

1 UNITED STATES PATENT AND TRADEMARK OFFICE

2 BEFORE THE PATENT TRIAL AND APPEAL BOARD

3

4 INTUITIVE SURGICAL, INC.,

5 Petitioner,

6 v.

7 ETHICON, LLC,

8 Patent Owner.

9

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11 Case IPR2018-01254
12 U.S. Patent No. 8,479,969

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16 DEPOSITION OF BRYAN KNODEL, PH.D.

17 April 4, 2019

18 9:31 a.m.

19 Fish & Richardson

20 One Marina Park Drive

21 Boston, Massachusetts

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25

---- Reporter: Julie Thomson Riley, RDR, CRR ---

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1	I N D E X	
2	Deposition of:	Page
3	Bryan D. Knodel, Ph.D.	
4	by Mr. Desai	4
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2 MORNING SESSION

3 9:31 a.m.

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6 BRYAN D. KNODEL, PH.D.,

7 having been satisfactorily identified and duly sworn

8 by the Notary Public was examined and testified as

9 follows:

10 DIRECT EXAMINATION

11 BY MR. DESAI:

12 Q. Could you state your name for the record.

13 A. Bryan Knodel.

14 Q. And you were deposed yesterday in the 1247

15 IPR; is that right?

16 A. The Anderson case, yes.

17 Q. Okay. And for today's deposition, you
18 have a binder in front of you with the exhibits in

19 the 1254 IPR, which is the Giordano-based IPR; is
20 that right?

21 A. Yes, I do.

22 Q. Including your declaration?

23 A. Yes, I do.

24 Q. Okay. Why don't you -- before we do that,
25 what did you do to prepare today for this deposition?

1 A. I looked over my declaration and the cited
2 references in it.

3 Q. And when did you do that?

4 A. Last night.

5 Q. Okay. Did you meet with your attorney to
6 talk about the case?

7 A. I did. Yesterday afternoon.

8 Q. For how long?

9 A. Two hours.

10 Q. Okay. Do you have any corrections to make
11 to your declaration, which is Exhibit 1005?

12 A. Not that I'm aware of.

13 Q. Okay.

14 MR. KATZ: Do you happen to have an extra
15 copy of that one?

16 MR. DESAI: Yes I do. Sorry.

17 MR. KATZ: I think it would be helpful if
18 you have one.

19 Great.

20 MR. DESAI: Okay. I'll hand out these.
21 This is the -- you already have the Giordano. I'll
22 give this to --

23 MR. KATZ: Thank you.

24 THE WITNESS: Okay.

25 BY MR. DESAI:

1 Q. Okay. So for claim 24, that starts in
2 your declaration at page or let's say paragraph
3 I think it's 122; is that right?

4 A. That is correct.

5 Q. Okay. And as I understand your combination,
6 it's the Shelton stapler, adapted for use with
7 Giordano's articulation mechanism, and then
8 Wallace's surgical robot system; right?

9 A. Yes.

10 Q. Okay. I'd like you to take a look at
11 Figure 5 of Giordano, which actually is on the next
12 page in your declaration. Okay. And then at the
13 same time, if you could look at Figure 11 of
14 Shelton.

15 A. Mm-hmm.

16 Q. Okay.

17 A. Okay.

18 Q. So Shelton stapler, Figure 11, includes a
19 firing bar 14 that moves linearly to fire the
20 stapler; is that right?

21 A. That's correct.

22 Q. Okay. And Giordano's stapler includes a
23 rotary drive assembly that is formed of at least the
24 main drive shaft 48 --

25 A. Mm-hmm.

1 Q. -- bevel gear assembly 52 --

2 A. Mm-hmm.

3 Q. -- secondary drive shaft 50, drive gear
4 54, proximal drive gear 56 and helical screw shaft
5 36, and those are used to fire the stapler; right?

6 A. I didn't see the last few numbers that
7 you -- you went pretty fast. Can you -- I was
8 following you up to the very end, the secondary
9 shaft, 36, and then what was after that? Sorry.

10 Q. No, yeah, I'll do it again. I'll try to
11 do it slower.

12 A. Okay.

13 Q. Okay. So Giordano stapler has a rotary
14 drive assembly for firing the stapler that includes
15 the main drive shaft 48, bevel gear assembly 52,
16 secondary drive shaft 50, drive gear 54 --

17 A. Yes.

18 Q. -- proximal drive gear 56, and then
19 helical screw shaft 36.

20 A. Right. I followed it. Okay. Thank you.

21 Q. And those are used to fire the stapler?

22 A. That's correct.

23 Q. Okay. And as I understand your declaration,
24 you're saying that the articulation mechanism of
25 Giordano would be incorporated into the Shelton

1 stapler, so in your proposed combination, the firing
2 of the stapler would be accomplished using Shelton's
3 firing rod; is that right?

