UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SIMPSON STRONG-TIE COMPANY, INC.
Petitioner.

vs.

COLUMBIA INSURANCE COMPANY.
Patent Owner.

Case PGR2024-00050.
Patent No. 11,920,399

DEPOSITION OF RICHARD KACZKOWSKI

TAKEN ON BEHALF OF THE PETITIONER

JULY 24th, 2025

(Starting time of the deposition: 9:04 a.m.)

Simpson Strong-Tie Company EX1052
Simpson v. Columbia
PGR2024-00050

I N D E X

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(Exhibits retained by Michelle K. Holoubek, Esq.)

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DEPOSITION OF RICHARD KACZKOWSKI produced, sworn and examined on JULY 24th, 2025, between the hours of nine o'clock in the forenoon and six o'clock in the evening of that day, at the offices of Stinson, LLP, 7700 Forsyth Boulevard, Suite 1100, St. Louis, Missouri 63105 on behalf of the Petitioner, before Paula D. Hefner, a Certified Shorthand Reporter, Certified Court Reporter, Registered Merit Reporter, Certified Real-Time Reporter, and a Notary Public within and for the State of Missouri, and the following proceedings were held:

A P P E A R A N C E S

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IT IS HEREBY STIPULATED AND AGREED by and between counsel for the Petitioner and counsel for the Patent Owner that this deposition may be taken in shorthand by PAULA D. HEFNER, a Certified Shorthand Reporter, Certified Court Reporter, Registered Merit Reporter, Certified Real-Time Reporter, and a Notary Public, and afterwards transcribed into typewriting; and the signature of the witness is expressly reserved.

* * * * *

(Starting time of the deposition: 9:04 a.m.)

COURT REPORTER: Would you raise your right hand, please?

Do you swear that the testimony you give will be the truth, the whole truth, and nothing but the truth so help you God?

THE WITNESS: Yes.

COURT REPORTER: Thank you.

EXAMINATION

QUESTIONS BY MS. HOLOUBEK:

Q. Good morning. My name is Michelle Holoubek and I'll be taking your deposition today. Can you state your full name and address for the record, please?

A. My name is Richard Kaczkowski, spelled K-a- c as in cat, z as in zebra, k-o-w-s-k-i.

Do you want my home or business address?

Q. Home address.

A. 2736 North Windsor Drive, W-i-n-d-s-o-r, Arlington Heights, Illinois.

Q. Great. Thank you. And you understand you are here today to have your deposition taken in connection with the testimony you provided in Post-Grant Review Proceeding challenging U. S. Patent No. 11,920,339.

Is that correct?

A. That's correct.

Q. Throughout the day today I'm going to refer to the challenge patent by its last three digits so I'll refer to it as the 339 patent.

Is that okay?

A. I understand.

Q. Okay. A couple of ground rules for the deposition, especially to help out our Court reporter. Let's not speak over each other; please wait for a question to be finished before you answer. And then I'll likewise do the same with your answers before I ask the next question.

Additionally, please give verbal answers as the Court reporter cannot record head nods or hand movements.

Is that understood?

A. Understood.

Q. Okay. Will you tell me if you don't understand my question?

A. I will.

Q. Okay. If you don't ask for clarification I'll assume that you understood my question.

Is that okay?

A. Fair enough.

Q. Okay. Is there any reason that you cannot testify truthfully today?

A. No.

Q. Are you under any medication that may impair your testimony in any way today?

A. No.

Q. We'll take periodic breaks, and please let me know if you need a break. However, we can't take a break while a question is pending, so all questions that I've asked must have been answered before we take a break.

Is that understood?

A. Understood.

Q. Okay. And do you understand that you are under oath and that means you are required to tell the whole truth to the best of your knowledge.

Is that correct?

A. That's correct.

Q. Okay. Have you been deposed before?
A. I have.
Q. How many times?
A. I would estimate on the order of sixty to seventy times. I mean I couldn't give you an exact number, but it would be somewhere in that range.
Q. Okay. Have any of those depositions been for a proceeding in front of the U. S. Patent Office?
A. Yes.
Q. About how many depositions have been in front of the U. S. Patent office?
A. Well, are you including Federal Circuit Court cases involving patent litigation? Or are you simply referring to matters that are post-grant reviews or PTAP related cases?
Q. I'm just referring to PTAP related cases.
A. Again, perhaps two or three.
Q. Okay. Have those cases that you've been involved with been related to MiTech or Columbia Insurance?
A. They have not.
Q. Okay. What was the subject matter of the other PTAP cases you were involved with? Without disclosing confidential information.
A. Well, so they have generally been related to building products of various types.
Q. Okay. When you say building products you mean like

construction buildings?

A. Exactly, yes. Construction related -- products that would go into the construction of a building.

Q. Okay. What did you do to prepare for today's deposition?

MR. SCHROEDER: Real quick -- just object -- he's used to this. But, just making sure the client is aware not to divulge any work product or attorney client communications.

But, you may answer.

A. So in general I spent several days going through the documents. There's a large number of documents in this matter -- both the declarations that I wrote as well as some of the supporting documentation, the patent at issue, the prior art. I met with Attorney Schroeder here yesterday for a preparatory session to discuss the documents.

Q. (By Ms. Holoubek) Okay. And are the documents you reviewed -- actually I'll pause and actually go ahead and hand you your two declarations.

So these documents, one is already marked as Exhibit 2001. And the second document is already marked as Exhibit 2050.

Do you recognize these two documents?

A. Yes. I do.

Q. Looking at document labeled Exhibit 2001 first, Declaration of Richard T. Kaczkowski.

Is that correct?

A. Correct.

Q. I'll get there. What is this document?

A. So this would be the initial declaration that I prepared and signed.

Q. Okay. And this declaration was submitted with a preliminary response in this 339 patent proceeding.

Is that correct?

A. That's correct. The preliminary response to the Petition.

Q. Okay. And if you turn to the last page of your declaration is that your signature on Page 181 of the declaration?

A. It is.

Q. And you signed this declaration December 20th, 2024.

Is that correct?

A. That's correct.

Q. The other document I handed you, Exhibit 2050, is labeled Second Declaration.

Is that correct?

A. That's correct.

Q. And what is this document?

A. Well, this would be the second declaration that I prepared and signed, and it would have been issued after the board issued their findings or decision.

Q. Okay. And if you turn to Page 166 of the second declaration that's your signature on Page 166.

Is that correct?

A. That is correct, yes.

Q. And you signed this document on May 27th, 2025.

Is that correct?

A. That's correct.

Q. And this particular declaration contains several exhibits at the end after your signature page.

Is that correct?

A. That's correct.

Q. And I apologize, I think I said exhibits. But, they're labeled appendices.

Is that correct?

A. That's correct. They're labeled Appendices A, B, C, and D.

Q. So you reviewed both of these documents in preparation for today's deposition.

Is that correct?

A. That's correct.

Q. On Page 5 of your second declaration begins a description of other documents you considered for your declaration.

Is that correct?

A. That is correct.

Q. Did you review all of these documents in preparation for today's deposition?

A. In preparation for today's deposition no, not necessarily. There's a large number of documents here.

I would have reviewed all of these documents to some extent prior to preparing and signing my second declaration.

I may have reviewed some of them subsequent to that in preparation for this deposition, but no. I did not review each and every one of those exhibits in preparation for this deposition after I signed and issued the second declaration.

Q. Okay. In addition to the documents that are listed here -- starting on Page 5 of your second declaration you mentioned that you also reviewed the patent and prior art cited in the Petition.

Is that correct?

A. That's correct.

Q. Did you review the Petition that was filed in this 339 case?

A. Portions of it, yes.

Q. Okay. Did you -- are there portions of the Petition that you did not review?

A. Well, I probably skimmed through the entire Petition.

I focused, I think, primarily on the findings that were more -- that I felt were more relevant to this matter. So in other words, findings related to the independent claims. So,

again, I may have skimmed through the entire Petition but there were certain sections that I focused on in more detail.

Q. Okay. And you said you read the institution decision.

Is that correct?

A. I did.

Q. I'll also go ahead for our discussion today and hand you a copy of the 339 patent. So I'm handing you what's been previously marked as Exhibit 1001.

Is that correct?

A. That is correct.

Q. Have you seen this document before?

A. I have.

Q. What is this document?

A. So this document is the U. S. patent issued to Brekke assigned to Columbia Insurance Company, and it is the document that we have agreed to refer to as the 339 patent in the course of this deposition. So this is the patent that is being challenged in the Petition by Simpson.

Q. The filing date listed on the front of this patent is February 22nd, 2023.

Do you see that?

A. I do.

Q. And the earliest priority date listed under related U. S. Application Data is December 31st, 2013.

Is that correct?

A. I'm sorry, could you repeat the question?

Q. Sure. The earliest priority date listed under the section titled related U. S. Application Data is December 31st, 2013.

Is that correct?

MR. SCHROEDER: Objection to the extent its outside the scope of his Direct, but he may answer.

A. Yeah. That is correct.

Q. (By Ms. Holoubek) In your declaration are your opinions from the perspective of a person skilled in the art as of 2013?

A. They are. They are from the perspective of a person of ordinary skill in the art as of that priority date.

Q. Thank you. Did you write the first draft of each of your declarations?

MR. SCHROEDER: Objection. I'm going to instruct the client not to divulge attorney work product or attorney expert work product.

A. So I authored, reviewed, and concurred with all of the opinions that are in my first declaration. The format and some of the understanding of patent law was prepared by the attorneys for Columbia Insurance Company -- the Stinson attorneys.

In the course of developing the declaration I made numerous changes, inserts, comments, and reviewed and concurred with everything prior to signing it.

Q. (By Ms. Holoubek) And did you follow the same process for the second declaration?
A. I did.
Q. Okay. If you turn to I guess Page -- so this is in your first declaration, Page 43.
A. I've got it.
Q. Okay. And -- actually I apologize. Can you turn to Page 9 of your declaration?
A. Got it.
Q. Paragraphs 14 through 19 refer to legal concepts referenced throughout the declaration.
Is that correct?
A. That is correct.
Q. So does Paragraph 14 represent your full understanding of the legal concept of written description support?
MR. SCHROEDER: Objection; vague.
A. I'm sorry, could you repeat the question?
Q. (By Ms. Holoubek) Sure. Does Paragraph 14 represent your full understanding of the legal concept of written description?
A. Well, maybe I'm struggling with the term full understanding.
I think this is a good summary of my understanding as I sit here. I mean there may be other considerations that aren't explicitly mentioned here, but I think it's a good

summary.

Q. Okay. And then does Paragraph 15 represent your understanding of what it means for a claim to be indefinite?

MR. SCHROEDER: Objection; vague.

You may answer.

A. I think the same answer. I think it's a good summary.

Q. (By Ms. Holoubek) Okay. And then Paragraphs 16 through 18 provide your legal understanding of what it means for a claim to be obvious.

Is that correct?

A. That is correct.

MR. SCHROEDER: Objection; vague.

A. That is correct.

Q. (By Ms. Holoubek) At this time do you have any corrections or other changes to be made to either of your declarations?

A. I do not, no.

Q. And who did you work with to prepare each of these two declarations?

A. Well, various attorneys in the Stinson law firm, primarily Attorney Mr. Schroeder.

Q. Did you work with anyone outside of the Stinson firm to prepare your declaration?

A. I did not.

Q. About how much time did you spend on the first

declaration?

Do you recall?

A. Without looking at my invoices no. I'm sure it was on the order of several weeks. But, no. Without looking at my invoices I couldn't tell you that.

Q. Do you recall about how much time you spent preparing the second declaration?

A. Same answer. It was a considerable amount of time. There's a number of pages obviously to each declaration, there is a number of exhibits. But, no, as I sit here without going through my invoices I couldn't give you a number.

Q. How long have you worked with Columbia Insurance?

A. As far as I can recall this is the first matter where I have been engaged by Columbia Insurance.

Q. Do you recall about when you were engaged by Columbia Insurance?

A. Well, my first declaration was signed in December of 2024. I was contacted by Attorney Schroeder earlier in 2024. Again, I could not give you an exact date without looking through my correspondence. But, I would estimate that the first contact was sometime in March or April or thereabouts of 2024.

Q. Okay. You mentioned that you've been involved in a number of Court proceedings prior to this case.

Is that correct?

A. I've served as an expert witness in a number of Court

proceedings prior to this matter.

Q. Are you aware of any time that your testimony has been discredited or discounted in a Court proceeding prior to this matter?

MR. SCHROEDER: Objection; vague.

A. No. No. I'm not.

Q. (By Ms. Holoubek) Let's turn to your first declaration. In Paragraph 3 of your first declaration you mentioned that you obtained a bachelor's degree in civil engineering from the University of Illinois in 1988.

Is that correct?

A. No. That's not correct.

What it says -- and I'll read it into the record, Paragraph 3 is I hold bachelor's and master's degrees in civil engineering. I have been a Licensed Professional Engineer in Illinois since 1988.

So professional engineering licensure in Illinois requires a certain amount of post-college experience. So I would have obtained my bachelor's and master's degrees prior to 1988.

Q. When did you obtain your bachelor's degree?

A. 1983.

Q. And from where did you --

A. University of Illinois at Urbana-Champaign.

Q. And when did you obtain your master's degree?

A. 1984.

Q. And from where did you obtain your master's degree?

A. The same school; University of Illinois at Urbana-Champaign.

Q. In Paragraph 4 you indicate that you were employed for approximately nine years in the R&D Department of USG Corporation.

Is that correct?

A. That is correct.

Q. When were you employed at USG Corporation?

A. From 1993 until 2002.

Q. And in Paragraph 4 you mention that your role at USG included testing fire resistant drywall clad wall assemblies.

Is that correct?

A. It included the testing of drywall clad fire resistant assemblies. It was certainly not exclusive to that, but yes, it included that.

Q. When you were testing this fire resistant drywall clad wall assemblies where did that testing take place?

A. So USG Corporation had a research facility in Libertyville, Illinois. We had furnaces at that facility for conducting both ASTM E119 tests, as well as various smaller scale tests. So many of the developmental tests would have been done in-house at that facility.

We also did a large number of certification tests

primarily at Underwriter's Laboratories which was located in Northbrook, Illinois, but also occasionally at other independent test facilities.

Q. Do you have any experience with drywall clad fire resistant wall assemblies on active construction sites?

A. On active construction sites? Yes.

So part of my role at USG in addition to managing the Laboratory Group that was responsible for quote certification testing -- and that would have included the fire testing -- I also assisted our Quality Department and Sales Department in responding to field issues. So those may have been inquiries, at that time faxes, phone calls, related to questions about ongoing construction, it would have involved going out to the field to look at the actual construction and respond to those issues.

So, yes. In addition to laboratory testing and building code requirements I also had field experience with fire resistant wall assemblies.

Q. Okay. Were any of the fire resistant wall assemblies you have experience with, did any of them involve joist hangers?

A. They did. I mean I have certainly been on projects where joist hangers and similar means, or alternate means of attachment were used.

Q. And were those situations where you've been involved with firewall assemblies that had joist hangers, were those

before 2013?

A. They would have been, yes.

Q. Okay. Have you ever personally installed a joist on any type of wall in an active construction site?

A. In an active construction site probably not because I've never worked as a contractor when we built assemblies for testing.

I participated in construction because part of my job was helping to develop specifications for installation, for example. So I certainly installed drywall. I certainly installed, you know, various accessories.

