UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

IMPERATIVE CARE, INC.,	)
	)
Petitioner,	)
	)
vs.	) Case No. IPR2025-00156
	)
INARI MEDICAL, INC.,	) Patent No. 11,697,012
	)
Patent Owner.	)
_____	)

VIDEOTAPED DEPOSITION OF

TROY L. THORNTON

SAN FRANCISCO, CALIFORNIA

THURSDAY, NOVEMBER 20, 2025

Reported Stenographically By:
Cody Knacke, RDR, CSR No. 13691
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Pages: 1 - 66

Inari-2033
Imperative Care, Inc. v. Inari Medical, Inc.
IPR2025-00289

INARI-2014
Imperative Care, Inc. v. Inari Medical, Inc.
IPR2025-00156

1 VIDEOTAPED DEPOSITION OF TROY L. THORNTON,
2 taken before Cody Knacke, RDR, CSR No. 13691, a
3 Certified Shorthand Reporter for the State of
4 California, commencing on Thursday,
5 November 20, 2025, at 12:56 p.m., at 333 Bush
6 Street, 21st Floor, San Francisco, California.
7
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25

I - N - D - E - X

EXAMINATION BY:	PAGE
BY MR. HAMILTON	5

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MARKED	DESCRIPTION	PAGE
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Exhibit 2012	Declaration of Troy Thornton in Support of Opposition to Plaintiff's Motion for Preliminary Injunction	62

PREVIOUSLY MARKED EXHIBITS

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Exhibit 1001	U.S. Patent No. 11,697,012	56
Exhibit 1003	Declaration of Troy L. Thornton in Support of Inter Partes Review of U.S. Patent No. 11,697,012	9
Exhibit 1005	U.S. Patent Application Publication No. 2003/0225379, Schaffer	17
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1 SAN FRANCISCO, CALIFORNIA
2 THURSDAY, NOVEMBER 20, 2025
3 12:56 P.M.
4 THE VIDEOGRAPHER: Here begins Media 12:56:20
5 Number 1 in the videotaped deposition of 12:56:21
6 Troy Thornton in the matter of Imperative Care, Inc. 12:56:23
7 versus Inari Medical, Inc., in the United States 12:56:26
8 Patent and Trademark Office, Case Number 12:56:32
9 IPR2025-00156. 12:56:38
10 Today's date is November 20, 2025, and the 12:56:42
11 time on the monitor is 12:56 p.m. 12:56:44
12 The videographer today is Tomas Reyes 12:56:48
13 representing Planet Depos, and this video deposition 12:56:50
14 is taking place at 333 Bush Street, 21st Floor, 12:56:54
15 San Francisco, California. 12:56:59
16 Would counsel please voice identify 12:57:00
17 themselves and state whom they represent, starting 12:57:02
18 with the plaintiff. 12:57:04
19 MR. STOWELL: Joshua Stowell of 12:57:04
20 Knobbe Martens on behalf of the petitioner and the 12:57:09
21 witness. 12:57:10
22 MR. HAMILTON: Joseph Hamilton of 12:57:11
23 Perkins Coie on behalf of the patent owner. 12:57:13
24 THE VIDEOGRAPHER: The court reporter today 12:57:19
25 is Cody Knacke, representing Planet Depos. 12:57:20

1 And the witness will now be sworn. 12:57:24
2 THE STENOGRAPHER: This is Cody Knacke,
3 CSR 13691. This deposition is being recorded
4 stenographically.
5 TROY THORNTON,
6 called as a witness, having been first duly sworn,
7 testified as follows:
8 EXAMINATION
9 BY MR. HAMILTON:
10 Q. Mr. Thornton, welcome back. Thank you for 12:57:43
11 appearing today. 12:57:45
12 I know we've done this a few times. I'm 12:57:45
13 just going to go briefly over some of the ground 12:57:48
14 rules to refresh your memory. 12:57:50
15 So you understand you're under oath? 12:57:51
16 A. Yes. 12:57:53
17 Q. Is there any reason you can't give your 12:57:53
18 full, complete, and truthful testimony today? 12:57:58
19 A. No. 12:58:00
20 Q. Are you on any medications that might 12:58:00
21 prevent you from giving your full, complete, and 12:58:04
22 truthful testimony today? 12:58:06
23 A. No. 12:58:07
24 Q. If at any time you don't understand a 12:58:08
25 question, please ask for clarification. If you 12:58:14

1 don't, we're going to assume that you understand the 12:58:15
2 yes. 12:58:17
3 Is that fair? 12:58:17
4 A. Yes. 12:58:18
5 Q. I also ask that we don't speak over each 12:58:18
6 other. I'll try not to speak when you're answering 12:58:22
7 a question. If you could do the same while I'm 12:58:24
8 asking a question. And then also give an audible 12:58:26
9 answer, not a head nod. So a "yes" or a "no." 12:58:29
10 Is that fair? 12:58:40
11 A. Yes. 12:58:40
12 Q. I also ask that we -- you can take a break 12:58:41
13 any time you want, but as long as we don't do it 12:58:48
14 while a question's pending. 12:58:50
15 Okay? 12:58:51
16 A. Yes. 12:58:51
17 Q. Did you do any prep for your deposition 12:58:52
18 today? 12:58:54
19 A. Yes. 12:58:54
20 Q. What did you do? 12:58:57
21 A. Reviewed a number of documents. Met with 12:58:58
22 counsel yesterday. 12:59:02
23 Q. How long did you meet with counsel? 12:59:05
24 A. Around two hours. 12:59:07
25 Q. And by counsel do you mean Mr. Stowell 12:59:10

1 sitting next to you? 12:59:17
2 A. Yes. 12:59:18
3 Q. Was anybody else present? 12:59:19
4 A. No. 12:59:21
5 Q. Have you spoken with anybody else in 12:59:21
6 preparation for your deposition here today? 12:59:23
7 A. No. 12:59:24
8 Q. What documents did you review? 12:59:24
9 A. Several. Several documents that are listed 12:59:27
10 in the supplemental declaration. 12:59:44
11 Q. Do you recall reviewing any documents that 12:59:48
12 aren't listed in the supplemental declaration? 12:59:51
13 A. I need to look at that list of the exhibits 12:59:53
14 in the supplemental declaration. 01:00:02
15 Q. So as you sit here you don't recall 01:00:04
16 reviewing any? 01:00:06
17 A. I don't believe I reviewed anything that 01:00:06
18 wasn't listed there. No. 01:00:08
19 Q. Then I just want to be clear for the 01:00:11
20 record. 01:00:14
21 So I'm going to hand you what's been 01:00:15
22 previously marked as Exhibit 1020. 01:00:16
23 (Exhibit 1020 was previously marked by the 01:00:16
24 Certified Shorthand Reporter, and a copy is 01:00:16
25 attached hereto.) 01:00:29

1 BY MR. HAMILTON: 01:00:29
2 Q. Is this the supplemental declaration that 01:00:30
3 you just referred to? 01:00:31
4 A. Yes. 01:00:32
5 Q. I'm going to hand you another document. 01:00:32
6 This document's been previously marked as 01:01:00
7 Exhibit 10 -- 01:01:03
8 Yes? 01:01:04
9 A. Just to add to my last answer, after 01:01:04
10 looking at the exhibits, I did review the transcript 01:01:06
11 from the last deposition related to the '012 01:01:08
12 supplemental -- or '011 supplemental, I guess it 01:01:16
13 would have been. 01:01:20
14 Q. When you say transcript, you mean 01:01:20
15 transcript of your deposition? 01:01:23
16 A. My own deposition, yes. 01:01:24
17 Q. And when did you review that document? 01:01:26
18 A. This morning. 01:01:35
19 Q. Prior to this morning, had you seen that 01:01:36
20 document before? 01:01:40
21 A. I believe so. 01:01:40
22 Q. I'm going to hand you what was previously 01:01:53
23 marked as Exhibit 1003 in this matter. 01:01:55
24 ///
25 ///

1 (Exhibit 1003 was previously marked by the 01:01:55
2 Certified Shorthand Reporter, and a copy is 01:01:55
3 attached hereto.) 01:02:04
4 BY MR. HAMILTON: 01:02:04
5 Q. Do you recognize Exhibit 1003? 01:02:06
6 A. Yes. 01:02:07
7 Q. What's 1003? 01:02:07
8 A. It's a declaration of Troy Thornton in 01:02:12
9 Support of Petitioner for Inter Partes Review of 01:02:14
10 US Patent Number 11,697,012. 01:02:18
11 Q. And is this your declaration submitted in 01:02:20
12 association with this matter? 01:02:25
13 MR. STOWELL: Objection. Vague. 01:02:26
14 THE WITNESS: This was my declaration 01:02:34
15 submitted as of November 8, 2024. 01:02:35
16 BY MR. HAMILTON: 01:02:41
17 Q. Have you done any other declarations 01:02:41
18 related -- excuse me -- withdraw that question. 01:02:45
19 Have you prepared any other declarations -- 01:02:49
20 I withdraw the question. 01:03:01
21 When did you last review this Exhibit 1003? 01:03:03
22 A. I looked at parts of it yesterday in 01:03:17
23 preparation for this deposition. 01:03:22
24 Q. Did any portion of this document refresh 01:03:23
25 your recollection as to the matters of this case? 01:03:35

1 A. I'm not sure I understand the question. 01:03:37
2 Q. You said you reviewed this document 01:03:42
3 yesterday, is that correct, Exhibit 1003? 01:03:46
4 MR. STOWELL: Objection. Misstates 01:03:50
5 testimony. 01:03:52
6 THE WITNESS: I've read some portions of 01:03:52
7 the document yesterday. 01:03:56
8 BY MR. HAMILTON: 01:03:57
9 Q. And did your review of any portions of the 01:03:57
10 document refresh your recollection about any matter 01:04:00
11 in this -- any issue in this case? 01:04:02
12 MR. STOWELL: Objection. Vague. 01:04:04
13 THE WITNESS: Well, they're very 01:04:05
14 interrelated, so they cross-reference back and 01:04:18
15 forth. I was cross-referencing back and forth a few 01:04:20
16 things. 01:04:23
17 BY MR. HAMILTON: 01:04:23
18 Q. If you could turn to page 2 of 01:04:27
19 Exhibit 1003. Let me know when you're there. 01:04:39
20 A. Yes. 01:04:50
21 Q. So under the heading on page 2 it says 01:04:50
22 "Experience and Qualifications," and that goes on 01:04:55
23 through paragraph 14 on page 4; is that correct? 01:04:58
24 A. Yes. 01:05:05
25 Q. Do you have any additional experience not 01:05:06