4 A. It could be.

5 Q. Well, what's your opinion in your
6 combination?

7 A. Oh, I didn't -- in my opinion that I
8 formulated, I didn't feel like I needed to
9 distinguish, because either one -- I wanted to use
10 the -- I wanted to use the articulation of Giordano,
11 but whether I stuck with the firing bar of Shelton
12 or the rotary drive of Giordano, I felt was
13 not -- either one could have worked with that
14 articulation.

15 Q. So when you say the Shelton stapler --

16 A. Mm-hmm.

17 Q. -- what do you mean?

18 I mean because in your declaration, you
19 say the Shelton stapler would be adapted for use in
20 Giordano's articulation mechanism. What do you mean
21 by the Shelton stapler?

22 A. The mechanisms of the Shelton stapler, but
23 my recollection is that there's a lot of -- you
24 know, they -- the Shelton stapler had used a firing
25 bar. The Giordano used a rotary drive, and they

1 were -- they both accomplished the same purpose.

2 They advanced the wedge and knife.

3 Q. Right. So but in your declaration, when
4 you tell the Board, I'm combining the Shelton
5 stapler, what do you mean?

6 A. Okay.

7 Q. What parts of the Shelton stapler?

8 A. The -- I believe that there's -- when I'm
9 combining -- first of all, I'm combining all three.
10 I'm combining Giordano and Shelton and Wallace, in
11 this -- that's what you started with.

12 You said -- I'll reread it: One
13 of -- "specifically one of ordinary skill in the art
14 would have understood that the Shelton stapler
15 adapted for use with Giordano's articulation
16 mechanism and Wallace's surgical robot disclose this
17 claim."

18 It's the combination of the three; right?
19 So I'm not -- I wasn't specifically trying to
20 identify this specific component versus this -- it's
21 the concepts of Giordano's articulation, Shelton's
22 rotary inputs and -- in the handle that lead to
23 driving, and those rotary inputs can rotary drive a
24 linear actuation or you can keep them rotary and
25 drive the helical screw, and Wallace has the adapter

1 to the robot. So I wasn't trying to identify -- this
2 exact part from Shelton is what I was considering.
3 That was not what I did.

4 Q. Okay. So when you said Shelton stapler,
5 you meant you're picking parts of the Shelton
6 stapler, parts of the Giordano stapler --

7 A. And parts of Wallace.

8 Q. -- and parts of Wallace?

9 A. Yes, that's what I mean.

10 Q. But what part of -- when you say the
11 Shelton stapler here, what part are you referring to
12 or parts?

13 A. I didn't specifically try to identify
14 those.

15 Q. Okay. You've explained, I think, that the
16 articulation mechanism of Giordano that you're
17 incorporating includes the articulation control 16
18 and the articulation pivot 14; right?

19 A. Can you point to my --

20 Q. Right. Yeah. So let's see, in
21 paragraph 122, you say Giordano's articulation
22 mechanism, and then you say see above claim 11;
23 right?

24 A. Okay.

25 Q. You got that?

1 A. Yes, I see that.

2 Q. And if we go to paragraph 117, that's
3 claim 11; right?

4 A. Yes.

5 Q. Okay. And at the bottom there, you define
6 Giordano's articulation mechanism is including,
7 among other things, the articulation control 16 and
8 the articulation pivot 14; right?

9 A. I do identify that the Giordano's
10 articulation mechanism includes, among other things,
11 these controls 16, yes, and articulation pivot 14,
12 yes.

13 Q. Okay. Looking at Shelton Figure 11.

14 MR. KATZ: That's right here.

15 Q. Yeah. Thank you.

16 How would the articulation pivot be
17 integrated into this device?

18 A. The outer shaft 32 of Shelton is replaced
19 with the assembly of outer tube comprising 44 and
20 42.

21 Q. And you would maintain or you could
22 maintain, in your view, the firing rod 14; right?
23 You wouldn't change that?

24 A. Fourteen. I am not -- I didn't make a
25 determination whether I would want to or needed to.

1 Maybe; maybe not.

2 Q. The Shelton stapler, am I correct, that it
3 is intended to be actuated by a clinician first
4 drawing back a closure trigger to close the jaws and
5 then drawing back the firing trigger to fire the
6 stapler?

7 A. That is my understanding as well.

8 Q. Okay. For the Shelton stapler does the
9 clinician have to pump the trigger more than once
10 to fire or does pulling the trigger all the way
11 complete a full firing? Do you know?

