90; EX2018, ¶¶111-113. Petitioner's combination of Islas and Darlington just does not add up.

Petitioner further seeks to distract from this point by misleading the Board to believe that Reinholtz's deposition discussion that the two power cables (as a whole) perform the same function somehow undercuts the important distinction he makes between the distinct wrapping/unwrapping functions played by opposing **ends of each power cable** on an individual cam. Reply, 17. In fact, within the same deposition answer Reinholtz clarifies this point for Petitioner's counsel:

[the power cables] share a common purpose of causing the limb to deflect—or the limbs of the bow to deflect to store energy. One—one of these cable[s] ... [cable] 31 is a cable that as the bow is drawn, 31 unwraps from its Cam 60. And as the bow is drawn Cable 30 wraps to take up slack, and the wrap—the wrapping always must be greater than the unwrapping or else the—the cable goes slack and the bow will explode, and it's very dangerous for that to happen.

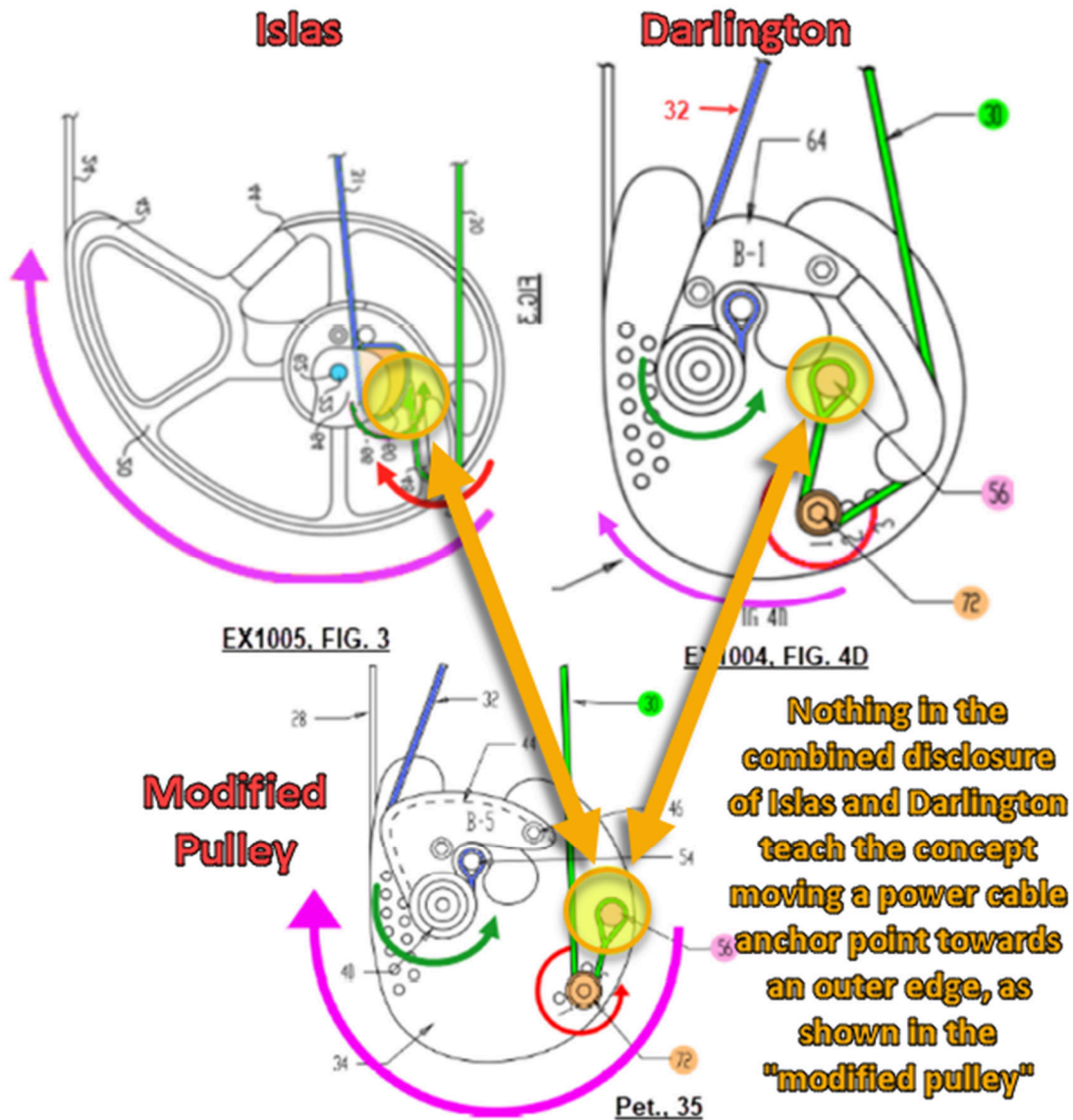
EX1019, 33:17-34:2. The function of the power cables as a whole is not disputed. But, as Reinholtz makes clear, the wrapping/unwrapping function of each particular cable end around a particular cam is critical. Id.; EX2018, ¶¶111-113. Petitioner's false equivalence between the power cables as a whole and the wrapping/unwrapping function of the cable ends only belies Petitioner's failure to comprehend the scope and content of its own combination of references.