1 included in this paragraphs 5 to 14 related to 01:05:09
2 hemostasis valves that's not listed here? 01:05:16
3 MR. STOWELL: Objection. Vague. 01:05:19
4 THE WITNESS: Can you repeat the question. 01:05:34
5 BY MR. HAMILTON: 01:05:37
6 Q. Is there anything you want to add to your 01:05:37
7 experience between paragraphs 5 to 14 related to 01:05:39
8 hemostasis valves? 01:05:41
9 MR. STOWELL: Objection. Vague. 01:05:42
10 THE WITNESS: No. 01:05:44
11 BY MR. HAMILTON: 01:05:45
12 Q. If you look at paragraph 14, paragraph 14 01:05:45
13 says you have more than 35 years of experience, and 01:06:06
14 it lists several categories. 01:06:08
15 You see that? 01:06:09
16 A. Yes. 01:06:10
17 Q. In those categories what I don't see is the 01:06:10
18 word "hemostasis valve." 01:06:16
19 Would you consider your 35 years of 01:06:19
20 experience in these categories listed in this first 01:06:22
21 sentence of paragraph 14 to include experience in 01:06:26
22 hemostasis valves? 01:06:28
23 A. The second sentence says: "I'm very 01:06:30
24 familiar with the concepts of catheters, catheter 01:06:34
25 systems, and hemostasis valves." 01:06:36

1 Q. Other than this 35 years of experience 01:06:42
2 reference in paragraph 14, do you have any other 01:06:44
3 experience with hemostasis valves? 01:06:46
4 MR. STOWELL: Objection. Vague. 01:06:48
5 THE WITNESS: During the 35 years I've 01:06:52
6 worked with several hemostasis valves on several 01:06:54
7 different catheters. 01:06:57
8 BY MR. HAMILTON: 01:06:59
9 Q. So over the course of 35 years, you said 01:06:59
10 you've worked with several hemostasis valves on 01:07:07
11 several different catheters. 01:07:10
12 Do you know about how many hemostasis 01:07:12
13 valves? 01:07:13
14 A. Just on my last project, a MitraClip 01:07:16
15 development project that was started in 2020 in 01:07:35
16 which I was the head of R&D for 12 years, that 01:07:40
17 product had at least three hemostasis valves built 01:07:44
18 in to that catheter system. 01:07:55
19 Q. Okay. So we've -- you've identified three 01:08:03
20 in your 35 years of experience. 01:08:06
21 How many others? 01:08:08
22 A. So Advanced Cardiovascular Systems, as I 01:08:09
23 talk about in paragraph 11, I didn't develop any 01:08:46
24 hemostatic -- hemostatic valves there, but we used 01:09:01
25 those regularly in clinical use and testing. 01:09:05

1 Prior to that in '95 to 2000 when I was at 01:09:15
2 Prograft Medical, we did develop -- had a 01:09:21
3 custom-made introducer sheathe, which had a custom 01:09:28
4 hemostatic valve as part of that development 01:09:31
5 project. 01:09:37
6 Q. Did that hemostatic valve you just 01:09:37
7 mentioned use a string, a wire, or some type of 01:09:40
8 flexible wire to constrict the lumen? 01:09:45
9 A. No. 01:09:48
10 Q. What caused the construction, or what 01:09:48
11 allowed that valve to seal? 01:09:53
12 A. It was a passive sealing valve that had a 01:10:01
13 silicone-type seal that had a slit and a circular 01:10:05
14 opening as part of the design. 01:10:13
15 Q. Have you ever encountered a valve in your 01:10:18
16 35 years of experience that employed a string, wire, 01:10:27
17 or other type of flexible member to constrict a 01:10:31
18 lumen? 01:10:39
19 A. At Evalve we did prototype a pinch-type 01:10:48
20 valve that was used to constrict a polymeric tube. 01:10:54
21 We didn't ever commercialize that option. That was 01:10:58
22 a side-pinch type valve on a single-lumen tube. 01:11:02
23 Q. Did that employ a string, wire, or other 01:11:10
24 flexible member to constrict the lumen? 01:11:13
25 A. No. 01:11:15

1 Q. So the question was, have you ever 01:11:15
2 encountered a valve in your 35 years of experience 01:11:18
3 that employed a string, wire, or other type of 01:11:21
4 flexible member to constrict the lumen? And you 01:11:24
5 gave me an example that didn't include that. 01:11:26
6 Do you have an example of any one you've 01:11:28
7 encountered that does include string, wire, or other 01:11:31
8 type of flexible member to constrict the lumen? 01:11:33
9 MR. STOWELL: Objection. Compound. 01:11:35
10 THE WITNESS: Not until this project 01:11:38
11 working with -- working as an expert witness here. 01:11:40
12 BY MR. HAMILTON: 01:11:43
13 Q. And when you say not until this project, 01:11:44
14 what valves have you encountered that use a string, 01:11:46
15 wire, or other type of flexible member to constrict 01:11:48
16 the lumen? 01:11:51
17 A. The valve described in '011 patents and 01:11:53
18 '0 -- other patents we've reviewed and referenced -- 01:12:03
19 Hartley, Eller, et cetera. 01:12:07
20 Q. So '011, you're referring to Inari's 01:12:11
21 patents; is that right? 01:12:14
22 A. Yes. 01:12:16
23 Q. And have you ever reviewed an Inari device? 01:12:16
24 A. I have not seen one. 01:12:23
25 Q. Have you ever reviewed any device that 01:12:24

1 includes a string, wire, or other type of flexible 01:12:27
2 member to constrict a lumen? 01:12:29
3 MR. STOWELL: Objection. Vague. 01:12:31
4 THE WITNESS: I have not seen one. 01:12:32
5 BY MR. HAMILTON: 01:12:33
6 Q. So other than the prior art references you 01:12:33
7 just referred to, you have no experience with a 01:12:36
8 valve that includes a string, wire, or flexible 01:12:38
9 member to constrict a lumen; is that correct? 01:12:43
10 MR. STOWELL: Objection. Misstates 01:12:46
11 testimony. 01:12:47
12 THE WITNESS: I don't have experience 01:12:48
13 designing or implementing a valve with that 01:12:49
14 description that you provided. 01:12:56
15 BY MR. HAMILTON: 01:12:57
16 Q. Have you ever tested a valve with that 01:12:57
17 description? 01:12:59
18 A. Not with a flexible actuating member or 01:13:01
19 filament, no. 01:13:06
20 Q. In connection with this matter, have you 01:13:08
21 ever tested a valve with a flexible string, wire, or 01:13:22
22 other type of flexible member to constrict a lumen? 01:13:25
23 A. No. 01:13:28
24 Q. If you could pick up Exhibit 1020. This is 01:13:28
25 the supplemental declaration. And because these are 01:13:38

1 from different matters, I'm going to try to refer to 01:13:45
2 the actual exhibit number in this matter. 01:13:49
3 So when I refer to Exhibit 1020, you'll 01:13:54
4 understand what I'm referring to; correct? 01:13:57
5 A. Yes. 01:13:58
6 Q. All right. 01:13:58
7 If you could turn to paragraph 33. 01:14:00
8 A. Okay. 01:15:29
9 Q. Before I ask about that, I just wanted to 01:15:30
10 clarify for your -- the last topic. 01:15:34
11 So have you ever seen images of a valve 01:15:37
12 that includes a string, wire, or other type of 01:15:39
13 flexible member? 01:15:41
14 A. Yes. 01:15:43
15 Q. And let me clarify that question. 01:15:44
16 Images of an actual device, an actual valve 01:15:48
17 as opposed to, for example, the images in the 01:15:52
18 patents that includes a string, wire, or other type 01:15:55
19 of flexible member to constrict a lumen. 01:15:59
20 MR. STOWELL: Objection. Vague. Compound. 01:16:01
21 THE WITNESS: I do remember seeing images 01:16:09
22 from a -- I guess it was the court -- court filing, 01:16:11
23 district court filing, maybe. I can't remember what 01:16:18
24 document that was in. 01:16:27
25 ///

1 BY MR. HAMILTON: 01:16:29
2 Q. Do you recall if that was before or after 01:16:30
3 you rendered your -- we'll say you signed your first 01:16:31
4 declaration in this matter, Exhibit 1003? 01:16:35
5 A. I don't remember. 01:16:44
6 Q. Okay. Going back to paragraph 33 of 01:16:44
7 Exhibit 1020. 01:17:06
8 In the first sentence you refer to a highly 01:17:10
9 sticky or gelatinous material that would not work 01:17:15
10 well with Figures 31 through 34 of Schaffer. 01:17:18
11 Do you see that? 01:17:22
12 A. Yes. 01:17:23
13 Q. So what I want to clarify is, what is the 01:17:23
14 highly sticky or gelatinous material you're 01:17:30
15 referring to in that sentence? 01:17:35
16 A. It's how Schaffer describes those 01:17:36
17 materials. I need to look at the Schaffer reference 01:17:39
18 to clarify that. 01:17:41
19 Q. Let's do that. 01:17:43
20 I'm going to hand you what's been 01:18:03
21 previously marked Exhibit 1005. 01:18:05
22 (Exhibit 1005 was previously marked by the 01:18:05
23 Certified Shorthand Reporter, and a copy is 01:18:05
24 attached hereto.) 01:18:16
25 ///

1 BY MR. HAMILTON: 01:18:16
2 Q. Is this the Schaffer reference you've just 01:18:16
3 referred to? 01:18:18
4 A. Yes. 01:18:19
5 Q. And I'll give you Exhibit 1008 just in case 01:18:20
6 you need it. 01:18:23
7 (Exhibit 1008 was previously marked by the 01:18:23
8 Certified Shorthand Reporter, and a copy is 01:18:23
9 attached hereto.) 01:18:37
10 BY MR. HAMILTON: 01:18:37
11 Q. And then if you could turn to Exhibit 1005, 01:18:37
12 the Schaffer reference. 01:18:40
13 At paragraph 59 at about the middle of that 01:18:42
14 paragraph you can see the sentence: "This provides 01:18:50
15 a material 166 that is extremely soft and compliant 01:18:54
16 and intrinsically sticky." 01:18:57
17 Do you see that? 01:19:00
18 A. Yes. 01:19:00
19 Q. Is that the material you're referring to as 01:19:00
20 the sticky or gelatinous material in paragraph 33 of 01:19:03
21 your declaration, Exhibit 1020? 01:19:08
22 A. Yes. In paragraph 59 they give as examples 01:19:14
23 of another option, another option being in the range 01:19:19
24 between 15 and 20 Shore on the 00 scale. This 01:19:25
25 provides a material 166 that is extremely soft and 01:19:30