12 A. I don't recall. Did I -- did I comment on
13 that?

14 Q. I don't think you did. I'm asking if you
15 know.

16 A. I don't recall.

17 Q. Okay. Are you able to determine that by
18 looking at the Shelton stapler in the patent?

19 A. Perhaps, if I read through it.

20 (Pause.)

21 A. I don't know that I -- the -- I am hesitant
22 to try to state this because this patent references
23 other patents that may be included, and I don't
24 think that that's something that I have time to
25 delve into right now.

1 Q. Okay. What about Figure 6 of Shelton,
2 taking a look at that, and Figure 8? Limit it to
3 that. Do those figures instruct you as to how the
4 firing would work as to how many times the user
5 needs to pull the trigger?

6 A. From Figure 6, I would deduce that the
7 firing -- the closure trigger is pulled once, and
8 the firing trigger is pulled once.

9 Q. Okay. In paragraph 127 of your declaration,
10 that's where you address what you've labeled as
11 limitation 24.2.2.

12 A. Yes.

13 Q. Okay. And your primary position here is
14 that the Shelton stapler with the Giordano
15 articulation mechanism satisfies this limitation;
16 right?

17 A. Giordano, in view of Wallace, where the
18 Shelton stapler with Giordano's articulation
19 mechanism, yes.

20 Q. Right.

21 A. Mm-hmm.

22 Q. But then you have a sentence at the very
23 end of the paragraph that says "Moreover, Wallace,
24 likewise, teaches a surgical instrument with an
25 articulation joint providing articulation about an

1 axis transverse to the longitudinal axis, and thus
2 Wallace likewise provides the necessary teaching to
3 add articulation to the Shelton stapler."

4 Do you see that?

5 A. I do see that.

6 Q. Okay. Are you proposing an alternative
7 combination here where the Shelton stapler utilizes
8 the platform wrist mechanism that's described in
9 Wallace as opposed to the Giordano articulation
10 pivot?

11 A. What I'm proposing is that Wallace, that
12 the Wallace articulation joint creates a geometric
13 relationship where the axis is transverse to the
14 longitudinal tool.

15 Q. Okay. You didn't answer my question.

16 A. Oh, I'm sorry.

17 Q. You answered a different question.

18 A. Okay.

19 Q. I'll try again.

20 Are you proposing a combination here where
21 the Shelton stapler utilizes the platform wrist
22 mechanism that's described in Wallace as opposed to
23 the Giordano articulation pivot?

24 A. I'm not sure I understand the question. I
25 know this is the third time you've asked it, but.

1 Q. Okay. In your previous paragraph you
2 explain how the Shelton stapler will utilize a
3 Giordano articulation mechanism which we've
4 discussed as the articulation control 16 at least
5 and the articulation pivot 14; right?

6 A. No. No, that's -- if you understood me to
7 say that, I wasn't saying that we would use that
8 exact articulation control 16. Sixteen is out on
9 the shaft, and it's -- it's -- I wasn't saying we're
10 using 16 specifically.

11 Q. So you're changing your declaration?

12 A. No.

13 Can you show me where I said -- identified
14 specifically part No. 16.

15 Q. I think we just went through that.

16 A. Okay. Let's do it again.

17 Q. Paragraph 117.

18 A. Okay. I identify that that is the
19 mechanism of Giordano, but I'm not specifically
20 saying that I'm using all the -- I'm not identifying
21 the pieces of -- when I'm saying that that is -- in
22 Giordano, 16 is the articulation control; that is
23 true. What I'm not saying that it is in a
24 combination that 16 is a part that I have identified
25 that I'm using. That's the clarification I'm

1 making.

2 Q. And so when you said or Giordano disclosed
3 an articulation mechanism, including among other
4 things, an articulation control 16 and articulation
5 pivot 14 --

6 A. Right.

7 Q. -- you said that right?

8 A. I did say that, yes.

9 Q. And then later on in your declaration, you
10 say the Shelton stapler with Giordano's articulation
11 mechanism. That's what you said, paragraph 127?

12 A. I understand that.

13 Q. Right. And so now you're changing
14 this -- hold on. Let me just --

15 MR. KATZ: And hold on because I'm going
16 to object. So hold your horses.

17 Q. You're changing or you're modifying
18 paragraph 127 now, so that what you're saying here
19 is when you're saying Giordano's articulation
20 mechanism, you're not referring to the control 16?

21 MR. KATZ: And objection to form.
22 Argumentative and mischaracterizes testimony.

23 A. I'm saying that -- what I'm saying in
24 paragraph 17 is relative to Figure No. 2. I'm
25 identifying the articulation control in the pivot,

1 among other things, so that the reader can say, oh,
2 here's the articulation joint and its control.

