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UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

RAVIN CROSSBOWS, LLC,	)
	) Case No. IPR2024-00522
Petitioner,	) U.S. Patent No. 8,683,989
	)
vs.	) Case No. IPR2024-00523
	) U.S. Patent No. 9,354,017
MCP IP, LLC,	)
	) Case No. IPR2024-00524
Patent Owner.	) U.S. Patent No. 9,909,831
	)

SWORN STATEMENT OF JOSHUA LANGE
Taken on behalf of Petitioner
November 21, 2024
8:50 a.m.

NAOLA C. VAUGHN, CCR, RPR, CRR, CCP
MO CCR #1052
KS CCR #0895

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MCP 2012
RAVIN v. MCP
IPR2024-00522

1 SWORN STATEMENT OF JOSHUA LANGE,
2 produced, sworn and examined on behalf of the
3 Petitioner, pursuant to Agreement, on Thursday, the
4 21st day of November 2024, between the hours of
5 8:50 a.m. and 3:09 p.m. of that day, at the law offices
6 of Erise IP, P.A., 7015 College Boulevard, Suite 700,
7 in the City of Overland Park, in the County of Johnson,
8 and the State of Kansas, before me, NAOLA C. VAUGHN, KS
9 CCR 0895, MO CCR 1052, CRR, RPR, a Certified Court
10 Reporter, within and for the States of Missouri and
11 Kansas.

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19

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1 I N D E X

2 WITNESS: JOSHUA LANGE

3 Examination by Mr. Colvin 5

4

5

6 EXHIBITS

7 NUMBER DESCRIPTION PAGE

8 Lange Exhibit 2010 - Diagram with colored arrows 41
Darlington Figure 2

9

10 Lange Exhibit 2011 - Diagram with colored arrows 73
Islas Figure 3

11

12 EXHIBITS PREVIOUSLY MARKED

13 Exhibit 1001 123

Exhibit 1003 48

14 Exhibit 1004 6

15 Exhibit 1005 46

16 Exhibit 2002 123

17

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22

1 JOSHUA LANGE,
2 the witness, being first duly sworn, testified as
3 follows:

4 EXAMINATION
5 BY MR. COLVIN.

6 Q. Good morning, Mr. Lange.

7 A. Good morning.

8 Q. All right. So you're under oath to
9 tell the truth.

10 You understand that; right?

11 A. Yes.

12 Q. And you're going to tell the truth
13 today?

14 A. I swore to do so.

15 Q. Okay. So -- and you are going to do
16 that today; right?

17 A. Yes.

18 Q. And you understand that the PTAB may
19 rely on your testimony today?

20 A. I have that understanding.

21 Q. Okay. When's the last time you were
22 deposed?

1 A. I don't know the exact date. I think
2 it was earlier this year.

3 Q. And what kind of case was that?

4 A. I believe it was an intellectual
5 property case.

6 Q. Was it -- was it about bows or
7 something else?

8 A. Something else.

9 Q. What was it about?

10 A. Had to do with firewall penetrations.

11 Q. Sounds exciting.

12 In the last five years, how many times
13 have you been deposed; would you say? Just an
14 estimate is fine.

15 A. A handful.

16 Q. Okay. Less than 10?

17 A. Yes, sir.

18 Q. All right. I'm going to hand you a
19 copy of the Darlington patent. It is
20 Exhibit 1004. It's been premarked.

21 Do you recognize this document, sir?

22 A. I do.

1 Q. You spoke about this document in your
2 expert reports in these IPRs; is that right?

3 A. In my declarations, yes.

4 Q. Yeah. So you've read this document?

5 A. Yes.

6 Q. You understand it?

7 A. I believe I do.

8 Q. You understand how the cams and the
9 cables work in the bow that's described in this
10 Darlington reference?

11 A. I believe I do.

12 Q. Let's talk a little bit about
13 Figure 1. Let's just start there.

14 So I want to go over some of the
15 structure here so that we can get on the same
16 page.

17 28 is a bow string; is that right?

18 A. 28 is referred to as a bow string
19 cable in the specification.

20 Q. And what is 30?

21 A. According to the specification, 30
22 is -- it says a pair of power cables, 30 and 32.

1 So 30 is a power cable.

2 Q. So 30 is a power cable, and 32 is a
3 separate power cable; right?

4 A. That is my understanding.

5 Q. And the power cables are connected to
6 cams, is that right, or technically call them
7 pulleys?

8 A. The specification states that the pair
9 of power cables, 30 and 32, are extending between
10 pulleys 18 and 22.

11 Q. Okay. So we have an upper pulley 18
12 and a lower pulley 22; right?

13 A. That appears to be accurate.

14 Q. Now, when the bow is drawn, as shown
15 in Figure 1A, the pulleys rotate; right?

16 A. Well, to be more specific, as it is
17 drawn, the pulleys rotate. But in the drawn
18 condition, as shown in Figure A, they would not be
19 rotating.

20 Q. As the bow is drawn, the pulleys
21 rotate? We can agree on that; right?

22 A. Yes.

1 Q. Let's take a look at Figure 2 now.

2 You understand Figure 2 to be showing,
3 call it a zoomed-in view of the upper pulley 18
4 and the lower pulley 22; is that right?

5 A. That appears to be correct.

6 Q. Now, if we just take a focus on the
7 lower pulley 22, as shown here in Figure 2, when
8 the bow is drawn, this pulley will rotate in the
9 clockwise direction; right?

10 A. Seems to me that that is correct.

11 Q. And when the bow is drawn, power
12 cable 32 will unwrap from the module 44; right?

13 A. That seems to be correct.

14 Q. And when the bow is drawn, power
15 cable 30 will wrap around section 42 and
16 module 44; right?

17 A. Appears to be correct.

18 Q. Now, cable 30 goes -- is attached to
19 both the upper pulley 18 and the lower pulley 22;
20 right?

21 A. That seems correct.

22 Q. And if we look at the upper pulley,

1 when the bow is drawn, power cable 30 will unwrap
2 from the module 44; right?

3 A. That seems to be the case.

4 Q. And when the bow is drawn, power
5 cable 32 will wrap around section 42 and module 44
6 on the upper pulley; right?

7 A. As I think further about the last
8 number of questions, I'm not sure that I'm in
9 agreeance with your characterization of "wrap".

10 Q. Okay. How would you characterize it?

11 A. I would use -- or I would characterize
12 it as the cable is either let out or taken up.

13 Q. Okay. So looking at cable 32 on the
14 upper pulley 18, when the bow is drawn, you would
15 say that cable 32 is taken up?

16 A. I would.

17 Q. And when it is taken up, how would you
18 characterize its interaction with section 42 and
19 Module 44, if you don't want to say "wrap"?

20 I just want to get on the same
21 terminology with you.

22 A. Sure. One more time.

1 Q. Yeah.

2 A. Can you repeat that last question?

3 Q. So looking at the upper pulley 18 --

4 A. Yes, sir.

5 Q. -- when the bow is drawn, cable 32 is
6 taken up; right?

7 A. Correct.

8 Q. And it interacts with section 42 and
9 module 44; right?

10 A. Are you still talking about component
11 18?

12 Q. Yes.

13 A. Okay. So it interacts with 42 and
14 Module 44, yes.

15 Q. And you don't want to say that it
16 wraps around those components; right?

17 A. I would not characterize --
18 characterize it as wrapping around.

19 Q. Okay. How would you characterize it?

20 A. As taking up.

21 Q. Okay. You would say it's taken up by
22 section 42 and taken up by Module 44?

1 A. Yes. Cable 32 is taken up.

2 Q. By section 42 and by Module 44?

3 A. Yes.

4 Q. Okay. And so when the bow is drawn,
5 if we're looking at cam 18 at the top, power
6 cable 30 is let out; right?

7 A. Yes. I would say power cable 30 is
8 let out as cam 18 rotates when the bow is drawn.

9 Q. Okay. And so when the bow is drawn,
10 if we're looking at power cable 30, it's let out
11 from the top pulley 18, and it's taken up by the
12 bottom pulley 22; right?

13 A. Can you repeat that once again,
14 please?

15 Q. When the bow is drawn, power cable 30
16 is let out by top pulley 18 and taken up by bottom
17 pulley 22.

18 A. That appears to be accurate.

19 Q. And the opposite would be true for
20 power cable 32.

21 When the bow is drawn, power cable 32
22 is taken up by upper pulley 18 and let out by

1 lower pulley 22?

2 A. That also appears to be correct.

3 Q. Now, there is some other structures
4 here that I want to ask you about. Let's just
5 look at Figure 2, and we'll look at the lower
6 pulley 22.

7 Power cable 30 is attached to what's
8 shown as Index No. 56.

9 Do you see that?

10 A. I do.

11 Q. And what is 56?

12 Would you agree that it's an anchor?

13 A. The '607 patent specification refers
14 to it as an anchor.

15 Q. And there's another anchor for power
16 cable 32; right? Index No. 54. You see that?

17 A. I also see that 54 is described as an
18 anchor in the specification.

19 Q. Power cables 30 and 32 are engaged
20 with a track; right?

21 A. I don't think I understood your
22 question.

1 Q. Well, let's look at power cable 30.

2 And in Figure 2 you see a little dashed line that
3 goes in Module 42 and also into Module 44?

4 You see that?

5 A. I do.

6 Q. What does that dashed line represent?

7 A. I believe the specification calls it a
8 cable groove.

9 Q. What's the purpose of that cable
10 groove?

11 A. My understanding is that it is to
12 guide the cable.

13 Q. How does it guide the cable?

14 A. By providing a geometric space whose
15 characteristics are favorable for receiving the
16 geometry of a cable.

17 Q. The cable goes into and out of the
18 groove, is that right, during -- while -- during
19 the bow draw cycle?

20 A. Portions of it.

21 Q. In fact, if we just look at power
22 cable 30, you would agree that power cable 30 is

1 always in contact with the groove for section 42;
2 right?

3 MR. SCHMIDT: Objection. Form.

4 A. Seems that it would always be in
5 contact with a portion of the groove of 42.

6 Q. BY MR. COLVIN: And that would be a
7 brace during draw and at full draw; right?

8 MR. SCHMIDT: Objection. Scope.

9 A. In the specific embodiment depicted in
10 Figure 2, that seems to be the case.

11 Q. BY MR. COLVIN: In fact, Darlington
12 never describes an embodiment where power cable 30
13 is not in contact with section 42; correct?

14 MR. SCHMIDT: Objection. Scope.

15 A. The detailed description of preferred
16 embodiments of the Darlington '607 patent do
17 not -- does not appear to describe, one way or
18 another, that scenario.

19 Q. BY MR. COLVIN: Well, are you saying
20 you can't tell from looking at Darlington whether
21 or not it describes a scenario where power
22 cable 30 is not in contact with the groove of

1 section 42?

2 A. I don't believe that's what I said.

3 Q. Okay. You just say that Darlington
4 doesn't describe one way or another whether power
5 cable 30 is ever not in contact with section 42?

6 Is that your testimony?

7 MR. SCHMIDT: Objection. Form.

8 A. I don't see that the specification
9 describes that arrangement.

10 Q. BY MR. COLVIN: You don't see that the
11 specification describes the arrangement where
12 power cable 30 is not in contact with section 42;
13 is that right?

14 A. Seems more or less what I said.

15 Q. Well, do you agree with my statement
16 or not?

17 The statement is: You don't see that
18 the specification describes the arrangement where
19 power cable 30 is not in contact with section 42.

20 A. One more time, please.

21 Q. You don't see that the specification
22 describes the arrangement where power cable 30 is

1 not in contact with section 42?

2 A. I don't see where the specification
3 describes an arrangement where cable 30 is not in
4 contact with element 42.

5 Q. What's the purpose of section 42 in
6 Darlington?

7 MR. SCHMIDT: Objection. Scope.

8 A. Can you please repeat your question?

9 Q. BY MR. COLVIN: What's the purpose of
10 section 42 in Darlington?

11 MR. SCHMIDT: Objection. Scope.

12 A. I don't see that the specification
13 describes the function.

14 Q. BY MR. COLVIN: Do you have an
15 understanding of the function of section 42?

16 MR. SCHMIDT: Objection. Scope.

17 A. I believe I may have some
18 understanding.

19 Q. BY MR. COLVIN: What's your
20 understanding of the purpose of section 42 in
21 Darlington?

22 A. My understanding is that which was

1 previously discussed in this deposition.

2 Q. What do you mean?

3 A. I mean we talked about it previously.

4 Q. Okay. What's your understanding of
5 the purpose of section 42?

6 MR. SCHMIDT: Objection. Scope.

7 A. Well, I don't believe I have any
8 opinion in addition to what I've previously
9 stated.

10 Q. BY MR. COLVIN: Okay. So you're
11 saying, as an expert in this field, that you
12 understand that 42 has a purpose; you're just not
13 going to tell me what it is; is that right?