1 compliant and intrinsically sticky. 01:19:34
2 Q. Okay. So now looking back at your 01:19:42
3 declaration, paragraph 33, the highly sticky or 01:19:44
4 gelatinous material referenced in paragraph 33, that 01:19:49
5 would not work well with the seal modules disclosed 01:19:52
6 in Figures 31 through 34, that material 166 we just 01:19:54
7 identified in Schaffer; correct? 01:19:59
8 A. In Schaffer they provide a wide range of 01:20:00
9 material properties, including the first part of 01:20:08
10 paragraph 59, which says that can include materials 01:20:12
11 that are highly elastic, deformable, compliant, yet 01:20:15
12 virtually noncompressible. 01:20:20
13 And they give examples of vinyl, silicone, 01:20:21
14 polyurethane. 01:20:24
15 So they're listing a type that is in the 01:20:30
16 first case options that are in the range of 5 to 01:20:37
17 15 Shore A and then later talk about the Shore 00 01:20:40
18 options that are even softer, extremely soft, 01:20:45
19 compliant, and intrinsically sticky. 01:20:52
20 Q. So then is it -- is it fair to say that 01:20:59
21 your testimony is that this material 166 identified 01:21:01
22 in paragraph 59 of Schaffer is the highly sticky and 01:21:07
23 gelatinous material that would not work well with 01:21:16
24 the seal modules disclosed in Figures 1 -- 31 01:21:18
25 through 34? Excuse me. 01:21:22

1 A. They give a range of options. And what I'm 01:21:24
2 saying is that the most gelatinous -- I don't know 01:21:26
3 if they use that word there. Maybe it's later -- 01:21:33
4 sticky, softest materials would probably not work 01:21:36
5 appropriately with the design shown in Figure 31 01:21:39
6 through 34 because those must retract on their own 01:21:44
7 to an uncollapsed configuration when the tension is 01:21:49
8 released by the actuating members. 01:21:52
9 So 165 could have properties shown in the 01:22:02
10 beginning of paragraph 59 and it could have 01:22:05
11 properties that are much softer and compliant. 01:22:08
12 Q. So there you said 165. Before we were 01:22:11
13 talking about material 166. 01:22:14
14 Is there a difference between material 165 01:22:15
15 and 166? 01:22:17
16 A. Well, they use 165 for the third central 01:22:19
17 seal member to denote the third central seal member 01:22:28
18 and they use 166, I believe, as just the material 01:22:33
19 itself. 01:22:37
20 Q. And for that material itself, 166, is it 01:22:43
21 your testimony that there is a range of properties 01:22:46
22 of that material that would not be used in 01:22:49
23 Figures 31 through 34, the embodiment in Figures 31 01:22:53
24 through 34? 01:22:56
25 A. Can you repeat the question? 01:22:58

1 Q. So for that material 166, is it your 01:22:59
2 testimony that there is a range of properties of 01:23:07
3 that material 166 that would not be used in the 01:23:09
4 embodiment of Figures 31 through 34? 01:23:14
5 A. I think a person of skill in the art would 01:23:21
6 have understood that an extremely soft, gelatinous, 01:23:23
7 sticky, self-closing material -- they use that term 01:23:28
8 later in that paragraph -- would probably not work 01:23:36
9 well for a seal module that had to recover and open 01:23:39
10 once the force of the filaments was released. 01:23:45
11 Q. So you just said would not work well, but 01:23:51
12 it could be used, couldn't it? 01:23:53
13 MR. STOWELL: Objection. Vague. 01:23:56
14 THE WITNESS: I think a person of skill in 01:23:57
15 the art would not find that it works well. If it's 01:24:01
16 stuck to itself, it won't reopen. It wouldn't work, 01:24:09
17 it seems to me. 01:24:12
18 BY MR. HAMILTON: 01:24:13
19 Q. So you just said it wouldn't work. That 01:24:22
20 means you could not use that material 166 in the 01:24:25
21 embodiments of Figures 31 through 34; is that right? 01:24:27
22 MR. STOWELL: Objection. Asked and 01:24:31
23 answered. 01:24:32
24 THE WITNESS: Well, in my declaration I 01:24:37
25 said it would not work well. Could it work at some 01:24:38

1 level? I don't know. Depends on a lot of other 01:24:41
2 characteristics of the material, the other aspects 01:24:45
3 of the design. 01:24:51
4 BY MR. HAMILTON: 01:25:09
5 Q. Could a person of ordinary skill in the 01:25:09
6 art, as that term has been defined in your 01:25:12
7 declaration and in this matter, have been able to 01:25:14
8 construct an embodiment following Figures 31 through 01:25:18
9 34 of Schaffer that included material 166 that is 01:25:21
10 extremely soft and compliant and intrinsically 01:25:24
11 sticky? 01:25:28
12 A. As I said, I don't think it would work well 01:25:30
13 if you chose a material that was in that category of 01:25:34
14 the softest, most gelatinous range that they provide 01:25:38
15 in paragraph 59. 01:25:42
16 Q. So it wouldn't work well. You keep saying 01:25:45
17 wouldn't work well, but you could design an 01:25:49
18 embodiment that would work, couldn't you? 01:25:51
19 MR. STOWELL: Objection. Misstates 01:25:53
20 testimony. 01:25:54
21 THE WITNESS: Yeah, I don't know. 01:25:56
22 BY MR. HAMILTON: 01:26:01
23 Q. So let's turn to paragraph 34 of 01:26:51
24 Exhibit 1020, the very next paragraph. 01:26:53
25 Four lines down you used the phrase 01:27:22

1 "conform sufficiently to the size or the shape of 01:27:26
2 the tool inserted." 01:27:30
3 Do you see that? 01:27:31
4 A. Yes. 01:27:32
5 Q. What do you mean by conform sufficiently to 01:27:32
6 the size or the shape of the tool inserted? 01:27:36
7 A. That depends on Schaffer's U-shape 01:27:43
8 actuating members. Depending on their material 01:27:47
9 properties, dimensions, how they're attached, that 01:27:54
10 they may not sufficiently conform to every 01:27:56
11 conceivable tool that could be inserted. 01:28:03
12 Q. What material properties and dimensions 01:28:05
13 would allow those actuating members, 55, to 01:28:42
14 conform -- to sufficiently conform to the size or 01:28:48
15 shape of a tool inserted? 01:28:50
16 A. I don't know. 01:28:55
17 Q. If each of the actuating members 55 -- and 01:29:24
18 you can look at that figure that you have right 01:29:29
19 there in that -- on that same page 19 in the middle 01:29:30
20 of paragraph 34, if those were strings, would those 01:29:34
21 conform sufficiently to the size or shape of the 01:29:41
22 tool inserted? 01:29:44
23 MR. STOWELL: Objection. Outside the 01:29:49
24 scope. 01:29:50
25 THE WITNESS: I haven't really considered 01:29:52

1 replacing those U-shaped members with two strings. 01:29:53
2 In later, of course, we talk about replacing it with 01:29:59
3 a single string that's wrapped around the sealing 01:30:02
4 tube. 01:30:08
5 BY MR. HAMILTON: 01:30:08
6 Q. And why couldn't you just replace each of 01:30:09
7 those members with a string, then include two 01:30:12
8 strings? 01:30:18
9 MR. STOWELL: Objection. Outside the 01:30:19
10 scope. 01:30:20
11 THE WITNESS: I didn't say I couldn't. I 01:30:20
12 said I didn't consider it in this declaration. 01:30:22
13 BY MR. HAMILTON: 01:30:24
14 Q. So a person of skill in the art could 01:30:24
15 replace both those U-shaped members with a string or 01:30:25
16 a wire that was flexible enough to conform 01:30:30
17 sufficiently to the size and the shape of the tools 01:30:33
18 inserted; is that correct? 01:30:35
19 MR. STOWELL: Objection. Outside the 01:30:36
20 scope. 01:30:37
21 THE WITNESS: I don't know. I didn't 01:30:38
22 consider it. And it also depends on where -- where 01:30:41
23 it's attached to the buttons. 01:30:44
24 BY MR. HAMILTON: 01:30:49
25 Q. Would replacing the U-shaped actuating 01:30:53

1 members each with a string conform sufficiently to 01:30:56
2 the size and the shape of the tool inserted? 01:31:00
3 MR. STOWELL: Objection. Outside the 01:31:03
4 scope. 01:31:04
5 THE WITNESS: It depends on the tools. 01:31:08
6 Depends on the tubing. Depends on spring tension 01:31:09
7 force. Depends on where they would be attached. 01:31:14
8 It's -- I did not really consider that for this 01:31:18
9 declaration. 01:31:21
10 BY MR. HAMILTON: 01:31:21
11 Q. Can you consider it now? 01:31:22
12 A. I think I just did. 01:31:23
13 Q. So a person of skill in the art could 01:31:42
14 replace the U-shape -- each of the U-shaped 01:31:44
15 actuating members with a string or some other 01:31:48
16 flexible material like a wire, and it would 01:31:50
17 sufficiently -- excuse me -- conform sufficiently to 01:31:54
18 the size or shape of the tool inserted; is that 01:31:57
19 right? 01:31:59
20 MR. STOWELL: Objection. Asked and 01:32:00
21 answered. Outside the scope. 01:32:00
22 THE WITNESS: Yeah, I don't know. It would 01:32:02
23 depend on the -- what's being inserted, what the 01:32:03
24 dimensions are, what the tubing characteristics are, 01:32:05
25 and the string, I guess, also. 01:32:10

1 BY MR. HAMILTON: 01:32:12
2 Q. And couldn't a person of ordinary skill in 01:32:12
3 the art figure out those other variables you just 01:32:15
4 mentioned in order to make it -- make the string or 01:32:18
5 wire member conform sufficiently to the size or 01:32:22
6 shape of the tool inserted? 01:32:24
7 MR. STOWELL: Same objection. 01:32:26
8 THE WITNESS: Yeah, I don't know. I didn't 01:32:32
9 consider it here. 01:32:33
10 BY MR. HAMILTON: 01:32:40
11 Q. And a moment ago I asked if you could 01:32:41
12 consider it now, and you said you already did. 01:32:44
13 So what did you mean by that, you've 01:32:47
14 already considered it? 01:32:49
15 A. Can you read back my answer just before 01:32:51
16 that? 01:32:54
17 Q. I asked "Can you consider it now?" 01:33:28
18 You answered "I think I just did." 01:33:31
19 What did you mean by that? 01:33:32
20 A. I think it was before that. 01:33:33
21 Q. Your answer immediately before that was "I 01:33:36
22 did not really consider that for this declaration." 01:33:39
23 MR. STOWELL: That's not the complete 01:33:41
24 answer. 01:33:42
25 Objection. 01:33:44