I can't tell you from recollection whether I actually installed a joist hanger. But, I certainly fastened framing, drywall, and other accessories.

Q. Did you ever test assemblies -- that is firewall assemblies -- that incorporated both a joist hanger and drywall?

A. You know, I don't recall a specific example. We certainly tested assemblies that had through penetrations.

I don't recall a specific instance of testing a joist hanger.

Q. Can you describe an example of an assembly with a through penetration?

A. Sure. So USG at the time I worked there was the parent company for various subsidiaries. One of those subsidiaries was the United States Gypsum Company. At that time

US Gypsum was the largest U. S. manufacturer of drywall, and a considerable part of their sales volume was with fire resistant drywall. So sheetrock was one of their brand names. And they sold fire resistant panels under the UL designations of Sheetrock Type X, Sheetrock Type C, Sheetrock Ultra Code. Those were all various fire resistant panels manufactured by US Gypsum.

In addition to developing and testing fire rated drywall assemblies that were comprised entirely of US Gypsum products we also participated in collaborative testing with manufacturers that made accessories that might be used in these products. So, for example, if a duct or some sort of electrical penetration was required in a fire rated wall assembly the UL or other independent design we pursued would often be exclusive to proprietary products. So, in other words, it would be our sheetrock brand wall board with perhaps our rockwell installation -- which was a non-combustible type of insulation -- and it may have been someone else's fire stop material that went over that.

So I would be involved in those tests, and those tests would involve the ASTM E119 test to determine the baseline fire rating for the wall as well as tests of specific through penetrations that may penetrate that wall.

Now, I can't recall did one specifically involve a joist hanger at that time. I'm not sure. They certainly may

have involved other types of penetrations through the wall.

Q. So when you refer to other types of penetrations would that be with structural connecters, for example?

A. They could be, sure.

Q. And when you refer to the term through penetration that means when a structural connecter, for example, penetrates all the way through the sheetrock from the front to the back.

Is that correct?

A. Well, either -- so perhaps I misspoke.

We would be involved in testing both penetrations that penetrated the front and the back, and also penetrations that breached the fire resistant layers on the front of the assembly.

Q. So some penetrations would not go all the way through the sheetrock from the front to the back.

Is that correct?

A. That's correct. But, if they penetrated the fire resistant materials -- the sheetrock on one side -- there would still be a concern regarding temperature transmission and potential for flaming and deterioration of primarily combustible materials like wood studs that would be used in the wall. So both of those conditions were evaluated.

Q. Do you recall testing any firewall assemblies that used structural connectors penetrating through the sheetrock that passed the fire resistance testing?

MR. SCHROEDER: Objection; scope.

A. You know, I recall testing, for example, ledgers that may have been used in a similar manner to joist hangers for supporting the end of a truss or joist. Those were, I think, primarily developmental tests, and as I sit here I can't recall whether those resulted in a certification. Because in addition to the certification testing we certainly did a lot of developmental testing, both small scale as well as full scale.

Q. (By Ms. Holoubek) Okay. Were these tests involving penetrations through the drywall fairly common?

A. I would say they were not uncommon. Our primarily focus was in developing certified fire rated systems that consisted entirely of our own products. But, it was certainly not unusual for us to collaborate with a manufacturer of a product that likely would be used in our wall assembly. It was a way of promoting and advancing the use of our products in wider quote approved wall assemblies and fire resistance. So there was obviously a sales incentive to do that.

Q. About how long have fire rated walls been used in multifamily dwellings?

MR. SCHROEDER: Objection; vague.

You may answer.

A. Yes. So the concept of a fire rated wall goes back a long period of time. I can tell you that just in researching some of the materials for this matter I went back to the 2000 IBC Code -- the International Building Code. The International

Building Code is a model building code. The 2000 edition was the first year that it was issued. And that addresses Type III construction and two hour fire ratings.

Prior to that there were regional model codes. The IBC was an attempt to consolidate a national model code. And by model code I mean kind of a template or a recommended code which in and of itself does not have any authority. But, authorities having jurisdiction -- states, counties, cities -- depending on how the building code approval process is set up would adopt the model building code either in its entirety or with various amendments.

So how long has fire resistant construction in multifamily going on? Well, I can cite a document from 2000 that addresses it.

But, prior to that I worked with the three model building codes -- the three regional model building codes that preceded the International building code, and those were referred to as the BOCA Code, the Southern Building Code -- SBCCI -- and the UBC, which was the Uniform Building Code. And I recall that those certainly addressed fire resistant ratings for all types of building construction, including multifamily.

Q. (By Ms. Holoubek) Are fire rated walls ever used in single family dwellings?

A. Well, they can be. And, again, a lot depends on the authority having jurisdiction.

But, one area might be -- the separation of a garage from a residence may have a fire rating requirement.

Q. A minute ago you referred to the IBC addressing Type III construction.

Is that correct?

A. Correct.

Q. What is Type III construction?

A. Well, Type III construction at least as it was defined in the 2000 code -- and I believe it's still generally similar today -- but the type of construction refers to the materials that could be used in construction. So Type I and II are essentially non-combustible materials. Type III generally requires either non-combustible materials or in some cases allows fire treated -- fire retardant treated wood to be used in the exterior wall assemblies. And then the interior walls -- even the interior bearing walls -- would also have a fire rating requirement, but, they could be constructed out of any material allowed by the code.

Q. For Type III you said it allows for fire retardant treated wood to be used. Does Type III construction allow for gypsum sheathing to be used to achieve a fire rating?

MR. SCHROEDER: Objection; compound.

You may answer.

A. Yes. So only certain types of gypsum drywall and gypsum sheathing can be used to provide a fire resistance rated

wall.

So the answer to your question is simply a commodity grade gypsum sheathing could not be used. A gypsum sheathing which carries a certification developed by a manufacturer or even a commodity type designation that would be developed by let's say the Gypsum Association -- which is a trade group comprised of gypsum manufacturers -- would also develop products that carry a recognized fire rating.

So the answer to your question is if the gypsum sheathing carries a recognized fire rating typically through testing at an independent laboratory that is qualified to certify such a product then yes, it certainly could be used in the construction of a fire rated wall.

Q. (By Ms. Holoubek) Did the 2000 IBC allow such fire rated gypsum products to be used in the construction of the fire rated wall?

A. I believe it did. And I don't recall specifically looking for that. But, I would be surprised if it did not as long as the product was appropriately qualified.

Q. Prior to 2013 it was common for framing of a building to hang joists using joist hangers.

Is that correct?

MR. SCHROEDER: Objection; foundation.

A. Prior to 2013?

Q. (By Ms. Holoubek) Yes.

A. I would say that that was being done. I think the DU hanger is one example of that being done. How common that was I can't tell you. There were certainly a number of means that were used to accomplish that connection. But, yes, prior to 2013 it was being done.

Q. My question wasn't asking specifically about firewalls.

A. Okay.

Q. How long have joist hangers in general been used in building construction?

A. Well in my report -- I believe it's my second declaration -- I make reference to a patent from 1895, right, for a joist hanger. So I think the use of joist hangers goes back decades.

So if your question was not specific to fire rated construction then the answer is yes, certainly it was used before 2013.

Q. So your prior question that said you thought joist hangers were used in construction prior to 2013 included a reference to fire rated wall assemblies.

Is that correct?

A. That's correct. And as I responded I'm not sure how common it was.

Q. But, it did -- but, joist hangers were used in fire rated construction before 2013.

Is that right?

A. That's correct. To my recollection, yes, they were.

MR. SCHROEDER: I am going to object -- I didn't get to -- but, on vagueness.

Q. (By Ms. Holoubek) Taking firewalls out of the equation -- and we're just talking general construction -- it was common for drywall to be used on walls that also had joist hangers installed.

Is that correct?

MR. SCHROEDER: Objection; vague.

A. I don't know how common that was. But, yes. I expect it would have been done.

Q. (By Ms. Holoubek) How long has drywall been used in the building industry?

A. Well, again, for decades. Drywall replaced plaster-type construction sometime in the middle of the twentieth century, nineteen fifties, nineteen sixties.

Q. So you also said that joist hangers have been around for decades.

Is that correct?

A. Right.

Q. So both drywall and joist hangers have been around for decades.

Is that right?

A. That's correct.

Q. So is it fair to say that drywall and joist hangers were used in the same building prior to 2013?

A. That's possible. I mean I don't have any specific knowledge of that, but yes, that's certainly possible.

Q. Okay. Do you know -- scratch that.

A minute ago you mentioned the Simpson DU hanger.

Is that correct?

A. Correct.

Q. Do you know when the Simpson DU hanger first came on the market?

A. I don't know that. My understanding it was -- is that it was sometime prior to 2013. But, no, I don't know the exact date.

Q. Okay. Prior to the DU hanger what joist hangers were used in fire rated walls?

A. I don't know that. I mean I haven't studied that as part of my work in this matter.

Q. Okay. Prior to 2013 did fire rated walls use fire retardant drywall that reached up to the floor above the truss or joist that was being carried?

MR. SCHROEDER: Objection; vague.

A. I would expect that it did, but, again, I haven't specifically studied that as part of my work in this matter.

Q. (By Ms. Holoubek) Okay. If you had a fire rated wall assembly prior to 2013 that involved a joist would the drywall

have to be notched around the joist to reach up to the floor above?

A. I don't know that it would have to be. I think building code officials -- since the determination of what type of construction is allowable is ultimately determined by the local building official. And the knowledge and the requirements of that local building official may vary from region to region.

So I don't know that it would have been required.

Q. Okay. Under a building code that required drywall to extend up to the floor above a truss wouldn't the drywall have to be notched around the truss in order to reach that floor?

A. Wouldn't the drywall need to be notched around the truss in order to reach that floor? Well --

MR. SCHROEDER: I'm going to object; incomplete hypothetical.

You may answer.

THE WITNESS: Okay.

A. Not necessarily. I mean first of all, if that was the requirement I would assume that there would be multiple ways that you could do that. You could terminate the drywall at the bottom cord of the truss and then somehow in-fill between the truss members.

But, I'm just speculating here. I haven't researched the exact Code requirements at that time. And, as I testified, even if I had researched them I suspect that they would really

vary because it's open to the interpretation of the local code official.

Q. (By Ms. Holoubek) Okay. So if drywall is required to reach the floor above a truss and a truss is in the way of that drywall how can the drywall reach the floor above the truss?

MR. SCHROEDER: Objection; incomplete hypothetical, calls for speculation.

A. Well, as I answered previously I didn't study that as part of my work in this matter. Just speculating, I mean, I think there -- if the fire resistance rating is required to reach the underside of the floor there would be other means of providing that other than drywall. Non-combustible insulation with some type of a fire rated fire stop or sealant.

If the attempt was used to make drywall -- to use drywall then, as I said, I suppose one way of doing it would have been to terminate the drywall at the underside of the bottom cord and simply cut panels and in-fill between the trusses.

But, I have no idea if that was done. I'm just kind of speculating as to how that could be done.

Q. (By Ms. Holoubek) When you say cut panels to in-fill between the trusses do you mean between say two separate trusses spaced apart on a wall?

A. Correct. Between the trusses.

Q. Okay. Prior to 2013 was it common to complete framing

to dry-in status before installing drywall?

A. So, again, I didn't study that.

One of the things that I did study as part of this was the commercial success of the MiTech FWH hanger, which is based on the 339 patent. And I provide opinions in my second declaration in the Secondary Consideration section. And some of those opinions relate to commercial success and long-term unfulfilled market need.

So based on that I would say that no, that was not common because the FWH hanger enabled that, it was very successful.

Q. So you mentioned that the IBC came out in 2000.

Is that correct?

A. The first edition is in 2000, and then it is typically re-issued every three years.

Q. Do you know when the FWH first came on the market?

A. I believe it's shortly after the priority date of the 339 patent. So I believe it was approximately 2014, somewhere in that time period.

Q. Okay. So are you saying that between the year 2000 and the year 2014 no firewalls were completed such that rough -- or such that roof dry-in was achieved before drywall was installed?

A. No. I'm not saying that at all.

I think in my previous answer I said I have not

studied that as part of this matter.

I suspect based on the opinions in the study that I did of commercial success and long term unmet market needs that it was not a common practice. But, I can't tell you it was never done.

Q. Okay. So is your understanding of long felt need purely from the declaration submitted by others in this proceeding?

MR. SCHROEDER: Objection; vague.

A. Well, it's not just the declarations. I think it's the entirety of the exhibits and the documents cited in my second declaration; so emails, correspondence, deposition testimony, deposition exhibits and the like.

Q. (By Ms. Holoubek) So you don't have any personal experience that affects your understanding of firewall construction in the years between 2000 and 2013.

Is that correct?

MR. SCHROEDER: Objection; vague, misstates prior testimony.

A. Yeah, I'm sorry, if you could repeat the question. I missed a part of that.

MS. HOLOUBEK: I'm going to ask the Court reporter can you please repeat the question.

THE REPORTER: "Q. So you don't have any personal experience that affects your understanding of firewall

construction in the years between 2000 and 2013.

Is that correct?"

A. Yeah, no. That's not correct.

I think as I testified previously part of my responsibilities at USG during the time period from 1993 to 2002 involved both laboratory and field inspections, interface support related to fire resistant construction.

Specific to the question of installing joist hangers prior to installing drywall I don't recall experience with that particular issue.

I do recall that at the time period that I worked at USG the question of moisture damage and mold was very significant. So the whole idea of protecting drywall from moisture because of concern about moisture damage and mold I have quite a bit of experience with. That was very much a hot topic while I was at USG.

Q. (By Ms. Holoubek) Okay. Because of that mold issue you would agree that the strong preference was for -- prior to 2013 was for framing to be complete to dry-in status before installing drywall.

Is that correct?

A. I would say that certainly was the preference. I think there was a struggle as to how to accomplish that.

Q. So you're saying between the year 2000 and 2013 a contractor would not know how to achieve framing to dry-in

status before installing drywall?

MR. SCHROEDER: Objection; vague.

A. Well, that's a very general question. I think it depends on the construction, right. It depends on how that supporting structure is assembled.

Again, if your question is specific to joist hangers and Type III construction and making that connection in order to satisfy both the desire to achieve the preferred sequence of installing the joist hanger first and then the drywall as well as satisfying the structural requirements, the fire requirements, the cost requirements, yes, I think that was a struggle. And for the same reasons I cite in the Secondary Considerations part of my report that did establish a long term unmet market need.

But, your question seems to be much more general than that.

Q. (By Ms. Holoubek) It is more general.

So setting aside firewalls or joist hangers specifically intended for use with firewalls wasn't it common in just general building construction to complete framing to dry-in status before installing, you know, mold susceptible materials like drywall?

MR. SCHROEDER: Objection; scope, relevance.

You may answer.

A. Yes. So, again, I did not study that specifically as

part of this investigation.

I can tell you that during my time in USG over those nine years that was very much an evolving topic. Because the whole concern about mold arose because construction practices at that time did not necessarily recognize the importance of keeping gypsum based materials completely dry. And, therefore, when mold issues arose the desire to change the construction sequence intensified.

Q. (By Ms. Holoubek) When did you leave US Gypsum?

A. 2002.

Q. Okay. So what did you do between 2002 and 2013?

A. So between 2002 and 2011 I worked for a company called Packer Engineering. Between 2011 and even beyond 2013 I worked for a company called CTL Group.

Part of my work with both of those companies was to resolve construction related problems, and many of those problems related to building envelope issues. So I conducted water testing. I would design repairs. I would inspect existing buildings when a client had a moisture leakage related issue.