3 Later when I say I want to use Giordano's
4 articulation, I didn't identify all the elements of
5 the articulation. I identified them relative to
6 Figure 2 for identification, so I'm not specifically
7 saying that the combination requires the specific
8 component 16. That's what I'm trying to clarify.

9 Q. Okay.

10 A. Okay.

11 Q. All right. So let's now go back to the
12 other question I was asking --

13 A. Okay.

14 Q. -- which is where you say at the end of
15 paragraph 127, are you proposing a combination here
16 where the Shelton stapler would utilize the platform
17 wrist mechanism that's described in Wallace?

18 A. I'm -- yes, so Wallace would provide a
19 longitudinal -- an axis -- Wallace articulation
20 would create an axis transverse to the longitudinal
21 tool if that were -- if that were included in a
22 combination with Shelton.

23 Q. So if someone were to use the platform
24 wrist mechanism in Wallace with the Shelton stapler,
25 you're saying that would be -- allow you to

1 articulate transverse?

2 A. Yes.

3 Q. That's what you're saying?

4 A. That's what I'm saying.

5 Q. Is it your position that somebody would --
6 a person of ordinary skill in the art would use the
7 platform wrist mechanism in Wallace with the Shelton
8 stapler?

9 A. I didn't really -- I didn't consider the
10 question from that perspective. It wasn't a
11 question of would. It was a question of could.

12 Q. Have you explained here in your declaration
13 how the Shelton stapler with the platform wrist
14 mechanism of Wallace would have a proximal spine
15 portion pivotally coupled to a distal spine portion
16 at an articulation joint?

17 A. Once, again, it might be faster if you
18 point to where you're -- which claim are you referring
19 to?

20 Q. Well, I'm talking about limitation 24.2.2 --

21 A. Okay.

22 Q. -- and your only paragraph about that is
23 paragraph 127.

24 A. Okay.

25 Q. And so do you think you've explained here

1 how the Shelton stapler with the Wallace platform
2 wrist would have a proximal spine portion pivotally
3 coupled to a distal spine portion at an articulation
4 joint?

5 A. The Wallace articulation joint has
6 something beyond it that it's driving, and if we
7 look at Wallace --

8 Q. Well, before you do that, before you -- I'll
9 let you do that in a second.

10 A. Yeah.

11 Q. Okay. But first answer my question. Do
12 you think you've explained that here in paragraph 127?

13 A. I think it -- I think I explained it to
14 the -- I guess it seemed obvious to me.

15 Q. You're not answering my question.

16 A. Okay.

17 Q. My question is do you think you've
18 explained it here in paragraph 127?

19 A. I felt that I -- 127 was clear in my
20 intention.

21 Q. You think it's clear in paragraph 127 that
22 you've explained how the Shelton stapler with the
23 Wallace platform wrist has a proximal spine portion
24 pivotally coupled to a distal spine portion at an
25 articulation joint?

1 A. What I wrote I felt was sufficient for
2 someone to look at then what does Wallace have?
3 What does Shelton have? And that the combination
4 met the limitations of that claim.

5 Q. Okay. Where in Wallace have you pointed
6 us to?

7 A. I didn't specifically point to Wallace. I
8 didn't try to identify a component by number that
9 said this is the distal spine portion.

10 Q. We talked about Wallace a bit yesterday.
11 I don't remember if we covered this or not. You'd
12 agree that the purpose of Wallace is to provide a
13 platform wrist mechanism that provides three degrees
14 of movement of an end effector?

15 MR. KATZ: Objection to form.

16 A. I don't -- I don't recall that statement
17 being made, no. Three degrees of freedom.

18 Q. You don't recall that being said in
19 Wallace?

20 A. Three degrees of freedom, no, that's --

21 Q. I didn't say three degrees of freedom, did
22 I?

23 A. You just did, yes.

24 Q. I said three degrees of movement.

25 A. Okay.

1 Q. Okay. Does that change -- does it matter?

2 A. Well, I think of a wrist as two degrees of
3 freedom.

4 Q. Okay. I didn't use the word "freedom";
5 so, I'll try again.

6 You would agree that the purpose of
7 Wallace is to provide a platform wrist mechanism
8 that provides three degrees of movement of an end
9 effector?

10 MR. KATZ: Objection to form.

11 A. I don't really understand the question
12 or -- yeah, I don't understand what you're saying.

13 Q. Okay. You read Wallace; right?

14 A. Yes, I did.

15 Q. All right. So why don't we take a look at
16 it. Column two.

17 A. Okay.

18 Q. The bottom of column two, and you see it
19 says "Manipulation and control of these end
20 effectors is a critical aspect of robotic surgical
21 systems."

22 Do you see that?

23 A. I do see that. Mm-hmm.

24 Q. Okay. And then it talks about providing a
25 surgical tool which includes mechanisms to provide

1 three degrees of rotational movement of an end
2 effector.

