Deposition of:

Dr. Reynaud Serrette

December 22, 2020

In the Matter of:

Simpson Strong-Tie Company Inc v. Columbia Insurance Company

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Simpson Strong-Tie EX1047
Simpson Strong-Tie v. Columbia Insurance
PGR2023-00048

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

SIMPSON STRONG-TIE COMPANY INC.,

Petitioner,

vs. No. PGR2019-00063

COLUMBIA INSURANCE COMPANY,

Patent Owner.
_____/

DEPOSITION OF DR. REYNAUD SERRETTE
Remote Zoom Proceeding
San Jose, California
Tuesday, December 22, 2020

REPORTED BY:
LESLIE ROCKWOOD ROSAS, RPR, CSR 3462
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Deposition of DR. REYNAUD SERRETTE, Remote Zoom Proceeding, taken on behalf of the Petitioner, from San Jose, California, beginning at 9:17 a.m. PST and ending at 1:03 p.m., on Tuesday, December 22, 2020, before Leslie Rockwood Rosas, RPR, Certified Shorthand Reporter No. 3462.

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I N D E X

TUESDAY, DECEMBER 22, 2020

WITNESS	EXAMINATION
DR. REYNAUD SERRETTE	
BY MS. HOLOUBEK	10

QUESTIONS WITNESS INSTRUCTED NOT TO ANSWER:

(NONE)

DEPOSITION EXHIBITS

DR. REYNAUD SERRETTE

NUMBER	DESCRIPTION	IDENTIFIED
Exhibit 1001	U.S. Patent Number 10,316,510 B2, 06/11/19	8
Exhibit 1009	Letter To Whom It May Concern from Junichi Ishizuka, 09/03/19	8
Exhibit 1010	U.S. Patent Number 4,261,155, 04/14/81	8
Exhibit 1041	U.S. Patent Number 5,004,369, 04/02/91	8
Exhibit 2001	Declaration of Dr. Reynaud Serrette, 12/13/19	8
Exhibit 2034	Supplemental Declaration of Dr. Reynaud Serrette, 02/19/20	8
Exhibit 2042	Supplemental Declaration of Dr. Reynaud Serrette, 02/26/20	8
Exhibit 2044	Third Supplemental Declaration of Dr. Reynaud Serrette, 06/04/20	8

Exhibit 2055	Declaration of Dr. Reynaud Serrette in Support of the Revised Contingent Motion to Amend, 10/07/20	9
Exhibit 2056	Specification For Structural Steel Buildings, 06/22/10	9
Exhibit 2057	Declaration of Dr. Reynaud Serrette In Support of the Reply to the Opposition of the Revised Contingent Motion to Amend, 12/10/20	9
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San Jose, California; Tuesday, December 22, 2020

9:17 a.m.

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PROCEEDINGS

(Exhibit 1001, U.S. Patent Number 10,316,510 B2, 06/11/19, marked for identification.)

(Exhibit 1009, Letter To Whom It May Concern from Junichi Ishizuka, 09/03/19, marked for identification.)

(Exhibit 1010, U.S. Patent Number 4,261,155, 04/14/81, marked for identification.)

(Exhibit 1041, U.S. Patent Number 5,004,369, 04/02/91, marked for identification.)

(Exhibit 2001, Declaration of Dr. Reynaud Serrette, 12/13/19, marked for identification.)

(Exhibit 2034, Supplemental Declaration of Dr. Reynaud Serrette, 02/19/20, marked for identification.)

(Exhibit 2042, Supplemental Declaration of Dr. Reynaud Serrette, 02/26/20, marked for identification.)

(Exhibit 2044, Third Supplemental Declaration of Dr. Reynaud Serrette, 06/04/20, marked for identification.)

(Exhibit 2055, Declaration of Dr. Reynaud Serrette in Support of the Revised Contingent Motion to Amend, 10/07/20, marked for identification.)
(Exhibit 2056, Specification For Structural Steel Buildings, 06/22/10, marked for identification.)
(Exhibit 2057, Declaration of Dr. Reynaud Serrette In Support of the Reply to the Opposition of the Revised Contingent Motion to Amend, 12/10/20, marked for identification.)
(Paper 37, Patent Owner's Revised Contingent Motion to Amend, marked for identification.)
(Paper 40, Petitioner Simpson Strong-Tie Company Inc.'s Opposition to Patent Owner's Revised Contingent Motion to Amend, marked for identification.)
(Paper 43, Patent Owner's Reply in Support of Its Revised Motion to Amend, marked for identification.)
THE REPORTER: Would you like to introduce yourself, Michelle?
MS. HOLOUBEK: So this is Michelle Holoubek, counsel for Petitioner Simpson Strong-Tie, and I'll be taking the deposition today. My last name is spelled

H-O-L-O-U-B-E-K.

MR. EIDSON: I'm Scott Eidson. I will be defending the deposition today on behalf of Columbia Insurance Company and the witness and Patent Owner.

MR. MAUCH: I'm Joseph Mauch of Shartsis & Friese, counsel for Petitioner Simpson Strong-Tie Company.

MR. ALLAWI: Ali Allawi, counsel for Petitioner Simpson Strong-Tie.

DR. REYNAUD SERRETTE,

having been first duly sworn, was examined and testified as follows:

THE WITNESS: I do.

THE REPORTER: Thank you, sir.

You may proceed, Counsel.

EXAMINATION

BY MS. HOLOUBEK:

Q. Good morning, Dr. Serrette.

A. Good morning.

Q. So you understand you're here today to have your deposition taken in conjunction with the testimony you've provided in a post-grant review proceeding challenging US

Patent 10,316,510; is that correct?

A. That is correct.

Q. Okay. So a couple of formalities before we jump into the substance.

As I think we mentioned before the depo officially started, should you need to take a break, just let us know. The only thing we ask is that you not request a break while a question is pending. You have to have an answer before the break is taken.

Is that understood?

A. Yes.

Q. Okay. And are you under the influence of anything such as medications that might make it difficult for you to understand and answer my questions today?

A. No.

Q. Okay. Is there any other reason you can't give your complete and accurate testimony today?

A. No.

Q. Great. So just to confirm for the record, we are conducting this deposition remotely today; is that correct?

A. Yes.

Q. And where are you physically located today?

A. I am at my home address. Would you like to know the actual address?

Q. Sure. Thanks.
A. 1122 El Prado Court, San Jose, California 95120.
Q. Thank you.
Do you have anyone in the room with you today?
A. No.
Q. Did you bring any written materials with you to the deposition today?
A. No.
Q. Okay. And you can access the exhibits on the Exhibit Share; is that correct?
A. Yes.
Q. Okay. What did you do to prepare for today's deposition?
A. I had a meeting with counsel yesterday and, of course, reread my deposition.
Q. Okay. And did you speak with anyone other than counsel to prepare for today's deposition?
A. No.
Q. Okay. So please go ahead and open Exhibit 2057.
A. Okay.
Q. Do you recognize this document?
A. I do.
Q. And what is Exhibit 2057?
A. This is a Declaration of Dr. Reynaud Serrette In Support of the Reply to the Opposition to the Revised

Contingent Motion To Amend.

Q. Thank you.

Sorry, were you going to say something?

A. Dated December the 10th, 2020.

Q. Great. Thank you.

And can you also please open Exhibit 2055, 2-0-5-5.

A. Simultaneously have them both open or --

Q. You can put one on top of the other. I'll let you know if we go -- you know, when we go back.

A. Okay. Just looking at how to do that here, since this one is online.

Q. If there's also an option, if you want to download it, and then you'll be able to open it, I think, in a PDF.

A. I've downloaded that one. Which is the other one you would like me to open?

Q. 2055.

A. Okay.

Q. And what is Exhibit 2055?

A. Let me make sure I have -- Exhibit 2055. Declaration of Dr. Reynaud Serrette In Support of Revised Contingent Motion to Amend, dated October 7, 2020.

Q. Great. And then just one more of your declarations. Can you please open Exhibit 2044.

A. Open.
Q. Okay. And what is Exhibit 2044?
A. Third Supplemental Declaration of Dr. Reynaud Serrette, dated June 4, 2020.
Q. Okay. Thank you.
Let's look back at Exhibit 2057 again, page 2.
A. I'm there.
Q. Okay. And in paragraph 1, you refer to your First Supplemental Declaration as Exhibit 2043. Is it possible that you meant to say Exhibit 2044 there instead of Exhibit 2043?
A. The Third Supplemental Declaration is -- you have it as Exhibit 2044, correct. So if it's referring to the third, it would be Exhibit 2044.
Q. Okay. I just wanted to make sure we were talking about the same exhibit.
So in the -- in your most recent dec of December 10th, Exhibit 2057, that notation there should be Exhibit 2044; is that correct?
A. So it's the same question again on Third Supplemental Declaration --
Q. I'm just clarifying that the -- I apologize. I didn't mean to speak over you.
I'm just clarifying that in Exhibit 1, when you refer to your Third Supplemental Declaration as

Exhibit 2043, that should be corrected to Exhibit 2044; is that correct?

A. Exhibit 2043. Which page are you referring to? Are we still on the same page 2 or --

Q. Yes. It's in the middle of paragraph 1.

So do you see where it refers to your Third Supplemental Declaration as Exhibit 2043?

A. Correct. It should be 2044, if 2044 on -- in the documents I have is the Third Supplemental Declaration.

Q. Okay. I just wanted to confirm for the record.

And other typographical errors aside, do you still stand by the positions you set forth in this December 10th declaration?

A. Yes, I do.

Q. Okay. And do you still stand by the positions you set forth in the other declarations, October 7th and June 4th, as well?

A. That is correct.

Q. Okay. Turning to paragraph 3 of your Exhibit 2057, you indicate that you reviewed Mr. Fennell's declarations; is that correct?

A. That is correct.

Q. Okay. In that same paragraph, you list a number of substantive briefs by both the Petitioner and Patent

Owner; is that correct?