Q. So all the buildings you inspected in that 2002 to 2013 time frame had moisture leakage issues.

Is that right?

A. No. That's part of what I did. That was not exclusive to what I did.

I also got involved in similar investigations for structural problems, for example, or for building code related issues. But, a good part of it I think was moisture leakage related.

Q. Did you ever see a building construction where framing was complete to dry-in status before gypsum was installed?

A. I likely had. I mean I can't cite you a specific case from memory. But, part of my work involved single family homes and certainly that is the typical practice in single family construction.

Q. The typical practice in the single family construction is to complete framing to dry-in status before installing gypsum.

Is that correct?

A. Well, currently it certainly is. I mean I can't tell you it's been that way historically. But, yes, I would say the recognition today is that a paper faced gypsum panel product will degrade and potentially harbor mold if it's allowed to get wet. So the preferred sequence is to dry in the building prior to installing the interior drywall.

I would say based on my experience in single family home construction at least today that is the typical practice that is followed.

Q. In the 2000 IBC is there any requirement or guidance to complete framing before installing mold susceptible

materials?

MR. SCHROEDER: Objection; foundation.

You may answer.

A. You know, not that I'm aware of. I didn't specifically search for that requirement. There are probably requirements that just simply address habitability and the need to prevent moisture damage. But, to my knowledge there is nothing as specific as what you asked about.

Q. (By Ms. Holoubek) To your knowledge were there any local codes that required completion of framing before installation of mold susceptible materials?

MR. SCHROEDER: Objection; foundation, objection, scope.

You may answer.

A. Yeah. Again, I didn't study that as part of my work in this matter. As I testified, my experience with local codes is that the codes themselves vary widely. And there is further variation in the way the building code official may interpret the local code. So, no. I didn't study that. And I suspect that it may -- it may vary based on the locality.

Q. (By Ms. Holoubek) I want to hand you Exhibit 1033.

Do you recognize this document?

A. I do.

Q. What is this document?

A. Well, this is an ASTM standard that addresses

application and finishing of gypsum board, and more specifically it is the edition that was originally approved in December of 2000 and published in 2001.

Q. Okay. So you would agree that before 2013 a skilled artisan would have been aware of this ASTM specification for application of gypsum board.

Is that correct?

MR. SCHROEDER: Objection; foundation. Objection, vague.

A. Yeah. I would agree with that in the sense that ASTM standards are generally accepted standards. So, yes.

Q. (By Ms. Holoubek) I apologize, at least in my version some of the pages are out of order. But, if you turn to Page 3 -- labeled Page 3 -- do you see Section 4.2?

A. I do.

Q. Section 4.2 on Page 3 states, gypsum board shall be protected from direct exposure to rain, snow, sunlight, or other excessive weather conditions.

Is that correct?

A. That's correct.

Q. Why would the ASTM specify that gypsum board should be protected from these weather elements?

A. Well, I think this is consistent with my prior testimony. There was a growing recognition during this time period of the seriousness of moisture damage and mold to gypsum,

to a paper faced gypsum product such as gypsum board.

So I suspect that the protection requirement from rain, snow, or other excessive conditions relates to moisture damage concerns. The protection from sunlight probably relates to UV -- or ultraviolet -- related light concerns and the fact that if the paper on a gypsum board is subject to significant UV degradation you may not be able to finish it properly.

Q. Given this ASTM specification would a skilled artisan install sheathing in an environment that would be exposed to these weather elements?

MR. SCHROEDER: Objection; vague. Objection; foundation.

A. Yeah. I don't know that. That's a very general question.

I would agree that a skilled artisan should know that that is not the preferred approach; whether it was always done that way I'm not sure. Based on my experience with construction I suspect that it wasn't.

Q. (By Ms. Holoubek) So this specification is from 2001. Correct?

A. So this was published in May of 2001.

Q. Okay. So are you telling me that from 2001 to 2013 all gypsum products were installed before framing to roof dry-in status was complete?

MR. SCHROEDER: Objection; vague. Objection;

mischaracterizes prior testimony.

A. Yeah. I'm not saying that at all. I did not testify that I thought all gypsum products were installed prior to the dry-in of the building.

What I said was that I think a skilled artisan would recognize that that is not the preferred approach. But, based on my experience with construction the preferred approach is not always followed.

Q. (By Ms. Holoubek) Is the preferred approach usually followed?

A. Well, again, it depends. In construction time is money. So if a limited amount of gypsum wall board needed to be installed to enable the rest of the structural frame of the building to be constructed, right, such as a joist or truss connection to a wall. I would suspect that there were times when that was done. I can't give you a percentage on that.

Q. Is it your belief that firewall construction prior to the introduction of the DU hanger required gypsum to be installed before any joist hangers were installed?

MR. SCHROEDER: Objection; vague. Objection; foundation.

You may answer.

A. Yes. So your question was specific to firewall construction and joist hangers.

I'm aware that the DU hanger required the drywall to

be installed prior to the hanger. I'm not aware of any other joist hangers that would have enabled a different series -- sequence of construction during that time period.

And, again, based on the opinions I provide in the Secondary Consideration section of my second declaration I suspect that there weren't any, or if there were some they certainly weren't widely used.

Q. (By Ms. Holoubek) So before the DU hanger came out a firewall assembly that involved a joist hanger had to use a hanger other than the DU hanger.

Is that correct?

A. Presumably, yes.

MS. HOLOUBEK: We've been going about an hour. Should we take a short break?

MR. SCHROEDER: Yes.

(Discussion was had off the record.)

Q. (By Ms. Holoubek) So, Mr. Kaczkowski, did you speak to anyone during the break about the substance of this deposition today?

A. About the substance of the deposition, no. We had some idle small talk in this room between the people that were here, but nothing substantive.

Q. Okay. I'm going to hand you what's already been marked as Exhibit 1034. Do you recognize this Exhibit 1034?

A. I do. So this appears to be the cover and some

excerpts from the 2012 edition of the International Building Code.

Q. And are you familiar with the 2012 International Building Code?

A. Generally speaking I am, yes.

Q. Okay. You would agree that the 2012 International Building Code was published before 2013.

Is that correct?

A. Yeah. Independently I don't know that. If I'm looking at the third page of the exhibit that you handed me it says first printing May, 2011, second printing June, 2011. So from that I would assume that yes, this document had several printings prior to 2013.

Q. Okay. Please refer to Page 40 of this exhibit, and that's the page number on the bottom center of the page.

A. I've got it.

Q. Do you see the section entitled Section 714, Penetrations?

A. I do.

Q. So Section 714.1 indicates that the section shall govern the materials and methods of construction used to protect through penetrations and membrane penetrations of horizontal assemblies and fire resistance rated wall assemblies.

Is that correct?

A. That's correct.

Q. And earlier we were talking about through penetrations and membrane penetrations.

Do you recall that?

A. I do.

Q. So a membrane penetration is a penetration that goes through one side but not out the other side of a sheet of drywall.

Is that correct?

A. Yeah. It's my understanding that that is correct in terms of how the IBC defines it.

Q. Okay. And as the IBC uses it a through penetration is a penetration that goes from one side -- into one side and out the other.

Is that correct?

A. My understanding is that is correct.

Q. Okay. So at the time of this IBC Code -- International Building Code -- you would agree that penetrations through fire rated wall assemblies were needed to pass necessary structure, like trusses or pipes.

Is that correct?

MR. SCHROEDER: Objection; vague.

A. They can be depending on the construction, yes.

Q. (By Ms. Holoubek) And you would agree that penetrations through firewall assemblies were permissible under this Code so long as the penetrations were protected by an

approved fire stop system and could pass testing.

Is that correct?

MR. SCHROEDER: Objection; vague.

A. Yeah. I mean I don't know if there is other dimensional restrictions that are in here. But, yes. I would agree that the Code did permit that subject to the requirements of the Code.

Q. (By Ms. Holoubek) Okay. What were some common materials for fire stop materials prior to 2013?

A. Well, there's various mastics, sealants, caulks. Typically you would often have a filler material within the penetration, perhaps a non-combustible insulation product of some type.

Q. And prior to 2013 would a skilled artisan have understood that those fire stop materials could be used to seal gaps that prevented the passage of fire and smoke?

A. Yes.

Q. And I don't recall you mentioning mineral wool as one of those fire stops. But, would mineral wool be considered a fire stop material?

A. I think it would be considered as a component in a fire stop material. I don't know if mineral wool by itself would serve as a fire stop. But, if it could pass the test then presumably it could.

Q. Okay. So would mineral wool be installed under a

sealant, for example, in a fire stop?

A. That would be one method, yes.

Q. And before 2013 it was well known to fill the void spaces in the firewall assembly with fire resistant material to pass testing.

Is that correct?

MR. SCHROEDER: Objection; vague.

You may answer.

A. It was a Code requirement. So to the extent that it occurred yes, I think a person of ordinary skill in the art would be aware of that.

Q. (By Ms. Holoubek) I've already handed you a copy of the 339 patent. Can you turn to Column 11 of the 339 patent?

A. Okay. I'm there.

Q. In Lines 51 to 66 the 339 patent gives the example of this hanger installed in a wall assembly where the cavities in the wall were filled with mineral wool insulation.

Is that correct?

A. I'm sorry, it starts on 51 and where does it end?

Q. 66. So it's the paragraph that starts on Line 51 and extends through 66 or 67, and the numbers are a little bit in between the lines there.

A. So this gives an example of a configuration which passed an ASTM E814 test that had mineral wool in the cavity of the wall.

Q. Okay. And so that's -- that mineral wool in the cavity of a wall was common in firewall assemblies prior to 2013.

Is that correct?

A. In the cavity of the wall? I would say yes, that was known.

Q. Okay. And that insulation would be inside the frame wall behind any drywall.

Is that correct?

A. Well, it would be in the stud cavity. So it would be between the studs and, yes, in that position it would be behind the fire rated drywall.

Q. In the area between the studs would the insulation be packed from the bottom of the wall to the top of the wall?

A. Well, it would be dependent on the fire rated design. So, again, each of these approved assemblies has specific installation requirements. So it may have required that; it may not have.

Q. Okay. If you had a cavity that extended from the floor -- I'm sorry, from the bottom of the wall to the top of the wall in between two studs and the mineral wool fills that cavity can we assume that the mineral wool was throughout the cavity from the bottom of the wall to the top of the wall between the studs?

A. Yeah. I think we could assume that it would have

extended typically from the bottom plate to the top plate of the frame wall assembly.

Q. As it's described here in the 339 patent would that mineral wool exist in the cavity behind where the 339 hanger was installed?

MR. SCHROEDER: Objection; vague. Objection; foundation.

You may answer.

A. Well, so the mineral wool would be present between the studs and from the top plate to the bottom plate. It would be interrupted by the stud framing. So depending on where that fire hanger was located there may or may not be mineral wool behind the entirety of it.

Q. (By Ms. Holoubek) If the hanger was not located on a stud and it was more over the surface of the cavity would mineral wool be behind the hanger?

A. Well, in the completed installation the drywall would be behind the hanger and the mineral wool would be behind the drywall, the fire rated drywall.

Q. Okay. You would agree that with the 339 hanger a penetration through the drywall still exists in the final assembly.

Is that correct?

A. It does exist. There is language which I've quoted in my declarations that warn that that opening should be minimized,

and there are specific guidelines and dimensions provided in the 339 patent in order to accomplish that.

Q. But, nonetheless there would be a penetration through the drywall caused by the extension flange of the 339 hanger.

Is that correct?

A. Well, there would be a slot there. The slot would exist between the edge of the fire resistant drywall and the extension flange. So that would be a minimal dimension, which is called out in the patent as being less than or equal to one-eighth of an inch.

But, yes, that would be a membrane penetration because it penetrates the fire resistant drywall on one side.

Q. When you said the dimension of a slot would be less than or equal to one-eighths of an inch is that the full width of the slot?

A. No. That would be the distance between the cut edge and the extension flange of the hanger.

Q. So how wide would the slot be in total? About.

MR. SCHROEDER: Objection; vague. Objection; scope.

A. So the teaching that is provided in the 339 specification -- and I'm looking specifically at Column 5 beginning at Line 37 -- preferably the slot has an area less than or equal to six square inches and the gap between the extension flanges and the edge of the slot is less than or equal

to one-eighth of an inch.

Your question had to do with how wide the overall slot would be. I don't know that as I sit here. It would have to be wide enough to accommodate the gauge thickness of the two extension -- back to back extension flanges and still provide less than or equal to a one-eighth inch gap on either side.

But, I can't tell you sitting here exactly what that dimension would be.

Q. (By Ms. Holoubek) The specification of the 339 patent uses the word slot throughout the specification.

Is that correct?

A. That's correct.

Q. If you look at Claim 1 of the 339 patent, Claim 1 uses the word opening instead of slot.

Is that correct?

A. Well, okay. So let me go back to my prior answer. I think your question was is it referred to as a slot throughout the specification. Certainly that term is used. I can't tell you as I sit here whether it is not also referred to somewhere in the specification as an opening.

But, with that clarification -- I'm sorry, you were directing me to which claim?

Q. Claim 1.

A. Okay. So, yes. Claim 1 says cutting an opening into an exterior edge.

Q. So what's the difference between an opening and a slot?

A. So I think a person of ordinary skill in the art would understand that based on the teaching in the specification and the dimensional requirements that I just read that this opening would be very narrow, both because the specification teaches that that gap that we discussed between the extension flange and the edge of the sheathing must be less than or equal to an eighth of an inch, and also because these back to back extension flanges are made of thin metal.

So I think a person of ordinary skill in the art would recognize that an opening in this case is simply this narrow slot that is being taught by the specification.

Q. You referred to the back to back extension flanges. Do you think it's important for the extension flanges to be back to back for this hanger to work in a firewall?

MR. SCHROEDER: Objection; scope.

A. Well, I think it's important for this hanger to work in a firewall to minimize the interruption in the fire retardant sheathing. And that is mentioned numerous times in the specification. So to that extent yes, I think the back to back extension flanges and the narrow width of those flanges enables the installation sequence that is being taught in the 339 patent while at the same time minimizing the amount of fire rated sheathing that needs to be removed.

Q. (By Ms. Holoubek) In your second declaration let's take a look at Page 59.

A. If you bear with me a second I'm just trying to keep these exhibits in their proper order.

I'm sorry, you're directing me to Page 59 of my second declaration?

Q. Yes, that's correct.

A. Okay. I'm there.

Q. Do you see the two figures on Page 59?

A. I do.

Q. If you look at the left hand -- I'm sorry.

The right-hand figure shows an opening in the drywall.

Is that correct?

A. That's correct.

Q. Would you describe this opening in the drywall as a slot?

A. Yeah. I --

MR. SCHROEDER: I'm going to object to scope.

You may answer.

A. Yes. So I have not offered a definition of a slot other than as taught by the 339 specification. That long narrow opening to me obviously would be a slot. I can't tell you how wide that opening would become until it ceases to be a slot.

Certainly what is shown here is more of a cutout and less of a slot than what is taught by the 339 specification.

Q. (By Ms. Holoubek) In the 339 specification -- actually, quick question about your previous answer.

You mentioned that that figure on Page 59 shows a cutout. Is a cutout an opening?

A. A cutout is an interruption in the drywall. I'm not sure to what extent it forms an opening, but it's certainly a cutout or an interruption in the fire resistant drywall.

