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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PENUMBRA, INC.

Petitioner

v.

RAPIDPULSE, INC.

Patent Owner

IPR 2022-00608

U.S. Patent No. 10,722,253

REMOTE VIDEOCONFERENCE DEPOSITION OF

BRIAN BROWN

VOLUME II

Monday, May 22, 2023

Remotely Testifying from Hanover, Minnesota

Stenographically Reported By:

Hanna Kim, CLR, CSR No. 13083

Job No. 5921462

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PENUMBRA, INC.

Petitioner

v.

RAPIDPULSE, INC.

Patent Owner

U.S. Patent No. 10,722,253

IPR2022-00608

Virtual videoconference deposition of
BRIAN BROWN, taken on behalf of the Patent Owner,
pursuant to the stipulations of counsel thereof,
remotely testifying from Hanover, Minnesota, on
Monday, May 22, 2023, before Hanna Kim, CLR,
Certified Shorthand Reporter, No. 13083.

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1 Remotely Testifying from Hanover, Minnesota

2 Monday, May 22, 2023; 9:16 a.m., CDT

3 --o0o--

4 BRIAN BROWN,

5 having been duly administered an oath over

6 videoconference as stipulated by all counsel, was

7 examined and testified as follows:

8

9 EXAMINATION

10 BY MR. SANDERS:

11 Q. Good morning, Mr. Brown.

12 A. Good morning.

13 Q. Could you please state your full name for
14 the record.

15 A. Brian J. Brown. 09:16:34

16 Q. What is your address?

17 A. 178 Jandel Avenue Northeast, Hanover,
18 Minnesota 55341.

19 Q. Other than communicating through this Zoom
20 for the deposition, are you communicating with 09:16:51
21 anyone else in any other way?

22 A. No.

23 Q. Do you have any materials accessible to
24 you?

25 A. I have a copy of my second declaration in 09:17:02

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1 front of me.

2 Q. Any other materials?

3 A. No. No.

4 Q. Are there any markings on the version of

5 the declaration that you have? 09:17:18

6 A. No.

7 Q. All right.

8 Mr. Brown, have you changed your opinion

9 about the characteristics of a person of ordinary

10 skill in the field of the '253 patent since you 09:17:37

11 provided your initial declaration?

12 A. I have not changed my opinion.

13 Q. Okay. And just to confirm, I'll direct

14 your attention at Exhibit 1005 at Paragraph 48.

15 (IPR 2002-00608 Exhibit 1005 was 09:18:09

16 referenced.)

17 THE WITNESS: It's taking me a second here

18 to figure out how to operate this.

19 I do have the document in front of me.

20 Okay. I am now at paragraph 48. 09:19:15

21 BY MR. SANDERS:

22 Q. Excellent.

23 I'd like to direct your attention to page

24 19, the continuation of paragraph 48.

25 A. I am there. 09:19:37

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1 Q. Okay. And do you see maybe four lines
2 down you state your conclusion as to the
3 characteristics of a person of ordinary skill?

4 A. I do.

5 Q. Okay. And I just -- just to confirm, is 09:19:54
6 it still your opinion that "a person of ordinary
7 skill in the field of the art of the '253 Patent
8 would have been either a person with a Bachelor of
9 Science degree in engineering or an equivalent
10 field, with two to four years of academic or 09:20:11
11 industry experience in the aspiration embolectomy
12 and thrombectomy industry or comparable industry
13 experience who would, where necessary or desired,
14 work or consult with others including a physician to
15 develop embolectomy or thrombectomy devices; or an 09:20:35
16 interventional neurosurgeon with at least three
17 years of experience developing and/or using medical
18 devices in embolectomy or thrombectomy procedures,
19 and who would, where necessary, work or consult with
20 others including an engineer to develop such a 09:20:51
21 medical device"? [As read]

22 A. I do see that.

23 Q. All right.

24 And that's your opinion as to the level of
25 skill in the field or the '253 patent; right? 09:21:05

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1 A. Correct.

2 Q. Okay. Would that level of skill be the
3 same for the Teigan '683 patent?

4 A. Yes.

5 Q. Would it be the same for the Teigan '712 09:21:26
6 patent?

7 MR. WILLIAMS: Objection to form.

8 THE WITNESS: I assume so, yes.

9 BY MR. SANDERS:

10 Q. Okay. And is this the perspective that 09:21:41
11 you applied for both your initial declaration and
12 your reply declaration in this IPR?

13 A. I believe it is.

14 Q. Okay. And you also state in paragraph 48,
15 after you provide your definition, that "A person 09:21:58
16 with less education but more relevant practical
17 experience, or more relevant education but less
18 practical experience, may also meet this standard."

19 Do you see that?

20 A. I do. 09:22:14

21 Q. Okay. Would you agree that a person of
22 ordinary skill in the art should have some
23 experience and knowledge in the area of
24 thrombectomy?

25 A. Yes. 09:22:33

1 Q. Do you believe that a person of ordinary
2 skill in the art would need to have three years of
3 such experience?

4 MR. WILLIAMS: Objection to -- objection
5 to form. 09:22:48

6 THE WITNESS: I believe I said two to
7 four, so three falls in that range.

8 BY MR. SANDERS:

9 Q. Okay. And would you agree that five years
10 of experience in the area of thrombectomy would be 09:22:58
11 sufficient to make one skilled in the relevant art
12 here?

13 MR. WILLIAMS: Objection to form.

14 THE WITNESS: Experience, as I have
15 defined it, yes. Yeah. 09:23:13

16 BY MR. SANDERS:

17 Q. And -- and -- and would you agree that the
18 area of thrombectomy is how you've defined the area
19 for the level of skill here?

20 A. I believe I -- I said, yes, the area of 09:23:25
21 thrombectomy with the engineering background, the
22 neurosurgeon background, or years of experience,
23 yes.

24 Q. Okay. Would you agree that a person with
25 ten years of experience in the area of thrombectomy 09:23:42

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1 would be a -- qualified as a person of skill in the
2 art?

3 MR. WILLIAMS: Objection to the form.

4 THE WITNESS: As previly [verbatim] --

5 previously defined, yes. 09:23:54

6 BY MR. SANDERS:

7 Q. Okay. And what do you mean by "as
8 previously defined"?

9 A. When I clarified experience with a -- a
10 background in engineering, neurosurgeon, or relevant 09:24:12
11 practical experience.

12 Q. Okay. And just to make sure I understand,
13 when you say "a background in "engineering,
14 neurosurgeon," do you mean the person could either
15 have a background in engineering or be a 09:24:33
16 neurosurgeon?

17 A. I was referring to having a background in
18 engineering as I defined, having a background as an
19 interventional neurosurgeon, or having relevant
20 practical experience. 09:24:42

21 Q. Now, I'd like to talk a bit about the
22 issue of priority, and specifically direct you to a
23 statement that's made in Penumbra's reply brief.

24 I'll let you get the reply brief. It's --
25 it's the one unnumbered -- unnumbered exhibit 09:25:21

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1 document.

2 A. Yeah, it appears to be at the very top of
3 my list.

4 I do have it open now.

5 Q. I'd like to direct your attention to the 09:25:39
6 bottom of page 21.

7 A. I am there.

8 Q. Okay. And you see there's a -- a
9 statement at the bottom of the page that -- where
10 Penumbra argues that Dr. Finol admits that, per 09:26:20
11 Teigan's disclosure, "even when the vacuum valve is
12 closed and the saline valve is open, 'some level of
13 vacuum remains in the catheter'?"