Petitioner also seeks to distract with other irrelevant arguments, such as whether Islas's power cables would be bodily incorporated into Darlington. Reply, 16-17. However, Petitioner does not cite to anywhere in the POR where MCP makes such arguments because we do not. This is pure distraction.

B. Anchor Positioning

The POR explains that when the combination of Islas's and Darlington's pulleys are viewed side-by-side along with Petitioner's modified pulley, it becomes clear that Petitioner's "modified pulley" required more modifications than simply changing a cable wrap direction. POR, 76-78. Moving Darlington's anchor 56 outward to the edge of the periphery of Petitioner's modified pulley is one of several

additional, unsupported modifications Petitioner must make to Darlington in order to map to MCP's "reverse wrap" claim limitations.⁸ POR, 79.



POR, 78 (with additional annotations).

⁸ Claim elements 1(d)(ii)-(e), 1(f), and 11(e)(i)-(ii) for the '831 patent. POR, 101-103.

Petitioner, not MCP, presented the “modified pulley,” and thus, it bears the burden of proving that its modifications to Darlington “have an adequate evidentiary basis” and a rational connection to the scope and content of its references. *In re Nuvasive, Inc.*, 842 F.3d 1376, 1381-82 (Fed. Cir. 2016). It has not met this burden. POR, 79-82. The best “explanation” Petitioner can muster is a generic and conclusory appeal to “design choice.” Reply, 18-19 (citing Pet., 40; EX1003, ¶56-59). The Petition itself includes only a conclusory statement that a “PHOSITA would have recognized the exact placement, arrangement, and relative sizes” of various elements generally on the pulley “are design choices.” Pet., 40. This broad assertion is supported only by Lange’s similar conclusory statement that “To produce such a modified bow, a PHOSITA would have utilized any necessary ordinary skills...such as changing the relative distances between the capstan and terminal, the sizes of any of the elements illustrated.” *See*, Pet., 40, EX1003, ¶56-59. But the position of the anchor is not trivial to functioning of the cam and is part of what yields the advantages of the claimed design. *See, e.g.*, EX1019, 9:21-13:22 (Reinholtz discussing the interplay between reverse wrap, anchor position and draw length). Petitioner’s conclusory appeal to “design choice” falls far short of the specificity required to support a finding of obviousness, and Lange’s conclusory support is entitled to no weight. *Cutsforth, Inc. v. Motivepower, Inc.*, 636 F. App’x 575, 578 (Fed. Cir. 2016) (Reversing the PTAB for “[m]erely stating that a particular

placement of an element is a design choice ... [Rather, the] Board must [explain why a POSITA] would have made **the specific design choice ...**”); *Xerox Corp. v. Bytemark, Inc.* IPR2022-00624, Paper 9 (PTAB 2022) (precedential) (holding a declaration is entitled to little weight when it contains an exact restatement of the petition’s unsupported, conclusory assertions without any additional supporting evidence or reasoning).