Q. Is the -- does the figure on the right-hand side of Page 59 show an opening in the drywall?

A. Again, the top of the slot in the 339 patent per the patent claims is an opening that opens outwardly. And I agree with that teaching for the reasons that are discussed in the declaration. Whether the cutout that is shown here is a slot or whether that constitutes an opening to the top edge or to the face I haven't studied that. I didn't offer an opinion on that.

Q. Well, this is a figure on Page 59 in your declaration. Correct?

A. It is, yes.

Q. And you reviewed the language of the claims. Correct?

A. Correct.

Q. But, you're telling me that sitting here you can't tell me if that cutout on the right side of Page 59 is considered an opening in the context of the 339 claims?

Is that right?

A. Well, I certainly don't know if it's considered to be

an opening in the context of the Robinson prior art. There certainly is no discussion in Robinson for cutting such an opening or how such an opening would be characterized.

Q. I didn't ask about whether it was an opening in the context of Robinson; I asked whether it was an opening in the context of the 339 patent claims.

A. So leaving the question of slot aside because, as I said, I haven't studied how wide a cutout would need to be before it stops becoming a slot. But, this is open to the top in a similar manner to the slot in the 339 patent.

Q. So you would agree that this cutout shown on the right-hand side of Page 59 is an opening as that term is used in the 339 patent claims.

Is that correct?

A. I don't know that I would agree it's an opening as it's used in the 339 patent claims because the 339 patent claims discuss the opening as resulting from a specific process of cutting the slot, right, and describes the resulting opening, and specifically describes the edge from which the opening opens.

This merely shows a resulting cutout. The configuration -- again, if you leave the question of how wide a cutout can be before it ceases becoming a slot I would agree that this is open to the top edge in a similar manner as taught in the 339 patent claim.

Q. So you would agree then that this cutout shown on the right-hand side of Page 59 here opens outwardly from the sheathing.

Is that correct?

A. Again, I don't know that.

The term opening outwardly is specific to the 339 patent. And it's specific to the cutting operation and then the resulting configuration of that cut slot. This clearly appearance wise is similar in the sense that it has an opening along the top edge of the fire rated drywall.

Q. So is it your position that because it's simply a figure showing a cutout you can't tell whether that cutout opens outwardly?

A. So my opinion on the opening outwardly in the 339 patent is not just based on a figure. It's based on the teachings and the specification and the language that is in the claim.

Q. Can you show me where in the text of the 339 patent the patent teaches opening outwardly?

A. That language --

MR. SCHROEDER: Objection; vague.

A. That language does not appear in the specification.

It does appear in the claim.

Q. (By Ms. Holoubek) You would agree that the language of the claims has to be supported by the specification.

Is that correct?

A. It has to be supported --

MR. SCHROEDER: Objection; foundation.

You may answer.

A. It has to be supported by the specification. But, it certainly does not need to appear as cited in the claim. It only needs to demonstrate that the inventor was in possession of the claimed information and it needs to be clear enough that a person of ordinary skill in the art would understand what is being claimed. And for the reasons cited in my declaration I believe the specification accomplishes that.

Q. (By Ms. Holoubek) Can you show me where the specification accomplishes what you say is the concept of opening outwardly?

MR. SCHROEDER: Can you repeat the question?

MS. HOLOUBEK: Go ahead.

THE REPORTER: "Q. Can you show me where the specification accomplishes what you say is the concept of opening outwardly?"

A. So in my second declaration I discuss the language in Claims 1 and 27 related to opening outwardly, and the antecedent -- antecedent basis manner in which the edge was referred to. I then make reference to -- starting in Paragraph 52 I make reference to how that way in which the claims would be interpreted by a person of ordinary skill in the art is

supported by sections of the specification and figures.

So, for example, in Paragraph 52 I make reference to Figure 9 of the 339 patent. I make reference to the template that is shown in Figure 16 of the patent. I make reference to other sections within the specification. And then I also offer the opinion that a posit understanding of what is being claimed would be facilitated by the fact that face and edge are terms of art that are used with gypsum panels. So the face typically refers to the large planar surfaces at the front and rear, and the edge would refer to the edges that are along the perimeter of the panel.

Q. (By Ms. Holoubek) So my question was where the concept of opening outwardly was included in the specification; not figures, not anything external to the specification, but the specification.

Can you point me to where in the written words of the specification the concept of opening outwardly is explained?

MR. SCHROEDER: Objection; vague.

You may answer.

A. So as I think I responded in a previous question, the term opening outwardly does not appear in the specification nor in a designation within the figures.

I think the claim language which relates to both the cutting step as well as the resulting appearance of the cut and the manner in which the edge is referred to and specifically --

and is specifically identified as the edge, along with the figures and specification language that I cite which do not include the term opening outwardly, allows a person of ordinary skill in the art to recognize that the limitation in Claim 1 that reads cutting an opening into an exterior edge of the fire retardant sheathing, the opening extending through a front face of the fire retardant sheathing, and through a rear face of the fire retardant sheathing, and opening outward from the exterior edge of the fire retardant sheathing.

So the exterior edge is clearly the edge which was cut. Not the face, not the rear face, not the front face, but in this case the top edge. The fact that the opening opens outwardly merely means that the opening -- its outward direction is at the top of the panel towards the top.

Q. (By Ms. Holoubek) And you're relying on that understanding based on other words in the claim.

Is that correct?

A. I'm relying on that understanding based on the words in the claim and the reference portions of the specification and figures in my report.

Q. So I guess that's been my -- go ahead.

A. And the fact that face and edge are terms of art when referring to gypsum panels and gypsum sheathing.

Q. So I guess that's been my question, though, is what are the sections of the specification that you're citing as

support for the concept of opening outwardly?

MR. SCHROEDER: I'm going to object; asked and answered.

A. So in Paragraph 53 I again provide the opinion that I think I just summarized that the edge -- which is identified as the edge from which the opening opens outwardly is clearly defined by the claims and the specifications. So it is the exterior edge which, as shown in the figures, would be the top edge of the panels. The opening that exists at the top does open outwardly. It is open to the outside in the area above the fire rated sheathing panels. And it is that fact that it is opened outwardly at the top that enables the drywall to be inserted and moved or arranged upward in the manner that is also taught in Claims 1 and 27.

So I think a person of ordinary skill in the art would understand that. He would understand where the opening is per the teachings of this patent -- that it exists at that top edge -- and that it opens outwardly. It is open at the top in a manner that would enable that insertion and moving and arranging step to be accomplished.

Q. (By Ms. Holoubek) So you referred in that answer to Paragraph 53.

Is that correct?

A. Well, I think I referred in total to the explanation that I provided in this second declaration related to this claim

language, and so that would start at Paragraph 39 and it would continue through Paragraph 54.

It's also addressed in my first declaration.

Q. Looking at Paragraph 53 you would agree that Paragraph 53 just refers to the claims.

Is that correct?

A. Paragraph 53 does refer to the claims.

Q. Okay. And in Paragraph 54 you're referring to the use of the template shown in Figure 24.

Is that correct?

A. So in 54 I make reference to Figure 16. I make reference to Line 6 -- pardon me, Column 6, Lines 32 and 34 of the specification, the modified Figure 9 that I added here. Column 6 Lines 8 through 10. Column 6 Line 35.

Q. Column 6 Lines 8 through 10 that quote refers to how you insert a cutting tool.

Is that correct?

MR. SCHROEDER: Objection; vague.

A. Well, it talks in general about how you insert the cutting tool, but also where you insert the cutting tool. You insert it into the guide slot.

Q. (By Ms. Holoubek) That guide slot is referring to the guide slot in the template.

Is that correct?

A. That's correct.

Q. Column 6 Lines 8 through 10 that you just quoted there does not talk about the resultant opening.

Is that correct?

A. Column 6 Lines 8 through 10 talk about the template and the guide slot, so yes, that's correct.

I think, though, if I could add to that answer the description of the cutting process allows a person of ordinary skill in the art to understand how the cut is made and to which edge or exterior edge the cut initiates from.

Q. Okay. So looking at the patent, Claim 1 of the 339 patent -- actually Claim 1 of the 339 patent.

Let me know when you are there.

A. Okay. I have it.

Q. Claim 1. First two lines of Claim 1 refer to a method of constructing a fire resistant wall assembly.

Is that correct?

A. That's correct.

Q. In your own words what is a fire resistant wall assembly?

A. A fire resistant wall assembly would be a wall assembly that carries a recognized fire rating or offers a level of protection against fire that is recognized as complying with Code requirements.

Q. And a fire resistant wall assembly is made up of many different elements.

Is that correct?

MR. SCHROEDER: Objection; vague.

A. It's made up of several different elements, I would agree with that.

Q. (By Ms. Holoubek) Does an individual hanger have to have been rated for fire resistance to be part of a fire resistible assembly?

A. No. The hanger would need to be tested in a configuration which reflects the manner in which it will be installed in a fire resistive wall assembly. The hanger itself does not carry a fire rating.

Q. Claim 20 refers to the term planar extension plates.

Is that correct?

A. That is correct.

Q. In your own words how would you define the term planar?

A. I would define planar as existing in one plane. In other words, two dimensional obviously neglecting the thickness of the plate.

Q. Paragraph 19 of your second declaration states that you agree that a plate is a smooth, flat, thin piece of material.

Is that correct?

A. I'm sorry, Paragraph 19 of the second declaration?

Q. Yes.

A. Yes. Just reading the statement into the record I agree with Simpson that a plate is a smooth, flat, thin piece of material. And, yes, that does appear in Paragraph 19 of my second declaration.

Q. So is it your position that a plate does not have bends?

A. So if you could define what you mean by a bend.

Q. What do you mean by the term bend?

What do you interpret the term bend to be?

A. Okay. So a bend by itself could mean several different things. You can have a bent plate; so in other words, you start with a plate which is a thin, flat, piece of material but you put a bend in it, like a ninety degree bend. So now you have two plate sections of considerable size that are separated by a bend.

So I think the term planar extension plate is used to mean that this is not a bent plate. This is not a curved plate. That it is a plate that exists in one plane.

I would distinguish that type of a bend from the de minimus bend that is used when a product such as this hanger is formed from metal.

So your question was would a planar extension plate include a bend? I think if that plate has a bend which is an inherent part of the forming process and is a de minimus bend that is used to connect that plate to another element, such as a

flange or what have you, I would consider a portion of that bend to be part of the plate.

Q. What is your definition of a de minimus bend?

MR. SCHROEDER: Objection; vague.

You may answer.

THE WITNESS: Okay.

A. So in forming metal you can't form it and bend it at a ninety degree angle. That's well understood by engineering mechanics.

So a de minimus bend would be a bend on the order of maybe a couple of times of the plate thickness and radius, which is really there because you cannot form that bend any tighter in a practical sense without fracturing the plate.

Q. (By Ms. Holoubek) Is it your position that a flange can also have bends?

A. Yes.

Q. So what's the difference between a flange and a plate?

A. Well, that's addressed also in my second declaration. But, just generally speaking a plate is a more limiting form of the term flange. So in other words, a flange is not necessarily a planar plate. It may be a planar plate. It may be several plates that have a bend between them.

Q. Is it your position that the term planar extension plate as used in the claims is not flat?

MR. SCHROEDER: Objection; vague.

A. It's my opinion that the term planar extension plate consists of a plate which is a flat, thin piece of metal as we discussed in Paragraph 19. But, that plate also would include portions of these de minimus bends which must be there in the process of forming the plate. You can't form the plate without them.

So it's my opinion that a flat -- that a planar plate is flat. But, it can also contain these bends or a portion of these bends at either end that result from the forming operation.

Q. (By Ms. Holoubek) Looking at the 339 patent would you agree that Claim 15 refers to a first extension flange?

A. Claim 15?

Q. Yes.

MR. SCHROEDER: Can you actually repeat the question?

THE REPORTER: "Q. Looking at the 339 patent would you agree that Claim 15 refers to a first extension flange?"

A. So I would agree that in Claim 15 the term a first extension flange appears.

Q. (By Ms. Holoubek) Would you agree that Claim 20 refers to a first planar extension plate?

A. So Claim 20 includes the term first and second planar extension plates, so yes. It does refer to a first planar

extension plate.

Q. (By Ms. Holoubek) Can you turn to Figure 7 of the 339 patent?

A. Got it.

Q. Looking at Figure 7 of the 339 patent can you identify for me where the difference lies between a first extension flange and a first extension plate?

MR. SCHROEDER: Objection; form. Objection; vague.

You may answer.

A. So, again, as I mentioned I think the term extension plate is a more restrictive term because as I testified in my opinion a person of ordinary skill in the art would understand that a plate, and more specifically a planar plate, is a flat piece of metal but, would also understand that a portion of the bend that must be used to form this hanger configuration would exist and be part of the plate at each end.

As I testified a flange is a broader term. It's less restrictive than plate. So it would include potentially one or more plates that are joined together.

In Figure 7 what is shown here I think would be both an extension plate and an extension flange.

Q. (By Ms. Holoubek) So is it your position that in Figure 7 an extension -- an extension flange is completely coincident with the extension plate?

MR. SCHROEDER: Objection; vague.

A. As it's drawn here this would appear to me to be both a planar extension plate and an extension flange.

Q. (By Ms. Holoubek) Is there any difference in this figure between the planar extension plate and the extension flange?

A. In this figure no -- or at least not as can be identified from the view in this figure.

Q. Turning to Page 57 -- I'm sorry, Paragraph 57 on Page 35 of your second declaration.

A. I'm sorry, Page 57?

Q. Page 35, Paragraph 57.

A. Got it.

Q. You state that the close conformance of Claims 13 and 14 means the edge of the fire retardant sheathing is within a short distance away from the exterior face of the extension portion.

Is that right?

A. That's correct.

Q. Would one-sixteenths of an inch be considered in close conformance?

MR. SCHROEDER: I'm going to object to vague.

But, you may answer.

THE WITNESS: Okay.

A. I think in a previous answer I cited to a portion of

the specification which I thought gave some teaching as to what was meant by the term close conformance. And that appears in Column 5. I'm looking at Lines 37 through 39. Preferably the slot is an area less than or equal to six square inches and the gap between the extension flanges and the edge of the slot is less than or equal to one-eighth of an inch.

So in Claim 13 the claim language reads, positioning the fire retardant sheathing relative to the firewall hanger so that the edge of the fire retardant sheathing bounding the opening is in close conformance with the first exterior face of the extension portion of the firewall hanger.

So based on the teachings of the specification in the claim language I would say yes, a sixteenth of an inch would be in close conformance.

Q. Okay. Would three-sixteenths of an inch be considered in close conformance?

A. Not based on the teachings of the patent.

Q. So you're saying that based on the teachings of the patent as shown here in Column 5 anything less than or equal to an eighth of an inch would be in close conformance and anything beyond that range would be not in close conformance.

Is that correct?

MR. SCHROEDER: Objection; vague.

A. Well, again, I don't know that I would define a numerical boundary for the term close conformance. As I stated

close conformance means it's within a short distance away and corresponding in form or shape.

Q. (By Ms. Holoubek) But, you pointed me to a numerical value in Column 5 of an eighth of an inch.

Is that right?

A. I pointed you to a section of the specification which informs a person of ordinary skill in the art what is meant by close conformance in terms of this particular claim. And the specification does say less than or equal to an eighth of an inch.

Now, I think one can argue that you can begin to exceed that and still be in close conformance, but certainly anything that significantly exceeds that would not be in close conformance.

