RAVIN CROSSBOWS, LLC (Petitioner)

v.

MCP IP, LLC (Patent Owner)

Patent Owner's Demonstratives

Case Nos. IPR2024-00522; IPR2024-00523; IPR2024-00524
U.S. Patent Nos. 8,683,989; 9,354,017; 9,909,831
Before Hon. Meredith C. Petravick, Mitchell G. Weatherly, Arthur M. Peslak
Administrative Patent Judges

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

MCP 2024
RAVIN v. MCP
IPR2024-00523

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’989 Patent; ’017 Patent; ’831 Patent

(12) **United States Patent**
McPherson

(10) **Patent No.: US 8,683,989 B1**
(45) **Date of Patent: Apr. 1, 2014**

(54) **ARCHERY BOW CAM**

(75) Inventor: **Mathew A. McPherson**, Norwalk, WI (US)

(73) Assignee: **MCP IP, LLC**, Sparta, WI (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 328 days.

(21) Appl. No.: **12/895,610**

(22) Filed: **Sep. 30, 2010**

Related U.S. Application Data

(60) Provisional application No. 61/247,473, filed on Sep. 30, 2009.

(51) **Int. Cl.**
F41B 7/00 (2006.01)

(52) **U.S. Cl.**
USPC **124/25.6**; 124/900

(58) **Field of Classification Search**
None
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

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4,060,066	A	11/1977	Kadlacek	
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4,774,927	A	10/1988	Larson	
4,838,236	A	6/1989	Kadlacek	
4,986,250	A	1/1991	Darlington	
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5,960,778	A	10/1999	Larson	
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6,516,790	B1 *	2/2003	Darlington	124/25.6
6,691,692	B1	2/2004	Adkins	
6,871,643	B2	3/2005	Cooper et al.	
6,990,970	B1 *	1/2006	Darlington	124/25.6
7,082,937	B1	8/2006	Land	
7,188,615	B2	3/2007	Chang	
RE39,880	E *	10/2007	McPherson	124/25.6
7,305,979	B1	12/2007	Yehle	
2010/0089375	A1	4/2010	Mcpherson et al.	

OTHER PUBLICATIONS

Priority U.S. Appl. No. 61/247,473, filed Sep. 30, 2009; Inventor: McPherson.

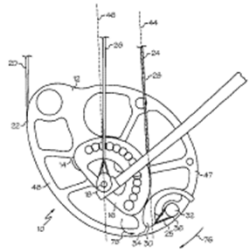
* cited by examiner

Primary Examiner — Gene Kim
Assistant Examiner — John E Simms, Jr
(74) *Attorney, Agent, or Firm* — Vidas, Arrett & Steinkraus

(57) **ABSTRACT**

In at least one embodiment, an archery bow includes a rotatable member comprising a cam track, a capstan and a terminal. A drawstring extends from the first rotatable member. A power cable is attached to the terminal and extends away from the rotatable member. The power cable comprises an elongate straight portion located near the rotatable member, a capstan portion in contact with said capstan and a terminal portion in contact with said terminal. In a brace condition, the power cable wraps around the capstan in a first rotational direction as the power cable is traversed from the elongate straight portion to the terminal portion. When the bow is drawn from the brace condition, the rotatable member rotates in a second rotational direction that is opposite the first rotational direction.

19 Claims, 7 Drawing Sheets



’989 EX1001 (Cover)

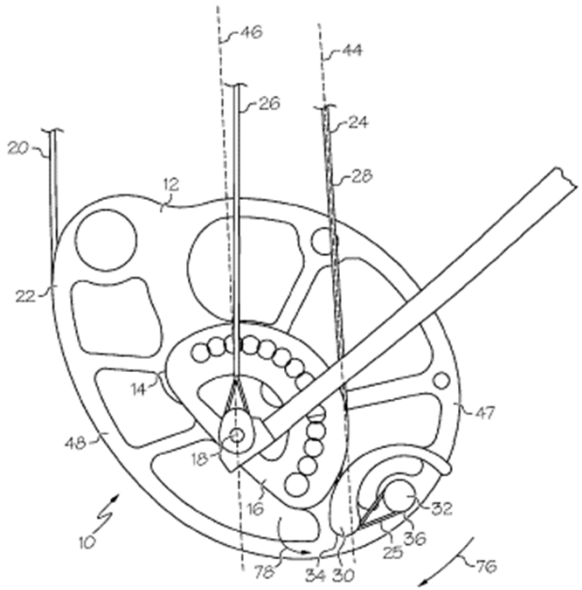


FIG. 1

EX1001, Fig. 1

’989 POR, 6-14; ’017 POR, 6-14; ’831 POR, 6-14;
EX2017, ¶3; EX2018, ¶¶43-44

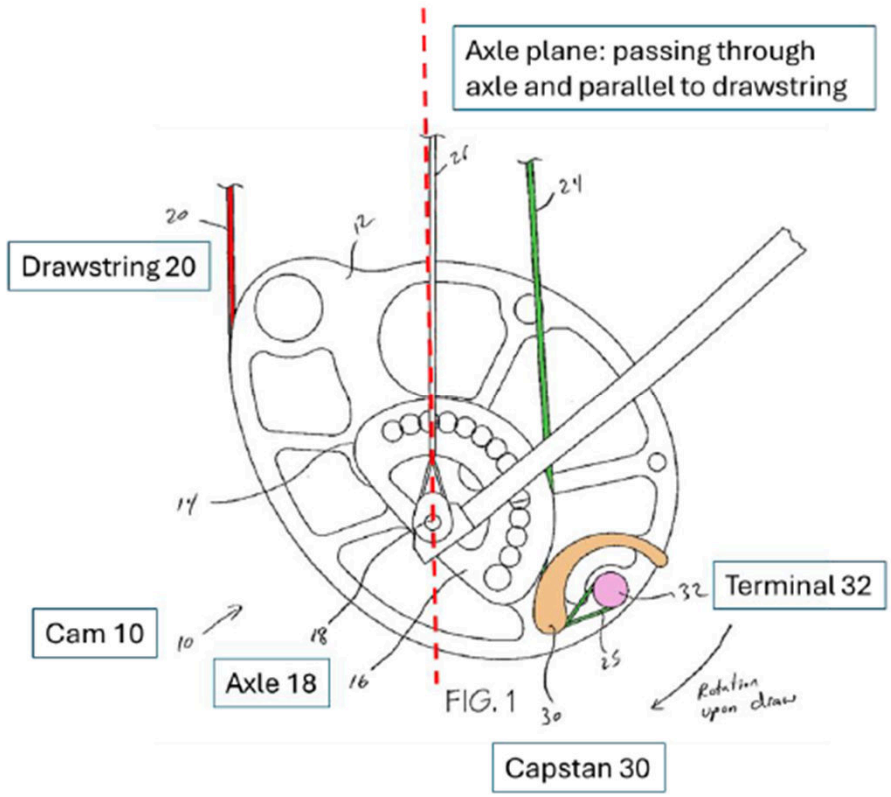
Explanation of Compound Bows

EX2017, Appendix Menace 455 Full Bow.mp4

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

POR, 76-77; EX2018, ¶¶102-107; Reply, 1

The Reverse Wrap



EX2001, Fig. 1; EX2018, ¶107

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

The Reverse Wrap

’989 POR, 2-5; ’017 POR, 2-5; ’831 POR, 2-5
EX2018, ¶¶29-31

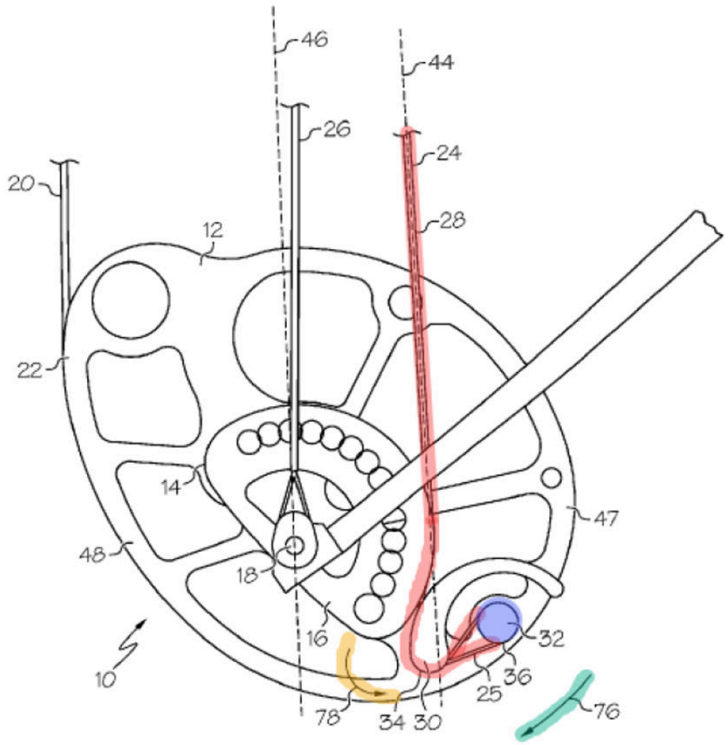


FIG. 1

’989 Patent, Fig. 1; POR, 4

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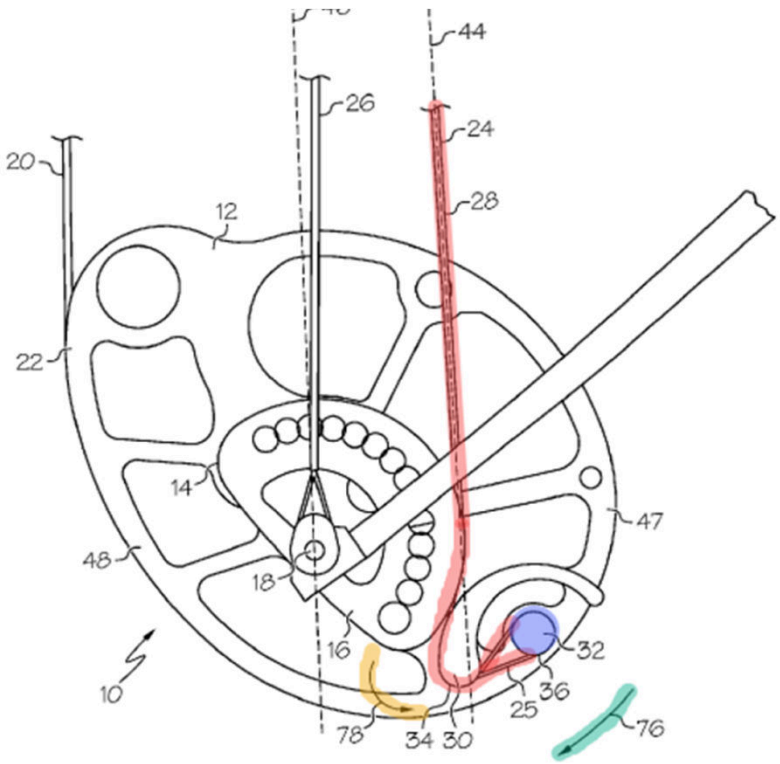
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 25-61; EX2018, ¶¶38-51, 60-83

The Reverse Wrap



’989 Patent, Fig. 1; POR, 4

Claim 1(e): “wherein, in the brace condition, the power cable wraps around the capstan in a first rotational direction as the power cable is traversed from the elongate straight portion to the terminal portion; and”

Claim 1(f): “when the bow is drawn from the brace condition, the first rotatable member rotates in a second rotational direction that is opposite the first rotational direction and”

Claim 11(g): “wherein, in the drawn condition, the capstan is located closer to the elongate straight portion [of the power cable] than the terminal.”

Claim 12(e)(i): “wherein, in the brace condition, the axle plane divides the first rotatable member to a first part and a second part, the capstan and the terminal located in the first part, the drawstring exit location located in the second part, and”

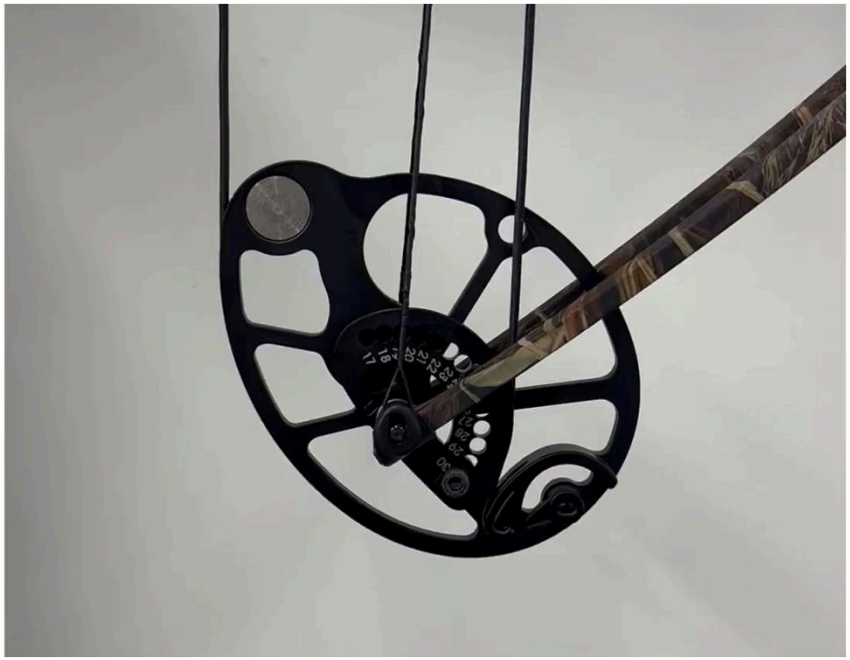
’989 Patent, Claims 1, 11, 12

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

The Reverse Wrap

’989 POR, 6-14; ’017 POR, 6-14; ’831 POR, 6-14;
EX2017, ¶3; EX2018, ¶¶43-44

EX2017, Appendix Menace 455 Full Bow.mp4



EX2017, Appendix Menace 455 lower cam.mp4

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

The Reverse Wrap

'989 Pet., 4; '017 Pet., 5; '831 Pet., 5; '989 Institution Decision, 48;
'017 Institution Decision, 45; '831 Institution Decision, 44

Patent No.	Claim(s) Challenged	35 U.S.C. §	Reference(s)
8,683,989	1-4, 7-19	103	Darlington, Islas
9,354,017	1-6, 9-20	103	Darlington, Islas
9,909,831	1-5, 8-19	103	Darlington, Islas

Darlington priority date – June 30, 2009
Islas priority date – Dec. 7, 2006

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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Darlington Is Not Prior Art

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Darlington's Filing Date

(54) **COMPOUND ARCHERY BOW**

(75) Inventor: **Rex F. Darlington**, Whittemore, MI (US)

(73) Assignee: **Darton, Inc.**, Hale, MI (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 260 days.

(21) Appl. No.: **12/459,316**

(22) Filed: **Jun. 30, 2009**

(51) **Int. Cl.**
F41B 5/10 (2006.01)

(52) **U.S. Cl.** **124/25.6**; 124/23.1; 124/86; 124/90

(58) **Field of Classification Search** 124/23.1, 124/25.6, 900, 90, 86
See application file for complete search history.

EX1004 (Cover)

(12) **United States Patent**
Darlington

(10) **Patent No.: US 8,205,607 B1**
(45) **Date of Patent: Jun. 26, 2012**

(54) **COMPOUND ARCHERY BOW**

(75) Inventor: **Rex F. Darlington**, Whittemore, MI (US)

(73) Assignee: **Darton, Inc.**, Hale, MI (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 260 days.

(21) Appl. No.: **12/459,316**

(22) Filed: **Jun. 30, 2009**

(51) **Int. Cl.**
F41B 5/10 (2006.01)

(52) **U.S. Cl.** **124/25.6**; 124/23.1; 124/86; 124/90

(58) **Field of Classification Search** 124/23.1, 124/25.6, 900, 90, 86
See application file for complete search history.

(56) **References Cited**

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4,774,927	A *	10/1988	Larson	124/25.6
4,838,236	A *	6/1989	Kudlacek	124/25.6
5,934,265	A *	8/1999	Darlington	124/25.6
6,082,347	A *	7/2000	Darlington	124/25.6
6,237,582	B1 *	5/2001	McPherson	124/25.6
6,250,293	B1 *	6/2001	Andrews	124/25.6
6,516,790	B1 *	2/2003	Darlington	124/25.6
6,691,692	B1 *	2/2004	Adkins	124/25.6
6,871,643	B2 *	3/2005	Cooper et al.	124/25.6
6,990,970	B1 *	1/2006	Darlington	124/25.6
6,994,079	B1 *	2/2006	Darlington	124/25.6
7,082,937	B1 *	8/2006	Land	124/25.6
7,188,615	B2 *	3/2007	Chang	124/25.6
7,305,979	B1 *	12/2007	Yehle	124/25.6
7,690,372	B2 *	4/2010	Cooper et al.	124/25.6
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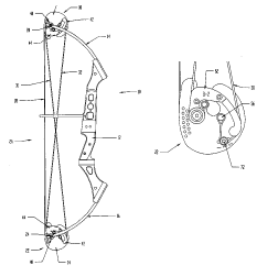
* cited by examiner

Primary Examiner — Gene Kim
Assistant Examiner — Alexander Niconovich
(74) *Attorney, Agent, or Firm* — Reising Ethington PC

(57) **ABSTRACT**

A compound archery bow includes a handle having projecting limbs, and first and second pulleys mounted on the limbs for rotation around respective axes. First and second cable anchors are disposed on the base adjacent to respective ends of a cable groove. A bow cable arrangement includes a bowstring cable extending from a bowstring anchor on the first pulley around a bowstring let-out groove and then toward the second pulley. A first cable extends from the first anchor on the first pulley through a portion of the cable groove on the first pulley and then toward the second pulley. A second cable extends from the second anchor toward the second pulley. Draw of the bowstring cable way from the bow handle lets out bowstring cable from the bowstring let-out groove on the first pulley and rotates the first pulley around its axis, lets out the first cable from the cable groove on the first pulley and takes up the second cable into the cable groove on the first pulley including a portion of such groove previously occupied by the first cable. The first pulley includes a hub surrounding the first axis and a removable draw module having an edge extending from the hub toward said second anchor. The cable groove extends along the edge of the draw module and the hub between the first and second anchors.

6 Claims, 5 Drawing Sheets



EX1004 (Cover)

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DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 5-76; ’017 POR, 5-75;
’831 POR, 5-70; EX2006; EX2016;
EX2017; PO sur-reply 3-11

Prior Actual Reduction to Practice

Supported by 4 independent & interrelated sources of information

- Sales Records – EX2016
  - **Over 12,000** Menace Bows produced and shipped before 06/30/2009
  - **Over 11,000** Monster Bows produced and shipped before 06/30/2009
- Physical Bows – EX2017
  - Menace Serial # 937455 – shipped on 11/04/2008
  - Menace Serial # 940817 – shipped on 11/18/2008
  - Monster Serial # 986775 – shipped on 04/21/2009
- *Inside Archery* Review Articles
  - Menace Review published Dec 2008 – EX2013
  - Monster Review published June 2009 – EX2014
  - Declaration of Eduardo Rother – co-owner of Publisher of *Inside Archery* – EX2015
- Declarations
  - Mathew McPherson – Inventor of ’989 Patent, ’017 Patent, and ’831 Patent – EX2006
  - Jerrod Hoff – Director of Operations at Mathews Archery 2006-2012 – EX2016

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Actual Reduction to Practice Before June 30, 2009

'989 POR, 5-76; '017 POR, 5-75; '831 POR, 5-70; EX2013, 42-43; EX2014, 30-31; EX2017; EX2018 ¶¶32-89

Menace

EX2017, App. A, Photo 2

Monster

EX2017, App. C, Photo 2

EX2013, 1, 42-43

EX2014, 1, 30-31

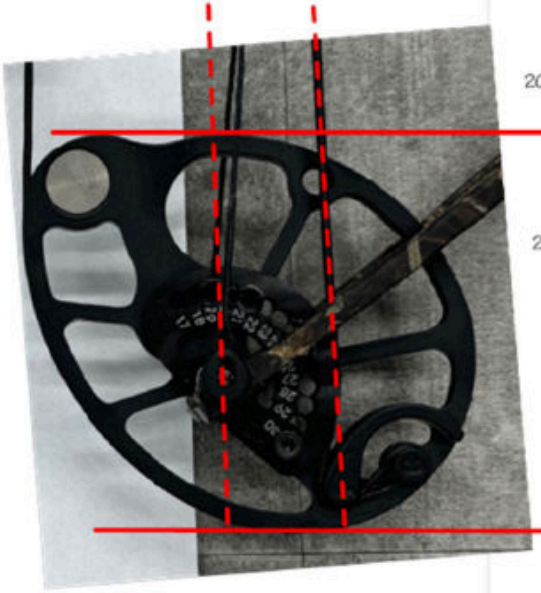
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Menace ’455 – ’989 Patent – *Inside Archery*

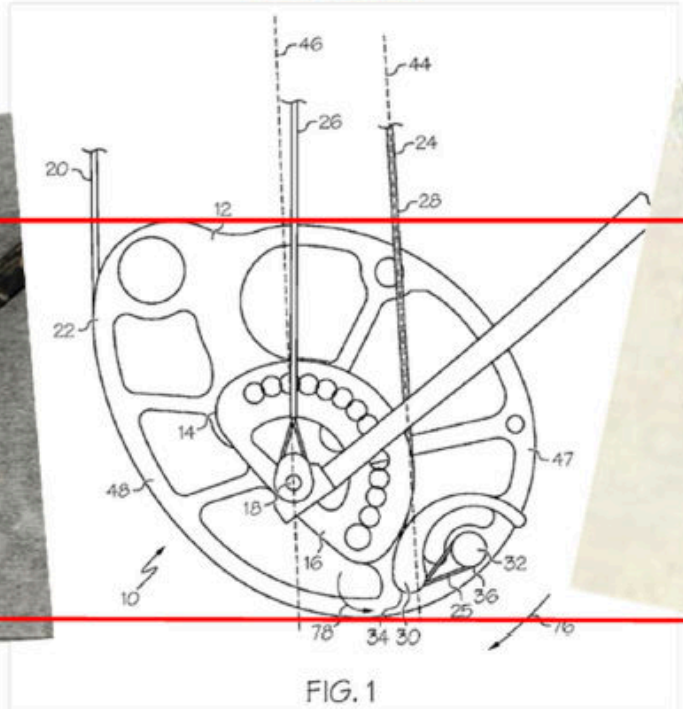
Undisputed Fact

Menace cams substantially match patent figures

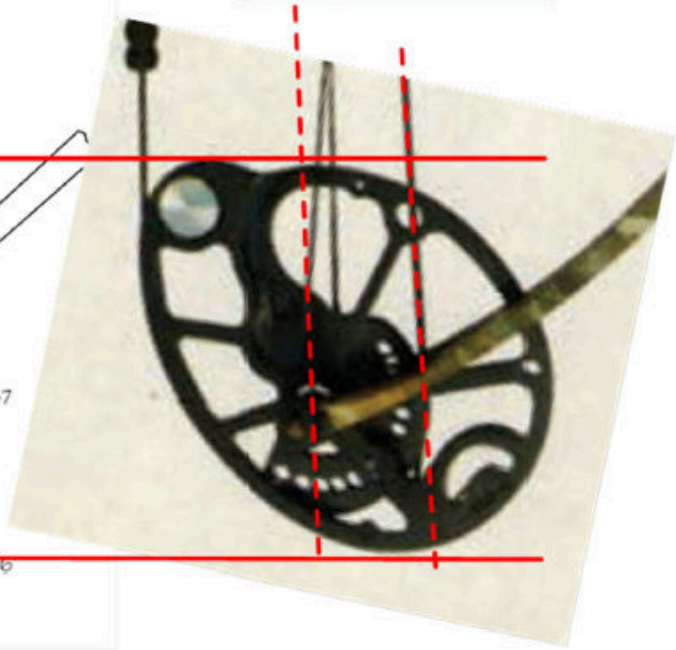
EX2017, App A: Physical Menace ’455 (lower cam)



’989 Patent



EX2002: 2008 *Inside Archery* *(full bow lower cam)*



PO Sur-reply, 9

’989 POR, 5-76; ’017 POR, 5-75; ’831 POR, 5-70; EX2006; EX2018, ¶¶31-51; PO sur-reply 3-27

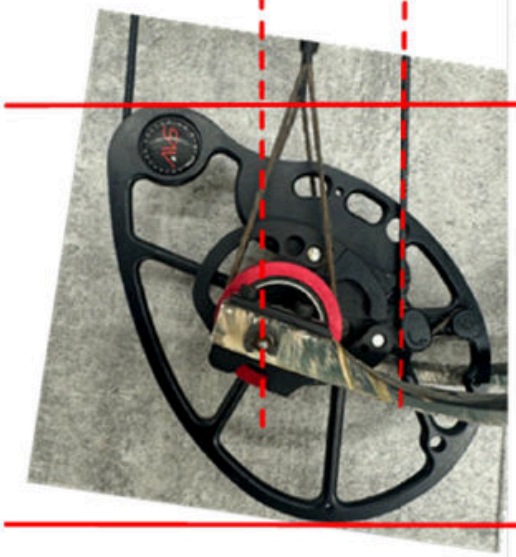
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Monster ’775 – ’989 Patent – *Inside Archery*