14 MR. SCHMIDT: Objection. Form and
15 scope.

16 A. That is not correct.

17 Q. BY MR. COLVIN: Okay. Let's do that
18 one bite at a time.

19 You agree that section 42 has a
20 purpose?

21 MR. SCHMIDT: Objection. Form and
22 scope.

1 A. It stands to reason that it would.

2 Q. BY MR. COLVIN: And do you have an
3 understanding of what that purpose is?

4 A. I believe I have an understanding of
5 some things, as we have discussed previously in
6 the deposition.

7 Q. Okay. Tell me what those things are.
8 Tell me what your understanding of the purpose of
9 section 42 is.

10 MR. SCHMIDT: Objection. Form and
11 scope.

12 A. It might be more accurate if we have
13 the court reporter read back what I had previously
14 stated.

15 Q. BY MR. COLVIN: No. We're not going
16 to do that. I've asked you a new question. So
17 you give me a new answer.

18 Please tell me what the purpose of
19 section 42 is in Darlington.

20 MR. SCHMIDT: Objection. Form and
21 scope.

22 A. I don't believe I've developed an

1 opinion as to its function.

2 Q. BY MR. COLVIN: Okay. So you don't
3 have an opinion about the function of section 42
4 in Darlington?

5 A. Well, earlier in the deposition I
6 believe that I opined that, when the bow is drawn,
7 cable 30 is taken up by the lower assembly.

8 Q. Are you done?

9 A. Yeah.

10 Q. Okay. And so what purpose does
11 section 42 serve?

12 A. Wherein cable 30 is in contact with
13 42, it seems to me that a function is to play a
14 part in taking up cable 30.

15 Q. Why is section 42 shaped like it is?
16 Do you have an understanding of that as a former
17 bow engineer?

18 MR. SCHMIDT: Objection. Form and
19 scope.

20 A. I don't have an opinion on that.

21 Q. BY MR. COLVIN: So we can agree that
22 section 42 in Darlington is there to take up

1 cable 30 when the bow is drawn; right?

2 A. I don't believe that's an accurate
3 characterization of what I previously stated.

4 Q. Do you disagree with that statement,
5 that -- let me just ask it cleanly.

6 Do you disagree that section 42 in
7 Darlington is there to take up cable 30 when the
8 bow is drawn?

9 A. I'm not sure if that was the
10 motivation the designer had in mind.

11 Q. Okay. You agree that section 42 takes
12 up cable 30 when the bow is drawn; right?

13 A. That seems to be accurate.

14 Q. And when the bow is drawn -- well, so
15 let me shift gears just a little bit.

16 You understand that there's groove
17 50a, 50b, and 50c shown in Darlington; right?

18 A. The Darlington specification describes
19 cable groove 50a, 50b, and 50c.

20 Q. And 50a is the part of the groove that
21 goes around the hub, and 50b is the part of the
22 groove that goes around Module 44, and 50c is the

1 part of the groove that goes around section 42;

2 right?

3 A. 50c is along a portion of element 42.

4 Q. And 50b is along a portion of

5 element 44?

6 A. It appears to be so.

7 Q. And 50a is around a portion of 40;

8 right?

9 A. That seems to be correct.

10 Q. And when the bow is drawn, power

11 cable 30 contacts more of the groove 50,

12 collectively 50a, 50b, and 50c, while at the same

13 time power cable 32 contacts less of the groove;

14 right? If we're -- if we're just looking at the

15 bottom pulley 22.

16 A. Can you repeat your question one more

17 time, please?

18 Q. Yes.

19 Just looking at the bottom pulley,

20 number 22 in Figure 2, when a bow is drawn, power

21 cable 30 contacts more of the groove and power

22 cable 32 contacts less of the groove; right?

1 A. Which groove?

2 Q. Collectively groove 50.

3 MR. SCHMIDT: Objection. Form.

4 A. As the bow was drawn, it seems that
5 cable 30 will come into contact with increasingly
6 more of the collective groove 50 until full draw
7 is reached.

8 Q. BY MR. COLVIN: And at the same time,
9 power cable 32 would come into contact with less
10 of the groove until full draw is reached; right?

11 A. That seems to be the case.

12 Q. And you don't have an understanding of
13 why section 42 is shaped like it is; do you?

14 A. As I believe I said earlier, I don't
15 know the motivations the designer had to choose
16 that particular shape.

17 Q. And sitting here today as an expert
18 and as a former person who, in fact, designed cams
19 on bows, you don't have an understanding why 42 is
20 shaped like it is.

21 That's fair; right?

22 MR. SCHMIDT: Objection to form.

1 A. I don't know the designer's
2 motivations for choosing that particular shape.

3 Q. BY MR. COLVIN: All right. And you
4 didn't consider the purpose of section 42 in
5 forming your opinion in this case; right?

6 MR. SCHMIDT: Objection. Form.

7 A. I believe I considered it.

8 Q. BY MR. COLVIN: And what was the
9 purpose of section 42 that you considered in
10 forming your opinion?

11 A. I believe I put forth numerous
12 opinions. Can you be more specific as to which
13 you are wanting me to answer with respect to?

14 Q. Well, you told me that you considered
15 the purpose of section 42 in forming your opinion,
16 and I asked you what the purpose was that you
17 considered.

18 So you tell me the purpose of
19 section 42 that you considered in forming your
20 opinion.

21 MR. SCHMIDT: Objection. Form.

22 A. I considered that the cable 30 wraps

1 around the end of element 42, which would help to
2 alleviate some of the stress imparted on
3 element 56.

4 Q. BY MR. COLVIN: Is that the only thing
5 that you considered with respect to element 42?

6 A. It's the only thing that comes to mind
7 as I sit here.

8 Q. Okay. Section 44. I believe it's
9 called a draw module.

10 Is that your understanding?

11 A. Draw length module is my
12 understanding, per the specification.

13 Q. What's the purpose of the draw length
14 module 44 in Darlington?

15 A. Can you please repeat your question?

16 Q. What's the purpose of draw length in
17 module 44 in Darlington?

18 A. The specification states that
19 module 44 has openings 66 for receiving screws 46.

20 Q. I don't want to cut you off. Are you
21 done?

22 A. I'm done.

1 Q. So it's your opinion that the purpose
2 of draw module 44 is to have openings that receive
3 screws?

4 A. That seems the specification describes
5 that as a purpose of module 44.

6 Q. Is that the only purpose of module 44?

7 A. Perhaps not.

8 Q. What else?

9 MR. SCHMIDT: Objection. Scope.

10 A. The specification states, "A bow 10
11 can be marketed with modules 44 in place, for
12 example, and with modules 60, 62, 64 separately
13 provided with instructions for mounting the
14 modules and with the bow draw" lengths -- excuse
15 me, "with the bow draw length associated with each
16 module."

17 Q. BY MR. COLVIN: Draw module 44, which
18 is shown in Figure 2, labeled B-4, can be changed
19 out with other modules, such as B-1, B-2, B-3, and
20 B-4; right?

21 A. That seems to be the case.

22 Q. And you can change out those modules

1 to change the draw length of the bow; right?

2 A. Appears to be -- excuse me. That
3 appears to be what is described.

4 Q. How is it that changing out the
5 modules can change the draw length of the bow?

6 A. The specification states modules 60,
7 62, 64 may be of any suitable shape determined by
8 the draw cycle desired.

9 Seems to me from that statement that
10 the modules effect the draw cycle.

11 Q. What does that have to do with
12 changing the draw length of the bow?

13 MR. SCHMIDT: Objection. Form.

14 A. Draw length is a characteristic of the
15 draw cycle.

16 Q. BY MR. COLVIN: And so how does the
17 shape of these different modules change the draw
18 length?

19 A. Can you please repeat your question?

20 Q. How does the shape of the different
21 modules change the draw length?

22 MR. SCHMIDT: Objection to form.

1 A. The shape of the modules affects the
2 overall geometry of the bow through the draw
3 cycle, including draw length.

4 Q. BY MR. COLVIN: How is it that the
5 shape of the modules affect the overall geometry
6 of the bow through draw cycle, including draw
7 length?

8 MR. SCHMIDT: Objection. Form.
9 Scope.

10 A. Well, as they are part of the bow
11 assembly, if their geometry is changed, then the
12 overall geometry of the bow would have changed.

13 Q. BY MR. COLVIN: Okay. I understand
14 that they're a different shape and so the geometry
15 changed.

16 My question is: How does that change
17 in geometry affect the draw length?

18 MR. SCHMIDT: Objection. Form and
19 scope.

20 A. I'm not sure that I have an answer,
21 given your framing of the question.

22 Q. BY MR. COLVIN: Okay. So you don't

1 know how the different modules affect draw length?

2 MR. SCHMIDT: Objection. Form.

3 A. Without construction and testing and
4 further investigation, I, as I sit here, don't
5 feel I am prepared to describe what changes in
6 draw length would result by changing out the
7 depicted modules.

8 Q. BY MR. COLVIN: Okay. So let's come
9 at it a different way.

10 Let's look at Figure 3. And you see
11 that there's Figure A, B, C, and D. See that?

12 A. I see that.

13 Q. And Figure 3A shows module B-4.
14 Figure 3B shows B-3, Figure 3C shows module B-2,
15 and Figure 3D shows module B-1; right.

16 A. I see that.

17 Q. And you would agree that these -- each
18 of those modules can be placed on the cam in place
19 of -- or are interchangeable on the cam; right?

20 A. It seems they're intended to be
21 interchangeable with the upper calm.

22 Q. And each of these modules has a groove

1 50b; right?

2 A. I do see that.

3 Q. And the length of that groove is
4 smaller in module B-1 than it is in module B-4;
5 right?

6 MR. SCHMIDT: Object to form and
7 scope.

8 A. Having not measured it, I can't say
9 for sure. But it appears that way.

10 Q. BY MR. COLVIN: Okay. Does the length
11 of the -- excuse me.

12 Does the difference in the length of
13 that groove, in these different modules, affect
14 the draw length?

15 A. As I stated earlier, I expect changing
16 the geometry of the module would change the
17 geometry of the overall bow, which may possibly
18 include draw length.

19 Q. You just don't know; fair?

20 A. That's not how I would characterize
21 the answer I just gave.

22 Q. Okay. Well, you said may possibly

1 include draw length as something that would
2 change, which leaves open that maybe it does or
3 maybe it doesn't.

4 And so I'm just trying to get the
5 clarification so that I really know what you're
6 telling me.

7 Do you believe that changing the
8 length of the groove in these modules will change
9 the draw length of the bow?

10 MR. SCHMIDT: Objection. Form.

11 A. It may.

12 Q. BY MR. COLVIN: You're just not sure
13 one way or the other?

14 A. Again, I have not built these parts,
15 and I have not assembled such a bow to test.

16 Q. Okay. So you're not sure if changing
17 from module B-4 to module B-1 will affect the draw
18 length through the bow?

19 MR. SCHMIDT: Objection. Form.

20 A. I don't have an opinion at this time.

21 Q. BY MR. COLVIN: Okay. You didn't
22 consider that in forming your opinion in this

1 case?

2 MR. SCHMIDT: Objection. Form.

3 A. I believe I did consider it.

4 Q. BY MR. COLVIN: You don't have an
5 opinion about it, but you considered it?

6 A. I've considered it.

7 Q. Okay.

8 THE WITNESS: Can we have a break?

9 MR. COLVIN: Sure. Let's go off
10 record.

11 (Recessed from 9:59 a.m. to
12 10:14 a.m.)

13 Q. BY MR. COLVIN: Looking back at
14 Darlington, and just so we can both look at the
15 same thing, I'll look at Figure 2, or the
16 embodiment shown in Figure 2.

17 You agree that power cable 30 and
18 power cable 32 share the same groove?

19 A. I'm not sure that I would characterize
20 it that way.

21 Q. Okay. How would you characterize it?

22 A. Looking at the lower cam of the

1 embodiment of Figure 2, cable 30 is engaged with
2 the groove 50c and cable 32 is engaged with 50a
3 and 50b.

4 Q. All right. I can respect that. Let's
5 try it a different way.

6 You would agree that, through the draw
7 cycle of the bow, power cable 30 will share the
8 same groove that power cable 32 occupies during
9 brace? Or I should say occupies at brace.

10 A. I don't think I agree with your
11 characterization.

12 Q. Okay. What do you disagree about?

13 A. The word "share."

14 Q. Okay. Why not? Why don't you like
15 the word "share," or why do you think that's the
16 wrong word?

17 A. Because I don't think the groove is
18 shared by 30 and 32.

19 Q. Because they don't occupy the same
20 spot in the groove at the same time; right?

21 A. You got it.

22 Q. All right. During the draw, power

1 cable 30 is -- contacts groove 50c and groove 50b
2 and maybe some of groove 50a; right?