3 Do you see that?

4 A. I do see that.

5 Q. You understand what that means?

6 A. I do in this context. It's much more
7 clear than what I thought I heard you say before.

8 Q. Oh, okay.

9 So now you agree that the purpose of this
10 patent is to provide a mechanism that provides three
11 degrees of rotational movement for an end effector
12 for a robotic surgical system; correct?

13 MR. KATZ: Objection to form.

14 You may answer.

15 A. The entire device has three degrees of
16 motion, yes. The articulation is not providing
17 three degrees of motion.

18 Q. The third degree is the shaft roll?

19 A. Exactly. That's what's confusing me.

20 Q. Okay. And the way that Wallace
21 accomplishes providing that three degrees of
22 movement is to have a shaft roll and a platform
23 wrist; right?

24 A. That is correct, I believe.

25 Q. Wallace illustrates a tool base that

1 mounts to the robotic system and includes a drive
2 system for an end effector; right?

3 A. Yes, Wallace has a tool base for
4 connection to a robotic surgical system that drives
5 the instruments, yes.

6 Q. And it's illustrated in Figures 26 to 30;
7 right. That's the tool base?

8 A. You can see a portion of the tool base in
9 28 and 29. It is more clear in 27 and 30, yes.

10 Q. And 26 too; right? I think they're all
11 just different views of the same tool base; right?

12 A. Yes. Basically, yes, I think so. I think
13 so.

14 Is 62 is that what he calls it, a tool
15 base?

16 Q. I think so.

17 A. I just don't want to use the wrong term.

18 Q. You can check. Yeah, column 7.

19 A. Column 7.

20 Q. Right around line 37, it says tool base,
21 62.

22 A. Thirty-seven.

23 Q. You can also see in the figures, the
24 description of the figures in column 7. There's say
25 Figure 26, they're all --

1 A. Okay.

2 Q. -- referring to the tool base; right?

3 A. Okay. Linkage 62. And then it's a little
4 bit weird. It talks about linkage 62.

5 Q. Right. If you just look at the description
6 of Figures 26 to 30 on column 7, you'll see that
7 they're referring to a tool base. Column 7.
8 I think you're in the wrong -- you're in the wrong
9 place.

10 A. That's what was throwing me off.

11 Q. You've gone too far into your binder now.

12 A. Yeah, I'd gone into Tierney. I'm like,
13 boy, I'm just not seeing what you're saying.

14 Q. Sorry.

15 A. Boy, I'm really confused.

16 Q. That's okay.

17 A. Okay. Let me try again. Coupled to tool
18 base 62, yes, it is clear now. Thank you.

19 Q. No problem.

20 All right. So the tool base that's shown
21 in Figures 26 to 30 of Wallace is not designed to
22 drive an endocutter that clamps and fires; correct?

23 A. That is correct.

24 Q. Okay. The motions that are provided in
25 this tool base are articulation of the platform

1 wrist and a shaft roll; correct?

2 A. No. I think there's also an actuation to
3 actuate an end effector.

4 Q. Are you sure about that?

5 A. I'm not sure. That's why I say I think
6 there's an actuation as well.

7 I don't --

8 Q. Well, I don't think there is, so by my
9 read of Wallace, there are -- that tool base
10 performs, as it's shown and described, performs the
11 shaft roll and the articulation.

12 A. Okay.

13 Q. Do you want to check that for yourself?

14 A. No, that's fine.

15 Q. No, I actually need you to check for
16 yourself.

17 A. If that's what you believe.

18 Q. I want to know what you believe.

19 MR. KATZ: Objection. Asked and answered.

20 A. I just want to see -- because Wallace
21 shows, for example, in Figure 6B --

22 Q. Right. So I agree --

23 A. -- Wallace shows --

24 Q. Go ahead.

25 A. -- it shows a jaw to be actuated in

1 Figure 6B.

2 Do you agree that that's a jaw?

3 Q. I agree that's a jaw. I don't agree that

4 Wallace discloses a tool base that actuates that.

5 So that's my question to you.

6 A. So the same as 2A; right?

7 Q. All right. So why don't we stick to one

8 question at a time.

9 A. Okay. Sorry.

10 Q. Show me in Wallace where it describes the

11 tool base is actuating the jaws?

12 A. All right.

13 Q. Figure 30 -- show me what part of Figure 30

14 is actuating the jaw.

15 A. Okay.

16 Q. Okay. We can probably make this quicker

17 too, so --

18 A. Sure.

19 Q. -- there's in Figure 30, there's two

20 spools that are labeled 400. Do you see that?

21 A. I do.

22 Q. Okay. And those are used for the platform

23 wrist; right?