14 A. I do see that.

15 Q. Do you agree that, per Teigan's 09:26:41
16 disclosure, "even when the vacuum valve is closed
17 and the saline valve is open, 'some level of vacuum
18 remains in the catheter'?"

19 MR. WILLIAMS: Objection to form and
20 scope. 09:26:55

21 THE WITNESS: I would have to read more of
22 what we're referring to here to be able to answer
23 that question.

24 BY MR. SANDERS:

25 Q. Well, you've reviewed the Teigan 09:27:09

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1 provisional applications; correct?

2 A. Correct.

3 Q. Okay. In your view, based on the
4 disclosure in Teigan's provisional applications,
5 when the vacuum valve is closed and the saline valve 09:27:32
6 is opened, does some level of vacuum remain in the
7 catheter?

8 MR. WILLIAMS: Objection to form.

9 THE WITNESS: It can.

10 BY MR. SANDERS: 09:27:46

11 Q. Under what conditions?

12 MR. WILLIAMS: Objection to form.

13 THE WITNESS: Depending upon the pressures
14 and depending on the timing.

15 BY MR. SANDERS: 09:28:10

16 Q. Let's break that down.

17 How does whether some level of vacuum
18 remains in the catheter depend on pressure?

19 A. It can be -- when I use the
20 term "pressure," I am including both a positive and 09:28:27
21 a negative pressure.

22 A negative pressure typically is -- is
23 referred to as a vacuum. And so when I refer to
24 "pressure," it could be the pressure of the vacuum,
25 or it could be the pressure of the vent fluid. 09:28:45

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1 Q. Under what pressure would some level of
2 vacuum remain in the catheter even when the vacuum
3 valve is closed and the saline valve is open?

4 A. There -- there isn't a specific pressure
5 that would relate to this statement. As I 09:29:18
6 mentioned, it would be the amount of vacuum
7 pressure. It would be the amount of venting
8 pressure. And it would be the timing of the valves
9 opening and closing.

10 Q. Okay. And what pressure and timing would 09:29:37
11 be required to ensure that some level of vacuum
12 remains in the catheter?

13 A. That, again, is not a specific answer.
14 It -- I would also have to know the design of the
15 system in order to be able to calculate an answer 09:30:01
16 for you or experimentally determine an answer for
17 you.

18 Q. Well, we're focusing on Teigan's system as
19 described in Teigan's provisional applications.

20 In that system, is there particular 09:30:21
21 pressure and timing that's disclosed in Teigan that
22 maintains a level of vacuum in the catheter when the
23 vacuum valve is closed and the saline valve is open?

24 MR. WILLIAMS: Objection to form and
25 scope. 09:30:42

1 THE WITNESS: I do believe Teigan does
2 teach what his system is. I don't have it right in
3 front of me to be able to answer that for you.

4 BY MR. SANDERS:

5 Q. Okay. Let's take a look at the first 09:31:10
6 Teigan provisional, which is Exhibit 1008.

7 (IPR 2002-00608 Exhibit 1008 was
8 referenced.)

9 THE WITNESS: I have it open.

10 BY MR. SANDERS: 09:31:32

11 Q. Okay. And I'll direct you to the
12 discussion of pulsating aspiration pressure that
13 begins at paragraph 63 at the bottom of page 14.

14 And my question, Mr. Brown, is, per
15 Teigan's disclosure in its first provisional 09:32:38
16 application, does Teigan describe that some level of
17 vacuum remains in the catheter even when the vacuum
18 valve is closed and the saline valve is open?

19 A. And you are referring to paragraph 63?

20 Q. And the following paragraphs. 09:33:03

21 A. So how many of the following?

22 Q. Well, I believe that the discussion of
23 pulsated aspiration continues through paragraph 69.
24 But if there are other sections of Teigan's
25 disclosure that you need to consult to answer the 09:33:30

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1 question, you're free to do so.

2 A. Can you re-ask your question, please.

3 Q. Sure.

4 In Teigan's disclosure in its first
5 provisional application, does Teigan describe that 09:33:51
6 some level of vacuum remains in the catheter even
7 when the vacuum valve is closed and the saline valve
8 is open?

9 A. He describes that it is possible to do
10 that. 09:34:09

11 Q. And where, Mr. Brown, do you believe that
12 Teigan describes that it is possible to do that?

13 A. In paragraph 65, in the center, it says,
14 "An influx or bolus of saline will partially relieve
15 the vacuum." 09:35:33

16 Q. Okay. And in your view, Mr. Brown, does
17 that reference to "An influx or bolus of saline will
18 partially relieve the vacuum" refer to maintaining a
19 level of vacuum in the catheter when the vacuum
20 valve is closed and the saline valve is open? 09:36:05

21 MR. WILLIAMS: Objection to form.

22 THE WITNESS: It is stating that that is
23 possible.

24 BY MR. SANDERS:

25 Q. When you say "stating that that is 09:36:24

1 possible," what's the "that" you're referring to?

2 A. That it is possible to maintain vacuum
3 in -- a -- a level of vacuum in the catheter.

4 Q. And is that in a situation where the
5 vacuum valve is closed and the saline valve is open? 09:36:49

6 A. Correct.

7 Q. Does the disclosure in Teigan's first --
8 first provisional -- I'll start again.

9 Does Teigan describe in their first
10 provisional a situation where the vacuum valve is 09:37:28
11 closed, the saline valve is open, and some level of
12 vacuum does not remain in the catheter?

13 MR. WILLIAMS: Objection to form and
14 scope.

15 THE WITNESS: Yes, he does. 09:37:49

16 BY MR. SANDERS:

17 Q. Where do you believe Teigan does that?

18 A. In paragraph 63, bottom of page 14, in the
19 middle of that paragraph it says, "In such cases,
20 saline pulsated aspiration." [As read] Saline 09:38:34
21 would be what is coming from the vent valve.

22 And if it's pulsated, it would have the
23 possibility of being -- having a positive pressure,
24 which would also then provide a positive pressure to
25 the interior of the catheter. 09:38:53

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1 Q. What we just looked at in paragraph 65
2 with the sentence, "An influx or bolus of saline
3 will partially relieve the vacuum," that was saline
4 pulsated aspiration; correct?

5 A. It was. 09:39:15

6 Q. And that, in your view -- let me start
7 again.

8 That saline pulsated aspiration that's
9 described in paragraph 65 involved maintaining a
10 level of vacuum in the catheter; correct? 09:39:34

11 A. I said it was possible to maintain a level
12 of vacuum.

13 Q. And you -- and tell me if I got this
14 wrong, but I believe you testified that paragraph 65
15 describes actually maintaining a level of vacuum in 09:39:54
16 the catheter with saline pulsated aspiration; is
17 that right?

18 A. Yes. So when I say "possible," it is
19 actually possible to do that.

20 Q. My question is different. My question is 09:40:10
21 not whether it's possible. My question is whether
22 it's described in the Teigan reference.

23 MR. WILLIAMS: Objection to form.

24 MR. SANDERS: There wasn't a question.

25 BY MR. SANDERS: 09:40:23

1 Q. My question is, does Teigan describe
2 maintaining a level of vacuum in the catheter using
3 saline pulsated aspiration?