A. Correct.

Q. And then that's followed with an exhibit list that lists Patent Owner's exhibits that you reviewed; is that correct?

A. That is correct. This is beginning on page 3.

Q. Yes.

Did you not review any Petitioner Exhibits other than the Fennell declaration in preparation of this opinion? Or sorry, this declaration.

A. That's what I was asked to review, yes.

Q. Okay. So to confirm, you did not review any Petitioner Exhibits, other than the Fennell declarations, to prepare this declaration; is that correct?

MR. EIDSON: Object to the form.

MS. HOLOUBEK: I'll rephrase.

Q. So to confirm, is it correct that you did not review any Petitioner Exhibits other than the Fennell declaration?

MR. EIDSON: Same objection.

Q. BY MS. HOLOUBEK: You can proceed to answer.

A. Okay. So I reviewed the Fennell declaration, and I don't remember the exact name, but I think it was the Petitioner's -- I believe it was the Simpson's Opposition to the Petitioner's Revised Motion to Amend.

So what was, I guess, the document, I believe, that was written based on the Fennell declaration.

Q. And you did not review any other Petitioner Exhibits; is that correct?

A. I do not believe so.

Q. Okay.

A. Those were the two documents that I looked at, and my focus was on the Fennell declaration.

Q. Okay. Can you please open Exhibit 1001. It's the '510 patent.

A. Okay. It's open.

Q. Okay. And Exhibit 10,001 or 100 -- sorry -- 1001 is a copy of the '510 patent; is that correct?

A. That is what is indicated in the first page.

Q. Okay. Have you discussed your opinions regarding this '510 patent with anyone other than the attorneys at Simpson?

A. No, I have not.

Q. Okay. And then let's please open the document labeled Paper 37, "Patent Owner's Revised Contingent Motion to Amend."

A. Did you ask me to open that or someone else?

Q. Yes, please.

MR. EIDSON: Counsel, what exhibit number again? I'm sorry.

MS. HOLOUBEK: Well, this is Paper 37. It's "Patent Owner's Revised Contingent Motion to Amend."

MR. EIDSON: Thank you.

THE WITNESS: It's downloading.

Q. BY MS. HOLOUBEK: Okay.

A. It's opened.

Q. Okay. Have you seen this document before?

A. I have seen this document, but only a couple of pages in the document. I did not have the document, no.

Q. Okay. Which were the pages that you've seen in this document?

A. I don't remember the pages I've seen. I was not looking at page numbers. But I'm going to say I think I looked at a table or I was shown a table.

Q. Okay. If you go to page -- it's 35 of the PDF, there's an Appendix A listing the proposed substitute claims. It follows page 26 of this Revised Motion to Amend.

A. Okay. That's the page that begins: "Certificate of Compliance With Type-Volume Requirements Under" --

Q. Yeah, the next page after that. So it's following page 26.

A. Yes.

Q. It starts at page 1. Do you see the Appendix A,

"Patent Owner's Contingent Motion to Amend"?

A. Yes.

Q. And this appendix lists the proposed substitute claims; is that correct?

A. I did not see this document.

Q. Okay. Are you familiar with the listing of claims that appears, say starting on page 3 of that appendix?

MR. EIDSON: Objection. Foundation.

THE WITNESS: I am familiar with the patent, which is exhibit -- I think it's 1001.

Q. BY MS. HOLOUBEK: Okay. Did you review any proposed claim amendments from Patent Owner to prepare your declarations?

A. I reviewed the Fennell declaration and the -- I would have to -- what I mentioned before, the two documents I mentioned.

Q. But from Patent Owner, Columbia Insurance, did you review any proposed amendments to the claims before?

A. No. The only two documents I reviewed were the two that I indicated previously.

Q. Okay. So let's take a look at page 4. Well, so 3 and 4 of that appendix. It's pages 37 and 38 of the PDF for this paper.

A. Page 3 begins: "Claims listing of proposed

substitute claims"?

Q. Yes, that's right.

And do you see where it says claim 21 replaces claim 1?

A. I do see that.

Q. Okay. And then if you go to the next page, there's some underlined text there?

A. Yes.

Q. Have you seen this text before?

A. I have not seen this document before.

Q. Okay. So I'd like to go back to your declaration, Exhibit 2057.

A. Yes.

Q. And on page 6, I guess around at paragraph 5, if you could go ahead and turn to that section.

A. Yes.

Q. So this section of your declaration discusses the term "rigidly fixed." What is the difference between the term "fixed" and the term "rigidly fixed"?

A. Those two terms have to be taken in context together. And so what "rigidly fixed" means is that in a prearranged configuration, orientation, elements with a prearranged configuration or an orientation with respect to each other.

Q. And so how is that different from the term

"fixed"?

A. "Rigidly" is intended to mean the elements are configured such that their orientation is not intended to be changed.

Q. And for the term -- so that's the term "rigid." What does the term "fixed" mean?

A. No. Rigid -- are you asking me what the term "rigid" means?

Q. No, I'm asking what the term "fixed" means.

A. My previous definition was not a definition of "rigid." It was a definition of the term "rigidly fixed."

Q. Okay. I believe you said "rigid" is intended to mean that the elements are configured. Is that --

A. No, I think I -- if I said that, I misspoke. You asked me, I believe, about fixed. I told you that "rigidly" and "fixed" have to be taken together. And taken together, for someone who is trained in structural engineering or anyone with an understanding of structural engineering, means that you have elements, if it's a cross-section, elements if it's a framed structure that have a predefined orientation with respect to each other, that cannot freely move.

Q. Okay. So if that's the definition of "rigidly fixed," is there a definition for just the word "fixed"?

A. "Fixed" just means it's in a position. And it's placed in a particular position.

Q. So if something is fixed, can it still move?

A. What do you define as move?

Q. Well, you used the word "move" just in -- as we're talking. Well, you said placed in a particular position. I think of the definition of "rigidly fixed," you compared it to a predefined orientation that can freely move.

So what do you mean by "move"?

A. No, I did not say --

MR. EIDSON: Object to the form of the question.

Sorry, Dr. Serrette. Go ahead.

Q. BY MS. HOLOUBEK: Understood.

Dr. Serrette, when you use the word "move," what do you mean by "move"?

A. Deformable.

Q. Deformable; is that what you said?

A. Yes, deformable.

Q. So is something that is fixed also deformable?

A. Every material that we know of on the planet is deformable.

Q. Is a material that is rigidly fixed deformable?

A. Rigidly fixed, in the context of structural engineering is meant two elements -- at least the minimum

of two elements that frame into each other, that are not intended -- they're pre-configured to stay in that configuration.

Q. What do you mean by "pre-configured"?

A. It means they're oriented with respect to each other. Whether that orientation is defined as an angle, two planes intersecting. But the way, it is configured, which means it is arranged, the parts are arranged, that then they do not move freely with respect to one another.

Q. Okay. So if something does not swing freely, two components do not swing freely with respect to each other, is that considered rigidly fixed, in your opinion?

A. What do you mean by "do not swing freely"?

Q. I believe this is the language that you used in your declaration. So if we look at, I think, paragraph -- let's see -- 51 of your 2057 declaration.

A. Let me get there. 51, you said?

Q. Yes.

A. So you're looking at the one, two -- the third -- fourth line?

Q. Yes.

So you referred to "swing freely" in this paragraph.

A. Okay. And so --

Q. What is your understanding --

A. Sorry.

MR. EIDSON: Sorry. Was the question out? I'm sorry. I didn't mean to interrupt. I have an objection, but I don't know if you rephrased the question or not. I'm sorry.

Q. BY MS. HOLOUBEK: What is your understanding of that term "swing freely"?

A. Okay. I think previously you said I used that term, but that sentence begins: "As stated by Mr. Fennell, the components of the hanger described in the '517 application cannot swing freely."

So in the context that you're asking me to refer to, this is not language that I used.

Q. Okay.

A. So are you asking me to interpret what Mr. Fennell was trying to say?

Q. No. Maybe we can move, actually, to paragraph 55, which will be in your language.

In paragraph 55, I believe the phrase you use is it cannot move freely relative to one another; is that correct?

A. In the third line? Yes.

Q. Yes. Okay.

A. They cannot move freely with each other. Yes.

Q. Can you describe what you mean by saying that

two elements cannot move freely with respect to one another or relative to one another?

A. Absolutely. Anything that is configured in a predefined arrangement or orientation of elements to each other and are rigidly fixed cannot move freely, which means you don't take -- and this is an example -- you cannot simply slide one part, change the orientation of one with respect to the other easily.

In other words, it was not configured to simply take one element or member and just maybe with a pinch of a finger, move it.

Now let me try to expand upon this. This is engineering, and in engineering we use terms that any other engineer will understand. And so when I say that something cannot move freely, it means it was not configured to easily move or be moved.

Q. Who determines whether it's configured to be easily moved?

A. I would have to say whoever is manufacturing the part or whoever is constructing or the engineer, if it's an engineering design.

Q. So if you have a hanger that is pre-configured such that it's -- it is not movable, if someone applies a force to it and moves it, would you still consider that rigidly fixed?

A. Yes. Because as I mentioned at the beginning, every material on the plant is deformable. You simply have to apply enough force.

Now I will give you a simple example. If a specification calls for me to tighten something and the specification says -- so this is how -- how language is written for engineers, because we have to look at the -- what the specification is trying to ask us to do, and it says to tighten to the full strength of an ironworker, I would be completely different as an ironworker to Arnold Schwarzenegger or a weightlifter. We will apply different levels of force.

So to ask the question that you're asking, I will go back to the -- what I've said before. And if it's rigidly fixed, it means that it is intended to be used in the configuration that you see.

Can someone modify it with enough force? Yes. Why? Everything is deformable. Every material on the planet that we know of is deformable with sufficient force.

Q. Okay. Going back to the language saying that components do not move freely with respect to one another, is that the same understanding for the term "fixed"?