3 A. Maybe.

4 Q. It certainly contacts groove 50c and
5 groove 50b during draw; right?

6 A. Could.

7 Q. At full draw, power cable 30 occupies
8 groove 50c and groove 50b; right?

9 A. That seems to be correct.

10 Q. And during -- at brace, power cable 32
11 occupies a portion of groove 50b; right?

12 A. It appears to.

13 Q. And the portion of groove 50b that's
14 occupied by power cable 32 at brace is occupied by
15 power cable 30 at full draw; right?

16 A. I'm sorry. Can you repeat that?

17 Q. I will.

18 The portion of groove 50b that's
19 occupied by power cable 32 at brace is occupied by
20 power cable 30 at full draw?

21 A. That seems to be correct.

22 Q. At the bottom of the pulley, shown in

1 Figure 2, the lower pulley shown in Figure 2, you
2 see holes 1, 2, and 3 labeled in that drawing?

3 A. I do.

4 Q. What's the purpose of holes 1, 2, and
5 3?

6 A. According to the specification,
7 intermediate post 72 is adjustably positioned on
8 space 43 to adjust the length of power cable 30.

9 My understanding is that post 72
10 engages with one of the -- or can engage with one
11 of the three holes that you have pointed out
12 earlier.

13 Q. How does placing intermediate post in
14 hole 1, 2, or 3 change the length of power
15 cable 30?

16 A. I don't believe it does change the
17 length of the power cable.

18 Q. Okay. You just said in your answer
19 that intermediate post 72 can be positioned in
20 those spaces to, what I see, adjust the length of
21 power cable 30.

22 So let me just ask you: Does placing

1 intermediate post 1, 2, or 3 change the length of
2 power cable 30?

3 A. Can you please read back my previous
4 answer?

5 Q. Sure.

6 A. Or can I have the court reporter do
7 it, please.

8 (The reporter read the record as
9 requested.)

10 THE WITNESS: Thank you.

11 A. Excuse me. I misread the passage in
12 the specification. What I meant to say was,
13 intermediate post 72 is adjustably positionable on
14 base 34 to adjust the effective length of power
15 cable 30.

16 Q. BY MR. COLVIN: And what effect does
17 adjusting the effective length of power cable 30
18 have on the bow?

19 A. It would serve to change the overall
20 geometry of the bow assembly.

21 Q. Can you be more specific than changing
22 the overall geometry of the bow?

1 A. It would change the effective length
2 of the power cable.

3 Q. Does that effect the draw length of
4 the bow?

5 A. I expect that it could.

6 Q. You just don't know one way or the
7 other?

8 A. Not having built such a bow and tested
9 it, I cannot say definitively, but I expect that
10 it could.

11 Q. In considering Darlington for your
12 opinion that you have rendered in this case, you
13 did not consider whether or not changing the
14 effective length of cable 30 would change the draw
15 length of the bow?

16 A. I did consider it.

17 Q. And what did you consider about
18 changing the effective length of the cable for
19 your opinion in this case?

20 A. I'm not sure I understand the
21 question.

22 Q. Well, we'll do it -- we'll do it piece

1 by piece again.

2 Using intermediate post in holes 1, 2,
3 or 3 will change the effective length of cable 30;
4 right?

5 A. That's what the specification states.

6 Q. And sitting here today, you don't have
7 an opinion one way or the other about if that will
8 change the draw length of the bow; right?

9 A. I thought I gave an opinion a moment
10 ago.

11 Q. Okay. I missed it. What is that
12 opinion?

13 A. Seems that it could.

14 Q. Okay. It could or it could not?

15 A. It's possible -- scratch that.
16 I expect that it would.

17 Q. Why?

18 A. Because it would change the overall
19 geometry of the bow system, which would affect
20 many of the connected components.

21 Q. Do holes 1, 2, and 3 correspond with
22 particular draw modules discussed in Darlington?

1 And by draw modules, I mean B-1, B-2, B-3, or B-4.

2 A. Would you mind repeating your
3 question, please.

4 Q. Sure.

5 Do holes 1, 2, and 3 correspond with
6 particular draw modules discussed in Darlington?

7 And by draw modules I mean B-1, B-2, B-3, or B-4.

8 A. I do not see in the specification that
9 there are specific pairings listed --

10 Q. Okay.

11 A. -- of draw modules and intermediate
12 post positions.

13 Q. Do the draw modules affect the
14 effective length of the power cable?

15 A. I'm not sure I have an opinion on
16 that.

17 Q. Okay. You didn't consider whether or
18 not the modules B-1, B-2, B-3, and B-4 would
19 change the effective length of the power cable
20 when you were forming your opinions in this case?

21 A. I don't recall.

22 Q. Okay. Let's take a look back at

1 Figure 2 in Darlington. And, again, I'll focus
2 your attention on the lower pulley.

3 Do you have it in front of you?

4 A. I do.

5 Q. Looking at power cable 32, at the --
6 as shown in the lower image in Figure 2, there's a
7 straight portion of power cable 32 that goes
8 towards the upper pulley; right?

9 A. That seems to be correct.

10 Q. And if you follow that power cable 32
11 down, it eventually -- well, it contacts module 44
12 and then it goes around hub 40 and then it
13 connects to a terminal post 54; right?

14 A. Anchor 54.

15 Q. Okay. Anchor 54.

16 And you agree that power cable 32,
17 going in the direction from the straight portion
18 towards the anchor point, wraps around the hub in
19 a counterclockwise direction?

20 A. As depicted, that is correct.

21 Q. And as depicted, power cable 30, going
22 from the straight portion around section 42

1 towards anchor 56, that wraps around 42 in the
2 clockwise direction; right?

3 A. That appears to be correct.

4 Q. And during the draw cycle --

5 A. Can I revise my answer?

6 Q. Yes.

7 A. And forgive me if I missed it in your
8 question, but going along the straight portion of
9 30 towards the anchor, it goes in a clockwise
10 direction.

11 Q. Okay. I appreciate that.

12 And the lower pulley 22, when the bow
13 is drawn, rotates in a clockwise direction; right?

14 A. I expect that it would.

15 MR. COLVIN: Madam court reporter,
16 would you mark this document as Exhibit 2010.

17 (Exhibit 2010 marked.)

18 Q. BY MR. COLVIN: Okay. Now, Mr. Lange,
19 I'm handing you what's been marked Exhibit 2010,
20 and this is a figure -- it's a blowup of Figure 2,
21 lower pulley of Figure 2 from the Darlington
22 patent, and I have drawn three arrows on it, a

1 green one, a blue one, and a red one.

2 And so looking at Exhibit 2010, do you
3 agree that the green arrow shows the direction
4 that power cable 32 is wrapped around hub 40, when
5 going from the straight end to the anchor end?

6 A. That appears to be correct.

7 Q. And do you agree that the blue arrow
8 shown shows the direction that power cable 30 is
9 wrapped around section 42?

10 A. If traversing the cable from the
11 straight portion toward the anchor, I would agree.

12 Q. Thank you for that clarification.

13 And do you agree that the red arrow
14 shows the direction that the pulley will rotate
15 during -- or while the bow is being drawn?

16 A. That seems accurate.

17 Q. I want to talk to you a little bit
18 more about section 42. You can go back to
19 Darlington and keep Exhibit 2010 however you'd
20 like.

21 Section 42 -- well, let me back up for
22 some context.

1 Darlington describes that draw
2 module 44 is removable; right?

3 A. That is my understanding.

4 Q. Darlington does not describe that
5 section 42 is removable; does it?

6 A. I've not seen such a description.

7 Q. In fact, Darlington calls section 42 a
8 fixed section; right? And I don't want it to be a
9 game of hide-and-seek.

10 If you look in column 3, line 48, I
11 think you can confirm that.

12 A. It does state "fixed section 42."

13 Q. And you agree that, in Darlington,
14 section 42 is fixed and not removable; right?

15 A. It appears to be what is stated in the
16 specification.

17 Q. If you take a look at Darlington
18 Figure 1A, Darlington describes Figure 1A as a bow
19 in the fully drawn condition; right?

20 Again, not a game of hide-and-seek.
21 You can look at column 3, line 30.

22 A. Your question again, please?

1 Q. BY MR. COLVIN: Yes. Figure 1A of
2 Darlington shows the bow in a fully drawn
3 condition; right?

4 A. That appears to be correct.

5 Q. And at a fully drawn condition, that
6 means that you can't draw the bow anymore; is that
7 right?

8 A. The bow is not to be -- is not
9 intended to be drawn beyond the fully drawn
10 condition.

11 Q. And so at the -- I appreciate the
12 specificity.

13 At the fully drawn condition, the cams
14 have rotated as much as they are intended to be
15 rotated; right?

16 A. I believe that's accurate.

17 Q. What stops the cams from rotating
18 further?

19 A. Their geometry.

20 Q. What do you mean?

21 A. Their shape.

22 Q. What about their shape causes the cams

1 to stop rotating at full draw?

2 A. Their geometry makes it a great deal
3 more difficult to pull the bow string beyond the
4 intended full draw length.

5 Q. And what is it about the geometry of
6 the cams shown in Darlington that causes them to
7 stop rotating at full draw?

8 MR. SCHMIDT: Objection. Scope.

9 A. Could you please repeat the question?

10 Q. BY MR. COLVIN: Yeah.

11 What is it about the geometry of the
12 cams shown in Darlington that causes them to stop
13 rotating at full draw?

14 MR. SCHMIDT: Objection. Scope.

15 A. I'm not sure that I agree with your
16 premise in the question.

17 Q. BY MR. COLVIN: Okay. What do you
18 disagree with?

19 A. How you described the actions of the
20 cams.

21 Q. What do you mean?

22 A. How they move.

1 Q. I'll try it again.

2 What is it about the geometry of the
3 cams shown in Darlington that makes it hard for
4 them to keep rotating at full draw?

5 MR. SCHMIDT: Objection. Scope.

6 A. Their shape.

7 Q. BY MR. COLVIN: What about their
8 shape?

9 A. Not sure that I have an opinion on
10 that.

11 Q. You can't look at the cam in
12 Darlington and understand what makes them hard to
13 continue to rotate past full draw?

14 MR. SCHMIDT: Objection. Form and
15 scope.

16 A. I'm not sure that that's something
17 I've considered to date in this matter.

18 Q. BY MR. COLVIN: Okay. You can put the
19 Darlington reference to the side.

20 I'm going to hand you what's been
21 premarked as Exhibit 1005, as the Islas Patent
22 Publication, Publication Number 2008/0135032.

1 Do you have that document in front of
2 you, sir?

3 A. Yeah. You gave it to me.

4 Q. By the way, how do you pronounce the
5 last name of the inventor of this patent?

6 A. I don't have an opinion on that.

7 Q. Okay. I've been saying Islas. If I
8 say -- if I say Islas, you know what I'm talking
9 about?

10 A. Yes. And I think regardless of how I
11 pronounce it, it will appear the same in the
12 transcript.

13 Q. That's right. I was just hoping to
14 get somebody under oath that actually had an
15 opinion, but if you don't have an opinion, we'll
16 move on from it.

17 Okay. You have read this patent
18 application, right, sir, Exhibit 1005?

19 A. Forgive me. Do you have a copy of my
20 declaration that I can look at?

21 Q. I do. I'll be happy to do that.

22 Here. Let me hand you --

1 A. '989 would be great.

2 Q. Glad you said that. Happens to be the
3 one I have in front of me.

4 A. Excellent.

5 Q. Here's a copy of your declaration for
6 the '989 patent. This was Exhibit 1003.

7 A. Do we need to pause so she can mark
8 it?

9 Q. It's been marked.

10 Okay. All I would ask, sir, is, if
11 you're looking at your declaration at some spot,
12 just let me know what you're looking at; so I can
13 follow along.

14 A. All right.

15 Q. Okay. Let's go back to Islas.

16 A. Yes, sir.

17 Q. Exhibit 1005.

18 You have read this document; right,
19 sir?

20 A. Yes.

21 Q. You understand it?

22 A. I believe so.

1 Q. You understand how the cam described
2 in Islas operates?

3 A. I believe I do.

4 Q. Okay. Let's find out.

5 Let's take a look at Figure 3
6 together.

7 And like we did with Darlington, I
8 first want to start with just the identification
9 of a few components shown on this cam in Figure 3.

10 So let's start with Index 24.

11 You understand that to be a bow
12 string; right?

13 A. I do.

14 Q. And also shown in Islas are power
15 cables 30 and 31; right?

16 A. The specification describes them as
17 cam cables and also as cables. So I'm comfortable
18 with either.

19 Q. Well, if you look in paragraph 24 near
20 the top it calls them power cables 30 and 31.

21 A. I see that as well.

22 Q. Yeah.

1 A. Further down it calls them two other
2 things.

3 Q. Sure. If I say power cable 30 or
4 power cable 31, you'll know what I'm talking
5 about; right?

6 A. I believe I would.

7 Q. And just looking at, let's say, power
8 cable 30, power cable 30 interacts with the power
9 cam 32 in Figure 3; right?