4 A. It does.

5 Q. And is that the sentence you referred to 09:40:41
6 previously in paragraph 65, "An influx or bolus of
7 saline will partially relieve the vacuum"?

8 MR. WILLIAMS: Objection to form.

9 THE WITNESS: Correct.

10 BY MR. SANDERS: 09:41:04

11 Q. Okay. Does Teigan describe not
12 maintaining a level of vacuum in the catheter with
13 saline pulsated aspiration?

14 A. Please repeat the question.

15 Q. Yes. 09:41:26

16 Does Teigan in its first provisional
17 describe not maintaining a level of vacuum in the
18 catheter with saline pulsated aspiration?

19 A. I believe he does describe that in
20 paragraph 63. 09:41:48

21 Q. And what in paragraph 63 do you believe
22 describes not maintaining a level of vacuum in the
23 catheter with saline pulsated aspiration?

24 A. The fact that it's pulsated could allow it
25 to be positive. 09:42:13

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1 Q. Okay. But the saline could be pulsated
2 and the vacuum level could remain negative as
3 described in paragraph 65; correct?

4 A. It is possible to have both.

5 Q. And Teigan actually describes in paragraph 09:42:35
6 65 of its first provisional having a level of vacuum
7 with saline pulsated aspiration; right?

8 A. I -- I'm going to have you repeat the
9 question 'cause I -- I got confused.

10 Q. No problem. 09:43:05

11 Teigan actually describes in paragraph 65
12 of its first provisional having a level of vacuum
13 with saline pulsated aspiration; right?

14 A. Yes, he does.

15 Q. Is there a statement in the first Teigan 09:43:23
16 provisional where you believe Teigan describes
17 having saline pulsated aspiration without
18 maintaining a level of vacuum?

19 A. I have given you one example. Are you
20 asking for others? 09:44:07

21 Q. What is the one example that you've given
22 me of where Teigan describes having saline pulsated
23 aspiration without maintaining a level of vacuum?

24 A. The example I gave you was in paragraph 63
25 where he does describe the saline pulsa- -- pulsated 09:44:33

1 aspiration.

2 Q. What statement or statements in paragraph
3 63 do you believe describe having saline pulsated
4 aspiration without maintaining a level of vacuum?

5 A. The -- by him teaching that it's pulsated, 09:44:57
6 he is teaching that it could be a positive or a
7 negative pulse. When I say "pulse," the end result
8 being positive or negative.

9 Q. In paragraph 63, does Teigan state whether
10 the pulsated saline produces a net positive or net 09:45:20
11 negative pressure within the catheter?

12 A. He does not specifically state negative or
13 positive pressure within the catheter in paragraph
14 63.

15 Q. Is there anywhere else, Mr. Brown, where 09:45:43
16 you believe Teigan in the first provisional
17 describes saline pulsated aspiration producing a net
18 positive pressure within the catheter?

19 A. I would have to read the following
20 paragraphs to -- to find the -- an -- an additional 09:46:21
21 example.

22 Q. Okay. Certainly. Please go ahead.

23 A. (Witness reviews.)

24 In the following paragraphs, I cannot find
25 an example where it specifically says that there is 09:48:18

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1 a positive pressure in the catheter, but he teaches
2 ways of having a positive pressure in the catheter.

3 Q. And when you say that "he teaches ways of
4 having a positive pressure in the catheter," do you
5 mean that Teigan in his first provisional teaches 09:48:55
6 pulsated aspiration which could be used to achieve
7 either a positive or a negative pressure in the
8 catheter?

9 A. Correct.

10 Q. And taking a step back down, Mr. Brown, 09:49:19
11 would you agree that as long as there is non-zero
12 suction force in a catheter, that means that there's
13 some level of vacuum in the catheter?

14 MR. WILLIAMS: Form and scope.

15 THE COURT REPORTER: Could you please 09:49:47
16 repeat your objection.

17 MR. WILLIAMS: Form and scope.

18 THE WITNESS: And -- and I am going to
19 have you re-ask the question, please.

20 BY MR. SANDERS: 09:49:54

21 Q. Sure.

22 Would -- would you agree that as long as
23 there is a non-zero suction force in the catheter,
24 that means that there's some level of vacuum in the
25 catheter? 09:50:05

1 A. I -- I'm going to answer no, but I'm not
2 convinced I'm understanding your question correctly
3 as far as how you've asked it.

4 Q. Sure.

5 You've reviewed the Grey reference; right? 09:50:24

6 A. Yes.

7 Q. And the Grey reference, you're familiar,
8 talks about maintaining a non-zero suction force at
9 all times; right?

10 A. Yes. 09:50:39

11 Q. Okay. And when Grey speaks about
12 maintaining a non-zero suction force, that means
13 maintaining a level of vacuum; right?

14 A. I believe, without having Grey in front of
15 me, that that is how he speaks to maintaining a 09:50:59
16 level of vacuum.

17 I was under the understanding that we were
18 reviewing Teigan.

19 Q. Yeah, my question is really more -- I used
20 Grey as a starting point, but it's really more 09:51:15
21 general.

22 Would you agree that when there's a
23 non-zero suction force in a catheter, that means
24 there is a level of vacuum in a catheter?

25 MR. WILLIAMS: Objection to form. 09:51:27

1 THE WITNESS: As Grey uses that term, yes.

2 BY MR. SANDERS:

3 Q. Can -- can you think of a situation where
4 a catheter would have non-zero suction force and not
5 have a level of vacuum in the catheter? 09:51:45

6 MR. WILLIAMS: Objection to scope.

7 THE WITNESS: I believe if you were to ask
8 a typical engineer that question, they would have
9 you define what is non-zero.

10 And in the case of Grey, he does define 09:52:09
11 it.

12 In the case of Teigan, Teigan has not
13 defined what non-zero means.

14 BY MR. SANDERS:

15 Q. What are the -- well, let me start again. 09:52:26

16 What are the definitions of non-zero that
17 you have in mind?

18 A. Non-zero in its plain and ordinary meaning
19 would mean not zero. So it could be a positive
20 pressure; it could be a negative pressure. 09:52:56

21 Q. Okay. So a -- a -- a non-zero suction
22 force to you could be a positive suction force?

23 MR. WILLIAMS: Objection to form and
24 scope.

25 THE WITNESS: If I remember correctly, you 09:53:20

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1 stated a non-zero pressure, not a non-zero suction
2 force.

3 BY MR. SANDERS:

4 Q. Oh, if I did, I apologize, so let me ask
5 the question again. 09:53:31

6 Would you agree, Mr. Brown, that when
7 there is a non-zero suction force in a catheter,
8 that means there is a level of vacuum in the
9 catheter?

10 A. Yes. 09:53:49

11 Q. Okay. Would you agree that when there is
12 a non-zero suction force in the catheter or, in
13 other words, a level of vacuum in the catheter,
14 there would not be flow out of the catheter's distal
15 end? 09:54:13

16 MR. WILLIAMS: Objection to form and
17 scope.

18 THE WITNESS: Correct.

19 BY MR. SANDERS:

20 Q. Would you agree that maintaining a 09:54:27
21 non-zero suction force in a catheter used in a
22 thrombectomy procedure reduces risk by always
23 pulling material toward the catheter rather than
24 pushing it away from the catheter such that it might
25 migrate somewhere else? 09:54:43

1 A. I do agree.

2 Q. Would you agree that migration of a
3 thrombus could lead to loss of brain tissue and may
4 even result in death?

5 A. I do agree. 09:55:05

6 Q. Would you agree that when using the system
7 that's disclosed in Teigan's first provisional, if
8 the pressure in the catheter is less than the mean
9 arterial pressure, then there would be no flow out
10 from the catheter's distal end? 09:55:34

11 MR. WILLIAMS: Objection to form and
12 scope.

13 THE WITNESS: I do agree.

14 BY MR. SANDERS:

15 Q. Would you agree that to have flow out of 09:55:48
16 the distal end of Teigan's catheter described in the
17 first provisional, the pressure in the catheter not
18 only needs to be positive, but also needs to be
19 above the mean arterial mean pressure?