Q. What would you consider as significantly exceeding that value?

A. Something that is perhaps two or three times that value.

Q. Okay. And what's your basis for that range of tolerance?

A. Well, because you always have tolerances in construction. And it seems to me that a person of ordinary skill in the art would consider that to be a reasonable tolerance based on his judgment.

Q. So would different people consider different distances

to be in close conformance as aligns to the claims here?

MR. SCHROEDER: Objection; foundation.

A. Well, I think in a relative sense possibly. But, I don't think any person of ordinary skill in the art would consider a one inch gap to be in close conformance based on the teachings of this specification. So I think you do reach a point where persons of ordinary skill in the art would agree.

Q. (By Ms. Holoubek) But, there is a gray area where different people using their own judgment would have different definitions of close conformance.

Is that correct?

MR. SCHROEDER: Objection; vague.

A. So again I'm trying to separate the definition of close conformance in accordance with the teachings of this patent. And the specification, as I cited, clearly defines the term close conformance. It's not indefinite. It's something that a person of ordinary skill in the art would understand based on reading the specification and the figures in the claim.

If your question is if you take the general term close conformance as defined by being within a short distance away and corresponding in form or shape, yeah, then I would agree absent the teachings of the specifications the person of ordinary skill in the art may -- or persons of ordinary skills in the art may interpret the dimensional tolerance differently.

Q. (By Ms. Holoubek) So this definition of close

conformance that you give in Paragraph 57 that's different from what the specification says is close conformance in Column 5?

A. No. My definition --

MR. SCHROEDER: I was going to object to form.

You may answer.

A. No. My definition is based on the language of the claim limitations as informed or taught by the specification and the figures.

Q. (By Ms. Holoubek) Didn't you just say that the specification clearly defined the term close conformance to be less than or equal to an eighth of an inch?

MR. SCHROEDER: Objection; misstates testimony.

You may answer.

THE WITNESS: Okay.

A. The specification defines -- or teaches -- the gap and the size of the gap. And the specification, as I said, states preferably the slot has an area less than or equal to six square inches and the gap between the extension flanges and the edge of the slot is less than or equal to one-eighth of an inch.

The term preferably I think would apply both to the area requirement and the size of the gap. So preferably that gap should be less than or equal to one-eighth of an inch.

Since the claim limitation language talks about the close conformance between those two elements that form the gap specification teaches a person of ordinary skill in the art what

is meant by close conformance as taught by this patent.

Q. (By Ms. Holoubek) And what is that teaching in the specifications to the term close conformance?

MR. SCHROEDER: Objection; asked and answered.

A. Preferably the gap should be less than or equal to an eighth of an inch.

Q. (By Ms. Holoubek) But, that's not what you defined close conformance as in Paragraph 57.

Is that correct?

A. Well, I don't think it's inconsistent. I defined close conformance as being within a short distance away and corresponding in form or shape to the exterior face of the extension portion. So I think the plain and ordinary meaning of close conformance is exactly that.

Now, when you read the claim limitation with the understanding of what a person of ordinary skill in the art would understand close conformance to mean and you combine that with the teachings of the specification I think the term is very definite. It's very clear what the inventor is trying to say by the term close conformance.

Q. So would five-sixteenths of an inch be considered in close conformance as taught by the specification?

A. Well, again, I think I testified that once that gap starts to significantly exceed then it's clearly not in close conformance because preferably it should be less than or equal

to an eighth of an inch.

Q. I'm sorry, you said once the gap starts to exceed. But, you didn't provide a value.

A. No. I didn't.

Q. Okay. So once the gap starts to exceed when does it become not in close conformance?

MR. SCHROEDER: Objection; asked and answered.

You may answer again.

A. Yes. So I think at five-sixteenths of an inch you are more than twice the preferred gap value. So yes, I think that once you reach that level of gap you are exceeding the preferred range that is taught by this patent.

Q. (By Ms. Holoubek) Would five-sixteenths of an inch be considered a short distance away?

A. A what?

Q. Would five-sixteenths of an inch be considered a short distance away?

A. Well, again, have you to take the definition and combine it with the teachings that are in the specification, right, because I'm applying that term as it is defined -- or as it is intended to be defined by the inventor for that specific claim limitation, right.

So if you're asking me that putting this patent aside and simply referring to close conformance in general I think I would need more information to answer that question.

Q. Paragraph 57 in your declaration doesn't refer to anything in the specification.

Is that correct?

A. Paragraph 57 does not. But, certainly other portions of the declaration that are in the same section addressing Claims 13 and 14, close conformance, do. So you can't read the paragraph in isolation. You need to consider all the statements and references within the declaration -- or within the second declaration.

Q. So what's provided here in Paragraph 57 is not then a complete definition of what close conformance means in the context of this patent.

Is that right?

MR. SCHROEDER: Objection; vague.

A. Yeah. Again, I think what is provided in Paragraph 57 is what a person of ordinary skill in the art would understand to be the ordinary meaning of the term close conformance.

This section, which consists of Paragraphs 56 through 59, discusses how that term close conformance is used within the context of the claim limitation and the teachings in the specification and figures.

Q. (By Ms. Holoubek) So given that would a gap of three-sixteenths of an inch be considered in close conformance for the 339 patent claims?

MR. SCHROEDER: Objection; asked and answered.

MS. HOLOUBEK: I've not asked about three-sixteenths of an inch yet.

A. Yeah. I don't know if I can draw a specific -- well, okay. Let me back up.

I think three-sixteenths is a sixteenth of an inch greater than the preferred value, so I think it would be reasonable for a person of ordinary skill in the art to say that well, okay, that's still within the bounds of what this particular patent teaches it means as being in close conformance.

Q. (By Ms. Holoubek) Can a given firewall assembly be given approval by one fire inspector but be denied by another fire inspector?

A. Well, again, that's a hypothetical question. Based on my experience in dealing with Code officials and fire inspectors they are -- they make decisions based on specific Code requirements. They also make some decisions based on their judgment and experience, right. So things like precision of installation -- the short answer to your question is question. I mean I have seen that happen.

Q. Are you familiar with drywall cutting tools?

A. To a general extent, yes.

Q. Are most drywall cutting tools precise to within an eighth of an inch?

A. Well, I think they can be if you have routers such as

a roto-zip which has different cutting attachments.

The whole purpose of a drywall cutting tool is often to make an opening for something like an electrical outlet box that has fairly tight tolerances because you need to cover that up. So yes, it would be my opinion, generally speaking, that there are commercially available drywall tools that could make a cut within that tolerance.

Q. Are there commercially available drywall tools that cannot achieve an eighth of an inch tolerance?

A. Well, there certainly --

MR. SCHROEDER: Objection; I'm going to object to foundation. Also going to object to scope.

You may answer.

A. Yes. So it depends on what you mean by commercially available drywall tool. You can use a Sawzall to cut drywall. I've seen people use a Sawzall to cut drywall. A Sawzall is not a precision cutting tool that will cut something within an eighth of an inch.

Q. (By Ms. Holoubek) A couple of questions ago you answered that there were commercially available drywall tools that could be precise to within an eighth of an inch.

Is that correct?

A. (Witness nodded head.)

Q. So in the same category of commercially available drywall tools are there commercially available drywall tools

that are not precise to within an eighth of an inch?

MR. SCHROEDER: Objection; asked and answered.

A. Well, so again as part of this investigation I have not made a study of drywall tools. I have seen a lot of drywall being cut in the field. I have seen drywall being cut with a relatively high degree of precision. I'm sure there are tools available that say they can cut through drywall that would be less precise.

But, again, I believe a person of ordinary skill in the art and an experienced drywall installer would choose the right tool for the right job, and not simply choose a tool that can cut drywall but is not intended for a reasonably precise or close cut.

(Discussion was had off the record.)

Q. First question: During the break did you talk to anyone about the substance of this deposition today?

A. I did not. I don't think I talked to anybody at all other than the brief conversation we had here in the room.

Q. Okay. And did you review any documents during the break?

A. No. I put these exhibits back in order, but that's about it.

Q. Okay. Is load path calculation a common task of a construction engineer?

MR. SCHROEDER: Objection; vague.

You may answer.

A. A load path calculation can be done by a construction engineer. It is more the specialty of a structural engineer, but yes, either one could do it.

Q. (By Ms. Holoubek) Is load path calculation within the skill set of a person who is skilled in the art as it's been defined in this proceeding?

A. I think in a general sense, yes.

Q. Are you familiar with a MiTech FWH hanger?

A. I am generally speaking, yes.

Q. Are you aware that the FWH hanger series has different hangers rated for different loads?

A. I'm generally aware of that, yes. I haven't studied it, but yes, I am aware of that.

Q. Wasn't it common for joist hangers to be designed to carry specific loads such that different hangers might have different load ratings?

A. I would agree with that. That's not unusual, certainly.

Q. Okay. Let's turn in your second declaration to Page 37.

A. Got it.

Q. Okay. Paragraph 63 and 64 in your second declaration say that spacing the joists end away from Cullen's back plate would change the load path. Correct?

A. Correct.

Q. And in Paragraph 65 you raise a concern that Cullen's side walls would buckle due to the change in load path.

Is that correct?

A. That's correct.

Q. Can you turn to Figure 2 of the 339 patent?

A. Got it.

Q. Figure 2 of the 339 patent shows kind of like a 3-D view of the 339 hanger.

Is that correct?

A. A 3-D view of the 339 hanger yes, I would agree with that.

Q. Okay. And then looking on Page 37 of your second declaration you have an annotated illustration of the Cullen hanger holding a load.

Is that correct?

A. That's correct.

Q. Both the 339 hanger and the Cullen hanger have top flanges that attach to the top plate.

Is that correct?

A. That's correct.

Q. And both the 339 hanger and Cullen have a back flange that extends down from the top flanges and rests against the frame wall.

Is that correct?

A. That's correct.

Q. Okay. On Page 37 of your second declaration you illustrated the Cullen hanger holding a joist at a distance away from the back flange.

Is that correct?

A. That is correct.

Q. And as you've illustrated here on Page 37 Cullen's back flange extends down a distance that is about half the joist beam length.

Is that correct?

A. I'm sorry, could you can repeat that?

I missed the last part of that.

Q. Sure. Cullen's back flange extends down a distance that is about half the joist beam length.

Is that correct?

MR. SCHROEDER: Objection; form. Objection; I think it mis -- it misrepresents the document.

A. Yes. So from the view in the annotated picture on Page 37 I can't tell that precisely. It certainly extends down and ends some distance below the bottom of the supported joist.

From this view I can't tell you whether it's half -- it certainly terminates short of the bottom of the joist.

Q. (By Ms. Holoubek) Okay. A second ago you said it ended a distance below the bottom of the joist, but that's not what you meant to say. Correct?

A. Oh, I'm sorry. The back flange extends downward and terminates at a distance above or short of the bottom of the joist.

So, thank you for allowing me to clarify that.

But, I can't tell you whether half -- it extends halfway down or not as a reasonable estimate.

Q. Sure. Would you say that it extends sort of midway, in a middle range of the beam?

A. Well, again midway is fifty percent. I can't tell -- it looks to me like it does extend at least a third of the way down, maybe forty percent.

It's hard to tell from the angle in which this is drawn.

Q. Okay. Looking at Figure 2 of the 339 patent the back flange of the 339 hanger extends down about the same distance as that shown for the Cullen hanger.

Is that correct?

MR. SCHROEDER: Objection; foundation.

A. Yeah. Well, same answer. I can't tell you that it is exactly the same distance. It does appear to be at least approximately the same distance. It's in the same neighborhood.

Q. (By Ms. Holoubek) Okay. And both the 339 patent and the Cullen hanger include flanges that extend out from the back flange to where the joist would sit.

Is that correct?

A. I'm sorry, could you repeat that?
Q. Sure. Both the 339 patent and the Cullen hanger as you've illustrated it here on Page 37 include flanges that extend out from the back flange to where the joist would sit.
Is that correct?
MR. SCHROEDER: Objection; vague.
A. So in the annotated configuration that I have shown that is correct. In the Cullen hanger, as disclosed by the patent, that is not correct. The hanger as disclosed by the patent is intended to be used in a manner in which that joist abuts the back flange -- or is in hard contact with the back flange.
Q. (By Ms. Holoubek) Got it. Thank you.
A. So in this illustration by moving the joist portion -- which is shown in blue -- outward the portion that is shaded in light red extends out from the back flange to the point where the back of the joist is placed in this annotation.
But, that is based on this modification to the Cullen hanger and not the Cullen hanger as it's intended to be used.
Q. I appreciate that clarification. So what's shown here on Page 37 is a representation of the Cullen-Bundy combination.
Is that correct?
That's what you say in Paragraph 64.
A. That's correct.
Q. Okay. And so in this representation there are flanges

that extend out from the back flange to where the joist would sit.

Is that correct?

A. That extend out to where the back of the joist or the end of the joist as shown in this annotated figure on Page 37 would sit, that's correct.

Q. Okay. And the bottom of the back flange of both the 339 patent and the Cullen hanger is about even with the bottom of the corresponding extension flanges.

Is that correct?

MR. SCHROEDER: Objection; vague.

A. Let me repeat what I thought you asked.

Q. (By Ms. Holoubek) Okay.

A. The bottom of the back flange in both hangers is approximately equal to the bottom of the extension flange.

Is that the --

Q. Is about even with the bottom of the extension flange.

A. Even with the bottom of the extension flange.

Q. Yes.

A. Yes. I would agree that that's approximately correct.

Q. So if you're concerned that this Cullen hanger is modified in the combination here in Paragraph 64. If you're concerned that that hanger might buckle due to the joist being spaced apart from the back flange aren't you equally concerned that the 339 hanger might buckle for similar reasons --

A. No.

Q. -- since its components are located in about the same place?

A. No.

Q. And why not?

A. Well, for several reasons. The hanger that's shown in Figure 3 -- Figure 2 of the 339 patent has those extension portion consisting of two separate flanges in a back to back configuration.

The extension portion of the Cullen-Bundy combination that I show on Page 37 consists of individual plates that are separated. So in that configuration they would, first of all, be more prone to buckling.

Secondly, typically when a hanger product is introduced into the commercial market place there is an effort to cost optimize it, right, which just makes sense. If you are going to sell a hanger you want to make it as inexpensively as possible yet still have it serve its intended purpose.

So not only would this Cullen-Bundy combination I think be more prone to buckling, it is being modified from its original intent -- and the original intent was that the end of that joist be butted up and in contact with the outer surface of the back flange. And in that configuration you not only have a lower resulting moment, but the manner in which the hanger resists that moment is modified because now as that joist

attempts to rotate the bottom of the joist can bear on the wall and provide some additional resistance.

So in order to modify this hanger as shown you would have to significantly increase the metal thickness. If you make the reasonable assumption that it was -- that its design was optimized for its original intended purpose and that would introduce a significant cost increase. And as I pointed out in the Secondary Consideration section one of the secondary considerations I looked at was skepticism. And part of the documentation that I cite supporting the skepticism is the increased cost.

So the constructional concern here I think is twofold. I think even given the geometrical similarities that you asked me about I think that if each of these products were made of a similar gauge I still think the Cullen-Bundy combination would have a weaker capacity, but also it would require a significant modification from its original intended use in terms of increased thickness. And I think that would then introduce the issue of skepticism as to whether this could be a marketable hanger given that price increase.

Q. So taking the first one of those you said that if this hanger shown on -- in the configuration on Page 37 and the 339 hanger were made of similar gauge metal you think that the hanger on Page 37 would not be capable of handling loads as heavy as the 339 hanger.