10 A. According to the specification, power
11 cable 30 rides in a cam groove of a first outboard
12 power cam member 32.

13 Q. And you can see that cam groove in
14 Figure 4; right?

15 A. Yes.

16 Q. Similarly power cable 31 interacts
17 with power cam 60; right?

18 A. Second power cable 31 resides --
19 sorry. Rides in a peripheral groove in the second
20 power cam member 60.

21 Q. What does it mean for a power cable to
22 ride in a groove?

1 A. I'm not sure that I have an opinion
2 specifically on the construction of "rides."

3 Q. You don't know what it means for a
4 power cable to ride in a groove, as described in
5 Islas?

6 A. I think I have an idea.

7 Q. What's your idea?

8 A. It goes in there.

9 Q. Does it also come out of there?

10 A. I'm not sure that I would characterize
11 the coming out as rides. Rides in, rather.

12 Q. Okay. A couple more components.
13 Do you see lobe 48 in Figure 3?

14 A. I do.

15 Q. What's the purpose of lobe 48?

16 A. Seems, according to the specification,
17 that 48 exists for first power cable 32 to pass
18 over.

19 Q. What do you mean?

20 A. Specification says, "The first power
21 cable 30 is carried in a peripheral groove or
22 channel on the first power cam member 32 passing

1 over a lobe 48 in the cam member."

2 Q. What does it mean to "pass over a
3 lobe"?

4 A. I'm not sure that I would characterize
5 it differently. Seems pretty apparent.

6 Q. Okay. Let's talk about what happens
7 during a draw cycle.

8 So looking at Figure 3, when the bow
9 is drawn -- well, let me back up.

10 Figure 3 just shows one cam; right?

11 A. Yeah. Figure 3 shows one cam
12 assembly.

13 Q. Okay. Maybe it's one -- it's one cam
14 assembly, and that cam assembly has two smaller
15 cams inside of it; is that fair.

16 A. Can you be more specific as to what
17 you're characterizing --

18 Q. Sure.

19 A. -- as what part? Please.

20 Q. Happy to.

21 So this is -- you would call 20 a bow
22 string cam; right?

1 A. This specification calls it a bow
2 string cam.

3 Q. Okay.

4 A. So we can use that characterization.

5 Q. And then on that bow string cam is
6 power cam member 32 and power cam member 60;
7 right?

8 A. That is consistent with what the
9 specification calls 32 and 60.

10 Q. And that's consistent with your
11 understanding also; right, sir?

12 A. Insofar as I have stated that I
13 understand the patent application publication,
14 yes.

15 Q. Bow string cam 20 rotates in a
16 counterclockwise direction when the bow is drawn;
17 right?

18 A. As depicted in Figure 3, that appears
19 to be correct.

20 Q. And you would expect the bow to have
21 another cam on the other limb that also looks like
22 the cam in Figure 3; right?

1 A. Likely.

2 Q. And power cable 31 -- if we're looking
3 at the cam shown in Figure 3, during draw, power
4 cable 31 is let out; right?

5 A. Can you please repeat your question?

6 Q. I'll change it up just a little bit.
7 During draw, power cable 31 -- let's
8 back up.

9 Power cable 31 interacts with a groove
10 that's around power cam 60; right?

11 A. Power cam member 60, yes. Correct.

12 Q. And during draw, power cable 31 comes
13 out of that groove; right?

14 A. It seems that is the case through at
15 least a portion of the draw.

16 Q. You would agree that, during the draw,
17 power cable 31 contacts less of the groove, as you
18 go from brace to full draw; right?

19 A. I'm not sure that that's true
20 throughout the entirety of the draw cycle.

21 Q. Where is power cable 31 anchored on
22 cam 20?

1 A. Can you please repeat your question?

2 Q. Where is power cable 31 anchored on
3 cam 20?

4 A. Specification only states that it is
5 attached at an anchor point.

6 Q. You don't know where that anchor point
7 is?

8 A. I expect that it is coincident with
9 the end of the cable.

10 Q. And you don't know where that is on
11 cam 20?

12 A. It's not depicted in Figure 3.

13 Q. And you're not sure where it is; are
14 you, sir?

15 A. I would expect that it's below
16 number 64.

17 Q. And during the draw -- well, let's see
18 if we can reach agreement somewhere else.

19 You would agree that power cable 31,
20 going from the straight portion around power cam
21 60 -- well, let's just trace it this way.

22 Power cable 31 goes around power

1 cam 60 in a clockwise direction and anchors

2 somewhere below 60?

3 MR. SCHMIDT: Objection. Form.

4 A. I would say it terminates somewhere

5 below 64. Scratch that.

6 Please one more time your question.

7 Q. BY THE COURT: Sure.

8 Power cable 31 goes around power

9 cam 60 in a clockwise direction and terminates
10 somewhere below 64.

11 A. As depicted in Figure 3, that appears
12 to be accurate.

13 Q. Now, as -- during the draw cycle,
14 power cable 31 contacts less of the groove going
15 around power cam 60; right?

16 A. I'm not sure that I agree.

17 Q. Why not?

18 A. Because in the brace condition, I
19 can't tell whether the cable 31 is engaged with
20 the flat portion of the power cam 60 that is at
21 approximately 12:00 o'clock in the orientation of
22 the image.

1 And further, given the positioning of
2 power cam 60, it would serve to take up a power
3 cable at the onset of the draw cycle. And I don't
4 believe there's enough information to answer, with
5 specificity, whether or not less of cable 31 is
6 engaged with groove -- with the groove of
7 element 60 throughout the draw cycle.

8 Q. Just to make sure we're on the same
9 page, you don't know if, during the draw cycle,
10 power cable 31 contacts less of the groove going
11 around power cam 60?

12 A. I don't think one can determine that
13 from Figure 3.

14 Q. How about from the Islas reference as
15 a whole?

16 A. Is there a particular passage you
17 would point me to?

18 Q. No.

19 A. I can reread the document.

20 Q. Well, I mean, you've read this
21 document to make your opinion in this case; right?

22 A. Yes.

1 Q. And you've studied this document in
2 anticipation of this deposition today; right?

3 A. That is correct.

4 Q. And you don't know if, during the draw
5 cycle, that power cable 31 contacts less of the
6 groove around power cam 60?

7 MR. SCHMIDT: Objection. Form and
8 scope.

9 A. I cannot tell whether or not that is
10 accurate in the early part of the draw.

11 Q. BY THE COURT: Okay. Take a look, if
12 you can -- I know you've got your papers, your
13 document unstapled there. Make it so you can see
14 Figure 1 and Figure 3 at the same time.

15 Figure 1 shows power cable 31
16 contacting less of the groove of power cam 60 than
17 it does -- than is shown in Figure 3; right?

18 A. That seems to be true.

19 Q. What's your understanding of fulcrum
20 point 66, as shown in Figure 1 and in Figure 3?

21 A. I'm not sure how to answer your
22 question.

1 Q. Do you see fulcrum point 66?

2 A. I do.

3 Q. What is fulcrum point 66?

4 A. According to the specification, it is
5 the point where the power cable 31 is tangent to
6 the second cam member 60.

7 Q. What does it mean for a power cable to
8 be tangent to a cam member?

9 A. That the cable is orthogonal to the
10 radius of the geometry at a particular point on
11 the cam.

12 Q. And what happens to the fulcrum point
13 of power cam 60 during the draw, or as the cam
14 rotates?

15 A. The location of the fulcrum point 66
16 changes during rotation.

17 Q. How does it change? Or I should say:
18 How has the fulcrum point changed from Figure 3 to
19 the condition in Figure 1?

20 A. Can you please repeat your question?

21 Q. How has the fulcrum point changed from
22 Figure 3 to the condition shown in Figure 1?

1 A. The nature of the fulcrum has not
2 changed.

3 Q. The location of the fulcrum point has
4 changed; right?

5 A. It has.

6 Q. How has the location of the fulcrum
7 point changed from the condition shown in Figure 3
8 to the condition shown in Figure 1?

9 A. It has moved rotationally, or at least
10 to some degree rotationally about the axis 22.

11 Q. Is it fair to say that the fulcrum
12 point has moved up power cam 60?

13 A. No.

14 Q. Fair to say it's moved down power
15 cam 60?

16 A. No.

17 Q. Fair to say that it's moved around
18 power cam 60?

19 A. Got any better ones?

20 Q. Let's stick with that one for now.

21 A. How about "along"?

22 Q. Fair to say that the fulcrum point has

1 moved along power cam 60?

2 A. I would say that is fair.

3 Q. And it's moved along the groove of
4 power cam 60; right?

5 A. That's reasonably one way to
6 characterize it.

7 MR. SCHMIDT: Matt, when you get a
8 breakpoint.

9 MR. COLVIN: Yeah. Thanks.

10 Q. BY MR. COLVIN: When comparing
11 Figure 1 and Figure 3, looking at power cable 31,
12 does power cable 31 contact more of the groove in
13 Figure 1 or in Figure 3?

14 A. It seems to be contacting more of the
15 groove of element 60 in Figure 3.

16 Q. And so -- and you agree that Figure 1
17 shows a view where the bow string is drawn and the
18 cam has rotated; right? As compared to the brace
19 condition shown in Figure 3.

20 A. It does not appear to me that the bow
21 is drawn.

22 Q. Okay. I just want to direct you to

1 paragraph 18.

2 And paragraph 18 says, "Figure 1 is a
3 side view of the cam assembly of an embodiment of
4 this invention with the bow string drawn back."

5 Do you see that?

6 A. I do.

7 Q. And so you would agree that Figure 1
8 shows a view where the bow string is drawn back;
9 although it may not be in the fully drawn
10 condition; is that fair?

11 A. I would agree with that.

12 Q. And you would expect that, when the
13 bow is in the fully drawn condition, the cam would
14 rotate even further than is shown in Figure 1;
15 right?

16 A. Can you please be more specific in
17 your characterization of the cam?

18 Q. Okay. You would expect that, when the
19 bow is in the fully drawn condition, cam 20 would
20 rotate even further than is shown in Figure 1;
21 right?

22 A. I would expect that.

1 Q. And cam 60 -- well, when cam 20
2 rotates, power cam 60 also rotates; right?

3 A. Correct.

4 Q. And just like you would expect the
5 power cam -- cam 20 to rotate more in the
6 counterclockwise direction when the bow is fully
7 drawn, you would also expect power cam 60 to
8 rotate in the counterclockwise direction when the
9 bow is fully drawn; right?

10 A. No.

11 Q. You're taking issue with fully drawn
12 versus the process of drawing; aren't you?

13 A. Yes.

14 Q. Yeah. Let me try it again.

15 When going from the condition shown in
16 Figure 1 to the fully drawn condition, you would
17 expect cam 20 to rotate more in the
18 counterclockwise direction; right?

19 A. Correct.

20 Q. And when going from the condition
21 shown in Figure 1 to the fully drawn condition,
22 you would expect power cam 60 to rotate more in

1 the counterclockwise direction; right?

2 A. Correct.

3 Q. And when power cam 60 rotates in the
4 counterclockwise direction from Figure 1 to fully
5 drawn, you would expect power cable 31 to contact
6 less of the groove; right?

7 A. I'm not sure about that.

8 Q. Why not?

9 A. Because, as I believe I explained
10 earlier, the geometry is such that cable 31 is
11 taken up in the draw cycle before it is let out.
12 And from the depiction, it's unclear whether or
13 not your statement is correct.

14 Q. Going from the condition shown in
15 Figure 1 to a fully drawn condition, you think
16 that power cable 31 is taken up by cam 60?

17 A. Perhaps I misheard your question. I
18 thought we were talking about Figure 3.

19 Q. Okay. Let me ask you again so it's
20 clear.

21 In going from the condition shown in
22 Figure 1 to the fully drawn condition, you would

1 expect power cable 31 to contact less of the
2 groove of power cam 60; correct?

3 A. That is correct.

4 MR. COLVIN: Okay. Let's take a
5 break.

6 MR. SCHMIDT: Okay.

7 MR. COLVIN: Go off the record.

8 (Recessed from 11:34 a.m. to
9 11:47 a.m.)

10 Q. BY MR. COLVIN: Okay. Let's take a
11 look back at Figure 3. And you see the fulcrum
12 point on Figure 3; right? 66?

13 A. Yeah. I see it.

14 Q. And you think that during the initial
15 portion of the draw cycle that power cable 31 may
16 interact with more of the groove than is shown in
17 Figure 3; is that right?