1 For the record, the complete answer said: 01:33:50
2 "It depends on the tools, depends on the tubing, 01:33:51
3 depends on string tension force, depends on where 01:33:54
4 they would be attached. It's -- I did not really 01:33:57
5 consider that for this declaration." 01:34:00
6 MR. HAMILTON: And then I asked, "Can you 01:34:03
7 consider it now?" and you said, "I think I just 01:34:05
8 did." 01:34:07
9 What does that mean? 01:34:07
10 THE WITNESS: The same I said before, which 01:34:11
11 was it depends on the tubing characteristics, the 01:34:13
12 mechanical characteristics of the components, 01:34:17
13 string, actuator, sutures. 01:34:22
14 BY MR. HAMILTON: 01:34:25
15 Q. And could a person of ordinary skill in the 01:34:26
16 art determine what tubing characteristics, 01:34:29
17 mechanical characteristics, string, actuator, 01:34:32
18 sutures, would allow a string in place of each of 01:34:35
19 the actuating members 55 to conform sufficiently to 01:34:41
20 the size or shape of the tool inserted? 01:34:45
21 MR. STOWELL: Objection. Asked and 01:34:47
22 answered. Outside the scope. 01:34:48
23 THE WITNESS: I think a person of ordinary 01:34:52
24 skill in the art would consider those things and 01:34:55
25 could, along with other things. Like, a 01:35:00

1 single-suture line wrapping around the tubing would 01:35:01
2 be another consideration that a person of ordinary 01:35:09
3 skill would try. 01:35:14
4 BY MR. HAMILTON: 01:35:16
5 Q. So a person of ordinary skill would try 01:35:20
6 both of those scenarios you just described; is that 01:35:24
7 right? 01:35:27
8 MR. STOWELL: Objection. Outside the 01:35:27
9 scope. Misstates testimony. 01:35:29
10 THE WITNESS: I didn't consider it here. I 01:35:32
11 think it's possible that a person of ordinary skill 01:35:38
12 could try multiple different design options to 01:35:41
13 optimize sealing and recovery of the tubing. 01:35:45
14 BY MR. HAMILTON: 01:35:52
15 Q. And those different options -- would a 01:35:54
16 person of ordinary skill in the art expect that they 01:35:59
17 would successfully seal? 01:36:02
18 A. That would be the design goal, to create a 01:36:04
19 seal, but also address other design goals like 01:36:07
20 ability to recover when the tension is released. 01:36:11
21 Q. So a moment ago you said "a single-suture 01:36:14
22 line wrapping around the tubing." 01:36:28
23 Do you recall saying that? 01:36:31
24 A. Yes. 01:36:32
25 Q. Could one skilled in the art replace one of 01:36:32

1 the U-shaped members, actuating members 55, with a 01:36:42
2 single-suture line wrapping around the tubing, and 01:36:47
3 that returns to the same button so that both ends of 01:36:54
4 that line are attached to the same button? 01:36:56
5 MR. STOWELL: Objection. Outside the 01:36:58
6 scope. 01:36:59
7 THE WITNESS: What we have shown is, using 01:37:02
8 Eller or Hartley, that a single-suture line would be 01:37:08
9 able to wrap around the sealing member and attach to 01:37:17
10 the opposing button, not to the same button. 01:37:21
11 BY MR. HAMILTON: 01:37:24
12 Q. So Eller and Hartley don't have an opposing 01:37:24
13 button; correct? 01:37:29
14 A. They do not have two buttons, no. 01:37:31
15 Q. And could one skilled in the art take a 01:37:33
16 single-suture line from one button in Schaffer, wrap 01:37:37
17 it around the tubing, completely around the tubing, 01:37:43
18 so it goes 360 degrees around the tubing and back to 01:37:48
19 that same button? 01:37:51
20 MR. STOWELL: Objection. Outside the 01:37:53
21 scope. Incomplete hypothetical. 01:37:55
22 THE WITNESS: If I'm understanding what 01:37:58
23 you're saying right, I don't think that would be a 01:38:04
24 feasible design. 01:38:06
25 ///

1 BY MR. HAMILTON: 01:38:07
2 Q. And why not? 01:38:07
3 A. Because it wouldn't compress the tubing 01:38:09
4 appropriately. 01:38:14
5 Q. Why wouldn't it compress the tubing 01:38:15
6 appropriately? 01:38:18
7 A. It would pull it to one side. It wouldn't 01:38:19
8 compress it circumferentially. 01:38:30
9 Q. So if the actuating material, the actuating 01:38:42
10 member -- string, wire, whatever it is -- pulls the 01:38:46
11 tube to the side, that would not be a -- a person of 01:38:49
12 ordinary skill in the art would not adopt that 01:38:54
13 design; is that correct? 01:38:57
14 MR. STOWELL: Objection. Outside the 01:38:58
15 scope. Misstates testimony. 01:38:59
16 THE WITNESS: I haven't considered that in 01:39:00
17 this document. Doesn't seem like it would make a 01:39:03
18 sensible design to me. 01:39:09
19 BY MR. HAMILTON: 01:39:56
20 Q. If you can take a look at your Exhibit 1003 01:39:56
21 in front of you, page 35. 01:39:59
22 Do you see Figures 16 and 17 were 01:40:11
23 reproduced on page 35? 01:40:21
24 A. Yes. 01:40:22
25 Q. Isn't that exactly what's shown in 01:40:22

1 Figure 16 and 17, a single wire wrapped around the 01:40:24
2 tube pulling the tube to one side? 01:40:30
3 MR. STOWELL: Objection. Vague. 01:40:39
4 THE WITNESS: I don't see that as what you 01:40:42
5 were describing to me in looking at Figure 31 in 01:40:43
6 Schaffer. 01:40:48
7 BY MR. HAMILTON: 01:40:48
8 Q. And what's the difference? 01:40:48
9 A. I don't know. They seem to be different 01:40:49
10 mechanisms of action here. 01:40:56
11 Q. Eller has a single rotatable actuator; 01:41:04
12 correct? 01:41:11
13 MR. STOWELL: Objection. Vague. 01:41:14
14 THE WITNESS: Actuator 18 as shown in 01:41:23
15 Figure 2 is the rotating portion. 01:41:25
16 BY MR. HAMILTON: 01:41:28
17 Q. Was that a "yes"? 01:41:28
18 A. Yes. Actuator 18 rotates to actuate the 01:41:29
19 valve. 01:41:36
20 Q. And then in Figure 17 reproduced on page 35 01:41:36
21 of your Exhibit 1003, you see what's labeled 422. 01:41:40
22 Is that attached to the actuator, the 01:41:51
23 single rotatable actuator? 01:41:53
24 MR. STOWELL: Objection. Compound. 01:41:55
25 THE WITNESS: Can you ask the question 01:42:20

again? 01:42:22
BY MR. HAMILTON: 01:42:22
Q. What's labeled as 422 in Figure 17 on 01:42:23
page 35 of your Exhibit 1003, is that attached to 01:42:26
that single rotatable actuator in Eller? 01:42:31
A. It's not showing the actuator, but I 01:42:42
believe that does get attached to the actuator. 01:42:46
This is just showing the housing surrounding the 01:42:49
sleeve. 01:42:51
Q. So here we have a single -- let's call it 01:42:52
flexible wire that extends and wraps around a 01:43:04
tubular member, and it's attached to a single 01:43:10
actuator; correct? 01:43:13
A. Yes. It would appear that the 422 wire 01:43:16
member attaches to the actuator. 01:43:21
Q. And do you believe this would seal? 01:43:24
MR. STOWELL: Objection. Vague. 01:43:29
THE WITNESS: I think Eller shows 01:43:32
cross-sections of the device sealing. 01:43:35
BY MR. HAMILTON: 01:43:38
Q. And would this pull the tubular member to 01:43:38
one side? 01:43:42
MR. STOWELL: Objection. Vague. Outside 01:43:47
the scope. 01:43:56
THE WITNESS: There's not much room for it 01:43:57

1 to move, but I'm not sure how it would collapse. I 01:44:00
2 would need to look at Eller's cross-sections to see 01:44:04
3 how they show their cross-sections. 01:44:07
4 BY MR. HAMILTON: 01:44:09
5 Q. Could a person of skill in the art design 01:44:09
6 this tube member so that it is not pulled to one 01:44:12
7 side in this configuration shown in Figure 17? 01:44:15
8 MR. STOWELL: Objection. Outside the 01:44:17
9 scope. 01:44:19
10 THE WITNESS: Yeah, I don't know. I 01:44:19
11 haven't considered that. 01:44:22
12 BY MR. HAMILTON: 01:44:22
13 Q. Let's look at the previous page, 34. 01:44:25
14 There's a figure there. 01:44:28
15 You recognize that figure? 01:44:30
16 A. Yeah, it's Hartley's Figure 3. 01:44:35
17 Q. In that configuration -- 01:44:39
18 A. Sorry. This is messed up. It's stuck 01:44:41
19 under my roller or something. 01:44:45
20 Q. In that configuration of Hartley, would the 01:44:49
21 tubular member be pulled to one side? 01:44:54
22 MR. STOWELL: Objection. Vague. 01:44:56
23 THE WITNESS: Yeah, I don't know. I 01:45:05
24 haven't considered that. 01:45:06
25 ///

1 BY MR. HAMILTON: 01:45:07
2 Q. The item labeled "string filament" in that 01:45:07
3 figure, you see that? 01:45:11
4 A. Yes. 01:45:12
5 Q. That's offset from the center of the 01:45:12
6 tubular member. 01:45:17
7 Do you see that? 01:45:18
8 A. Yes. 01:45:20
9 Q. So pulling on that what's labeled "string 01:45:21
10 filament," wouldn't that pull the tubular member to 01:45:25
11 the side? 01:45:29
12 MR. STOWELL: Objection. Vague. 01:45:30
13 THE WITNESS: Yeah, I'm not sure. Depends 01:45:31
14 on material properties, space in there. It's not 01:45:34
15 clear to me what would happen. 01:45:38
16 BY MR. HAMILTON: 01:45:40
17 Q. So what I'm trying to understand is, with 01:45:40
18 respect to Schaffer, you said one wouldn't put a 01:45:42
19 single string, wrap it around the tube and have it 01:45:45
20 come back to the same button because it would be 01:45:48
21 pulled to the side, and yet that's exactly what's 01:45:50
22 shown in Hartley and in Eller. And now you're 01:45:52
23 telling me you haven't thought about it. 01:45:55
24 MR. STOWELL: Objection. Misstates 01:45:58
25 testimony. Argumentative. 01:45:59