Is that correct?

A. That's correct.

Q. If they're made of the same gauge metal and they have a similar configuration why wouldn't the hanger on Page 37 be able to handle the same load as the 339 hanger?

A. Well, for the reasons I discussed.

You asked me whether the extension, the bottom of the extension flange intersects the end of the joist at approximately the same location as Figure 2, correct? The top of the extension flange as drawn in this annotated figure is below the top of the joist, which is different than the Figure 2 of the 339 patent. So although the bottom of the extension flange is in approximately the same position the top of the flange is not. So the height of that extension flange is smaller in the Cullen-Bundy combination.

But, secondly as I mentioned -- as I previously testified because here you have two plates separated by a distance they will have a tendency to buckle independently.

So buckling is a phenomenon where if a material is subject to compression it's not going to mobilize its full strength, it's not going to yield, it's going to want to buckle sideways. Just like if you were to take a straw and press down on it.

So I think that in addition to having less material here in cross section, even the same thickness, you are also

going to have an additional failure mode with the Cullen-Bundy, which is going to reduce its capacity.

Q. And on that buckling aspect the 339 patent hanger is not susceptible to buckling because of that back to back configuration.

Is that correct?

MR. SCHROEDER: Objection; scope.

A. Well, it's not going to eliminate the potential for buckling. I mean you would have to test this to see what the actual failure mode is. But, it would be not as susceptible to buckling because you have those two plates in back to back configuration rather than a spaced configuration. So, in other words, those two plates are going to need to buckle together somehow and not buckle individually.

Q. (By Ms. Holoubek) And you said it's also important that the 339 hanger extension flange go up to the top of the back flange.

Is that correct?

A. Well, it appears in these figures that the height of the extension flange is different, with the Figure 2 extension flange being taller.

So the cross sectional area there is also important. So, in other words, even if these two hangers were made of the same gauge thickness the hanger that is shown in Figure 2 of the 339 patent would have a larger cross sectional area across that

extension portion.

Q. I would also like to touch on the second part of your answer from a few questions back, which talked about the cost effectiveness of requiring a heavier gauge steel for a hanger.

Are you aware that the MiTech FWH series has both a light load and a heavy load hanger?

A. I'm aware that they have different load capacities, yes.

Q. Okay. Are you aware that one of those hangers is actually titled a heavy duty hanger?

A. It would not surprise me. I don't think I was aware of that specifically, but it would not surprise me.

Q. Okay. So the heavy load hanger for the FWH is made with 12 gauge steel and the regular hanger is made with 14 gauge steel, so that would imply that the heavier hanger is more expensive.

Is that correct?

A. If all other things are equal, yes, it would imply that.

Q. Okay. And in your declaration you reference a report by -- this is in the Secondary Consideration section -- by Michael Nelson of MiTech.

Is that correct?

A. That's certainly possible. If you can direct me to a specific page.

Q. Sure. Let me pull out the exhibit here. If you look at Paragraph -- not paragraph. Page 6 of your declaration in the chart of documents you reviewed to prepare this declaration.

A. Correct.

Q. Do you see Exhibit 2059, Declaration of Michael Nelson?

A. I do.

Q. Okay. I am going to hand you a copy of what's been marked as Exhibit 2059.

A. So I'm sorry, perhaps I misunderstood. If I could just clarify.

You asked me whether I reviewed the affidavit of a Michael Nelson in preparing declaration -- my second declaration? Or you were asking about a specific citation to the declaration of Michael Nelson within this?

Q. My most recent question was whether you reviewed it.

A. Okay.

Q. So it would be included in that list.

A. So the answer to the question is yes; if it's included in the exhibit list I did review it even though I may not have made a particular citation to it.

Q. And is this Exhibit 2059 that I just shared with you the same declaration of Michael Nelson that you reviewed previously?

A. Well, it appears to be. I mean there is many, many

exhibits cited and I haven't committed them to memory. But, they are both entitled Declaration of Michael Nelson and they are both designated as Exhibit 2059, so I would assume it's the same document.

Q. Okay. Following Page 6 of the Nelson declaration there is an exhibit entitled Exhibit 1.

Do you see that?

A. Got it.

Q. This exhibit lists the revenue generated for each MiTech FWH generated each year.

Is that correct?

MR. SCHROEDER: Objection; foundation.

A. It appears to be, but if you would allow me to review the first six pages which I assume explain Exhibit 1.

Q. (By Ms. Holoubek) Sure.

A. So on Page 3 it says attached hereto as Exhibit 1 is a true and correct copy of Microsoft Excel spreadsheet showing annual FWH sales revenues for the years 2014 through April, 2025.

So, yes, I would assume that this exhibit is as represented in this declaration.

Q. And Exhibit B -- I'm sorry, Exhibit 2 is one that lists the number of units sold for each of those same MiTech FWH models.

Is that correct?

A. Again, reading from Page 4 of the declaration attached hereto as Exhibit 2 is a true and correct copy of a Microsoft Excel spreadsheet showing annual FWH sales data for the years 2014 through April, 2025.

So yes, I would assume that Exhibit 2 is as you described and as represented in the declaration.

Q. Okay. So for each model of the FWH hanger if we have for a given year the revenue of that hanger and the number of units sold for that hanger we can calculate an average price for that product.

Is that fair?

MR. SCHROEDER: Objection -- actually, I'm going to withdraw that objection.

A. If both of those figures are accurate then yes, I think you can calculate an average price. I think that price may vary -- it often does -- based on location, quantity sold, etc. But to calculate an average price yes, that would be a methodology that could be used.

Q. (By Ms. Holoubek) Unfortunately the exhibit pages are not numbered, but in Exhibit 1 can you turn to the first page that shows 2025 data.

A. Okay. So I'm looking at a page that the first three entries are 2024 and the fourth entry is listed as 2025.

Is that --

Q. Yes.

A. I'm at that page.

Q. Okay. Can you save that page, and then also turn to the corresponding page in Exhibit 2?

A. Okay. I'm there.

Q. Do you see I guess about -- let's see. About a quarter of the way down the page on each of those pages there is a row for FWH 3518.

A. Okay. I have it.

Q. Okay.

MR. SCHROEDER: I'm going to object to this line of questioning; it seems to be outside the scope of his Direct testimony.

Q. [redacted]

MR. SCHROEDER: Objection; foundation.

You may answer.

A. [redacted]

[redacted]

In construction product sales selling price is not often completely related to manufacturing costs. It's related to demand. It may be related to the volume of sales; in other words, if I sell a lot of product into one job I may give the buyer a price break.

So I would certainly agree that I would expect a heavier duty hanger to have a higher manufacturing cost than a lighter duty hanger.

I would not necessarily expect the average sales cost to be completely reflective of the difference in manufacturing costs. It's not like you mark everything up by the same amount and sell every piece for that.

Q. (By Ms. Holoubek) [redacted]

MR. SCHROEDER: Objection; foundation.

You can answer.

A. So, again as I testified, I would expect the heavier duty hanger to certainly have a higher manufacturing cost. The sales price is not necessarily correlated exactly to the manufacturing cost, as I explained. I don't know and I haven't

looked in detail at this data. I reviewed the exhibit as part of my declaration. Since I'm not citing or using these numerical values I didn't analyze the numeral values.

[redacted]

Is that correct?

A. Well, it --

MR. SCHROEDER: Objection; vague. Objection;

foundation.

You may answer.

THE WITNESS: Okay.

A. Well, the answer to your question is yes, it does. But, I would be a little careful with simply using the term lighter duty hanger and heavier duty hanger.

The hanger in order to be commercially viable must have a rated load capacity which is consistent with the demand that it's going to see in the market that you're trying to sell into. So for example, if you have a construction that has a longer span the hanger will see an increased load. If you have a construction that has a heavier floor loading requirement by Code you will see an increased load on the hanger.

So a manufacturer would typically offer several products because, again, they are trying to cost optimize the product for its particular application. Contractor is not going to want to buy a heavy duty hanger if all he needs is a light duty hanger. But, that range should be intended to be able to support the demand that the hanger sees over its intended market. So a heavy duty hanger to one manufacturer may be different than a heavy duty hanger to another manufacturer.

It's not the term light duty and heavy duty that is important. I think the more important thing is what is the capacity and what is the market that you are trying to sell into.

Q. (By Ms. Holoubek) So a manufacturer may still manufacture an expensive hanger if there is a market need for it.

Is that correct?

A. If there is a sufficient market need in order to justify the increased manufacturing costs for that hanger and enable him to turn a profit, sure.

Q. Okay. Going back to the figure on Page 37 of your declaration.

And you can probably put Nelson away; I don't think we are going to need that in the near future.

A. Okay. Okay.

Q. Could the concern about the buckling of side walls be mitigated in this assembly shown on Page 37 by using a load that is lighter than a load that would otherwise cause buckling?

A. Well, it could be, again, if that is a commercially viable capacity. So, yes. The lower the load the less potential there is to cause that buckling and the thinner the material could be -- that could be used. However, if that load is so low that it's not commercially viable then yes, you have a more inexpensive hanger that has practically no market value.

Q. And then turning to Paragraph 65 of your declaration.

Do you actually know what total amount of force applied to this hanger would make the side walls buckle?

MR. SCHROEDER: Objection; incomplete

hypothetical.

A. No. I don't. I mean that analysis could be done if you make certain assumptions about the dimensions and the gauge thickness. But, the opinions that I've offered here are really in a relative sense. You've asked me questions about the comparative capacity of the Figure 2-339 hanger to the Cullen-Bundy hanger. And I can offer those opinions without doing a numerical calculation.

But, no, if you want to know how many pounds it would take to cause that buckling mode I would need to do calculations that I haven't done.

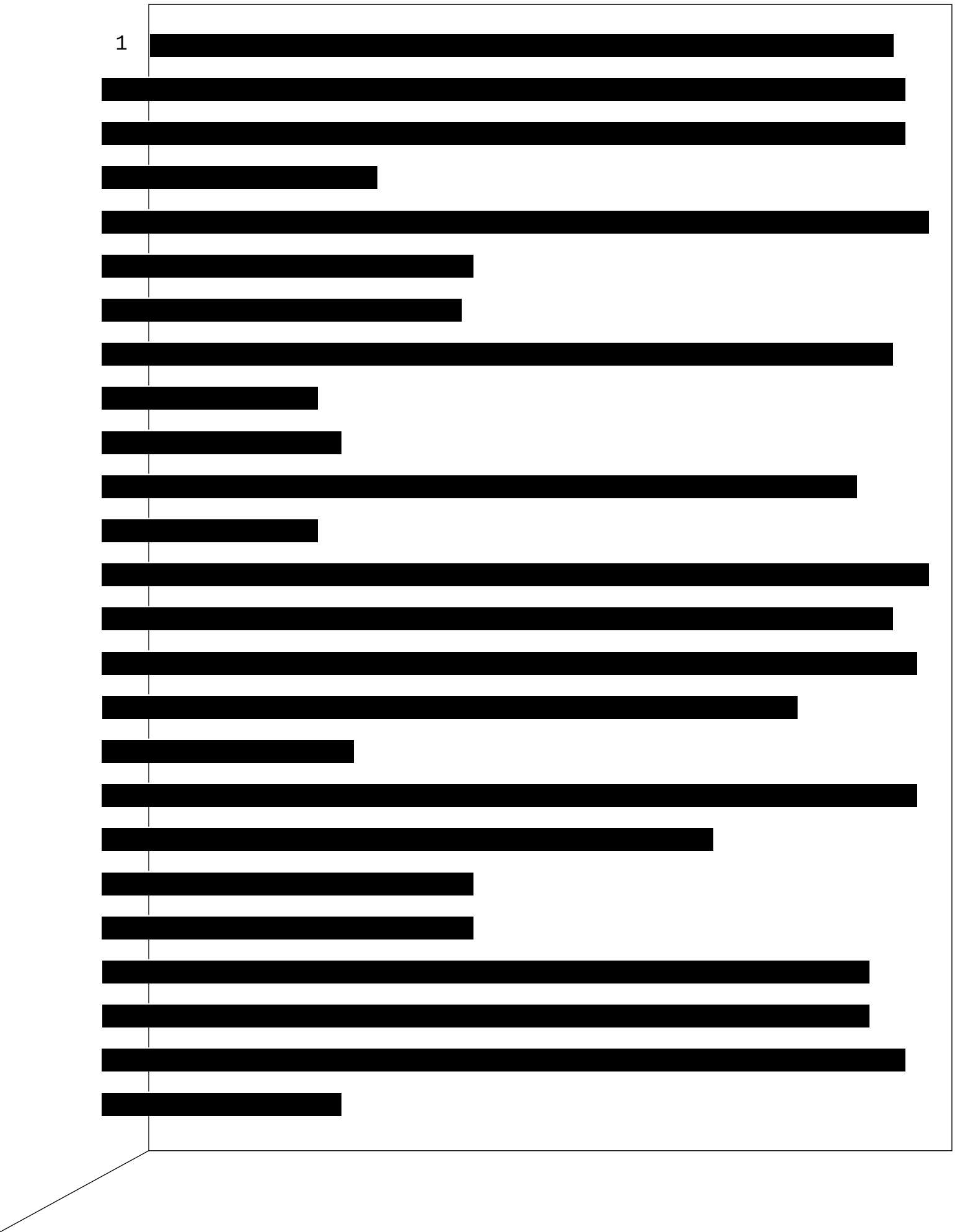
Q. (By Ms. Holoubek) Okay. Is it fair to say that the magnitude of the moment force applied to the Cullen-Bundy hanger depends on the load of the joist as one factor?