A. Rigidly fixed is used together, and used

together to indicate that something is configured in a certain way to be used or it is -- it is configured such that when it is specified, that is the orientation that it's going to be used in. That is the configuration that it will be used in.

It cannot -- it is not intended to be used, it is not configured to be used in a different orientation.

Q. Can you have elements that are fixed but which aren't rigidly fixed?

A. Absolutely. So let me give you a very simple example.

We've all seen steel structures go up. You can attach a beam to a column, and you can connect that beam that is attached to the column such that you will allow -- it is intended to permit rotation.

So when you put them together, one may be perpendicular to the next, but your intention is when it is used, it will deform. And so it is designed by the engineer as a connection that will deform. It is intended to perform that way.

So that's as simple as an example that I can give that I think anyone -- most people would know of, and certainly anyone doing any kind of structural mechanics on anything that is structures related.

Q. Okay. Do you recall the hanger of Gilb '155?

It's in Exhibit 1010, I believe.

A. I believe I do, but it may be best for me just to pull it up. One -- which one? It's not in the list of exhibits.

Q. In the Exhibit Share. It's not --

A. Oh, there it is. It's the 1010. Sorry.

Q. Yeah.

A. Okay. Just let me download it in case we have to go back.

Yes, I'm looking at it right now.

Q. Okay. Would you say that Gilb '155 is an example of elements that are fixed, but not rigidly fixed?

A. I would say --

MR. EIDSON: Object to the form of the question.

Q. BY MS. HOLOUBEK: Okay. Is it your opinion that Gilb '155 is an example of elements that are fixed but not rigidly fixed?

MR. EIDSON: Same objection.

Q. BY MS. HOLOUBEK: You can go ahead and answer.

A. Gilb '155 has three parts that are put together, and one part, which is, I guess, 54, is connecting those two other points, which is 16 and, I believe, 52 or 4. So these parts are not rigidly fixed with respect to each other.

Q. Would you agree that they are fixed with respect to each other?

A. No. I just said they are not rigidly fixed with respect to each other. They are connected. I would say that they are connected to each other.

Q. Is "connected to each other" different from "fixed"?

A. "Connected to each other" is different from "fixed," yes, in my interpretation.

Q. And how is that different from the word "fixed"?

A. You can connect two pieces that can -- together where they can change orientation with respect to each other easily. They're intended to allow that change in the orientation of one element or one member with respect to the other.

One that is fixed, rigidly fixed, you have one element that was pre-configured in its orientation with respect to the other, and it is not meant to be movable, one with respect to the next.

Now let me qualify that in case we have another question that may come up.

Every material is deformable. What you're looking at, what I am looking at with Gilb '115, are two parts that are configured to allow, deliberately allow, the change in orientation between the parts.

Q. Is there a difference between the term "substantially fixed" and the term "rigidly fixed"?

A. When I used the term "substantially fixed," I was trying to get to the point that is also made in the AISC commentary, that "rigidly fixed," if someone were to look at that outside of the context of engineering and think of the word "rigidly fixed," they would think immovable. But this would be someone who has no background whatsoever in structural engineering.

"Rigidly fixed" is a word we use -- intend the orientation of elements or members is such that they're -- we're fabricating, constructing them so that there is essentially no movement, relative movement, between them for what we do in design as engineers.

Q. So let's go ahead and turn to that exhibit. I believe it's Exhibit 2056.

A. I have to download that.

Yes, I have it download.

Q. Okay.

A. Okay. I am there now.

Q. Okay. And let's go to page 26 of the PDF.

A. Can you give me the actual page number in the commentary, please? It's at the top left-hand corner.

Q. Sure. It's 16.1-510.

A. Yes, I'm there now.

Q. Okay. And at the bottom of this page 26, or 16.1-510, there's a list of assumptions of idealized conditions; is that correct?

A. Right.

Q. Is this section of Exhibit 2056 the section you're referring to in your declaration?

A. Yes.

Q. Okay. And this list of idealized conditions, these elements are used to calculate an effective length factor K; is that correct?

A. They're used to not calculate an effective length factor. They're used to look at table C-A-7.1 on page 16.1-511 to determine an effective length factor K for design of columns.

Q. Okay. So this list of idealized conditions is used to determine an effective length factor K as shown in table C-A-7.1; is that correct?

A. It is used to choose an effective length factor if the engineer of record who's designing a column is using this method to calculate the capacity of the column.

Q. Okay. And one of the assumptions this document says seldom exists in real structures is that all joints are rigid; is that correct?

A. It never exists. Not seldom. It never exists.

They may use the word "seldom," but it does not exist.

Q. Okay. So if we go back to your declaration, 2057.

A. Uh-huh.

Q. The end of paragraph 11. And I believe this is on page 9 of your declaration.

A. Yes, I see that.

Q. Okay. Do you see the sentence that says: "Still, the joint is considered 'rigid' to the PHOSITA"?

A. That is correct. I see that.

Q. Okay. What joint are you referring to in that sentence?

A. The joint is the intersection of two framing elements or two framing members in the context of the American Institute of Steel Construction specification for structural steel buildings.

Q. Okay. So other than including the rigid joint in the list of assumptions, where does Exhibit 2056 say that a PHOSITA would still call that joint a rigid joint?

A. Just let me get to that document. Just a minute. I'm just trying to -- I don't know why that one does not show up on my screen here again.

So we're back on the AISC, the American Institute of Steel Construction specification, page 16.1-510.

Q. Yes.

A. And can you repeat the question, if you don't mind.

Q. Sure.

Other than the list of assumptions that's shown on this page, where does Exhibit 2056 say that a PHOSITA would still refer to this joint as a rigid joint?

A. Where other than where we're looking at in 2056, Exhibit 2056?

Q. Uh-huh.

A. I did not go through all of 2056. I went to a section of 2056 to try to indicate what a PHOSITA would understand as something that is rigid.

Q. And where does this document show that a joint used in this type of structure would be called a rigid joint?

A. Where in this document?

Q. Uh-huh. Yes.

A. I think it says it in the section that we're referring to. You can read -- one can read through the document on page 16.1-52. And so you're asking me to go beyond now what I have written --

Q. I apologize to interrupt. Did you say 16.1 --

A. 512.

Q. Oh, 512.

A. 512. My mistake.

Q. Okay.

A. And so we're going further than what I have said in my declaration, but you're asking me a question, and I'm just trying to be helpful in showing you other places where it's indicated.

So if you look at the sentence after equation C-A-7-3, where it indicates the subscripts A and B refer to joints at the ends of the columns being considered, the symbol -- summation indicates a summation of all members rigidly connected.

So I can take that and I can say I'm looking at a cross-section made out of cold-formed steel, which means I formed the shape, whichever forming method was used, that are rigidly connected. Same idea. They're put into a configuration.

And so they're using rigidly even after saying that this is not something that you would actually find. And so there is where "rigidly" is used.

Now if you were to go down to figure C-A-7.1 on the same page, alignment chart sidesway inhibited, and you look at the figure on the right-hand side, at the first cross, you would see an A, and if you go down to the second cross, you will see a B. The vertical part of the cross is the column. The horizontal -- and there are

two of them -- are the beams.

The joint is A and the other joint is B. And they're saying that the summation of all members rigidly connected to that joint, yet they show deformation -- they show the joint rotating. But what we assume -- what we assume is that there is no change in the orientation of the members.

So if you look at the -- there's on the right-hand side of the upper cross, there is a label B2, and you look again at joint A, and you look at below joint A, there is a label C2. The orientation of B1 to C2 does not change even after that joint rotates.

So those members are assumed to be rigidly fixed and connected to one another.

Does that answer your question?

Q. Yes. Thank you.

And just to confirm that when it's talking at the top of that page, 16.1-512, this is part of that determination of effective length factor; is that correct?

A. It is determination of effective length factor, but it is different from the table that you have on page 16.1-511. The language on page 16.1-510 at the bottom with the assumptions. "Yes"?

Q. Uh-huh.

A. Are also related to the behaviors we see in the table and the figure that we just looked at with the joint A and joint B.

Q. Okay. So let's go back to the '510 patent. And in the '510 patent, isn't it true that different beam materials will provide different loads on the hanger?

A. I need some clarification on that question.

Q. What part of the question?

A. I need clarification with respect to different material, different -- I think you said different beam materials.

Q. Sure. So the '510 patent describes a hanger for beams such as joists and rafters and those types of beams; is that correct?

A. That is correct.

Q. Okay. So in that term or in that configuration, a beam is seated within the hanger; is that correct?

A. That is correct.

Q. So a beam made of, say, balsawood would put a lighter load on the hanger than a beam made of oak; is that correct?

A. That is correct.

Q. All right. And a beam made of steel would put a heavier load on a hanger than a beam made of oak; is that correct?

A. That is correct.

Q. Okay.

A. Now, I think just looking at that in isolation is inappropriate, those -- the -- what I answered "correct" to. Because a beam is not placed in a hanger to support the beam. The beam supports a load, which is the floor or a roof. That is the intent of the beam. If a balsa beam will work, that's what you will use. If a wood beam will work, that's what you will use.

But the beam -- the hanger is intended to hold the beam, but the beam is supporting something.

Q. Okay.

A. If you just take it out of context in terms of weights associated with beams alone, that would be incorrect. Because you will not put a beam if you do not have something to support. So you will not need a hanger.

Q. But depending on what that structure is that's built, the total load on the hanger will be different for different materials and different constructions; is that correct?

A. Not based on the structure that's built. It's based on the use of the structure. Loads come from use, not from the structure itself.

Q. But the same hanger could be subject to

different loads; is that correct?

