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Transcript of Troy L. Thornton

Date: August 15, 2025
Case: Imperative Care, Inc. -v- Inari Medical, Inc. (PTAB)

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WORLDWIDE COURT REPORTING & LITIGATION TECHNOLOGY

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

IMPERATIVE CARE, INC., Petitioner,	)	
VS.	)	Case No. IPR2024-01157
	)	Patent No. 11,697,011 B2
INARI MEDICAL, INC., Patent Owner.	)	

IN-PERSON VIDEOTAPED DEPOSITION OF
TROY L. THORNTON
FRIDAY, AUGUST 15, 2025

STENOGRAPHIC REPORTER: CHRISTA YAN, CSR NO. 14316, RPR

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E X H I B I T S

EXHIBIT	FOR IDENTIFICATION	PAGE
No Exhibits Marked.		

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BE IT REMEMBERED that on FRIDAY, the 15TH DAY OF AUGUST, 2025, at the hour of 9:01 A.M., of said day, at 333 Bush Street, San Francisco, California 94104, before me personally, CHRISTA YAN, a Certified Shorthand Reporter, State of California, personally appeared TROY L. THORNTON, who was examined as a witness in said cause; that said transcript format was prepared in accordance with California Code of Regulations Section 2473.

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THE VIDEOGRAPHER: Here begins Media Number 1 in the videotaped deposition of Troy L. Thornton in the matter of Imperative Care, Inc., versus Inari Medical, Inc., in the United States Patent and Trademark Office before the Patent Trial and Appeal Board. Case Number IPR 2024-01157. 09:01:22 09:01:25 09:01:31 09:01:39 09:01:43 09:01:54

Today's date is August 15th, 2025. The time on the video monitor is 9:01 a.m. The videographer today is Gary Garcia, representing Planet Depos. This video deposition is taking place at 333 Bush Street, San Francisco, California. 09:01:55 09:01:58 09:02:02 09:02:05 09:02:10

Would counsel please voice identify themselves and state whom they represent starting with the taking attorney. 09:02:11 09:02:13 09:02:16

MR. HAMILTON: This is Joseph Hamilton from Perkins Coie representing Patent Owner. 09:02:16 09:02:25

MR. STOWELL: Joshua Stowell of Knobbe Martens, representing Petitioner, Imperative Care, as well as the witness. 09:02:25 09:02:28 09:02:32

THE VIDEOGRAPHER: The court reporter today is Christa Yan representing Planet Depos. The witness will now be sworn. 09:02:33 09:02:35 09:02:38

TROY L. THORNTON, 09:02:38

the Witness, called on behalf of the Patent Owner, being duly sworn to state the truth, the whole truth, and 09:02:38 09:02:38

nothing but the truth, testified on oath as follows: 09:02:38

EXAMINATION 09:02:46

BY MR. HAMILTON: 09:02:46

Q Good morning, Mr. Thornton. Thank you for coming back. 09:02:49 09:02:52

Do you understand you're under oath? 09:02:52

A Yes. 09:02:56

Q Is there any reason you can't give your full, complete, and truthful testimony today? 09:02:57 09:03:02

A No. 09:03:04

Q Are you on any medications that might prevent you from giving your full, complete, and truthful testimony today? 09:03:05 09:03:08 09:03:11

A No. 09:03:11

Q I'm going to hand you a couple things. We'll start first with Exhibit 1001. 09:03:12 09:03:29

Do you recognize Exhibit 1001? 09:03:47

A Yes. 09:03:50

Q And is this the '011 patent? 09:03:50

A Yes. U.S. 11,697,011 B2. 09:03:57

Q If I refer to that Exhibit 001 as the '011 patent, can we both agree that's the same patent Exhibit 1001? 09:04:04 09:04:15 09:04:19

A Yes. 09:04:20

Q All right. I'm going to hand you another 09:04:22

exhibit. This exhibit's been previously marked as Exhibit 1014. Do you recognize this exhibit? 09:04:26 09:04:40

A Yes. 09:04:42

Q And what is it? 09:04:43

A Supplemental Declaration of Troy L. Thornton in Support of Petitioner's reply for Inter Partes Review of U.S. Patent Number 11,697,011. 09:04:45 09:04:50 09:04:54

Q Do you recall submitting an earlier declaration in this matter? 09:05:03 09:05:09

A Yes. 09:05:10

Q So to keep the two separate, when we refer to them, I'm going to refer to Exhibit 1014 as your supplemental declaration. And the other exhibit, which is Exhibit 1003, I'm going to refer to as your declaration. 09:05:13 09:05:20 09:05:24 09:05:28

A Okay. 09:05:32

Q Is that okay? Great. 09:05:33

Is there anything you want to change in your first declaration, Exhibit 1003? 09:05:36 09:05:47

A No. 09:05:50

Q Are there any mistakes in your first declaration, Exhibit 1003, that you're aware of? 09:05:51 09:06:03

A Not that I'm aware of. 09:06:05

Q And then what about for your supplemental declaration? 09:06:06 09:06:09

A I'm not aware of any mistakes. 09:06:10

THE VIDEOGRAPHER: One moment, Counsel. I just want to adjust your mic because it keeps brushing against your shirt. (Indicating.) There you go. 09:06:33 09:06:35 09:06:41

BY MR. HAMILTON: 09:06:43

Q If you could open your supplemental declaration to page 21. 09:06:44 09:06:48

A Yes. 09:07:30

Q Do you see the figure on page 21? 09:07:30

A Yes. 09:07:33

Q I got a couple questions about that figure. Do you understand what's depicted in the figure? 09:07:34 09:07:36

A Yes. 09:07:38

Q And what is depicted in the figure on page 21? 09:07:40

A It's an illustration provided by the patent owner showing two instruments in red with a Hartley string or Eller's wire member encircling them in yellow, and green is identified as Schaffer's seal module component. 09:07:43 09:08:11 09:08:23 09:08:30

Q If you look at the sentence underneath the figure beginning with, Patent owner's illustration. 09:08:36 09:08:41

A Yes. 09:08:48

Q What is the compliant sealing member you're referencing there? 09:08:48 09:08:52

A The sealing member that's described in Schaffer's paragraph 68. 09:08:53 09:09:27

Q Is this figure an accurate depiction of your 09:09:34

proposed combination of Schaffer with Hartley or Eller? 09:09:38
MR. STOWELL: Objection. Incomplete hypothetical. 09:09:45
THE WITNESS: It's not my depiction. It's from patent 09:09:47
owner's illustration that was provided, I think, by 09:09:57
Zalesky. 09:10:02
BY MR. HAMILTON: 09:10:02
Q And is it an accurate depiction of your proposed 09:10:04
combination of Schaffer with Hartley or Eller? 09:10:07
MR. STOWELL: Same objection. 09:10:19
THE WITNESS: Yeah, I'm not sure that it is an 09:10:20
accurate depiction. 09:10:28
BY MR. HAMILTON: 09:10:29
Q And why not, what's not accurate about it? 09:10:29
MR. STOWELL: Objection. Outside the scope. 09:10:38
THE WITNESS: As I state in paragraph 35, they're 09:10:39
depicting a noncompliant sealing member in the 09:10:57
illustration showing large gaps whereas if they would have 09:11:01
used the very compliant material as described in Schaffer 09:11:07
as... as a very compliant sealing member as described in 09:11:14
Schaffer which would fill in those gaps. 09:11:44
BY MR. HAMILTON: 09:11:46
Q So in your proposed combination of Schaffer with 09:11:53
Hartley or Eller, that proposed combination would include 09:11:55
the highly compliant sealing member; is that correct? 09:11:58
MR. STOWELL: Objection. Misstates testimony. 09:12:00

THE WITNESS: In the Schaffer embodiments where the U-shape actuating members are replaced with a wire member or string, the seal module wouldn't be extremely compliant, gel-like sticky as is described this Schaffer paragraph 68. 09:12:01 09:12:23 09:12:27 09:12:39 09:12:51

BY MR. HAMILTON: 09:12:51

Q But you would include a highly compliant sealing member; is that correct? 09:12:59 09:13:04

MR. STOWELL: Objection. Misstates testimony. Asked and answered. 09:13:06 09:13:09

THE WITNESS: It would include a seal member. It would not be the extremely sticky self-sealing seal member which is one of the options provided in Schaffer. 09:13:09 09:13:16 09:13:23

BY MR. HAMILTON: 09:13:26

Q But it would be compliant enough to fill in the gaps in the figure on page 21, correct, that's your testimony? 09:13:27 09:13:29 09:13:33

MR. STOWELL: Objection. Misstates testimony. Asked and answered. 09:13:34 09:13:36

THE WITNESS: No. I think the seal member to be used with Schaffer would need to reopen when force is released -- when the circumferential force is released so that an extremely compliant sticky seal member would not be the appropriate material choice. 09:13:36 09:13:46 09:13:54 09:14:01 09:14:05

BY MR. HAMILTON: 09:14:07
Q What about just a compliant seal member, would it 09:14:08
include a compliant seal member? 09:14:11
MR. STOWELL: Objection; vague. 09:14:13
THE WITNESS: It's not clear what you mean by 09:14:14
compliant. How compliant is compliant? 09:14:19
BY MR. HAMILTON: 09:14:21
Q I'm looking at your statement on page 21 where 09:14:23
you say, Patent owner's illustration does not depict the 09:14:25
compliant sealing member, and you refer to a specific 09:14:29
paragraph in Schaffer. Do you see that? 09:14:34
A Yes. 09:14:35
Q How compliant is that sealing member? 09:14:35
MR. STOWELL: Objection. Vague. 09:14:40
THE WITNESS: I'd have to look at Schaffer's paragraph 09:14:41
to refresh my recollection. 09:14:44
BY MR. HAMILTON: 09:14:49
Q Would that sealing member be compliant enough to 09:14:49
fill in the gaps on the -- in the figure on page 21? 09:14:52
A I'd have to look at Schaffer to confirm that. 09:14:58
Q If the sealing member was not compliant enough to 09:15:00
fill in the gaps, your proposed combination of a string or 09:15:10
a wire as in Hartley or Eller in the device of Schaffer 09:15:19
would leak if two (indiscernible utterance) instruments 09:15:25
were inserted as shown on page 21, correct? 09:15:29

THE STENOGRAPHIC REPORTER: I'm sorry, Counsel. You said would leak if two what? 09:15:29 09:15:32

MR. HAMILTON: I'll withdraw the question and restate it. 09:15:49 09:15:51

THE VIDEOGRAPHER: Counsel, please be mindful of your mic. Thank you. 09:15:53 09:15:55

BY MR. HAMILTON: 09:15:57

Q In your proposed combination of Schaffer with Hartley and Eller, would gaps form when two instruments are inserted as shown on page 21 of your declaration? 09:16:00 09:16:03 09:16:08

MR. STOWELL: Objection. Outside the scope. Vague. 09:16:14

THE WITNESS: That's not something I've considered in this particular supplemental declaration. 09:16:16 09:16:29

BY MR. HAMILTON: 09:16:33

Q You don't know if gaps would form as shown in this figure on 21. Is that your testimony? 09:16:37 09:16:40

MR. STOWELL: Objection. Asked and answered. 09:16:42

THE WITNESS: Repeat the prior question. 09:16:43

BY MR. HAMILTON: 09:16:55

Q In your proposed combination of Schaffer with Hartley and Eller, would gaps form when two instruments are inserted as shown on page 21 of your declaration? 09:17:01 09:17:03 09:17:06

MR. STOWELL: Objection. Outside the scope and vague. 09:17:11

THE WITNESS: It would depend on the size of the instruments, the shape of the instruments, the seal module 09:17:13 09:17:36

material, the seal module thickness and many other variables, material properties of the seal module. So it would depend on lots of different variables. 09:17:40 09:17:43 09:17:50

BY MR. HAMILTON: 09:17:52

Q Okay. So let's apply the shape, thickness, and other variables shown on page 21. Would a gap form? 09:17:53 09:17:58

MR. STOWELL: Objection. Incomplete hypothetical. 09:18:04

THE WITNESS: I don't know. I haven't considered that. 09:18:05 09:18:10

BY MR. HAMILTON: 09:18:10

Q If you look at the sentence that begins on the bottom of page 21 starting with, The sealing and goes over to the next page. What does that mean, Compliant that it forms a seal around the instruments 260 even if the instruments 260 are irregularly shaped. What does that mean? 09:18:59 09:19:03 09:19:07 09:19:22 09:19:25 09:19:29

A That's a statement from the Schaffer patent application so I need to look at Schaffer to fully understand that sentence. 09:19:29 09:19:37 09:19:41

Q I'm going to hand you what's been previously marked as Exhibit 1005. Is that the Schaffer that you're referring to? 09:19:42 09:20:07 09:20:14