Undisputed Fact

Monster cams substantially match patent figures

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



’989 Patent

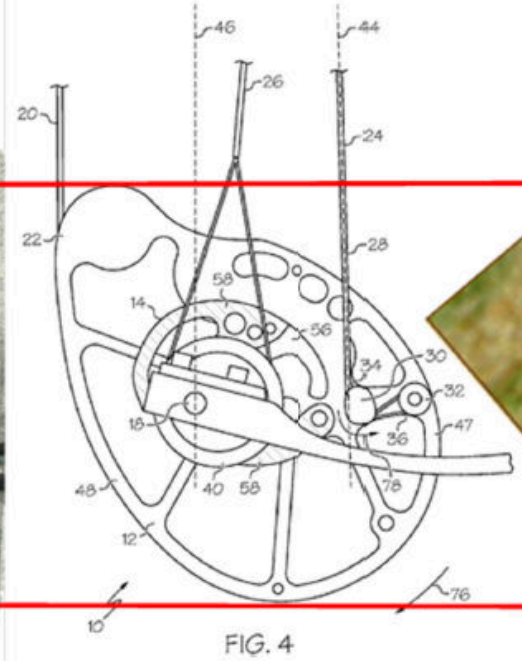
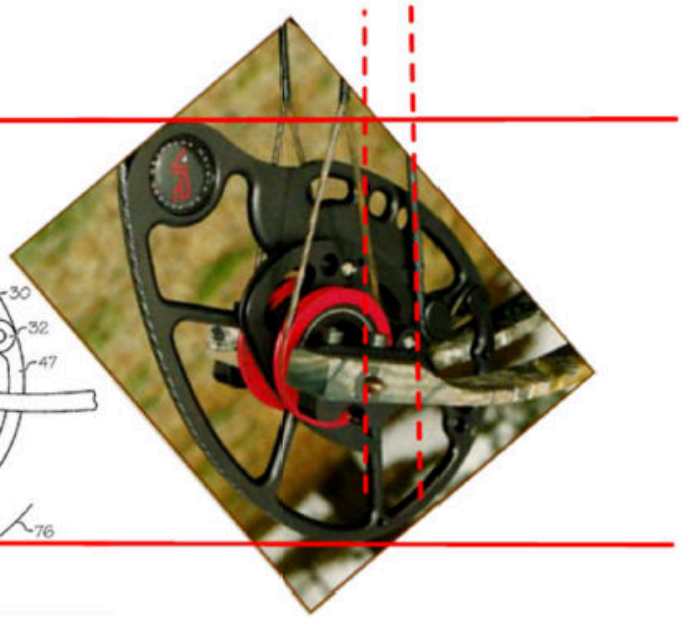


FIG. 4

EX2002: 2009 *Inside Archery* *(close up lower cam)*



’989 POR, 5-76;
’017 POR, 5-75;
’831 POR, 5-70;
EX2002;
EX2017;
EX2018, ¶¶52-60;
PO sur-reply 3-36

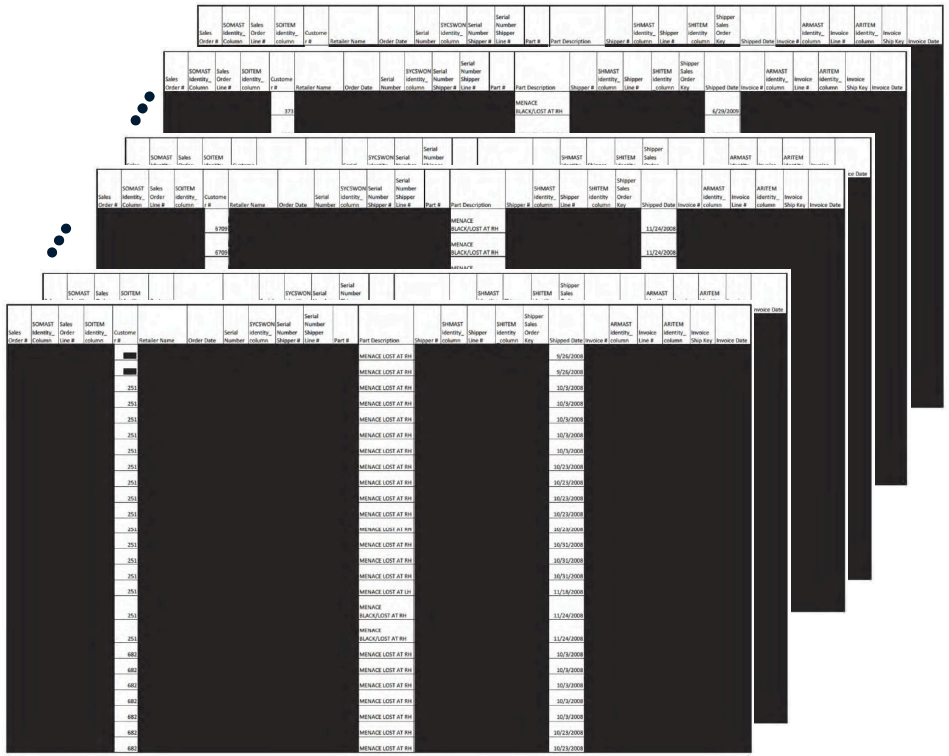
PO Sur-reply, 12

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 5-76; ’017 POR, 5-75; ’831 POR, 5-70; EX2006; EX2016; PO sur-reply 3-11

Actual Reduction to Practice Before June 30, 2009

Mission Menace Sales Records Prior to 06/30/2009



EX2016, 19-20, 28-29, 600-01

Mathews Monster Sales Records Prior to 06/30/2009

EX2016, 607-08, 882, 889, 1092-93

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 5-76; ’017 POR, 5-75; ’831 POR, 5-70; EX2006; EX2016, ¶¶17-18; PO sur-reply 3-11

Menace Bow – Serial # 937455

EX2017, App. A, Photo 2

Sales Order #	SOMAST Identity_ Column	Sales Order Line #	SOITEM identity_ column	Customer #	Retailer Name	Order Date	Serial Number	SYCSWON identity_ column	Serial Number Shipper #	Serial Number Shipper Line #	Part #	Part Description	Shipper #	SHMAST identity_ column	Shipper Line #	SHITEM identity _column	Shipper Sales Order Key	Shipped Date	Invoice #	ARMAST identity_ column	Invoice Line #	ARITEM identity_ column	Invoice Ship Key	Invoice Date
				6709								MENACE BLACK/LOST AT LH						11/25/2008						
				6709								MENACE LOST AT RH						11/4/2008						
				6709								MENACE LOST AT RH						11/4/2008						
				6709								MENACE LOST AT RH						11/4/2008						
				6709								MENACE LOST AT RH						11/4/2008						
				6709								MENACE LOST AT RH						11/4/2008						
				6709								MENACE LOST AT RH						11/4/2008						
				6709								MENACE LOST AT RH						11/4/2008						
				6709								MENACE LOST AT RH						11/4/2008						
				6709		10/1/2008	937455					MENACE LOST AT RH						11/4/2008						
				6709								MENACE LOST AT RH						11/4/2008						
				4017								MENACE LOST AT RH						10/3/2008						
				4017								MENACE LOST AT RH						10/3/2008						
				4017								MENACE LOST AT RH						10/3/2008						
				4017								MENACE LOST AT RH						10/3/2008						
				4017								MENACE LOST AT RH						10/3/2008						
				4017								MENACE LOST AT RH						10/24/2008						
				4017								MENACE LOST AT RH						10/24/2008						
				4017								MENACE LOST AT RH						10/24/2008						
				4017								MENACE LOST AT RH						10/24/2008						
				4017								MENACE LOST AT RH						10/24/2008						
				4017								MENACE BLACK/LOST AT RH						11/7/2008						
				4017								MENACE LOST AT RH						11/3/2008						
				4017								MENACE LOST AT RH						11/3/2008						
				4017								MENACE LOST AT LH						11/4/2008						

EX2016, 29

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Menace Bow – Serial # 937455

'989 POR, 5-76; '017 POR, 5-75; '831 POR, 5-70; EX2006; EX2016, ¶¶17-18; PO sur-reply 3-11

EX2017, App. A, Photo 2

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

[redacted]

[redacted]

10/1/2 937455

Shipped Date In

11/4/2008

EX2016, App A:
Menace '455 Sales Record

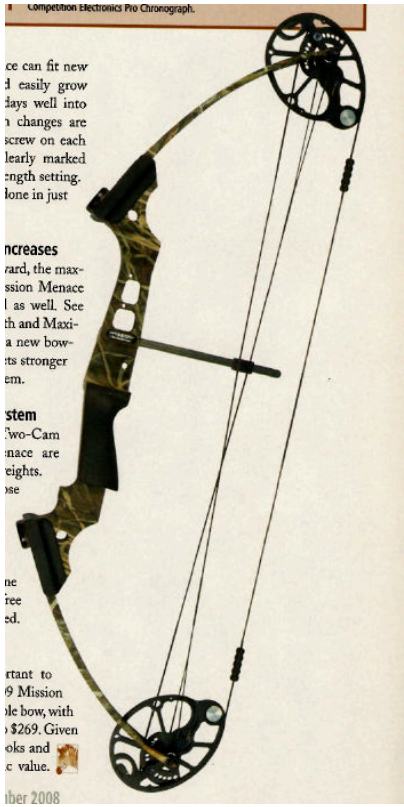
PO Sur-reply, 7

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 5-76; ’017 POR, 5-75; ’831 POR, 5-70; EX2006; EX2016, ¶¶14-16; PO sur-reply 3-11

Menace Bow – *Inside Archery*



EX2013, 43

Sales Order #	SOMAST Identity_ Column	Sales Order Line #	SOITEM identity_ column	Customer #	Retailer Name	Order Date	Serial Number	SYCSWON identity_ column	Serial Number Shipper #	Serial Number Shipper Line #	Part #	Part Description	Shipper #	SHMAST identity_ column	Shipper Line #	SHITEM identity _column	Shipper Sales Order Key	Shipped Date	Invoice #	ARMAST identity_ column	Invoice Line #	ARITEM identity_ column	Invoice Ship Key	Invoice Date
[redacted]	[redacted]	[redacted]	[redacted]	682	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	11/14/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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[redacted]	[redacted]	[redacted]	[redacted]	5456	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	12/11/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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[redacted]	[redacted]	[redacted]	[redacted]	2597	INSIDE ARCHERY	10/24/2008	935923	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	10/27/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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[redacted]	[redacted]	[redacted]	[redacted]	5662	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	11/13/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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[redacted]	[redacted]	[redacted]	[redacted]	6161	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	11/18/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	6161	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	11/18/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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[redacted]	[redacted]	[redacted]	[redacted]	6161	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT LH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	12/8/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	5832	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	11/18/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	5832	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	11/18/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	5832	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	11/18/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

EX2016, 137

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 5-76; ’017 POR, 5-75; ’831 POR, 5-70; EX2006; EX2016, ¶¶14-16; PO sur-reply 3-11

Menace Bow – *Inside Archery*

MARKET TRENDS

Bow Report

By Bill Krenz

2009 Mission Menace

EX2002

Retailer Name	[redacted]	Shipped Date
[redacted]	[redacted]	12/20
[redacted]	[redacted]	
INSIDE ARCHERY	[redacted]	10/27/2008

EX2016, App A: *Inside Archery* Shipping Record (Menace)

PO Sur-reply, 6

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 5-76; ’017 POR, 5-75; ’831 POR, 5-70; EX2006; EX2016, ¶¶14-16; PO sur-reply 3-11

Menace Bow – *Inside Archery*

Ship to :INSIDE ARCHERY

Sold to :IN

Contact :

Phone :

Ship Date

10/27/2008

MNCR

MENACE MAX 4 RH

Serial Number(s) 935923 Qty 1

EX2016, App B: *Inside Archery* Shipping Doc. (Menace)

PO Sur-reply, 6

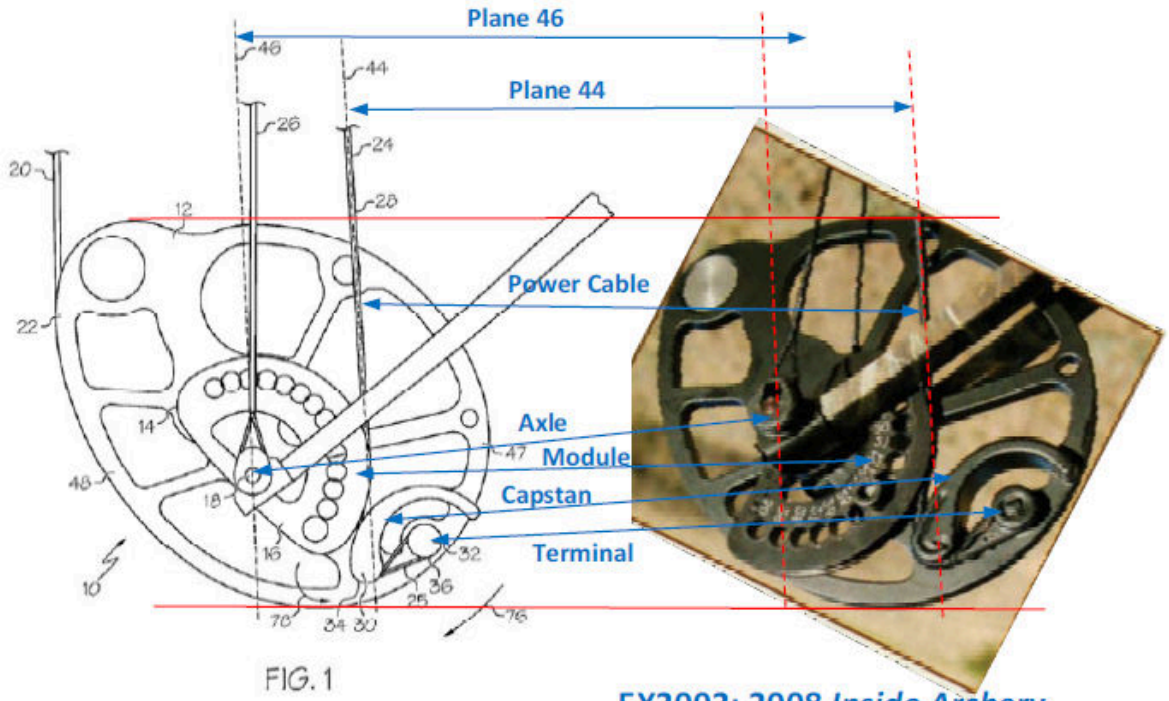
FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Menace Bow – *Inside Archery*

Undisputed Fact

Menace cams substantially match patent figures



EX2002: 2008 *Inside Archery (close up lower cam)*

PO Sur-reply, 26

'989 POR, 5-76; '017 POR, 5-75; '831 POR, 5-70; EX2006; EX2018, ¶¶33-51; PO sur-reply 3-27

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Inside Archery Menace Bow is Strung

Undisputed Fact

Inside Archery
Full Bow is Strung

PO sur-reply, 20.

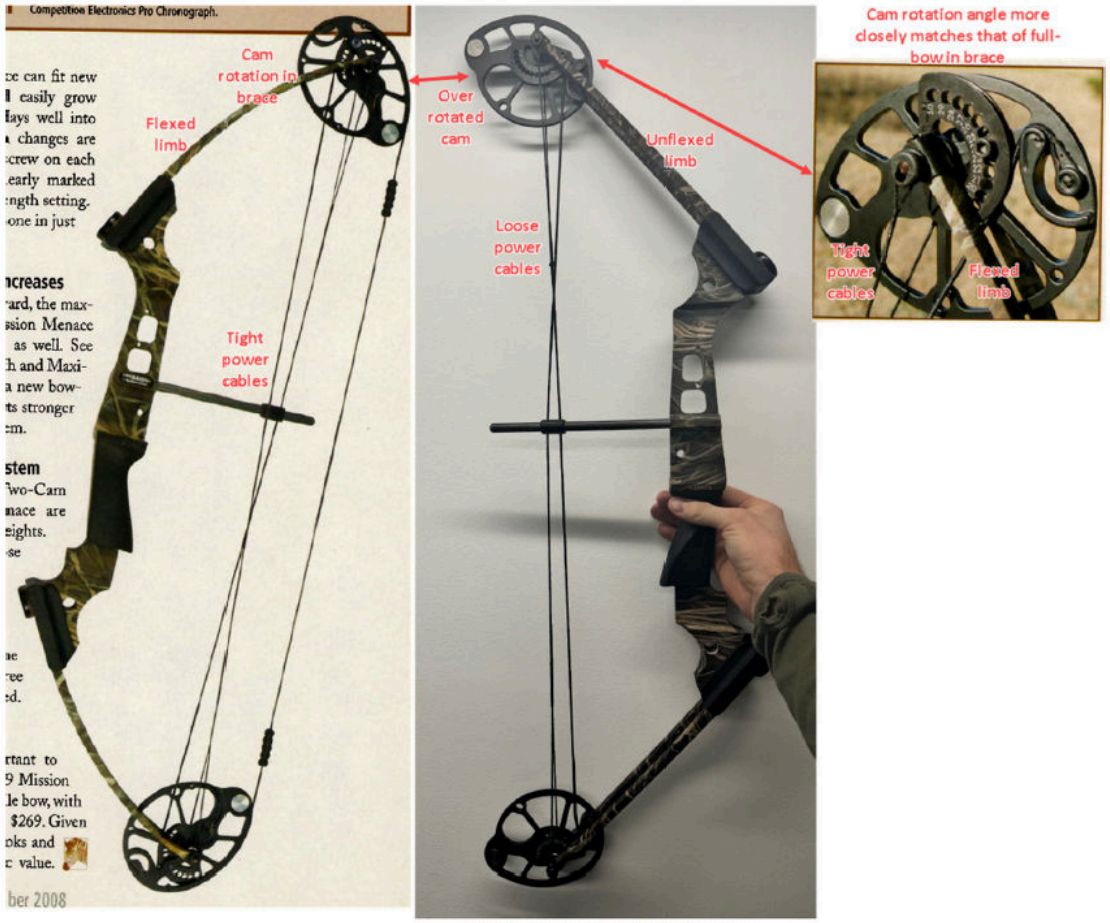


Photo 12: Menace '455 unstrung.

EX2018, ¶50

'989 POR, 5-76;
'017 POR, 5-75;
'831 POR, 5-70;
EX2002;
EX2017;
EX2018, ¶50;
PO sur-reply 13-19

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 Patent – Menace ’455

Undisputed Fact

Menace cams substantially match patent figures

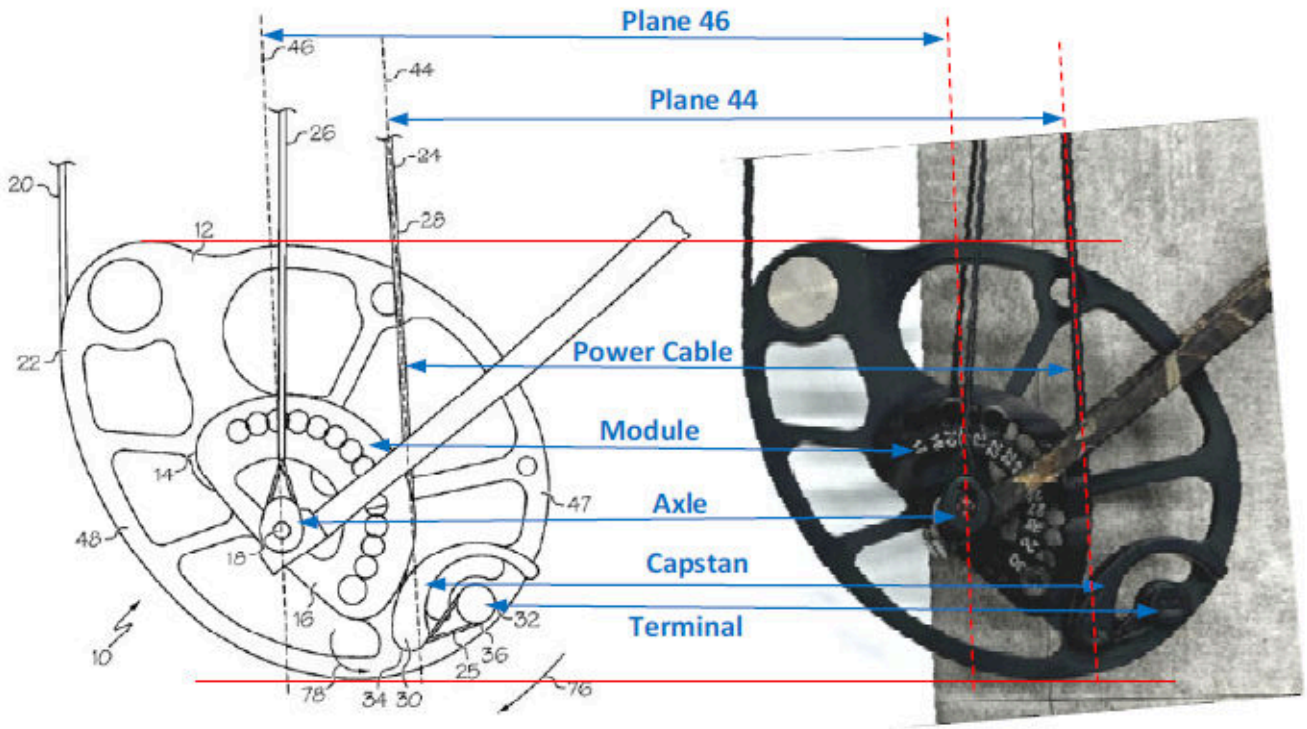


FIG. 1

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

’989 POR, 5-76;
’017 POR, 5-75;
’831 POR, 5-70;
EX2017;
EX2018, ¶¶33-51;
PO sur-reply 3-27

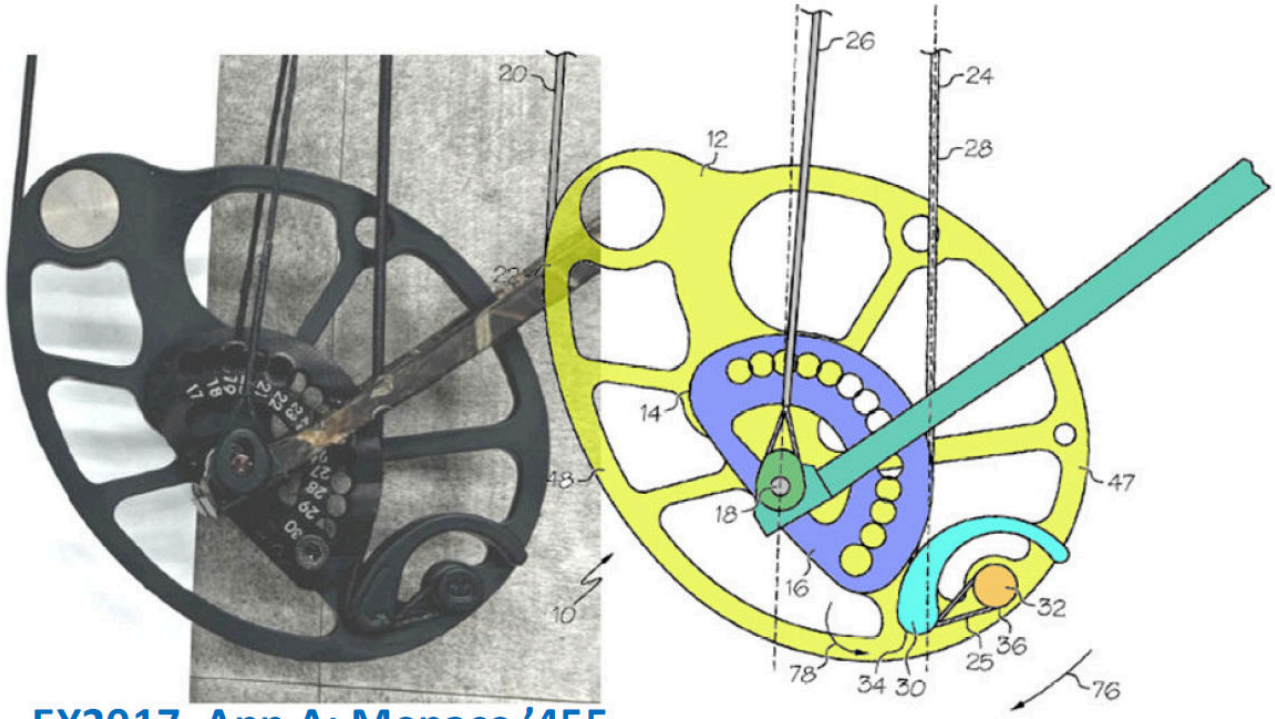
PO Sur-reply, 25

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 Patent – Menace ’455

Undisputed Fact

Menace cams substantially match patent figures



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

’989 POR, 5-76;
’017 POR, 5-75;
’831 POR, 5-70;
EX2017;
EX2018, ¶¶33-51;
PO sur-reply 3-27