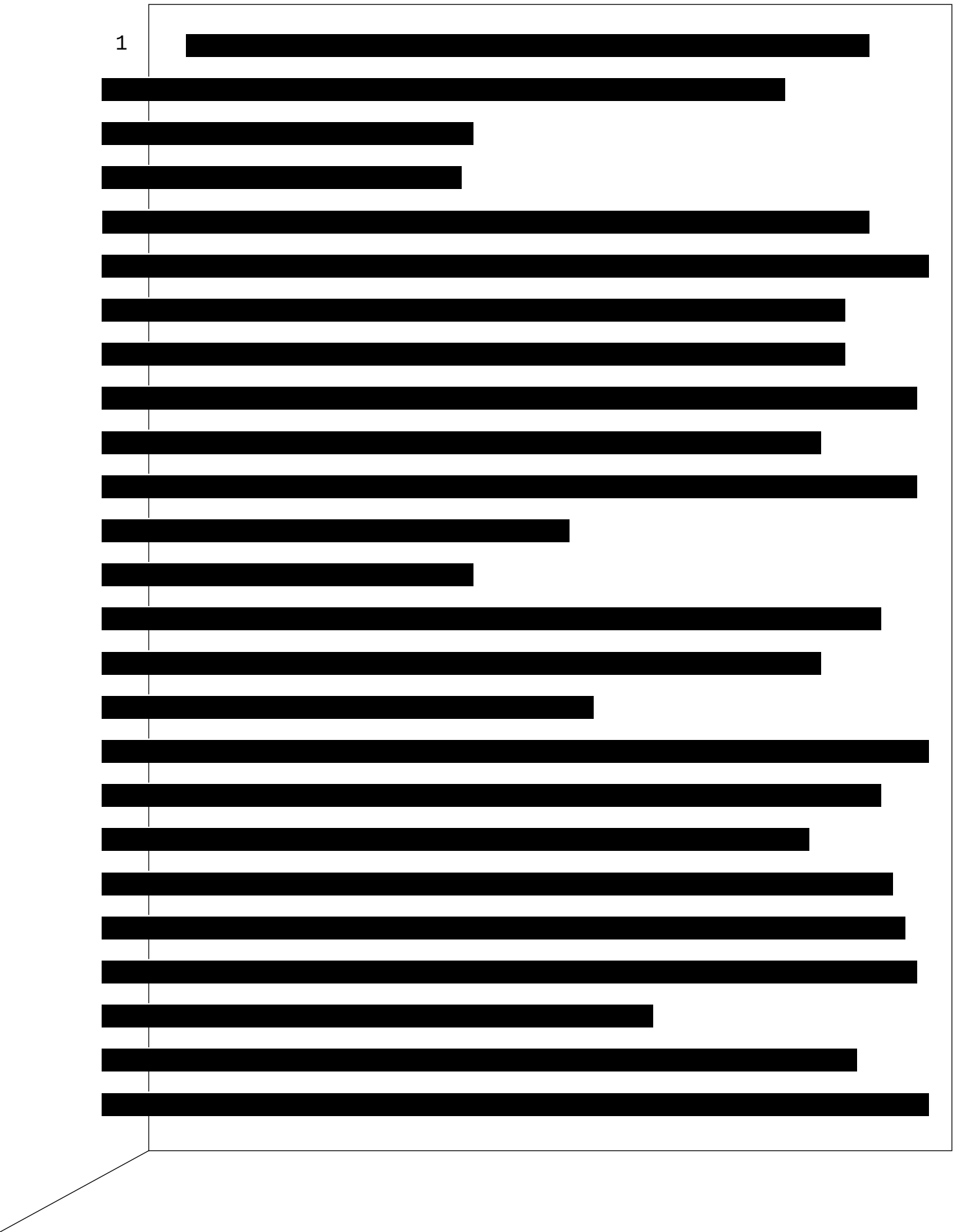
A. That's one factor, yes. There is, I think, several. But, yes, it does depend on the loading, the designed loading on that joist.

Q. Okay. If we look at Paragraph 71 and 72, starting at the very bottom of Page 39.

A. I got it.

Q. [redacted]


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[redacted]

Q. (By Ms. Holoubek) But, you have no evidence related to a Cullen-Bundy hanger.

Is that correct?

A. I don't. But, the section that -- yeah. The answer to your question is no. I don't. I only can make a reasonable inference based on the documentation and the commentary related to the FWH hanger as far as Exhibit 2092 is concerned.

Q. Okay. So if we turn to Paragraph 76 of your declaration.

A. I've got it.

Q. In Paragraph 76 you mention that the extension flanges of the FWH hanger are considerably taller than the side walls thirty, thirty-two from Cullen's hanger.

Is that correct?

A. That's correct. And I think that's consistent with my prior testimony.

Q. The FWH hanger is not identical to what's claimed in the 339 patent.

Is that correct?

MR. SCHROEDER: Objection; vague.

A. Well, I'm not sure of that. The FWH hanger, in my opinion, certainly is based on or is consistent with the Claim 1 limitations -- and I included a claim chart at the end of this that demonstrates that. I did not go through every claim and every claim limitation relative to the FWH hanger. I only looked at Claim 1.

Q. (By Ms. Holoubek) Well, looking at Claim 1 you would agree that the FWH hanger has features that are not mentioned in Claim 1.

Is that correct?

MR. SCHROEDER: Objection; vague.

A. That are not mentioned in Claim 1, but there are not inconsistent with Claim 1, yes. I mean there are dependent claims that had additional features.

Q. (By Ms. Holoubek) But, the FWH hanger has features that are not recited in Claim 1.

Is that correct?

MR. SCHROEDER: Objection; vague.

A. That is correct. But, as it relates to the secondary consideration issues that I have discussed here the importance of the sequence of installation, for example, the structural load comparison that we have just been discussing, the fact that the FWH hanger was able to achieve a documented fire rating

because of the minimal interruptions to the drywall. Those features are certainly in the FWH hanger.

Q. (By Ms. Holoubek) But, those features are not in Claim 1.

Is that correct?

MR. SCHROEDER: Objection; vague.

A. Well, and we can go through Claim 1. But, certainly some of those features are in Claim 1, right. Claim 1 discusses the -- I'm sorry, if you'll bear with me here for a second. I've got too many documents opened at too many different places.

Q. (By Ms. Holoubek) Sure.

A. Okay. So your question, I believe, was there are features of the FWH hanger that are not incorporated or that are not addressed by the limitations in Claim 1.

Is that correct?

Q. Yes; that was my question.

MR. SCHROEDER: And I objected that that's vague.

A. So I would agree with that in that there certainly are some dependent claims that had features. But, in Claim 1 certainly the single most important feature in my opinion which is the sequence of installation, the insertion -- the initial mounting of the firewall hanger, right. And then the subsequent insertion and moving of the fire rated sheathing. That is certainly there in Claim 1.

Q. (By Ms. Holoubek) This limitation or this feature

that you're referring to in Paragraph 76 of the extension flanges of the FWH hanger being considerably taller height wise than the side walls of the Cullen hanger, is that feature of height of the extension flanges present in Claim 1?

MR. SCHROEDER: I'm going to object to the form of the question, but you may answer.

A. It is not. But, it is shown in the figures of the 339 patent. It is not specifically defined as a limitation within Claim 1.

Q. (By Ms. Holoubek) So a comparison between the prior art and the FWH hanger is not the same as a comparison between the 339 patent claims and the prior art.

Isn't that correct?

MR. SCHROEDER: Objection; form. Objection; vague.

A. Yeah, and I'm sorry -- if you can repeat the question.

Q. (By Ms. Holoubek) Sure. A comparison between the prior art and the FWH hanger is not the same as a comparison between the prior art and the 339 patent claims.

Is that correct?

A. It is not -- well, if by patent claims you mean the entirety of the patent claims then I think it would be.

I don't know of a claim limitation in the FWH hanger that is not present -- I don't know of a claim limitation in the 339 patent that is not present or shows that the FWH hanger is

not an embodiment of the invention disclosed in the 339 patent.

Q. (By Ms. Holoubek) Let's look at Claim 1.

A. I would agree -- I would agree that not all of those features are included in Claim 1 of the 339 patent.

Q. So when you refer in Paragraph 76 to the comparison between the height of the FWH hangers' extension flanges and the side walls 30 and 32 of the Cullen hanger that's not the same as comparing the Cullen hanger to Claim 1 of the 339 patent.

Is that correct?

MR. SCHROEDER: Objection; form. Objection; vague.

A. Yeah. It is not the same as comparing it to Claim 1.

But, it is still an embodiment of the teachings -- the FWH hanger is still an embodiment of the teachings in the 339 patent even though some of those features are covered in limitations other than Claim 1. And they're also covered within the specification and figures of the patent.

Q. (By Ms. Holoubek) Can you point to any claim of the 339 patent that provides a limitation on the height of extension flanges?

A. Okay. So your question was can I point to a claim limitation that addresses the height of the extension flanges?

Q. Correct.

A. And the answer is no, there is no claim limitation that I found that addresses that. I think the figures do

address that, but not the claim limitations.

Q. Okay. So turning back to Paragraph 76 of your declaration you would agree that Paragraph 76 compares the Cullen hanger to the FWH hanger but not the 339 patent claims.

Is that correct?

A. But, not the patent claims, that is correct.

Q. Okay. Do the extension flanges in the 339 patent hanger require a minimum height to be able to counter the moment acted on it by a joist?

MR. SCHROEDER: Objection; form.

A. Well, it would require a minimum strength in order to have practical value as a firewall hanger in the marketplace. That strength would be dictated by the material thickness, the height.

As I testified, the height is not addressed as a specific claim limitation in the 339 patent. So yes. They would require -- not specifically height but a combination of factors. Height, thickness, material strength, configuration, in order to have a practical function as a firewall hanger.

Q. (By Ms. Holoubek) But, the claims themselves don't actually include that limitation.

Is that correct?

A. That's correct. As I previously testified, the height of the extension flange is not addressed specifically within the claims.

Q. And in your previous answer you said that the hanger would have to have a minimal strength to be commercially viable.

Is that correct?

A. It's a load bearing element, so yes.

Q. None of the 339 patent claims refer to a minimum strength.

Is that correct?

A. Well, that is correct. I mean the specification clearly defines it as a firewall hanger. The figures show that it carries the load from a truss or a joist, so clearly it's a load bearing element. So I think a person of ordinary skill in the art would understand that it needs to have some threshold level of strength to be commercially viable. It is not directly addressed within the claim limitations, that's correct.

Q. Does a hanger have to be commercially viable to fall within the scope of the 339 patent claims?

MR. SCHROEDER: Objection; foundation.

You may answer.

A. Well, I think a person of ordinary skill in the art would understand that a firewall hanger serves a purpose. It doesn't just sit on a shelf. So I think a person of ordinary skill in the art who reads the 339 patent would understand that there is a structural component here that is important, and if you can't satisfy a threshold level of structural strength you don't have a firewall hanger.

Q. (By Ms. Holoubek) Even if that structural element is not recited in the claims a skilled artisan would understand that it would nonetheless have to be there.

Is that correct?

A. Well, he would because the specification and the figures show -- they define what the firewall hanger is, right. They show that it supports a joist or a truss. They show it's connected to a load bearing wall. So, yes, I don't think you need a specific claim limitation to enable a person of ordinary skill in the art to recognize that some threshold level of strength is needed for this to serve as a firewall hanger.

Q. Turning back to Paragraph 76 where you're looking at the side walls of the Cullen hanger a skilled artisan would understand how to adjust the height of Cullen's side walls to support different loads.

Is that correct?

MR. SCHROEDER: Objection; vague. Objection; calls for an incomplete hypothetical.

You may answer.

A. Yeah. I think a person of ordinary skill in the art would understand that increasing the height would likely increase the strength. I think he would also understand that that increases the cost, and I think to a certain extent some degree of experimentation would be required to verify that.

(Discussion was had off the record.)

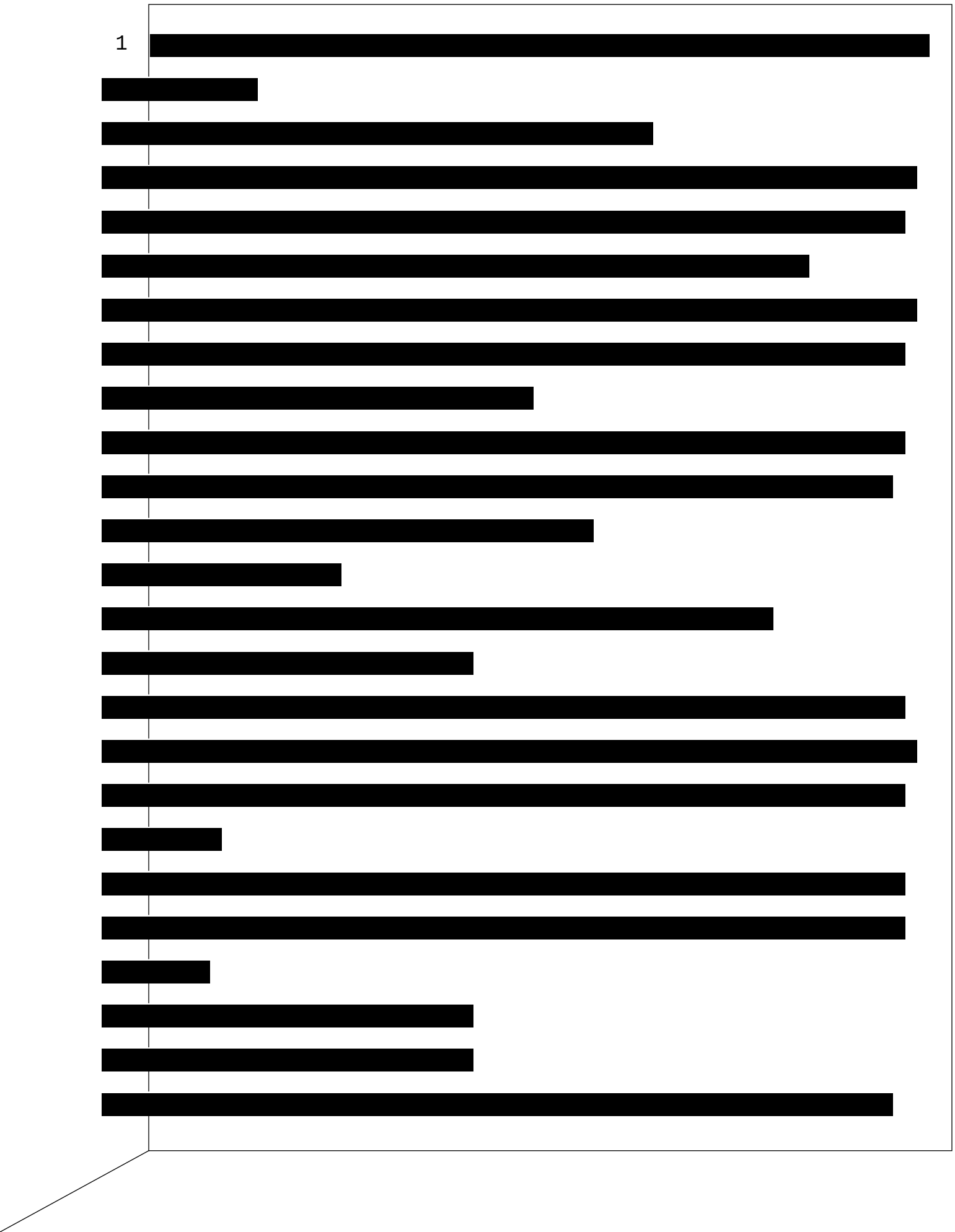
Q. (By Ms. Holoubek) During the break did you talk with anyone about the substance of this deposition today.