A Yes. 09:20:14

Q What do you need to look at to determine what that sentence means from Schaffer that you quoted in your 09:20:15 09:20:22

declaration? 09:20:24

A So in paragraph 68 it's discussing another 09:20:24
embodiment, and the last sentence says, The material 166 09:21:47
of the third seal member third central seal member 165 is 09:21:59
so compliant that it forms a seal around the instruments 09:22:07
260 even if the instruments 260 are irregularly shaped. 09:22:10

Q And how does that third central seal member form 09:22:19
that seal around an irregularly shaped instrument? 09:22:23

A Well, it states it is so compliant, and earlier 09:22:27
sections discuss ranges of material properties, including 09:22:44
some very compliant soft gelatinous-type materials that 09:22:50
they show in paragraph 59. 09:22:58

At the end of paragraph 59 Schaffer states, The 09:23:20
material 166 exhibits a self-closing nature in that it 09:23:22
sticks occlusively to itself forming a nearly fluid 09:23:28
gas-tight seal under very light compression. 09:23:32

Q So the third central seal member forms a seal by 09:23:42
filling in the gaps; is that correct? 09:23:47

MR. STOWELL: Objection. Vague. 09:23:50

THE WITNESS: It states it can seal around the 09:23:57
instruments even if the instruments are irregularly 09:23:58
shaped. 09:24:00

BY MR. HAMILTON: 09:24:01

Q And does that mean it will fill in the gaps 09:24:01
around the irregularly shaped instrument? 09:24:03

MR. STOWELL: Objection. Vague. 09:24:08
THE WITNESS: I would say once again, it depends on 09:24:09
the size, the shape, the thickness of the seal member, the 09:24:12
compliance of the seal member, the tension applied. Many 09:24:17
different variables would make a difference. 09:24:20
BY MR. HAMILTON: 09:24:23
Q Is the goal of the compliant seal member to fill 09:24:24
in those gaps? 09:24:27
MR. STOWELL: Objection. Vague. 09:24:27
THE WITNESS: Schaffer certainly states that it is so 09:24:28
compliant that it forms a seal around instruments even if 09:24:44
the instruments are irregularly shaped. 09:24:49
BY MR. HAMILTON: 09:24:52
Q Does that mean it would fill in the gaps around 09:24:52
the irregularly shaped instrument? 09:24:55
MR. STOWELL: Objection. Asked and answered. Vague. 09:24:57
THE WITNESS: I think it depends on the instruments, 09:24:59
the size, the materials, the tension applied and possibly 09:25:00
other variables. 09:25:05
BY MR. HAMILTON: 09:25:06
Q Is the highly compliant material intended to fill 09:25:06
in gaps around an irregularly shaped instrument, is that 09:25:08
how it seals? 09:25:11
MR. STOWELL: Objection. Vague. Asked and answered. 09:25:12
THE WITNESS: It's certainly how it's described in 09:25:21

Schaffer, is that it would seal around irregularly shaped instruments. 09:25:29 09:25:31

BY MR. HAMILTON: 09:25:31

Q And could it also fill in the gaps shown on page 21 of your declaration in the figure? 09:25:49 09:25:54

MR. STOWELL: Objection. Incomplete hypothetical. 09:25:56

THE WITNESS: It would depend on the material, the thickness, material properties, tension applied, the size of the two instruments, and potentially other variables. 09:25:58 09:26:05 09:26:09

BY MR. HAMILTON: 09:26:14

Q And a person -- could a person of ordinary skill in the art figure out all those variables so that the gaps are filled in by the highly compliant material? 09:26:16 09:26:19 09:26:25

A I don't know. 09:26:27

Q If you look at the sentence beginning after the quote on the top of page 22 in your declaration, In addition, what did you mean by that sentence? 09:26:36 09:27:44 09:27:47

A Well, as I said the patent owner did not explain how the illustration of the two instruments would be any different if the string or wire member were replaced with two U-shaped actuating members. Because of the noncompliant seal that's depicted in illustration, some gaps it would exist with U-shaped actuating members also. 09:27:54 09:28:18 09:28:28 09:28:31 09:28:36 09:28:42

Q Okay. So let's stop there. So whether you use a string or U-shaped actuating members, these gaps would be 09:28:48 09:28:52

formed unless you use the compliant -- a compliant seal; is that right? 09:28:55 09:29:03

MR. STOWELL: Objection. 09:29:03

THE WITNESS: I'm just saying that the illustration apparently shows a relatively less compliant material. 09:29:03 09:29:05

BY MR. HAMILTON: 09:29:10

Q So one skilled in the art would actually use a more compliant material to fill in those gaps; is that right? 09:29:11 09:29:14 09:29:18

MR. STOWELL: Objection. Outside the scope. 09:29:18

THE WITNESS: I think the illustration is showing a relatively noncompliant material as confirmed by the fact that it is the same thickness all the way around. If a more compliant material were used, it still would be unclear whether some gaps would still form because of the other variables I mentioned before. 09:29:19 09:29:25 09:29:29 09:29:37 09:29:41 09:29:45

BY MR. HAMILTON: 09:29:47

Q And that would be the same whether it's a string or wire or two U-shaped members; is that right? 09:29:47 09:29:52

A Well, as I said, if the string were replaced by two U-shaped actuating members, and one were to use a relatively noncompliant seal member, some gaps would exist between either design. 09:29:55 09:30:08 09:30:15 09:30:21

Q So could one use a more compliant seal member and fill in those gaps? 09:30:22 09:30:28

A As I said before, I'm not sure. It would depend on the size of the instruments, the thickness of the material, the compliance of the material, the tension applied, the flexibility of the U-shaped members, et cetera. 09:30:29 09:30:38 09:30:41 09:30:45 09:30:50

Q So both the U-shaped members and the string would form the gaps; is that right? 09:30:51 09:30:55

MR. STOWELL: Objection. Misstates testimony. 09:30:57

THE WITNESS: Gaps could form depending on the multiple variables that I've mentioned several times. 09:30:58 09:31:04

BY MR. HAMILTON: 09:31:06

Q You say here on page 22, the same gaps would exist. You're comparing the gaps with a string or a wire and U-shaped members, correct? 09:31:07 09:31:09 09:31:14

A And with use of a relatively less compliant seal member. 09:31:16 09:31:28

Q So using a string or a wire in place of the U-shaped members doesn't improve sealing if all other things are equal; is that right? 09:31:28 09:31:33 09:31:38

MR. STOWELL: Objection. Incomplete hypothetical. Vague. 09:31:42 09:31:44

THE WITNESS: It's certainly possible that a string or a wire could improve sealing. Once again, it depends on the size and shape of the instruments inside, material properties of the seal module, tension applied, the 09:31:44 09:31:53 09:31:57 09:32:01

flexibility of the string, wire, or U-shaped members and potentially other variables. 09:32:06 09:32:13

BY MR. HAMILTON: 09:32:14

Q So here on page 22 you say, The same gaps would exist. 09:32:15 09:32:17

A In this illustration that was provided by the patent owner, given the way it's drawn, if the same materials were used, it would appear that the similar gaps would exist. 09:32:20 09:32:24 09:32:31 09:32:36

Q Now you just said similar. It would be the same gaps, wouldn't it? 09:32:37 09:32:39

A It might depend on the material properties, the tension applied, how tension can be applied to U-shaped members, may be different than how tension is applied to a suture. 09:32:40 09:32:44 09:32:48 09:32:53

Q So do you want to change this then, do you want to change your testimony on page 22, you said the same gaps. Is that not true? 09:32:53 09:32:56 09:32:58

A No, I don't want to change it. 09:33:00

Q So the same gaps would exist with U-shaped members and a string or a wire, correct? 09:33:04 09:33:07

A If a relatively noncompliant seal member, as is depicted in the illustration, it would be the same or very similar gaps would exist if U-shaped members were used. 09:33:09 09:33:14 09:33:19

Q And how would a more compliant seal member 09:33:23

address that issue of the gaps? 09:33:26
A If a thicker, more compliant seal member were 09:33:28
used, it may be able to fill in some or all of the gaps. 09:33:34
Q And that would be the case whether or not a 09:33:41
string or a wire is used or U-shaped members as in 09:33:48
Schaffer's used, correct? 09:33:53
MR. STOWELL: Objection. Compound. 09:33:56
THE WITNESS: I think it's unclear without knowing the 09:33:56
exact materials, material properties, thicknesses, et 09:34:05
cetera, how different designs would perform. 09:34:08
BY MR. HAMILTON: 09:34:14
Q Would you need to know how compliant the member 09:34:26
is in order to assess that? 09:34:28
A I think one would need -- a person skilled in the 09:34:29
art would need to know many different aspects of the 09:34:36
different components of the design. 09:34:40
Q Is that one of the aspects? 09:34:41
A That would be one of the aspects. 09:34:43
Q Would you also need to know if the U-shaped 09:34:45
members were rigid or flexible to determine if the gaps 09:34:59
would be filled in? 09:35:04
A I think it would be important to know the 09:35:05
material properties of U-shaped members, the size and 09:35:20
shape of material properties, and obviously, flexibility 09:35:24
and rigidity exist along a wide range. 09:35:29

Q So you would need to know how much force is necessary to cause the more compliant material to fill in the gaps; is that right? 09:35:34 09:35:39 09:35:44

MR. STOWELL: Objection. Vague. Misstates testimony. 09:35:46

THE WITNESS: I think as I've said before, I think we need to know -- a person of skill in the art would need to know material properties for all the different components, dimensions for the different components to be able to judge that. 09:35:47 09:35:53 09:35:58 09:36:05 09:36:08

BY MR. HAMILTON: 09:36:09

Q And those properties and different components, one of those properties is how compliant the seal member is, right? 09:36:09 09:36:12 09:36:15

A That would be one aspect -- 09:36:17

Q Sorry. 09:36:22

A -- of one component. 09:36:23

Q And another one would be how rigid the member applying (indiscernible utterance) the compression is, right? 09:36:24 09:36:38 09:36:38

THE STENOGRAPHIC REPORTER: As a member of compliant pressure? Is that what you said? 09:36:38 09:36:38

MR. HAMILTON: How rigid the member applying the compression is. 09:36:39 09:36:42

THE STENOGRAPHIC REPORTER: Thank you. 09:36:42

THE WITNESS: I think it would be important to know 09:36:49

the dimensions, the material properties. Material properties include, flexibility or rigidity, among other properties and dimensions for the tools that are inside, the tension applied and potentially other properties. 09:36:51 09:36:58 09:37:05 09:37:13

BY MR. HAMILTON: 09:37:15

Q For -- if you look at the first sentence on page 22, starting with the quote, So compliant that it forms a seal. Do you see that? 09:37:15 09:37:37 09:37:43

A Yes. 09:37:45

Q I want you to assume a seal member meets that requirement. It's so compliant that it forms a seal. Okay? Can you do that? 09:37:46 09:37:50 09:37:53

MR. STOWELL: Objection. Vague. Incomplete hypothetical. 09:37:56 09:37:57

THE WITNESS: I don't know. It depends on the dimensions, the material properties, the size of the instrument. There's many variables to consider. 09:37:57 09:38:07 09:38:09

BY MR. HAMILTON: 09:38:13

Q So is it your testimony that you -- withdraw the question. 09:38:15 09:38:21

And the way this functions would be a -- some member, U-shaped member or string would cause the compliant member however compliant it is, to deform to form the seal; is that correct, that's how this operates? 09:38:21 09:38:33 09:38:36 09:38:42

MR. STOWELL: Objection -- objection. Vague. 09:38:44

THE WITNESS: The mechanism of action in the '011 patent and in Schaffer are the same in that they circumferentially constrict the tube in order to create a seal around the members that are inside. 09:38:46 09:38:55 09:39:05 09:39:10

BY MR. HAMILTON: 09:39:15

Q So right now, we're talking about some sealing member that's so compliant that it forms a seal as you've stated on page 22. And the way Schaffer forms the seal with that sealing member that is so compliant that it forms a seal is to apply some kind of compression to that sealing member, correct? 09:39:15 09:39:18 09:39:22 09:39:28 09:39:32 09:39:35

MR. STOWELL: Objection. Misstates testimony. Incomplete hypothetical. 09:39:37 09:39:40

THE WITNESS: In Schaffer, when they are showing embodiments that are described as being this extremely compliant, gelatinous, sticky material, they're referring to earlier embodiments, not the embodiments in 30 through 34 -- Schaffer 30 through 34, which have the same mechanism of action as the '011 patent. 09:39:40 09:39:44 09:39:51 09:39:55 09:40:01 09:40:09

BY MR. HAMILTON: 09:40:11

Q So but is it your testimony the embodiment in Schaffer Figures 30 through 34, does not include a compliant seal member; is that right? 09:40:12 09:40:16 09:40:21