PO Sur-reply,27

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 Patent – Menace ’455

Undisputed Fact

Menace cams substantially match patent figures

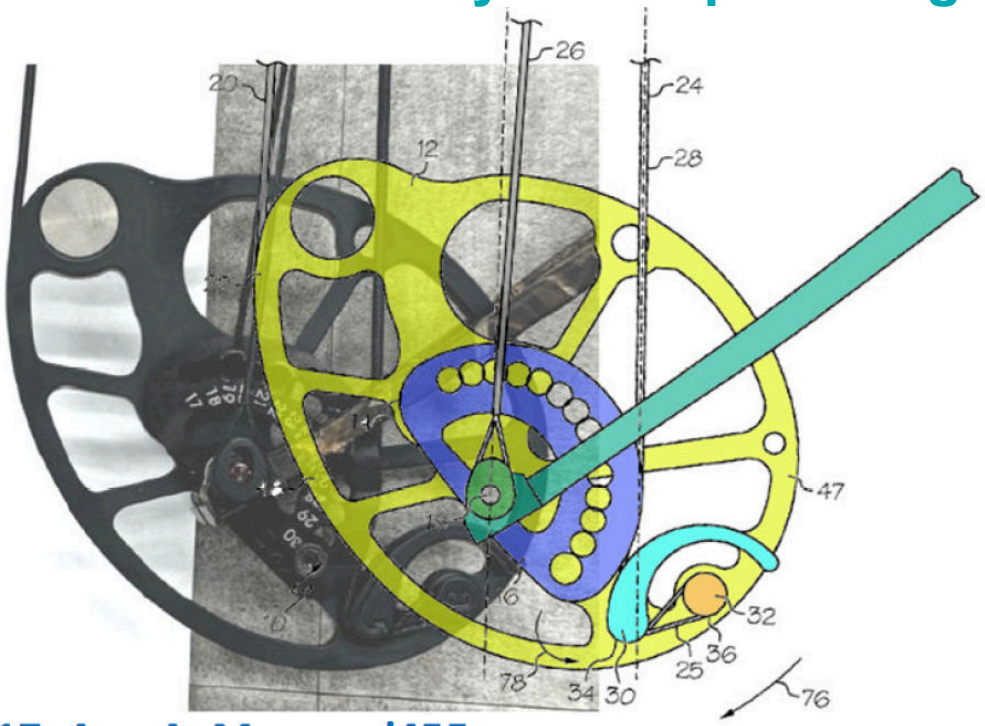


FIG. 1

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

’989 POR, 5-76;
’017 POR, 5-75;
’831 POR, 5-70;
EX2017;
EX2018, ¶¶33-51;
PO sur-reply 3-27

PO Sur-reply,27

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 Patent – Menace ’455

Undisputed Fact

Menace cams substantially match patent figures

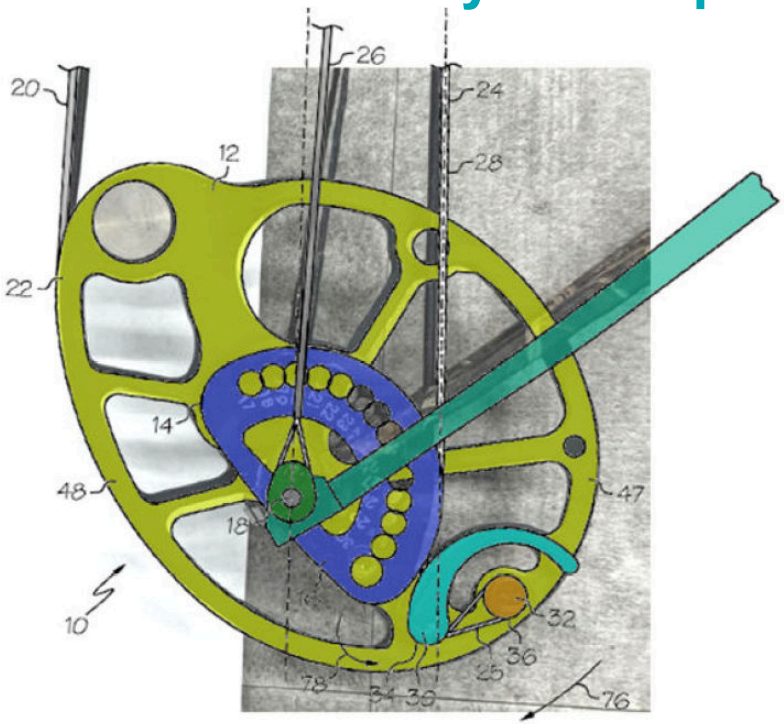


FIG. 1

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

PO Sur-reply,27

’989 POR, 5-76;
’017 POR, 5-75;
’831 POR, 5-70;
EX2017;
EX2018, ¶¶33-51;
PO sur-reply 3-27

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Monster Bow – Serial # 986775

'989 POR, 5-76; '017 POR, 5-75; '831 POR, 5-70; EX2006; EX2016, ¶¶24-25; PO sur-reply 3-11

EX2017, App. C, Photo 2

Sales Order #	SOMAST identity_ Column	Sales Order Line #	SOITEM identity_ column	Customer #	Retailer Name	Order Date	Serial Number	SYCSWON identity_ column	Serial Number Shipper #	Serial Number Shipper Line #	Part #	Part Description	Shipper #	SHMAST identity_ column	Shipper Line #	SHITEM identity_ column	Shipper Sales Order Key	Shipped Date	Invoice #	ARMAST identity_ column	Invoice Line #	ARITEM identity_ column	Invoice Ship Key	Invoice Date
[redacted]	[redacted]	[redacted]	[redacted]	10	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MONSTER 70# 28" AP RH HL	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	4/20/2009	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	1027	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MONSTER 70# 29" AP RH HL	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	4/17/2009	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	283	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MONSTER 60# 27" AP LH HL	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5/18/2009	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	952	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MONSTER 70# 28" AP RH HL	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	4/20/2009	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	952	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MONSTER 70# 29" AP RH HL	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	4/17/2009	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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[redacted]	[redacted]	[redacted]	[redacted]	4652	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MONSTER 60# 29" AP RH HL	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5/19/2009	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	4652	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MONSTER-FOR CONFIG	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	6/2/2009	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	419	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MONSTER 70# 29" AP RH HL	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	4/17/2009	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	162	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MONSTER 70# 27.5" AP RH HL	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	4/6/2009	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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[redacted]	[redacted]	[redacted]	[redacted]	480	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MONSTER 70# 28" AP RH HL	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	4/20/2009	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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[redacted]	[redacted]	[redacted]	[redacted]	3250	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MONSTER 70# 28" AP RH HL	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	4/20/2009	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	3250	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MONSTER-FOR CONFIG	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5/15/2009	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	6166	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MONSTER-FOR CONFIG	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	4/24/2009	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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EX2016, 889

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Monster Bow – Serial # 986775

'989 POR, 5-76; '017 POR, 5-75; '831 POR, 5-70; EX2006; EX2016, ¶¶24-25; PO sur-reply 3-11

EX2017, App. C, Photo 2

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

Order Date	Serial Number	[redacted]
[redacted]	R985274	[redacted]
3/18/200	986775	[redacted] 4/21/2009

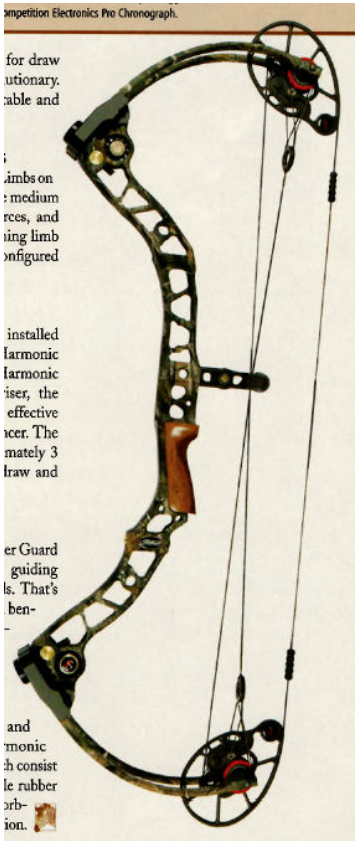
EX2016, App C: Monster '775 Sales Record

PO Sur-reply, 11

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 5-76; ’017 POR, 5-75; ’831 POR, 5-70; EX2006; EX2016, ¶¶21-23; PO sur-reply 3-11

Monster Bow – *Inside Archery*



EX2014, 31

Sales Order #	SOMAST identity_ Column	Sales Order Line #	SOITEM identity_ column	Customer #	Retailer Name	Order Date	Serial Number	SYCSWON identity_ column	Serial Number Shipper #	Serial Number Shipper Line #	Part #	Part Description	Shipper #	SHMAST identity_ column	Shipper Line #	SHITEM identity_ column	Shipper Sales Order Key	Shipped Date	Invoice #	ARMAST identity_ column	Invoice Line #	ARITEM identity_ column	Invoice Ship Key	Invoice Date
[redacted]				1039	[redacted]							MONSTER 70# 29" AP RH HL	[redacted]					4/17/2009	[redacted]					
				1039								MONSTER 70# 29" AP RH HL						4/17/2009						
				3550								MONSTER 60# 29" AP RH HL						4/8/2009						
				3550								MONSTER 60# 29" AP RH HL						4/8/2009						
				868								MONSTER 70# 28" AP RH HL						4/20/2009						
				868								MONSTER 70# 30" AP RH HL						4/15/2009						
				1572								MONSTER 60# 28" AP RH HL						5/8/2009						
				638								MONSTER 70# 30" AP RH HL						4/15/2009						
				6189								MONSTER 70# 29" AP RH HL						4/17/2009						
				54								MONSTER-FOR CONFIG						6/8/2009						
				114								MONSTER 60# 28" AP RH HL						5/8/2009						
				114								MONSTER 70# 29" AP LH HL						5/1/2009						
				4696								MONSTER 70# 28" AP RH HL						4/20/2009						
				4696								MONSTER 70# 30" AP RH HL						4/15/2009						
				5863								MONSTER 60# 28" AP RH HL						5/8/2009						
				5863								MONSTER 40# 25" AP RH HL						5/26/2009						
				3368								MONSTER 70# 29" AP RH HL						4/17/2009						
				2597	INSIDE ARCHERY	3/17/2009	978783	[redacted]	[redacted]		[redacted]	MONSTER-FOR CONFIG						3/23/2009						
				894	[redacted]							MONSTER-FOR CONFIG	[redacted]					5/18/2009	[redacted]					
				298								MONSTER 70# 30" AP RH HL						4/15/2009						
				1036								MONSTER 70# 28" AP RH HL						4/20/2009						
				596								MONSTER 60# 27" AP RH HL						5/27/2009						
				596								MONSTER 70# 30" AP RH HL						4/15/2009						
				5365								MONSTER 60# 29" AP RH HL						4/9/2009						

EX2016, 882

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Monster Bow – *Inside Archery*

'989 POR, 5-76; '017 POR, 5-75; '831 POR, 5-70; EX2006; EX2016, ¶¶21-23; PO sur-reply 3-11

Bow Report

By Bill Krenz

Mathews McPherson Series Monster

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	Invoi
[redacted]			
[redacted]			
INSIDE ARCHERY		3/23/2009	
[redacted]			

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

PO Sur-reply, 10

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Monster Bow – *Inside Archery*

'989 POR, 5-76; '017 POR, 5-75; '831 POR, 5-70; EX2006; EX2016, ¶¶21-23; PO sur-reply 3-11

Ship to :INSIDE ARCHERY

Sold to :I

Phone :

Ship Date	
03/23/2009	
Item	
000001	PO-
	CP-MONSTR MONSTER
	Serial Number(s) 978783
000002	

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

PO Sur-reply, 10

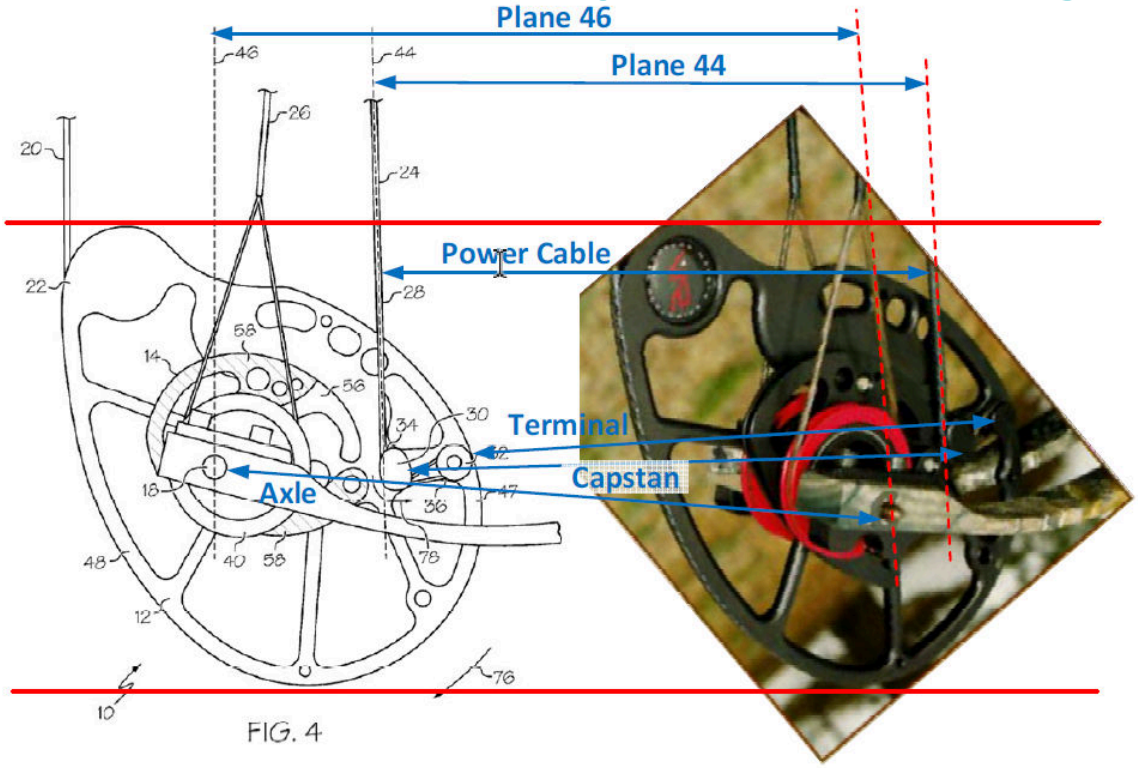
FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 Patent – Inside Archery

Undisputed Fact

Monster cams substantially match patent figures



EX2013, 2009 *Inside Archery* (close up lower cam)

’989 POR, 5-76;
’017 POR, 5-75;
’831 POR, 5-70;
EX2002;
EX2017;
EX2018, ¶¶52-60;
PO sur-reply 3-36

PO Sur-reply, 28

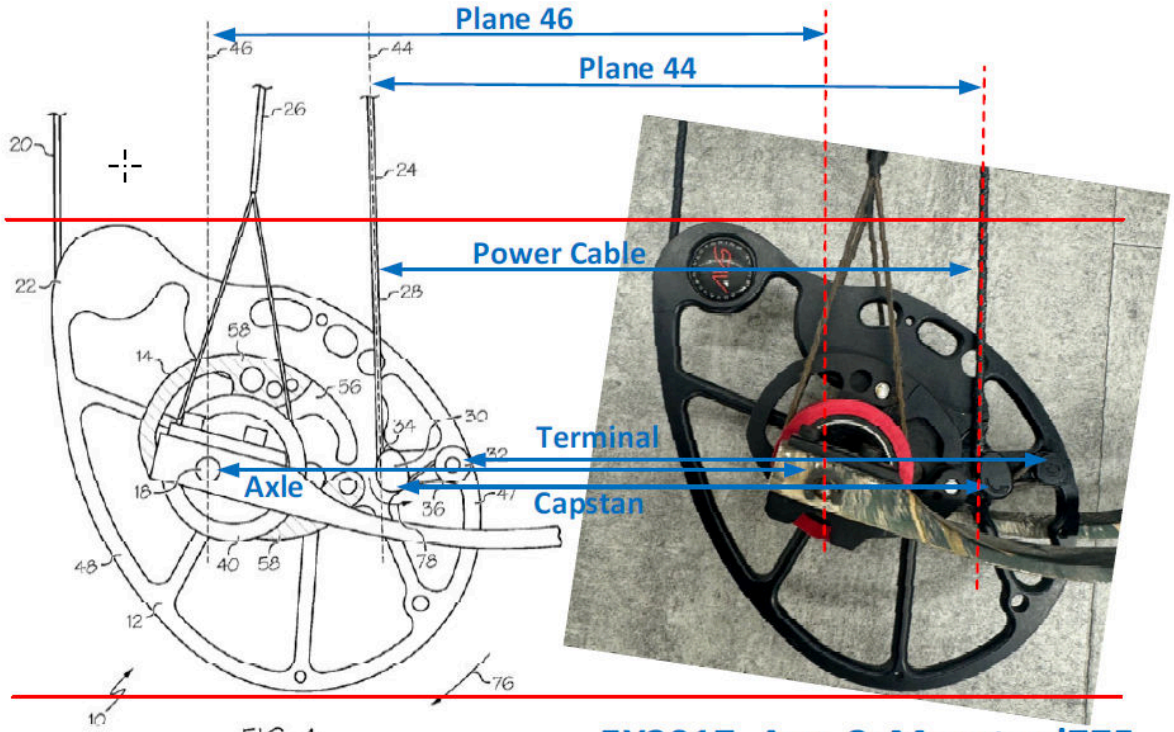
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

FISH.

’989 Patent – Monster ’755

Undisputed Fact

Monster cams substantially match patent figures



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

’989 POR, 5-76;
’017 POR, 5-75;
’831 POR, 5-70;
EX2017;
EX2018, ¶¶52-60;
PO sur-reply 3-36

PO Sur-reply, 28

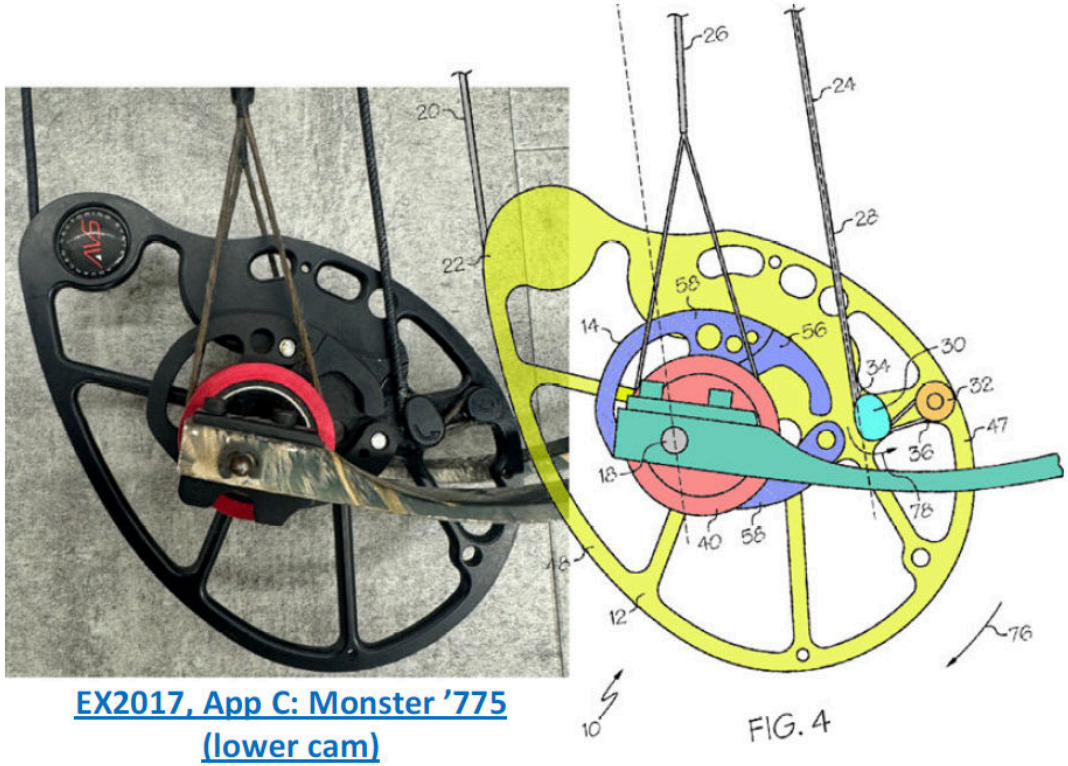
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

FISH.

’989 Patent – Monster ’755

Undisputed Fact

Monster cams substantially match patent figures



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

’989 POR, 5-76;
’017 POR, 5-75;
’831 POR, 5-70;
EX2017;
EX2018, ¶¶52-60;
PO sur-reply 3-36

FISH.

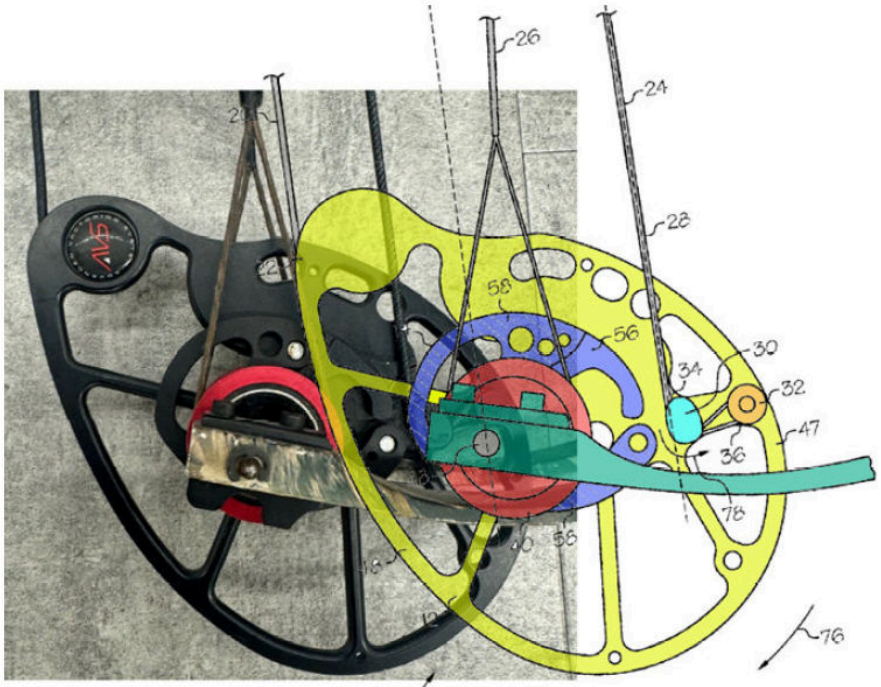
PO Sur-reply, 29

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 Patent – Monster ’755

Undisputed Fact

Monster cams substantially match patent figures



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

’989 POR, 5-76;
’017 POR, 5-75;
’831 POR, 5-70;
EX2017;
EX2018, ¶¶52-60;
PO sur-reply 3-36

FISH.

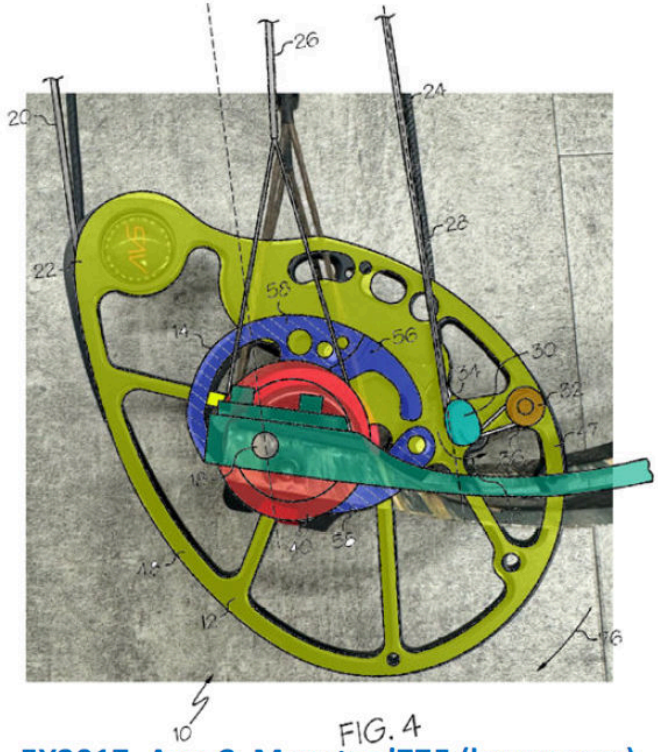
PO Sur-reply, 29

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 Patent – Monster ’755

Undisputed Fact

Monster cams substantially match patent figures



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

’989 POR, 5-76;
’017 POR, 5-75;
’831 POR, 5-70;
EX2017;
EX2018, ¶¶52-60;
PO sur-reply 3-36

PO Sur-reply, 29

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

FISH.

FISH.

Menace Bow Embodies Claims of ’989 Patent, ’017 Patent, and ’831 Patent

’989 POR, 25-61; ’017 POR, 24-59; ’831 POR, 24-55; EX2018, ¶¶38-51, 60-83, 101-104

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 25-61; ’017 POR, 24-59; ’831 POR, 24-55; EX2018, ¶¶38-51, 60-83, 101-104

MCP’s expert analyzed the physical Menace bows and determined that the Menace bows meet the claims of the ’989, ’017, and ’831 patents

’989 Patent	
Claim	EX2018 ¶¶
1	61-67
3	76
4	77
8	78-81
9	82
10	83
11	61-69
12	61-67, 71-74
13	74-75
14	76
16	77
17	71-74, 78-81
18	82
19	61-74

’017 Patent	
Claim	EX2018 ¶¶
1	61-66, 79-81
2	67
3	68-71
5	76
6	77
10	78-81
11	82
12	61-66, 71-74
13	74-75
14	67
15	68-71
16	76
18	77
19	71-74, 78-81
20	82

’831 Patent	
Claim	EX2018 ¶¶
1	61-66
2	64
4	76
5	77
9	78-81
10	82
11	61-66, 71-74
12	74-75
13	67
14	68-71
15	76
17	77
18	78-81
19	82

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

'989 POR, 17-21; EX2018, ¶¶32-35; EX2002, 1-2

Menace Bows were tested for proper operation

Undisputed Fact

Declaration of Mathew McPherson

> 15. As with all of our new designs, the Mission Menace bow was tested for proper operation before being approved for production.