1 THE WITNESS: I hadn't considered putting a 01:46:07
2 single line, single actuating filament around the 01:46:09
3 Schaffer valve, no. 01:46:18
4 BY MR. HAMILTON: 01:46:19
5 Q. So what I'm trying to understand is, why 01:46:36
6 would one skilled in the art, instead of replacing 01:46:41
7 each U-shaped actuating member with a single string, 01:46:45
8 put a single string -- let me withdraw that 01:46:51
9 question. It was poorly worded. 01:46:54
10 What I'm trying to understand is why one 01:46:56
11 skilled in the art wouldn't replace each U-shaped 01:46:58
12 actuating member with a single string in Schaffer 01:47:01
13 and instead put one string in place of both U-shaped 01:47:04
14 actuating members in Schaffer. 01:47:10
15 And it seems to me you're saying you have 01:47:13
16 never considered replacing each with a U-shaped 01:47:15
17 actuating members; is that correct? 01:47:18
18 MR. STOWELL: Objection. Misstates 01:47:19
19 testimony. Outside the scope. 01:47:20
20 THE WITNESS: As I show in -- on page 20, 01:47:54
21 the second image down, if those actuating members 01:48:00
22 got more and more flexible, more like a thread or a 01:48:08
23 suture, they could still not seal as well because of 01:48:14
24 the attachment points. 01:48:21
25 If you had a single suture that went across 01:48:23

1 and wrapped around one time and it attached to 01:48:27
2 opposing buttons, that seems like a very simple way 01:48:31
3 to modify the design to create a better seal around 01:48:35
4 smaller tools. 01:48:46
5 BY MR. HAMILTON: 01:48:49
6 Q. And I just want to clarify for the record. 01:48:49
7 You're now looking back at Exhibit 1020, 01:48:50
8 the figures on page 20; is that right? 01:48:54
9 A. Yes. 01:48:57
10 Q. So is it your testimony that one skilled in 01:48:58
11 the art would not replace each U-shaped member with 01:49:03
12 a string -- 01:49:06
13 MR. STOWELL: Objection. 01:49:08
14 BY MR. HAMILTON: 01:49:10
15 Q. -- for the reasons shown on this figure? 01:49:10
16 MR. STOWELL: Objection. Misstates 01:49:12
17 testimony. Outside the scope. 01:49:13
18 THE WITNESS: I'm saying it would seem to 01:49:14
19 be a pretty simple substitution to replace the two 01:49:17
20 actuating members with a single string that wraps 01:49:22
21 around one time and attaches to the opposing button. 01:49:27
22 And it may seal better as the tools are smaller and 01:49:36
23 smaller. 01:49:44
24 BY MR. HAMILTON: 01:49:56
25 Q. So I understand your testimony that it 01:49:56

1 would be simple to put a single string and attach 01:49:58
2 each end to a different button. What I'm trying to 01:50:00
3 understand is why wouldn't one skilled in the art 01:50:03
4 replace each actuator with a string as opposed to 01:50:05
5 taking a single string and spanning it between two 01:50:09
6 buttons? 01:50:12
7 MR. STOWELL: Objection. Outside the 01:50:13
8 scope. Asked and answered. 01:50:14
9 THE WITNESS: I'm kind of considering the 01:50:32
10 lower image on page 20 as -- as that actuator could 01:50:35
11 be extremely flexible, if that would be similar -- 01:50:40
12 similar to changing out those two Schaffer actuators 01:50:43
13 with a suture line, let's say. 01:50:48
14 So I think we are showing that as an option 01:50:52
15 there. 01:50:54
16 BY MR. HAMILTON: 01:51:02
17 Q. So one skilled in the art would replace 01:51:02
18 each U-shaped actuating member in Schaffer with a 01:51:05
19 string as shown in the figure -- the bottom figure 01:51:09
20 on page 20 of your Exhibit 1020; is that right? 01:51:14
21 MR. STOWELL: Objection. Misstates 01:51:17
22 testimony. Asked and answered. 01:51:18
23 THE WITNESS: I think there are many 01:51:20
24 different options that a person of skill in the art 01:51:21
25 could attempt. A very simple one would be a single 01:51:23

1 filament wrapping one time around to the opposing 01:51:28
2 buttons. Other designs could be attempted, of 01:51:31
3 course. 01:51:39
4 BY MR. HAMILTON: 01:51:40
5 Q. Would one skilled in the art be motivated 01:51:41
6 to make this change that's shown in the bottom 01:51:44
7 figure that you just described on page 20 of your 01:51:47
8 Exhibit 1020? 01:51:49
9 A. I think if the valve is not sealing well, 01:51:52
10 then other options would be considered, as I'm 01:52:01
11 showing there. 01:52:05
12 Q. So what I'm trying to understand is, why 01:52:05
13 would one skilled in the art choose a single string 01:52:07
14 in place of the two actuators as opposed to one 01:52:10
15 string replacing each actuator? 01:52:15
16 MR. STOWELL: Objection. Asked and 01:52:17
17 answered. Outside the scope. 01:52:18
18 THE WITNESS: It certainly seemed like a 01:52:24
19 simple substitution and something easy and quick to 01:52:26
20 try. 01:52:29
21 BY MR. HAMILTON: 01:52:29
22 Q. And there are multiple substitutions to 01:52:30
23 make; is that right? 01:52:33
24 MR. STOWELL: Objection. Vague. 01:52:35
25 THE WITNESS: I don't know. 01:52:37

1 BY MR. HAMILTON: 01:52:38
2 Q. You could replace each actuator with a 01:52:38
3 string. That's one option; correct? 01:52:40
4 A. That may be a possibility that a person of 01:52:49
5 skill in the art would consider. 01:52:52
6 Q. When you say may be a possibility, are you 01:52:54
7 testifying they would consider it, or they would 01:53:03
8 not? 01:53:05
9 MR. STOWELL: Objection. Asked and 01:53:06
10 answered. 01:53:08
11 THE WITNESS: I don't know if they would or 01:53:08
12 not. I didn't really address it in this 01:53:11
13 declaration. 01:53:14
14 BY MR. HAMILTON: 01:53:16
15 Q. So the only option you addressed in the 01:53:18
16 declaration is a single string attached to two 01:53:20
17 separate buttons; is that right? 01:53:23
18 A. I believe in the '012 -- yeah, '012 01:53:33
19 declaration, Exhibit 1003, I also discuss that other 01:53:45
20 aspects can be -- maybe it was in prior 01:53:52
21 declarations -- depositions, sorry, prior 01:54:00
22 depositions where I explained that other aspects 01:54:03
23 could be optimized between the spring force, the 01:54:06
24 actuator design and material properties, and the 01:54:10
25 seal module properties. 01:54:15

1 Q. So does that mean there are many options to 01:54:17
2 improve the sealing of Schaffer that don't include 01:54:40
3 replacing Schaffer's U-shaped actuating members with 01:54:43
4 a string or a wire? 01:54:48
5 A. It would depend on the size of the tools 01:54:50
6 going through, the shape of the tools, what type of 01:54:52
7 optimization might be necessary. But certainly one 01:54:58
8 option would be to simply take a string and wrap it 01:55:03
9 around the central sealing member. 01:55:07
10 Q. And is it fair to say that there are other 01:55:20
11 options with respect to taking a string or a wire 01:55:22
12 and configuring it differently around the sealing 01:55:27
13 member? So for example, two U-shaped strings? 01:55:31
14 MR. STOWELL: Objection. Vague. Compound. 01:55:34
15 Uh. 01:55:39
16 THE WITNESS: Yeah, I haven't really 01:55:39
17 considered two U-shaped strings. 01:55:41
18 BY MR. HAMILTON: 01:55:42
19 Q. So you have considered one option; is that 01:55:42
20 right? 01:55:44
21 MR. STOWELL: Objection. Misstates 01:55:44
22 testimony. 01:55:46
23 THE WITNESS: I've said in certain places 01:55:49
24 that we -- a person skilled in the art would have 01:55:56
25 aspects of the design that could be modified in 01:56:00

1 order to try to optimize a design, minimize leaks to 01:56:05
2 be able to get good opening when the force is 01:56:10
3 removed, including the ones I just mentioned, spring 01:56:15
4 force, et cetera. 01:56:19
5 So there are -- those are some of the other 01:56:22
6 options that I think I've mentioned in depositions 01:56:25
7 or declarations. 01:56:28
8 BY MR. HAMILTON: 01:56:35
9 Q. And other than connecting a single string 01:56:35
10 or wire between two different buttons, are there 01:56:38
11 other configurations of the string or wire that a 01:56:41
12 person of skill in the art would consider? 01:56:45
13 MR. STOWELL: Objection. Outside the 01:56:47
14 scope. 01:56:49
15 THE WITNESS: I don't know. 01:56:49
16 BY MR. HAMILTON: 01:56:50
17 Q. You didn't consider any of those other 01:56:50
18 configurations; is that correct? 01:56:52
19 A. Which other configurations are you talking 01:56:54
20 about? 01:56:57
21 Q. For example, two U-shaped strings. 01:56:57
22 A. Yeah, I've said my declaration didn't 01:57:01
23 include replacing those with two U-shaped strings. 01:57:07
24 Q. Another example would be a single string 01:57:10
25 that is attached on one end to a button, wraps all 01:57:12