MR. STOWELL: Objection. Vague. 09:40:23

THE WITNESS: In Schaffer, they use the term highly 09:40:23

compliant third seal member, and they use that seal member to describe embodiments shown as 10A, 10B. And the way that those embodiments work is by passive blood pressure, not by an outside constraining force that constricts a lumen. 09:40:36 09:40:39 09:40:51 09:40:57 09:41:05

BY MR. HAMILTON: 09:41:05

Q And so is it your testimony that that sealing member that you just referred to is not found and could not be used in Figures 30 through 34 in that embodiment; is that right? 09:41:06 09:41:08 09:41:11 09:41:15

A I certainly don't believe that a gelatinous substance that sticks to itself as they describe in paragraph 59 is the type of material which could be used for the Figures 30 through 34. 09:41:15 09:41:25 09:41:29 09:41:37

Q What about a material that's so compliant that it forms a seal around instruments as you quoted on page 22, could that material be used in the embodiment of Figures 30 through 34? 09:41:43 09:41:45 09:41:52 09:41:55

MR. STOWELL: Objection. Vague. 09:41:55

THE WITNESS: Once again, that sentence comes from the end of paragraph 68 in Schaffer. And as it says, it's so compliant which implies that it is the sticky, super-soft material, gelatinous material, and I do not believe that that would be -- a person skilled in the art would choose that material to be used with the figures in 30 09:41:56 09:42:16 09:42:33 09:42:36 09:42:40 09:42:45

through 34, Schaffer. 09:42:51
BY MR. HAMILTON: 09:42:53
Q And when you say that material, let's just make sure we're clear on what material you're referring to. What paragraph are you referencing for the material? 09:42:53 09:42:59 09:43:06
A Paragraph 59, Schaffer. 09:43:07
Q So is it your testimony that the description of the materials, for example, C-flex or Kraton, wouldn't be used in the embodiment of Figures 30 through 34, is that your understanding? 09:43:10 09:43:19 09:43:25 09:43:28
MR. STOWELL: Objection. Misstates testimony. 09:43:29
THE WITNESS: In paragraph 59 they say the shore hardness of the material 166 is in another option between 15 and 20 on the shore 00 scale. This provides a material 166 that is extremely soft and compliant and intrinsically sticky. They go on to compare it to a gelatinous substance. 09:43:30 09:43:41 09:43:45 09:43:50 09:43:54 09:44:06
So I believe that material, that type of description of material is not the material that would be able to be used for designs in Figures 30 through 34 wherein when the tension is released on the actuating members, the tubing needs to recover, reopen on its own, in order to open the valve. 09:44:06 09:44:08 09:44:15 09:44:21 09:44:25 09:44:32
BY MR. HAMILTON: 09:44:33
Q So it's this sentence in paragraph 59 that begins 09:44:33

with, The shore hardness and ends with, 00 scale. That's the material you're referring to, something with those properties couldn't be used in Figures 30 through 34; is that correct? 09:44:37 09:44:40 09:44:42 09:44:45

A I think a person skilled in the art would not choose materials that were that soft, gelatinous, or sticky to be used in designs that need -- where the sealing member needs to reopen on its own once tension is released from its circumference. 09:44:45 09:44:51 09:44:53 09:45:01 09:45:06

Q And when you say that soft, gelatinous, or sticky, you're referring to the shore hardness properties, correct? 09:45:10 09:45:14 09:45:18

A Hardness is one measure. I think there are others. But they describe it as intrinsically sticky, extremely soft, extremely low shore hardness. It can be easily compressed upon itself or upon inserted an instrument, can be compared to a gelatinous substance. 09:45:18 09:45:21 09:45:30 09:45:35 09:45:41

Q And that material -- withdraw the question. 09:45:55

If you could turn to paragraph 75 of Schaffer. Do you see the last sentence in paragraph 75? 09:46:12 09:46:42

A Yes. It reads, In another option, the seal module 100 and/or any of its respective seal members can be formed of one or more materials, including their relative properties as discussed above. 09:46:44 09:46:52 09:46:56 09:47:00

Q And that would include the materials and 09:47:02

properties of paragraph 59, wouldn't it, that's discussed above that paragraph, isn't it? 09:47:05 09:47:08

A That's at least one area above that discusses material properties. 09:47:09 09:47:14

Q So Schaffer says you can use that material, doesn't it? 09:47:15 09:47:18

MR. STOWELL: Objection. Misstates the document. 09:47:19

THE WITNESS: Schaffer says that the seal members could be formed of one or more materials and they have a wide range of materials shown in paragraph 59 including ones that are not so soft and sticky and gelatinous in their nature. 09:47:21 09:47:29 09:47:33 09:47:40 09:47:48

BY MR. HAMILTON: 09:47:48

Q So how compliant is the seal module in this embodiment 30 through 34? 09:48:12 09:48:17

MR. STOWELL: Objection. Vague. Outside the scope. 09:48:19

THE WITNESS: The description in Schaffer toward the end of paragraph 77 says, The seal module 100 is able to retract to an unsealed configuration. So that it has to be resilient enough to retract to its open configuration or unsealed configuration. That's the guidance that they provided. 09:48:22 09:49:04 09:49:17 09:49:23 09:49:26 09:49:30

BY MR. HAMILTON: 09:49:30

Q Does it also have to be compliant enough to seal around irregularly shaped instruments? 09:49:32 09:49:35

A I'm sure the goal of the design is to be able to seal well. It also has to unseal and reopen. 09:49:37 09:49:50

Q So the goal of the design is to be able to seal around irregularly shaped instruments, correct? 09:49:54 09:50:02

MR. STOWELL: Objection. Misstates testimony. Asked and answered. 09:50:05 09:50:07

THE WITNESS: I think the goal is to be able to seal around various instruments. It is a hemostatic valve. So it's designed to seal around a variety of instruments, I'm sure. 09:50:07 09:50:16 09:50:24 09:50:27

BY MR. HAMILTON: 09:50:27

Q And the seal members must be compliant enough to seal around irregularly shaped instruments, correct, for this embodiment of Figures 30 through 34, correct? 09:50:28 09:50:32 09:50:37

MR. STOWELL: Objection. Vague. Misstates the document. 09:50:39 09:50:40

THE WITNESS: In order to seal adequately, there are a number of variables, including the spring tension, the actuating members, material properties, the seal member material properties and thickness, the tension applied, and probably others that all impact the ability to seal appropriately. 09:50:47 09:50:49 09:50:53 09:51:02 09:51:07 09:51:11

BY MR. HAMILTON: 09:51:11

Q So let's focus on the seal member material properties and thickness. And one of those properties is 09:51:20 09:51:23

how compliant the seal member is, right? 09:51:27
A Yes. 09:51:28
Q And a more compliant seal member is more likely 09:51:31
to fill in gaps or seal around an irregularly shaped 09:51:35
instrument, correct? 09:51:39
MR. STOWELL: Objection. Vague. 09:51:41
THE WITNESS: Depends on the thickness and the 09:51:42
material properties, tension applied, et cetera. 09:51:46
BY MR. HAMILTON: 09:51:51
Q Does it also again on what's applying the 09:51:53
compression? 09:51:55
MR. STOWELL: Objection. Vague. 09:51:57
THE WITNESS: Yeah, I don't know. I haven't 09:51:57
considered that. 09:52:10
BY MR. HAMILTON: 09:52:10
Q So let's go back to page 21, paragraph 35 of your 09:56:08
supplemental declaration. You're right there on it. Do 09:56:15
you see the figure? 09:56:19
A Yeah. 09:56:19
Q You say, Patent owner's illustration does not 09:56:20
depict the compliant seal member described in Schaffer's 09:56:33
paragraph 68. Do you see that, right underneath the 09:56:35
picture? 09:56:38
A Yes. 09:56:38
Q If the compliant seal member described in 09:56:39

Schaffer's paragraph 68 was included in the figure on page 21, how would that figure differ? 09:56:45 09:56:50

A If it were extremely compliant and soft material, it would probably show some filling of the gaps, some thinning out on the sides where it's in contact with the instruments. 09:56:52 09:57:17 09:57:24 09:57:28

Q So when you say it would probably show some filling in of the gaps and thinning out on the sides, you mean it would deform? 09:57:28 09:58:18 09:58:24

A Once again, it depends on how gelatinous, how soft, how much pressure's being applied. But if a seal module were significantly more compliant than what's shown here, it would have a different geometry shown. 09:58:25 09:58:33 09:58:42 09:58:48

Q And it would have a different geometry because the material had deformed, its shape had deformed; is that right? 09:59:01 09:59:04 09:59:12

A Extremely soft, compliant, gelatinous material would thin out in certain areas and potentially fill in other areas depending on all the material properties I've mentioned before. 09:59:12 09:59:15 09:59:23 09:59:28

Q Thin out in certain areas and potentially fill in other areas, that's the material deforming, correct? 09:59:29 09:59:36

A I don't know if I'd characterize it that way. But... it's... changing its geometry if you look at it in cross-section. 09:59:40 09:59:46 09:59:52

Q And that changing of geometry is caused by an external compression force, right? 09:59:53 10:00:05

MR. STOWELL: Objection. Vague. Incomplete hypothetical. 10:00:09 10:00:11

THE WITNESS: It's caused by exerting force around the seal module. Circumferential force around the seal module. 10:00:11 10:00:18 10:00:26

BY MR. HAMILTON: 10:00:26

Q Let's turn to page 17 of your declaration -- supplemental declaration, excuse me. Does this image show a compliant seal member? 10:01:02 10:01:08 10:01:56

MR. STOWELL: Objection. Vague. 10:01:59

THE WITNESS: What's showing is potential gaps that could form between the tool and the valve lumen with tools that do not match the size and shape of the U-shaped actuating members or if the members don't conform sufficiently to the size of the tool inserted. That's what the graphic is showing. 10:01:59 10:02:24 10:02:31 10:02:33 10:02:36 10:02:39

BY MR. HAMILTON: 10:02:41

Q And you depict a seal module in that graphic, correct? 10:02:41 10:02:46

A Yes. 10:02:46

Q Does that seal module include a compliant sealing member? 10:02:46 10:02:53

MR. STOWELL: Objection. Vague. 10:02:54

THE WITNESS: It's showing a seal module that can collapse upon circumferential force and seal module, which can expand when that force is released. So it has the appropriate properties to perform those functions. I can't say the level of compliance that it would have. 10:02:54 10:03:06 10:03:12 10:03:18 10:03:22

BY MR. HAMILTON: 10:03:32

Q Could a person of ordinary skill in the art have figured out a level of compliance for a sealing member that would fill in the gaps shown in that figure? 10:03:37 10:03:39 10:03:43

MR. STOWELL: Objection. Vague. 10:03:47

THE WITNESS: I think a person of skill in the art would have many variables to consider, including the actuating members themselves, mechanical properties of the actuating members, mechanical properties of the spring force applied, the polymer seal module materials. And depending on the tools inserted, they may be able to design one that works well in many cases. 10:03:48 10:03:53 10:03:57 10:04:01 10:04:05 10:04:17 10:04:20

BY MR. HAMILTON: 10:04:23

Q So let's take the tool that you're depicting on page 17. With that tool inserted, could one of skill in the art select a seal module material that's compliant enough to fill in these gaps? 10:04:24 10:04:27 10:04:35 10:04:37

MR. STOWELL: Objection. Asked and answered. 10:04:40

THE WITNESS: I don't know. What I'm depicting is that there may be cases where it doesn't seal perfectly 10:04:40 10:04:49

depending on the material properties of the components I just mentioned. 10:04:56 10:04:59

BY MR. HAMILTON: 10:04:59

Q And the material -- one of those material properties is how compliant that seal module is, correct? 10:05:04 10:05:06

A Well, material property, among many others, would be material properties of that tube, the seal module, the thickness of the seal module, the resilience, how much it can recover when force is released, and of course, the actuator or U-shaped members' properties also. 10:05:08 10:05:16 10:05:21 10:05:24 10:05:29

Q So could a person of ordinary skill in the art select material properties of the seal member such that those gaps would be filled in? 10:05:33 10:05:36 10:05:39

A I think it would depend on the size of the tool inserted, the shape of the tool inserted, the geometry of the actuating members as to whether that would be possible or not. 10:05:40 10:05:46 10:05:54 10:05:58

Q So let's take the size of the tool, the shape of the tool, and the geometry of the actuating members shown in this figure. Is it possible? 10:05:58 10:06:01 10:06:05

MR. STOWELL: Objection. Vague. 10:06:08

THE WITNESS: This is just a graphic illustration that it may not be possible in some cases. 10:06:09 10:06:14

BY MR. HAMILTON: 10:06:17

Q But in some cases it is possible, correct? 10:06:19

A That would certainly be the goal of the engineer, the person of skill in the art, to be able to make it seal well and not have gaps. 10:06:22 10:06:25 10:06:30