20 A. I do agree as long as the catheter is in 09:56:09
21 the patient.

22 Q. Thank you.

23 And assuming that catheter's in the
24 patient and a clot is occluding the distal end of
25 the catheter, even if the pressure inside the 09:56:25

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1 catheter is above the mean arterial pressure, there
2 may not be flow out of the catheter's distal end;
3 right?

4 A. That is correct, if the clot is corking
5 the end of the catheter. 09:56:44

6 Q. I'd like to take a look at your reply
7 declaration, which is Exhibit 1034, and specifically
8 paragraph 34 that's on pages 20 to 21.

9 (IPR 2002-00608 Exhibit 1034 was
10 referenced.) 09:57:09

11 THE WITNESS: All right. I'm on page 20.

12 BY MR. SANDERS:

13 Q. Okay. Great. I have to just --
14 apologies. My computer is a little slower than
15 yours. 09:57:45

16 Okay.

17 And I'd like to direct your attention to
18 the sentence in paragraph 34 of your reply
19 declaration that begins "Second." It's the sentence
20 that spans from the bottom of page 20 to the top of 09:58:30
21 page 21.

22 A. And starts with the word "Second"?

23 Q. Correct.

24 A. I am there.

25 Q. All right. 09:58:48

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1 And you see in that sentence, in
2 discussing Teigan, you state that "'reducing' vacuum
3 does not preclude generating a 'positive pressure'?"

4 A. I do see that.

5 Q. And I -- I just want to make sure I 09:59:19
6 understand.

7 In -- in your view, if a positive pressure
8 is generated in Teigan's catheter, is it correct
9 that the overall pressure within the catheter can
10 still be a vacuum force? 09:59:38

11 A. I am going to have you re-ask the
12 question.

13 Q. Sure.

14 Is it your view that a positive pressure
15 can be generated in Teigan's catheter while the 09:59:55
16 overall pressure within the catheter remains a
17 vacuum force?

18 A. It is not.

19 Q. Okay. What do you mean by "'reducing'
20 vacuum does not preclude generating a 'positive 10:00:23
21 pressure'?"

22 A. I'm saying that reducing pressure --
23 excuse me, "reducing vacuum," what that's referring
24 to is a decrease in vacuum or an increase in
25 pressure. 10:00:49

1 And so when you increase pressure, you can
2 continue to increase above the zero value and
3 actually be -- create a positive pressure.

4 Q. So in your view, when saline is injected
5 into Teigan's catheter, that does not mean -- let me 10:01:32
6 start again.

7 In your view, when saline is injected into
8 Teigan's catheter, that does not necessarily mean
9 that the pressure in the catheter will be above
10 zero; right? 10:01:55

11 A. I'm saying it's possible to be above zero
12 or below zero.

13 Q. And would you consider reducing vacuum in
14 Teigan's catheter to be consistent with introducing
15 a positive pressure into Teigan's catheter? 10:02:28

16 MR. WILLIAMS: Objection to form.

17 THE WITNESS: Reducing vacuum would happen
18 through the injection of a pressure greater than the
19 pressure that is in the catheter, which would be a
20 vacuum. 10:02:51

21 BY MR. SANDERS:

22 Q. And I wanted to ask you as well about a
23 footnote you have off of paragraph 58. It's on page
24 36.

25 And let me know when you're there. 10:03:29

1 A. I am at Footnote 12 at the bottom of page
2 36.
3 Q. Great.
4 And in your view, Mr. Brown, a positive
5 pressure pulse does not necessarily equate to an 10:03:40
6 overall positive pressure; right?
7 A. Just give me a second to read this.
8 I have read it. Can -- can you please
9 re-ask your question.
10 Q. Certainly. 10:04:26
11 In your view, Mr. Brown, a positive
12 pressure pulse does not necessarily equate to an
13 overall positive pressure; right?
14 A. Correct.
15 Q. Would you agree that a positive pressure 10:04:38
16 pulse can be an increase in pressure that reduces
17 overall vacuum pressure?
18 A. Yes.
19 Q. So it's possible to have an overall vacuum
20 state even when a positive pressure pulse is being 10:05:01
21 applied; right?
22 A. You are able to maintain an overall vacuum
23 state even when a positive pressure pulse has been
24 applied.
25 Q. Okay. And I'd like to direct your 10:05:58

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1 attention back to paragraph 22 of your declaration,
2 which is on the bottom of page 12. Your reply
3 declaration, the same one you are on.

4 A. I'm at paragraph 22.

5 Q. Okay. And in the second sentence of that 10:06:29
6 paragraph you discuss Deville-Prov2. That's a
7 reference to the second Deville provision.

8 All right?

9 A. It is.

10 Q. Okay. And you agree that the second 10:06:44
11 Deville provisional describes forward flow; right?

12 A. Yes.

13 Q. And by "forward flow," do you mean flow
14 out of the catheter's distal end?

15 A. Yes. 10:07:04

16 Q. And you -- you cite paragraph 126 of the
17 second Deville provisional at the end of paragraph
18 22 of your reply declaration.

19 Do you see that?

20 A. I do. 10:07:26

21 Q. I'd like to take a look at that paragraph,
22 which is in Exhibit 1003, the second Deville
23 provisional.

24 (IPR 2002-00608 Exhibit 1003 was
25 referenced.) 10:07:41

1 BY MR. SANDERS:

2 Q. Just let me know when you have it. It's
3 at the bottom of page 33 and continues on to page
4 34.

5 A. I am there. 10:08:44

6 Q. Great.

7 And I'd like to direct your attention five
8 lines down in paragraph 126 to the line that
9 starts -- or I should say, the sentence that starts
10 with "When the vacuum line 402 is open." 10:08:59

11 Do you see that?

12 A. I do.

13 Q. Okay. That -- that sentence reads, "When
14 the vacuum line 402 is open and the vent line 404 is
15 closed, vacuum is drawn on the aspiration catheter 10:09:18
16 410."

17 Do you see that?

18 A. I do.

19 Q. Then I'd like to direct your attention to
20 page 34 as the paragraph continues. There is a 10:10:18
21 sentence ten lines up from the bottom that refers --
22 that starts "When the vent line 404 is opened."

23 Do you see that?

24 A. I don't yet. You said ten lines from the
25 bottom? 10:10:50

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1 Q. I'll count again.

2 Maybe nine.

3 A. And you're on page 34; right?

4 Q. I am.

5 A. Okay. 10:11:09

6 Q. And the sentence begins "When the vent
7 line 404 is opened."

8 MR. WILLIAMS: It's -- he was saying up
9 from the bottom of the end of paragraph 126, Brian.

10 THE WITNESS: Okay. 10:11:24

11 I don't know why --

12 BY MR. SANDERS:

13 Q. If you're looking at the left margin, the
14 first word [verbatim] in the left margin
15 is "connected together." And then if you look along 10:11:38
16 that line, the sentence starts.