EX2006, ¶15

Inside Archery Bow Review

How It Shoots

I had an archery dealer recently tell me that he was tired of so-called youth compounds that were nothing more than cut-down adult bows. "Such bows are often too heavy, noisy, full of handshock and very poor performers," he explained.

The 2009 Mission Menace is none of those things. To begin with, the new Menace weighs just 2.9 pounds. That's light. And it's just 31 inches from axle to axle so it's also compact.

Maybe never before has such a sweet-shooting, affordable, performance-minded bow been offered specifically for new bowhunters. The 2009 Mission Menace is astoundingly pleasant to shoot. There's little or no hand shock and the bow is quiet as a whisper. For a beginner bow, that's spectacular.

EX2013, 42-43; EX2018, ¶33

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
		24" 1816 Aluminum	376 grains	196 fps
30 inches	52 pounds	28" 400 Carbon	391 grains	248 fps
		28" 400 Carbon	366 grains	255 fps

EX2013, 43; EX2018, ¶34

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 25-39; EX2018, ¶¶60-67

Menace Embodies ’989 Patent – Claim 1

1. An archery bow having a brace condition and a drawn condition, the archery bow comprising:

a riser;

a first limb and a second limb supported by the riser;

a first rotatable member supported by the first limb on a first axle, a second rotatable member supported by the second limb on a second axle, the first rotatable member comprising a drawstring track, a cam track, a capstan and a terminal, wherein said drawstring track is oriented in a first cam plane and said cam track is oriented in a second cam plane offset from said first cam plane;

a drawstring extending between the first rotatable member and the second rotatable member;

a power cable attached to said terminal and extending toward the second limb, said power cable comprising an elongate straight portion located near said first rotatable member, a capstan portion in contact with said capstan and a terminal portion in contact with said terminal;

wherein, in the brace condition, the power cable wraps around the capstan in a first rotational direction as the power cable is traversed from the elongate straight portion to the terminal portion; and when the bow is drawn from the brace condition, the first rotatable member rotates in a second rotational direction that is opposite the first rotational direction and wherein, in the brace condition, the elongate straight portion defines a plane, wherein said first axle and said terminal are located on opposite sides of said plane.

’989 Patent, Claim 1

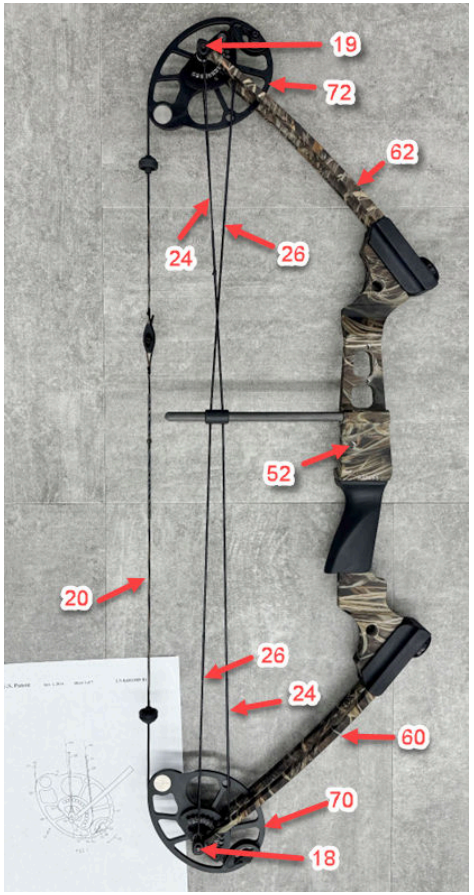
’989 patent claims are used as an example of how the Menace embodies the challenged claims

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 38-39; EX2018, ¶67; EX2002, 2

Menace Embodies ’989 Patent – Claim 1



’989 POR, 39

Undisputed Fact

Claim 1(Pre): “An archery bow having a brace condition and a drawn condition, the archery bow comprising:”

Claim 1(a): “a riser; a first limb and second limb supported by the riser;”

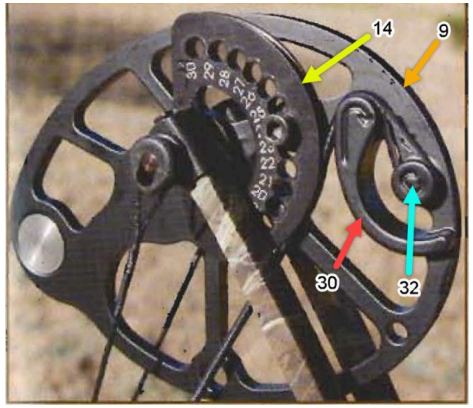
Claim 1(b)(i): “a first rotatable member supported by the first limb on a first axle, a second rotatable member supported by the second limb on a second axle,”

Claim 1(c): “a drawstring extending between the first rotatable member and the second rotatable member;”

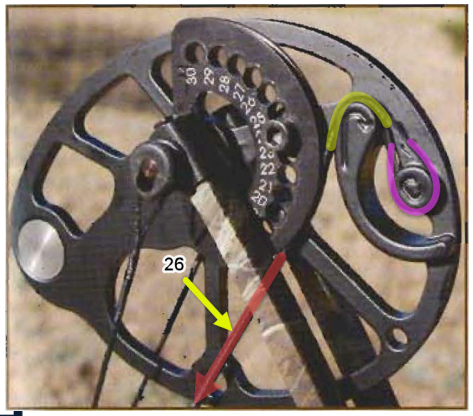
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 38-39; EX2018, ¶67; EX2002, 2

Menace Embodies ’989 Patent – Claim 1



’989 POR, 35



’989 POR, 37

Undisputed Fact

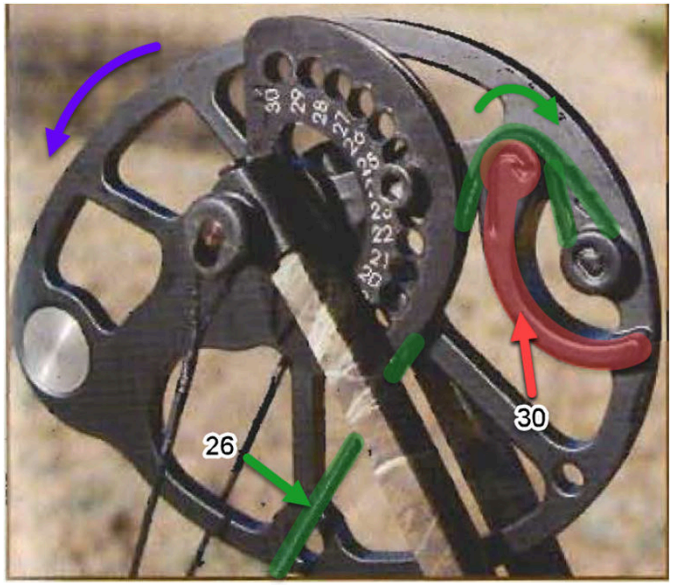
Claim 1(b)(ii)-(v): “the first rotatable member comprising a drawstring track, a cam track, a capstan and a terminal, wherein said drawstring track is oriented in a first cam plane and said cam track is oriented in a second cam plane offset from said first cam plane,”

Claim 1(d)(i)-(ii): “a power cable attached to said terminal and extending toward the second limb, said power cable comprising an elongate straight portion located near said first rotatable member, a capstan portion in contact with said capstan and a terminal portion in contact with said terminal;”

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 38-39; EX2018, ¶67; EX2002, 2

Menace Embodies ’989 Patent – Claim 1



’989 POR, 38

Undisputed Fact

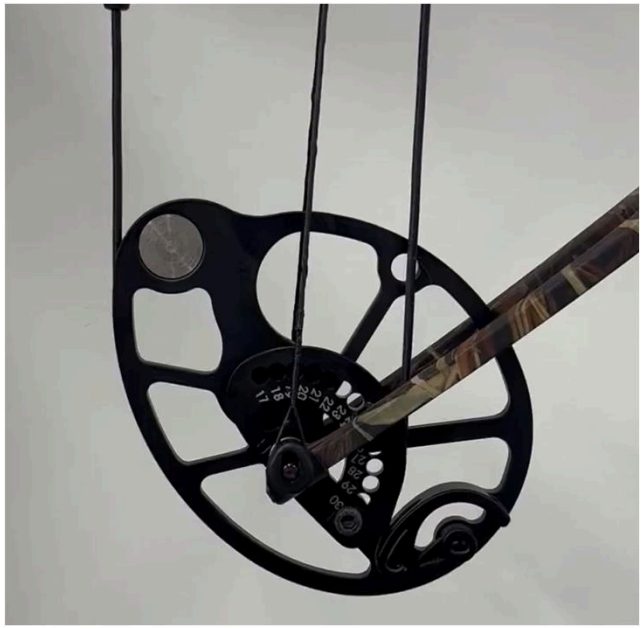
Claim 1(e): “wherein, in the brace condition, the power cable wraps around the capstan in a first rotational direction as the power cable is traversed from the elongate straight portion to the terminal portion; and”

Claim 1(f): “when the bow is drawn from the brace condition, the first rotatable member rotates in a second rotational direction that is opposite the first rotational direction and”

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 38-39; EX2018, ¶67; EX2002, 2

Menace Embodies ’989 Patent – Claim 1



EX2017, Appendix Menace 455 lower cam.mp4

Undisputed Fact

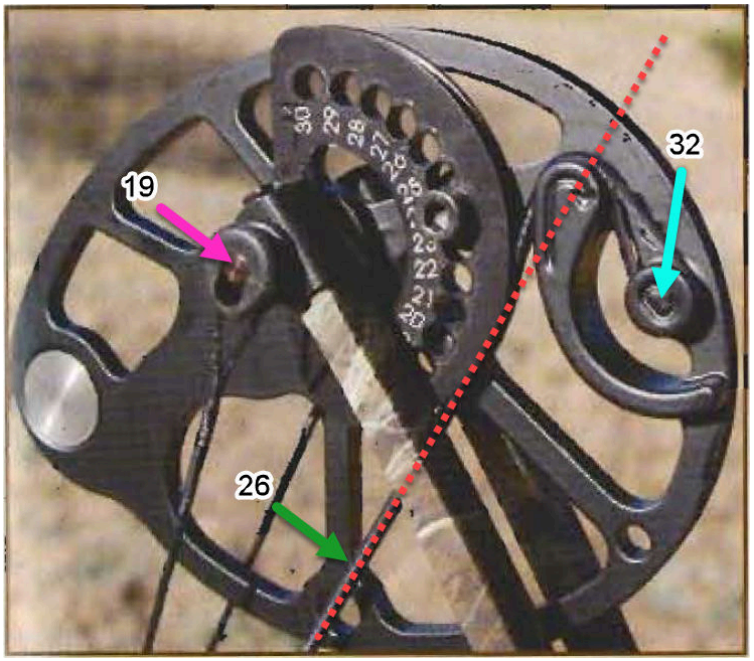
Claim 1(e): “wherein, in the brace condition, the power cable wraps around the capstan in a first rotational direction as the power cable is traversed from the elongate straight portion to the terminal portion; and”

Claim 1(f): “when the bow is drawn from the brace condition, the first rotatable member rotates in a second rotational direction that is opposite the first rotational direction and”

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 38-39; EX2018, ¶67; EX2002, 2, PO Sur-reply, 30-37

Menace Embodies ’989 Patent – Claim 1



’989 POR, 39

Claim 1(g): “wherein, <u>in the brace condition</u>, the elongate straight portion defines a plane, wherein said first axle and said terminal are located on opposite sides of said plane.”

PETITION

Limitation 1(d)(ii). Thus, a PHOSITA would have recognized a plane including the red dot-dash line above teaches the recited “plane” defined by the elongate straight portion. *Dec.*, 65. However, prior to modification with *Islas*, *Darlington’s* first axle

’989 Pet., 45 (highlighting added)

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 39-42; EX2018, ¶¶68-71

Menace Embodies ’989 Patent – Claim 11

11. An archery bow having a brace condition and a drawn condition, the archery bow comprising:

a riser;

a first limb and a second limb supported by the riser;

a first rotatable member supported by the first limb on a first axle, a second rotatable member supported by the second limb on a second axle, the first rotatable member comprising a drawstring track, a cam track, a capstan and a terminal, wherein said drawstring track is oriented in a first cam plane and said cam track is oriented in a second cam plane offset from said first cam plane;

a drawstring extending between the first rotatable member and the second rotatable member;

a power cable attached to said terminal and extending toward the second limb, said power cable comprising an elongate straight portion located near said first rotatable member, a capstan portion in contact with said capstan and a terminal portion in contact with said terminal;

wherein, in the brace condition, the power cable wraps around the capstan in a first rotational direction as the power cable is traversed from the elongate straight portion to the terminal portion; and when the bow is drawn from the brace condition, the first rotatable member rotates in a second rotational direction that is opposite the first rotational direction and wherein, in the drawn condition, the capstan is located closer to the elongate straight portion than the terminal.

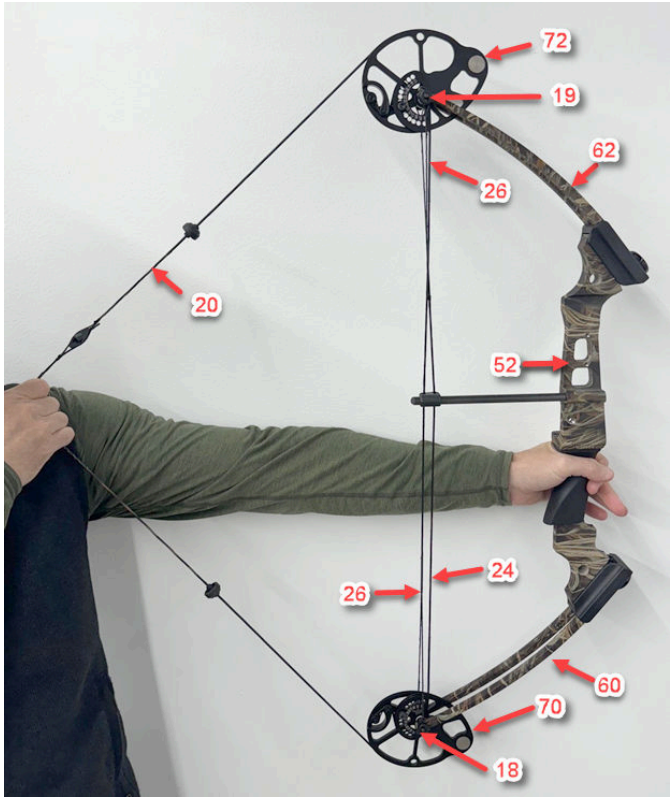
’989 Patent, Claim 11

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 39-42; EX2018, ¶¶68-71; EX2017, App. A

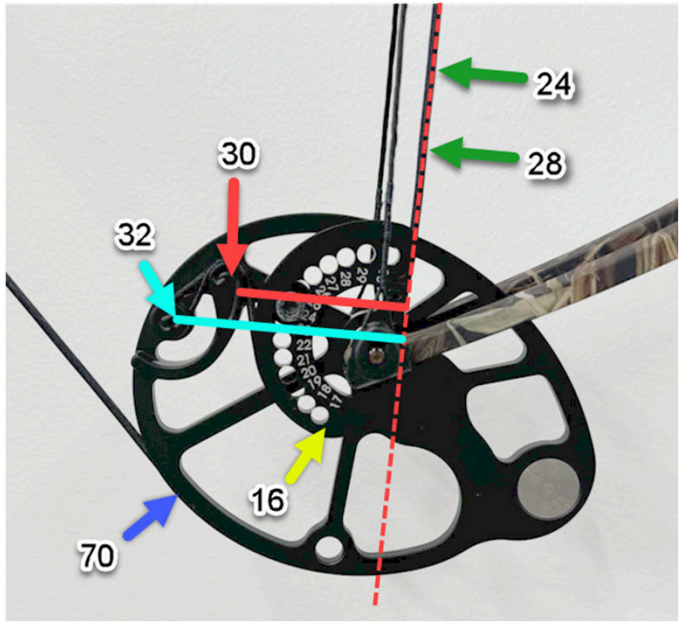
Menace Embodies ’989 Patent – Claim 11

Undisputed Fact



’989 POR, 42

Claim 11(g): “wherein, in the drawn condition, the capstan is located closer to the elongate straight portion [of the power cable] than the terminal.”



’989 POR, 42

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 43-47; EX2018, ¶¶60-75; EX2017, App. A

Menace Embodies ’989 Patent – Claim 12

12. An archery bow having a brace condition and a drawn condition, the bow comprising:

a riser;

a first limb and a second limb supported by the riser;

a first rotatable member supported by the first limb on a first axle, a second rotatable member supported by the second limb on a second axle, the first axle and the second axle defining an axle plane, the first rotatable member comprising a drawstring track, a cam track, a capstan and a terminal, wherein said drawstring track is oriented in a first cam plane and said cam track is oriented in a second cam plane offset from said first cam plane;

a drawstring extending between the first rotatable member and the second rotatable member, the drawstring extending from the first rotatable member at an exit location;

a power cable attached to said terminal and extending toward the second limb, said power cable comprising a capstan portion in contact with said capstan and a terminal portion in contact with said terminal;

wherein, in the brace condition, the axle plane divides the first rotatable member to a first part and a second part, the capstan and the terminal located in the first part, the drawstring exit location located in the second part, and a distance between the terminal and the axle plane is greater than a distance between the capstan and the axle plane and wherein, in the brace condition, said power cable comprises an elongate straight portion located near said first rotatable member, the elongate straight portion defines a cable portion plane, said first axle and said terminal are located on opposite sides of said cable portion plane.

’989 Patent, Claim 12

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 43-47; EX2018, ¶¶72-75; EX2017, App. A

Menace Embodies ’989 Patent – Claim 12

’989 POR, 45

Claim 12(b)(i)-(ii): “… a first rotatable member supported by the first limb on a first axle, a second rotatable member supported by the second limb on a second axle, the first axle and the second axle defining an axle plane,”

Claim 12(c)(i)-(ii): “a drawstring extending between the first rotatable member and the second rotatable member, the drawstring extending from the first rotatable member at an exit location;”

DECLARATION OF MCP’S EXPERT

72. A POSITA would have understood that the two axles on a compound bow are parallel to each other and therefore define a plane.

73. The full bow photograph from the Menace Article and of the Menace ’817 are annotated below to show an edge view of the axle plane (the red dashed line represents an edge view of the plane) defined by the two axles (18, 19) and the drawstring exit (22) location on each cam. As illustrated, the axle plane of

EX2018, ¶¶72-73

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 43-47; EX2018, ¶¶72-75; EX2017, App. A

Menace Embodies ’989 Patent – Claim 12

’989 POR, 45

Claim 12(e)(i): “wherein, <u>in the brace condition</u>, the axle plane divides the first rotatable member to a first part and a second part, the capstan and the terminal located in the first part, the drawstring exit location located in the second part, and”

DECLARATION OF MCP’S EXPERT

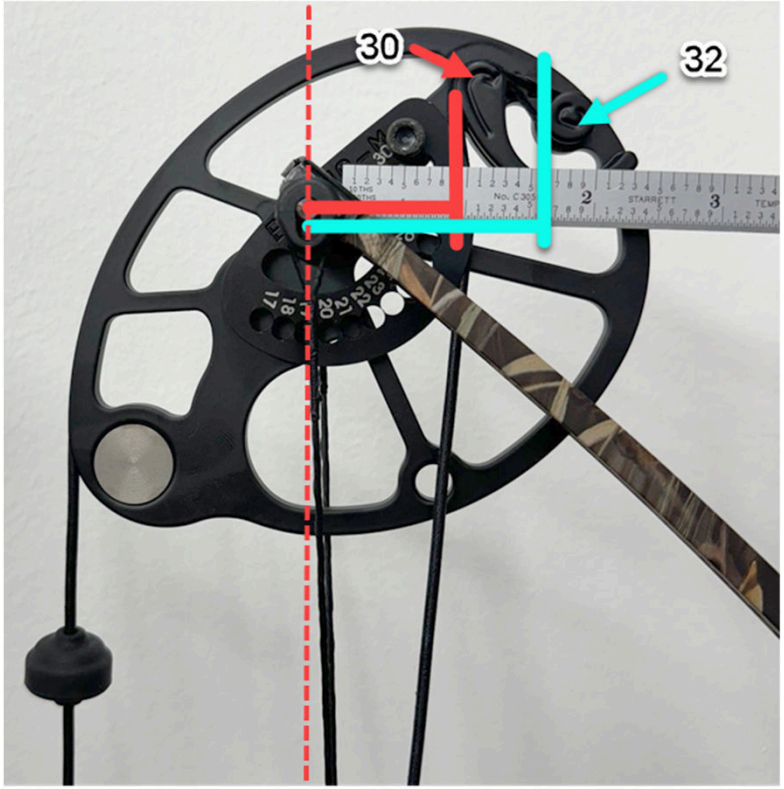
> 73. The full bow photograph from the Menace Article and of the Menace ’817 are annotated below to show an edge view of the axle plane (the red dashed line represents an edge view of the plane) defined by the two axles (18, 19) and the drawstring exit (22) location on each cam. As illustrated, the axle plane of the Mission Menace bow divides each cam into a first part (green) and a second part (purple). It is clear that the capstan and terminal (circled) are located in the green first part, and the drawstring exit (22) is located on the purple second part.

EX2018, ¶73

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 43-47; EX2018, ¶¶72-75; EX2017, App. A

’989 Patent – Claim 12



’989 POR, 47

Claim 12(e)(ii): “a distance between the terminal and the axle plane is greater than a distance between the capstan and the axle plane, and”

DECLARATION OF MCP’S EXPERT

74. The images below show the upper cam of bow in the Menace article and of the Menace ’817 to view the detail of the upper cam. The relative distances between the axle plane (dashed red line) of the Mission Menace bow and the terminal (blue) and the capstan (red) have been annotated on the photograph. It is clear that the distance between the terminal (32) and the axle plane is greater than the distance between the capstan (30) and the axle plane on the Mission Menace bow.

EX2018, ¶74

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

FISH.

Monster Bow Embodies the Claims of ’989 Patent, ’017 Patent, and ’831 Patent

’989 POR, 61-76; ’017 POR, 59-75; ’831 POR 55-70; EX2018, ¶¶84-104

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

MCP's expert analyzed the physical Monster bows and determined that the Monster bows meet all the claims of the '989, '017, and '831 patents

'989 Patent	
Claim	EX2018 ¶¶
1	86-90
2	93
3	100
4	94
7	94
8	95
9	96
10	97
11	86-90, 98-99
12	86-92
13	92
14	100
15	93
16	94
17	91-92, 95
18	96
19	86-92, 98-99

'017 Patent	
Claim	EX2018 ¶¶
1	86-89
2	90
3	98-99
4	93
5	100
6	94
9	94
10	95
11	96
12	86-92
13	92
14	90
15	98-99
16	100
17	93
18	94
19	91-92, 95
20	96

'831 Patent	
Claim	EX2018 ¶¶
1	86-89
2	87
3	93
4	100
5	94
8	94
9	95
10	96
11	86-92
12	92
13	90
14	98-99
16	93
15	100
17	94
18	91-92, 95
19	96

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

'989 POR, 61-76; '017 POR, 59-75; '831 POR 55-70; EX2018, ¶¶84-104

POR, 21-24; EX2018, ¶¶36-37; EX2003, 1-2

Monster Bows were tested for proper operation

Undisputed Fact

Declaration of Mathew McPherson

> 23. As with all of our new designs, the Mathews Monster bow was tested for proper operation before being approved for production.

EX2006, ¶23

Inside Archery Bow Review

Arrow Speed

2009 Mathews Monster set at 29 inches (by factory) and adjusted to 70 pounds

28-inch Arrows	Shaft: Grains/In	Arrow: Total Weight	Kinetic Energy	Arrow Speed
Easton XX78 Alloy 2512	10.3	448 gr.	92.0	304 fps
Easton Full Metal Jacket 400	10.2	426 gr.	91.5	311 fps
Carbon Express Aramid KV 350	9.8	415 gr.	90.9	314 fps
Carbon Tech Whitetail 65/80	9.5	411 gr.	91.1	316 fps
Carbon Express Maxima Hunter 350	8.9	398 gr.	90.5	320 fps
Easton ST Axis N-Fused 400	9.0	392 gr.	90.3	322 fps
Beman ICS Hunter Elite 400	8.4	390 gr.	90.3	323 fps
Gold Tip XT Hunter 55/75	8.2	385 gr.	89.8	324 fps
PSE Radial X Weave Hunter 300	8.1	376 gr.	89.8	328 fps
Easton LightSpeed 400	7.4	363 gr.	89.4	333 fps
Gold Tip Ultralight Pro 400	7.4	361 gr.	89.4	334 fps
Carbon Tech Cheetah 400	6.4	346 gr.	88.8	340 fps
High Country Speed Pro Max	5.5	303 gr.	88.2	362 fps

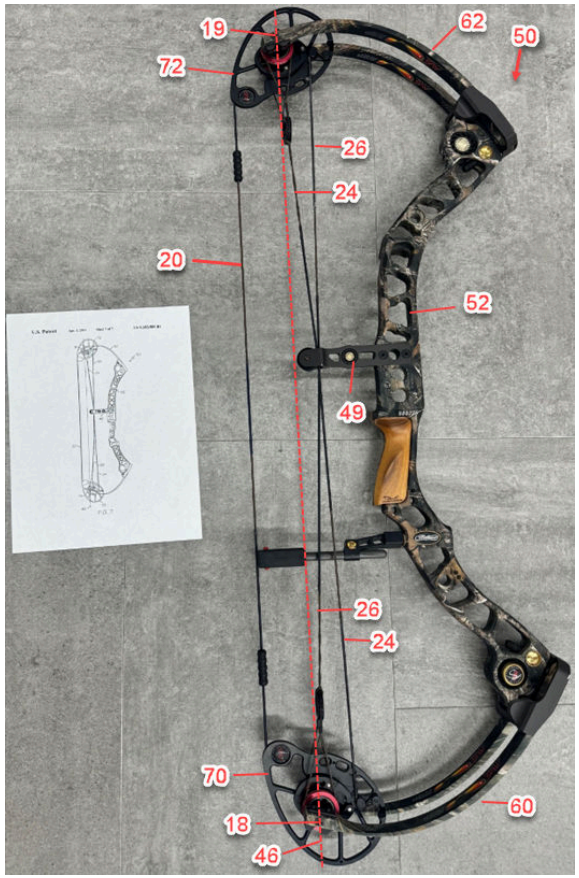
Bow weighed with an Easton Bow Force Digital Scale. All tests conducted with a Spot-Hogg Hooter Shooter Portable Shooting Machine and a Competition Electronics Pro Chronograph.