1 the way around a tubular member, and then is 01:57:15
2 attached back to the same button at the other end. 01:57:18
3 You didn't consider that option as well; is 01:57:21
4 that right? 01:57:23
5 A. I did not consider that. 01:57:23
6 Q. So going back to page 19 of Exhibit 1020, 01:57:24
7 the portion above the figure, and back to that 01:58:04
8 phrase "conform sufficiently to the size or the 01:58:12
9 shape of the tool inserted." 01:58:16
10 And I'll ask you the question here in just 01:58:17
11 a minute. 01:58:19
12 Are you at that spot? 01:58:20
13 A. Yes. 01:58:21
14 Q. Is it fair to say that that's the reason 01:58:22
15 you believe that one skilled in the art would 01:58:27
16 replace Schaffer's U-shaped actuating members with a 01:58:29
17 string or a wire, because a string or a wire would 01:58:32
18 conform sufficiently to the size and the shape of 01:58:35
19 the tool inserted? 01:58:37
20 A. Yeah. As I say on the end of page 20: 01:58:58
21 "Because Hartley's string or Eller's wire would be 01:59:01
22 wrapped around Schaffer's seal module, with each 01:59:05
23 respective end secured to the opposing actuator 01:59:08
24 buttons, the string/wire member would be better able 01:59:10
25 to conform to varying-diameter tools in this 01:59:12

1 situation." 01:59:19
2 BY MR. HAMILTON: 01:59:32
3 Q. So if there's a configuration of a wire or 01:59:32
4 a string that would be better able to conform to 01:59:35
5 varying-diameter tools, that would motivate one 01:59:38
6 skilled in the art to make that modification; is 01:59:42
7 that right? 01:59:45
8 MR. STOWELL: Objection. Vague. 01:59:46
9 THE WITNESS: If the current design does 01:59:48
10 not conform sufficiently to create a good seal, that 01:59:49
11 would be the motivation to try other design options. 01:59:55
12 MR. HAMILTON: Why don't we take a 02:00:25
13 five-minute break. 02:00:28
14 MR. STOWELL: Okay. 02:00:28
15 THE VIDEOGRAPHER: Okay. Going off record. 02:00:29
16 Time, 2:00 p.m. 02:00:31
17 (Recess.) 02:00:34
18 THE VIDEOGRAPHER: We are back on the 02:07:23
19 record. The time is 2:07 p.m. 02:07:24
20 BY MR. HAMILTON: 02:07:27
21 Q. Do you understand you're still under oath? 02:07:27
22 A. Yes. 02:07:28
23 Q. Did you discuss or communicate with anyone 02:07:29
24 regarding your testimony during the break? 02:07:34
25 A. No. 02:07:35

1 Q. Did you talk to anyone about this matter 02:07:35
2 during the break? 02:07:37
3 A. No. 02:07:38
4 Q. Look at any documents? 02:07:38
5 A. No. 02:07:40
6 Q. Turning back to Exhibit 1020, page 20, the 02:07:40
7 two figures we were just referring to. 02:07:57
8 A. Yes, sir. 02:08:02
9 Q. If a material that was highly elastic, 02:08:03
10 deformable, compliant, and yet virtually 02:08:17
11 noncompressible was included as an inner seal member 02:08:20
12 in the tube shown -- the seal module, excuse me, 02:08:23
13 shown in those two figures, would that form a seal? 02:08:32
14 MR. STOWELL: Objection. Vague. 02:08:34
15 THE WITNESS: Depends on the material 02:08:39
16 properties and the dimensions and the other 02:08:40
17 parameters that create the seal. 02:08:44
18 BY MR. HAMILTON: 02:08:47
19 Q. And a person of ordinary skill in the art 02:08:47
20 could figure out those material properties, 02:08:50
21 dimensions, et cetera, to form a seal using an 02:08:52
22 internal seal member; correct? 02:08:56
23 MR. STOWELL: Objection. Vague. 02:08:57
24 THE WITNESS: That would certainly be the 02:09:06
25 goal of a design, would be to come up with a design 02:09:09

1 that is able to seal and meet the other design 02:09:12
2 requirements. 02:09:15
3 BY MR. HAMILTON: 02:09:16
4 Q. And could a person of ordinary skill in the 02:09:16
5 art accomplish that goal by including an internal 02:09:19
6 seal member that's highly compliant, deformable, yet 02:09:22
7 virtually noncompressible in the seal module shown 02:09:25
8 in these two figures on page 20? 02:09:31
9 MR. STOWELL: Objection. Vague. 02:09:34
10 THE WITNESS: Those are descriptive words 02:09:36
11 for a polymer. Not really sufficient to determine 02:09:40
12 if -- determine what the material properties and 02:09:46
13 characteristics would be to see if that would work. 02:09:53
14 BY MR. HAMILTON: 02:09:55
15 Q. If you look at page 59 of Exhibit 1005, 02:09:55
16 that's Schaffer -- excuse me -- paragraph 59, that's 02:09:59
17 the paragraph we were looking at earlier. 02:10:03
18 Schaffer shows -- says: "The third central 02:10:08
19 seal member 165 includes material 166 that is highly 02:10:10
20 elastic, deformable, compliant, and yet virtually 02:10:14
21 noncompressible." 02:10:19
22 Do you see that? 02:10:20
23 A. Yes. It starts with "in one embodiment," 02:10:21
24 and continues on with what you read. 02:10:33
25 Q. And do you understand what that means, 02:10:35

1 "highly elastic, deformable, compliant, and yet 02:10:37
2 virtually noncompressible"? 02:10:40
3 A. I think these are general terms to describe 02:10:42
4 the materials that they're listing as possible 02:10:51
5 materials that they list below -- vinyl, silicone, 02:10:53
6 polyurethane, for instance. 02:10:58
7 Q. And would a person of ordinary skill in the 02:10:59
8 art be able to select a material that has those 02:11:02
9 properties, that if it was included in the seal 02:11:04
10 module shown on page 20 in the two figures on 20, 02:11:08
11 that those gaps wouldn't form and that module would 02:11:13
12 be sealed? 02:11:17
13 MR. STOWELL: Objection. Vague. 02:11:19
14 THE WITNESS: I think it depends on the 02:11:21
15 seal member properties, but also on the size of the 02:11:25
16 tool that's being inserted, the location of the 02:11:31
17 attachment points for the actuating members, the 02:11:35
18 mechanical characteristics of the actuating members, 02:11:41
19 probably other characteristics. 02:11:48
20 BY MR. HAMILTON: 02:11:54
21 Q. So you said it depends on other 02:11:54
22 characteristics. 02:11:57
23 Would a person of skill in the art 02:11:57
24 understand what those characteristics are and be 02:11:59
25 able to select a material that's highly elastic, 02:12:02

1 deformable, compliant, and yet virtually 02:12:05
2 noncompressible as disclosed in Schaffer so that the 02:12:08
3 two figures on page 20 of your declaration, 1020, 02:12:16
4 would seal? 02:12:21
5 MR. STOWELL: Objection. Asked and 02:12:22
6 answered. Outside the scope. 02:12:23
7 THE WITNESS: It's difficult to say without 02:12:31
8 knowing the size of the tools inserted. I think a 02:12:35
9 person of skill in the art would find it difficult 02:12:38
10 to create a perfect -- a perfectly sealing 02:12:41
11 hemostatic valve in all cases as shown in the 02:12:49
12 figures on page 20. 02:12:55
13 BY MR. HAMILTON: 02:12:57
14 Q. It's quite complicated, isn't it? 02:12:58
15 MR. STOWELL: Objection. Vague. 02:13:00
16 THE WITNESS: What's complicated? 02:13:10
17 BY MR. HAMILTON: 02:13:12
18 Q. You just said there's all these other cases 02:13:12
19 in terms of size of the tool, materials, et cetera, 02:13:17
20 such that one skilled in the art would find it 02:13:20
21 difficult to include a material that forms a seal; 02:13:22
22 is that right? 02:13:25
23 MR. STOWELL: Objection. Misstates 02:13:25
24 testimony. 02:13:26
25 THE WITNESS: I think a person of skill in 02:13:31

1 the art has several parameters to work with, and it 02:13:33
2 would be difficult to find a perfect combination 02:13:37
3 that seals in all cases. 02:13:43
4 BY MR. HAMILTON: 02:13:44
5 Q. You mean it went beyond the ordinary skill 02:13:50
6 of a person -- of ordinary skill in the art? 02:13:58
7 A. I think a person of ordinary skill in the 02:14:00
8 art would require iteration and optimization to find 02:14:02
9 the right balance, and it still may be difficult 02:14:06
10 with this design of two U-shaped actuating members 02:14:10
11 attached at a fixed location to create a valve that 02:14:17
12 worked perfectly in all cases. 02:14:20
13 Q. Wouldn't it be simple to just attach the 02:14:22
14 location, move the U-shaped members to the 02:14:25
15 attachment together? Wouldn't that take care of it? 02:14:27
16 MR. STOWELL: Objection. Vague. 02:14:31
17 BY MR. HAMILTON: 02:14:32
18 Q. That's pretty simple. 02:14:33
19 MR. STOWELL: Vague. Compound. 02:14:34
20 THE WITNESS: I haven't considered it in 02:14:42
21 here. I think that's one possibility that a person 02:14:43
22 of skill in the art could consider, along with other 02:14:45
23 simple options like a single-suture line that might 02:14:48
24 wrap around the central sealing member. 02:14:52
25 ///

1 BY MR. HAMILTON: 02:14:54
2 Q. So I'm trying to find out. Now you're 02:14:55
3 saying they're simple options. A minute ago you 02:14:57
4 said it would be very difficult and there would be 02:15:00
5 many iterations to form a seal. 02:15:03
6 Which one is it? 02:15:05
7 MR. STOWELL: Objection. Misstates 02:15:06
8 testimony and argumentative. 02:15:07
9 THE WITNESS: What I said was for the 02:15:13
10 drawings shown in Figure 20, that to create a 02:15:14
11 perfect seal in all cases would require iteration 02:15:21
12 and still may not seal perfectly in all cases. 02:15:24
13 BY MR. HAMILTON: 02:15:29
14 Q. And there are many options to do that; is 02:15:29
15 that right? 02:15:31
16 A. There are different design considerations 02:15:35
17 for each of the components that a person of skill in 02:15:37
18 the art would optimize. 02:15:40
19 Q. And a person of ordinary skill in the art 02:15:43
20 would understand each of those design 02:15:46
21 considerations; correct? 02:15:48
22 A. I think a person of skill in the art would 02:15:53
23 be able to consider different options for the 02:15:58
24 different components and yet still may not be able 02:16:03
25 to create a perfect seal as shown with the pair of 02:16:07