Q And a person of ordinary skill in the art could take that goal and make this seal well by adjusting the seal module's compliance, correct? 10:06:32 10:06:34 10:06:37

MR. STOWELL: Objection. Vague. Asked and answered. 10:06:39

THE WITNESS: I think it's not just a seal module. There are many other components, and their properties are important. And this is just illustrating a case in which it isn't -- everything is not perfectly optimized to create a seal around the size of tool. 10:06:42 10:06:44 10:06:47 10:06:52 10:06:56

BY MR. HAMILTON: 10:06:58

Q And one of those things is the -- how compliant the seal module is, correct? 10:06:59 10:07:01

A One aspect of many would be the seal module properties. 10:07:02 10:07:07

Q And Schaffer discloses a seal module having a level of -- that is compliant enough to fill in these gaps, correct? 10:07:08 10:07:14 10:07:18

A I don't know. Schaffer provides a wide range of material properties, some of which probably would not work for this type of design because they would be too soft and sticky and gelatinous. 10:07:18 10:07:31 10:07:36 10:07:39

Q And would a person of ordinary skill in the art 10:07:40

be able to figure out which ones would work and which ones wouldn't? 10:07:43 10:07:46

A That would be the goal of the engineer to optimize a design to pick the right materials and properties. 10:07:47 10:07:54 10:07:57

Q And would that engineer be able to do that, pick the right materials and properties? 10:07:58 10:08:01

MR. STOWELL: Objection. Asked and answered. 10:08:03

THE WITNESS: Depends on the range of tools that are going to be inserted and the other properties for the other components that we've been discussing. 10:08:03 10:08:08 10:08:10

BY MR. HAMILTON: 10:08:14

Q To deform a compliant material, is it easier to deform with a hard or rigid material or a soft flexible material? 10:09:51 10:10:11 10:10:20

MR. STOWELL: Objection. Incomplete hypothetical. 10:10:21

THE WITNESS: Can you clarify what components we're talking about here? 10:10:22 10:10:26

BY MR. HAMILTON: 10:10:26

Q If you have a -- let's say you've got a ball of the highly compliant material disclosed in Schaffer, and you want to deform it. Is it easier to deform with a hard material or a softer material, which one would be easier? 10:10:27 10:10:32 10:10:39 10:10:44

MR. STOWELL: Objection. Incomplete hypothetical. 10:10:47

THE WITNESS: Depends on how hard the hard material 10:10:48

is, but extremely soft, gel-like material can be deflected -- what's the term you used? -- compressed with the material that's at least as hard as the gel material itself. 10:10:58 10:11:10 10:11:19 10:11:22

BY MR. HAMILTON: 10:11:22

Q And when you say at least as hard, so it would be at least as hard as the gel material, first of all, right, and the harder it is, the more predictable that deformation would be, wouldn't it? 10:11:22 10:11:26 10:11:31 10:11:34

MR. STOWELL: Objection. Incomplete hypothetical. 10:11:37

THE WITNESS: Theoretically, a harder material would be able to deform a softer material more readily. 10:11:38 10:11:45

BY MR. HAMILTON: 10:11:50

Q And if that harder material was, say, for example, steel that doesn't deform, so let's just say a block of steel that wouldn't deform in any meaningful sense relative to the softer material, you could predict with pretty good accuracy exactly how much the soft material would deform based on how much pressure you applied to the other material, correct? 10:11:51 10:11:53 10:11:59 10:12:03 10:12:11 10:12:14 10:12:18

MR. STOWELL: Objection. Vague. Incomplete hypothetical. 10:12:20 10:12:22

THE WITNESS: If an engineer knew the material properties of the two materials in question, I think it could be modeled, how much force would cause -- how much, 10:12:22 10:12:32 10:12:35

certain amount of deformation. 10:12:44
BY MR. HAMILTON: 10:12:46
Q And that modeling is pretty simple when one material, the material applying compression, is much harder than the other material, correct? 10:12:46 10:12:49 10:12:53
MR. STOWELL: Objection. Vague. 10:12:54
THE WITNESS: I don't know, haven't considered that. 10:12:55
BY MR. HAMILTON: 10:13:00
Q So as you sit here now, you can't tell me what's easier to predict in terms of the amount of deformation between applying a compression force with a hard material or a softer material; is that right? 10:13:01 10:13:05 10:13:08 10:13:10
MR. STOWELL: Objection. Vague. Misstates testimony. 10:13:14
THE WITNESS: Can you repeat the question? 10:13:16
BY MR. HAMILTON: 10:13:20
Q As you sit here now, can you tell me what -- whether it's easier to predict the amount of deformation between applying compression force with a harder material or a softer material? 10:13:34 10:13:37 10:13:40 10:13:43
A I haven't considered how hard it might be to predict material compression in this supplemental declaration, so I can't really answer that. 10:13:44 10:13:55 10:14:00
MR. STOWELL: We've been going for about an hour and 15 minutes. So when you reach a good spot to take a break, let's take one. 10:15:19 10:15:22 10:15:25

BY MR. HAMILTON: 10:15:30
Q Are you okay to go for a couple more questions? 10:15:30
A Sure. 10:15:33
Q All right. Let's take a look at page 19 of your declaration. Do you see the figure on page 19? 10:15:33 10:15:36
A Yes. 10:15:53
Q Do you see the U-shaped actuating members depicted in that figure? 10:16:04 10:16:16
A Yes. 10:16:17
Q Do those U-shaped actuating members have a cross-section that's rectangular? 10:16:18 10:16:34
A Yeah, Schaffer's Figure 32, it shows a cross-section, and they would show the U-shaped portion as having a rectangular cross-section. 10:16:39 10:16:58 10:17:02
Q So Figure 32's a better depiction of that cross-section; is that right? 10:17:04 10:17:08
A Yes. 10:17:09
Q Does that U-shaped member provide a compression force against the seal module along the length, the longest distance of that rectangular cross-section? 10:17:09 10:17:59 10:18:05
MR. STOWELL: Objection. Vague. 10:18:09
THE WITNESS: I'm not sure what you mean by length. 10:18:09
BY MR. HAMILTON: 10:18:16
Q So if you look at the cross-section, you see it's a rectangle, right? 10:18:17 10:18:19

A In Figure 32? 10:18:21
Q Yes. 10:18:23
A Yes. 10:18:23
Q And it's got four sides, right? 10:18:23
A Yes. 10:18:26
Q Two sides are shorter than the -- you have two short sides and two long sides, right? 10:18:27 10:18:32
A Yeah. 10:18:33
Q And the compression force is applied along the length of the longest side, correct? 10:18:34 10:18:39
A Yes. That's the portion that's in contact with the seal member. 10:18:41 10:18:46
Q And so that compression force is spread across a distance that's the same length as the longest side of the rectangle, correct? 10:18:47 10:18:52 10:18:58
MR. STOWELL: Objection. Vague. 10:19:00
THE WITNESS: That's the portion that's in contact with the seal member as it wraps around the seal member. 10:19:01 10:19:10
BY MR. HAMILTON: 10:19:14
Q And the portion that's in contact with the seal member, that's the portion that applies compression to the seal member, correct? 10:19:22 10:19:25 10:19:27
A It applies compression to the seal member by the springs that are attached on either end of it. 10:19:29 10:19:40
Q And it applies that compression along that entire 10:19:42

length of the cross-section, the longest side of the cross-section, correct? 10:19:46 10:19:49

MR. STOWELL: Objection. Vague. 10:19:51

THE WITNESS: That's the part that's in contact. So that's how it would apply the force. 10:19:52 10:19:57

BY MR. HAMILTON: 10:19:59

Q And as depicted in figure -- let's look at Figure 34. Do you see the two U-shaped members are side-by-side, parallel to each other, do you see that? 10:20:14 10:20:26 10:20:50

A Yes. 10:20:52

Q So for the two members, the force applied is along the length of one member, the longest side of the rectangle, and the other one along the length of the other member, longest side of that rectangle. 10:20:56 10:21:04 10:21:06 10:21:10

A That's how the force is applied to the seal module, yes. 10:21:13 10:21:17

Q And when that force is applied, the seal module will deform from the farthest end of one U-shaped member to the farthest end of the length of the other U-shaped member, correct? 10:21:18 10:21:34 10:21:42 10:21:46

MR. STOWELL: Objection. Vague. 10:21:47

THE WITNESS: I'm not sure exactly what you mean by farthest end. 10:21:48 10:21:51

BY MR. HAMILTON: 10:21:52

Q So if you look at Figure 34, and you have one 10:21:52

U-shaped member with the cross-section in the length and another U-shaped member with the cross-section in the length, do you see that? 10:21:56 10:21:59 10:22:01

A Length meaning the total length of the U-shaped member to where it attaches to the button? 10:22:06 10:22:09

Q No. 10:22:11

The length of the cross-section, the rectangular cross-section, the longest dimension we were just discussing. 10:22:11 10:22:15 10:22:18

A Okay. 10:22:18

Q So twice that length, when the two U-shaped members apply compression -- withdraw the question. 10:22:18 10:22:24

The two U-shaped members apply -- withdraw that question. 10:22:27 10:22:33

The two U-shaped members deform the seal module along that entire length, correct? 10:22:34 10:22:38

MR. STOWELL: Objection. Vague. 10:22:45

THE WITNESS: U-shaped members deform the seal module in areas that it's in contact with the seal module. 10:22:46 10:22:52

BY MR. HAMILTON: 10:22:55

Q And it's in contact along the longest side of each of those cross-sectional rectangles, correct? 10:22:55 10:22:57

A Yes. That's the part that's in contact with the seal module. 10:23:01 10:23:05

Q And that -- would that be the same if Schaffer's 10:23:05

U-shaped members were replaced with a string, the deformation of the seal module would occur at the place where the string contacts the seal module? 10:23:46 10:23:49 10:23:52

MR. STOWELL: Objection. Outside the scope. 10:23:56

THE WITNESS: I haven't really considered how it deforms in cross-section. I haven't shown that in my declaration. 10:23:57 10:24:05 10:24:08

BY MR. HAMILTON: 10:24:09

Q Can you answer the question? 10:24:11

A I'm not sure I can. It's not something I've considered how the module deforms, with the string. 10:24:11 10:24:16

Q You don't know what would happen if a string was put into, in place of Schaffer's U-shaped members. Is that your testimony? 10:24:20 10:24:23 10:24:28

MR. STOWELL: Objection. Misstates testimony. 10:24:28

THE WITNESS: I said I haven't considered in my declaration how a cross-section might look if a string were wrapped around the U-shaped member. 10:24:29 10:24:34 10:24:37

BY MR. HAMILTON: 10:24:40

Q Do you understand what would deform in the module if a string was used in place of the U-shaped members? 10:24:41 10:24:46

MR. STOWELL: Objection. Vague. 10:24:50

THE WITNESS: Well, the seal module would compress, circumferentially. 10:24:51 10:24:58

BY MR. HAMILTON: 10:25:00
Q And it would compress where the string contacts a seal module, just like you testified for the U-shaped members, correct? 10:25:00 10:25:02 10:25:05
A That's the area in contact. That's where you're trying to compress the seal module. So it would compress the seal module in areas that are in contact with the string or wire or filament. 10:25:06 10:25:11 10:25:18 10:25:21
MR. HAMILTON: Okay. Why don't we take a break. 10:25:29
THE VIDEOGRAPHER: We are going off the record. The time is 10:25 a.m. 10:25:31 10:25:33
(Recess taken.) 10:35:05
THE VIDEOGRAPHER: We are back on the record. The time is 10:35 a.m. 10:35:05 10:35:13
BY MR. HAMILTON: 10:35:15
Q Do you understand you're still under oath, Mr. Thornton? 10:35:17 10:35:18
A Yes. 10:35:19
Q Did you communicate with anybody regarding the substance of your testimony during the break? 10:35:19 10:35:31
A No. 10:35:33
Q Did you review any documents during the break? 10:35:34
A No. 10:35:36
Q If you could turn to page 20 of Exhibit 1014, your supplemental declaration. Do you see two figures on 10:35:36 10:35:45

page 20? 10:35:55
A Yes. 10:35:56
Q Did you create those figures? 10:35:56
A Working with counsel, I had input into the figures. 10:35:58 10:36:07
Q Did you suggest those two figures to counsel? 10:36:07
A I don't recall. 10:36:11
Q Do you understand what's depicted in the two figures? 10:36:14 10:36:19
A Yes. 10:36:19
Q Is this a depiction of Schaffer from these two figures? 10:36:21 10:36:46
MR. STOWELL: Objection. Vague. 10:36:53
THE WITNESS: It's a depiction of the U-shaped actuating members in Schaffer showing the deformation that might happen with the somewhat flexible U-shaped members or bights, with tool diameters that are smaller. One is smaller than the other. 10:36:54 10:37:12 10:37:21 10:37:25 10:37:33
BY MR. HAMILTON: 10:37:34
Q Both figures show gaps, correct? 10:37:38
A I've illustrated an example where gaps are formed because of a mismatch between sizes or shapes or compliance or flexibility. 10:37:41 10:37:50 10:37:59
Q And this is your understanding of Schaffer's disclosure, this is what Schaffer discloses? 10:38:03 10:38:10