EX2003, 2

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 61-66; EX2018, ¶¶84-90

Monster Embodies ’989 Patent – Claim 1



’989 POR, 62

Undisputed Fact

Claim 1(Pre): “An archery bow having a brace condition and a drawn condition, the archery bow comprising:”

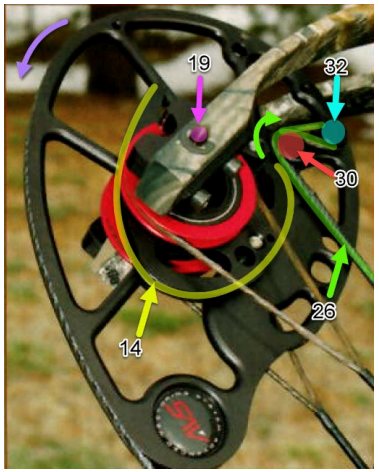
Claim 1(a): “a riser; a first limb and second limb supported by the riser;”

Claim 1(b)(i): “a first rotatable member supported by the first limb on a first axle, a second rotatable member supported by the second limb on a second axle,”

Claim 1(c): “a drawstring extending between the first rotatable member and the second rotatable member;”

’989 POR, 61-66; EX2018, ¶¶84-90

Monster Embodies ’989 Patent – Claim 1

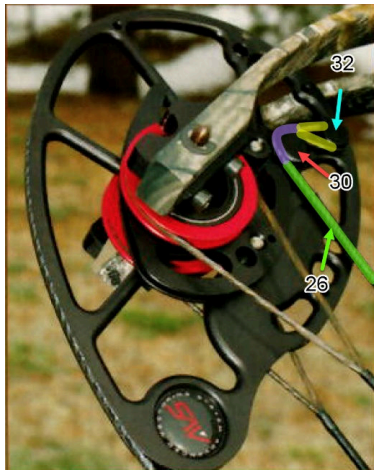


’989 POR, 63

Undisputed Fact

Claim 1(b)(ii)-(v): “the first rotatable member comprising a drawstring track, a cam track, a capstan and a terminal, wherein said drawstring track is oriented in a first cam plane and said cam track is oriented in a second cam plane offset from said first cam plane,”

Claim 1(d)(i)-(ii): “a power cable attached to said terminal and extending toward the second limb, said power cable comprising an elongate straight portion located near said first rotatable member, a capstan portion in contact with said capstan and a terminal portion in contact with said terminal;”

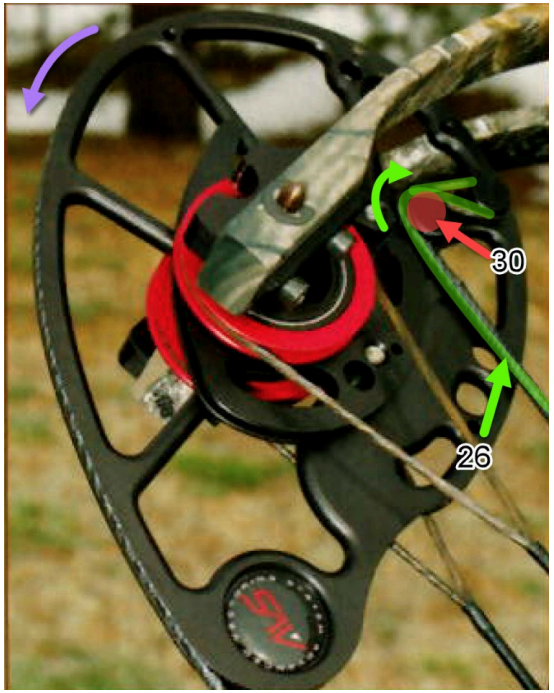


’989 POR, 64

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 61-66; EX2018, ¶¶84-90

Monster Embodies ’989 Patent – Claim 1



’989 POR, 65

Undisputed Fact

Claim 1(e): “wherein, in the brace condition, the power cable wraps around the capstan in a first rotational direction as the power cable is traversed from the elongate straight portion to the terminal portion; and”

Claim 1(f): “when the bow is drawn from the brace condition, the first rotatable member rotates in a second rotational direction that is opposite the first rotational direction and”

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 61-66; EX2018, ¶¶52-59, 84-90; EX2017

Monster Embodies ’989 Patent – Claim 1

EX2017, Appendix Monster Bow.mp4

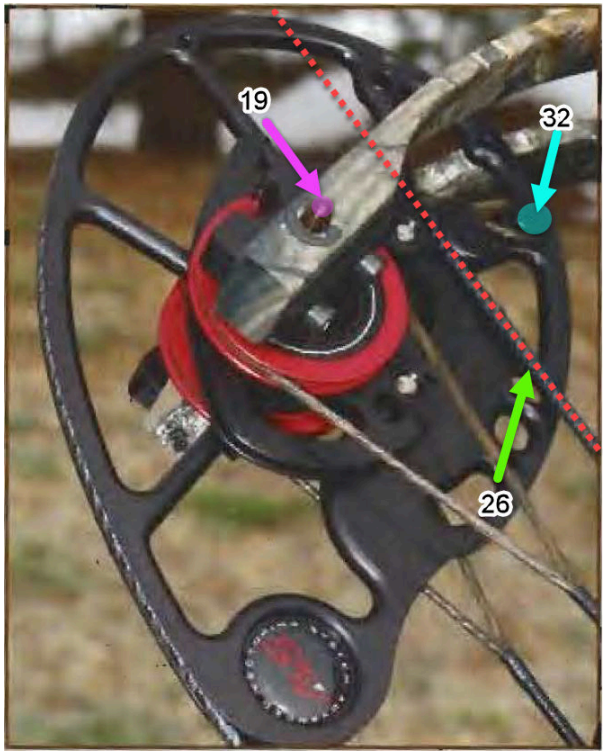
Undisputed Fact

Claim 1(e): “wherein, in the brace condition, the power cable wraps around the capstan in a first rotational direction as the power cable is traversed from the elongate straight portion to the terminal portion; and”

Claim 1(f): “when the bow is drawn from the brace condition, the first rotatable member rotates in a second rotational direction that is opposite the first rotational direction and”

’989 POR, 38-39; EX2018, ¶67; EX2002, 2, PO Sur-reply, 30-37

Monster Embodies ’989 Patent – Claim 1



’989 POR, 66

Claim 1(g): “wherein, in the brace condition, the elongate straight portion defines a plane, wherein said first axle and said terminal are located on opposite sides of said plane.”

PETITION

Limitation 1(d)(ii). Thus, a PHOSITA would have recognized a plane including the red dot-dash line above teaches the recited “plane” defined by the elongate straight portion. *Dec.*, 65. However, prior to modification with *Islas*, *Darlington’s* first axle

’989 Pet., 45 (highlighting added)

FISH.

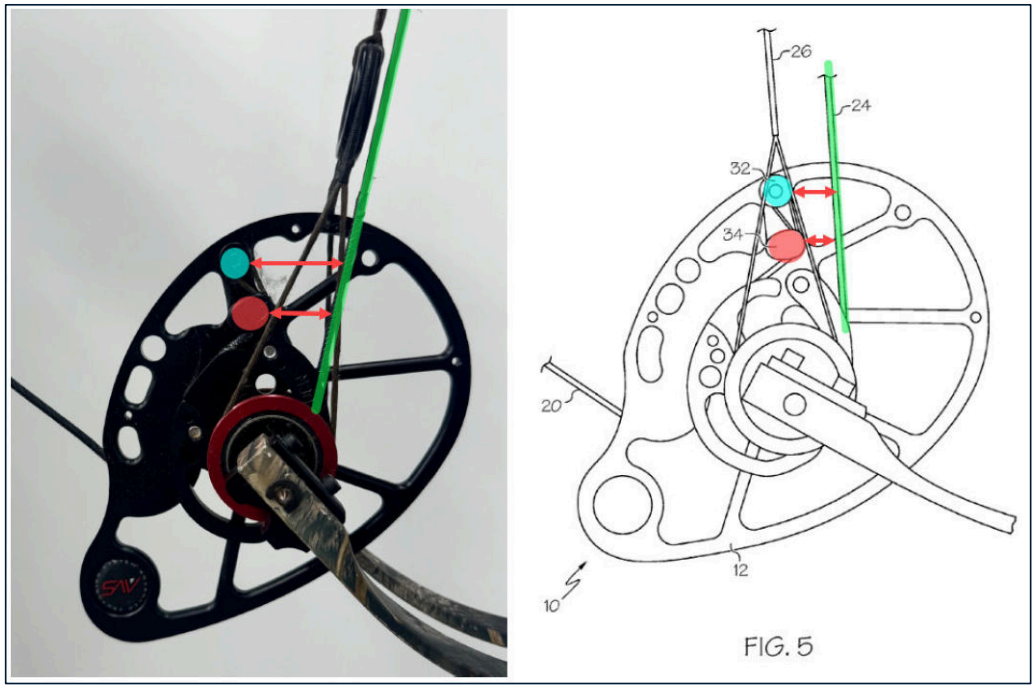
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 66-67; EX2018, ¶¶56-57, 91-92; EX2017, App. A

Monster Embodies ’989 Patent – Claim 11

Undisputed Fact

Claim 11(g): “wherein, in the drawn condition, the capstan is located closer to the elongate straight portion [of the power cable] than the terminal.”



’989 POR, 67

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 67-70; EX2018, ¶91; EX2017, App. A

Monster Embodies ’989 Patent – Claim 12

’989 POR, 69

Claim 12(b)(i)-(ii): “… a first rotatable member supported by the first limb on a first axle, a second rotatable member supported by the second limb on a second axle, the first axle and the second axle defining an axle plane,”

Claim 12(c)(i)-(ii): “a drawstring extending between the first rotatable member and the second rotatable member, the drawstring extending from the first rotatable member at an exit location;”

DECLARATION OF MCP’S EXPERT

91. The full bow photograph from the Monster article and of the Monster ’775 are annotated below to show an edge view of the axle plane (dashed red line) defined by the two axles (18, 19) and to indicate the drawstring exit location (22) on each cam. As noted above, a POSITA would understand that a compound bow would have a plane defined between the two axles of the bow and that the plane is parallel to the axis of rotation of the axles. A POSITA would also

EX2018, ¶91

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 67-70; EX2018, ¶91; EX2017, App. A

Monster Embodies ’989 Patent – Claim 12

’989 POR, 69

Claim 12(e)(i): “wherein, <u>in the brace condition</u>, the axle plane divides the first rotatable member to a first part and a second part, the capstan and the terminal located in the first part, the drawstring exit location located in the second part, and”

DECLARATION OF MCP’S EXPERT

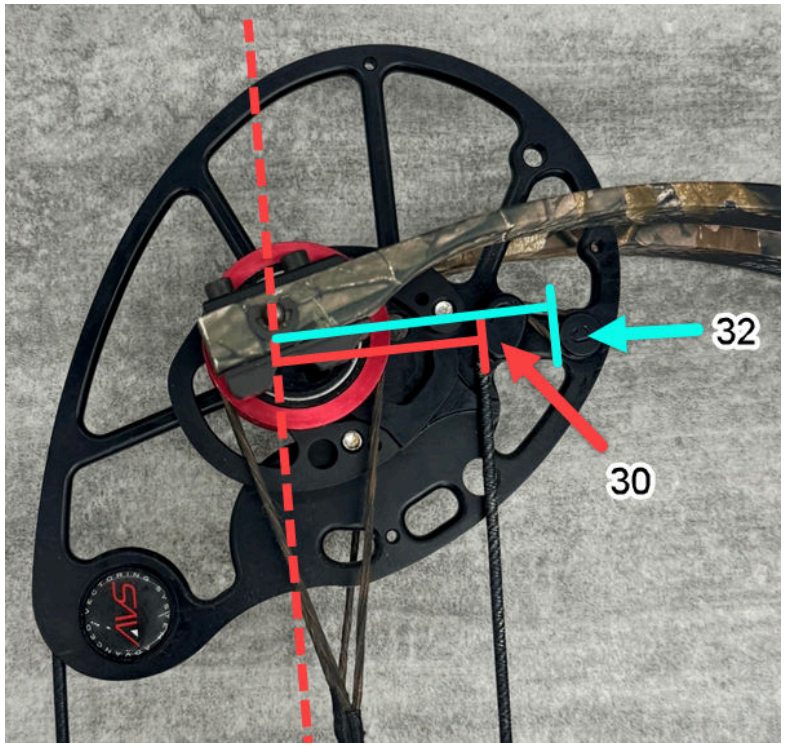
> that the plane is parallel to the axis of rotation of the axles. A POSITA would also have understood that the axle plane would divide the cam into a first part and a second part. It is clear that the axle plane of the Monster bow divides each cam into a first part (green) and a second part (purple). The capstan and terminal (circled) are located on the green first part and the drawstring exit 22 is located on the purple second part.

EX2018, ¶91

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 43-47; EX2018, ¶¶92; EX2017, App. A

Monster Embodies ’989 Patent – Claim 12



’989 POR, 70

Claim 12(e)(i): “wherein, in the brace condition, the axle plane divides the first rotatable member to a first part and a second part, the capstan and the terminal located in the first part, the drawstring exit location located in the second part, and”

DECLARATION OF MCP’S EXPERT

92. The cam photograph from the Monster article and the Monster ’775 are annotated below illustrating the relative distances between the axle plane (dashed red line) of the Monster bow and the terminal (32, blue) and the capstan (30, red). It is clear from this photograph that on the Monster bow, the distance (blue) between the terminal (32) and the axle plane is greater than the distance (red) between the capstan (30) and the axle plane.

EX2018, ¶92

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

FISH.

Petitioner Fails to Show Claims Are Obvious

Petitioner Fails to Show Claims Are Obvious

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

FISH.

Petitioner Fails to Show Claims Are Obvious

Cable Wrap Direction

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Cable Wrap Direction

'989 POR, 82-85, 89-97; '017 POR, 82-85, 88-96; '831 POR, 76-79, 82-90; EX2018, ¶¶111-13; PO Sur-reply, 41-46

Islas does not teach a different wrap direction than *Darlington*

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

> 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, 57. *Islas* teaches that reverse wrapping power cables was known.

'989 Reply, 17

FISH.

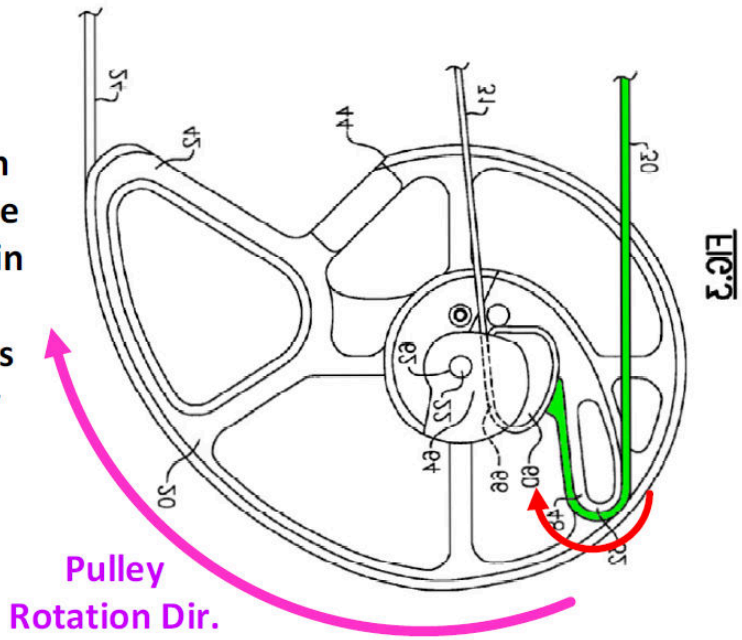
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Cable Wrap Direction

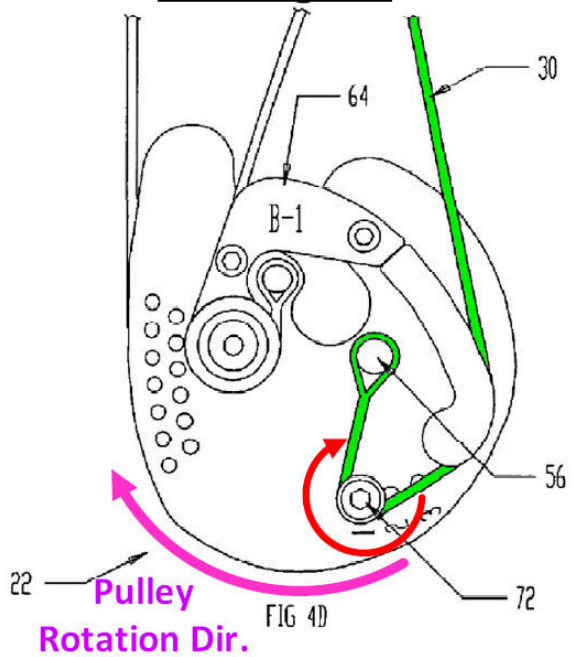
'989 POR, 82-85, 89-97; '017 POR, 82-85, 88-96; '831 POR, 76-79, 82-90; EX2018, ¶¶111-13; PO Sur-reply, 41-46

Both green power cable ends wrap in the same direction as the pulley rotation

Islas



Darlington



'989 Sur-reply, 43

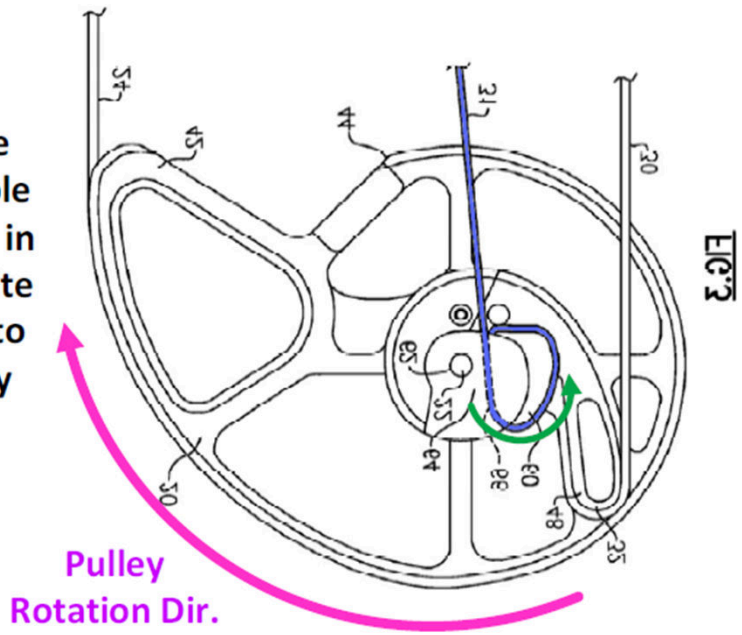
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Cable Wrap Direction

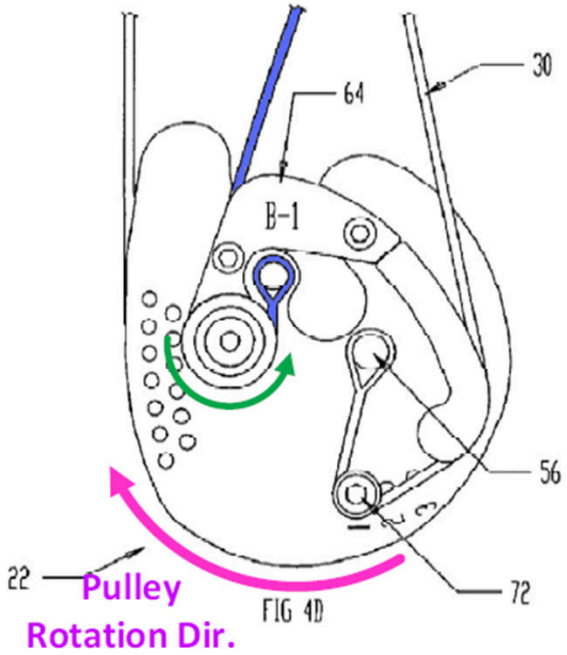
’989 POR, 82-85, 89-97; ’017 POR, 82-85, 88-96; ’831 POR, 76-79, 82-90; EX2018, ¶¶111-13; PO Sur-reply, 41-46

Both blue power cable ends wrap in the opposite direction to the pulley rotation

Islas



Darlington



’989 Sur-reply, 43

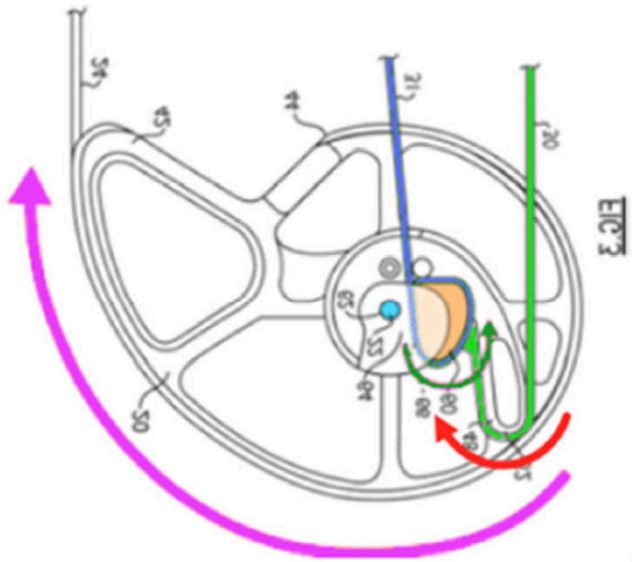
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Cable Wrap Direction

'989 POR, 82-85, 89-97; '017 POR, 82-85, 88-96; '831 POR, 76-79, 82-90; EX2018, ¶¶111-13; PO Sur-reply, 41-46

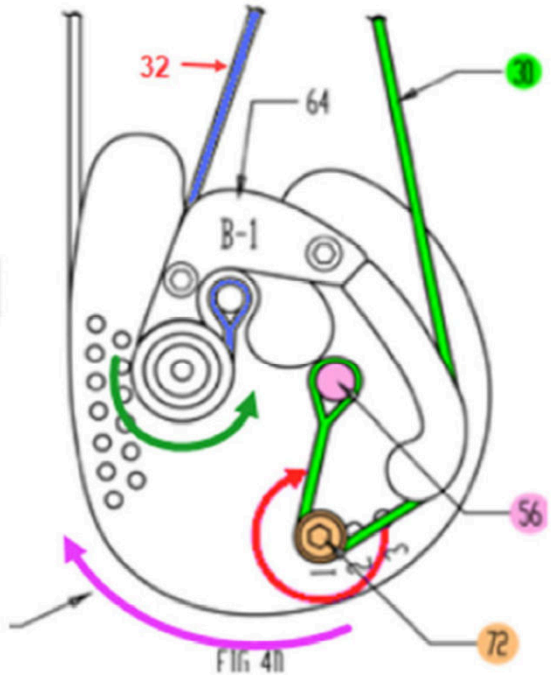
Islas and Darlington viewed in combination teach the same cable wrapping directions

Islas



EX1005, FIG. 3

Darlington



EX1004, FIG. 4D

EX2018, ¶112
'989 Sur-reply, 43

FISH.