24 A. I believe that's correct, yes.

25 Q. Okay. And then there's the spool or gear,

1 420. Do you see that?

2 A. Yes, I do.

3 Q. Okay. And that is described as that's for
4 shaft roll; right?

5 A. Right.

6 Q. Okay. So then there's one spool left;
7 right?

8 A. That is correct.

9 Q. And that --

10 A. Not numbered.

11 Q. And that doesn't have any mechanisms
12 associated with it; right?

13 A. Not in this figure; that's correct.

14 Q. Does it have any in Figures 26, 28 -- oh
15 sorry -- Figures 26, 27, 28 or 29?

16 A. I do not see the fourth spool being
17 connected to anything --

18 Q. Okay.

19 A. -- in those figures.

20 Q. All right. And so then you would agree
21 that the tool base that's shown in Figures 26 to 30
22 does not illustrate or show how you would drive the
23 actuation of jaws; correct?

24 A. That is correct.

25 Q. Okay. And are you aware of any description

1 in Wallace of how the actuation of the jaws would be
2 accomplished?

3 A. I'm not aware of that. I know that
4 Wallace shows jaws. We agree with that, but I don't
5 recall -- I'd have to look to see through the
6 reference to see if he ever describes that.

7 Q. Why don't you take a moment to see if you
8 can figure that out.

9 (Pause.)

10 A. So Wallace identifies the grasping jaws
11 and a whole bunch of other actuatable or devices
12 that would require actuation in column 7, around
13 line 48.

14 So clearly Wallace is contemplating
15 actuating devices that require actuation, but, I
16 don't see -- he doesn't point to a figure where he
17 actually shows that connection.

18 Q. Okay. So in Figures 2A and, for example,
19 Figure 6B, and there's some description in the
20 patent about end effectors that can be attached to
21 the platform wrist; right?

22 A. They can be attached to the device, yes.

23 Q. But there's no description in this patent
24 for how a pair of jaws attach to the platform wrist
25 would be actuated through that wrist; right?

1 A. It doesn't show that in a figure.

2 Q. It doesn't describe it in the text either?

3 MR. KATZ: Objection to form.

4 A. It doesn't. I did not see it -- not that
5 I'm aware of right now. I didn't read the whole
6 thing again, but my impression from the patent was
7 that he had that intention. He had his jaws. He
8 had a -- you know, he has an extra control available
9 to actuate them, but he doesn't describe it or
10 illustrate it.

11 Q. Do you have a copy of the Cooper reference?

12 A. Yes, I do.

13 Q. It's Exhibit 1007.

14 A. No, I don't think I do.

15 Q. 1007.

16 A. I have Wallace, Tierney, Giordano, Shelton,
17 Kuehl, yeah. Okay. I do have Cooper back here.

18 Q. Yeah.

19 A. It's just in the other case.

20 Q. Yeah.

21 MR. KATZ: Well, is Cooper in the Giordano
22 case, because we're in the Giordano deposition right
23 now.

24 MR. DESAI: I can ask him a question about
25 Cooper even if he didn't cite it in his declaration.

1 MR. KATZ: Oh, well. That's fine.

2 MR. DESAI: Are you going to --

3 MR. KATZ: Well, I'll object as beyond the
4 scope, but it's beyond the scope, and we'll see if
5 we need to call the Board.

6 MR. DESAI: You can object every question
7 I have is beyond the scope if you like. I totally
8 disagree, but that's fine.

9 BY MR. DESAI:

10 Q. So you have Cooper in front of you; right?

11 A. I do.

12 Q. Okay. And you're familiar with this
13 reference, yes?

14 A. I am.

15 Q. Okay. And this discloses -- I actually
16 not even pointing to Cooper in my hand. Hold on.

17 This discloses a multi-disk wrist joint;
18 right?

19 MR. KATZ: And I'll say objection. Beyond
20 the scope.

21 A. Where did I -- in my declaration, did I
22 discuss this?

23 Q. Do you not want to answer my question?
24 Are you following your counsel's cue or are you
25 going to answer my question?

1 MR. KATZ: Objection to -- objection --

2 Q. Are you familiar --

3 MR. KATZ: No. No. I am objecting, sir.

4 Now you stop it. You let me get my objection on the
5 record, and we'll call the Board. Okay.

6 MR. DESAI: What do you want to call the
7 Board about, Steven?

8 MR. KATZ: You are saying that I'm giving
9 cues to this witness. I want the record to reflect,
10 I just lodge objections. I've lodged an objection
11 it's beyond the scope. I've lodged an objection
12 that you're trying to cross into another deposition
13 after you represented you would not do that --

14 MR. DESAI: Excuse me.

15 MR. KATZ: -- and I can make my
16 objection -- I'm not done with my objection.

17 I can make my objection and for you to
18 tell this witness that he's taking cues from me is
19 an outrageous statement to put on the record when
20 all I've done is made a valid objection.