V. FAILURE OF PETITIONER’S ALLEGED MOTIVATIONS

In the Reply, Petitioner still fails to show any rational connection, i.e., nexus, between its three alleged motivations and “reversing the wrap direction of Darlington’s power cable 30—the **only** concept that is allegedly adopted from Islas.” POR, 91-92 (citing Pet., 32-40); EX1003, ¶55; *see also* Reply, 19-26. To properly support obviousness the Petitioner must show that “a skilled artisan not only **could have made** but **would have been** motivated to make the combinations or modifications of prior art **to arrive at the claimed invention.**” *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015). There must be some nexus or “rational connection” between the alleged motivations and Petitioner’s proposed modification. *In re Nuvasive, Inc.*, 842 F.3d at 1382; *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (The factfinder must determine that “there was **an apparent reason** to combine the known elements **in the fashion claimed by the**

patent.”); *Metalcraft of Mayville, Inc. v. Toro Co.*, 848 F.3d 1358, 1367 (Fed. Cir. 2017).

MCP rebuts Petitioner’s motivations to combine by demonstrating Petitioner’s failure to show such connection. POR, 91-96. The POR demonstrates that, at best, Petitioner only rationally links its three alleged motivations to the removal of Darlington’s “fixed section 42,” **not** to changing cable wrap direction. *Id.* Petitioner’s reply is willfully blind to this principal argument and distracts from it with allegations that “MCP forgets” the ordinary creativity of a “PHOSITA.” Reply, 19-20. Petitioner’s blind appeals to the general common sense of a POSITA to “utilize[] any necessary ordinary skills ... such that [Petitioner’s] bow [would be] operable and provide[] the desired improvements [of] safety, simplicity, maintenance, and draw length” still fail to show that the **specific modification of reversing a cable wrap direction** on a bow cam has any causal connection to its alleged motivations. Reply, 19-25. Instead, Petitioner’s generic appeals to the ordinary creativity of a POSITA essentially amount to an argument that “a POSITA would have been motivated to make any modifications necessary to read on the claims of McPherson’s patent.” *Metalcraft*, 848 F.3d at 1367; *ActiveVideo Networks, Inc. v. Verizon Communs., Inc.*, 694 F.3d 1312, 1327 (Fed. Cir. 2012)(Conclusory expert “testimony on obviousness ... is not sufficient.”).

A. Petitioner's Three Alleged Motivations

Petitioner argues that Lange's declaration "supports" each of its three motivations and attacks Reinholtz's analysis of these motivations. Reply, 20-25. What Petitioner misses is that MCP does not contest whether "Mr. Lange's declaration supports" the desirability of each of these motivations in the abstract. Rather, MCP's POR shows, as explained below, that neither Petitioner nor Lange present a rational connection between the proffered motivations and changing the wrap direction of Darlington's power cable. POR, 91-96.

Petitioner explains "[t]he Petition lays out three reasons a PHOSITA would have been motivated to modify *Darlington* based in [*sic*] *Islas*'s teachings." Reply, 20. And, Petitioner is quite clear that "[i]n [its] combination, '...**only** the rotational direction of [*Islas*'s] power cable ... is being combined..." to modify "*Darlington*'s power cable 30." Reply, 16. Petitioner is also clear that "[t]his is the combination that MCP must attempt to rebut." *Id.* But, Petitioner ignores that this combination is also the one that Petitioner must demonstrate a POSITA would have been motivated to make. *Belden*, 805 F.3d at 1073. Here, Petitioner fails. POR, 97-96.

Motivation (1) increased safety and maintainability:

The Petition discusses safety and maintainability but never draws a rational connection to changing the wrapping direction of Darlington's power cable 30.

POR, 93-95. Instead, Petitioner devotes two full paragraphs to explaining how reducing “unwanted cable contact” would reduce cable wear including “wear [that] naturally occurs as a cable rides in and out of a track,” without explaining how changing the wrap direction minimizes such contact or wear. Pet., 33-34; POR, 93-94. Instead, Lange admitted that “the only contact his proposed combination removed was the contact of the power cable with [Darlington’s] section 42.” POR, 94. Hence, any improvement in safety and maintainability supported by the Petition is the result of removing section 42, not changing the power cable wrap direction. POR, 94-95.