A. Yes.

Q. Okay. Let's turn back to your declaration, Exhibit 2057, and specifically paragraph 45.

A. Okay, I'm there.

Q. Okay. In paragraph 45, you refer to figures 1, 2, 25, and 26 of the '517 application; is that correct?

A. That is correct.

Q. Okay. And are the figures of the '517 application the same as the figures that issued in the '510 patent?

A. I would have to look at those two again side-by-side just to make sure, but let me just read the language.

So the language in 45 is -- is indicating the -- what we've been discussing now for a while, the -- this rigid fixity of elements that frame into one another. And so what you're asking me now is to take a look at two different documents and make an opinion as to -- I think it's if the figures are identical or are they trying to -- are they showing the same intent with respect to predetermined or preset configuration of elements, orientation of elements with respect to each other.

So I'm asking, I guess, for clarification on exactly what you're trying to do with the two sets of

figures.

Q. Well, the main reason I was asking about the '510 patent was so that you could look at that document, since it's labeled pretty well. But since your declaration here refers to the '517 application, I believe that is found in Exhibit 1002, which is the prosecution history.

Is that where you saw the copy of the '517 application that you're referring to here?

MR. EIDSON: Object to the form.

Sorry. Dr. Serrette, you can go ahead.

THE WITNESS: I was going to say that was something that I did not -- that I looked at, yes, previously.

Q. BY MS. HOLOUBEK: Okay. And so if you can open Exhibit 1002.

A. This is not included in the documents. This -- I don't see it, at least. Maybe you can tell me where it is.

MR. EIDSON: Same here. I don't have it in the Exhibit Share.

MS. HOLOUBEK: Okay. I apologize. I was planning on referring to the patent.

How about this, Dr. Serrette: We've been going about an hour. I'll make sure that gets transferred into

the Exhibit Share, and we can come back and walk through the actual application as filed.

THE WITNESS: I would certainly appreciate that.

MS. HOLOUBEK: Okay. So maybe a quick ten-minute?

THE WITNESS: I only need about five.

MS. HOLOUBEK: Okay. Five minutes is fine.

THE WITNESS: Thank you.

MR. EIDSON: Thank you.

(Recess.)

(Exhibit 1002, '510 Patent File History, marked for identification.)

Q. BY MS. HOLOUBEK: Dr. Serrette, did you speak to anyone on the break that we just had?

A. No.

Q. Okay. And when you access the Exhibit Share, are you able to see Exhibit 1002 now?

A. Yes, I am.

Q. Okay. Great.

And when you look at that exhibit, if you can scroll down to -- sorry, I don't have the page of the PDF here. I guess it's the number at the very bottom is 0238.

A. 0238.

Q. And do you see at the top where it says "Hanger

For Fire Separation Wall"?

A. Yes.

Q. Is this the '517 application that you're referring to in your declaration, paragraph 45?

A. That was a while ago so I'm just trying to recollect. Just looking. Just a second.

I believe it is.

Q. Okay. And if you scroll down to the figures, I'm doing the same so I'll let you know the page as soon as I get there.

So it's page 261, 0261.

A. Yes, uh-huh.

Q. So that's -- the start of the figure is accompanying this '517 application; is that correct?

A. Found it. Yes.

Q. Okay. So your declaration, Exhibit 2057, refers to figures 1, 2, 25, and 26 of this '517 application; is that correct?

A. Yes.

Q. Okay. So figure 1 shows the orthogonal version of the hanger; is that correct?

A. Correct. And orthogonal meaning perpendicular to. Or normal to the wall.

Q. Okay. And what is the hanger loaded with in figure 1?

A. The hanger is loaded with the -- what appears to be a truss member.

Q. And why do you say it's a truss member?

A. Because it appears to have a top cord, a bottom cord, and a diagonal.

Q. So it's not a solid beam; is that correct?

A. It does not appear to be a solid beam.

Q. Figure 1 shows this orthogonal hanger with two sheets of sheathing installed; is that correct?

A. That is correct. Item, I guess, 34.

Q. Is that sheathing 34 flush against the back of the connection portion of the hanger?

A. Can you repeat that again?

Q. Sure. And maybe I'll just preface it with another question.

Do you see the connection portion of the hanger there with reference number 26?

A. Correct. I see it.

Q. Okay. Is the sheathing 34 flush against the back of the connection portion of the hanger?

A. It will be flush with respect to the tolerance that you must have to install the sheathing.

Q. And what is that tolerance?

A. Whatever the manufacturer specifies. If you're asking me what section I can find that in, I do not know,

and I would have to go read the document.

Q. From this particular figure, can you tell what that tolerance would be?

A. Simply looking at the figure, you cannot say what that tolerance is, but the manufacturer would specify what that tolerance needs to be.

Q. Okay. And why does there need to be a tolerance?

A. Because you cannot fit a five-eighths-inch bolt in a five-eighths-inch hole. That's an analogy. So you cannot fit two pieces of material of a certain thickness in a space that has exactly the same width.

Q. And why is that?

A. Because you cannot put a five-eighths-inch bolt in a five-eighths-inch hole.

Q. Can you maybe describe it with regards to the sheathing? Why couldn't you put -- if you have a space that is five-eighths inches, why couldn't you fit a five-eighths-inch thick sheet of sheathing in that space?

A. Because there is tolerances with everything that is manufactured.

Q. What do you mean by a "tolerance"?

A. I'm going to explain that.

In engineering, nothing is made perfectly. This is engineering. It's not laser science. And so you

must, in everything we do in engineering, have some level of tolerance.

So the things that need to fit, one thing that needs to fit into another, whatever is being fitted into has to have some tolerance to allow for whatever manufacturers understand tolerances of the sheathing must be that is going to be placed -- in this case, we're talking sheathing -- that's going to be placed in that space.

It's something that anyone who is doing engineering will understand at any point. So let me try to give you an example.

If someone specified the thickness of that sheathing to be 5.226685324, you will not provide a space with that exact same dimension. And so in engineering, we do not spec things out the way a physicist would spec it out in terms of the dimensional precision because we know that things will not always fit exactly in design.

Q. So in the context of figure 1 here, does that mean that there will be -- or there could be a bit of extra space between the connection portion 26 and the sheathing 34?

A. It will be whatever the manufacturer specifies for tolerance.

Q. But the tolerance essentially amounts to a bit

of extra space; is that correct?

A. Tolerance applies to whatever the manufacturer requires to make sure that the hanger will work for its intended purpose.

Q. But when you say whatever the manufacturer will require, are you talking about a sizing there?

A. If the indication, as is shown here, it's two layers of gypsum board, then the manufacturer will provide a tolerance that will accommodate the thickness of gypsum board for the number of layers that are expected.

Q. And when you say "a tolerance," is that defined in terms of distance?

A. That will be defined by the manufacturer, my engineering intuition, background, trainings, as it will be in terms of a distance because you're trying to fit a thickness.

Q. And so along those lines, that distance is essentially an amount of space that's allowed when you talk about a tolerance; is that correct?

A. The distance will be a gap that the manufacturer would specify.

Q. Okay. And then in figure 1, are you able to see the back flange of the hanger in figure 1?

A. And what is -- how are you defining the back

flange?

Q. Are you familiar with the '510 patent's description of the back flange?

A. I understand what it is. I just want to make sure that I am saying the same thing that you are saying.

Q. Okay. Why don't we take a look at figure 2.

A. Yeah.

Q. And this is figure 2, page 0262 of Exhibit 1002.

In figure 2, what element would you identify as the back flange of the hanger?

A. The back flange I will identify as 6 -- 66. Element 66. It's in sort of the middle of the figure on the right-hand side.

Q. Okay. So with that understanding of the back flange, if you go back to figure 1 --

A. Uh-huh.

Q. -- are you able to see the back flange of the hanger in figure 1?

A. It is obscured by the -- the plane of the back flange, and therefore the back flange is obscured by the two layers of sheathing that are shown in the figure. The second two layers, I should say. The one that is inserted in the hanger.

Q. In paragraph 45 of your declaration, Exhibit 2057, you say that the components of the hanger

do not freely move with respect to one another; is that correct?

A. Just let me get back to...

Q. Okay.

A. Yes.

Q. Okay. Are you referring to movement in the vertical direction, which would be from top to bottom, in this figure?

A. The "yes" was I got back to the document.

Q. Okay. Can you turn to paragraph 45.

A. Okay. Yes.

Q. And do you see in paragraph 45, you say the components of the hanger do not freely move with respect to one another?

A. Correct. Yes, I see it.

Q. Okay. There are you referring to movement in the vertical direction, which would be from top to bottom, in this figure?

A. I'm referring to the orientation of the members with respect to each other. The predefined and fixed, rigidly fixed orientation of one element with respect to the next.

Q. Okay. And so that would include movement in the vertical direction; is that correct?

A. Movement, there are two things that I would like

to distinguish, movement versus deformation. Those are two completely different -- I can take the hanger and move it from the table to a chair, and I can change the orientation of the elements with respect to each other. Which one are we referring to when you say "movement"?

Q. Deformation. I'll reask the question with the word "deformation." Would that be more clear?

A. Yes.

Q. Okay. So in this section of paragraph 45, when you say the components of the hanger do not freely move with respect to one another, do you mean deformation in the vertical direction?

A. I mean deformation. Deformation results from two types of stresses, a normal stress and a shear stress.

Q. Can you describe the differences between a normal stress and a shear stress?

A. A normal stress is one where you have a force that is applied perpendicular to the surface or plane of a member, and a sheer stress is when you have a force acting over an area, and that force is parallel to the surface of the member that you are describing.

Q. In figure 1, if you can describe it in context of figure 1, what is the direction of the normal stress?

A. That would be an inappropriate question. You

would have to identify the force that is creating the stress, please. Oh, in other words, it's not an inappropriate question; it's a question I cannot answer because I don't know the direction of the force.

Stress is a result of force. So before you can get to stress, you have to know the force that is creating that stress.

Q. So in figure 1 you can't tell just by looking at it whether or not there is a force creating a stress; is that correct?

A. Figure 1 is just the configuration of members and the hanger. You have to know -- you have to -- the question has to be posed: A force creates a stress, a stress creates deformation due to the constrictive properties of the material.