21 MR. DESAI: Okay.

22 MR. KATZ: So let's not do any more
23 argument. This whole deposition you've been very
24 argumentative. You've actually been very rude to
25 this witness. Your whole approach today is so

1 different than it was yesterday. Your demeanor has
2 totally changed, and you've been extremely rude.
3 You've been talking fast. You've been trying to
4 talk over the witness, and this has to stop.

5 MR. DESAI: Steven, you know what, I think
6 everything you just said is a complete fabrication.

7 MR. KATZ: It --

8 MR. DESAI: You've lost your control. I
9 can see it in your face.

10 MR. KATZ: None of this --

11 MR. DESAI: Just stop.

12 MR. KATZ: No. None of this is complete
13 fabrication.

14 MR. DESAI: Steven, stop.

15 MR. KATZ: The record can reflect what
16 you've said. It didn't reflect your demeanor, but
17 you have been -- your questions have been clearly
18 argumentative, clearly argumentative.

19 MR. DESAI: You know what. You want to
20 keep going?

21 MR. KATZ: You know what we're going to
22 do, it's 10:16. Why don't we just take a break.

23 MR. DESAI: No, I'm not done with my
24 questions. I'm sorry. I was in the middle of a
25 question.

1 MR. KATZ: Finish that question. We'll
2 take a break.

3 MR. DESAI: All right.

4 MR. KATZ: Are you refusing to take a
5 break after you finish the question?

6 MR. DESAI: No. You are trying to
7 interrupt this deposition.

8 MR. KATZ: That is the last thing I've
9 been trying to do. The record will reflect --

10 MR. DESAI: You've been speaking now for
11 like 50 lines. Just stop.

12 MR. KATZ: You just made an incorrect
13 statement on the record of my behavior at this
14 deposition --

15 BY MR. DESAI:

16 Q. Dr. Knodel --

17 MR. KATZ: -- and I have corrected it.

18 Q. -- are you familiar with the Cooper
19 reference? Yes or no?

20 A. I am.

21 Q. Okay. You read it yesterday to prepare
22 for your depositions; right?

23 MR. KATZ: Objection to form. Beyond the
24 scope.

25 Q. Did you read it yesterday?

1 A. I did look over it again yesterday.

2 Q. Okay. And you understand that Cooper
3 discloses a multi-disk wrist joint; correct?

4 MR. KATZ: Objection. Beyond the scope.

5 A. I do understand that.

6 Q. Okay. And Cooper also discloses how the
7 gripping of a jaws of an end effector would be
8 accomplished through the multi-disk wrist joint;
9 correct?

10 MR. KATZ: Objection. Beyond the scope of
11 the declaration.

12 A. I don't recall commenting about that in my
13 declaration. If you could point me to that, that
14 would be great.

15 Q. Okay. I'm going to point you to Cooper,
16 Figure 39. Are you there?

17 A. I am there.

18 Q. Okay. And what I would just like to draw
19 a comparison to is Cooper, unlike Wallace, for
20 example, discloses how the jaws would be actuated
21 through the articulation joint, and it does that by
22 these cables 446 and 448; right?

23 MR. KATZ: Objection. Beyond the scope of
24 the declaration.

25 A. I haven't thought about it.

1 Q. Okay. Are you able to distinguish between
2 Wallace and Cooper and how one discloses how to
3 actuate the jaws through an articulation joint and
4 the other doesn't? Are you able to do that as an
5 expert?

6 MR. KATZ: Objection. Beyond the scope of
7 the declaration.

8 A. I haven't thought about it.

9 MR. DESAI: So you think the question
10 about Wallace was outside the scope of the
11 declaration?

12 MR. KATZ: I think -- can you read back
13 the last answer before I answer that absurd
14 question.

15 MR. DESAI: I said --

16 MR. KATZ: No. I want the court reporter
17 to read back the question you asked the witness.

18 MR. DESAI: -- are you able to distinguish
19 between how Wallace, as an example, has an
20 articulation joint and Cooper also has an
21 articulation joint, but one discloses how to
22 articulate -- sorry -- how to actuate jaws through
23 the joint while the other one doesn't?

24 Are you able to do that?

25 MR. KATZ: First of all, that question was

1 directed to me, not you.

2 MR. DESAI: But this one is now directed
3 to you.

4 MR. KATZ: So, no, I'm sorry. No, you
5 asked me a question. I asked you to read it back,
6 and you did, and I'm going to provide the answer.