17 A. Okay. Very good.

18 Q. Okay.

19 A. I don't know why, but on my version that's
20 much more than nine or ten lines up. That's odd. 10:11:46

21 Anyway, I am there.

22 Q. Okay.

23 And this sentence reads, "When the vent
24 line 404 is opened, there is an in-rush of fluid
25 because of the pressure delta." 10:12:02

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1 Do you see that?

2 A. I do.

3 Q. And you agree that sentence describes the
4 opening of the vent line to produce an in-rush of
5 fluid?

10:12:17

6 A. Yes, an in-rush of fluid into the
7 catheter.

8 Q. And the -- the next sentence states, "This
9 rush of fluid balances the radial force of the
10 catheter 410 and draws in fluid to create a distally 10:12:37
11 directed momentum in the column of fluid residing in
12 the catheter 410 distal of the valves 420,440."

13 Do you see that?

14 A. I do.

15 Q. The next sentence reads, "The momentum 10:12:56
16 causes a small amount of fluid to move through a
17 distal portion of the catheter 410 and create a
18 small distal movement of the clot that is stuck in
19 the distal opening at the end of the catheter 410."

20 Do you see that? 10:13:18

21 A. I do.

22 Q. And would you agree, Mr. Brown, that those
23 two sentences describe how the in-rush of fluid
24 causes a small amount of fluid to flow out of the
25 distal end of the catheter to move a clot that was 10:13:36

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1 stuck at the distal end?

2 MR. WILLIAMS: Objection to form.

3 THE WITNESS: I do.

4 BY MR. SANDERS:

5 Q. And then picking up with the next sentence 10:13:52
6 after the ones I read, do you see it states, "Once
7 the clot is no longer stuck at the distal opening,
8 it is able to be moved proximally into and through
9 the catheter 410 with subsequent vacuum imparted to
10 the catheter 410"? 10:14:10

11 A. I do see that.

12 Q. Then the final sentence in the paragraph
13 reads, "Repeated selective actuation of vacuum and
14 venting macerates the clot at the distal opening,
15 thereby reforming it into a state where it can be 10:14:36
16 completely drawn into the lumen of the catheter 410
17 and out of the vasculature."

18 A. I do see that.

19 Q. And those final two sentences at paragraph
20 126 would you agree describe repeatedly applying 10:14:55
21 vacuum and venting to macerate the clot so it can be
22 removed?

23 A. I do agree that it describes the actuation
24 of the two valves to macerate the clot to have the
25 clot removed, yes, from the -- from the body. 10:15:22

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1 Q. All right.

2 And now I'd like to turn back to your
3 reply declaration, Exhibit 1034, and specifically
4 wanted to ask you about paragraph 34.

5 Let me know when you're there. 10:16:04

6 A. You said paragraph 34?

7 Q. Correct. It's on page 20.

8 A. Okay. I am there.

9 Q. And do you see in the third sentence you
10 comment about a difference in claim language between 10:16:23
11 the Teigan '712 patent and the Teigan '683 patent?

12 A. I do see where I'm referring to those two
13 patents.

14 Q. In your view, is there a difference in
15 meaning between the language "change a level of 10:16:48
16 negative and positive pressure at the distal end" in
17 the Teigan '712 patent and the language "change a
18 level of vacuum at the distal end" in the Teigan
19 '683 patent?

20 MR. WILLIAMS: Objection to form and 10:17:11
21 scope.

22 THE WITNESS: I don't see a significant
23 difference in -- in the two languages as far as what
24 they are teaching. They obviously are written
25 differently, but the meanings are very similar. 10:17:45

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1 BY MR. SANDERS:

2 Q. Is there any difference in meaning between
3 those two phrases?

4 MR. WILLIAMS: Same objection.

5 THE WITNESS: I don't see any meaningful 10:18:24
6 difference between the two of them as far as what
7 they are trying to teach.

8 BY MR. SANDERS:

9 Q. And in the next sentence in paragraph 34,
10 you state that the argument that patent owner and 10:18:54
11 Dr. Finol were making were "either inadequately
12 articulated or irrelevant to the Teigan '683 claims?

13 Do you see that?

14 A. I do.

15 Q. And what was your basis for saying that 10:19:18
16 the argument was irrelevant to the Teigan '683
17 claims?

18 A. I would need to read this whole paragraph
19 to provide an answer.

20 Q. Please go ahead. 10:19:52

21 A. (Witness reviews.)

22 I have read it. Can you please re-ask
23 your question.

24 Q. Sure.

25 What was your basis for saying that the 10:20:52

1 argument that patent owner and Dr. Finol had made
2 was irrelevant to the Teigan '683 claims?

3 A. That their argument was that it was
4 necessary to maintain a level of vacuum in the
5 catheter by teaching saline reduces the vacuum, I'm 10:21:16
6 saying that that is not necessarily true.

7 Q. The -- the '683 -- or, excuse me, let me
8 start again.

9 The Teigan '683 claims use the
10 language "change a level of vacuum at the distal 10:21:47
11 end"; right?

12 A. Correct.

13 Q. Okay. In your view, does that language,
14 "change a level of vacuum at the distal end" in
15 Teigan '683's claims encompass having either 10:22:06
16 negative or positive pressure at the distal end?

17 A. Yes.

18 MR. WILLIAMS: And, Charles, when you get
19 a chance, we'd like to take a break.

20 MR. SANDERS: Sure. Just a few more 10:22:32
21 questions to wrap up this line.

22 BY MR. SANDERS:

23 Q. So just to be clear, you believe that a
24 level of vacuum as referenced in the claim language
25 of Teigan '683 can include a -- a positive pressure 10:22:39

1 above zero; right?

2 MR. WILLIAMS: Objection to form.

3 THE WITNESS: It can include a positive
4 pressure.

5 MR. SANDERS: Great. We can take a break 10:23:12
6 now.

7 MR. WILLIAMS: Great.

8 THE COURT REPORTER: We're off the record.

9 (Short recess taken.)

10 THE COURT REPORTER: We're back on. 11:02:39

11 MR. SANDERS: Super.

12 BY MR. SANDERS:

13 Q. Mr. Brown, I'd like to continue to focus
14 on your declaration -- reply declaration, which is
15 Exhibit 1034, and just go back a few pages from the 11:02:54
16 page that we were discussing to page 17 of your
17 declaration.

18 A. Okay. I'm there.

19 Q. And do you see there is "Teigan claim
20 limitation [1d]" in the heading? 11:03:16

21 A. I do.

22 Q. Okay. And at the end of that claim
23 limitation, there's the language "control flow in
24 and out from the distal end of the catheter."

25 Do you see that? 11:03:30

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1 A. I do.

2 Q. Okay. Am I correct, Mr. Brown, that in
3 your opinion a system that prevents flow out during
4 each cycle controls flow out -- let me start again.

5 I misspoke. 11:03:49

6 Am I correct, Mr. Brown, that in your
7 opinion a system that prevents flow out during each
8 cycle controls flow in and out from the distal end
9 during each cycle as claimed in the Teigan patent?