18 A. It may.

19 Q. You're not sure one way or the other;
20 right?

21 A. I can't tell from the image.

22 Q. And the fulcrum point 66, during the

1 initial part of the draw cycle, do you think that
2 it may traverse down the power cable towards the
3 other rotatable member that's not shown here?

4 A. I don't believe I understand your
5 characterization.

6 Q. Okay. If power cable 31 was to
7 contact more of the groove than it is shown
8 contacting in Figure 3, you would expect the
9 fulcrum point to go -- to move; fair enough?

10 A. Yes.

11 Q. And if it's going to contact less of
12 the groove, the fulcrum point will move in a
13 clockwise direction around power cam 60; right?

14 A. Correct.

15 Q. And if it's going to contact more of
16 the groove, fulcrum point 66 will move in a
17 counterclockwise direction around power cam 60;
18 right?

19 A. Can you please repeat that question?

20 Q. If power cable 31 is going to contact
21 more of the groove than it is shown contacting in
22 Figure 3, fulcrum point 66 will move in a

1 counterclockwise direction around power cam 60;
2 right?

3 A. I don't think so.

4 Q. You think that power cable 31 can
5 contact more of the groove shown in Figure 3
6 without the fulcrum point 66 moving?

7 A. Yeah.

8 Q. And you agree, during the initial part
9 of the draw cycle, power cam 60 is going to rotate
10 in a counterclockwise direction; right?

11 A. Yes.

12 Q. And you think that, even though power
13 cam 66 is rotating in the counterclockwise
14 direction, power cable 33 could interact with more
15 of the groove than it's shown interacting with in
16 Figure 3?

17 A. I don't believe I understood your
18 question.

19 Q. Let me try it again.

20 Power cam 66 rotates in the
21 counterclockwise direction during the initial part
22 of the draw cycle; right?

1 I'm sorry.

2 Power cam 60 rotates in a
3 counterclockwise direction during the initial draw
4 cycle; right?

5 A. It's rotates in the counterclockwise
6 direction.

7 Q. And even though power cam 60 is
8 rotating in the counterclockwise direction, you
9 think that power cable 31 may not be interacting
10 with less of the groove; right?

11 A. Maybe.

12 Q. In fact, you think that power cable 31
13 could be interacting with more of the groove when
14 power cam 60 rotates in the counterclockwise
15 direction?

16 A. Maybe.

17 Q. And -- okay. Great. And let's talk
18 about the other groove. This would be the groove
19 that interacts with power cable 30.

20 Do you see that?

21 A. I do.

22 Q. And groove -- that groove is on power

1 cam 32; right?

2 A. Correct.

3 Q. Power cable 31 never interacts with
4 the groove on power cam 32; does it?

5 A. It does not appear to.

6 Q. And power cable 30 does not interact
7 with the groove around power cam 60; does it?

8 A. As depicted in Figure 3, it does not.

9 Q. In fact, that's the case in all the
10 embodiments described in Islas; right?

11 A. Earlier in this deposition, if my
12 recollection serves me, we established that it is
13 likely that there is an opposing cam similar to
14 Figures 1 and 3 on the other side of the bow.

15 Insofar as that it is the case, I
16 would expect that features 60 and 32 would exist
17 on that other opposing limb's cam.

18 In which case, to answer your
19 question, does cable 31 ever interact with member
20 32, I would have to say that it does interact with
21 member 32 on the opposing cam.

22 Likewise, cable 30, which interacts

1 with cam 32 on Figures 3 and 1, would, in turn,
2 interact or likely interact with member 60 of the
3 opposing cam.

4 Q. Okay. We'll go there in just a
5 minute. Thanks for previewing that.

6 Let me ask my question again, and I'll
7 restrict it to just this cam.

8 A. Thank you.

9 Q. Power cable 31 does not interact with
10 the groove on cam 32, power cam 32, as shown in
11 the single cam depicted in Figures 1 and 3?

12 A. That is correct.

13 Q. And conversely, power cable 30 does
14 not interact with the groove on power cam 60, as
15 shown in the single cam depicted in Figures 1 and
16 3; right?

17 A. Correct.

18 Q. Now, Figure -- power cable 30, during
19 the draw cycle, interacts with -- I started that
20 question poorly. Let me start over.

21 During the draw cycle, power cable 30
22 interacts with more of the groove as the bow is

1 drawn; right?

2 A. Can you please restate your question?

3 Q. Power cable -- during the draw cycle,
4 power cable 30 interacts with more of the groove
5 around power cam 32 than it does at brace
6 condition?

7 A. During the draw cycle, power cable 30
8 would interact with more of the groove of power
9 cam 32.

10 Q. And you've mentioned that what we see
11 here is just one cam. There's an opposing cam on
12 the other end of the bow; right?

13 A. Likely.

14 Q. And in that situation, power cable 30
15 that's connected to power cam 32 in Figure 3, in
16 the opposing cam it would go to a structure
17 similar to power cam 60; right?

18 A. Insofar as the system, the bow's
19 system incorporated mirrored cams, that is what I
20 would anticipate.

21 Q. And likewise, power cable 31 that
22 interacts with power cam 60 shown in Figure 3

1 would interact with a structure similar to power
2 cam 32 in the opposing cam; right?

3 A. Insofar as the opposing cam was
4 essentially a mirror image of the one depicted,
5 that is a reasonable expectation.

6 Q. Where is the anchor point of power
7 cable 30 on cam 20?

8 A. I don't know precisely.

9 Q. Do you know approximately?

10 A. I don't see it depicted. So I don't
11 know where it is intended to be placed on this
12 cam.

13 Q. You know that power cable 30 is
14 anchored to cam 20 at some point; you just don't
15 know where?

16 A. Yes. It stands to reason.

17 Q. Okay. Power cable 30, when going from
18 the straight portion to the terminal portion, goes
19 around power cam 32 in a counterclockwise
20 direction; right?

21 A. I would say it goes around element 48
22 of 32 in a counterclockwise direction.

1 Q. Okay. Power cable 31, when going from
2 the straight portion to its terminal end, goes
3 around power cam 60 in a clockwise direction;
4 right?

5 A. Correct.

6 MR. COLVIN: Madam court reporter, can
7 you mark this document as Exhibit 2011.

8 (Exhibit 2011 marked.)

9 Q. BY MR. COLVIN: Hand you this document
10 that's been marked Exhibit 2011.

11 It is an image of Figure 3 from the
12 Islas reference, and I have drawn a red, blue, and
13 green set of arrows on it.

14 And so similarly to what we did with
15 Darlington, do you agree that the green arrow, as
16 drawn in figure 2011 -- sorry. Let me start that
17 over.

18 Do you agree that the green arrow, as
19 shown in Exhibit 2011, depicts the direction that
20 power cable 31 is wrapped around power cam 60?

21 A. That depends on one's point of view.

22 Q. Okay. I'll include that in my

1 question.

2 In Exhibit 2011, do you believe
3 that -- do you agree that the green arrow depicts
4 the direction that the power cam is wrapped around
5 power -- that the power cable 31 is wrapped around
6 power cam 60 when going from the straight to the
7 terminal end?

8 A. Yes.

9 Q. And do you also agree that the blue
10 arrow depicts the direction that power cable 30 is
11 wrapped around structure 48, when going from
12 straight to the terminal end?

13 A. Yes.

14 Q. And do you agree that the red arrow
15 shows the direction that the cam 20 rotates, when
16 going from brace to fully drawn?

17 A. It does.

18 Q. Let's take a look at what you have
19 depicted as the combination of Darlington and
20 Islas. You've had your report -- your declaration
21 in front of you.

22 Let's take a look at the figure at the

1 bottom of -- or the figure in paragraph 58.

2 It's on page 59 of your '989
3 declaration.

4 And just for the record, we have in
5 front of us the Declaration of Mr. Lange in the
6 IPR proceeding 2024-00522 regarding U.S. Patent
7 Number 8,683,989.

8 And so what we're looking at here in
9 paragraph 58, this is -- this is a cam that you
10 created, which you believe is the combination of
11 Darlington and Islas; right?

12 A. It is the Darlington cam modified in
13 view of Islas.

14 Q. Okay. And further in paragraph 58,
15 shown on page 60, you show another depiction of
16 the Darlington cam as, in your opinion, modified
17 in view of Islas, with an additional change to the
18 draw module 44; right?

19 A. Yes.

20 Q. Okay. And you used this combination
21 in each of the three IPR proceedings that you've
22 provided declarations in; right?

1 A. I believe that is correct.

2 Q. Now, your combination example shown in
3 paragraph 58 takes the power cable 30 and wraps it
4 around a capstan to an anchor point 56; right?

5 A. Yes.

6 Q. And would you say that anchor point 56
7 is on the periphery of the cam?

8 A. Can you please repeat your question?

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.

21 Q. And if you take a look back at Islas,
22 Islas also does not show an anchor point on the

1 periphery of a cam; does it?

2 A. Insofar as it does not show any anchor
3 points at all, that statement is reasonable.

4 Q. Well, it's not that it just doesn't
5 show the anchor points. You can tell by looking
6 at the embodiments in Islas that Islas doesn't
7 have anchor points on the periphery of the cam;
8 right, sir?

9 A. Would you mind repeating your question
10 again, please?

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.

1 Q. In your combination embodiment you
2 show a gap between power cable 30 and draw
3 module 44; right?

4 A. Correct.

5 Q. Your combination embodiment removes
6 fixed section 42 from Darlington; right?

7 A. That appears to be the case.

8 Q. And regardless of which draw module is
9 used, B-1, B-2, B-3, B-4, or your created B-5,
10 there's a gap between the draw module and power
11 cable 30 in your combination embodiment; right?

12 A. I expect there would be.

13 Q. In your combination embodiment, power
14 cable 30 goes around the capstan to an anchor
15 point in the direction opposite cam rotation
16 during draw; right?

17 A. Can you repeat the question once
18 again, please?

19 Q. Of course.

20 In your combination embodiment, power
21 cable 30 goes around the capstan to an anchor
22 point in a direction opposite cam rotation during

1 draw.

2 A. Correct.

3 Q. And you say that you got that idea
4 from Islas; right? That's the part of Islas that
5 you used to make your combination?

6 MR. SCHMIDT: Objection. Form.

7 A. I'm not exactly sure how you mean
8 that.

9 Q. BY MR. COLVIN: Well, at the bottom of
10 paragraph 57 -- also you'll see it on page 59, you
11 say, "The concept of Islas's power cable wrapping
12 around a fixed point as it extends toward an
13 opposite rotatable member in a direction opposite
14 the direction its pulleys rotate when drawn is
15 being combined in the Darlington's bow."

16 Do you see that?

17 A. Yes.

18 Q. And so my question is -- or what I
19 think you can agree with is that you took the
20 concept of Islas' power cable wrapping around
21 something in the direction opposite of cam
22 rotation and used that for your combination with

1 Darlington; right?

2 MR. SCHMIDT: Objection. Form.

3 A. "The concept of Islas's power cable
4 wrapping around a fixed point as it extends
5 towards an opposite rotatable member in a
6 direction opposite the direction its pulleys
7 rotate when drawn is being combined into
8 Darlington's bow."

9 Q. And that was -- that was the teaching
10 you took from Islas; right?

11 A. As stated, that is the concept from
12 Islas.

13 Q. Let's look back at Islas, Figure 3.
14 Where's the fixed point in Islas that
15 you reference in the last paragraph -- excuse
16 me -- in the last sentence of paragraph 58 that we
17 just read? Excuse me. I said that wrong.

18 Where in Islas is the fixed point that
19 you note in the last sentence of paragraph 57?

20 A. There would be a fixed point or there
21 is a fixed point around which power cable 31 is
22 wrapped at the center of each circular radius of

1 member 60 that the cable is wrapped around.

2 Q. Okay. So 60 has multiple different
3 radiuses; correct?

4 A. Yes.

5 Q. And the center point of each of those
6 radiuses is in a different spot; right?

7 A. Correct.

8 Q. So Islas doesn't exactly have a fixed
9 point that the cable wraps around; right?

10 A. It does. As you stated, there are
11 multiple.

12 Q. There are multiple fixed points that
13 it wraps around. Is that what you're saying?

14 A. Yes.

15 Q. Okay.

16 A. And what anyone would do to illustrate
17 the concept of wrapping a power cable around a
18 fixed point.

19 Q. Does Darlington show a power cable
20 wrapping around a fixed point?

21 A. Yes.

22 Q. You would agree that in Darlington,

1 power cable 32 wraps around a fixed point; right?

2 Sorry. Let me be more specific.

3 If we look at the bottom pulley,
4 pulley 22 in Figure 2 of Darlington, you would
5 agree that power cable 32 wraps around a fixed
6 point; right?