7 The answer is no. I was objecting that it
8 was beyond the scope of the deposition -- the
9 declaration, because you were asking about Cooper,
10 which he -- he asked you to point to where in his
11 declaration he discussed distinguishing Cooper, and
12 you could not point to it; and on that basis, I
13 objected it was beyond the scope of his declaration.

14 BY MR. DESAI:

15 Q. Okay. Let me ask my question, Dr. Knodel.
16 Okay. Are you able as an expert to determine -- I
17 have -- why don't you please have Cooper Figure 39
18 in front of you.

19 A. I do.

20 Q. Okay. And have Wallace, let's say,
21 Figure 2A. You got that?

22 MR. KATZ: Do you have a copy of Wallace
23 he can put separately then if you're going to do
24 that?

25 MR. DESAI: Sure.

1 Q. Here you go. Got it.

2 A. I do.

3 Q. Okay. And can you agree that Cooper,
4 unlike Wallace, shows the mechanism that would be
5 used to actuate jaws through an articulation joint?

6 MR. KATZ: Objection. Beyond the scope of
7 the declaration.

8 A. The Figure 2A in Wallace doesn't show
9 enough information. It's not clear enough to say he
10 clearly has an actuated -- a jaw requiring actuation
11 that he's illustrating, connected to his articulation
12 mechanism, but that view is not a section. It's
13 not -- the view in the Cooper reference is an
14 isometric with hidden lines shown. So I can't -- I
15 can't -- to compare these and say one does and
16 one -- you're looking at two completely different
17 technical drawing styles here.

18 Q. Okay. So sitting here today, as an expert
19 having read Wallace before and opined on it; right?
20 You have?

21 A. I have.

22 Q. Okay. And you've read Cooper as well and
23 opined on it in a different declaration; yes?

24 A. I have.

25 Q. Okay. And are you able here to tell me

1 today as an expert whether or not Wallace discloses
2 a mechanism for actuating the jaws through its
3 platform wrist mechanism?

4 A. I'm telling you that Wallace shows in
5 Figure 2A his platform wrist mechanism attached to a
6 jaw that requires an actuation, but the figure is
7 not clear as to show the internals of that
8 mechanism.

9 Q. Does the text provide information about
10 the internals of the mechanism?

11 A. Not that I recall.

12 Q. Okay. So I just want to understand
13 something before we go off the record and go to the
14 next deposition.

15 Okay. I think a little while ago you
16 responded -- let me find this question here.

17 I had asked you about a question about
18 Cooper and whether these cable mechanisms that
19 actuate the jaw, and you said I haven't thought
20 about it. Now, are you going to go take a break now
21 and discuss this with your attorney?

22 A. No, we don't discuss the case during
23 breaks.

24 Q. Okay. Oh, between these depositions.

25 MR. KATZ: Actually, he's asking you a

1 forward-looking question, which you have no
2 obligation to answer. It's totally inappropriate.
3 I object to the question, and, frankly, I object on
4 the grounds of attorney/client privilege.

5 So you're not to answer a forward-looking
6 question of what you may discuss with an attorney
7 after this deposition concludes.

8 And also I'll object to that question
9 because it misrepresented his testimony in this
10 case. That isn't my recollection of what he said;
11 but in any case, that question is so objectionable,
12 and I am going to instruct you not to answer on the
13 grounds of attorney/client privilege.

14 He's asking you whether you're going to
15 have -- what discussions you're going to have with
16 me after this deposition ends. It's totally
17 inappropriate. Don't answer that question.

18 MR. DESAI: Okay. No more questions.
19 We'll start the next deposition when you're ready.

20 MR. KATZ: We're taking a break.

21 THE WITNESS: Okay.

22

23 (Deposition concluded at 10:25 a.m.)

24

25

1 CERTIFICATE OF REPORTER

2 I, Julie Thomson Riley, RDR, CRR, do certify
3 that the deposition of Bryan D. Knodel, Ph.D., in
4 the matter of Intuitive Surgical, Inc. vs. Ethicon,
5 LLC, on April 4, 2019, was stenographically recorded
6 by me; that the witness provided satisfactory evidence
7 of identification, as prescribed by Executive
8 Order 455 (03-13), issued by the Governor of the
9 Commonwealth of Massachusetts, before being sworn by
10 me, a Notary Public in and for the Commonwealth of
11 Massachusetts; that the transcript produced by me is
12 a true and accurate record of the proceedings to the
13 best of my ability; that I am neither counsel for,
14 related to, nor employed by any of the parties to
15 the above action; and further that I am not a
16 relative or employee of any attorney or counsel
17 employed by the parties thereto, nor financially or
18 otherwise interested in the outcome of the action.

19
20 April 7, 2019



21 Julie Thomson Riley, RDR, CRR
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