So before I can get to the deformation, I have to back out of the type of materials, then I have to back out to the stress that was created, and then I have to back out all the way to the force.

So the question would be ambiguous for me because I would have to know what force we're talking about to say that there's going to be deformation. And as I said before, all materials are deformable.

Q. And is it fair to say that figure 1 doesn't illustrate that information that you would need?

A. Because figure 1 shows no forces. Figure 1 is an illustration.

Q. Okay. So you can't tell from figure 1 whether there are any forces acting on the hanger; is that correct?

A. Well, let me go back to a question that you asked earlier, and you said the hanger can be -- is used to support a beam. And I suggested really the beam is supporting something, and the hanger is just supporting the thing that the beam is supporting.

And so -- and then we talked about a balsa beam and we talked about a wood beam, a solid wood beam, and we talked about a steel beam. And they impose a force at the base of the hanger.

So if that's the force that we're talking about, then I want to tie it back to the conversation we had where you were talking about the different materials, beam materials, imposing a force.

So if that's the force, then I can -- I can respond in that context.

Q. Well, you mentioned that this figure shows a truss; is that correct?

A. Yes. It looks like a truss.

Q. Okay. And would the installation of that truss create a force on a hanger?

A. Based on the discussions we had before, absolutely.

Q. Okay. And so which direction of -- or what is the direction of the force created by the truss as shown in figure 1?

A. The direction in the force created by the truss, which means the self weight of the truss will be a force that's in the direction of gravity.

Q. And in this figure, what direction is that? Is that from top to bottom, for example, in this figure?

A. I am going to assume that that figure is oriented such that gravity is acting down.

Q. Okay. So is the force resultant from the truss loading onto the hanger acting in a downward direction?

A. Based on the assumption that gravity's acting downward, when we look at that -- when we look at the screen we're looking at, or we're looking at the picture, and the screen is in the vertical orientation, so I want to make sure I get it right, and I'm assuming gravity is acting down, yes.

So in the direction of from the top cord of the truss, if we're saying this is a truss, to the bottom cord of the truss, with two lines that are the two points that are directly above and below each other.

Q. And you mentioned that a hanger, when installed,

would not only have the load from the weight of the truss but from anything else that the truss was supporting; is that correct?

A. Which is the primary load. The primary load is the load that the truss or the beam will be supporting, yes.

Q. So is the load from the truss minimal compared to the primary load?

A. The truss or the beam, in the design of a structure, is there to support the floor. It would not be put in if it's not needed. And so depending on the material that you use, in structural design you begin a design with the loads that you know, which is the loads based on use and the weight of the floor itself.

If you can span a long distance, you put in less beams. If you cannot span a long distance, you put in more beams. You can put in multiple beams and make them lighter; you can put in less beams and make them heavier.

It is a design situation completely.

Q. So the primary load, then, on the hanger would come from the structure that's being supported; is that correct?

A. The primary load on the hanger will come from the floor that the hanger supports.

Q. Okay. And -- I'm sorry, what was that last

part?

A. Or the roof. The horizontal structural subsystem.

Q. Okay. And then the truss here then is a secondary load; is that correct?

A. The truss creates an additional load. Secondary as used in the context of a civil or a structural engineer is -- may be a lot different from how you are using it.

Q. How would you refer to it?

A. I would refer to it as an additional load.

Q. Okay.

A. That weight.

Q. In terms of figure 1, does figure 1 show that primary structure, such as a floor or roof, that would be supported by the truss?

A. Figure 1 shows a member that seems to be configured with the top cord, a bottom cord, and diagonal members. And so an engineer looking at that will say that's a truss, and that is all the figure shows.

Q. Okay. And then going back to the question of load and forces, here we have the sheathing behind the connection portion 26 -- sorry, the channel-shaped portion 26; is that correct?

A. That is correct, as I am reloading that figure

now.

Q. Okay.

A. I'm not sure why I'm having -- I apologize.

Q. That's okay.

A. Okay. So I am there now. So I'm going to ask if you can just repeat the question.

Q. Sure.

And this question is just to provide some context. We've already mentioned that the sheathing 34 is disclosed behind the channel-shaped portion 26 of the hanger; is that correct?

A. That's correct.

Q. So when we think about forces, the sheathing there would help prevent any change to the skew angle; is that correct?

A. Anything that has resistance helps. So let me respond in that way. So anything that is against or the anything coming into contact with that has constitutive properties will provide resistance.

Resistance results from an attempt to deform a material that does not necessarily want to deform.

Q. Okay. And in figure 2 of this '517 application is that same hanger in an uninstalled configuration; is that correct?

A. Yes. It looks just like the hanger itself.

Standard.

Q. Okay. The other two figures that you mentioned in your declaration were 25 and 26. So let's scroll down to figure 25.

THE WITNESS: Before you ask the question, I need a short break.

MS. HOLOUBEK: Okay.

THE WITNESS: Maybe a minute and a half.

MS. HOLOUBEK: Okay. That's fine. Thank you.

(Recess.)

Q. BY MS. HOLOUBEK: Dr. Serrette, did you speak to anyone during the break?

A. No, I did not.

Q. And did you look at any materials during the break?

A. No.

Q. Right before the break, we were turning to figure 25 of the '517 patent. That's in Exhibit 1002. I believe it's page 288.

A. I am there.

Q. Okay. So figure 25 shows the nonorthogonal version of the hanger; is that correct?

A. Nonorthogonal in terms of the framing angle that the -- what we're calling the truss makes with the wall that supports the hanger, yes.

Q. Okay. And other than that framing angle, the sheathing and truss are the same as in figure 1; is that correct?

A. They seem to have the same drawings, yes.

Q. Okay. And in figure 25, there's one other part of it, and it appears that there's a cutaway in the drawing for the sheathing; is that correct?

A. Yes, on the right-hand side.

Q. Okay. In this drawing, are you able to see the entire back flange of the hanger?

A. No, I'm not.

Q. Okay. And does the sheathing fill the space between the back flange and the back edge of the channel-shaped portion in this figure?

A. That -- that will be a -- I think -- I don't know if you can ask it a little differently. Because the channel-shaped portion is at an angle. So one vertical edge of the channel-shaped portion cannot possibly contact the sheathing, but the other end can.

So if we look on the left-hand side of the figure, where we see the number 14, it's under the 174.

Q. Uh-huh.

A. That vertical edge, which I believe is identified, I'm going to say as the part with the holes, which are 156.

Q. Uh-huh.

A. That edge of the channel section cannot -- is not in very close proximity to the sheathing. But the other edge will be. Does that make sense?

Q. It does. Thank you.

On this particular hanger, if the shear force were applied, would this hanger move around that skew angle?

A. Everything is deformable. So would the hanger deform? Absolutely, because there's going to be load applied to it.

If you're asking if the angle will change, the truss -- what we're calling a truss -- is in place, and I'm going to assume it's connected over to something else, and I am going to assume there's a floor or roof sitting over it. So the only deformation you will get will be the deformation that results from the forces interacting.

So as an engineer, you would not expect that skew angle to change. You would expect that skew angle to remain as the manufacturer had intended.

Q. In this figure, can you tell whether the other end of the truss is connected to anything?

A. I cannot.

Q. Is it possible that in this figure, this is the

first end of the truss that is being connected to a hanger?

A. I think that will be an appropriate question maybe for a contractor. You will not install -- try to install a truss or a beam at an angle. You will try to drop it down straight in place, which is the reason the channel section has no top portion, because you want to basically bring your structural element vertically down.

So to say that this will be the first installation or the second installation is somewhat not accurate.

Q. Earlier when you were answering the question about whether the skew angle would change, you said you were assuming that the truss were already connected at the other end; is that correct?

A. Yes.

Q. Okay. So and now you're saying that it doesn't matter whether the truss is connected at the other end; is that correct?

MR. EIDSON: Object to the form.

Q. BY MS. HOLOUBEK: You can answer the question.

A. No, I'm not saying that. I think -- not that I think, I know exactly what I'm saying.

Would you like -- maybe you can ask the question a different way.

Q. Okay. Can we take away the assumption that this truss is connected at the other end because -- well, is it possible -- maybe I'll just rephrase.

Is it possible that this truss is not already connected at the other end?

A. Let me put it this way: If you were to take a truss, and let's assume that you only have a hanger on one side, and you put this truss down on that hanger, the whole truss will fall.

So we have a responsibility as engineers to public welfare and health, and the health and public -- and the welfare of emergency responders.

So you will never take a truss in this hanger that as I see it here and put it down on one side without having it supported on the other end.

It's like taking a knife in your kitchen, or a fork, and putting one end on one finger and letting go of the fork and assuming the fork will stay in place.

Q. Let me rephrase my question.

Can we -- is it possible that this truss is not already seated in another hanger on the other end of the truss?

A. It is impossible for that to happen. It has to be seated on two ends. Because as soon as you let go of the truss, it will fall.

Q. So is it your position that in a situation like this, where the angle of the truss to the wall is not an orthogonal, that hangers would be hung on both sides of opposing walls prior to the truss being loaded?

A. Sorry. The orthogonality of the hanger has absolutely nothing to do with the comments I have made. If the truss is coming in perpendicular to the wall, at 45 degrees to the wall, at 35 degrees to the wall, at 90 degrees to the wall, at zero degrees to the wall, it makes no difference.

As a structural engineer, when you're modeling that hanger -- I mean that truss, in the configuration that is shown and in the configuration where almost every beam or truss that frames into a hanger is used, the hangers that we're looking at here, and the majority -- vast majority, if not all of the hangers that are used in practice, will be modeled as a line with a triangle on one side and a circle on the other side. And the engineer in analyzing the truss or the beam will pay no attention to that skew.

Q. Okay.

A. So the question is --

Q. Let me rephrase my question.

Is it your position that if you are installing a truss, that the hangers on opposing sides or opposing

walls would already -- both hangers would already be in place when you're installing the truss?