7 A. Yes. As depicted.

8 Q. And in Darlington Figure 2, looking at
9 cam 22, you would agree that -- never mind.

10 Let's talk about cable wear for a
11 minute.

12 You discuss generally the concept of
13 cable wear in your declaration; right?

14 A. I believe I do.

15 Q. Cable wear is where a cable maybe rubs
16 against something and starts getting frayed and
17 would need to be replaced; right?

18 A. Ultimately, that is one mode.

19 Q. I'm sorry. Go ahead.

20 A. I said ultimately that is one mode.

21 Q. And in Darlington, if we, again, look
22 at the bottom pulley in Figure 2, in Darlington,

1 power cable 30 is in constant contact with fixed
2 member 42; right? During the draw cycle.

3 A. As depicted in Figure 2, I would
4 expect that to be the case.

5 Q. And in your -- what I'll call your
6 combination embodiment -- oh, let me go back to
7 Darlington.

8 In Darlington, looking at the bottom
9 pulley of Figure 2, fixed member 42 has a groove
10 50c; right?

11 A. I'm sorry. Was that a question?

12 Q. It was.

13 In Darlington --

14 A. Yes.

15 Q. -- looking at the bottom pulley --

16 A. Yes. It does have a groove 50c.

17 Q. And then draw module 44 has a
18 groove 50b; correct?

19 A. Correct.

20 Q. And fixed member 42 is shaped so that
21 the groove 50c and the groove 50b are lined up;
22 right?

1 A. More or less.

2 Q. They're oriented such that the
3 transition from fixed member 42 to draw module 44
4 is smooth?

5 A. I expect it would be relatively
6 smooth.

7 Q. In fact, Darlington itself talks about
8 it being a good thing that it's smooth; right?

9 A. Insofar as you have that passage in
10 the Darlington specification, would you be willing
11 to share?

12 Q. I will.
13 If you take a look at column 2, down
14 around lines 62 to 65, I'll just read the
15 sentence, "Cable groove 50a, 50b, 50c, preferably
16 is substantially continuous in a plane
17 perpendicular to the axis of rotation around
18 axle 20, 'substantially' meaning that there are no
19 more than small gaps between the cable groove
20 sections that do not affect smooth drawing of the
21 bow."

22 Do you see that?

1 A. I do.

2 Q. Why would gaps affect smooth drawing
3 of the bow?

4 A. Gaps between various groove sections,
5 depending on how severe or how they are arranged,
6 could disrupt the interaction between different
7 portions of the cable groove, which might be
8 perceived by the user.

9 Q. So gaps might be perceived by the user
10 as not a smooth draw?

11 A. Gaps in the cable grooves may be
12 perceived by the user as not being a smooth draw,
13 as I believe is taught in Darlington.

14 Q. So Darlington teaches against having a
15 gap between draw module 44 and fixed member 42;
16 right?

17 MR. SCHMIDT: Objection. Form.

18 A. More specifically Darlington calls
19 for -- scratch that.

20 Can you please repeat your question?

21 Q. BY MR. COLVIN: Darlington teaches
22 against having a gap between draw module 44 and

1 fixed member 42; right?

2 MR. SCHMIDT: Objection. Form.

3 A. I do not believe your statement is
4 correct.

5 Q. BY MR. COLVIN: Darlington teaches
6 against having large gaps between draw module 44
7 and fixed member 42; right?

8 A. I do not see where Darlington teaches
9 that.

10 Q. In the sentence we read a moment ago,
11 at the bottom of column 2, starting at line 61, it
12 says, "Cable groove 50a, 50b, 50b preferably is
13 substantially continuous," and it goes on to say,
14 "'substantially' meaning there are no more than
15 small gaps between cable groove sections that do
16 not affect smooth drawing of the bow."

17 Do you see that?

18 A. I do.

19 Q. And do you understand that to mean
20 Darlington is teaching that it's preferable to
21 have small gaps between module 44 and -- or a
22 small gap between module 44 and fixed member --

1 fixed section 42?

2 A. No.

3 MR. SCHMIDT: Objection. Form.

4 Q. BY MR. COLVIN: What do you take that
5 to mean?

6 A. Darlington teaches that the cable
7 grooves 50a, 50b, 50c are preferably substantially
8 continuous. I take that at face value.

9 Q. What do you take the portion of that
10 sentence that says, "meaning that there are no
11 more than small gaps between the cable groove
12 sections that do not affect the smooth drawing of
13 the bow" -- what do you take that to mean?

14 A. I take it to mean what it says.

15 Q. You believe that Darlington is
16 teaching that it's okay to have large gaps between
17 modules 44 and fixed section 42?

18 MR. SCHMIDT: Objection. Form.

19 A. I don't believe Darlington speaks to
20 that.

21 Q. BY MR. COLVIN: You don't believe that
22 Darlington speaks to the nature of the gaps

1 between modules 44 and fixed section 42?

2 A. Not necessarily.

3 Q. Okay. All else being equal, better to
4 have a small gap or a larger gap between draw
5 modules 44 and fixed section 42?

6 MR. SCHMIDT: Objection. Form.

7 A. I can envision some scenarios where it
8 wouldn't matter.

9 Q. BY MR. COLVIN: Can you envision some
10 scenarios where it would matter?

11 A. I think I can.

12 Q. Name one.

13 A. One wherein such a gap would be
14 contrary to the teachings of Darlington, wherein
15 it states that cable groove 50a, 50b, 50c are
16 preferably substantially continuous.

17 Q. And what would that actually look
18 like, speaking of the gap between module 44 and
19 fixed member 42?

20 MR. SCHMIDT: Objection. Form.

21 A. Could you please repeat your question?

22 Q. BY MR. COLVIN: What would that

1 actually look like, speaking of the gap between
2 module 44 and fixed member 42?

3 MR. SCHMIDT: Objection. Form.

4 A. If there was a substantial distance
5 between 50c and 50b, it seems that would be
6 contrary to the teachings of Darlington as
7 described in the specification.

8 Q. BY MR. COLVIN: If there was enough of
9 a gap that it would -- scratch that.

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.

15 Q. And when it takes up power cable 30,
16 that effectively shortens the length -- that
17 shortens the effective length of the power cable;
18 right?

19 A. Can you please be more specific in how
20 you are characterizing effective length?

21 Q. No.

22 A. Can you please repeat your question?

1 Q. During draw, when fixed member 42
2 takes up power cable 30, that shortens the
3 effective length of power cable 30; right?

4 MR. SCHMIDT: Objection. Form.

5 A. I can't give an answer without
6 further -- without you further specifying what you
7 mean by effective length.

8 Q. BY MR. COLVIN: During draw, when
9 section 42 takes up power cable 30, that means the
10 energy is being stored by that; right?

11 MR. SCHMIDT: Objection. Form.

12 A. Can you please clarify what you mean
13 by, quote, by that, unquote, or close quote?

14 Q. BY MR. COLVIN: Taking up power cables
15 stores energy; right?

16 MR. SCHMIDT: Objection. Form.

17 A. In a bow system that is correct.

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

1 takes up power cable 30, as shown in the bottom
2 image of Figure 2?

3 A. Correct.

4 MR. COLVIN: Let's go off the record.

5 MR. SCHMIDT: Lunch is here, by the
6 way.

7 (Recessed from 12:53 p.m. to
8 1:30 p.m.)

9 Q. BY MR. COLVIN: All right. Let's take
10 a look back at your combination embodiment. And I
11 will look back at the version we were looking at
12 previously in paragraph 58 of your declaration.

13 In your proposed combination
14 embodiment -- or I should say, do you ever
15 describe in your declaration how you could change
16 the draw length in your proposed combination
17 embodiment?

18 A. Could I have a writing utensil?

19 I'm going to read from my declaration.

20 Q. Okay. Let me know what page or
21 paragraph, please.

22 A. Yes, sir. This is page 61.

1 Q. Um-hum.

2 A. I guess it's all the same paragraph,
3 but I'm going to start three lines in.

4 Q. Okay.

5 A. Beginning with "To produce."

6 Q. How much are you planning to read here
7 before you start reading your declaration nonstop?

8 A. The end of the sentence.

9 Q. Okay.

10 A. Is that --

11 Q. Yeah. Go for it.

12 A. "To produce such a modified bow, a
13 PHOSITA would have utilized any necessary ordinary
14 skills of a PHOSITA, such as changing the relative
15 distances between the capstan and the terminal,
16 the sizes of any of the elements illustrated, the
17 angle of the power cable, and/or the shape of the
18 draw length module 44 such that the bow was both
19 operable and provided the desired improvements
20 detailed below in safety, simplicity, maintenance,
21 and draw length."

22 Q. And that's where in your declaration

1 you describe that your proposed combination
2 embodiment would be able to have different draw
3 lengths?

4 A. Yes.

5 Q. Okay. I want to direct you to
6 paragraph 63 in your declaration.

7 The second sentence in paragraph 63
8 starts with, "The rotational limit of the original
9 Darlington design."

10 You see that?

11 A. I do.

12 Q. What is the rotational limit of the
13 original Darlington design?

14 Well, let me ask a different question.
15 Maybe it will be easier for you to answer.

16 When you describe the rotational limit
17 of the original Darlington design, are you
18 referring to the rotation of the cam at full draw?

19 A. Can you repeat your question, please?

20 Q. When you describe the rotational limit
21 of the original Darlington design, are you
22 referring to the rotation of the cam at full draw?

1 A. Yes.

2 Q. In your proposed combination
3 embodiment, the capstan 72 can -- its position can
4 be adjusted; is that right?

5 A. That's correct.

6 Q. And in the original Darlington design,
7 there were holes 1, 2, and 3 for a capstan; is
8 that right?

9 A. In one embodiment.

10 Q. And in your proposed combination
11 embodiment, you proposed using those holes 1, 2,
12 or 3 for the position of your capstan 72; is that
13 right?

14 A. That is correct.

15 Q. How does the proposed combination
16 embodiment have a higher rotational limit than the
17 original Darlington design?

18 Or let me ask the foundational
19 question first.

20 Does the proposed combination
21 embodiment have a higher rotational limit than the
22 original Darlington design?

1 A. It could.

2 Q. Does it?

3 A. In certain embodiments, I expect it
4 would.

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.

10 Q. I'm going to direct you to
11 paragraph 61 in your declaration.

12 The first sentence of paragraph 61
13 says, "Thus, PHOSITAS were well aware as of the
14 '989 Patent that any design modification that
15 would have lowered the likelihood of the power
16 cables contacting any other portion of the bow
17 would have been a desirable modification."

18 Do you see that?

19 A. I don't. Actually, can you point out
20 again where it is.

21 Q. Sure. Paragraph 61.

22 A. I'm sorry.

1 Q. On page 64.

2 A. I was on page 61.

3 Q. I may have said 61.

4 A. All right.

5 Q. That's why we read it.

6 A. Right.

7 Q. Okay. The first sentence of
8 paragraph 61 starts with, "Thus" and ends in
9 "modification."

10 Do you see it?

11 A. Yes.

12 Q. That sentence discusses lowering the
13 likelihood of power cables contacting any other
14 portion of the bow.

15 Do you see that?

16 A. Yes.

17 Q. And I believe you at least insinuate
18 that your proposed combination embodiment lowers
19 the likelihood power cables contacting any other
20 portion of the bow as compared to the original
21 Darlington design.

22 Is that right?

1 A. Can you please repeat your question?

2 Q. I'll just ask it more directly.

3 Does your proposed combination
4 embodiment lower the likelihood of power cables
5 contacting any other portion of the bow as
6 compared to the original Darlington design?

7 A. Yes.

8 Q. How?

9 A. By eliminating section 42.

10 Q. How does eliminating section 42 lower
11 the likelihood of the power cables contacting any
12 other portion of the bow?

13 A. Because section 42 is a portion of the
14 bow. Therefore, removal of that portion of the
15 bow reduces its likelihood that the cable will
16 contact that portion of the bow to zero.

17 Q. Okay. So in your mind, the cable
18 contacting section 42 in Darlington was a bad
19 thing?

20 MR. SCHMIDT: Objection. Form.

21 A. I don't know that I would necessarily
22 characterize it as a bad thing.

1 Q. BY MR. COLVIN: You think it's
2 undesirable?

3 A. But I --

4 Q. I'm sorry. Go ahead.

5 A. But where cable 30 would have
6 contacted 42 would be a wear point on the cable,
7 which would be eliminated with the elimination of
8 element 42.

9 Q. So you think that it's undesirable in
10 the original Darlington that the cable contacts
11 section 42, even though section 42 is designed to
12 contact the cable; right?

13 A. I wouldn't characterize it that way.

14 Q. Okay. So you think it's desirable in
15 the original Darlington that the cable contacts
16 section 42?

17 MR. SCHMIDT: Objection. Form.

18 A. I don't think it's a matter of
19 desirable or undesirable. More a matter of good
20 versus more good.

21 Q. BY MR. COLVIN: Okay. Let's go with
22 that.

1 You think it's better that section 42
2 not be there; right?

3 A. With respect to wear on cable 30, the
4 wear would have been -- the wear would be reduced
5 where it is not making contact with element 42.