MR. STOWELL: Objection. Vague. 10:38:12

THE WITNESS: It's depicting a case where small gaps are formed and even larger gaps might form if an even smaller tool is inserted, if the distance between the attachment points is a fixed dimension as is depicted in Schaffer's Figures 30 through 34. 10:38:13 10:38:23 10:38:29 10:38:34 10:38:40

BY MR. HAMILTON: 10:38:43

Q And those gaps would cause a poor seal in Schaffer, correct? 10:38:44 10:38:49

MR. STOWELL: Objection. Vague. 10:38:51

THE WITNESS: Gaps are not desired in order to create a seal in a hemostatic valve. 10:38:51 10:38:58

BY MR. HAMILTON: 10:39:01

Q So these gaps would be created in Schaffer whether or not the U-shaped member was flexible or rigid, correct? 10:39:02 10:39:05 10:39:09

A Well, this is depicting U-shaped members that are -- that have some flexibility as shown, especially in the lower image where they're deforming more so around a smaller tool. 10:39:09 10:39:22 10:39:27 10:39:32

Q So if Schaffer's U-shaped members are flexible, gaps would still be formed in Schaffer; is that correct, is that your testimony? 10:39:33 10:39:40 10:39:43

MR. STOWELL: Objection. Vague. Misstates the document. 10:39:44 10:39:46

THE WITNESS: Depending on the material properties of the actuators, the U-shaped actuating members, the seal module, the size of the tool, the force exerted, I think it's possible that gaps could form. That is even more so true as the tools get smaller as depicted in the lower figure on page 20. 10:39:46 10:39:52 10:39:59 10:40:03 10:40:13 10:40:16

BY MR. HAMILTON: 10:40:17

Q And that would occur whether or not Schaffer's U-shaped members are rigid or flexible, correct? 10:40:17 10:40:20

MR. STOWELL: Objection. Asked and answered. 10:40:25

THE WITNESS: I think a person of ordinary skill in the art would have understood that Schaffer's actuating members have some flexibility, that they're not entirely rigid. They're not entirely inflexible. And that's what we're depicting here, especially on the lower image on page 20. 10:40:27 10:40:35 10:40:39 10:40:43 10:40:49 10:40:53

BY MR. HAMILTON: 10:40:54

Q Are the flexible U-shaped actuating members in the bottom of the two pictures, would that be a string, for example? Are you depicting what would happen if a string was used in Schaffer? 10:41:18 10:41:22 10:41:28 10:41:31

A I'm depicting the U-shaped actuating members that are described in Schaffer as being a metal or polymer. 10:41:33 10:41:43

Q And what if this U-shaped member was a metal wire, is this -- would -- a flexible metal wire, is this 10:41:57 10:42:01

what would happen in the embodiment Figures 30 through 34 of Schaffer? 10:42:07 10:42:10

MR. STOWELL: Objection. Vague. Outside the scope. 10:42:11

THE WITNESS: Well, it's depicting a metal U-shaped actuator, which in -- which is depicted in the Figures 30 through 34 as a metal or plastic, flat wire is how it's depicted in those figures. 10:42:12 10:42:19 10:42:25 10:42:31

BY MR. HAMILTON: 10:42:32

Q And if the flexible U-shaped member in the bottom figure was a string, would it look just like this, would you have the same issue with these gaps? 10:42:37 10:42:43 10:42:47

A I don't know. I haven't considered that here in this declaration. 10:42:50 10:42:57

Q So you don't know what would happen if this flexible U-shaped actuating member was a string as opposed to a, you said, flat wire as depicted in Schaffer; is that right? 10:42:58 10:43:01 10:43:04 10:43:09

MR. STOWELL: Objection. Asked and answered. 10:43:09

THE WITNESS: I don't know that the geometry would be identical. It depends on the properties of the flexible U-shaped member, flat wire, or polymer versus the properties of the string or wire that you're proposing. I haven't considered that in here. The geometry could be similar. It might be slightly different. 10:43:10 10:43:13 10:43:17 10:43:23 10:43:27 10:43:31

BY MR. HAMILTON: 10:43:32
Q And whatever the geometry is similar or slightly 10:43:32
different, these gaps would still be formed, correct? 10:43:36
MR. STOWELL: Objection. Vague. Outside the scope. 10:43:41
THE WITNESS: Yeah, I haven't really considered a pair 10:43:42
of strings or wires or -- for these -- for these images. 10:43:49
So I don't know that gaps would form or not. 10:44:03
BY MR. HAMILTON: 10:44:04
Q So I thought a moment ago, you said this was a 10:44:05
flat wire, Schaffer was a flat wire. Is that not correct? 10:44:08
A I think Schaffer gives an example, shows in the 10:44:11
embodiments 30 through 34 to be a rectangular-shaped 10:44:19
member wire or plastic -- metal or plastic or -- 10:44:24
descriptions that they use in the specification. 10:44:32
Q Are the actuating members in Schaffer a flat 10:44:34
wire? 10:44:37
A I think they could be a flat wire. 10:44:37
Q When you say could be, you mean Schaffer doesn't 10:44:43
disclose a flat wire, but one skilled in the art could 10:44:53
include a flat wire. Is that what you mean by it could 10:44:56
be? 10:44:58
MR. STOWELL: Objection. Misstates testimony. Asked 10:44:58
and answered. 10:45:00
THE WITNESS: I think Schaffer shows pretty clearly in 10:45:00
30 through 34, that the actuating members are a flattened 10:45:04

material whether it's polymer or metal. Yeah. 10:45:09
BY MR. HAMILTON: 10:45:19
Q And is that material a flat wire as you 10:45:19
understood that -- understand what that term means? 10:45:22
MR. STOWELL: Objection. Asked and answered. 10:45:28
THE WITNESS: It could be a flattened wire. It could 10:45:29
be a flattened polymer. They give those examples as 10:45:33
potential materials. I don't think it's mandatory to be 10:45:36
this shape, but they don't -- this is what's shown in the 10:45:45
30 through 34, is a rectangular cross-section implying a 10:45:49
flattened wire, flattened polymer as the actuating member. 10:45:55
BY MR. HAMILTON: 10:46:00
Q So if a flattened wire is used, that's what 10:46:00
you're depicting on page 20, correct, a flat wire? 10:46:02
A Yes. 10:46:05
Q And if a flat wire is used in Schaffer, you 10:46:08
understand it is, gaps are going to be formed as shown on 10:46:12
page 20 of your declaration, correct? 10:46:17
A Gaps may be formed in some instances depending on 10:46:19
all the properties that we've talked about already. 10:46:24
That's what's being shown on page 20. 10:46:27
Q If you could turn to the next page, 21, 10:46:29
paragraph 35. You see the sentence about the middle of 10:47:15
that paragraph, This particular disclosure. Do you see 10:47:29
that? 10:47:32

A I need to read to get there, sorry. 10:47:32
Q Sure, go ahead. 10:47:40
A Okay. 10:47:41
Q Is it your understanding that the third seal member shown in Figures 12 through 15 is not used in the embodiment of Figures 30 through 34, is that what you're saying here in this paragraph? 10:48:06 10:48:20 10:48:25 10:48:29
A I'm saying this particular disclosure refers to Figures 12 through 15 in Schaffer, not to Figures 30 through 34. Figures 12 through 15 are different embodiments that does not use an external circumferential member to compress the seal module. 10:48:30 10:49:09 10:49:14 10:49:18 10:49:25
Q Does that embodiment use a third seal member? 10:49:28
MR. STOWELL: Objection. 10:49:40
THE WITNESS: Which embodiment? 10:49:41
BY MR. HAMILTON: 10:49:42
Q The one Figures 12 through 15. 10:49:43
A Let's see... third seal member. Figures 12 through 15 on Schaffer show a third seal member 165 in those embodiments, and those embodiments work with a method of action where the antegrade crusher 270 is sufficient to push the valve closed. 10:49:45 10:50:14 10:50:21 10:50:24 10:50:32
Q And how does the seal module close in those figures, does seal member 165 form a seal? 10:50:41 10:50:45
MR. STOWELL: Objection. Compound. 10:50:50

THE WITNESS: The design shown in 12 through 15, I believe, work by blood pressure 270 shown in Figure 13 as pushing a seal member 170, which doesn't really compress, and it compresses the third seal member 165 because that is extremely soft and compliant and can self-seal is how it's described in the patent. 10:50:51 10:50:57 10:51:08 10:51:15 10:51:20 10:51:25

BY MR. HAMILTON: 10:51:26

Q So seal member 165 in Figures 12 through 13 forms the seal based on deforming, correct? 10:51:30 10:51:38

MR. STOWELL: Objection. Vague. 10:51:44

THE WITNESS: My understanding is it's compressed actually, which causes it to collapse cylindrically and seal. 10:51:46 10:51:51 10:52:00

BY MR. HAMILTON: 10:52:00

Q And then in Figures 30 through 34, that seal member's compressed from the outside using the U-shaped members, correct, that's the difference? 10:52:00 10:52:03 10:52:06

MR. STOWELL: Objection. Vague. Compound. 10:52:09

THE WITNESS: Well, the mechanism of sealing is different in that it is an outside, cylindrical circumferential force that collapses the tubular member. 10:52:10 10:52:17 10:52:22

BY MR. HAMILTON: 10:52:26

Q So as you just read, Figures 12 through 15 include third seal member 165, right? 10:53:27 10:53:30

A Yes. The figures show that. 10:53:34

Q And then if you look at page 70 of Schaffer, that's Exhibit 1005 -- excuse me. Paragraph 70. I'm sorry. Not paragraph 70. Paragraph 77. Paragraph 77 also refers to third seal member 165, correct? 10:53:37 10:53:41 10:53:47 10:54:11

A Yeah, at the end of that paragraph, it states that, The lumen 193 of the third seal member 165 is able to retract to an unsealed configuration. 10:54:14 10:54:43 10:54:47

Q And then actually, up in the previous column, it refers to it again, The lumen 193 of third seal member 165 is at least partially collapsed by the compressive force 67. Do you see that? 10:54:49 10:54:53 10:55:00 10:55:05

A Yes. 10:55:06

Q So the third seal member 165 forms the seal as described in paragraph 77, correct? 10:55:07 10:55:17

A That's what paragraph 77 is saying. 10:55:19

Q And paragraph 77 relates to the embodiment of Figures 30 through 34; is that correct? 10:55:25 10:55:28

A It appears that they relate to Figures 30 through 34 where paragraph 75 at the end says that, The seal module 100 can be formed of one or more materials, including the relative properties above. 10:55:30 10:55:40 10:55:46 10:55:50

Q So now let's look back at page 21 of your declaration. The embodiment that you're discussing here on page 21 of Figures 12 through 15 includes the seal member 165 as we just discussed, right? 10:55:53 10:56:04 10:56:40 10:56:48

A It lists that seal member 165 as part of seal module 100. 10:56:50 10:56:56

Q And for your citation that the disclosure relates to, Figures 12 through 15, you cite paragraph 68 and 69. Do you see that? 10:56:57 10:57:03 10:57:09

A Yes. 10:57:09

Q What I'm trying to understand is just below that, just below the figure, you criticize patent owner as not depicting a compliant sealing member as described in Schaffer, and you cite the exact same paragraph 68. So what I'm trying to understand is, is the compliant seal member of paragraph 68 included in the embodiment of Figures 30 through 34 or not? 10:57:10 10:57:17 10:57:22 10:57:25 10:57:31 10:57:37 10:57:43

MR. STOWELL: Objection. Compound. Vague. 10:57:49

THE WITNESS: I think it's clear that 68 and 69 in Schaffer are referring to the earlier embodiments that are passive. They describe it as hands-free operation at the end of paragraph 69. For those to function, they would need a very compliant, gel-like, soft material is how they describe it in the patent. 10:57:50 10:58:05 10:58:12 10:58:17 10:58:22 10:58:27

Whereas in 30 through 34, I believe that material is not -- would not be appropriate, would not function with a -- with the design shown on Figures 30 through 34. 10:58:30 10:58:33 10:58:39

BY MR. HAMILTON: 10:58:47

Q So patent owner argues properties that seal -- 10:58:49

withdraw the question. 10:58:56

So then is it your testimony that the third seal member 165, as disclosed with respect to Figures 12 through 15, is not included in the embodiment of Figures 30 through 34? 10:58:57 10:59:49 10:59:54 11:00:01