MR. EIDSON: Object to the form.

Q. BY MS. HOLOUBEK: I'll rephrase.

Is it your position that hangers would already be in place for opposing ends of a truss to be inserted at the same time?

A. If you're using hangers on the two ends of the truss or the flexural member that you're using to support the floor, it has to be supported on two sides. Unless you're designing a cantilever member. A cantilever member is one that has one end free and the other end attached. The other end that has to be attached, has to transfer both moment and shear.

Hangers, as we were discussing before, the intent of them is to transfer a gravity direction load, and we said gravity was from the top cord of what appears to be a truss in figure 25 to the bottom cord of the truss in that figure 25, would be two points, and the top cord and the bottom cord vertically align.

So there's no moment --

Q. Go ahead.

I was just going to, you know, say my question was not whether one end of the truss would be completely unsupported. My question was whether the hangers, so,

for example, a complementary hanger that's identical to the hanger shown in figure 25, whether hangers would have to be installed on both opposing walls prior to insertion of the truss.

A. And let me see if I can try to answer that. So we're looking at the insertion of the truss. So you're going to insert it into something.

Q. Would that something not be the hanger?

A. Yes, and so I'm getting there.

And if you're inserting it, you have to have hangers on each side of the wall if it's a simply supported member. It is just physically impossible for any engineer or anyone who claims to be an engineer to insert a truss or a beam without using a support on each end, and in the configuration that we're looking at, that support is the hanger if it's a simply supported member.

You cannot insert -- insert -- I am assuming -- I should make this statement. Insert, I am assuming, you place the truss, and you remove the thing that placed the truss.

Is that the correct understanding of the term "insert"?

Q. If that's what you mean by it, yes.

A. That's what I mean by it.

And so in that case, you have to have supports

on each end, and in this case that we're talking about, that support is the hanger.

Q. So you wouldn't -- in this instance, then, that's shown in figure 25, you couldn't have the other end of the truss, say, being held by a person or other piece of equipment while the end of the truss that's shown in figure 25 is being loaded into the hanger?

A. That will be the support at the other end. So that's why I tried to clarify my response that said that there has to be support on each end. I said support first, and then I said those supports can be two trusses -- sorry -- two hangers.

Q. Right. And I'm asking a little bit of a different question in the sense that let's take that example where you have the truss being held by a person or another piece of equipment on one end --

A. Uh-huh.

Q. -- and you're inserting it into this particular hanger. Wouldn't you then at a later point, maybe right after, but still at a later point, then need to insert the opposing end into a hanger?

A. You would have to at that point -- and so we're just talking hypothetical, not what is practical in the field. This is a pure hypothetical because no contractor is going to use time holding something up when they could

pre-install two supports and drop the member in. That is just not practically...

Q. Well, I think that's the question I was trying to get to when asking whether or not the hangers would be pre-installed on opposing walls prior to insertion of the truss in either one; is that accurate?

A. That's accurate.

MR. EIDSON: Object to the form.

THE WITNESS: That may be accurate if you assume that you're using hangers at both ends.

Q. BY MS. HOLOUBEK: Okay.

A. That has to be the assumption that comes first.

Q. What happens if one of those hangers is misaligned such that it's not, say, a perfect alignment with the beam or with the truss?

A. What happens in the field if it's misaligned, how much misalignment are we talking about, one. And an inspector can come out into the field and red tag anything and say this has to come down because that is not how the manufacturer made the hanger. That is not what you bought off of the shelf. That looks completely different to what you picked up on the shelf.

Q. Let's say the alignment was off by a degree or two. Is that something that could be addressed in the field when you're installing the truss?

A. Because everything is deformable, every material is deformable with sufficient force, with sufficient force you can get almost any material to do what you want if it does not fail in the process of getting there.

Q. So at what point does the hanger become so rigid that it would not move if a shear force is applied to the beam?

A. It is impossible for a hanger or any material on the plant to become rigid.

Q. And that's because everything is inherently deformable; is that correct?

A. Every material that we know of on this planet that we inherited is deformable.

Q. And so does -- is 12-gauge steel or 12-gauge sheet metal -- sorry, I'll reask my question.

Does 12-gauge sheet metal have a different deformability than, say, quarter-inch steel plate?

A. It will depend on something called the elastic modulus.

Q. Okay. So is there a situation where 12-gauge sheet metal would have the same deformability as half-inch steel plate?

A. Deformability depends on a number of things. One is the elastic modulus; two is the configuration that is usually a parameter that all engineers -- every

engineer, any PHOSITA will know, is the modulus of elasticity.

So we talked about the elastic modulus. We talked about the -- I'm sorry, I said modulus of elasticity. The elastic modulus and modulus of elasticity are the same thing. The moment of inertia, which is a cross-section of the property, and the overall dimensions.

So when we discuss stiffness, there are several elements that play into stiffness.

Q. Are any of those -- oh, I apologize. Please go ahead.

A. No, no, go ahead.

Q. I was just wondering if any of those elements that you refer to are illustrated in figure 25.

A. It's illustrated by the fact that it is configured, one. The configuration is going to give you the moment of inertia, the dimension, and it shows that it has some dimension because it shows size. And if it's made out of steel, it's going to have elastic properties.

Q. So looking at figure 25 and just figure 25, can you calculate the moment of inertia?

A. No.

Q. Okay. And just looking at figure 25, can you calculate the elastic properties of this hanger?

A. Looking at the figure, no. You cannot look at any figure and determine the two things that you have said unless, one, you have dimensions, and two, you're told what material you have. There's no engineer on the planet who can do it.

Q. Okay. I'd like you to go ahead and turn to Exhibit 1041.

Actually, before we do that, I apologize. Can we go back to Exhibit 2056. This is the AISC document that we were talking about earlier.

A. Uh-huh.

Q. Okay. I want to go back to that page 16.1-512. It's what's labeled as page 28 in the Exhibit 2056.

A. Yes.

Q. So earlier you were describing the figure that's on the bottom right portion of the page as showing joints between elements that are configured to flex with respect to each other; is that right?

A. No, the elements are configured to flex. The framing angles between the elements are assumed to be -- the connection is assumed to be rigid. So there is no change in the angle, framing angles.

So member B2, which is the upper horizontal line on the right-hand side --

Q. Uh-huh.

A. -- and member C2, which is between points A and B, you assume that the framing angle between those two do not change. You assume that the framing angle does not change.

Q. And practically speaking, though, is that assumption correct, that they cannot change?

A. The assumption is correct insofar as you have detailed the connection between the members to give you that configuration. So if you have elements or members that frame -- in this case, we're talking about members -- the frame into each other and they are rigidly fixed to each other, then you would detail it such that that framing angle is not zero because it cannot be -- a change in the framing angle is zero, because it is impossible for it to be zero because all materials deform.

However, you configure to minimize the change in that framing angle because the parts are rigidly fixed to each other.

Q. Is it fair to say that those parts that are rigidly fixed to each other are still intended to allow for some movement with respect to each other?

A. Because all materials are deformable, yes.

Q. And is it correct that this -- these elements that are described in Exhibit 2056 are intended to be

used in seismic -- or intended to allow for seismic activity?

MR. EIDSON: Object to the form.

THE WITNESS: I'm sorry, someone said something.

MR. EIDSON: Object to the form.

Q. BY MS. HOLOUBEK: Is it correct that the elements described in Exhibit 2056 are intended to allow for movement due to seismic activity?

A. The document that you're looking at, 2056, is not a seismic document.

Q. Okay. If we turn to your declaration, Exhibit 2057, paragraph 11. It's the part of paragraph 11 that's on page 9 of the exhibit.

THE WITNESS: Before we start -- I am so sorry, but I need another break.

MS. HOLOUBEK: Okay.

THE WITNESS: What I was mentioning before. Sorry.

MS. HOLOUBEK: Okay. That's okay. Thanks.

(Recess.)

Q. BY MS. HOLOUBEK: Dr. Serrette, just before we broke, we were talking about paragraph 11 of your declaration, Exhibit 2057.

A. Yes.

Q. And that paragraph spans two pages, and so I'm

referring to a portion that's at the end of page -- the paragraph on page 9.

A. Yes.

Q. At the very end, you say -- well, first of all, this paragraph is discussing Exhibit 2056, the AISC document that we've been talking about today; is that correct?

A. That is correct.

Q. And you indicate that there can and would be some relative rotation at the joint, such as in a seismic event; is that correct?

A. That is correct.

Q. What do you mean by that sentence?

A. Okay. So let me read the sentence. Rigid in this context is meant to convey the intent is to limit the relative rotation between the framing members for intended use. However, there can and would be some relative rotation at the joint such as -- I'm not saying only in a seismic event.

The reason I used the example of a seismic event is because when we design structures seismically, we reduce the design force. Structures that are designed -- steel structures that are designed with rigid connections, which are also referred to as moment-resistant connections, they resist moment. So

that's probably more appropriate to -- but engineers know what we mean. Because we reduce the design force, we expect the members to be designed a certain way. Because we do not know exactly what an earthquake force will bring.

So to try to bring to fore the example that if the force is large enough, you will get a lot of deformation. Seismic is an example that I think is vivid in everyone's mind because you see what happens to buildings when the force is larger than what we expected.

And so that was the intent of saying seismic, was to give an example of a force that can be large enough that will change, but it is not the force that you would expect to be happening in normal use.

That said, and because I also said that the document that we're looking at, 10 -- 2056 -- sorry -- AISC document is not a seismic document, it does not mean it is not adopted in the seismic specification. Those are two different things.

It is not a seismic document so it applies to any design. But it is adopted in the seismic. And seismic is given in the example here as a magnitude of force that can be relatively high. Not the regular earthquake, but the maximum earthquake that we are expecting, and we don't really know what it is. So

that's the intent.

Q. So based on your statements here in paragraph 11, is it fair to say that in practice, designers would design a hanger intending to allow some rotation in case of force on the hanger such as a seismic event; is that correct?