1 actuators on page 20. 02:16:12
2 Q. If a single string was used as opposed to 02:16:15
3 the pair of actuators, would there be different 02:16:18
4 design considerations in that instance? 02:16:22
5 A. I think many of the same design 02:16:24
6 considerations would apply. 02:16:37
7 Q. And so is it possible that they would still 02:16:42
8 not be able to create a perfect seal as shown with 02:16:44
9 the pair of actuators on page 20 with a single 02:16:48
10 string or wire? 02:16:51
11 MR. STOWELL: Objection. 02:16:54
12 THE WITNESS: I don't know. It depends on 02:16:54
13 what's going through the -- what tools are being 02:16:56
14 inserted, I think. 02:16:58
15 MR. HAMILTON: I'm going to give you what 02:17:33
16 I'm going to ask the court reporter to mark as a new 02:17:35
17 exhibit, 2011. 02:17:38
18 (Exhibit 2011 was marked for identification 02:17:38
19 by the Certified Shorthand Reporter, and a 02:17:38
20 copy is attached hereto.) 02:18:07
21 BY MR. HAMILTON: 02:18:07
22 Q. Do you recognize Exhibit 2011? 02:18:08
23 A. Yes. 02:18:09
24 Q. And is Exhibit 2011 your declaration in an 02:18:09
25 IPR related to Patent 11,697,011? 02:18:16

1 A. Yes. 02:18:22
2 Q. If you could turn to page 50, paragraph 75. 02:18:22
3 I want you to focus on the last sentence of 02:19:04
4 page 50 that goes over the page 51. Let me know 02:19:07
5 when you're there and ready for a question. 02:19:23
6 A. Okay. 02:20:32
7 Q. What did you mean by: "The actuating 02:20:33
8 members could be formed from a thin, flexible sheet 02:20:40
9 or flat ribbon of aluminum or plastic so that they 02:20:43
10 have the flexibility to conform to the outer surface 02:20:48
11 of the cylindrical seal module"? 02:20:50
12 MR. HAMILTON: Sorry. I was going very 02:20:55
13 fast there. I'll slow it down next time. 02:20:56
14 MR. STOWELL: We'll object to questions 02:20:59
15 about Exhibit 2011 as being outside the scope of 02:21:03
16 today's deposition. 02:21:05
17 THE WITNESS: What I meant was what it says 02:21:12
18 on page 50: "The actuating members could be formed 02:21:16
19 from a thin, flexible sheet or flat ribbon of 02:21:16
20 aluminum or plastic so that they have the 02:21:16
21 flexibility to conform to the outer surface of the 02:21:16
22 cylindrical module." 02:21:28
23 BY MR. HAMILTON: 02:21:28
24 Q. You don't have anything to add beyond the 02:21:28
25 words there that you just read back to me? 02:21:32

1 A. I think that's what it means. It seems 02:21:34
2 clear. 02:21:36
3 Q. And does that mean that each U-shaped 02:21:37
4 actuating member in Schaffer would be made flexible? 02:21:40
5 So for example, like a flexible wire or a string? 02:21:44
6 MR. STOWELL: Objection. Compound. 02:21:53
7 THE WITNESS: As I said in prior 02:21:56
8 declarations, I think a person of ordinary skill in 02:21:58
9 the art would look at Schaffer and presume that they 02:22:02
10 have a certain amount of inherent flexibility that 02:22:08
11 they are -- they have some flexibility to start 02:22:11
12 with. 02:22:14
13 So this is just stating that it could be 02:22:18
14 modified to be more flexible and have a wider 02:22:22
15 surface area, narrower surface area, et cetera, to 02:22:30
16 better conform to the outer surface of the 02:22:35
17 cylindrical seal module. 02:22:37
18 BY MR. HAMILTON: 02:22:39
19 Q. So as I read this paragraph, what I 02:22:39
20 understand is you're testifying that one skilled in 02:22:42
21 the art would understand that Schaffer either 02:22:45
22 discloses in and of itself flexible U-shaped 02:22:48
23 actuating members that conform to the outer surface 02:22:51
24 of a tubular member or would modify those to make 02:22:53
25 them flexible so they conform to the outer surface 02:22:58

1 of the tubing member; is that right? 02:23:01
2 A. I think what I've said elsewhere is a 02:23:03
3 person of skill in the art would understand that 02:23:09
4 there's some flexibility in the actuating members of 02:23:11
5 Schaffer to start with. 02:23:15
6 Q. So what I'm trying to understand is, in 02:23:15
7 Exhibit 1020, you say one skilled in the art would 02:23:19
8 not simply replace each U-shaped member with a 02:23:22
9 string or a wire, and yet in this Exhibit 1 -- 02:23:25
10 excuse me -- 2011 you're saying that's exactly what 02:23:31
11 a person of ordinary skill in the art would do. 02:23:33
12 And I'm trying to understand, which one is 02:23:36
13 it? 02:23:37
14 MR. STOWELL: Objection. Misstates 02:23:41
15 testimony. 02:23:42
16 THE WITNESS: What I'm saying in 02:23:49
17 Exhibit 1003 is that they could be modified so that 02:23:51
18 they have additional flexibility to better conform 02:23:55
19 if it wasn't conforming as well initially. 02:24:00
20 BY MR. HAMILTON: 02:24:02
21 Q. And that would form a better seal; correct? 02:24:16
22 A. As I've said before, there are many 02:24:24
23 different things that could be adjusted to optimize 02:24:26
24 sealing, optimize tubing recovery. This is one 02:24:30
25 aspect, would be optimizing the actuating members. 02:24:37

1 Q. So in Exhibit 2011 -- 02:24:43
2 A. Which is which one? 02:24:47
3 Q. Which is the one you were just looking at, 02:24:49
4 so it was previously labeled Exhibit 1003 from a 02:24:53
5 different IPR. 02:24:58
6 You testify that: "To form a better seal, 02:25:07
7 the actuating members could be formed from a thin, 02:25:11
8 flexible sheet or flat ribbon of aluminum or plastic 02:25:14
9 so they have better flexibility to conform to the 02:25:20
10 outer surface of the cylindrical seal model -- 02:25:23
11 module." 02:25:26
12 MR. STOWELL: Objection. Misstates the 02:25:28
13 document. 02:25:30
14 BY MR. HAMILTON: 02:25:30
15 Q. And then in Exhibit 1020, your testimony is 02:25:30
16 one skilled in the art would not include two 02:25:38
17 flexible U-shaped members because that would not 02:25:43
18 form a better seal; is that correct? 02:25:45
19 MR. STOWELL: Objection. Misstates 02:25:47
20 testimony. 02:25:48
21 THE WITNESS: I certainly never said that 02:25:51
22 these actuating members were not flexible, to start 02:25:53
23 with. 02:25:57
24 BY MR. HAMILTON: 02:26:13
25 Q. And then you also said that if they were 02:26:13

1 flexible, they would conform to the cylindrical 02:26:16
2 shape of the seal module; correct? 02:26:19
3 MR. STOWELL: Objection. Vague. Misstates 02:26:24
4 testimony. 02:26:27
5 THE WITNESS: What I'm saying on page 50 of 02:26:27
6 Exhibit 2011 is that they could be modified in order 02:26:32
7 to optimize sealing. And as I've said elsewhere, 02:26:40
8 there are several other aspects that could also be 02:26:45
9 optimized by a person of skill in the art in order 02:26:48
10 to optimize sealing around different-size tools. 02:26:50
11 BY MR. HAMILTON: 02:26:55
12 Q. So there are many options that could be 02:26:56
13 optimized to improve sealing; is that right? 02:26:58
14 A. There are several that I have suggested in 02:27:01
15 the past, yes. 02:27:05
16 Q. And a single string connected to two 02:27:07
17 independently moving actuators is not shown in any 02:27:19
18 reference you've cited; is that right? 02:27:23
19 MR. STOWELL: Objection. Vague. 02:27:34
20 THE WITNESS: Can you repeat the question? 02:27:36
21 BY MR. HAMILTON: 02:27:37
22 Q. The configuration of a single flexible 02:27:38
23 string or wire where each end is connected to a 02:27:41
24 different independently movable actuating button or 02:27:45
25 any other type of actuator is not shown in any 02:27:49

1 reference in this matter, is it? 02:27:53
2 A. It's not shown in Eller or Hartley as two 02:27:56
3 separate buttons, no. 02:28:02
4 Q. And it's not shown in Schaffer either, is 02:28:03
5 it? 02:28:06
6 A. A single line is not shown in Schaffer, 02:28:10
7 that's correct. 02:28:12
8 Q. I'm going to hand you what's been 02:28:13
9 previously marked Exhibit 1001. 02:29:01
10 (Exhibit 1001 was previously marked by the 02:29:01
11 Certified Shorthand Reporter, and a copy is 02:29:01
12 attached hereto.) 02:29:11
13 BY MR. HAMILTON: 02:29:11
14 Q. Do you recognize Exhibit 1001? 02:29:12
15 A. Yes. 02:29:14
16 Q. If you could turn -- is this the 02:29:15
17 '012 patent that's the subject of this IPR? 02:29:28
18 A. Yes. 02:29:30
19 Q. If you could turn to page 30, Column 22. 02:29:30
20 I want to focus on Claim 1. 02:29:40
21 The fourth line down, you see the line 02:29:44
22 beginning "A hemostasis valve on the proximal end"? 02:29:46
23 Do you see that? 02:29:52
24 A. Yes. 02:29:53
25 Q. What does that mean, "on the proximal end"? 02:29:54

1 A. Well, that is typically where a hemostatic 02:30:04
2 valve would be located for a catheter. 02:30:10
3 Q. And then it actually continues "of the 02:30:12
4 catheter." 02:30:16
5 Do you see that? 02:30:17
6 A. Yes. 02:30:23
7 Q. What does that mean -- what catheter's 02:30:27
8 referred to by "the catheter"? 02:30:29
9 A. Claim 1 starts out as an aspiration 02:30:29
10 catheter. 02:30:32
11 Q. So the reference to a catheter in that 02:30:33
12 fourth line down is referring to the aspiration 02:30:36
13 catheter; is that right? 02:30:38
14 MR. STOWELL: Objection. Calls for a legal 02:30:40
15 conclusion. 02:30:41
16 THE WITNESS: That's my assumption as a 02:30:47
17 nonlawyer. 02:30:49
18 BY MR. HAMILTON: 02:30:49
19 Q. If you go back to Exhibit 1005, that is the 02:31:17
20 Schaffer reference. And it might be easier if you 02:31:20
21 want to look at Exhibit 1008 figures. And let's 02:31:26
22 just look at Figure 30. 02:31:38
23 Do you understand what's shown in 02:31:59
24 Figure 30? 02:32:02
25 A. I'd have to look deeper into Schaffer to 02:32:13