A I think in paragraph 77, when they're talking about third seal member 165, that just means the middle most seal member if there's more than one, and that could have, as paragraph 75 says, any of its respective seal members can be formed from one or more materials. In Figure 30 through 34, that material would be something that is not particularly highly compliant, gelatinous, et cetera. 11:00:01 11:00:09 11:00:15 11:00:19 11:00:33 11:00:41 11:00:45 11:00:51

Q Could a person of ordinary skill in the art make a material that's highly compliant, yet not sticky or gelatinous? 11:00:51 11:01:23 11:01:33

MR. STOWELL: Objection. Vague. 11:01:35

THE WITNESS: I don't know. I haven't talked about that in my disclosure. 11:01:36 11:01:42

BY MR. HAMILTON: 11:01:43

Q Are you aware of any material that's highly compliant but that's not sticky? 11:01:51 11:01:54

MR. STOWELL: Objection. Vague. 11:01:59

THE WITNESS: I don't know. I haven't considered that. 11:02:00 11:02:05

BY MR. HAMILTON: 11:02:05

Q If you could turn to paragraph 59 of Schaffer, 11:02:14

Exhibit 1005. Do you see the first sentence? 11:02:17

A Yes. 11:02:41

Q The first sentence discusses a third central seal 11:02:42

member 165 that includes a material that is highly 11:02:46

elastic, deformable, compliant and yet virtually 11:02:51

noncompressible. Do you see that? 11:02:54

A Yes. 11:02:56

Q Would that material always be sticky? 11:02:56

MR. STOWELL: Objection. Vague. Incomplete 11:03:09

hypothetical. 11:03:10

THE WITNESS: I don't think it would necessarily be 11:03:10

sticky. I think the description here is also trying to 11:03:23

describe a seal member that can be compressed and can 11:03:31

recover without having permanent deformation. They talk 11:03:39

about noncompressible. In other words, it's not 11:03:45

permanently deformed. 11:03:47

So in order to have a seal member that can be 11:03:49

compressed to basically zero, when nothing's inside and 11:03:53

yet reopen is how I think that first sentence is really 11:03:58

describing the function of the -- any seal member. 11:04:04

BY MR. HAMILTON: 11:04:08

Q When you say any seal member, you mean any seal 11:04:11

member used throughout Schaffer, correct? 11:04:13

A They're describing seal members within Schaffer, I believe. 11:04:14 11:04:21

Q And that could include the seal member in the embodiment of Figures 30 through 34, correct? 11:04:21 11:04:23

A Yes. I think they refer back. When describing 30 through 34, they refer back to prior descriptions of materials that are potential materials to use for the seal member. 11:04:26 11:04:43 11:04:47 11:04:52

Q And that would include a material that is highly elastic, deformable, compliant, and yet virtually noncompressible, correct? 11:04:55 11:04:58 11:05:02

A That's what the first sentence says, yes. 11:05:03

Q And that material could be sticky, and it might not be sticky; is that right? 11:05:05 11:05:08

MR. STOWELL: Objection. Vague. 11:05:11

THE WITNESS: I think later on in paragraph 59, they talk about more specific materials with different shore hardness scales. Materials that are in the shore hardness 00 scale, they describe as being extremely soft, compliant, intrinsically sticky. 11:05:11 11:05:15 11:05:19 11:05:27 11:05:30

So that's a category -- a subcategory of the materials they're listing there that could perform the functions of the tubular member. 11:05:36 11:05:38 11:05:41

BY MR. HAMILTON: 11:05:44

Q So if one skilled in the art made a material as 11:05:44

set forth in paragraph 59 that had a shore hardness in this range on the 00 scale, that material, would that material be sticky? 11:05:48 11:05:55 11:05:59

A I'm not sure when the term stickiness would apply as you get to very soft materials. 11:06:04 11:06:12

Q Could that material -- could a material manufactured as described in that paragraph and having that shore hardness be used in the embodiment of Figures 30 through 34? 11:06:14 11:06:28 11:06:31 11:06:36

A Which shore hardness? 11:06:36

Q The shore hardness in paragraph 59. 11:06:37

MR. STOWELL: Objection. Vague and compound. 11:06:41

THE WITNESS: They give a wide range of shore hardnesses from 5 to 15 in the shore A categorization and 15 to 20 in the 00 measurement scale. So there's a wide range shown there that a person skilled in the art might start with materials in that range and then experiment to optimize from there. 11:06:44 11:06:55 11:07:03 11:07:09 11:07:18 11:07:23

BY MR. HAMILTON: 11:07:25

Q What do you mean experiment to optimize, optimize what? 11:07:45 11:07:50

A All the required design features, such as recovery being nondeformable, not plastically deformable, the ability to seal well around the tools. All the design requirements that might be necessary for that seal member. 11:07:50 11:07:58 11:08:05 11:08:15

Q And I think you've testified two of those requirements are the ability to seal well. So fill in the gaps, right, that's one of them? 11:08:17 11:08:24 11:08:27

A I think the goal of the project would be to seal the hemostasis valve overall. 11:08:29 11:08:32

Q And that would be by filling in the gaps, correct? 11:08:36 11:08:38

MR. STOWELL: Objection. Vague. 11:08:38

THE WITNESS: It would be by preventing gaps and creating a full seal around a variety of instruments would be the design goal. 11:08:39 11:08:43 11:08:48

BY MR. HAMILTON: 11:08:51

Q And a person of ordinary skill in the art would be able to optimize that design goal, correct? 11:08:51 11:08:53

A I think they would be able to make adjustments and do experimentation to the springs, the actuating members, the seal member, the material dimensions in order to try to optimize a hemostatic valve design. 11:09:03 11:09:07 11:09:11 11:09:22

Q If you look at the last sentence of paragraph 59 in Schaffer, you see the phrase, Under very light compression? 11:09:30 11:09:55 11:10:07

A Yes. 11:10:08

Q Is it important in a hemostasis valve to form a good seal under very light compression? 11:10:16 11:10:31

A I'm not sure. I haven't really considered that. 11:10:32

The physician usability is where I think about -- when I think about compression and actuating the valve. 11:10:44 11:10:50

Q So why is Schaffer referencing that the seal can be formed under very light compression, what does Schaffer mean by that? 11:10:57 11:11:00 11:11:03

MR. STOWELL: Objection. Vague. Calls for speculation. 11:11:04 11:11:05

THE WITNESS: Well, that sentence about using a very light compression at the end of paragraph 59 is clearly referring to the materials in the very soft shore 00 scale where they refer to them as extremely soft, compliant, and sticky. And they compare it to a gelatinous substance and have a self-closing nature under a very light compression. 11:11:05 11:11:12 11:11:19 11:11:27 11:11:30 11:11:39

So I believe that is really referring to the designs shown in Figures 12 through 15 which are the designs that operate under low pressure, like blood pressure, to be self-closing and don't require -- the term they use is -- and allow a hands-free operation. The term they use in paragraph 69. 11:11:48 11:11:51 11:12:00 11:12:05 11:12:14 11:12:20

BY MR. HAMILTON: 11:12:21

Q So other than in that embodiment, is there any other reason one skilled in the art might want to create a seal under light compression? 11:12:21 11:12:25 11:12:28

MR. STOWELL: Objection. Vague. Outside the scope. 11:12:29

THE WITNESS: I think for a design like this, it's 11:12:31

always a balance between the spring force, the material properties of the seal member, size of devices going through it. So I think a person of skill in the art would try to optimize those, those different aspects of a design. 11:12:40 11:12:45 11:12:53 11:12:57 11:13:03

BY MR. HAMILTON: 11:13:03

Q And when you say optimize, why do you need a balance -- why do you need to optimize the balance between the spring force, the material properties of the seal member and the size of the devices going through it? 11:13:03 11:13:08 11:13:10 11:13:16

A Well, excessive spring force would mean the physician would have to push harder. So there's an ergonomic aspect to the spring force for the doctor to actuate, to open the valve. The higher spring force -- if the spring force was too high, it could exert excessive force on the seal member depending on the properties of the seal member itself. So there are several aspects that would need to be balanced if one were trying to optimize the design. 11:13:20 11:13:27 11:13:30 11:13:34 11:13:41 11:13:44 11:13:51 11:14:00 11:14:01

Q What is the problem with exerting excessive force on the seal member? 11:14:02 11:14:07

A Yeah, I don't know that there would be a problem. It depends on the thickness of the material, the amount of pressure. But, you know, conceivably, it could be -- could damage a seal member. 11:14:08 11:14:24 11:14:30 11:14:37

Q Could it also damage the catheter going through the seal member? 11:14:43 11:14:46

MR. STOWELL: Objection. Vague. 11:14:52

THE WITNESS: I don't -- I don't know. Haven't thought about that. 11:14:53 11:14:57

BY MR. HAMILTON: 11:14:57

Q Could it also damage the tools going through the seal member? 11:14:58 11:15:00

MR. STOWELL: Objection. Vague. 11:15:01

THE WITNESS: Well, the other aspect I didn't mention was you'd also want to have the ability to move the devices forward and back. So I think friction within that system might be important. Certainly design considerations might also include damage to the devices going through the tubular member. 11:15:02 11:15:12 11:15:16 11:15:21 11:15:27 11:15:31

BY MR. HAMILTON: 11:15:33

Q If you could turn to page 10 of your declaration -- supplemental declaration. Excuse me. See the figure -- annotated Figure 34 on page 10? 11:17:09 11:17:12 11:17:25

A Yes. 11:17:30

Q Is it your understanding that the figures of Schaffer are drawn to scale? 11:17:36 11:18:18

A No. I think most patents, things are not drawn to scale. 11:18:19 11:18:26

Q So here, you're comparing the thickness of the 11:18:26

U-shaped member with the thickness of the compression spring. Do you see that? 11:18:29 11:18:31

A Yes. 11:18:32

Q Do you think that's drawn to scale? 11:18:34

MR. STOWELL: Objection. Vague. 11:18:37

THE WITNESS: I don't believe most drawings in patents are necessarily drawn to scale. 11:18:38 11:18:42

BY MR. HAMILTON: 11:18:44

Q So I'm trying to figure out why do you say they have the same thickness if you don't believe this is drawn to scale? 11:18:44 11:18:47 11:18:51

A Whatever scale is drawn to, I took my calipers, and it looked like they were approximately the same thickness, that the U-shaped actuating member thickness was about the same as the compression spring diameter, giving some indication or giving a person of ordinary skill in the art some indication that those are probably relatively flexible actuating members. 11:18:51 11:18:55 11:18:57 11:19:02 11:19:10 11:19:13 11:19:14

Q How does the length of the compression spring compare to the length of the U-shaped actuating members? 11:19:16 11:19:24

MR. STOWELL: Objection. Vague. 11:19:27

THE WITNESS: The length of the compression spring in its compressed state or uncompressed state or unwound state? 11:19:28 11:19:37 11:19:41

BY MR. HAMILTON: 11:19:42

Q Let's say the unwound state. 11:19:42
A I have no idea. 11:19:47
Q The compression spring is much longer than the U-shaped members in an unwound state, isn't it? 11:19:48 11:19:51
MR. STOWELL: Objection. Asked and answered. 11:19:55
THE WITNESS: I would assume if an unwound state, it would be a longer piece of spring steel, yes. 11:19:57 11:20:00
BY MR. HAMILTON: 11:20:03
Q If you had two identical materials of identical thickness and one was many times longer than the other, would you expect the one that was many times longer to be more flexible? 11:20:08 11:20:13 11:20:19 11:20:22
MR. STOWELL: Objection. Incomplete hypothetical. 11:20:30
THE WITNESS: Yeah, I haven't considered that. This is just considering the diameter shown of the compression spring as being very similar to the thickness shown of the actuating member, which I believe would convey a certain amount of information that it was relatively thin and flexible -- not thin, relatively flexible in its mechanical properties. 11:20:32 11:20:35 11:20:42 11:20:47 11:20:52 11:21:00 11:21:08
BY MR. HAMILTON: 11:21:09
Q And your comparison here is simply taking into account the thickness shown in this figure; is that right? 11:21:17 11:21:20
A That and the fact that my understanding of a compression spring and having a physician able to compress 11:21:23 11:21:30

the two buttons is that it would have to be a fairly soft compression spring in order to be ergonomically appropriate for a physician to use. 11:21:37 11:21:44 11:21:48

Q Do you know the material that this compression spring is manufactured from? 11:21:49 11:21:52

A I don't believe Schaffer talks about the material of a compression spring in this patent. 11:21:53 11:21:57

Q Would you need to know the material that it's manufactured from to determine how flexible the compression spring is? 11:22:00 11:22:15 11:22:18