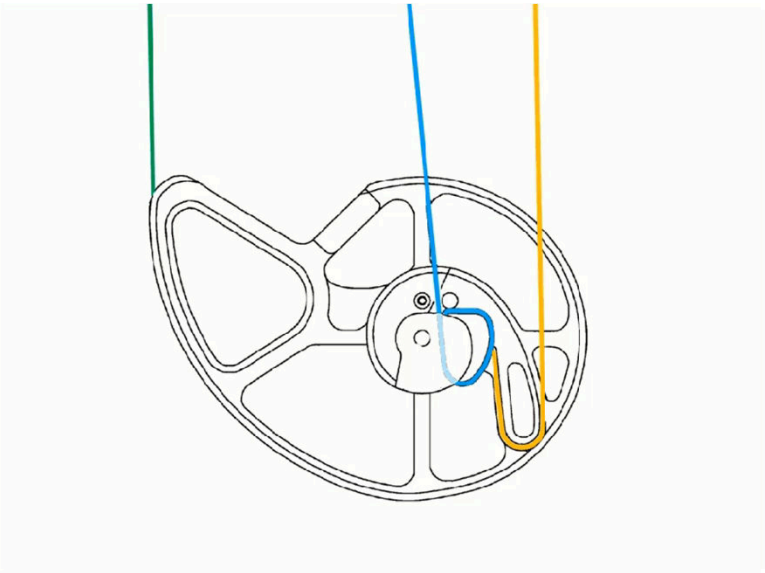
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 82-85, 89-97; ’017 POR, 82-85, 88-96; ’831 POR, 76-79, 82-90; EX2018, ¶¶111-13; PO Sur-reply, 41-46

Cable Wrap Direction

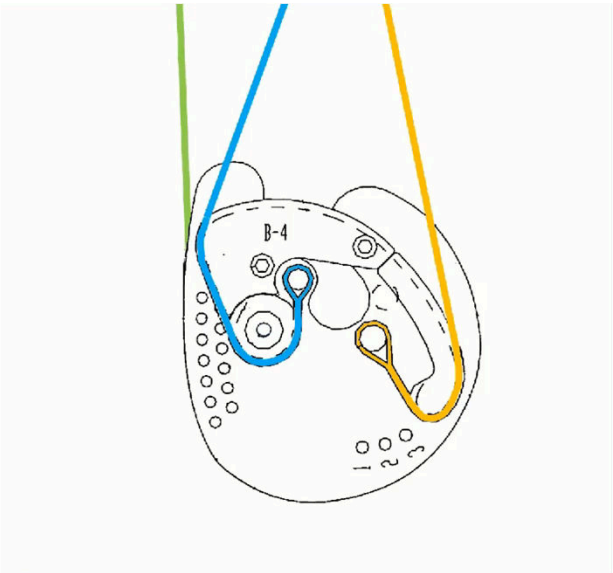
Darlington already teaches wrap directions in *Islas*

Islas



EX2021 – Islas brace to draw

Darlington



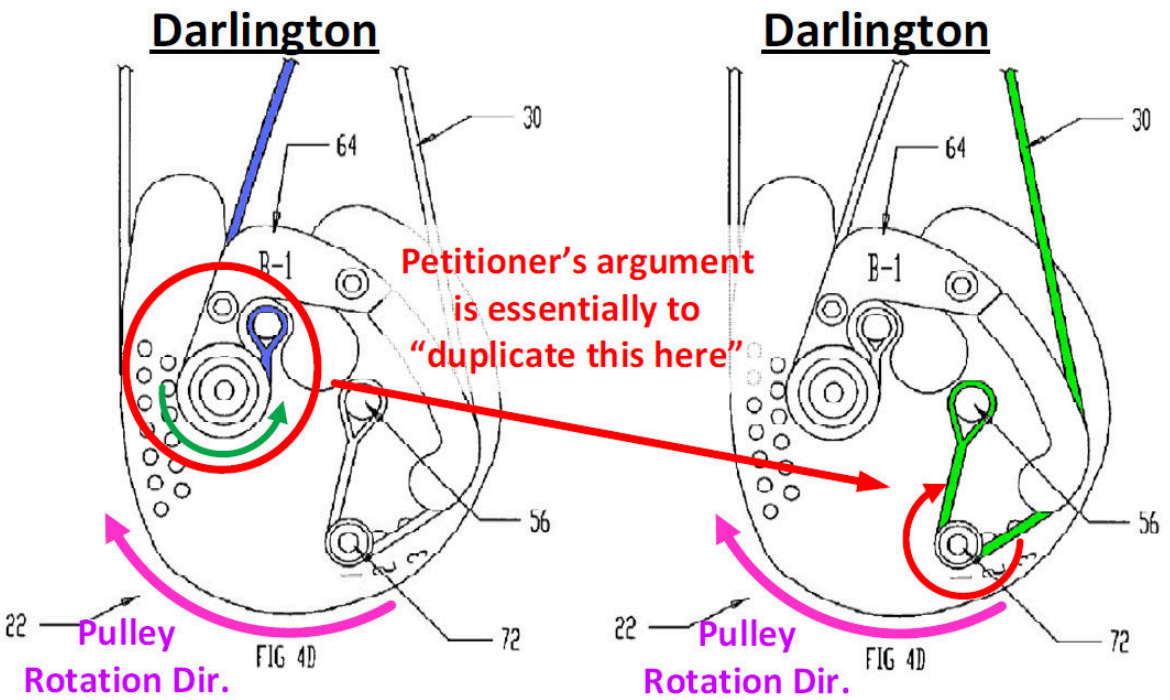
EX2020 – Darlington brace to draw

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 82-85, 89-97; ’017 POR, 82-85, 88-96; ’831 POR, 76-79, 82-90; EX2018, ¶¶111-13; PO Sur-reply, 41-46

Cable Wrap Direction

Darlington already teaches wrap directions in *Islas*

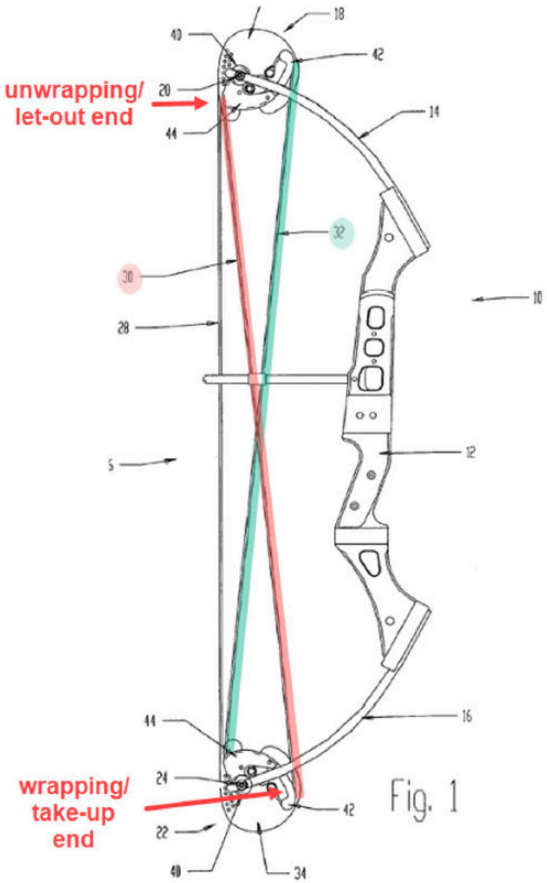


’989 Sur-reply, 43

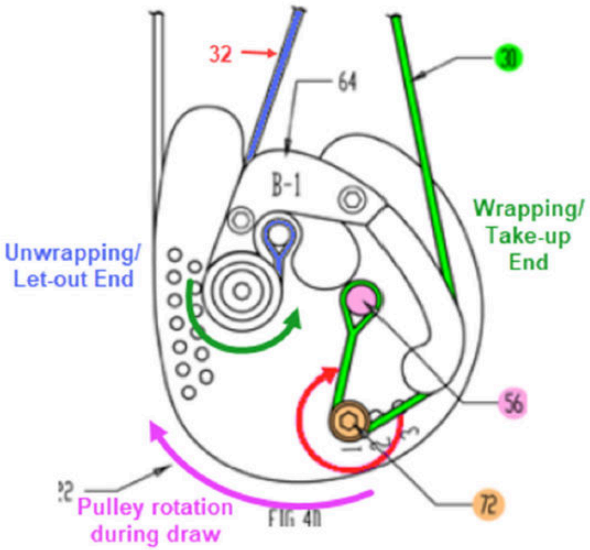
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 82-85, 89-97; ’017 POR, 82-85, 88-96; ’831 POR, 76-79, 82-90; EX2018, ¶¶111-13; PO Sur-reply, 41-46

Cable Wrap Direction



Power cable ends have different functions

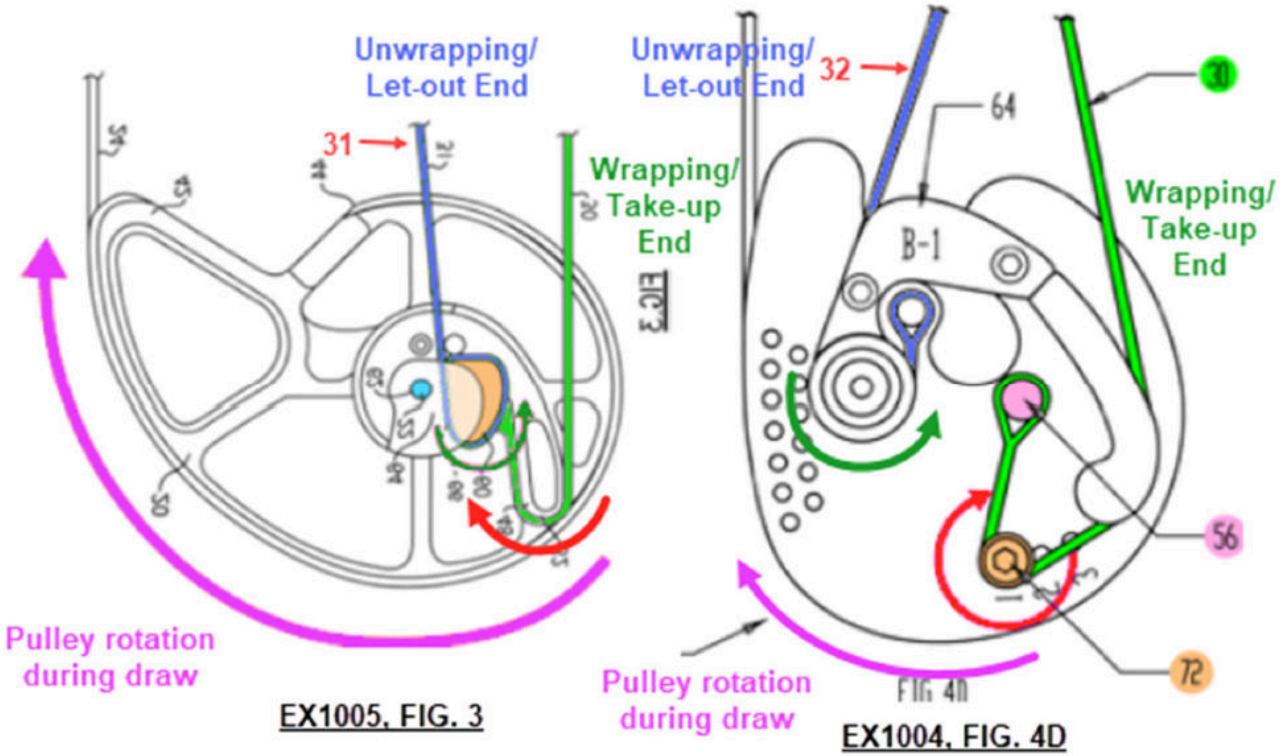


’989 POR, 94; EX1004, FIG. 1 & 4D (annotated)

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Cable Wrap Direction

'989 POR, 82-85, 89-97; '017 POR, 82-85, 88-96; '831 POR, 76-79, 82-90; EX2018, ¶¶111-13; PO Sur-reply, 41-46



'989 POR, 95

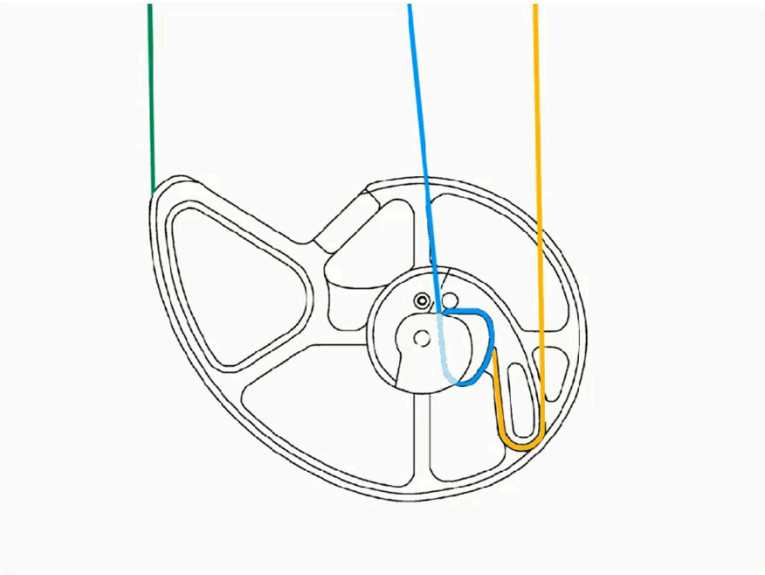
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Cable Wrap Direction

’989 POR, 82-85, 89-97; ’017 POR, 82-85, 88-96; ’831 POR, 76-79, 82-90; EX2018, ¶¶111-30; PO Sur-reply, 41-46

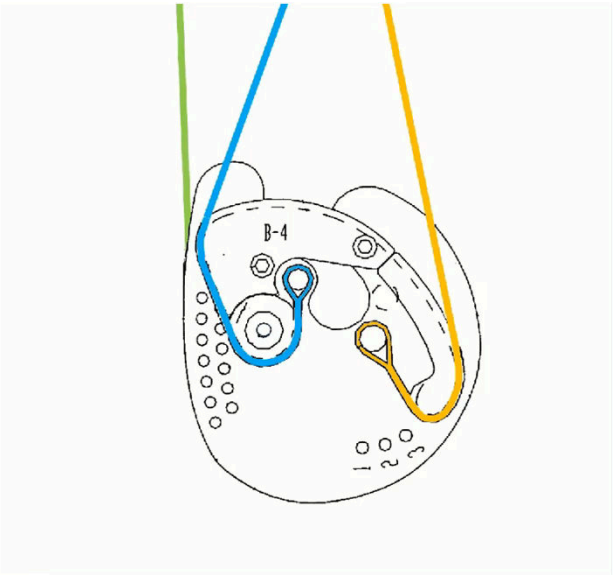
Power cable ends have different functions

Islas



EX2021 – Islas brace to draw

Darlington



EX2020 – Darlington brace to draw

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

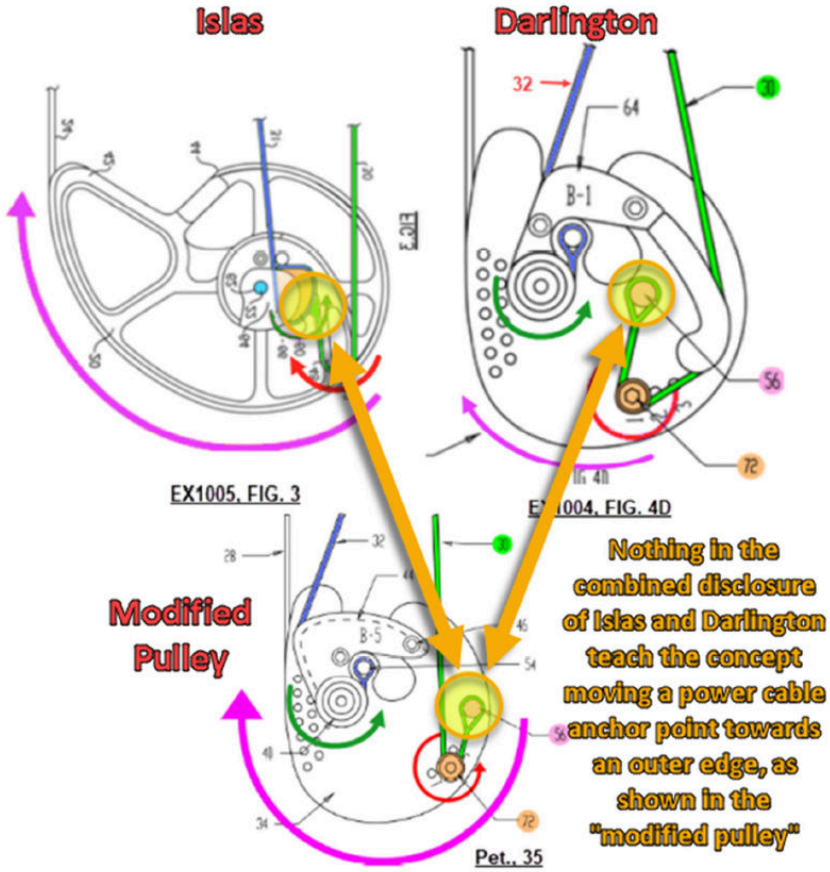
FISH.

Anchor Position

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

'989 POR, 76-89; '017 POR, 85-88; '831 POR, 79-82; EX2018, ¶¶111-13; PO Sur-reply, 46-49

Petitioner's modified pulley has features not present in *Darlington* or *Islas*



PO Sur-reply, 47

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 85-89; ’017 POR, 85-88; ’831 POR, 79-82; EX2018, ¶¶111-13; PO Sur-reply, 46-49

Anchor Position

Neither *Darlington* nor *Islas* teach an anchor near the periphery of the cam

DEPOSITION OF PETITONER’S EXPERT– EX2012

11 **Q. You can tell by looking at the**
12 **embodiments in Islas that Islas doesn't have**
13 **anchor points on the periphery of the cam; right?**
14 A. Islas does not show any anchor points.
15 So I don't know where the designer might have
16 imagined them to go.
17 **Q. Nothing in Islas teaches the reader to**
18 **put an anchor point on the periphery of the cam;**
19 **does it?**
20 A. I don't believe anything in Islas
21 teaches the reader anything about where to place
22 an anchor.

EX2012, 77:11-22

9 **Q. Anchor point 56 is on the periphery of**
10 **the cam; right?**
11 A. In which figure again, please?
12 **Q. Well, generally, I would say in the**
13 **combination of Darling -- in your combination of**
14 **Darlington and Islas, you have placed anchor**
15 **point 56 on the periphery of the cam; right?**
16 A. I would say so.
17 **Q. Now, in Darlington, Darlington doesn't**
18 **show anchor point 56 on the periphery of the cam;**
19 **does it, sir?**
20 A. It does not.

EX2012, 76:9-20

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

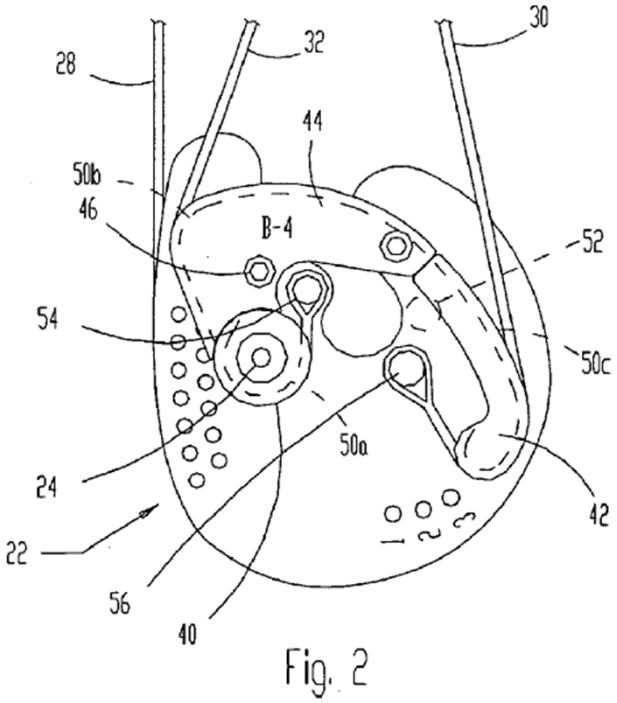
FISH.

Petitioner's Alleged Motivations to Combine Fail

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

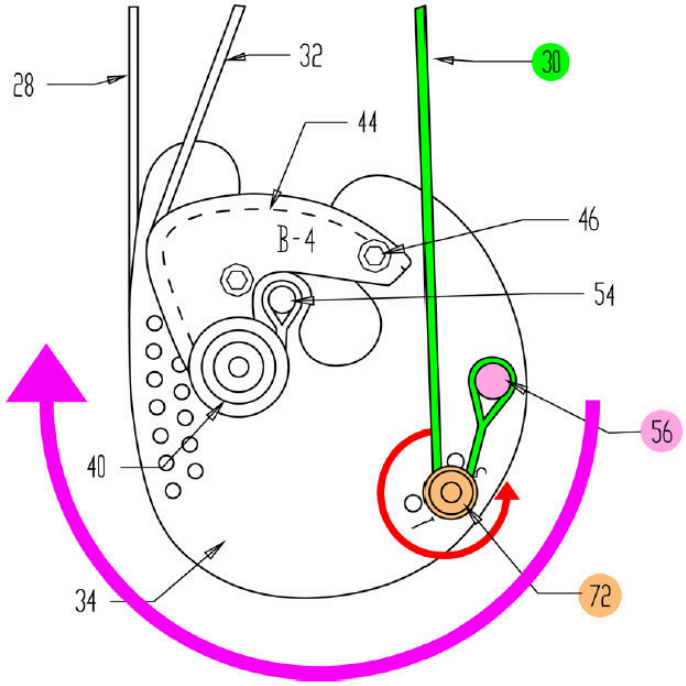
Petitioner's Modified Pulley

Darlington



EX1004, FIG. 2

Modified Darlington



'989 Pet. 36

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Petitioner's Motivations to Combine

'989 POR, 97-108;
'017 POR, 96-107;
'831 POR, 91-101;
EX2018, ¶¶114-40;
PO Sur-reply, 49-54

'989 PETITION

A PHOSITA would have been motivated, having read *Islas*, to modify *Darlington's* bow such that its power cable wrapped around its capstan in a second rotational direction that is opposite its first rotational direction (i.e., outward, toward the periphery of the cam) as recited in limitation 1(f) and taught by *Islas* for three primary reasons: (1) it would have increased safety and maintainability, (2) it would have simplified the design, resulting in a reduced manufacturing cost and (3) it would have increased the maximum angular sweep the rotatable member could rotate without obstruction from brace to full-draw.

'989 Pet. 36-37

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Petitioner's Motivations linked to removal of section 42 not cable wrap direction

DECLARATION OF PETITIONER'S EXPERT

proposed in one example (annotated, right). As mentioned above, eliminating section 42 would have decreased the wear, friction, and potential for unwanted contact between power cable 30 and other portions of the bow, but its elimination also would have resulted in reduced manufacturing cost for the design, further motivating the combination. Equivalently, in the case that the pulleys (including

EX1003, ¶62

63. A PHOSITA would have also recognized the elimination of section 42 in the modified *Darlington+Islas* design 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

EX1003, ¶63

'989 POR, 97-108;
'017 POR, 96-107;
'831 POR, 91-101;
EX2018, ¶¶114-40;
PO Sur-reply, 49-54

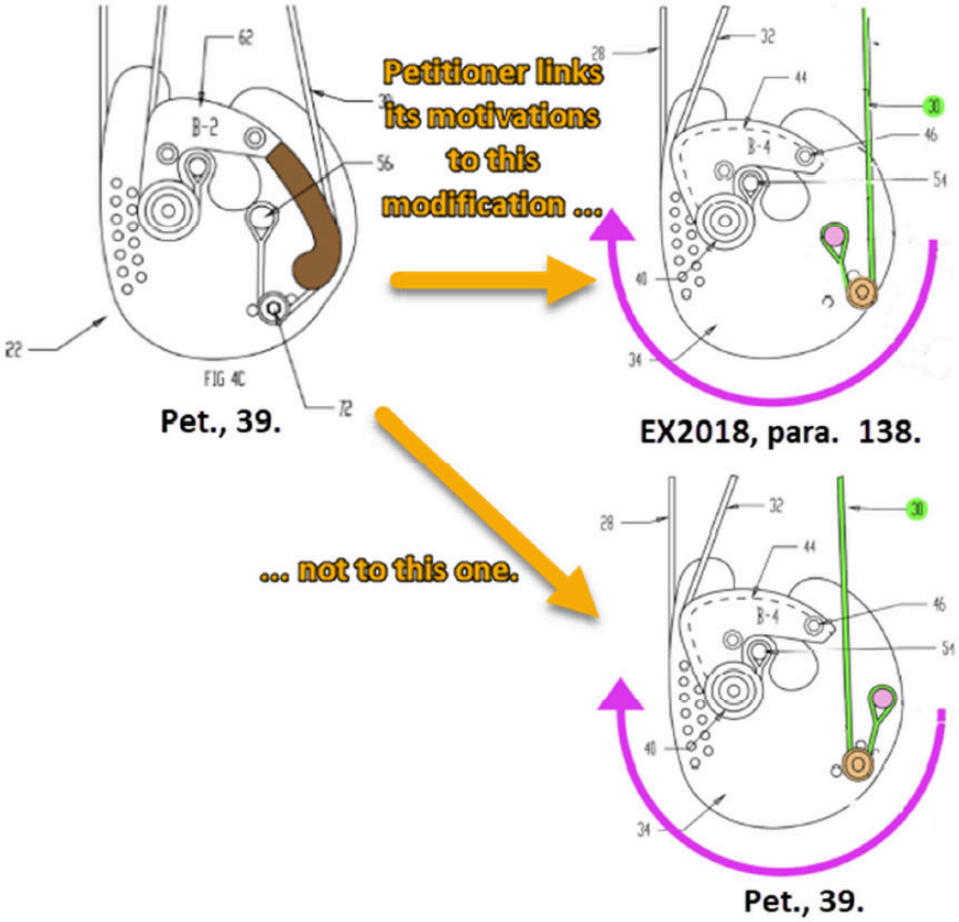
FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Petitioner's Motivations to Combine

'989 POR, 97-108;
'017 POR, 96-107;
'831 POR, 91-101;
EX2018, ¶¶114-40;
PO Sur-reply, 49-54

No rational connection between motivations and cable wrap direction



FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

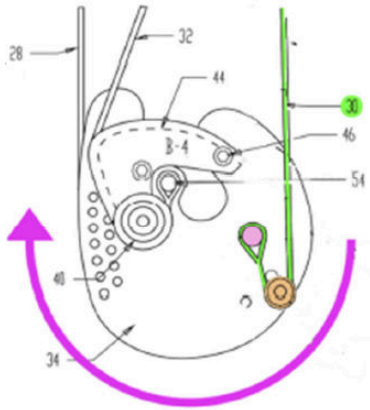
Petitioner's Motivations to Combine

'989 POR, 97-108;
'017 POR, 96-107;
'831 POR, 91-101;
EX2018, ¶¶114-40;
PO Sur-reply, 49-54

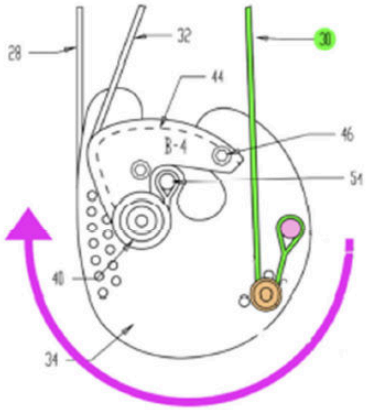
DECLARATION OF MCP'S EXPERT

138. With respect to the reduced energy storage and velocity discontinuity problems described above, I find it curious that Petitioner does not appear to have considered the alternative design modification depicted in the image below. The left image shows the modified design proposed by Petitioner. EX1003, ¶58. The right image shows a variation of this modified design, but with better energy storage capacity and less severe velocity discontinuity, although still not an improvement from Darlington. Petitioner's failure to consider this simple but improved (compared to Petitioner's proposed design) design variation suggests Petitioner may have used the '989 patent as a roadmap to guide the proposed combination.