1 see how they describe it. 02:32:15
2 Q. Do you see a catheter depicted in 02:32:16
3 Figure 30? 02:32:19
4 A. No. 02:32:19
5 Q. Do you understand that Figure 30 could be 02:32:20
6 used with a catheter? 02:32:29
7 A. Yes. 02:32:30
8 Q. And where would one -- how would -- how 02:32:33
9 would one use Figure 30 with a catheter? 02:32:37
10 A. They don't have that item numbered in 02:32:42
11 Figure 30 through 34, but there would appear to be a 02:32:54
12 Luer attachment as part of the design which would 02:33:06
13 typically be used to attach to the catheter that 02:33:08
14 this distal to the hemostatic valve. 02:33:11
15 Q. And when you say there appears to be a Luer 02:33:13
16 attachment, is that on the left of Figure 30? 02:33:23
17 A. Right-bottom. 02:33:29
18 Q. Maybe if you orient that so that 02:33:30
19 Figure 30's upright. So now would that be 02:33:33
20 left-bottom? 02:33:36
21 A. Left-bottom if you're looking at the page 02:33:36
22 horizontally. 02:33:41
23 Q. Okay. And then what would be -- and one 02:33:41
24 would attach a catheter at that Luer attachment on 02:33:46
25 the left-bottom; is that right? 02:33:53

1 A. That would be a typical attachment point 02:34:00
2 for a catheter, a side arm that would then lead to a 02:34:03
3 catheter. 02:34:06
4 These are typical medical device 02:34:10
5 connections. 02:34:11
6 Q. And would something be attached to the 02:34:12
7 other end? 02:34:14
8 A. In the Schaffer drawings of 30 through 34, 02:34:25
9 that other end also not labeled -- well, 276, I'd 02:34:28
10 have to look what 276 is in this Schaffer patent. 02:34:44
11 Schaffer describes 276 as the cap 276 02:36:16
12 secured to the housing 20. And typically through 02:36:19
13 that cap would be where the tool would be 02:36:27
14 introduced. 02:36:30
15 Q. Does the -- does the term "cap" in this 02:36:30
16 context have any special meaning? 02:36:46
17 MR. STOWELL: Objection. Vague. Outside 02:36:47
18 the scope. 02:36:49
19 THE WITNESS: I think it has the meaning 02:36:51
20 that Schaffer gives it, which is the components 02:36:53
21 that's attached to the housing on the proximal end 02:36:59
22 of the device. 02:37:02
23 BY MR. HAMILTON: 02:37:03
24 Q. Is it just an opening? 02:37:03
25 MR. STOWELL: Objection. Vague. Asked and 02:37:08

1 answered. 02:37:10
2 THE WITNESS: I don't know. I'd have to 02:37:11
3 look at Schaffer in more detail of what they call 02:37:12
4 the opening, but the cap is the plastic component 02:37:15
5 that is attached to the housing, is how it's 02:37:22
6 described in the section I just read. 02:37:27
7 BY MR. HAMILTON: 02:37:36
8 Q. Would the cap cover the opening? 02:37:36
9 MR. STOWELL: Objection. Vague. 02:37:37
10 BY MR. HAMILTON: 02:37:38
11 Q. And would it have to be removed to insert a 02:37:38
12 tool? 02:37:42
13 A. I don't see anything in Schaffer that says 02:38:05
14 that that's a cap that would have to be removed. In 02:38:08
15 fact, it shows it as a -- Figure 32 shows in the 02:38:10
16 cross-section view of 32 and 34 that there's a 02:38:19
17 channel through that cap through which the tool 02:38:23
18 could be inserted and removed. 02:38:37
19 Q. So do you have an understanding of what the 02:38:40
20 purpose of that cap is in Schaffer? 02:38:44
21 A. If the cap weren't there, the seal member 02:38:53
22 wouldn't be -- wouldn't be maintained in position. 02:39:01
23 Q. So other than for insertion of a tool, is 02:39:15
24 there any other purpose for that cap? 02:39:21
25 A. It's -- it looks like it's keeping the seal 02:39:24

1 member in place also. 02:39:30
2 Q. Anything else? 02:39:38
3 A. Not that I know of. I'd have to read into 02:39:41
4 Schaffer in more detail, if they describe it 02:39:46
5 differently. 02:39:50
6 MR. HAMILTON: Why don't we take another 02:40:19
7 five-minute break. 02:40:20
8 MR. STOWELL: Okay. 02:40:21
9 MR. HAMILTON: I might be just about done. 02:40:21
10 THE VIDEOGRAPHER: Okay. Going off the 02:40:24
11 record. Time, 2:40 p.m. 02:40:25
12 (Recess.) 02:40:28
13 THE VIDEOGRAPHER: And we're back on the 02:46:59
14 record. The time is 2:46 p.m. 02:47:02
15 BY MR. HAMILTON: 02:47:06
16 Q. Do you understand you're still under oath? 02:47:09
17 A. Yes. 02:47:10
18 Q. Did you have any conversations or review 02:47:10
19 any documents or do anything related to your 02:47:13
20 testimony here today during the break? 02:47:15
21 A. No. 02:47:16
22 Q. I'm going to hand you an exhibit. 02:47:17
23 I'll ask the court reporter to mark it 02:47:27
24 2012. 02:47:29
25 ///

1 (Exhibit 2012 was marked for identification 02:47:29
2 by the Certified Shorthand Reporter, and a 02:47:29
3 copy is attached hereto.) 02:47:35
4 BY MR. HAMILTON: 02:47:35
5 Q. Do you recognize Exhibit 2012? 02:47:35
6 A. Yes. 02:48:02
7 Q. And what is it? 02:48:02
8 A. It's my Declaration in Support of 02:48:04
9 Opposition to Plaintiff's Motion for Preliminary 02:48:06
10 Injunction. I signed it September 9, 2024. 02:48:12
11 Q. Earlier today you had testified that you 02:48:17
12 had seen a device with a string that constricts a 02:48:22
13 tubular member, and you said it was in connection 02:48:28
14 with a declaration. 02:48:30
15 Is this that declaration you were referring 02:48:31
16 to? And if it's helpful, I'll refer you to page 34, 02:48:34
17 paragraph 85. It starts on paragraph 85 and goes 02:48:47
18 on. 02:48:52
19 A. I remember these pictures, yes. 02:49:04
20 Q. And is this the declaration that you 02:49:06
21 referred to this morning where you had seen a -- 02:49:08
22 pictures of a device that included a string that 02:49:11
23 constricts a tubular member in a hemostasis valve? 02:49:15
24 A. I'm not sure if it was this document. It 02:49:25
25 might have been a different document. 02:49:30

1 Q. When you say it might have been a different 02:49:31
2 document, do you mean you have another declaration 02:49:34
3 that includes images of a hemostasis valve with a 02:49:36
4 string that constricts a tubular member? 02:49:41
5 A. Not another declaration, no. 02:49:43
6 Q. What'd you mean by another document? 02:49:45
7 A. I think it was a document I reviewed with 02:49:50
8 counsel as part of putting together this. 02:50:00
9 Q. So I don't want to get into 02:50:04
10 attorney-client, you know, conversations with 02:50:06
11 counsel. I just want to -- I just want to clarify 02:50:08
12 what other document you looked at. 02:50:18
13 Is this the result of that document? Is 02:50:19
14 this the declaration that you referenced this 02:50:22
15 morning that includes pictures of a device that you 02:50:28
16 reviewed with a string wrapped around a tubular 02:50:28
17 member to constrict it? 02:50:30
18 A. This is the declaration where we -- I 02:50:32
19 talked about that, yes. 02:50:34
20 Q. And you had said the date of that was 02:50:35
21 September 9, 2024; right? 02:50:39
22 A. Yes. 02:50:39
23 Q. And you would have viewed these images 02:50:40
24 sometime before that? 02:50:42
25 A. Yes. 02:50:43

1 Q. Do you remember when you first saw these 02:50:43
2 images? 02:50:45
3 A. I don't. 02:50:45
4 Q. Did you ever see the device shown in the 02:50:46
5 images on pages 35 and 36 in person? 02:50:51
6 A. I did not. 02:50:55
7 Q. So you've -- you've reviewed images of a 02:50:56
8 device but you've never actually held the device or 02:51:00
9 inspected the device itself; is that right? 02:51:03
10 A. That's correct. 02:51:06
11 Q. All right. Great. Well, thank you for 02:51:07
12 your time. 02:51:18
13 I've got no further questions. 02:51:19
14 MR. STOWELL: I have no questions for the 02:51:20
15 witness. 02:51:21
16 THE VIDEOGRAPHER: Okay. No further 02:51:22
17 questions. We're going off record at 2:51 p.m. 02:51:23
18 (End of video record at 2:51 p.m.)
19 THE STENOGRAPHER: Mr. Stowell, would you
20 require a rough draft or expedited copy?
21 MR. STOWELL: Rough is fine. Yeah, we'll
22 take a rough.
23 (Deposition concluded at 2:51 p.m.)
24 -o0o-
25

1 DECLARATION UNDER PENALTY OF PERJURY
2
3 I hereby declare under penalty of perjury
4 that the foregoing is my deposition under oath; that
5 I have read same; and that I have made the
6 corrections, additions, or changes to my answers
7 that I deem necessary.
8
9 In witness thereof, I hereby subscribe my
10 name this day of , 2025.
11
12
13
14
15 _____
TROY THORNTON
16
17
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1 COUNTY OF LOS ANGELES,)
)
2 STATE OF CALIFORNIA,)
I, Cody Knacke, Registered Diplomate
3 Reporter, Certified Shorthand Reporter in and for
the State of California, License No. 13691, hereby
4 certify:
That Troy L. Thornton, the witness whose
5 deposition is hereinbefore set forth, was duly sworn
by me before the commencement of such deposition and
6 that such deposition was taken before me and is a
true record of the testimony given by such witness.
7 I further certify that the adverse party,
Petitioner, was represented by counsel at the
8 deposition.
I further certify that the deposition of
9 Troy L. Thornton occurred at the offices of
Knobbe Martens at 333 Bush Street, 21st Floor,
10 San Francisco, CA on Thursday November 20, 2025,
commencing at 12:56 p.m. to 2:51 p.m.
11 I further certify that I am not related
to any of the parties to this action by blood or
12 marriage, I am not employed by or an attorney to
any of the parties to this action, and that I am
13 in no way interested, financially or otherwise,
in the outcome of this matter.
14 In witness whereof, I have hereunto set my
15 hand this day: November 24, 2025.
16
17 _____
18 CODY KNACKE, RDR, CSR No. 13691
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