A The material, the diameter of the wire, the stacking of the spring, all those would be important in order to quantify a compression force of a spring. 11:22:18 11:22:27 11:22:31

Q So here, your comparison is based on the thickness of the U-shaped member and the thickness of the spring, but you've ignored all the other properties of those components, correct? 11:22:35 11:22:39 11:22:41 11:22:44

MR. STOWELL: Objection. Misstates testimony. Asked and answered. 11:22:46 11:22:50

THE WITNESS: All I'm showing is that I believe the figures in Schaffer, this cross-section, would give a person of ordinary skill the sense that the actuating members are probably relatively flexible. Because they would be relatively thin. 11:22:50 11:22:53 11:23:00 11:23:03 11:23:09

BY MR. HAMILTON: 11:23:10
Q And that's based solely on the thickness of those 11:23:15
members, correct, the comparison of the thickness; is that 11:23:17
right? 11:23:20
MR. STOWELL: Objection. Misstates testimony. Asked 11:23:20
and answered. 11:23:22
THE WITNESS: That's all we're showing here. 11:23:22
BY MR. HAMILTON: 11:23:30
Q And there are many other properties of both those 11:23:34
components that would determine how flexible they are; 11:23:37
isn't that right? 11:23:39
MR. STOWELL: Objection. Vague. 11:23:42
THE WITNESS: Certainly to measure flexibility, one 11:23:42
would need to know the material, the dimensions and how 11:23:51
the material was processed even. 11:23:53
BY MR. HAMILTON: 11:23:57
Q If you could turn to page 12 of your declaration. 11:23:59
Do you see the figures shown on page 12? 11:24:12
A Yes. 11:24:14
Q So I believe a few moments ago, you testified 11:24:14
that these figures aren't to scale; is that right? 11:24:22
A I'm assuming that they're not exactly to scale. 11:24:25
As most patent drawings are not. 11:24:29
Q But do you believe the size of the components are 11:24:31
to scale relative to each other in the figure? 11:24:39

A Not necessarily. But they overall have an appearance of, you know, being a reasonably -- reasonably sized for use in a handheld, hemostatic device. 11:24:41 11:24:50 11:24:57

Q So to create the measurements of these components in this figure, you've assumed they are to scale relative to each other, correct? 11:25:01 11:25:05 11:25:10

A That was the assumption, to create these dimensions that we added, yes. 11:25:10 11:25:17

Q Does the circumference define an encircled area? 11:25:21

MR. STOWELL: Objection. Vague. 11:26:02

THE STENOGRAPHIC REPORTER: I'm sorry, Counsel. You said encircled area? 11:26:09 11:26:10

MR. HAMILTON: Encircled. 11:26:11

THE STENOGRAPHIC REPORTER: Thank you. 11:26:13

MR. STOWELL: Outside the scope. 11:26:13

THE WITNESS: Can you be more clear in the question? 11:26:14

BY MR. HAMILTON: 11:26:17

Q What don't you understand about the question? 11:26:18

A I'm not sure what you're referring to in my declaration. 11:26:19 11:26:21

Q Do you understand what the word circumference means? 11:26:21 11:26:26

A Yes. 11:26:26

Q Do you understand that the claims in the patent use the term circumferentially constrict? 11:26:28 11:26:33

A I'd have to relook at the claims, I guess. In the '011 patent you're talking about? 11:26:36 11:26:43

Q Mm-hmm. 11:26:45

A Yeah, Claim 1 uses the term circumferentially constrict after talking about a first member coupled to the first in the filament, and a second member coupled (indiscernible utterance) to the second -- 11:27:02 11:27:08 11:27:14 11:27:21

THE STENOGRAPHIC REPORTER: I'm sorry. You're speaking really fast. 11:27:21 11:27:21

THE WITNESS: Sorry. 11:27:21

THE STENOGRAPHIC REPORTER: Are you saying second end? I didn't understand that. 11:27:22 11:27:22

THE WITNESS: Second end of the filament wherein the first member and the second member of the actuator are moveable between a first position wherein the filament circumferentially -- circumferentially constricts the lumen to create a seal. 11:27:23 11:27:28 11:27:32 11:27:37 11:27:45

BY MR. HAMILTON: 11:27:55

Q Does the circumference define an encircled area? 11:27:55

MR. STOWELL: Objection. Vague. 11:28:01

THE WITNESS: Well, I think with respect to the Figures 30 through 34 in Schaffer and in '011, those are both encircling -- encircling the tubular member and circumferentially constricting. 11:28:02 11:28:32 11:28:40 11:28:49

BY MR. HAMILTON: 11:28:52
Q Does a circumference define an encircled area? 11:28:52
MR. STOWELL: Objection. Vague. 11:28:56
THE WITNESS: I'm not sure what encircled area you're referencing here. 11:28:57 11:29:01
BY MR. HAMILTON: 11:29:02
Q Do you understand what the word circumference means? 11:29:03 11:29:05
A Yes. 11:29:05
Q What does the word circumference mean? 11:29:08
A Is there a dictionary definition listed somewhere? 11:29:10 11:29:22
Q Do you need a dictionary to understand what the word circumference means? 11:29:23 11:29:24
A Well, if you have it, I would use that. 11:29:25
Q I do not. 11:29:29
A Okay. So my understanding is circumference means to surround, wrap around, encircle. 11:29:31 11:29:37
Q You said surround, wrap around, encircle. Is there a difference between those three terms, or do they all mean the same thing? 11:29:49 11:29:57 11:29:59
MR. STOWELL: Objection. Outside the scope. 11:30:00
THE WITNESS: Well, I think they all relate to circumferentially constricting a tubular member as it relates to these patents. 11:30:01 11:30:07 11:30:11

BY MR. HAMILTON: 11:30:12
Q Are you using those three words as synonyms? 11:30:38
MR. STOWELL: Objection. Outside the scope. 11:30:44
THE WITNESS: I'm giving those as examples of 11:30:46
circumferentially constricting the seal member as it 11:30:49
relates to these patents. 11:30:54
BY MR. HAMILTON: 11:30:55
Q So the question was about the word circumference 11:30:56
and what does circumference mean. And you said, Surround, 11:30:58
wrap around, encircle. Is that right? 11:31:02
A I think from a geometric standpoint, 11:31:07
circumference means the outside length of a circle or 11:31:16
something approximating a circle, doesn't have to be a 11:31:23
true circle. 11:31:27
Q What do you mean by true circle? 11:31:28
A From a geometric standpoint, a true circle. 11:31:57
Q So it could be an oval or some other shape; is 11:32:04
that right? 11:32:10
MR. STOWELL: Objection, vague. 11:32:10
THE WITNESS: I believe the term circumference can be 11:32:10
used to describe the perimeter dimension of things that 11:32:16
are not true circles, including ellipses or ovals or tree 11:32:24
trunks. 11:32:34
BY MR. HAMILTON: 11:32:36
Q So then would that be it's the outer boundary of 11:32:37

an area? 11:32:41
MR. STOWELL: Objection. Vague. 11:32:42
THE WITNESS: Circumference is, from a geometric 11:32:42
standpoint, the measurement of the outside perimeter of a 11:32:50
circle or roundish or oval type of member of geometry. 11:32:55
BY MR. HAMILTON: 11:33:06
Q Does the '011 patent disclose any embodiments 11:33:16
that do not circumferentially constrict? 11:33:19
MR. STOWELL: Objection. Outside the scope. 11:33:36
THE WITNESS: I will say the figures -- in the 11:33:37
figures, at least for the '011 patent as I interpret them, 11:34:00
it does appear that they -- that their embodiments 11:34:07
including Figures 8 and 9 do circumferentially constrict 11:34:14
the seal member. 11:34:18
BY MR. HAMILTON: 11:34:20
Q So it's your understanding every figure discloses 11:34:24
embodiments that circumferentially constrict; is that 11:34:26
right? 11:34:29
A That's my interpretation of these figures. 11:34:29
Q Are you aware of any embodiment in the 11:34:35
specification that does not circumferentially constrict? 11:34:38
A I'd have to look at more detail at the 11:34:43
specification. I haven't considered that for this -- this 11:34:47
supplementary declaration. 11:34:55
Q Did you consider it for your first declaration, 11:34:55

Exhibit 1003? 11:35:14

A I believe we did discuss circumferential 11:35:16
collapse, including more details about Figures 8 and 9 and 11:35:30
how those systems would work. 11:35:35

Q So are you aware of any embodiment in the '011 11:35:36
patent that does not circumferentially constrict? 11:35:42

A I'd have to look at more detail at the 11:35:46
specification. I haven't considered that for this 11:35:53
supplemental declaration. 11:36:00

Q Have you considered that question with respect to 11:36:02
your first declaration? 11:36:06

A I believe there was some description and 11:36:08
explanation for all the -- all the embodiments shown in 11:36:18
'011. 11:36:24

Q I see you have in front of you Figures 8 and 9 of 11:36:25
Exhibit 1001, the '011 patent. 11:37:08

A Yes. 11:37:10

Q Do those figures show interlocking bights? 11:37:10

A Yes. The two separate bights are overlapping, or 11:37:16
interlocking, I think, is the term that the patent uses as 11:37:24
one option. 11:37:27

Q What does overlap mean? 11:37:28

A The one wire is inside the other wire when 11:37:31
they're assembled as shown in Figures 8 and 9. I believe 11:37:38
that was given as an option that they would be 11:37:46

interlocking and that they don't have to be interlocking. 11:37:50
Q So if they're not interlocking, do they form an 11:37:53
encircled area? 11:37:58
A Yes. In Column 14, line 2, it states, In some 11:37:59
embodiments the first orientation is different from the 11:39:28
second orientation. These are referring to the bight 11:39:33
embodiments, such that the first and second receiving 11:39:37
areas 808A and 808B overlap and define an encircled area, 11:39:38
also referred to as a constricting area. Elongate member 11:39:45
132 is received -- can be received within the encircled 11:39:53
area 814. 11:39:56
Q What you just read is the interlocking bights, 11:39:59
correct? 11:40:08
MR. STOWELL: Objection. Misstates document. 11:40:08
THE WITNESS: In the section above, Column 13, 11:40:09
line 50, Whereas in other embodiments, the first and 11:40:29
second bights 800A, 800B can be noninterlocking. So I 11:40:32
believe it's referring to either interlocking or 11:40:42
noninterlocking. 11:40:45
BY MR. HAMILTON: 11:40:46
Q So whether they interlock or not, it's your 11:40:46
testimony that they overlap; is that right? 11:40:50
A Well, the U-shaped components have to overlap in 11:40:51
order to allow the tubing to go in between. So they're 11:41:04
overlapping in order to receive the sealing member. 11:41:08

Q And is that what's meant by overlap in -- that's your understanding of the passage you just read in Column 13, overlap means they overlap along the axis? 11:41:11 11:41:17 11:41:21

MR. STOWELL: Objection. Vague. 11:41:27

THE WITNESS: Well, it says they overlap to define an encircled area 814, so... Figure 8 is showing the overlapped area as being the 814 encircled area. 11:41:27 11:41:32 11:41:44

BY MR. HAMILTON: 11:41:49

Q Figure 8 shows the interlocking bights, correct? 11:41:49

A It does. 11:41:53

Q It does not show bights that are not interlocked, does it? 11:41:54 11:41:56

A It doesn't, but I think the interlocking area -- I'm sorry, the overlapping area, the encircled area would be identical whether the bights are interlocked or not interlocked. 11:41:57 11:42:01 11:42:04 11:42:11

Q Would the bights that are not interlocked have to be contacting each other to form an encircled area? 11:42:11 11:42:26

MR. STOWELL: Objection. Vague. 11:42:31

THE WITNESS: I haven't thought about it. 11:42:31

BY MR. HAMILTON: 11:42:37

Q Can you think about it now? 11:42:38

A It's not something I've considered in my declaration for today. 11:42:39 11:42:45