Motivation (2) design simplification and reduced cost:

The Petition’s discussion of this motivation is limited to one paragraph spanning pages 34-35. POR, 95. But, Petitioner’s expert “*only* testifies that [this motivation is] a result of the removal of Darlington’s section 42.” Id.; EX1003, ¶60. Petitioner’s Reply does not contest this point, but rather, doubles down on it: “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.” Reply, 23 (citing Pet., 32-33, 38-40). At best, Lange makes a bare conclusory statement that “[a]s an added benefit of the modification [presumably referring to changing cable wrap], the section 42 ... would

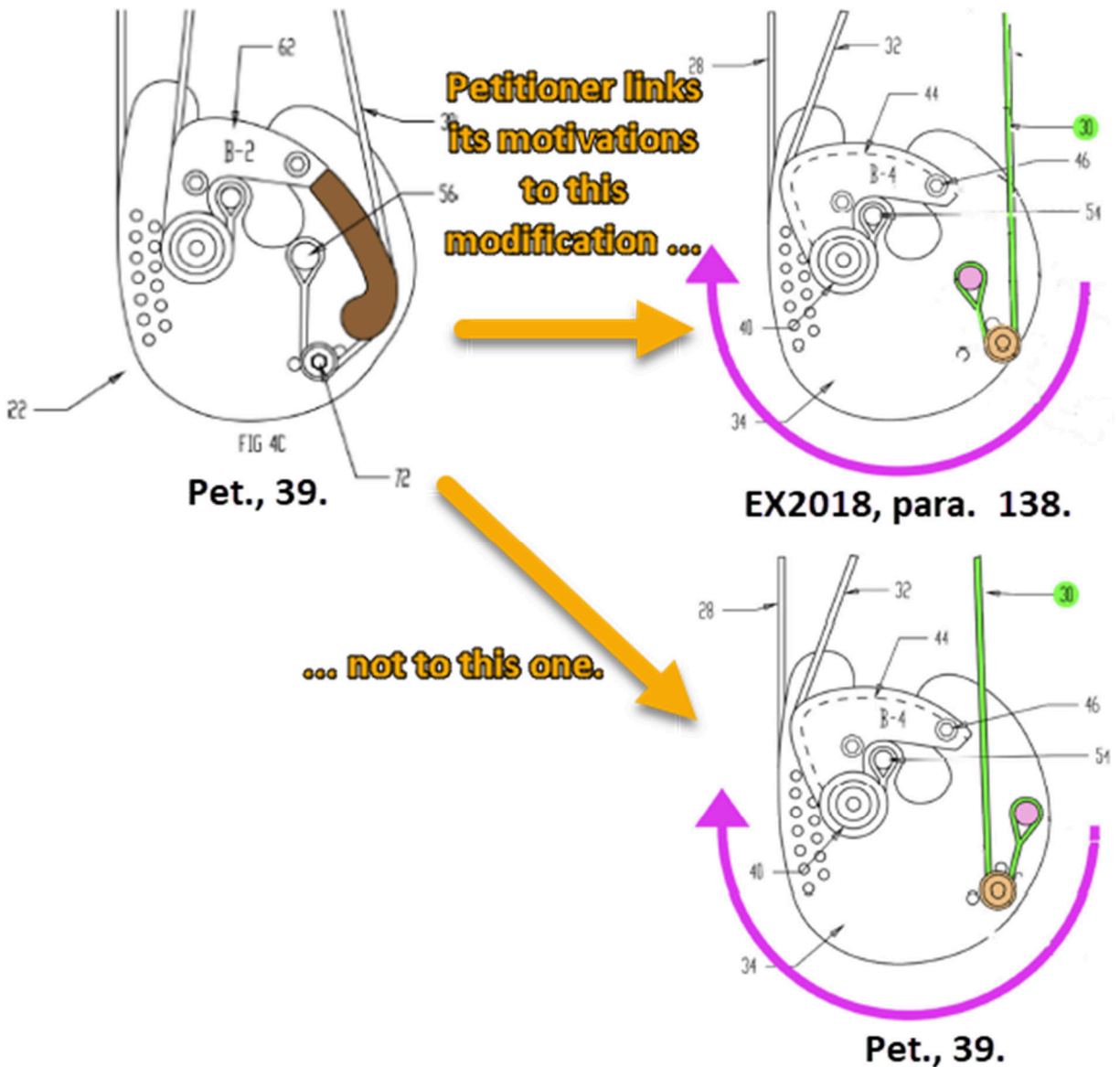
have been rendered superfluous ... simplifying the overall design” of Darlington’s pulley. EX2013, ¶62. Even under this overly generous interpretation, neither Petitioner nor Lange explain why section 42 is superfluous. POR, 92-93, 95. *ActiveVideo*, 694 F.3d at 1327.