10 MR. WILLIAMS: Objection to form. 11:04:11

11 THE WITNESS: I do.

12 BY MR. SANDERS:

13 Q. In your view, a system that maintains a
14 non-zero suction force at all times controls flow in
15 and out; correct? 11:04:29

16 A. I do -- or I should say correct.

17 Q. Thank you. We're not getting married.

18 A. Yes.

19 Q. In your opinion, a system that is always
20 in vacuum controls flow in and out as the Teigan 11:04:50
21 claim requires; right?

22 MR. WILLIAMS: Objection to form.

23 THE WITNESS: Correct.

24 BY MR. SANDERS:

25 Q. Okay. I'd like to go forward in your 11:05:07

1 declaration to paragraph 50 at page 30.

2 A. Okay.

3 Q. In the first sentence you're discussing
4 Teigan-Prov1, which is Teigan's first provisional;
5 right?

11:05:38

6 A. Correct.

7 Q. Okay. And the first Teigan provisional
8 discloses that saline is cycled on while aspiration
9 is cycled off until aspiration is turned back on;
10 correct?

11:06:00

11 A. Correct.

12 Q. And breaking that down, the first Teigan
13 provisional discloses injecting saline while the
14 vacuum is being turned down until it is off; right?

15 A. I didn't quite follow the sequence.

11:06:24

16 Q. Sure.

17 So in the statement that you cited from
18 Teigan's first provisional, it refers to "while
19 aspiration is cycled off, saline is cycled on until
20 aspiration is turned back on." [As read]

11:06:57

21 Do you see that?

22 A. I do.

23 Q. And -- and that means that the first
24 Teigan provisional discloses injecting saline while
25 the vacuum is being turned down until it's off and

11:07:15

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1 then turned back on; right?

2 MR. WILLIAMS: Object to form.

3 THE WITNESS: Not necessarily.

4 BY MR. SANDERS:

5 Q. Okay. Why do you say "not necessarily"? 11:07:29

6 A. Because it is not written that specific.

7 Q. So in your view, Mr. Brown, when it
8 says "while aspiration is cycled off, saline is
9 cycled on" [as read], does that mean that the saline
10 is being turned on at the same time that the vacuum 11:07:58
11 is being turned off?

12 A. It can mean that.

13 Q. What else in your view can it mean?

14 A. That -- what -- what you described would
15 be parallel operation. It could also be serial 11:08:23
16 operation, where the vacuum is turned off and then
17 the saline is turned on.

18 Q. And in the serial operation you described,
19 where the vacuum is turned off and then the saline
20 is turned on, the vacuum is turned off before the 11:08:53
21 saline is turned on; right?

22 A. Correct.

23 Q. Okay. Okay.

24 And in Teigan's first provisional, Teigan
25 does not say that the vacuum is turned off before 11:09:18

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1 the saline is turned on; correct?

2 MR. WILLIAMS: Objection to form.

3 THE WITNESS: It doesn't say it the way
4 that you said it, but it says it the way that it is
5 written here.

11:09:39

6 BY MR. SANDERS:

7 Q. In your view, Mr. Brown, can the
8 word "while" in "while aspiration is cycled off" be
9 interpreted to mean after?

10 A. Correct.

11:10:04

11 Q. And what is your basis for believing that
12 the word "while" can be interpreted to mean after?

13 A. It -- it's saying while aspiration is
14 cycled off, meaning it's off, then the saline, the
15 injection, is cycled on.

11:10:37

16 Q. And you believe that replacing the
17 word "while" with the word "after" in that statement
18 would give it the same meaning?

19 MR. WILLIAMS: Objection to form.

20 THE WITNESS: It would give one of the
21 meanings of what is written here.

11:11:02

22 BY MR. SANDERS:

23 Q. Okay. And what are the various meanings
24 that you see in the phrase "while aspiration is
25 cycled off, saline injection is cycled on"?

11:11:21

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A. As previously mentioned, you could have parallel operation of the valves, or you could have serial operation of the valves.

In parallel operation, the vent valve
would be closing at the same time as the
vat [verbatim] -- the vent valve would be opening.

Whereas in serial, the vacuum valve turns off first, and then the vent valve opens.

Q. Is there anything in the first Teigan provisional that you believe discloses serial as opposed to parallel operation of the vacuum and pressure valves?

MR. WILLIAMS: Objection to form.

THE WITNESS: Without re-reading
everything, from -- from what I recall, this statement here is describing both. I'm not aware of anything that is as specific as what you have mentioned.

BY MR. SANDERS:

Q. Okay. Well, why don't we take a look at the two paragraphs that you cited for -- in this statement that you made about sequential operation of valve operation.

You cited to paragraphs 64 and 69 of

Teigan's pro- -- provisional; right? 11:13:01

1 A. Correct.

2 Q. Okay. So let's take a look at

3 Exhibit 1008, which is Teigan's first provisional.

4 And why don't we first look at paragraph 64, which

5 is on page 15.

11:13:21

6 Let me know when you're there.

7 A. Okay. I'm at paragraph 64.

8 Q. Is there anything in paragraph 64 of the

9 first Teigan provisional that you believe discloses

10 serial as opposed to parallel operation of the

11:14:06

11 vacuum and pressure valves?

12 MR. WILLIAMS: Objection to form.

13 THE WITNESS: (Witness reviews.)

14 Starting with paragraph 64, an example of

15 serial operation would be the fourth line down

11:14:34

16 starting "By" -- starting with "By applying a

17 vacuum, followed by reducing that vacuum with

18 saline."

19 So applying a vacuum, turning off that

20 valve, and then reducing that vacuum by opening the

11:14:51

21 vent valve and injecting saline.

22 BY MR. SANDERS:

23 Q. Would you agree that the statement "By

24 applying a vacuum, followed by reducing that vacuum

25 with saline" could refer to keeping the vacuum on

11:15:12

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1 during that period while saline is being injected"?

2 A. It could also be that.

3 Q. Okay. And that would be what you

4 described as a parallel operation of the valves;

5 right?

11:15:38

6 A. Correct.

7 Q. Is there anything in paragraph 64 that you

8 believe describes serial as opposed to parallel

9 operation of the valves?

10 MR. WILLIAMS: Objection to form.

11:16:02

11 THE WITNESS: I don't see anything else in

12 paragraph 64.

13 BY MR. SANDERS:

14 Q. Okay. Let's take a look at paragraph 69,

15 which is on the next page.

11:16:25

16 My question is, in paragraph 69 of

17 Teigan's first provisional, is there anything that

18 in your view discloses serial as opposed to parallel

19 operation of the valves?

20 MR. WILLIAMS: Object to form.

11:16:48

21 THE WITNESS: Only very similar language

22 as what we saw in paragraph 64 where it mentions

23 having the aspiration cycled off and the saline

24 injection cycled on.

25 BY MR. SANDERS:

11:17:27

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1 Q. And just to make sure I understand your
2 view, Mr. Brown, do you believe that that language
3 could encompass either serial or parallel operation
4 of the valves?

5 A. That is correct. 11:17:39

6 Q. Is there anything in paragraph 69 of
7 Teigan's first provisional that you believe
8 describes only serial operation, not parallel
9 operation of the valves?

10 MR. WILLIAMS: Object to form. 11:18:00

11 THE WITNESS: Not that I'm seeing at this
12 time.

13 BY MR. SANDERS:

14 Q. Is there anything in Teigan's provisionals
15 that you believe discloses having both the vacuum 11:18:16
16 and pressure valves closed at the same time?