6 Q. Okay. In your proposed combination
7 embodiment, the cable is going to come in and out
8 of contact with draw module 44; right?

9 A. Under what context?

10 Q. Well, let's just take a look at what
11 you've -- the two images you have in paragraph 62.

12 When the bow is drawn, the cable is
13 going to come into contact with draw module 44.
14 And when it's fired and goes back to brace
15 condition, power cable 30 is going to come out of
16 contact with draw module 44; right?

17 A. That is correct.

18 Q. And you would agree that, where the
19 cable 30 comes into contact with draw module 44,
20 that's going to be a wear point; right?

21 A. I would expect any time a cable comes
22 in contact with a track meant for the cable --

1 meant to receive a cable that there would be some
2 wear that would develop in the cable along the
3 contact region.

4 Q. What's the purpose of the track for
5 cable 30?

6 A. Can you be more specific, please?

7 Q. Does the track of cable 30 have a
8 purpose?

9 A. I expect it does.

10 Q. What is that purpose?

11 A. Can you please specify what you mean
12 by the track of cable 30?

13 Q. No. You used that term earlier, and
14 you also used "purpose" earlier regarding that
15 track.

16 So I'm just asking you what that is.

17 MR. SCHMIDT: Objection. Form.

18 A. Well, I believe I said earlier that
19 track 50a, 50b, and 50c, a combination of which
20 we'll refer to as 50, in the Darlington patent was
21 or is made to -- exhibits a geometric
22 characteristic or characteristics or to receive

1 cable 30.

2 Q. BY MR. COLVIN: In the image you have
3 of Darlington Figure 4C under paragraph 62, are
4 you able to tell what the point of highest cable
5 wear for power cable 30 would be?

6 A. Not from the image.

7 Q. In the image of your proposed
8 combination shown in paragraph 62, are you able to
9 determine what the point of highest cable wear
10 would be?

11 A. Not from the image.

12 Q. You think there's a high likelihood,
13 though, that the point of highest cable wear would
14 be the point at which power cable 30 first
15 contacts draw module 44 during the draw cycle?

16 A. Well, I would expect a PHOSITA would
17 modify some of the geometry to minimize wear. The
18 embodiment depicted is merely conceptual and not
19 necessarily intended to be a final commercial
20 ready design.

21 Q. In fact, you tried to modify your
22 embodiment in a way that would lessen the wear on

1 cable 30; right?

2 A. Correct.

3 Q. If you look at the second manual in
4 your paragraph 58 on page 60, you created a new
5 draw module, B-5; right?

6 A. Correct.

7 Q. And that was your attempt to create a
8 design that would lessen the wear on cable 30;
9 right?

10 A. Can you please repeat your question?

11 Q. That was your attempt to create a
12 design that would lessen the wear on cable 30;
13 right?

14 Let me rephrase that so it's all in
15 one question.

16 The draw module you created, B-5, was
17 your attempt to create a design that would lessen
18 the wear on cable 30; right?

19 A. Modification was not intended to
20 necessarily lessen the wear on the cable.

21 Q. Let me direct you to the sentence
22 directly above that figure on page 60.

1 A. 60.

2 Q. It says, "In this embodiment, the draw
3 length module 44 has been reshaped to round-off
4 its end, ensuring there is no potentially sharp
5 edge for the take-up of power cable 30."

6 Do you see that?

7 A. I do.

8 Q. And you agree with that statement?

9 A. Yes.

10 Q. And do you, in light of that
11 statement, still say that you didn't make that
12 redesign draw module B-5 to reduce the wear on
13 power cable 30?

14 A. I would direct you to page 67.

15 Q. I'm there.

16 A. I'm going to read a couple of
17 sentences from paragraph 64.

18 Q. Okay.

19 A. In my opinion -- this is four lines
20 from the bottom.

21 Q. Um-hum.

22 A. "In my opinion the combination of

1 Darlington in view of Islas as mapped in the
2 Petition would not have abrupt discontinuations or
3 gaps that would introduce problematic unwanted
4 disruptions in the smoothness of the cam track of
5 the modified bow. The redesigned bow" -- excuse
6 me?

7 "The redesigned bow would potentially
8 have had a shortened draw length module 44 (also
9 numbered 62 in other drawings), but it would have
10 been no more discontinuous than in the unmodified
11 form, especially in the discussed example
12 combination in which the corner of the draw length
13 module has been rounded off."

14 Q. Okay. I don't think that was quite
15 responsive to my question.

16 Let me ask it again.

17 You modified B-5 in order to lessen
18 the wear on power cable 30; right?

19 A. That is not correct.

20 Q. You modified B-5 to have a roundoff --
21 a rounded-off end to ensure that there was no
22 potentially sharp edge for the takeup of power

1 cable 30; right?

2 A. That's what it says.

3 Q. And you agree with that?

4 A. I agree with that.

5 Q. And a potentially sharp edge on the
6 power cable 30 would increase power cable 30's
7 wear; right?

8 A. The motivation for rounding off the
9 edge was to smooth the draw cycle.

10 Q. You said in your statement that you
11 rounded off the edge, "ensuring that there is no
12 potentially sharp edge for the take-up of the
13 power cable"; right?

14 A. I did.

15 Q. And you are now -- and you're saying,
16 well, that potentially sharp edge for the takeup
17 of the power cable doesn't have anything to do
18 with wear; it was just to make a smooth draw
19 cycle; is that right?

20 A. I expect that a sharp edge would cause
21 the draw cycle to be less smooth.

22 Q. Do you also expect that a sharp edge

1 would increase the wear on power cable 30?

2 A. It's possible.

3 Q. You're not sure one way or the other
4 if a sharp edge on the draw module would increase
5 the wear on power cable 30?

6 MR. SCHMIDT: Objection. Form.

7 A. It would depend on how a PHOSITA would
8 modify module 44.

9 Q. BY MR. COLVIN: Are you a PHOSITA,
10 sir?

11 A. I am.

12 Q. And you modified module 44; right?

13 A. A bit.

14 MR. SCHMIDT: Objection. Form.

15 A. I would further add that the
16 combination of Darlington and Islas, modified and
17 unmodified, are merely meant to illustrate the
18 concept and are not intended to be complete
19 market-ready designs.

20 Q. BY MR. COLVIN: Right. You don't know
21 if the design you showed as your combination
22 embodiment would actually work as a market-ready

1 design; right?

2 MR. SCHMIDT: Objection. Form.

3 A. Can you please be more specific in how
4 you mean "work"?

5 Q. BY MR. COLVIN: You don't know if the
6 design you showed as your combination embodiment
7 is a market-ready design; do you?

8 MR. SCHMIDT: Objection. Form.

9 A. I'm not sure that I'm in a position to
10 answer that. It seems to me the market, through
11 sales, determines whether or not something is
12 viable in the market.

13 Q. BY MR. COLVIN: You're not sure if the
14 combination embodiment that you created would be
15 viable in the market; are you, sir?

16 MR. SCHMIDT: Objection. Form and
17 scope.

18 A. I have no opinion how it would do in
19 the market.

20 Q. BY MR. COLVIN: You said in a previous
21 answer that "the combination of Darlington/Islas,
22 modified and unmodified, are merely meant to

1 illustrate the concept and are not intended to be
2 complete market-ready designs."

3 Do I have it right, sir, that the
4 combination embodiment that you have shown in your
5 declaration is not intended to be a complete
6 market-ready design?

7 MR. SCHMIDT: Objection. Form.

8 A. The combination does not consider an
9 entire bow assembly design. It merely
10 contemplates or illustrates a concept that is
11 functional.

12 Q. BY MR. COLVIN: What does functional
13 mean, as you just used the term?

14 A. That it would allow certain
15 combinations of a bow assembly to be drawn and
16 fired.

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.

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.

7 Q. You didn't draw that modification
8 though or describe that modification in your
9 declaration; did you, sir?

10 A. I did provide a general statement on
11 page 61, three lines down that I read into the
12 record previously wherein I state, "To produce
13 such a modified bow, a PHOSITA would have utilized
14 any necessary ordinary skills of a PHOSITA, such
15 as changing the relative distances between capstan
16 and terminal, the sizes of any of the elements
17 illustrated, the angle of the power cable, and/or
18 the shape of draw length module 44 such that the
19 bow was both operable and provided the desired
20 improvements detailed below for safety,
21 simplicity, maintenance, and draw length."

22 So I stated I would expect that a

1 PHOSITA would modify draw length module 44 to make
2 any desired improvements in safety. I did not
3 show -- excuse me.

4 I did not show the sum total of all
5 possible modifications, as I don't feel it would
6 be possible or customary to do so, insofar as it
7 is not possible.

8 Q. Then in drawing the combination
9 embodiment, did you try to draw the best version
10 of that combination embodiment that you could at
11 the time?

12 A. I tried to present what I thought was
13 the best representation with the goal of
14 facilitating understanding of the concept by the
15 reader.

16 Q. You had to make some design decisions
17 when you created this combination embodiment;
18 didn't you, sir?

19 A. I would say that is reasonably
20 accurate.

21 Q. You had to make some design decisions
22 on what the modified draw module 44, B-5, would

1 look like; right?

2 A. Correct.

3 Q. You had to make some design decisions
4 about where to place the terminal anchor, 56;
5 right?

6 A. Correct.

7 Q. You had to make some design decisions
8 about where to put the capstan; right?

9 A. I think it would be more accurate to
10 say that the capstan is in one of holes 1, 2, 3 as
11 depicted in Darlington.

12 Q. Nevertheless, you chose to use those
13 existing holes for the capstan; right?

14 A. If you're implying that no decision is
15 a decision, then I suppose that's reasonable.

16 Q. Well, you could have made the decision
17 to locate the capstan somewhere else? There was
18 nothing binding you to using those holes; right?

19 A. It seemed to facilitate illustration
20 of the concept to leave it.

21 Q. Yet you decided not to leave the
22 terminal, terminal anchor 56 where it was; right?

1 A. Correct.

2 Q. You left terminal anchor 54 where it
3 was; right? You didn't -- you didn't adjust the
4 position of terminal anchor 54?

5 A. Correct.

6 Q. You could have left terminal anchor 56
7 in its original location; right?

8 A. I think there were motivations not to
9 do so.

10 Q. You could have left terminal anchor 56
11 in its original location; right?

12 A. I don't see why I would have done that
13 when its current location is an improvement.

14 Q. I'm going to direct your attention to
15 paragraph 62, first sentence.

16 You say that the section 42 would have
17 been rendered superfluous by the combination
18 embodiment; right?

19 A. I do.

20 Q. You still believe that?

21 A. I do.

22 Q. Fixed section 42 took up the power

1 cable -- or takes up the power cable during a draw
2 cycle; right?

3 A. Some of it.

4 Q. And draw module 44 also takes up some
5 of the power cable during draw cycle; right?

6 A. It does.

7 Q. When comparing your proposed
8 combination embodiment to Darlington, less power
9 cable is taken up in your proposed combination;
10 right? Assuming the same draw module 44 in both
11 combination, or in both embodiments.

12 A. I don't understand why I would make
13 that assumption.

14 Q. Well, draw module B-2, for example,
15 can also be used in your combination embodiment;
16 right?

17 A. I haven't presented it that way.

18 Q. Okay. You've presented draw module
19 B-4 in your proposed combination; right?

20 A. Yes.

21 Q. And draw module B-4 can also be used
22 in the original Darlington; right?

1 A. It comes from Darlington.

2 Q. In fact, what you've drawn in your
3 proposed combination, let's just say, in
4 paragraph 48 on page 59, is the same B-4 draw
5 module that's shown in Darlington Figure 2; right?

6 A. It is carried over from Darlington.

7 Q. Okay. So let me go back to my
8 original question on this.

9 If draw module B-4 is used in both
10 Darlington and as shown in your proposed
11 combination embodiment, you would agree that there
12 is less power cable taken up in your proposed
13 combination embodiment than would be in
14 Darlington?

15 A. If B-4, module B-4 were placed on both
16 embodiments, there would be a portion of cable 30
17 taken up by element 42 in Darlington, and that
18 would not be taken up in the embodiment depicted
19 in my declaration. But I would remind you that
20 the intention of the combination depicted in my
21 declaration is conceptual only. And so picking
22 apart the details of the combination as if it were

1 a real product, a fully fleshed-out design meant
2 to interact with a larger bow system, I would
3 expect that a new module would be further designed
4 and customized for the application.

5 Q. You just didn't show that in your
6 declaration; did you, sir?

7 A. I did not go to the trouble of fully
8 designing an entire bow to illustrate the concept
9 of the Darlington/Islas combination.