Motivation (3) increased angular sweep:

Although Reinholtz questions whether any of Petitioner’s modified pulleys would actually increase angular sweep (POR, 96-97; EX2018, ¶¶131-134), and Lange concedes they do not (EX2012, 93:5-95:9), the Petition bluntly links this alleged motivation only to removal of section 42. POR, 95-96 (citing Pet., 35). And, again the Reply doubles down on this point. Reply, 25 (The Petition “explains the relationship between the removal of section 42 and the desirability of increasing the maximum rotation of *Darlington’s* pulley”). So, even if both Reinholtz and Lange are wrong on the modified pulley’s increased sweep, there is no evidence linking this to a change in power cable wrap direction.

In sum, removal of section 42 is the only modification that Petitioner and its expert link to any of its alleged motivations. Pet., 32-36; EX1003, ¶¶56-62. Which begs the question: Why would the POSITA reverse the wrap direction of Darlington’s power cable 30—using a concept not present in either reference (*supra*

§III.A)—when Petitioner and its expert demonstrate that each of the proffered motivations is achievable by simply removing section 42? *See* POR 91-96; Reply, 23, 25. Neither the Petition nor Petitioner’s Reply answer this crucial question.



B. Reinholtz Testimony

The Reply also takes issue with Dr. Reinholtz's analysis of potential problems with Petitioner's modified pulley (e.g., introduction of cam lean, potential for derailment) and the substance behind Petitioner's alleged motivations (e.g., whether the modified pulley could achieve increased angular sweep). Reply, 21-26. Petitioner's issues with Reinholtz's analysis are immaterial to, and distractions from, the fundamental point of whether the Petition shows the required rational connection between any of its alleged motivations and its crucial modification—reversing Darlington's power cable wrap. It does not. Even so, none of Petitioner's arguments contesting Reinholtz's analysis are supported by evidence or expert testimony. Reply, 21-26. All amount to mere attorney argument. Petitioner did not provide any further testimony from Mr. Lange to contradict Reinholtz's analysis or methods. Therefore, Petitioner's arguments should be given no weight. *Icon Health*, 849 F.3d at 1043; *Gemtron Corp.*, 572 F.3d at 1380.

VI. CONCLUSION

For at least the reasons discussed above, Petitioner has failed to demonstrate that any of the Challenged Claims are unpatentable.

Respectfully submitted,

Date: April 17, 2025

/Kenneth J. Hoover/

Joshua A. Griswold, Reg. No. 46,310
Matthew A. Colvin, Reg. No. 66,843
Kenneth J. Hoover, Reg. No. 68,116
Kenneth Langley, Reg. No. 80,549
Fish & Richardson P.C.
60 South Sixth Street, Suite 3200
Minneapolis, MN 55402
T: 214-747-5070
F: 877-769-7945

Attorneys for Patent Owner

CERTIFICATION UNDER 37 CFR § 42.24(d)

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Patent Owner's Sur-Reply totals 5,210, which is less than the 5,600 allowed under 37 CFR § 42.24(c).

Respectfully submitted,

Date: April 17, 2025

/Kenneth J. Hoover/
Joshua A. Griswold, Reg. No. 46,310
Matthew A. Colvin, Reg. No. 66,843
Kenneth J. Hoover, Reg. No. 68,116
Kenneth Langley, Reg. No. 80,549
Fish & Richardson P.C.
60 South Sixth Street, Suite 3200
Minneapolis, MN 55402
T: 214-747-5070
F: 877-769-7945

Attorneys for Patent Owner

CERTIFICATE OF SERVICE

Pursuant to 37 CFR § 42.6(e)(4) and 42.205(b), the undersigned certifies that on April 17, 2025, a complete and entire copy of this Patent Owner's Sur-Reply was provided by email, to the Petitioner, by serving the email correspondence address of record as follows:

Adam P. Seitz, Reg. No. 52,206
Adam M. Sandwell, Reg. No. 72,484
Chris R. Schmidt, Reg. No. 63,982
Erise IP, P.A.

Adam.Seitz@eriseip.com
Adam.Sandwell@eriseip.com
Chris.Schmidt@eriseip.com
PTAB@eriseip.com

/Anastasia Renard/
Anastasia Renard
Fish & Richardson P.C.
60 South Sixth Street, Suite 3200
Minneapolis, MN 55402
renard@fr.com