17 MR. WILLIAMS: Object to form.

18 THE WITNESS: Yes.

19 BY MR. SANDERS:

20 Q. What's that? 11:18:35

21 A. The serial operation that we were just
22 discussing.

23 Q. Well, the statements that we discussed,
24 and correct me if I'm wrong, you believe could
25 embrace either serial or parallel operation; right? 11:18:51

1 A. The statements do, yes.

2 Q. Okay. So what, if anything, do you
3 believe is a disclosure in Teigan of having both the
4 vacuum and pressure valves closed at the same time?

5 A. The serial operation of the valves. 11:19:16

6 Q. All right.

7 When you say "the serial operation of the
8 valves," do you mean that if the valves were
9 operated in serial, then the vacuum and pressure
10 valves would be closed at the same time? 11:20:07

11 A. Correct.

12 Q. Did you identify anything in Teigan's
13 provisionals where Teigan stated that both the
14 vacuum and pressure valves were, in fact, closed at
15 the same time? 11:20:32

16 A. Not --

17 MR. WILLIAMS: Objection. Asked and
18 answered.

19 THE WITNESS: -- not as you've stated.

20 BY MR. SANDERS: 11:20:47

21 Q. And when you say not as I stated, is that
22 because you believe that if the valves were operated
23 in serial, then they would be closed at the same
24 time?

25 A. Correct. 11:21:00

1 Q. And Teigan's provisionals do not say
2 whether valves were operated in serial as opposed to
3 being operated in parallel; correct?

4 A. The Teigan provisional does not
5 differentiate the two, but describes operation that 11:21:28
6 can include both.

7 Q. Okay. And is -- is it fair to say that in
8 your view, Dr. Brown [verbatim], the disclosure of
9 Teigan's provisionals is general enough such that it
10 encompasses both serial and parallel operation? 11:21:55

11 A. Correct.

12 Q. And in your view, Dr. Brown [verbatim], is
13 it correct that Teigan's provisionals do not state
14 whether serial as opposed to parallel operation is
15 used? 11:22:24

16 MR. WILLIAMS: Object to form.

17 THE WITNESS: Correct. Both are included.

18 BY MR. SANDERS:

19 Q. Take a look back to the prior page of
20 Teigan's first provisional, paragraph 65. This is 11:23:06
21 Exhibit 1008.

22 A. I am there.

23 Q. Okay. And in the first sentence of that
24 paragraph Teigan states that pulsated aspiration is
25 selectively engaged; correct? 11:23:27

1 A. Correct.

2 Q. And in the next sentence, there's the
3 phrase "When the algorithm detects that the system
4 has been continuously in clot."

5 Do you see that? 11:23:54

6 A. I do.

7 Q. What is your interpretation of what that
8 means?

9 A. My interpretation is the catheter can
10 either be positioned in free-flowing blood, or it 11:24:13
11 can be positioned in the clot itself. This is
12 describing the tip of the catheter being positioned
13 in the clot.

14 Q. Is that the same as corking?

15 A. Corking would be included in that. 11:24:34

16 Q. And in the next sentence there's a
17 reference to "the on-off valve to the pump."

18 Do you see that?

19 A. Yes.

20 Q. "The pump" is the vacuum pump; right? 11:25:08

21 A. I believe that is what Teigan is referring
22 to when he says "pump."

23 Q. And the -- in that sentence it states "the
24 system will close the on-off valve to the pump and
25 open the valve 296 to the saline injection unit 11:25:48

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1 290."

2 Do you see that?

3 A. I do.

4 Q. Would you agree, Dr. Brown [verbatim],
5 that that statement does not address the relative 11:26:00
6 timing of when the on-off valve to the pump is
7 closed and when the valve to the saline injection
8 unit is opened?

9 MR. WILLIAMS: Objection to form.

10 THE WITNESS: I agree that that sentence 11:26:16
11 does not reference any timing as far as specific
12 timing.

13 BY MR. SANDERS:

14 Q. Would you agree that it would be
15 consistent with that statement to open one valve 11:26:40
16 before the other or vice versa, or open -- let me
17 start again.

18 Would you agree that it would be
19 consistent with that sentence to open one valve and
20 close the other at different times or to do them at 11:27:00
21 the same time?

22 A. Yes, it would be consistent with what we
23 have been defining as parallel operation and serial
24 operation.

25 Q. And in the next sentence -- and it's a 11:27:31

1 statement that we've looked at before -- "An influx
2 or bolus of saline will partially relieve the
3 vacuum."

4 That means that saline comes in to reduce
5 the vacuum, but the catheter still has overall 11:27:45
6 vacuum pressure; right?

7 A. That is how I would interpret the partial
8 relieving to -- yes.

9 Q. And in the next sentence, it states,
10 "After a short period of time the system will close 11:28:11
11 valve 296 and reopen the on-off valve to reestablish
12 the aspiration vacuum."

13 Do you see that?

14 A. I do.

15 Q. That sentence does not mention the 11:28:30
16 relative timing of when valve 296 is closed and when
17 the on-off valve is reopened; right?

18 A. There is no mention of the timing of the
19 opening and closing in that sentence.

20 Q. Okay. So consistent with that sentence, 11:28:54
21 valve 296 could be closed before, after, or at the
22 same time that the on-off valve is reopened; right?

23 A. It could be actuated in serial or
24 parallel. I do not believe that it would be closed
25 after the vent valve is opened, as you've stated. 11:29:21

1 Q. So you believe, consistent with that
2 sentence, that valve 296 -- excuse me, I'll start
3 again.

4 You believe that consistent with that
5 statement valve 296 would be closed before or at the 11:29:43
6 same time as the on-off valve; is that right?

7 MR. WILLIAMS: Object to form.

8 Object to form.

9 THE WITNESS: Correct.

10 BY MR. SANDERS: 11:29:58

11 Q. I'd like to take a look at a new document,
12 the Rubenstein reference, which is Exhibit 1011.

13 (IPR 2002-00608 Exhibit 1011 was
14 referenced.)

15 THE WITNESS: I have it open. 11:30:32

16 BY MR. SANDERS:

17 Q. Great.

18 And you recall addressing the Rubenstein
19 reference in your reply declaration; right?

20 A. Correct. 11:30:40

21 Q. Now, the Rubenstein reference has only two
22 figures, Figure 1 and Figure 2; right?

23 A. That is correct.

24 Q. And focusing in on those figures, there
25 are three valves shown; right? 11:30:59

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1 MR. WILLIAMS: Objection to form.

2 THE WITNESS: Are you referring to
3 Figure 1?

4 BY MR. SANDERS:

5 Q. Yes. 11:31:17

6 In -- in Figure 1, there are three valves
7 labeled 18, 60, and 90, or 18 might also be called
8 46; correct?

9 A. Yes. Other than the last one I see is 70;
10 you said "90." 11:31:35

11 Q. Oh, I misspoke. Let -- let me ask it
12 again. I apologize.

13 In -- in Figure 1 in Rubenstein, there are
14 three valves labeled 18/46, 60, and 70; correct?

15 A. Correct. 11:31:51

16 Q. Okay. Valve 18/46 controls vacuum and
17 fluid flow; right?

18 A. It controls vacuum and fluid flow to the
19 catheter.

20 Q. Okay. And Valve 60 is a fluid valve to 11:32:12
21 the catheter; right?

22 A. A fluid or a mist valve.

23 Q. Okay. And Valve 70 is a positive pressure
24 valve; right?

25 A. It appears to be, yes. 11:32:32

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1 Q. In Figures 1 and 2 in Rubenstein, the
2 Valve 18 or 46 is shown as being open; correct?