10 Q. In fact, you didn't even go to the
11 trouble of fully designing a cam; did you, sir?

12 MR. SCHMIDT: Objection. Form.

13 A. I don't think that's accurate.

14 Q. BY MR. COLVIN: You did fully design a
15 cam?

16 A. I presented a combination that would
17 be functional when applied in conjunction with
18 certain other bow system components that
19 conceivably would match with this geometry.

20 Q. And the combination that you showed
21 stores less energy than what's shown in the
22 original Darlington Figure 2; right?

1 MR. SCHMIDT: Objection. Form.

2 A. Not necessarily.

3 Q. BY MR. COLVIN: The combination that
4 you showed, that you drew in your declaration,
5 stores less energy than what is shown in Figure 2
6 of Darlington; right?

7 MR. SCHMIDT: Objection. Form.

8 A. That is not correct.

9 Q. BY MR. COLVIN: Your combination
10 embodiment takes up less of cable 30 than would be
11 taken up in Darlington, if both use the draw
12 module B-4; correct?

13 MR. SCHMIDT: Objection. Form.

14 A. As depicted, I think that would be
15 correct.

16 Q. BY MR. COLVIN: I'm going to take you
17 to paragraph 67 in your declaration. Oh. I'm
18 sorry. Before we go there, let me take you to 61
19 again -- I'm sorry, 62 on page 65.

20 In the -- looking at -- below the
21 figures there, the first full -- the second full
22 sentence below the figures starts with, "As

1 mentioned above."

2 A. Yes.

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.

14 Q. In the next sentence, you talk about
15 that the removed material, the removed material of
16 section 42, would have been recyclable for further
17 manufacturing. And then you say, "Thus the
18 combination bow would have reduced the
19 manufacturing cost."

20 Did I get that about right?

21 A. Yeah.

22 Q. How much do you think the recycled

1 aluminum obtained from removing section 42 is
2 worth per bow?

3 A. I don't know the answer.

4 Q. A super small amount?

5 A. I don't know.

6 Q. Less than a penny?

7 A. I really have no information on the
8 current cost of recycled aluminum.

9 Q. Okay.

10 A. I would add, though, that there are
11 additional manufacturing savings in not having to
12 machine that particular element, including tool
13 changes and time and energy spent on that
14 particular part of the cam.

15 Q. What do you consider undue
16 experimentation in designing a cam?

17 MR. SCHMIDT: Objection. Form.

18 A. Can you please direct me to where in
19 the declaration you are finding that?

20 Q. BY MR. COLVIN: Yeah. Well, you talk
21 about it in several places. I'm looking at it on
22 page 73 in paragraph 67, near the bottom of that

1 paragraph. In fact, the last sentence in the
2 paragraph, you say, "Thus, a PHOSITA would have
3 had the skill without undue experimentation and
4 found it obvious to shape the Darlington+Islas bow
5 such that it rendered claim 3 obvious."

6 Do you see that?

7 A. I do.

8 Q. So what is undue experimentation in
9 your mind?

10 A. In my experience, when designing the
11 cam system, it requires iterations to maximize the
12 design characteristics sought. I would
13 characterize undue experimentation as iterations
14 outside the basic understanding of how a cam
15 system functions.

16 Q. If you understand how a cam system
17 functions, why do you have to iterate on the
18 design?

19 A. Because a compound archery bow is a
20 system, and the cam system is something that needs
21 to integrate with the larger system. And one can
22 predict within a certain range how the various

1 components of an archery bow system will interact.
2 But the difference between the mathematics and the
3 calculations and how it exhibits itself in real
4 life can be -- there can be differences in those
5 two. And so the iterations are part of closing
6 the gap between the theoretical and the physical.

7 Q. You believe that the size, shape,
8 position, configuration, orientation of a cam's
9 axle and terminals and cam tracks is all able to
10 be determined by a PHOSITA without undue
11 experimentation?

12 A. In many cases.

13 Q. But in some cases not?

14 A. I can't say for sure if there might be
15 certain outlying cases, but I would expect, in
16 most cases, a PHOSITA would be able to begin
17 within the range, beyond which I would
18 characterize it as an undue experimentation.

19 MR. COLVIN: Let's go off the record.

20 (Discussion off the record.)

21 (Recessed from 2:41 p.m. to

22 2:56 p.m.)

1 Q. BY MR. COLVIN: Welcome back,
2 Mr. Lange.

3 A. Why. Thank you.

4 Q. Are you familiar with the term "cam
5 lean"?

6 A. I am.

7 Q. What is "cam lean"?

8 A. It's when a cam leans.

9 Q. And in what situation does a cam lean?

10 MR. SCHMIDT: Objection. Scope.

11 A. When the forces are unbalanced, such
12 that -- just that. When the forces are
13 unbalanced.

14 Q. BY MR. COLVIN: Can cam lean cause
15 unwanted cable wear?

16 MR. SCHMIDT: Objection. Scope.

17 A. I don't believe I have an opinion as
18 to that.

19 Q. BY MR. COLVIN: Okay. You're just not
20 sure, sitting here today as an expert, whether or
21 not cam lean can cause unwanted cable wear; right?

22 A. I haven't prepared any opinions on

1 that for today.

2 Q. And you didn't discuss cam lean in
3 your declaration; did you?

4 A. I don't believe that I did.

5 Q. And you didn't consider cam lean in
6 creating your proposed combination; did you?

7 A. I don't recall.

8 Q. Do you have -- yeah. Never mind.
9 Let's leave it at that.

10 I want to ask you about the
11 publication Inside Archery.

12 Are you familiar with that
13 publication?

14 A. I know of it.

15 Q. What is it?

16 A. As I recall, it was a magazine.

17 Q. Archery magazine?

18 A. That would stand to reason.

19 Q. You're familiar with it from your time
20 at Hoyt?

21 MR. SCHMIDT: Objection. Scope.

22 A. I'm not sure if I would link my

1 familiarity with my time at Hoyt.

2 Q. BY MR. COLVIN: You're familiar with
3 Inside Archery just as your time as an archery
4 enthusiast; is that fair?

5 A. I believe that's fair.

6 Q. I'm handing a copy of the '989 patent,
7 which is Exhibit 1001.

8 You no doubt have seen this patent
9 before; right, sir?

10 A. Yes, sir, I have.

11 Q. Are you familiar with a Mathews -- a
12 Mission Archery bow called the Menace?

13 MR. SCHMIDT: Objection. Scope.

14 A. As I sit here, I don't recall.

15 Q. BY MR. COLVIN: Okay. Let me see if I
16 can refresh your recollection.

17 I'm handing you what what's been
18 premarked as Exhibit 2002. This is an article
19 entitled 2009 Mission Menace.

20 MR. SCHMIDT: Objection. Foundation,
21 authenticity, and scope.

22 Q. BY MR. COLVIN: Have you ever seen

1 this article before, sir?

2 A. I can't say whether I have or not. I
3 don't recall.

4 Q. Okay. Were you aware of Inside
5 Archery in 2008?

6 MR. SCHMIDT: Objection. Scope.

7 A. I have no opinion on that.

8 Q. BY MR. COLVIN: You don't remember one
9 way or the other whether you were aware of Inside
10 Archery in 2008?

11 A. Specifically, I don't.

12 Q. Okay. And do you recall if you saw
13 Inside Archery publications while you were at
14 Hoyt?

15 MR. SCHMIDT: Objection. Scope.

16 A. I think they were about the office.

17 Q. BY MR. COLVIN: And take a look at
18 Exhibit 2002.

19 Does that look like an Inside Archery
20 article to you?

21 MR. SCHMIDT: Objection. Form and
22 scope.

1 A. I have no opinion on that.

2 Q. BY MR. COLVIN: You see at the bottom
3 of the page of Exhibit 2002, around the page
4 number, it says Inside Archery, and then the page
5 number, and then December 2008?

6 Do you see that?

7 MR. SCHMIDT: Objection. Foundation.
8 Form. Scope.

9 A. I see it.

10 Q. BY MR. COLVIN: What do you take that
11 to mean?

12 MR. SCHMIDT: Same objections.

13 A. I don't really have an opinion on what
14 that means.

15 Q. BY MR. COLVIN: Okay. You don't know
16 what it means?

17 MR. SCHMIDT: Same objections.

18 A. I don't have an opinion on the
19 meaning.

20 Q. BY MR. COLVIN: I want you to look at
21 the second page of that document, Exhibit 2002.

22 And you see on the right side of that

1 page there's a picture of a bow. See that?

2 A. It appears to be a picture of a bow.

3 Q. And on the left side of that page
4 there's a picture of a cam.

5 You see that?

6 MR. SCHMIDT: Objection. Scope.

7 A. I have no opinion as to what is
8 depicted in the picture.

9 Q. BY MR. COLVIN: You don't know if
10 that's a cam?

11 MR. SCHMIDT: Objection. Scope.

12 A. I don't have an opinion one way or the
13 other.

14 Q. BY MR. COLVIN: Okay. What do you
15 think it's a picture of?

16 MR. SCHMIDT: Objection. Scope.

17 A. I don't have any opinion on it. I
18 haven't seen this document before. I haven't
19 analyzed it or prepared any analysis. So I really
20 don't have any opinion to render about it.

21 Q. BY MR. COLVIN: As someone who
22 designed cams, worked at Hoyt, and is a general

1 archery enthusiast, do you have an understanding
2 of what compound bow cams look like?

3 MR. SCHMIDT: Objection. Form,
4 foundation, and scope.

5 A. Some of them.

6 Q. BY MR. COLVIN: You don't have enough
7 expertise or experience to know that what's shown
8 on the left side of page 2 of Exhibit 2002 is a
9 cam; do you, sir?

10 MR. SCHMIDT: Objection. Form,
11 foundation, and scope.

12 A. Can you repeat your question?

13 Q. BY MR. COLVIN: I will.

14 You don't have enough expertise or
15 experience to know that what's shown on the left
16 side of page 2 of Exhibit 2002 is a cam; do you,
17 sir?

18 MR. SCHMIDT: Objection. Form,
19 foundation, and scope.

20 A. I don't have any opinion on that.

21 Q. BY MR. COLVIN: Do you see any cams on
22 the bow that's on the right side of that page?

1 MR. SCHMIDT: Objection. Form,
2 foundation, and scope.

3 A. Once again, I have not formed an
4 opinion on that.

5 Q. BY MR. COLVIN: Okay. You just can't
6 tell?

7 MR. SCHMIDT: Objection. Form,
8 foundation, and scope.

9 A. I just don't have an opinion.

10 MR. COLVIN: Okay. Pass the witness.

11 MR. SCHMIDT: I have no questions.

12 MR. COLVIN: All right.

13 MR. SCHMIDT: I don't need a copy of
14 the transcript, unfortunately. I get a copy from
15 you.

16 (Deposition concluded at 3:09 p.m.)

17

18

19

20

21

22

1 REPORTER'S CERTIFICATE

2

3 I, NAOLA C. VAUGHN, a Certified Court
4 Reporter within and for the State of Kansas, hereby
5 certify that the within-named deponent was first
6 duly sworn to testify the truth, and that the
7 deposition by said deponent was given in response to
8 the questions propounded, as herein set forth, was
9 first taken in machine shorthand by me and
10 afterwards reduced to writing under my direction and
11 supervision, and is a true and correct record of the
12 testimony given by the deponent.

13 I further certify that I am not a relative
14 or employee or attorney or counsel of any of the
15 parties, or a relative or employee of such attorneys
16 or counsel, or financially interested in the action.

17 WITNESS my hand and official seal at
18 Tonganoxie, Leavenworth County, Kansas, this 23rd
19 day of November 2024.

20

21

22



NAOLA C. VAUGHN, CCR, CRR, RPR

Kansas CCR No. 0895

Page 130

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ERISE IP, P.A.

2 7015 College Boulevard, Suite 700

Overland Park, Kansas 66211

3

Case: Ravin Crossbows, LLC v. MCP IP, LLC

4 Date of deposition: November 21, 2024

Deponent: Joshua Lange

5

6 Please be advised that the transcript in the above
referenced matter is now complete and ready for signature.

7 The deponent may come to this office to sign the transcript,

8 a copy may be purchased for the witness to review and sign,

9 or the deponent and/or counsel may waive the option of

10 signing. Please advise us of the option selected.

11 Please forward the errata sheet and the original signed

12 signature page to counsel noticing the deposition, noting the

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3
4 SIGNATURE PAGE
Case: Ravin Crossbows, LLC v. MCP IP, LLC
5 Witness Name: Joshua Lange
Deposition Date: November 21, 2024

6
7 I do hereby acknowledge that I have read
and examined the foregoing pages
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8
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8 Case: Ravin Crossbows, LLC v. MCP IP, LLC

9 Witness Name: Joshua Lange

10 Deposition Date: November 21, 2024

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