MR. EIDSON: Object to the form.

Q. BY MS. HOLOUBEK: You can answer the question.

A. A seismic event is a large event. And the way you do design is at several levels. So we would expect that when we get a small seismic event, nothing changes. You get a moderate seismic event, you get some damage. You get the maximum considered seismic event, you do not want the structure to collapse, but it will look awful.

So given the fact that when we do a design, we have these different levels of design, can you rephrase the question?

Q. Is it fair to say that in practice, a hanger designer or a manufacturer would design the hanger so as to allow for some rotation due to shear force?

A. I don't know what "some" means because we're -- typically as an engineer, you have to quantify.

Q. Okay. When you in your -- sorry, let me rephrase.

In your paragraph 11, you refer to "relative

rotation." Can you define what you mean by "relative rotation"?

A. The rotation of one -- if two members are connected to each other, and there is a pre-configured orientation of the members, one member -- if you hold one member in place, the other member can move, rotate relative to that one. That's that relative rotation that I am referring to. Or relative deformation.

Q. Okay. And so that relative rotation would be possible even in a hanger designed as described in the AISC document; is that correct?

A. Relative rotation would be possible in any configured structure if the force is high enough because all materials are deformable. But the intent is not to build it so that it can be deformed. The intent is if it's configured pre-confined -- or pre-confined -- if the orientations are predefined, it is manufactured that way, it is sold that way. What happens after that, the engineer has no control over.

The engineer is doing calculations based on the configuration of the hanger, which is predefined. It is not intended to be deformed. The configuration is not intended to be changed, and all of the engineer's calculations are based on that.

The engineer -- it is impossible for the

engineer to design for something that they do not know will happen in the field.

MS. HOLOUBEK: I know that we took a short break, but I think it's been a while since we've had a -- sort of a standard-sized break. We've been going for a couple of hours now. Can we take a 15-minute break?

THE WITNESS: Sure.

(Recess.)

Q. BY MS. HOLOUBEK: Dr. Serrette, did you speak to anyone on the break that we just had?

A. No.

Q. And did you review any documents on the break that we just had?

A. No documents related to this.

Q. Okay. I'd like you to turn to or open Exhibit 1041, please.

A. Yes. I am there.

Q. Okay. And this is a US patent to Young; is that correct?

A. Yes, that's what it says.

Q. Do you recognize this document?

A. Yes, I do.

Q. Okay. Can you take a look -- I guess it's page 2 of the document showing figure 1.

A. Yes.

Q. So figure 1 shows an uninstalled hanger, while on the next page, figure 4 shows the same hanger as installed; is that correct?

A. Yes.

Q. Can you turn back to figure 1 again.

A. Uh-huh.

Q. Would you characterize the hanger elements shown in figure 1 as rigidly fixed with respect to each other?

A. Looking at the picture, without knowing exactly what the manufacturer intended, they look -- they appear to me to be rigidly fixed.

I also note, however, on the first page in the abstract, it describes -- just a minute, I have to move this up -- a slope and skew hanger for connecting a rafter to a beam for a variety of slope and skew angles.

So this variety has some meaning, I would think. But otherwise, just looking at the figure, and if you told me looking at the figure -- and this is just one piece of metal that was punched and bent into shape, I would respond in the affirmative, it looks like the elements are rigidly fixed with respect to each other.

Q. And to tell any different, you'd go to the abstract or the specification to see if there are any further details; is that correct?

A. Well, if an engineer's providing this drawing,

they will indicate what is -- what is the intent of the drawing. I believe in -- and you would have to excuse me, I am not an attorney -- I believe I have to then read the language to figure out what was intended.

Q. Okay. Let's go back to your declaration, Exhibit 2057, and turn to paragraph 21.

A. Okay. I'm there.

Q. Paragraph 21, you say that the term "extending from" should be construed to mean that the starting point of element A's extension is on element B; is that correct?

A. Yes, that's what it says.

Q. Okay. And in the following several pages, which are paragraphs 22 through 24, you provide examples of that; correct?

A. Yes.

Q. And in paragraph 25, you refer to the dictionary definition that you used for your construction; is that correct?

A. Yes.

Q. And that dictionary definition explicitly defines the word "from"; is that correct?

A. It gives a definition of the word "from," yes.

Q. Okay. Does the addition of the word "away" in the phrase "extending away from" change that definition

of the word "from"?

A. It changed the definition of the phrase "extending from."

Q. And how does it change the definition of the phrase "extending from"?

A. Well, "extending from," as you correctly indicated, is defined in paragraph 21. "Extending away from" gives a direction.

Q. So is the base word "from," is that definition changed at all when you add the word "away" to the phrase?

A. "From" is the dictionary definition?

Q. (Nods head.)

A. Again, I think it's not -- in my opinion, you have to look at the phrase, not just the individual words. And the two phrases are "extending from" and "extending away from."

I can take a number of words and just use them without context and they will have very little meaning. One example is the word "run."

Q. So in the -- in the declaration, in construing the phrase "extending from," you used this dictionary definition of "from"; is that correct?

A. No. The dictionary definition was there in the declaration in trying to explain what "extending from" in

the language of the patent meant. I was not trying to define "from" specifically. I was trying to use it -- explain the word "from" in the context of how it's used in the phrase.

Q. So this dictionary definition you were not relying on for its definition of the word "from"; is that correct?

A. I am using the dictionary definition in the context of "extending from," "extending away from."

Q. So how does the use of this dictionary definition of the word "from" change when you add the word "away" to that phrase?

A. "Away" gives a direction. It does not give a starting point.

Q. Okay. So the word "away" does not change the starting point; is that correct?

MR. EIDSON: Object to the form.

THE WITNESS: Sorry.

Q. BY MS. HOLOUBEK: You can answer the question.

A. It's not that it -- the word "away" has nothing to do with the starting point. It only -- only talks about a direction.

Q. Okay. I'd like to go back to the Motion to Amend and the proposed substitute claims. So that's the paper 37 that we talked about before.

A. Let me bring that up again. Okay.

Q. And at the end of that document, as you recall, there was a listing of claims we talked about earlier today. Can you scroll down to claim 38. And this is page 42 of the PDF. It's page 8 of the appendix. The number at the bottom is eight.

A. Appendix. And I think I noted this was not a document that I looked at except for those tables that we talked about earlier this morning.

Q. Okay. So if you look at claim 38, do you see that it says that it replaces claim 18?

A. The language here says replaces claim 18.

Q. Okay. And do you see that the claim 38 says that the extension portion includes extension flanges extending away from the channel-shaped portion?

A. I see that language here, yes. I read it for the first time here in this document.

Hello?

Q. Yes. Are you ready?

MR. EIDSON: Is there a question pending?

THE WITNESS: I just thought I had missed something.

Q. BY MS. HOLOUBEK: Oh, no. I thought you said you were reading the claim.

A. Oh, no, I read it. I read it.

Q. Okay. Sorry.

So in your opinion, is this claim 38 broad enough so that the extension flanges can start anywhere in relation to the channel-shaped portion?

MR. EIDSON: Objection. Foundation.

Q. BY MS. HOLOUBEK: Go ahead, Dr. Serrette. You can answer the question.

A. I was not asked to comment to that. I was asked to respond to the things that I responded to in my declaration.

Q. Okay. And so this isn't covered in your declaration; is that correct?

A. I was not asked to respond to that.

Q. Okay. In that case, I'd like to move on and talk about Tsukamoto. This is Exhibit 1009. Although we're talking about Exhibit 1009, I'm going to be asking you some questions about your declaration, Exhibit 2057.

A. Okay. So I would need to be switching back and forth?

Q. Probably not. I think there are some figures in your declaration that we can refer to.

A. Okay.

Q. So if you can turn to paragraph 68 of your declaration, Exhibit 2057.

A. Okay. I am there.

Q. Okay. In the middle of that paragraph 68, you say that due to the sheet metal thickness, a bend of sheet metal is performed over a radius and not a sharp 90-degree angle; is that correct?

A. That is correct.

Q. Okay. So now let's take a look at paragraph 64 of that same declaration.

A. Uh-huh. Yes.

Q. At the bottom of paragraph 64, I guess it's the bottom of page 41, you have an enlarged view of Tsukamoto figure 3; is that correct?

A. That is correct.

Q. And you've placed a red circle around a bend in the sheet metal; is that correct?

A. Yes.

Q. Okay. In this figure with the statement that a bend in sheet metal occurs over some radius, how can you tell where flange 3B ends and flange 3A starts?

A. Looking at this figure, just this drawing that is blown up here?

Q. Uh-huh. Yes.

A. The -- the drawing itself, because it has no breaks that I can see from 3A to 3B. It looks that is continuous.

Q. So can you tell where 3B transitions over to 3A

from this drawing?

A. If I am interpreting this drawing with nothing else, and based on just CAD detailing, I would say this is continuous.

Q. So what do you mean by the word "continuous"?

A. "Continuous" means that you -- the definition of "continuous" that is used in engineering and science, mathematics, is the slope on the right and the left at a point is equal. And so that if I pick any point on that curve going from 3A to 3B, and I draw a tangent on the left and a tangent on the right, they will be essentially the same tangent line.

And that is a definition that would be used in engineering, mathematics, and science.

Q. Is it your position that a flange has to be flat?

A. A flange is essentially a plate, and so it has to be used in context. You can have a flange that is -- it's the context. And in engineering, depending on the orientation of a member, you can call it a flange. You can turn it 90 degrees, it sudden becomes a web. So the context has to be explained.

If you're talking about planes that's a completely different issue. Planes are well defined.

Q. So let's look back at this figure here in your

corresponding text in paragraph 64. You indicate that the component labeled 3D appears to intersect the 3B prior to the completion of the curved transition to 3A; is that correct?

A. That's what the language says.

Q. Okay. Why can you also say the opposite, that if you're extending from flange 3A, that 3B doesn't start until the curved transition from 3A is complete?