3 A. It is shown in Figure 1 as being connected
4 to the vacuum source, the catheter being connected
5 to the vacuum source. 11:33:17

6 Q. Okay. And in Figure 1, the Valve 18 or 46
7 is shown as being connected to the vacuum source so
8 that vacuum can flow; right?

9 A. So that vacuum can be applied to the
10 catheter. 11:33:36

11 Q. Thank you. Better said.

12 And in Figure 2, that valve is shown as
13 either being open to the vacuum source or open to
14 fluid source; right?

15 A. Correct. 11:33:53

16 Q. Now, neither Figure 1 nor Figure 2 in
17 Rubenstein show Valve 18 or 46 closed; right?

18 MR. WILLIAMS: Object to form.

19 THE WITNESS: Neither Figure 1 or Figure 2
20 show Valve 18 in a closed state as far as not 11:34:31
21 having -- as far as preventing fluid from passing
22 through it.

23 BY MR. SANDERS:

24 Q. Well, in Rubenstein's figures, Valve 60 is
25 shown as either being open or closed ; right? 11:34:59

1 A. Correct.

2 Q. Neither Figure 1 or Figure 2 in Rubenstein
3 show both Valve 18 and Valve 60 closed; right?

4 A. Correct.

5 Q. Now, Rubenstein does not disclose the rate 11:35:33
6 of rotation of Valve 18 or Valve 60; right?

7 A. I believe that is correct.

8 Q. And Rubenstein does not disclose the
9 relative timing of rotating Valves 18 and 60; right?

10 MR. WILLIAMS: Object to form. 11:36:05

11 THE WITNESS: It does not specifically,
12 but we know that it has to happen within the
13 one-second interval shown at the bottom of Figure 2.

14 BY MR. SANDERS:

15 Q. And within that one-second interval, 11:36:23
16 Rubenstein does not disclose what the relative
17 timing for the rotation of Valves 18 and 60 are;
18 right?

19 MR. WILLIAMS: Object to form.

20 THE WITNESS: Correct. 11:36:41

21 BY MR. SANDERS:

22 Q. I'd like to take a look back at Penumbra's
23 reply brief, and specifically at page 25.

24 A. I am there.

25 Q. Do you see that there are figures on page 11:37:23

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1 25 at the top and bottom of the page?

2 A. Correct.

3 Q. Okay. I'd like to focus on the figures at
4 the bottom of the page.

5 And on the right-hand side at the bottom, 11:37:38
6 that's Figure 2 of Rubenstein; right?

7 A. Correct.

8 Q. On the left-hand side, what's shown there
9 is not depicted in Rubenstein; right?

10 MR. WILLIAMS: Objection to form. 11:37:57

11 THE WITNESS: It is not a figure from
12 Rubenstein.

13 BY MR. SANDERS:

14 Q. What's on the right-hand side at the
15 bottom of page 25 of Petitioner's reply is a 11:38:09
16 modification of Rubenstein's figures; right?

17 A. I believe you asked about the figure on
18 the right side?

19 Q. Ah, thanks for correct- -- noticing.

20 I meant to ask about the figure on the 11:38:26
21 left.

22 A. Please re-ask --

23 Q. The fig- -- absolutely.

24 The figure on the left-hand side at the
25 bottom of page 25 of Petitioner's reply is a 11:38:35

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1 modification of Rubenstein's Figure 2; right?

2 A. Correct.

3 Q. I'd like to now go to the next page in the
4 reply, page 26.

5 I'd like to focus on the figure at the top 11:39:02
6 of the page. The figure that's on the top of the
7 page on page 26 of Petitioner's reply is not a
8 figure that appears in Rubenstein; correct?

9 A. Correct.

10 Q. That figure is a modification of 11:39:28
11 Rubenstein's Figure 1; right?

12 A. Correct.

13 MR. SANDERS: Thank you, Dr. Brown. No
14 further questions.

15 MR. WILLIAMS: Okay. Let's just go off 11:40:03
16 the record for two or three minutes. Let me chat
17 with my team.

18 MR. SANDERS: Sure.

19 (Off the record.)

20 EXAMINATION 11:42:19

21 BY MR. WILLIAMS:

22 Q. Mr. Brown, just on Figure -- on the figure
23 on the top of page 26 of Petitioner's reply -- do
24 you still have that in front of you?

25 A. I do. Give me a second to get to 26. 11:43:12

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1	Okay.
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2 Q. And do you have your declaration in front
3 of you as well?

4	A. I do.
---	----------

5 Q. Okay. And if you could turn to page 43 of 11:43:29
6 your declaration.

7	A. I am there.
---	----------------

8 Q. Does the figure on the bottom of page 43
9 match the figure on the reply on the top of page 26?

10	A. Yes.	11:43:54
----	---------	----------

11 Q. And can you explain why there's a modified
12 version of the figure shown on this page as opposed
13 to the original figure?

14 MR. SANDERS: Objection. Scope.

15	THE WITNESS: Yes. The purpose of these	11:44:24
16	illustrations is to show how the valves of	
17	Rubenstein can be closed during actuation such that	
18	a double close state can be achieved with	
19	Rubenstein.	

20 BY MR. WILLIAMS: 11:44:43

21 Q. Do you believe that the modified versions
22 of these figures on page 43 of your declaration are
23 an accurate depiction of what's disclosed in
24 Rubenstein?

25	A. Yes.	11:44:55
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1 MR. WILLIAMS: No further questions.

2 THE COURT REPORTER: May we go off the
3 record, please?

4 MR. SANDERS: Yes.

5 MR. WILLIAMS: Yep. 11:45:05

6 (Proceedings concluded, 11:44 a.m., CDT,
7 on May 22, 2023.)

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JURAT

I, BRIAN BROWN, do hereby certify under penalty of perjury that I have read the foregoing transcript of my deposition taken remotely via videoconference on Monday, May 22, 2023; that I have made such corrections as appear noted herein in ink, initialed by me; that my testimony as contained herein, as corrected, is true and correct.

Dated this _____ day of _____, 2023,
at _____.

BRIAN BROWN

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CERTIFICATE OF REPORTER

I, Hanna Kim, a Certified Shorthand Reporter, do hereby certify:

That prior to being examined, the witness in the foregoing proceedings was by me duly sworn to testify to the truth, the whole truth, and nothing but the truth;

That said proceedings were taken before me at the time and place therein set forth remotely via videoconference and were taken down by me in shorthand and thereafter transcribed into typewriting under my direction and supervision;

I further certify that I am neither counsel for, nor related to, any party to said proceedings, not in anywise interested in the outcome thereof.

Further, that if the foregoing pertains to the original transcript of a deposition in a federal case, before completion of the proceedings, review of the transcript [x] was [] was not requested.

In witness whereof, I have hereunto subscribed my name.

Dated: 5/24/23



Hanna Kim

CLR, CSR No. 13083

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ERRATA SHEET FOR THE TRANSCRIPT OF:

Case Name: IPR2022-00608

Dep. Date: MAY 22, 2023

Deponent: BRIAN BROWN

CORRECTIONS:

Pg.	Ln.	Now Reads	Should Read	Reason
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Signature of Deponent

SUBSCRIBED AND SWORN BEFORE ME

THIS____DAY OF_____, 2023.

(Notary Public) MY COMMISSION

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