EX2018, ¶138



EX2018, para. 138.



Pet., 39.

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

FISH.

Safety and Maintainability

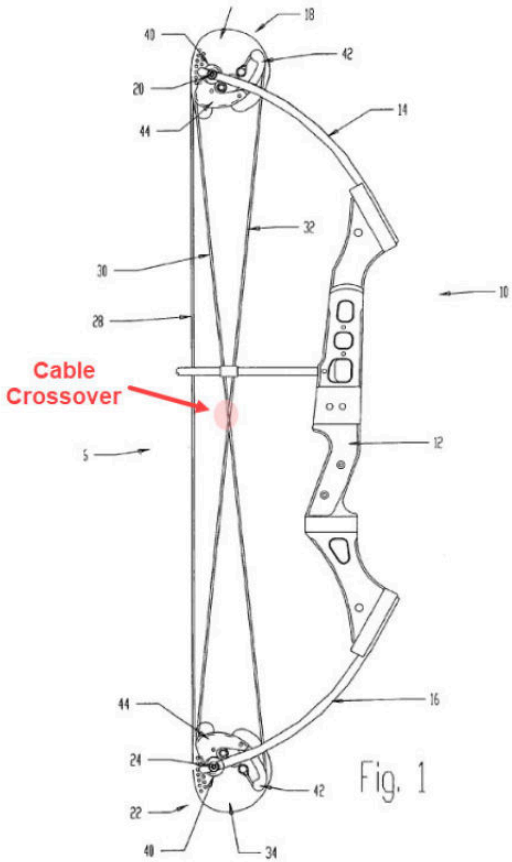
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 104-07; ’017 POR, 103-06; ’831 POR, 97-100; EX2018, ¶¶114-30; PO Sur-reply, 51-52

Reducing Cable Wear

Safety and maintainability only linked to reducing cable wear

Petitioner’s supporting evidence relates to cable wear at cable crossover not on cam



EX1004, FIG. 1

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

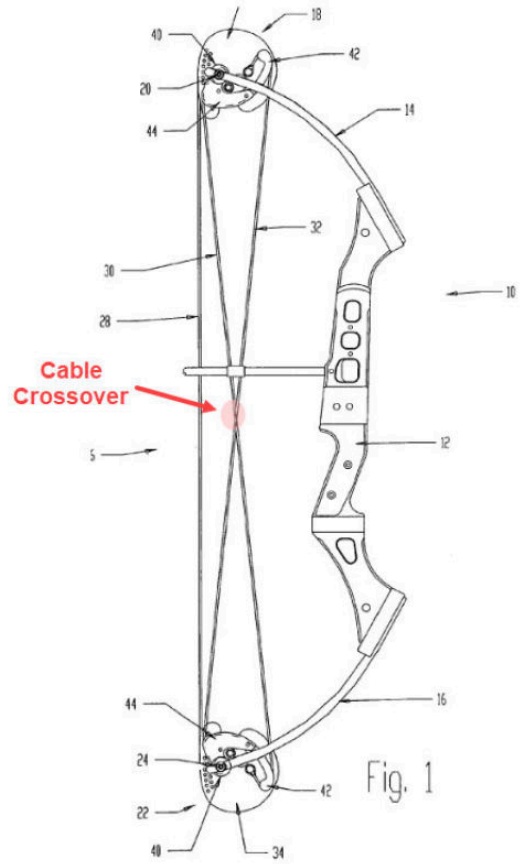
’989 POR, 104-07; ’017 POR, 103-06; ’831 POR, 97-100; EX2018, ¶¶114-30; PO Sur-reply, 51-52

Reducing Cable Wear

DECLARATION OF MCP’S EXPERT

EX1003, ¶61. In response, I first note that there is no evidence that cable rub occurs or is a problem in Darlington. Cable rub occurs when a cable slides over another component such as a cam or another cable. Rubbing requires (1) contact between two surfaces and (2) a non-zero relative sliding velocity at the contact point. If motion is controlled such that there is no sliding between the surfaces, no rubbing can occur. Moving the power cable <u>further</u> away from the other components, as Mr. Lange suggests, does nothing more to eliminate rubbing. Further, Mr. Lange has not identified any components in Darlington that have a relative surface velocity and are so closely spaced that there is a concern that rubbing may occur.

EX2018, ¶116



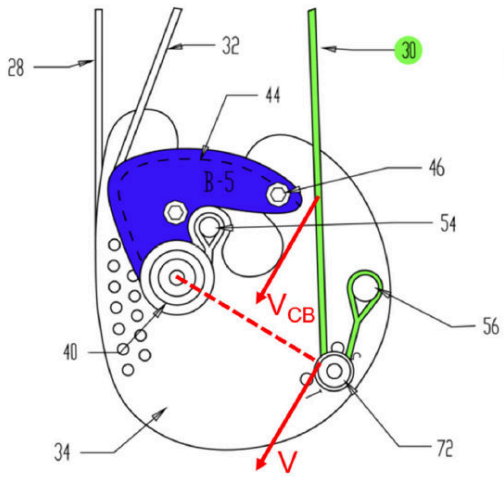
EX1004, FIG. 1

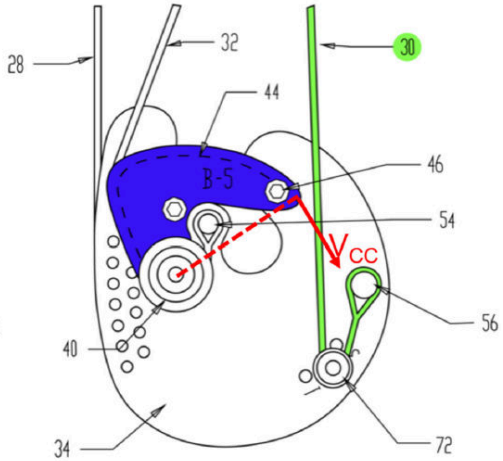
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

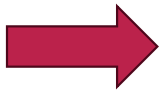
’989 POR, 104-07; ’017 POR, 103-06; ’831 POR, 97-100; EX2018, ¶¶114-30; PO Sur-reply, 51-52

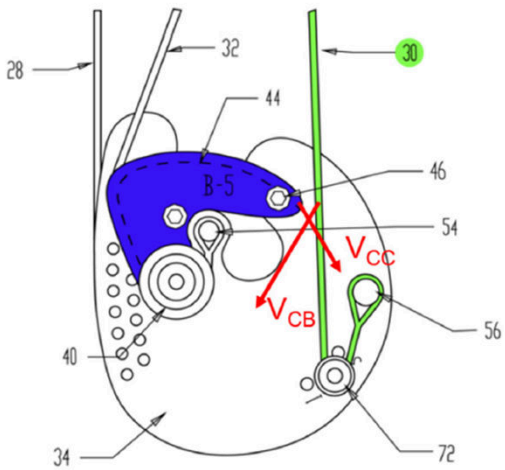
Reducing Cable Wear

Petitioner’s modification creates velocity discontinuities between cable and cam <u>increasing</u> cable wear









EX2018, ¶122

EX2018, ¶123

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

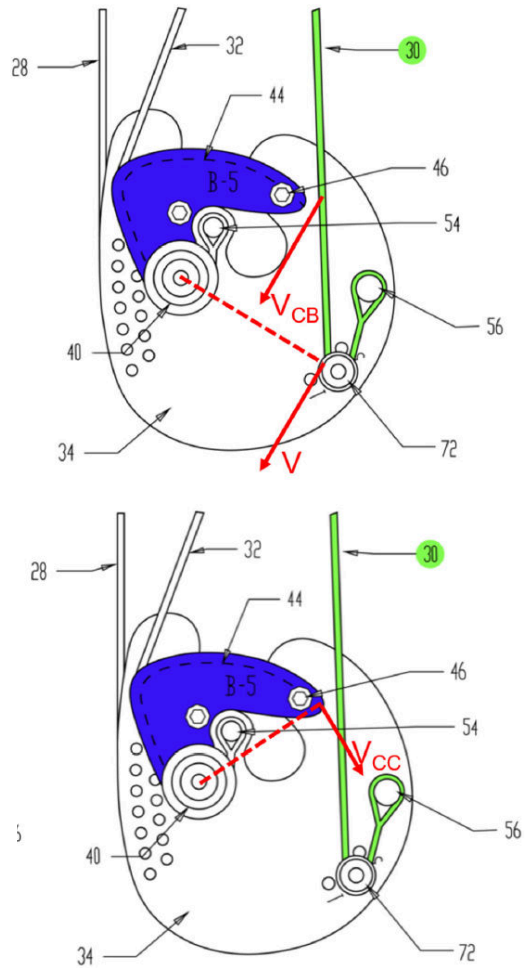
’989 POR, 104-07; ’017 POR, 103-06; ’831 POR, 97-100; EX2018, ¶¶114-30; PO Sur-reply, 51-52

Reducing Cable Wear

DECLARATION OF MCP’S EXPERT

122. The vector V_{CB} in the left image represents the velocity of the specific point on the cable that will first contact the tip of cam module B-5. Note that, for the reasons discussed above, V_{CB} will be approximately equal to V. The right image shows a similar construction used to determine the velocity of the tip of cam module B-5. Vector V_{CC} represents the velocity of the point on cam module B-5 that will first contact the cable. Since this point also rotates about the cam center, vector V_{CC} must be perpendicular to a line (shown dashed red) from the center of cam rotation to the point at the tip of module B-5. Note that V_{CC} is smaller in magnitude than V because it is closer to the center of cam rotation.

EX2018, ¶122



EX2018, ¶122

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 104-07; ’017 POR, 103-06; ’831 POR, 97-100; EX2018, ¶¶114-30; PO Sur-reply, 51-52

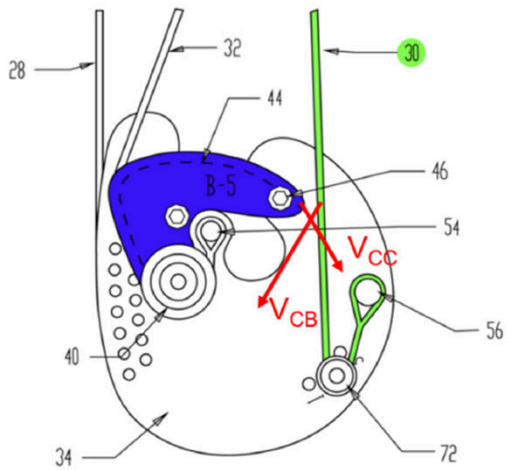
Reducing Cable Wear

Petitioner’s modification creates velocity discontinuities between cable and cam <u>increasing</u> cable wear

DECLARATION OF MCP’S EXPERT

> 123. The image below illustrates the velocity discontinuity that will occur when the cable first contacts the tip of cam module B-5. The tip of cam module B-5 is moving down and to the right. The contact point on the taut cable is moving down and to the left. Because the points come into contact abruptly with different velocities, an impact (or collision) occurs. I note that the same type of velocity discontinuity will occur when the bowstring is released and the arrow is fired, except the directions of the velocity vectors will be reversed. The image below

EX2018, ¶123



EX2018, ¶123

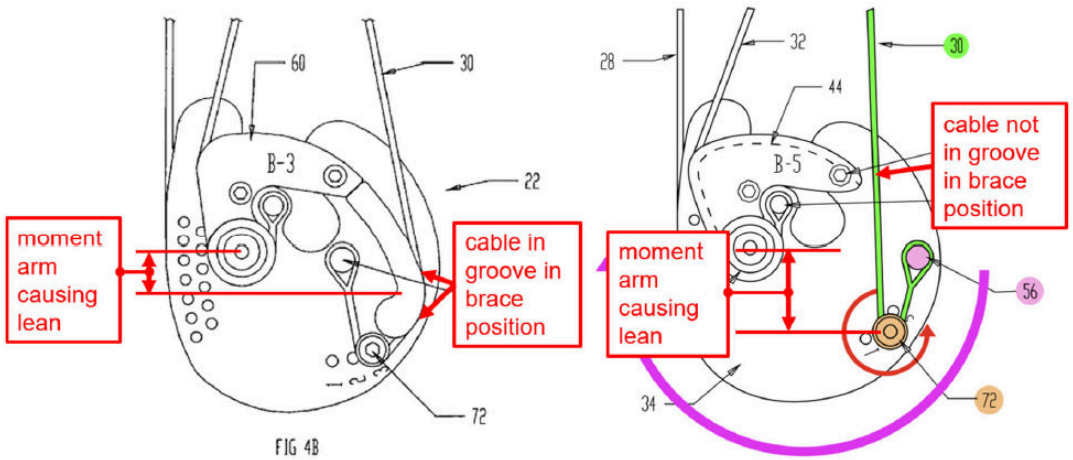
FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 104-07; ’017 POR, 103-06; ’831 POR, 97-100; EX2018, ¶¶114-30; PO Sur-reply, 51-52

Reducing Cable Wear

Petitioner’s modification <u>increases</u> cam lean <u>increasing</u> possibility of cable misalignment and cable wear



EX2018, ¶129

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 104-07; ’017 POR, 103-06; ’831 POR, 97-100; EX2018, ¶¶114-30; PO Sur-reply, 51-52

Cam Lean

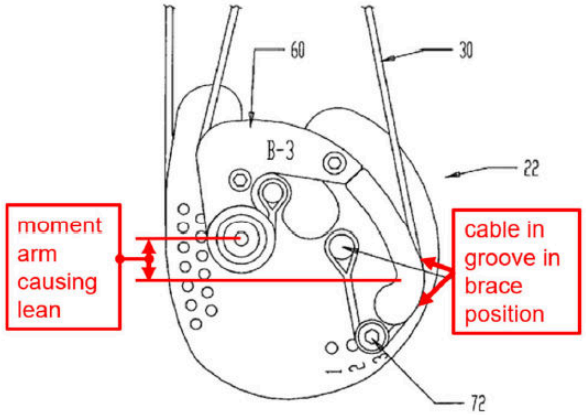
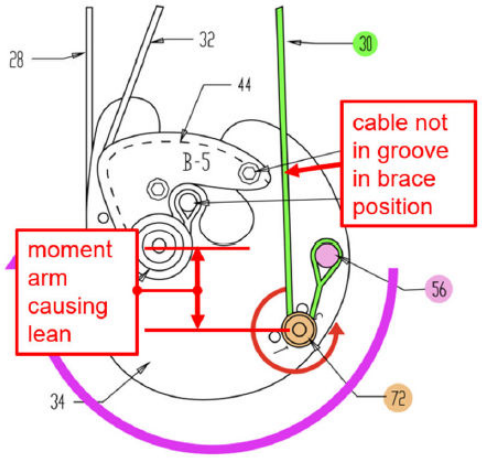


FIG 4B



EX2018, ¶129

DECLARATION OF MCP’S EXPERT

to consider is cam lean. Cam lean in a compound bow refers to cams that are not aligned with the vertical plane of the bow and are tilted to the right or the left instead of being straight up and down. A slight amount of cam lean may be acceptable, but too much lean can cause significant cable wear and cable derailment. Derailment occurs when a cable does not wrap in its intended groove.

EX2018, ¶128

In the inevitable event of cam lean, however, the cable may strike the edge of the groove or miss it altogether (i.e., derail). Cam lean occurs when tension in the cables creates a turning moment that deflects the cam out of the drawing plane. In Petitioner’s design this will cause the bottom of the cam to move out of the page and will cause the top of the cam to move into the page. The longer moment arm inherent in Petitioner’s design exacerbates this problem. Cam lean will cause the cable in Petitioner’s design to rub on the side of the groove in the best case, or derail altogether in the worst case. This again show the importance of cam section 42 in Darlington and why it cannot be eliminated as Petitioner proposes.

EX2018, ¶129

’989 POR, 104-07; ’017 POR, 103-06; ’831 POR, 97-100; EX2018, ¶¶114-30; PO Sur-reply, 51-52

Reducing Cable Wear

The only contact between the power cable and the bow that is removed is contact with section 42

DEPOSITION OF PETITIONER’S EXPERT

3 Q. And it says, "eliminating section 42
4 would have decreased the wear, friction, and
5 potential for unwanted contact between power
6 cable 30 and other portions of the bow," and it
7 continues.
8 You see that?
9 A. I do.
10 Q. The other portions of the bow that you
11 describe there, are you talking about section 42
12 or are you talking about something else?
13 A. Section 42.

EX2012, 117:3-13

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 104-07; ’017 POR, 103-06; ’831 POR, 97-100; EX2018, ¶¶114-30; PO Sur-reply, 51-52

Reducing Cable Wear

Petitioner’s expert admits that additional modifications are necessary to reduce cable wear

DEPOSITION OF PETITIONER’S EXPERT

17 **Q. Do you believe it's possible that the**
18 **combination embodiment you've drawn in your**
19 **declaration puts more wear on the cable than would**
20 **exist in the original Darlington?**
21 A. I don't have an opinion on that.
22 Scratch that.

Page 109

1 I do have an opinion on that.
2 **Q. Okay. What is it?**
3 A. I expect that a PHOSITA would further
4 modify the concept, presented as the modified
5 Darlington/Islas cam assembly, such that the wear
6 would be less than what is depicted in Darlington.

EX2012, 108:17-109:6

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

FISH.

Simplification and Reduced Cost

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 104-07; ’017 POR, 103-06; ’831 POR, 97-100; EX2018, ¶¶135-40; PO Sur-reply, 52-53

Reduced Manufacturing Costs

Alleged reduction in manufacturing costs result only from removing section 42

Petitioner’s claim that section 42 is “superfluous” has no factual support

DECLARATION OF PETITIONER’S EXPERT

> 62. As an added benefit of the modification, the section 42 highlighted in brown in annotated Fig. 4C below would have been rendered superfluous and would have been desirably eliminated from the combined *Darlington+Islas* bow, simplifying the overall design.

EX1003, ¶62

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Reduced Manufacturing Costs

'989 POR, 97-100, 104-07; '017 POR, 96-99, 103-06; '831 POR, 91-93, 97-100; EX2018, ¶¶135-40; PO Sur-reply, 52-53

Petitioner's expert admits section 42 functions to take up power cable to store energy

DEPOSITION OF PETITIONER'S EXPERT

10 **Looking at fixed member 42, you agree**
11 **that during the draw that fixed member 42 takes up**
12 **power cable 30?**
13 A. I believe -- I believe I stated that
14 it does earlier in the deposition.

EX2012 89:10-14

18 **Q. BY MR. COLVIN: In a bow system, such**
19 **as the one shown in Darlington, taking up power**
20 **cables stores energy; right?**
21 A. Yes.
22 **Q. And during draw, fixed section 42**

Page 91

1 **takes up power cable 30, as shown in the bottom**
2 **image of Figure 2?**
3 A. Correct.

EX2012, 90:18-91:3

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Any cost or material savings will be offset by added or modified components to create a functioning bow

'989 POR, 97-107; '017 POR, 96-107; '831 POR, 91-101; EX2018, ¶¶135-40; PO Sur-reply, 52-53

DECLARATION OF MCP'S EXPERT

simplifying the overall design." EX1003, ¶62. As I have shown above, section 42 is not superfluous; eliminating it has severe consequences that, at best, will require additional design work and added or modified components to address. For example, significant modifications to Petitioner's proposed design will be needed to mitigate the effect of the velocity discontinuity and resulting vibration. A significantly larger rotatable member will be required to regain the lost energy storage capacity. This, in turn, will require additional material and more time spent machining the rotatable member. Any small material savings or simplification gained by eliminating section 42 will be more than offset by the added complexity and material that will be required to create a functional design.

EX2018, ¶140

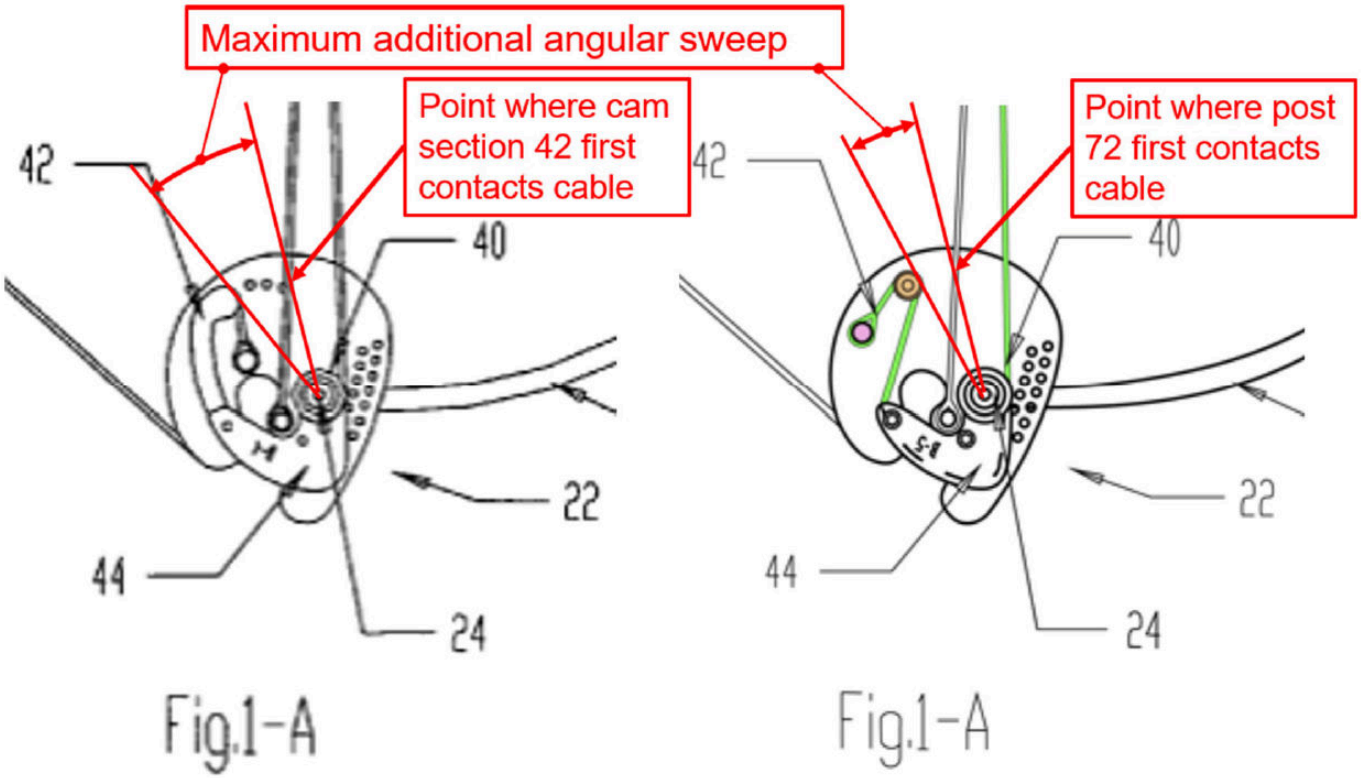
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

FISH.