A. Can you repeat that again slowly?

Q. Sure, sure. And I'll back up again referring to that statement in your Paragraph 64.

You seem to start with figure -- sorry. You seem to start with flange 3B and say that flange 3B is not complete until it completes the curve transition to 3A.

A. Okay.

Q. Am I correct?

A. And you're reading -- is that an interpretation or we're reading the last sentence?

Q. I'm asking if that's what your last sentence means.

A. The figure 3 also appears to contradict -- this is what it says -- intersecting planes. Argument labeled 3D, intersecting. It's talking about 3D and 3B intersecting, 3B prior to the completion of the curve.

Q. So you're saying as the component labeled 3D appears to intersect 3B prior to completion of curve transition 3A. So is that as the component and everything that follows, is that your explanation or is that your understanding of Simpson's argument?

A. Let me just read the sentence again so that I don't give you just the different -- just mine.

So it says figure 3 appears to contradict Simpson's intersecting plane argument that 3D appears to intersect 3B. Okay.

So 3B is continuous with 3A. There is nothing in this diagram that says, except for the drawing showing that the lines reach up and touch in this one particular drawing, that 3B is going to be intersecting on that corner radius that continuous piece that is labeled 3B and 3A.

Q. So is it fair to say that 3A and 3B essentially overlap there? How would you describe that connection between 3A and 3B?

MR. EIDSON: Object to the form.

Q. BY MS. HOLOUBEK: You can answer the question.

A. 3B and 3A are continuous around that corner. Continuity implies that there is -- if you take any point on that sloped region or that radiused region, the slope on the left, which is also called the tangent, and the

slope on the right, which is also called the tangent, will be the same.

Q. And can you clearly define any point along that curve as being part of 3B versus 3A?

A. The curve belongs to neither 3A or 3B. Mathematically, engineering wise, it is a transition because you bent the member.

So if I assume that 3A and 3B were straight horizontally; right? Then it will be one plane that defines 3A and 3B. Once I've bent it, that curve you cannot say belongs to A or B. The material has not changed, the piece has not changed, but you have now bent it.

So the how you define what happens in that curve is what tells you that it is still continuous. It started as a continuous piece, it was bent, it is still continuous, and it is still continuous because the tangent on the left and the right at any point in that curve is the same. That is the only way I can describe that.

Q. Is it possible that this curved part between the flanges isn't part of any flange? So this curved part between three -- I'll rephrase.

Is it possible that this curved part between 3B and 3A isn't part of any flange?

A. Is it possible or are we talking the context of Tsukamoto?

Q. In this context of Tsukamoto.

A. In the context of Tsukamoto, if you look at the full context of Tsukamoto, that is not the case.

Q. Okay. And thinking about the '510 patent, the '510 patent hanger is also made out of bent sheet metal; is that correct?

A. It is -- yes, out of formed sheet metal.

Q. So the bends in the '510 patent hanger wouldn't have sharp 90-degree bends, either; is that correct?

A. The framing angle between the elements is 90 degrees, but you must have a radius. The reason you must have a radius is if you make a sharp 90-degree bend, all materials will break, every one on the planet. Because the strain will go to infinity. And if the strain goes to infinity, there is nothing that we know of that can stretch forever.

So you cannot possibly make in any material a right-angle bend. You must have a radius. It's just a mechanics, structural mechanics-based thing, if you wish.

Q. And when you say it must have a radius, you're referring there to the sheet metal from which the hanger is made; is that correct?

A. I am referring to the bend. So, for example, in

what we're looking at, when we're looking at 3B and 3A, that radius is what I am referring to.

Q. But it's that bend in the sheet metal; correct? Not a framing member, but a bend in the sheet metal?

A. If you're forming it, yes, you're bending it. So it's in the metal that you're bending, hopefully.

Q. Looking at paragraph 68 of your declaration. This is Exhibit 2057.

A. Yes.

Q. There is a picture of a blank at the top of the page; is that correct?

A. Yes.

Q. And you describe this as a version of a blank for Tsukamoto; is that correct?

A. I describe it as the corrected version of the blank that was provided by -- in Fennell's declaration.

Q. And this blank is intended to correspond to the hanger in the Tsukamoto; is that correct?

A. This blank is intended to correct the error in the Fennell declaration concerning the circled portion of the elliptical blown up -- well, if we go to the elliptical blown-up portion, there is a shift between that sort of diagonal -- well, the dashed diagonal line and the horizontal solid with the dashed line.

Q. Looking at this blank, though, we're talking

about this blank in the context of Tsukamoto; is that correct?

A. This is the context in which it was used in the Fennell declaration, correct.

Q. Would this blank as shown in your figure, when assembled, form the hanger of Tsukamoto?

A. It is the exact same blank that Fennell claimed would form the hanger of Tsukamoto. This image is a correction of an error in Fennell's drawing.

Q. Do you believe that this blank, when formed, would create the Tsukamoto hanger?

A. I believe it to the same extent that Fennell believed it.

Q. Okay. Did you create this image of the blank?

A. This image was made for me to just shift that one space that I have indicated.

Q. Who made this image for you?

A. I asked counsel's drafters to make that image.

Q. Okay. Did you try to actually make a metal hanger from this blank?

A. This blank was taken from Fennell. Whatever he assumed, I assumed. I made a correction to it. So your question was did I try to make a hanger from this blank? I will precede that question with what I just said. No, I did not personally try to make a hanger out of this

blank.

And so the only difference, I would say again, between this blank and the blank that Fennell made was that change in that position. So if Fennell could not make a hanger out of it, it doesn't matter. The focus is what was important.

Q. You've been talking about Mr. Fennell's actions. You said that you assumed what he assumed. Are you aware of what his assumptions were in making the original blank?

A. His assumption is what I was responding to in my declaration, that there was a common point. And I was pointing out that that was an error in his judgement in reviewing the diagrams that illustrated the Tsukamoto hanger.

Q. So what assumptions or what of your assumptions were you referring to when you said that you assume what he assumed?

A. Okay. So in Fennell's declaration, that -- if we're looking again at the figure above paragraph 68, I'm going to be looking -- there are two circular-ish figures, and then there are two lines, one extending from the smaller circular shape to the large elliptical shape. I'm looking at the large elliptical shape. There's something called a top flange. And just above that text,

there's a solid line, and if I continue -- starting on the left and I continue to the right, it changes to a dashed line.

On the solid part of that horizontal line, as I start moving left, there's a vertical dashed line. So I'm just trying to establish the point there's a "T" at that point. I just want to make sure that we're at the same position in the drawing I'm trying to describe.

Q. Sure.

A. As I move from the "T," at that "T" point, Fennell's drawing -- and the only difference between Fennell's drawing and this one is that in Fennell's drawing, as I move from that "T" and I move across to the right, there's a solid diagonal line that goes up and to the left. Fennell had that line directly at the "T."

I moved -- had that line moved to the right. And I had that line moved to the right. If you go now to page -- well, above paragraph 69, and this is a drawing that was produced by -- I believe it was Fennell in one of his original declarations. You would see that there is a little bit of a gap there.

Now if you look at Tsukamoto, it becomes completely evident, looking at the totality of the drawings, that Fennell's interpretation of the blank and that intersection of that left-leaning diagonal with that

"T" point must have been in error.

Q. Did you -- but you did not actually try to make a metal hanger to see if it could be made from the blank provided in Mr. Fennell's declaration; is that correct?

A. I did not make a blank and try to form the hanger.

Q. Have you ever created a hanger blank before?

A. I have never created a hanger blank before.

Q. Have you ever made a metal hanger from a hanger blank before?

A. I have never made a metal hanger from a hanger blank before.

MS. HOLOUBEK: Okay. I see that we're about to -- I guess it's 12:20 your time. Can I propose that we break for lunch for maybe 45 minutes?

THE WITNESS: That's okay with me.

MS. HOLOUBEK: Does that work for everyone?

MR. EIDSON: Yeah.

THE WITNESS: So come back at 1:05 or 1:00? 1:05 will be 45.

MS. HOLOUBEK: We can do 1 o'clock to make it easier for everyone.

THE REPORTER: Off the record.

(Recess.)

THE REPORTER: Back on the record, Counsel.

Q. BY MS. HOLOUBEK: Dr. Serrette, over the break did you speak to anyone about the substance of your deposition today?

A. No.

Q. And over the break, did you review any documents related to your deposition today?

A. No.

MS. HOLOUBEK: No further questions, and pass the witness.

MR. EIDSON: Joe, you weren't kidding.

We have no questions at this time.

Dr. Serrette, thank you for your time.

THE WITNESS: Thank you.

MS. HOLOUBEK: Thank you, Dr. Serrette. I appreciate your time today.

THE REPORTER: Can I ask you, Mr. Eidson, if you need a copy of the transcript?

MR. EIDSON: Yeah, we'll take a copy and I think -- yes, we'll take a copy.

(Time noted: 1:03 p.m.)

--oOo--

I declare under the penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on _____, 2020, at _____, _____.

_____

SIGNATURE OF THE WITNESS

STATE OF CALIFORNIA) ss:
COUNTY OF MARIN)

I, LESLIE ROCKWOOD ROSAS, RPR, CSR NO. 3462, do hereby certify:

That the foregoing deposition testimony was taken before me at the time and place therein set forth and at which time the witness was administered the oath;

That testimony of the witness and all objections made by counsel at the time of the examination were recorded stenographically by me, and were thereafter transcribed under my direction and supervision, and that the foregoing pages contain a full, true and accurate record of all proceedings and testimony to the best of my skill and ability.

I further certify that I am neither counsel for any party to said action, nor am I related to any party to said action, nor am I in any way interested in the outcome thereof.

IN WITNESS WHEREOF, I have subscribed my name this 22nd day of December, 2020.

LESLIE ROCKWOOD ROSAS, RPR, CSR NO. 3462

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Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS
COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

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