Q If the bights are not contacting each other side 11:42:46

by side, would that form an encircled area? 11:42:52

A I guess I would say if they're close enough to 11:42:56

compress the tubing, then they're forming an encircled 11:43:20

area around the tubing. 11:43:24

Q So whether or not the compression is along a 11:43:26

circumference, the bights would compress the tubing; is 11:43:36

that right? 11:43:40

MR. STOWELL: Objection. Vague. 11:43:40

THE WITNESS: Can you explain the compression along 11:43:40

the circumference? 11:43:50

BY MR. HAMILTON: 11:43:51

Q If they're interlocking, there is compression 11:43:51

along a single circumference, correct? 11:43:55

MR. STOWELL: Objection. Vague. 11:43:57

THE WITNESS: I'm not sure. I haven't addressed that 11:43:57

in my declaration. 11:44:11

BY MR. HAMILTON: 11:44:13

Q If the bights are side by side, would each bight 11:44:19

form an arc around the tubular member? 11:45:13

MR. STOWELL: Objection. Vague. 11:45:17

THE WITNESS: Yeah, I really haven't considered that. 11:45:19

I'm not sure what -- I'm not sure what -- what the 11:45:30

question is, I guess. 11:45:36

BY MR. HAMILTON: 11:45:37

Q What don't you understand about the question? 11:45:37

A How are you using the term arc? 11:45:38
Q Do you understand what the term arc means? 11:45:48
A Yes. 11:45:50
Q What does arc mean? 11:45:51
A A curve. A bend or a curve. 11:45:54
Q What's the difference between an arc and a circumference? 11:46:04
MR. STOWELL: Objection. Outside the scope. 11:46:10
THE WITNESS: I think before I said circumference is surrounding, encircling or the measurement of a perimeter of a circle is a circumference. 11:46:11
BY MR. HAMILTON: 11:46:29
Q And how is that different from an arc? 11:46:31
MR. STOWELL: Objection. Outside the scope. 11:46:36
THE WITNESS: An arc has a length -- 11:46:39
MR. STOWELL: Vague. 11:46:40
THE WITNESS: -- that's something less than a complete circle. Something less than a complete circumference. 11:46:43
BY MR. HAMILTON: 11:46:44
Q So it would be fair to say an arc is a partial, could be a partial circumference? 11:46:47
MR. STOWELL: Objection. Vague. 11:46:50
THE WITNESS: From a geometric standpoint, an arc is a part of a curve or a circle. 11:46:50
11:46:53
11:46:57
11:46:57
11:47:10

BY MR. HAMILTON: 11:47:11
Q And if two arcs -- could two arcs form a 11:47:12
circumference? 11:47:19
MR. STOWELL: Objection. Vague. Outside the scope. 11:47:20
THE WITNESS: With respect to the patent, I think the 11:47:21
arcs shown in, for instance, Figure 8, together form a 11:47:30
circumference around the seal member. 11:47:38
BY MR. HAMILTON: 11:47:41
Q And Figure 8 again shows interlocking bights, 11:47:45
correct? 11:47:50
A It shows interlocking bights and I think it could 11:47:50
show noninterlocking bights and I would have the same 11:47:53
answer. 11:47:56
Q What do you mean it could show interlocking 11:47:56
bights, does it show interlocking bights or not? 11:48:08
MR. STOWELL: Objection. Asked and answered. 11:48:11
THE WITNESS: The specification says they could be 11:48:12
interlocking or noninterlocking. So they could have shown 11:48:14
noninterlocking. They chose to show interlocking bights 11:48:23
in Figure 8. 11:48:26
BY MR. HAMILTON: 11:48:27
Q Is there any figure showing noninterlocking 11:48:27
bights in the '011 patent? 11:48:31
A I don't believe so. 11:48:33
Q So if the bights of Figures 8 and 9 were 11:48:34

noninterlocking, they're side by side, would each bight form an arc around the tubular member? 11:49:16 11:49:20

MR. STOWELL: Objection. Outside the scope. Vague. 11:49:25

THE WITNESS: I think the curved portion could be considered an arc. And together, they would act to form an encircled area. 11:49:28 11:49:32 11:49:37

BY MR. HAMILTON: 11:49:39

Q But those two arcs would not actually connect, would they? 11:49:39 11:49:43

MR. STOWELL: Objection. Vague. 11:49:44

THE WITNESS: They would not be interlocking if they were side by side. 11:49:45 11:49:48

BY MR. HAMILTON: 11:49:53

Q And because they're not interlocking, they wouldn't connect, would they? 11:49:55 11:49:58

MR. STOWELL: Objection. Vague. 11:49:59

THE WITNESS: They wouldn't be interlocked if that's what you mean by connected. 11:49:59 11:50:07

BY MR. HAMILTON: 11:50:08

Q If the bights were interlocked, would that form a singular substantially circular line that encircles the tubular member? 11:50:41 11:50:48 11:50:55

MR. STOWELL: Objection. Vague. Outside the scope. 11:50:55

THE WITNESS: I think what it would form is how they describe it in the patent. Column 14. They describe an 11:50:57 11:51:11

encircled area 814. 11:51:27
BY MR. HAMILTON: 11:51:29
Q And is that encircled area -- does that encircled 11:51:29
area have a singular substantially circular line? 11:51:33
MR. STOWELL: Objection. Vague. 11:51:39
THE WITNESS: I'm not sure what that means. 11:51:40
BY MR. HAMILTON: 11:51:42
Q The two side-by-side arcs form a singular 11:51:46
substantially circular line? 11:51:54
MR. STOWELL: Objection. Vague. 11:51:58
THE WITNESS: I'm not sure where substantially 11:51:58
circular line is coming from or -- 11:52:06
BY MR. HAMILTON: 11:52:07
Q You don't understand what those words mean? 11:52:07
A I don't understand the reference to those words 11:52:08
that you're referring to. 11:52:10
Q Do you understand what substantially means? 11:52:12
A Sure. 11:52:15
Q Do you understand what singular means? 11:52:16
A With respect to these designs and patents, I'm 11:52:19
not sure what substantially singular line means. 11:52:22
Q Do you understand what circular means? 11:52:26
A Yes. 11:52:29
Q What's a circular line? 11:52:29
MR. STOWELL: Objection. Vague. Outside the scope. 11:52:31

THE WITNESS: A circle. 11:52:33
BY MR. HAMILTON: 11:52:36
Q What's a singular circular line? 11:52:42
MR. STOWELL: Objection. Asked and answered. 11:52:46
THE WITNESS: I'm not sure how it relates to this patent or what section you're reading from to find that reference. 11:52:47 11:52:50 11:52:57
BY MR. HAMILTON: 11:52:57
Q Do you understand what a singular circular line is? 11:53:03 11:53:05
MR. STOWELL: Objection. Asked and answered. 11:53:06
THE WITNESS: I think I said it's a circle. 11:53:08
BY MR. HAMILTON: 11:53:11
Q And for that circle, is one able to trace the circle completely around its circumference? 11:53:13 11:53:18
MR. STOWELL: Objection. Outside the scope. 11:53:22
THE WITNESS: I think that's the definition of a circle. 11:53:23 11:53:29
BY MR. HAMILTON: 11:53:30
Q So that's a yes? 11:53:30
A I think what you're describing is the definition of a circle. 11:53:31 11:53:37
Q If you could turn to Column 4 of the '011 patent. I want to ask you about the sentence beginning on line 51. 11:53:38 11:54:18
A You said Column 4? 11:54:36

Q Column 4, the sentence beginning on line 51. 11:54:38
A Okay. 11:54:41
Q So the sentence beginning at line 51, In some 11:56:14
embodiments. Do you see that? 11:56:19
A Yes. 11:56:19
Q Earlier, I had asked if there were embodiments 11:56:22
disclosed that do not circumferentially constrict. Does 11:56:29
this help you answer this question? 11:56:37
MR. STOWELL: Objection. Outside the scope. Vague. 11:56:38
THE WITNESS: (Indiscernible utterance)I don't think 11:56:40
it changes my answer. 11:57:56
THE STENOGRAPHIC REPORTER: I'm sorry. Repeat that? 11:57:56
THE WITNESS: I don't think it changes my answer that 11:57:58
the embodiments shown are all circumferentially 11:58:00
constricting a tubular member. 11:58:08
BY MR. HAMILTON: 11:58:10
Q When you say the embodiments shown, you mean in 11:58:13
the figures? 11:58:15
A In the figures. And in this paragraph you asked 11:58:15
me to read. 11:58:20
Q And this paragraph says, In some embodiments, the 11:58:20
at least one filament circumferentially constricts the 11:58:30
tubular member. Do you see that? 11:58:34
A Yeah. 11:58:34
Q So does that imply that there are embodiments 11:58:37

that do not circumferentially constrict? 11:58:40
MR. STOWELL: Objection. Vague. Outside the scope. 11:58:43
THE WITNESS: I don't recall embodiments that don't 11:58:45
circumferentially constrict. 11:58:52
BY MR. HAMILTON: 11:58:52
Q So as you sit here today, you're not aware of any 11:59:01
embodiment in the '011 that patent that does not 11:59:04
circumferentially constrict, where a filament does not 11:59:07
circumferentially constrict the tubular member; is that 11:59:11
right? 11:59:19
MR. STOWELL: Objection. Asked and answered. 11:59:19
THE WITNESS: That's my recollection, is that the 11:59:21
embodiment in '011 all discuss circumferentially 11:59:25
constricting using a filament of some type. 11:59:33
BY MR. HAMILTON: 11:59:34
Q And that was your understanding in rendering your 11:59:35
opinion in this case; is that correct? 11:59:37
A That's my understanding. 11:59:38
Q And the fact that this paragraph says, In some 11:59:44
embodiments, the at least one filament circumferentially 11:59:48
constricts, doesn't change your answer. You still believe 11:59:53
all the embodiments in the '011 patent circumferentially 11:59:59
constrict; is that right? 12:00:03
MR. STOWELL: Objection. Asked and answered. 12:00:03
THE WITNESS: That's my recollection, not having 12:00:04

looked at it in great detail today. 12:00:07
MR. STOWELL: We've been going another hour and a half. So when you reach a good time for a break, let's do that. 12:00:31 12:00:33 12:00:35
MR. HAMILTON: Sure, yeah. Let's take a break. 12:00:36
MR. STOWELL: Okay. 12:00:37
THE VIDEOGRAPHER: Okay. We are going off the record. The time is 12:00 o'clock p.m. 12:00:38 12:00:40
(Recess taken.) 12:35:39
THE VIDEOGRAPHER: We are back on the record. The time is 12:35 p.m. 12:35:39 12:35:46
BY MR. HAMILTON: 12:35:48
Q Mr. Thornton, do you understand you're still under oath? 12:35:50 12:35:51
A Yes. 12:35:51
Q Did you review any documents during the break? 12:35:52
A No. 12:35:57
Q Did you communicate with anybody in any way regarding your testimony here today? 12:35:58 12:36:01
A No. 12:36:05
Q Did you communicate with anybody regarding this matter in any way? 12:36:05 12:36:07
A No. 12:36:08
Q What is steel rebar? 12:36:08
MR. STOWELL: Objection. Vague. Outside the scope. 12:36:17

THE WITNESS: In my declaration that I gave as an example of -- well, steel rebar is using construction for reenforcing concrete. 12:36:18 12:36:24 12:36:36

BY MR. HAMILTON: 12:36:37

Q Are you aware of steel rebar being used in a hemostasis valve? 12:36:39 12:36:43

A No. 12:36:45

Q Would a person of ordinary skill in the art ever use steel rebar in a hemostasis valve? 12:36:46 12:36:50

A No. 12:36:53

MR. HAMILTON: All right. I have no further questions. 12:37:22 12:37:24

Thank you for your time today. 12:37:24

MR. STOWELL: I don't have any questions either. 12:37:26

THE VIDEOGRAPHER: Okay. One moment, I'll read us off. 12:37:32 12:37:36

This marks the end of the deposition of Troy L. Thornton. We're going off the record at 12:37 p.m. 12:37:40 12:37:44

(WHEREUPON THE DEPOSITION WAS CONCLUDED AT 12:37 P.M.)

Please be advised I have read the foregoing deposition, pages 1 through 86, inclusive.

I hereby state there are:

(Check one)_____ no corrections

_____ corrections per attached

_____

TROY L. THORNTON

--oOo--

WITNESS'S CHANGES OR CORRECTIONS

NOTE: If you are adding to your testimony, print the exact words you want to add. If you are deleting from your testimony, print the exact words you want to delete. Specify with "Add" or "Delete" and sign this form.

Deposition of: TROY L. THORNTON
Case Title: IMPERATIVE V. INARI
Date of Deposition: AUGUST 15, 2025

I,_____have

the following corrections to make to my deposition:

Page Line Change/Add/Delete

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CERTIFICATE OF SHORTHAND REPORTER/STENOGRAPHER

I, Christa Yan, Certified Shorthand/Stenographic Reporter within and for the State of California do hereby certify:

That Troy Thornton, the Witness whose deposition is hereinbefore set forth, was duly sworn by me before the commencement of such deposition and that such deposition was taken before me and is a true record of the testimony given by such witness.

I further certify that both parties were represented by counsel at the deposition.

I further certify that the deposition of Troy Thornton, occurred at the offices of Knobbe Martens San Francisco on August 15, 2025, commencing at 9:01 a.m. to 12:37 p.m.

I further certify that I am not related to any of the parties to this action by blood or marriage, I am not employed by or an attorney to any of the parties to this action, and that I am in no way interested, financially or otherwise, in the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my hand this 20th day of August 2025.



_____
CERTIFIED SHORTHAND/STENOGRAPHIC REPORTER
IN AND FOR THE STATE OF CALIFORNIA

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