Maximum Angular Sweep

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Modified pulley does not increase the maximum angular sweep



EX2018, ¶133

'989 POR, 103-04;
'017 POR, 102-03;
'831 POR, 100-101;
EX2018, ¶¶131-134;
PO Sur-reply, 53-54

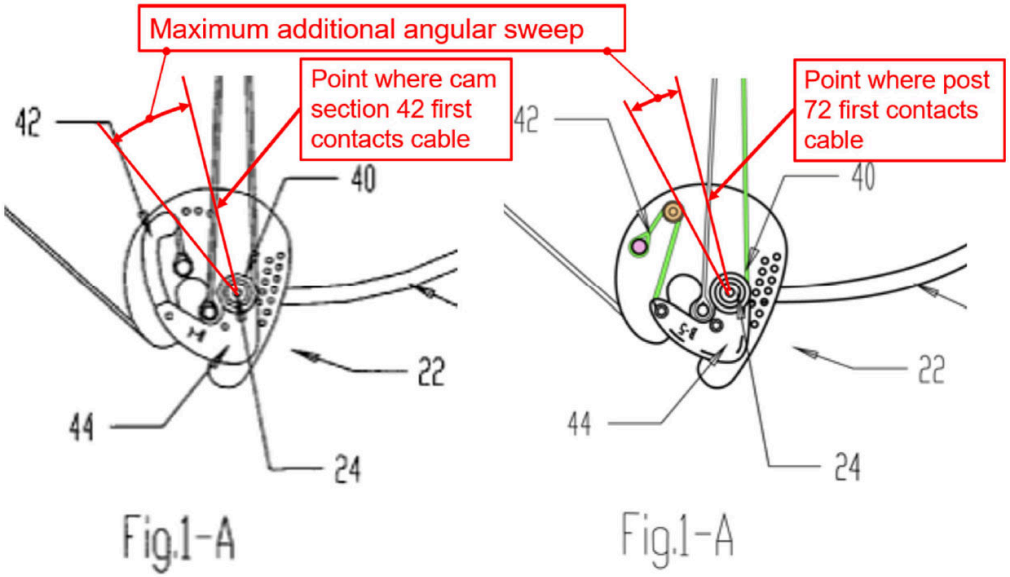
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Modified pulley does not increase the maximum angular sweep

DECLARATION OF MCP'S EXPERT

In the left image (Original Darlington), the rotatable member can rotate approximately an additional 25 degrees before the end of cam section 42 contacts the power cable. The angle is measured between the end of section 42 in the drawn position and the approximate location where the end of section 42 would contact the let-out end of the power cable. In Petitioner's modified design, the rotatable member can rotate approximately an additional 14 degrees before post 72 (highlighted orange) contacts the power cable. Petitioner's proposed modified design clearly reduces rather than increases the maximum angular sweep of the rotatable member.

EX2018, ¶133



EX2018, ¶133

'989 POR, 103-04;
'017 POR, 102-03;
'831 POR, 100-101;
EX2018, ¶¶131-134;
PO Sur-reply, 53-54

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 103-04; ’017 POR, 102-03; ’831 POR, 100-101; EX2018, ¶¶131-134; PO Sur-reply, 53-54

Maximum Angular Sweep

Petitioner’s expert admits modified pulley does not increase the maximum angular sweep

DEPOSITION OF PETITIONER’S EXPERT

5 Q. In the embodiments that you've drawn
6 in your declaration, do those embodiments have a
7 higher rotational limit than the embodiments shown
8 in Darlington?
9 A. No.

EX2012, 95:5-9

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

FISH.

No On-Sale Bar

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

PO Sur-reply, 37-40; EX1017; EX1016; EX2006; EX2016

Inaccurate Statement in POR

MCP informed Petitioner of inaccurate statement before Petitioner filed Reply

From: Josh Griswold <griswold@fr.com>
Sent: Thursday, March 6, 2025 3:49 PM
To: Adam Seitz <adam.seitz@eriseip.com>
Cc: Adam Sandwell <adam.sandwell@eriseip.com>; chris.schmidt@eriseip.com; lydia.raw@eriseip.com; IPR56402-0006IP1 <IPR56402-0006IP1@fr.com>; IPR56402-0005IP1 <IPR56402-0005IP1@fr.com>; IPR56402-0002IP1 <IPR56402-0002IP1@fr.com>
Subject: Correction of statement in Patent Owner's Responses; IPR2024-00522, IPR2024-00523, and IPR2024-00524

Counsel,

We've become aware that you are quoting our Patent Owner's Response from IPR2024-00522, IPR2024-00523, and IPR2024-00524 in a Rule 11 letter sent to our client.

Specifically, you quote: "[t]he Mission Menace bow was designed and built in 2008 and the product was first shipped to customers on September 26, 2008."

We are writing to inform you that, as explained by Mr. Hoff during his deposition, that this statement is inaccurate. As Mr. Hoff testified, the Mission Menace bows that show shipped on September 26, 2008 in his Exhibit A were not, in fact, shipped to customers but rather provided to Mr. McPherson the inventor on the patents at issue or Steve McPherson (who is also associated with Mathews, Inc.).

We do not believe this inaccuracy is material in the PTAB proceedings given the many other instances of Misson Menace bows shipped to customers after this date and before the critical date of the Darlington reference. Thus, unless you think it is necessary for the preparation of your Patent Owner's Response, we will clarify the inaccurate statement in our Replies.

Best,
Joshua Griswold, Lead Counsel for Patent Owner MCP IP, LLC

Email between counsel included in email from MCP's counsel to trials@uspto.gov on March 10, 2025

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Law for On-sale Bar

35 U.S.C. § 102(b) (pre-AIA)

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

M.P.E.P. § 2133.03(b)(I)

"[T]o be 'on sale' under **[pre-AIA] § 102(b)**, a product must be the subject of a commercial sale or offer for sale," and to be a commercial sale it must be "one that bears the general hallmarks of a sale pursuant to Section 2-106 of the Uniform Commercial Code." *Medicines Co. v. Hospira, Inc.*, 827 F.3d 1363, 1364, 119 USPQ2d 1329, 1330 (Fed. Cir. 2016) (*en banc*). The court in *Medicines Co.* went on to explain "[s]ection 2-106(1) of the Uniform Commercial Code describes a 'sale' as 'the passing of title from the seller to the buyer for a price.' U.C.C. § 2-106(1). The passage of title is a helpful indicator of whether a product is 'on sale,' as it suggests when the inventor gives up its interest and control over the product." *Id.* at 1375, 119 USPQ2d at 1338. The *Medicines Co.* court held "a contract manufacturer's sale to the inventor

E. Buyer Must Be Uncontrolled by the Seller or Offerer

A sale or offer for sale must take place between separate entities. *In re Caveney,* 761 F.2d 671, 676, 226 USPQ 1, 4 (Fed. Cir. 1985). Where the parties to the alleged sale are related, whether there is a statutory bar under **pre-AIA 35 U.S.C. 102(b)** depends on whether the seller so controls the purchaser that the invention remains out of the public's hands. *Ferag AG v. Quipp, Inc.,* 45 F.3d 1562, 1566, 33 USPQ2d 1512, 1515 (Fed. Cir. 1995) (Where the seller is a parent company of the buyer company, but the President of the buyer company had "essentially unfettered" management authority over the operations of the buyer company, the sale was a statutory bar.).

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

PO Sur-reply, 37-40; EX1017; EX1016; EX2006; EX2016

No On-sale Bar

Mathew McPherson was the sole inventor, engineer, and owner of the companies that developed the bows

’989 Patent

(54) **ARCHERY BOW CAM**

(75) Inventor: **Mathew A. McPherson**, Norwalk, WI (US)

(73) Assignee: **MCP IP, LLC**, Sparta, WI (US)

’989 Patent (cover)

Declaration of Mathew McPherson

2. I am currently the owner and CEO of Mathews Archery, Inc. and member of MCP IP LLC, which are both located in Sparta, Wisconsin. I make this

EX2006, ¶2

6. I invented a compound bow cam design that I refer to as the “Reverse Wrap” cam design, and this cam design is the focus of the Challenged Patents. In

EX2006, ¶6

Deposition of Mathew McPherson

17 A. Because I'm the engineer. I design
18 things. [redacted]

EX2023, 29:17-18; EX1017, 29:17-18

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

PO Sur-reply, 37-40; EX1017; EX1016; EX2006; EX2016

No On-sale Bar

Deposition of Mathew McPherson

16 Q. Okay. Do you recall ordering two Mission
17 Menace bows near the release date of those bows?
18 A. It's -- it's something that I would
19 typically do, yes.
20 Q. Okay. Why two?
21 A. That's a great question.
22 I was known for blowing one of them up.
23 Q. Okay. So were these -- did you acquire
24 the two bows for your personal use?
25 A. No, it would have been for testing.

EX2023, 30:16-25; EX1017, 30:16-25

Deposition of Mathew McPherson

19 Q. Okay. Would you consider yourself a --
20 when -- when you acquired those two Mission Menace
21 bows, did you consider yourself a customer?
22 A. Absolutely not.

EX2023, 37:19-22; EX1017, 37:19-22

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

PO Sur-reply, 37-40; EX1017; EX1016; EX2006; EX2016

No On-sale Bar

Deposition of Jerrod Hoff

17 Q. So where did those two bows go on that
18 shipped date?
19 A. Based on that customer number, I know --
20 happen to know that customer number is the Mathews
21 account, which is an internal account. I can't say
22 for sure where those bows physically went other than
23 they would have been internally given to Matt
24 McPherson, and I'm not sure what he would have done
25 with them after that.

EX2022, 14:17-25; EX1016, 14:17-25

Deposition of Jerrod Hoff

15 Q. Do you see that Entries 4 and 5 on this
16 page are to Customer No. [redacted]?
17 A. Yes.
18 Q. And that's the customer number for
19 Mr. McPherson?
20 A. Yes. That's our internal customer number.

EX2022, 35:15-20; EX1016, 35:15-20

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

PO Sur-reply, 37-40; EX1017; EX1016; EX2006; EX2016

No On-sale Bar

No other bows were shipped before 10/01/2008

Sales Order #	SOMAST Identity_ Column	Sales Order Line #	SOITEM identity_ column	Customer #	Retailer Name	Order Date	Serial Number	SYCSWON identity_ column	Serial Number Shipper #	Serial Number Shipper Line #	Part #	Part Description	Shipper #	SHMAST identity_ column	Shipper Line #	SHITEM identity _column	Shipper Sales Order Key	Shipped Date	Invoice #	ARMAST identity_ column	Invoice Line #	ARITEM identity_ column	Invoi Ship
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	9/26/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	9/26/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	251	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	10/3/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	251	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	10/3/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	251	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	10/3/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	251	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	10/3/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	251	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	10/3/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	251	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	10/23/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	251	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	10/23/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	251	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	10/23/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	251	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	10/23/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	251	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	10/23/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	251	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	MENACE LOST AT RH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	10/31/2008	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Shipped Date
9/26/2008
9/26/2008
10/3/2008
10/3/2008
10/3/2008

EX2016, 19

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

FISH.

Backup Slides

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Menace Bows – Serial #'s 940817 & 937455

'989 POR, 5-76; '017 POR, 5-75; '831 POR, 5-70;
EX2006; EX2016, ¶¶17-18;
PO sur-reply 3-11

Menace '817

EX2017, App. B, Photo 2

Menace '455

EX2017, App. A, Photo 2

Declaration of Jerrod Hoff

17. Mathews Archery also has possession of two physical Mission Menace bows that were also produced and shipped around the same time as the Menace '923 bow; a left-handed Mission Menace serial number 940817 ("Menace '817 bow") that was shipped on November 18, 2008, and a right-handed Mission Menace serial number 937455 ("Menace '455 bow") that was shipped on November 4, 2008. Appendix A, page 10, Sales Order 10268 (Menace '817) & page 11, Sales Order 10275 (Menace '455) (rows are highlighted). Based on these serial numbers, I can estimate that the Menace '817 was within the first 2500 Menace bows produced, and that the Menace '455 was within the first 2000 Menace bows produced.

EX2016, ¶17

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 5-76; ’017 POR, 5-75; ’831 POR, 5-70;
EX2006; EX2016, ¶¶17-18; PO sur-reply 3-11

Menace Bow – Serial # 940817

EX2017, App. B, Photo 2

Sales Order #	SOMAST identity_ Column	Sales Order Line #	SOITEM identity_ column	Customer #	Retailer Name	Order Date	Serial Number	SYCSWON identity_ column	Serial Number Shipper #	Serial Number Shipper Line #	Part #	Part Description	Shipper #	SHMAST identity_ column	Shipper Line #	SHITEM identity column	Shipper Sales Order Key	Shipped Date	Invoice #	ARMAST identity_ column	Invoice Line #	ARITEM identity_ column	Invoice Ship Key	Invoice Date
				6709								MENACE BLACK/LOST AT RH						11/24/2008						
				6709								MENACE BLACK/LOST AT RH						11/24/2008						
				6709								MENACE BLACK/LOST AT RH						11/24/2008						
				6709								MENACE BLACK/LOST AT RH						11/24/2008						
				6709								MENACE BLACK/LOST AT RH						11/25/2008						
				6709								MENACE BLACK/LOST AT RH						11/24/2008						
				6709								MENACE BLACK/LOST AT RH						11/24/2008						
				6709								MENACE BLACK/LOST AT RH						11/24/2008						
				6709								MENACE BLACK/LOST AT RH						11/24/2008						
				6709								MENACE BLACK/LOST AT RH						11/24/2008						
				6709								MENACE LOST AT RH						11/4/2008						
				6709								MENACE LOST AT RH						11/4/2008						
				6709								MENACE LOST AT LH						11/18/2008						
				6709								MENACE LOST AT LH						11/18/2008						
				6709		10/1/2008	940817					MENACE LOST AT LH						11/18/2008						
				6709								MENACE BLACK/LOST AT RH						11/25/2008						
				6709								MENACE BLACK/LOST AT RH						11/25/2008						
				6709								MENACE BLACK/LOST AT RH						11/25/2008						
				6709								MENACE BLACK/LOST AT LH						11/25/2008						

EX2016, 28

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 5-76; ’017 POR, 5-75; ’831 POR, 5-70; EX2006; EX2016, ¶¶17-18; PO sur-reply 3-11

Menace Bow – Serial # 940817

EX2017, App. B, Photo 2

EX2017, App B: Physical Menace ’817 (Serial No.)

Order Date	Serial Number	SYCSWON identity_ column	Serial Number Shipper #	Serial Number Shipper Line #	Part #	Part Description	Shipper #	SHMAST identity_ column	Shipper Line #	SHITEM identity column	Shipper Sales Order Key	Shipped Date	Inv
[redacted]						MENACE LOST AT LH	[redacted]					11/18/2008	[redacted]
10/1/2008	940817	[redacted]	[redacted]		[redacted]	MENACE LOST AT LH						11/18/2008	
[redacted]						MENACE							

EX2016, App A: Menace ’817 Sales Record

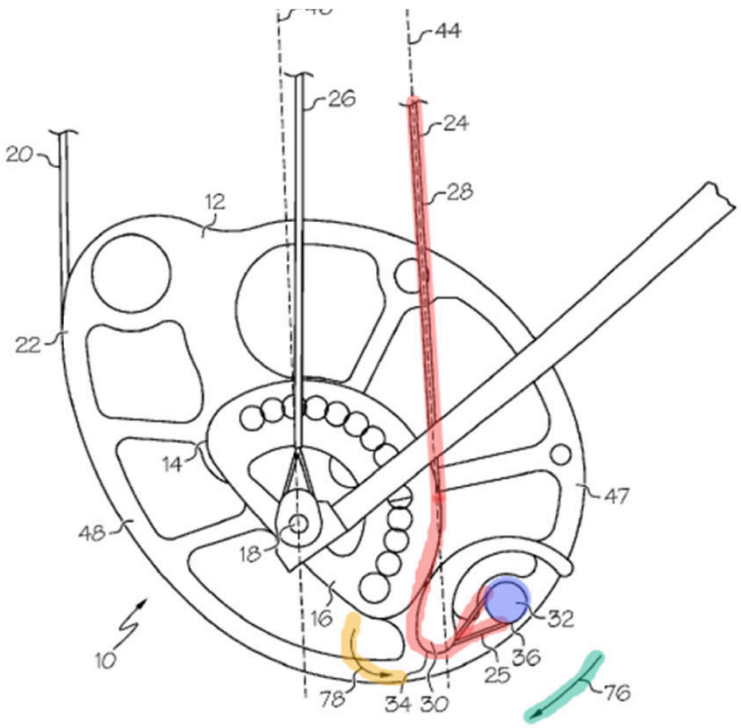
EX2016, 28

FISH.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’017 POR, 24-59; EX2018, ¶¶61-84, 60-83, 101-102

The Reverse Wrap



’989 Patent, Fig. 1; POR, 4

Claim 1(e): “wherein, <u>in the brace condition</u>, the power cable wraps around the capstan in a counter-clockwise direction as the power cable is traversed from the elongate straight portion to the terminal portion; and”

Claim 1(f): “<u>when the bow is drawn from the brace condition</u>, the first rotatable member rotates in a clockwise direction.”

Claim 12(e)(i): “wherein, <u>in the brace condition</u>, the axle plane divides the first rotatable member to a first part and a second part, the capstan and the terminal located in the first part, the drawstring exit location located in the second part, and”

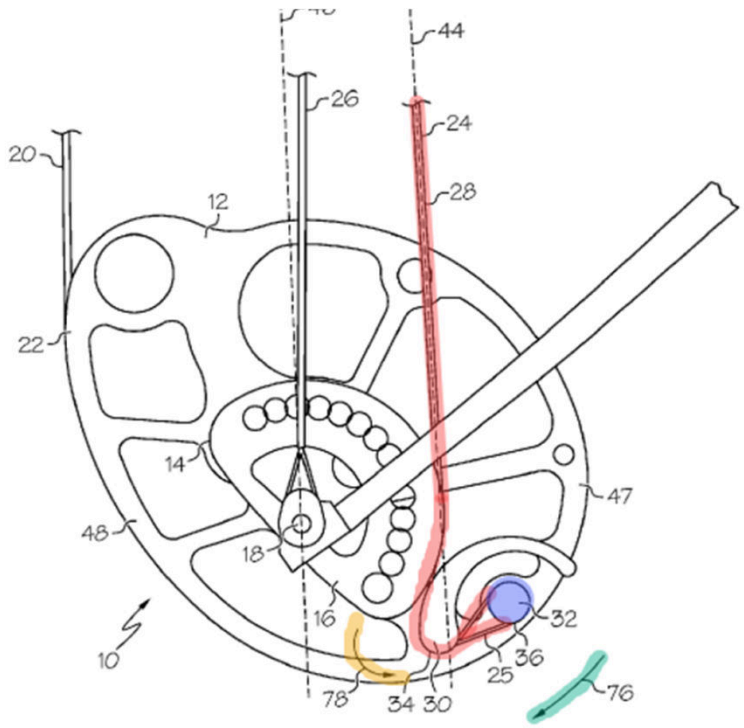
Claim 12(e)(ii): “a distance between the terminal and the axle plane is greater than a distance between the capstan and the axle plane.”

’017 Patent, Claims 1, 12

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’831 POR, 24-55; EX2018, ¶¶61-84, 60-83, 103-104

The Reverse Wrap



’989 Patent, Fig. 1; POR, 4

Claim 1(e): “<u>in the brace condition</u>, the power cable wraps around the capstan in a first rotational direction as the power cable is traversed toward the terminal; and”

Claim 1(f): “<u>when the bow is drawn from the brace condition</u>, the first rotatable member rotates in a second rotational direction that is opposite the first rotational direction.”

Claim 11(d): “wherein, <u>in the brace condition</u>, the axle plane divides the first rotatable member to a first part and a second part, the capstan and the terminal located in the first part, the drawstring exit location located in the second part, and”

Claim 11(e)(ii): “and a distance between the terminal and the axle plane is greater than a distance between the capstan and the axle plane.”

’831 Patent, Claims 1, 11

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 76-81; ’017 POR, 75-81; ’831 POR, 70-75; EX2018, ¶¶105-07; EX2001

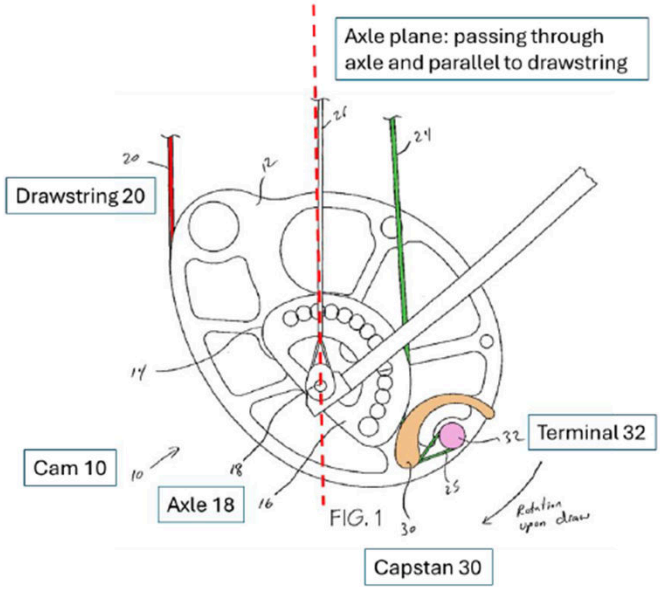
MCP’S expert analyzed the ’473 Provisional and determined that it disclosed all the claim limitations of the ’989, ’017, and ’831 patents

Undisputed Fact

DECLARATION OF MCP’S EXPERT

105. It is clear that FIGS. 1-6 of the ’473 Provisional and FIGS. 1-6 of the ’989 Patent are substantially the same. It is my opinion that the ‘473 Provisional discloses all of the features of the claims of the ’989 Patent because the cam design and cam features are the same. Further, due to the mechanical nature

EX2018, ¶105



EX2001, Fig. 1; EX2018, ¶107

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’989 POR, 47-48, EX2018, ¶¶60-84

’989 Patent – Claim 19

19. An archery bow having a brace condition and a drawn condition, the bow comprising:

a riser;

a first limb and a second limb supported by the riser;

a first rotatable member supported by the first limb on a first axle, a second rotatable member supported by the second limb on a second axle, the first axle and the second axle defining an axle plane, the first rotatable member comprising a drawstring track, a cam track, a capstan and a terminal, wherein said drawstring track is oriented in a first cam plane and said cam track is oriented in a second cam plane offset from said first cam plane;

a drawstring extending between the first rotatable member and the second rotatable member, the drawstring extending from the first rotatable member at an exit location;

a power cable attached to said terminal and extending toward the second limb, said power cable comprising a capstan portion in contact with said capstan and a terminal portion in contact with said terminal;

wherein, in the brace condition, the axle plane divides the first rotatable member to a first part and a second part, the capstan and the terminal located in the first part, the drawstring exit location located in the second part, and a distance between the terminal and the axle plane is greater than a distance between the capstan and the axle plane and wherein, in the drawn condition, said power cable comprises an elongate straight portion located near said first rotatable member, the capstan located closer to the elongate straight portion than the terminal.

’989 Patent, Claim 19

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’017 POR, 32-37; EX2018, ¶¶60-67, 101-102

’017 Patent – Claim 1

1. An archery bow having a brace condition and a drawn condition, the archery bow comprising:

a riser;

a first limb and a second limb supported by the riser;

a first rotatable member supported by the first limb, the first rotatable member rotatable about a first axis, a second rotatable member supported by the second limb, the second rotatable member rotatable about a second axis, the first rotatable member comprising a cam track, a capstan and a terminal;

a drawstring extending between the first rotatable member and the second rotatable member;

a power cable attached to said terminal and extending toward the second limb, said power cable comprising an elongate straight portion located near said first rotatable member, a capstan portion in contact with said capstan and a terminal portion in contact with said terminal;

wherein, in the brace condition, the power cable wraps around the capstan in a counter-clockwise direction as the power cable is traversed from the elongate straight portion to the terminal portion; and when the bow is drawn from the brace condition, the first rotatable member rotates in a clockwise direction.

’017 Patent, Claim 1

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DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’017 POR, 37-42; EX2018, ¶¶60-75, 101-102

’017 Patent – Claim 12

12. An archery bow having a brace condition and a drawn condition, the bow comprising:

a riser;

a first limb and a second limb supported by the riser;

a first rotatable member supported by the first limb on a first axle, a second rotatable member supported by the second limb on a second axle, the first axle and the second axle defining an axle plane, the first rotatable member comprising a cam track, a capstan and a terminal;

a drawstring extending between the first rotatable member and the second rotatable member, the drawstring extending from the first rotatable member at an exit location;

a power cable attached to said terminal and extending toward the second limb, said power cable comprising a capstan portion in contact with said capstan and a terminal portion in contact with said terminal;

wherein, in the brace condition, the axle plane divides the first rotatable member to a first part and a second part, the capstan and the terminal located in the first part, the drawstring exit location located in the second part, and a distance between the terminal and the axle plane is greater than a distance between the capstan and the axle plane.

’017 Patent, Claim 12

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’831 POR, 31-35; EX2018, ¶¶60-75, 103-104

’831 Patent – Claim 1

1. An archery bow having a brace condition and a drawn condition, the archery bow comprising:

a riser;

a first limb and a second limb supported by the riser;

a first rotatable member supported by the first limb on a first axle, a second rotatable member supported by the second limb on a second axle, the first rotatable member comprising a cam track, a capstan and a terminal;

a drawstring extending between the first rotatable member and the second rotatable member;

a power cable attached to said terminal, said power cable extending from said terminal, wrapping around said capstan and extending toward the second limb;

wherein the capstan is located between the cam track and the terminal, and in the brace condition, the power cable wraps around the capstan in a first rotational direction as the power cable is traversed toward the terminal; and when the bow is drawn from the brace condition, the first rotatable member rotates in a second rotational direction that is opposite the first rotational direction.

’831 Patent, Claim 1

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

’831 POR, 31-35; EX2018, ¶¶60-75, 103-104

’831 Patent – Claim 11

11. An archery bow having a brace condition and a drawn condition, the bow comprising:

a riser;

a first limb and a second limb supported by the riser;

a first rotatable member supported by the first limb on a first axle, a second rotatable member supported by the second limb on a second axle, the first axle and the second axle defining an axle plane, the first rotatable member comprising a cam track, a capstan and a terminal;

a drawstring extending between the first rotatable member and the second rotatable member, the drawstring extending from the first rotatable member at an exit location;

a power cable attached to said terminal, extending away from said terminal, wrapping around said capstan and extending toward the second limb;

wherein, in the brace condition, the axle plane divides the first rotatable member to a first part and a second part, the capstan and the terminal located in the first part, the drawstring exit location located in the second part, and a distance between the terminal and the axle plane is greater than a distance between the capstan and the axle plane.

’831 Patent, Claim 11

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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