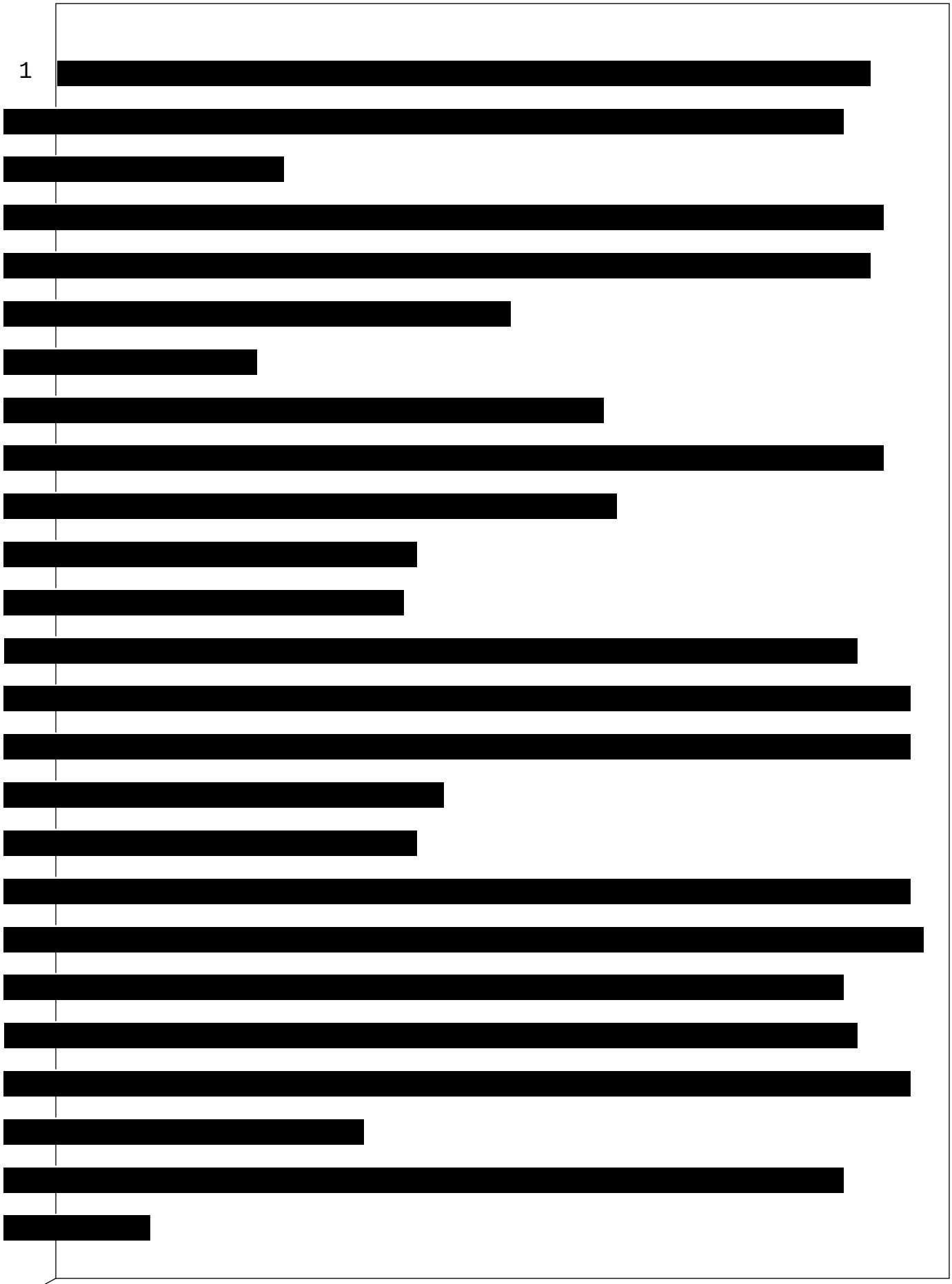
A. No. I didn't. I was with Attorney Schroeder the whole time and we had idle chitchat over lunch.

Q. Okay. So --

MR. SCHROEDER: Talked Cards and Cubs.

Q. (By Ms. Holoubek) [redacted]


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[redacted]

Q. Can you refer to Paragraph 270 on Page 121 of your declaration?

A. I've got it.

Q. So in Paragraph 270 you allege that Simpson's DG series hangers incorporated components of the FWH hangers.

Is that correct?

A. That's correct.

Q. Then on Page 122 of your declaration you compare images of Simpson's DG series hangers to MiTek's FWH hangers.

Is that correct?

A. That's correct.

Q. Did you ever compare the shape of Simpson's DG series hangers to Cullen?

A. Well, in a general sense, yes. I know that they are different in configuration. I did not analyze that in any specific detail.

Q. What is different about the configuration of the DG hangers and the Cullen hangers?

MR. SCHROEDER: Objection; outside scope.

Q. (By Ms. Holoubek) Would it be helpful if I gave you the Cullen patent? I am handing you what has been marked as Exhibit 1004.

Do you recognize this exhibit?

A. Yes; I do. So this is the UK patent issued to Cullen, which is one of the prior art pieces referenced.

Q. And you said that this is the document that's referred to throughout your declaration as Cullen.

Is that correct?

A. That is correct.

Q. So the hanger that is on the front page of the Cullen patent -- do you see that?

A. I do.

Q. Would you agree that the shape of Simpson's DG series hangers shown on Page 122 matches the shape of your drawing of Cullen's hanger on -- I'm sorry, matches the shape of your drawing of Cullen's hanger on Page 37 of your second declaration?

MR. SCHROEDER: Objection; vague.

A. Yes. So the figure on Page 37 is an annotated version of this figure. But, in terms of the features of the Cullen hanger itself without the annotations yes, they appear to be similar or the same.

Q. (By Ms. Holoubek) And by they you mean the Simpson DG series hanger shown on Page 122 is similar to the Cullen hanger

as shown on the face of the Cullen patent?

A. I'm sorry, I misunderstood your question. I thought what you were asking me, is the hanger shown on Page 1 of the Cullen patent application the same as the figure shown on Page 37 of my second declaration.

Q. Okay. I'm asking about the -- let's say the DGH hanger that is illustrated on Page 122 of your declaration.

Isn't that similar in structure to the representation you provide on -- what was it -- Page 37 of your declaration?

MR. SCHROEDER: Objection; vague. Also going to object to scope. But, you may answer.

A. So I'm comparing the figure that's labeled DGH on Page 122 to the figure that was shown on Page 37 of my second declaration.

Q. (By Ms. Holoubek) Yes.

A. Okay. So as I said, I didn't do a detailed analysis of the difference and similarities between these figures.

The hangers clearly are different. They share some common features in the sense that they have a top flange on the connection portion and a back flange on the connection portion. Certainly the channel shape portion is different.

So I'm not sure exactly what you mean by similar. There are some similarities, but there are clearly some differences.

Q. How is the channel shape portion different between

what you have represented from the DGH and what's shown on Page 37 of your report?

A. So the Cullen hanger has two angles that fit around either side of the supported joist. The one leg -- the horizontal leg of the angle -- in the annotated figure forms a portion of the extension flange or the extension portion of the hanger. The vertical leg of the angle is fastened to the joist.

The DGH hanger channel portion has a seat. So it has a U-shaped section as opposed to the two angle shaped sections in the modified Cullen hanger.

Q. Do you agree that Cullen discloses that a seat can be provided between the side arms of the channel shaped portion?

A. I would agree that he discloses that.

It's not shown in the figure on Page 37.

Q. You would agree that Simpson' DG series of hangers can be mounted to the frame wall before installing sheathing.

Is that correct?

A. The DG series, yes. That is my understanding.

Q. Do you know whether the Simpson DGB and DGH hangers shown on Page 122 have been successfully used in construction?

A. I don't know that. I know that they were sold into the construction market. I would assume they could have been successfully used based on those sales, but that hasn't been part of my investigation.

Q. A minute ago you indicated that one of the differences

between the DGH hanger shown on Page 122 and the representation on Page 37 of your second declaration was that the DGH hanger had a seat. But, then you also agreed that Cullen discloses providing a seat.

Is that correct?

A. That's correct. And, again, that's only one of the differences. Obviously there are other differences.

Q. What are the other -- I'm sorry.

What are the other differences?

MR. SCHROEDER: Objection; vague.

You may answer.

A. So the channel shape portion has a vertical element presumably to serve as a stop. That is shown in red on Page 122 of my second declaration.

The annotated figure on Page 37 has no such element.

Q. (By Ms. Holoubek) Okay. Does Claim 1 of the 339 patent require that the channel shape portion have a back panel?

MR. SCHROEDER: Objection; vague.

MS. HOLOUBEK: How is that vague? I'm asking whether the claim of the patent has a particular feature.

MR. SCHROEDER: It can be interpreted as requiring a certain feature. But...

MS. HOLOUBEK: Don't the elements of a claim require that element?

MR. SCHROEDER: I guess if you're specifically

stating a back flange on the channel shaped portion that's not vague.

MS. HOLOUBEK: Okay.

Q. (By Ms. Holoubek) So my question was not about a back flange. My question was whether Claim 1 requires the channel shaped portion to have a back panel.

A. It does not.

Q. So turning to Page 49 of your declaration --

A. My second declaration?

Q. Your second declaration. I apologize.

I think I am probably only going to be referring to your second declaration from here on out. If I refer to the first I'll explicitly call out the first. But, thank you for the clarification.

MR. SCHROEDER: Which paragraph did you say again?

MS. HOLOUBEK: It is Page 49.

A. Okay. I'm on Page 49.

Q. (By Ms. Holoubek) I am getting there.

So on Page 49 of your declaration you include a colored version of the Yamaguchi reference.

Is that correct?

A. That's correct.

Q. The red portion shows the joist.

Is that correct?

A. The dark red portion shows the joist, yes.
Q. And the blue portion shows the foundation wall. Correct?
A. That is correct.
Q. What is the uncolored element shown above the foundation wall?
A. Well, a portion --
MR. SCHROEDER: Objection; vague.
You may answer.
A. A portion of the hanger is shown as uncolored above the foundation wall. But, the rectangular section that runs along the top of the foundation wall is a sill plate.
Q. (By Ms. Holoubek) As illustrated here on Page 49 of your declaration there is a space between the end of the joist and the face of the sill plate.
Is that correct?
A. The figure shows the sill plate stepped back from the face of the foundation wall. And the joist is inserted so that part of it is at the same height as the sill plate and part of it is at the same height as the top of the foundation wall. So, yes, there is a space there from that offset.
Q. So Yamaguchi is shown here in this figure on Page 49 of your second declaration with a joist whose end stops while being spaced away from another structural member.
Is that correct?

A. It shows --

MR. SCHROEDER: Objection; vague.

You may answer.

A. It shows a space on one of the structural members, the sill plate, yes. It does not appear to show a space at the other structural member, which would be the foundation wall.

Q. (By Ms. Holoubek) Is there any description in Yamaguchi stating that the joist must abut a foundation wall?

A. From what I recall there is very little written text in Yamaguchi; and I don't recall that statement being made one way or the other.

Q. In Paragraph 105 of your declaration -- actually I'm going to go back and go ahead and hand you Yamaguchi. No, I'm not because I didn't bring it.

But, your recollection is that there is no description in Yamaguchi that the joist must abut a foundation wall.

Is that correct?

A. That is correct. My recollection is that there isn't a statement either stating that requirement or stating that it's not required.

Q. Okay. And in Paragraph 105 of your second declaration you state that a bend in Yamaguchi's hanger would have to resist the rotational force asserted by the joist.

Is that correct?

A. Without the aid of the bearing support provided by the

face of the foundation wall that is correct.

Q. And are you referring to the horizontal bend defined between Yamaguchi's extension portion and back flange?

MR. SCHROEDER: Objection; vague.

Q. (By Ms. Holoubek) On Page 51 there is a figure with a red circular arrow, and I just want to make sure that I'm interpreting correctly which bend you're referring to in Paragraph 105.

Is the bend you're referring to in Paragraph 105 the horizontal bend that's defined between the back flange of Yamaguchi and its extension portion?

MR. SCHROEDER: I will, again, say vague. But, maybe his answer will clarify.

A. So the answer to your question is the moment that is shown by the red circle at the top of Page 51 refers to the bend that is between the vertical leg of the connection portion and the angled leg that forms the extension portion. However, if the joist does not abut the foundation wall then really the whole hanger is going to be subject to an increased moment.

But, the depiction on Page 51 is intended to be at the location of that red circular arrow.

Q. (By Ms. Holoubek) Your figure on Page 51 shows vertical fins or flanges coupled to both the vertical back flange and the incline portion of the extension flange.

Is that correct?

A. That's correct.

Q. Those vertical flanges helped resist the moment arm forces.

Is that correct?

MR. SCHROEDER: Objection; vague.

You may answer.

A. So from a load path standpoint I don't believe that's true. As you move the joist away from the foundation wall the downward force and the induced moment is no longer resisted by bearing against that foundation wall. So as a result of that the hanger will rotate. And the resulting moment would stress the vertical portion that connects to the joist, and it would also stress the location that I have circled with the red arrow. The load path would go through both of those. It would not be a question of one helping the other.

Q. (By Ms. Holoubek) For the portion that's encircled by the red arrow you would agree that the vertical fins that connect to the back flange and that connect to the incline portion of the back -- I'm sorry, of the extension flange, would resist a relative movement between the incline portion of the extension flange and the vertical back flange.

Is that correct?

A. What are you referring to as the vertical back flange? Is it the vertical element that's above the red circular area?

Q. So I'm referring to the portion of the connection

portion that would sit up against the -- in this, I guess sit up against that sill plate.

A. Okay. So that would be the vertical element that is above the circled red portion, if I'm interpreting your question correctly.

So as the -- so as the joist is moved forward from the foundation wall as I said it's losing the bearing support from the foundation wall. And so that will increase stresses at that location.

I'm not sure if I'm answering your question directly or not.

Q. Well, my question is wouldn't the piece of metal that is connected to both the back flange -- which is that vertical portion above the red circle?

A. Right.

Q. And the inclined part of the extension flange?

A. Correct.

Q. Resist the opening of that bin, so to speak?

MR. SCHROEDER: Objection; assumes facts not in evidence.

You may answer.

A. Okay. So it will resist the opening of that bend, just as any structural element is going to resist the load. But, it will see an increased moment due to the fact that the end of the joist is spaced away from the foundation wall.

But, yes, it will resist it. Whether it's able to successfully resist the increased load or not is another question. But, yes; that's one portion where the load would be resisted.

Q. (By Ms. Holoubek) And you would agree that Yamaguchi has a connection portion that connects the hanger to the wall.

Is that correct?

A. Well, there is no wall shown in this figure. I would agree that Yamaguchi has a connection portion that at least as shown in this figure connects to the vertical face of a sill plate.

Q. Is it your position that a sill plate is not part of a wall?

A. Well, in this case there is no wall shown. But, yes, a sill plate can be -- can serve as the bottom portion of a frame wall.

Q. Didn't you refer to the bottom portion -- well, okay. I see in that figure.

On Page 49 then, let's refer to that figure.

A. Okay.

Q. So in the representation of Yamaguchi on Page 49 you would agree that Yamaguchi has a connection portion that connects the hanger to the wall.

Is that correct?

A. Well, to the face of the sill plate.

I mean your presumption about a wall assumes that there is some vertical elements, studs, above that sill plate which is not shown here. It certainly connects to the vertical face of the sill plate.

Q. And that connection portion has a top flange.

Is that correct?

A. It does have a top flange, yes.

Q. And you would agree that Yamaguchi has a channel shaped portion that holds a joist.

Is that correct?

A. It does have a channel shaped portion that holds the joist, yes.

Q. And you would agree that Yamaguchi has an extension portion that extends between the connection portion and the channel shape portion.

Is that correct?

A. Well, again, I think the term extension portion here -- it certainly does not have an extension portion in the manner that is disclosed in the 339 patent. It has an offset. And based on this figure it would appear that the only purpose for that offset is to accommodate differences in the vertical plane between the foundation wall and the sill plate.

Q. You said that the extension here is different from the extension portion shown in the 339 patent.

What's different about it?

MR. SCHROEDER: Objection; vague.

A. Well, it is disclosed in the 339 patent.

If we take Claim 1 as an example the extension portion is configured to allow the hanger to be installed prior to the installation of drywall and the extension portion serves to enable the drywall to be inserted and then either moved or arranged into the slot that is formed by the drywall. It is not simply an offset to accommodate changes in the structure, planar changes or offsets in the structure, to which the joist hanger is being fastened to.

So to the extent that an offset such as shown in Yamaguchi can be termed an extension it does extend the channel portion away from the connection portion. But, it does it for an entirely different purpose and an entirely different configuration than what is shown in the 339 patent.

Q. (By Ms. Holoubek) So structurally just looking hanger to hanger is Yamaguchi's hanger extension portion structurally different from the 339 patent's extension portion?

MR. SCHROEDER: Objection; vague.

A. Yes.

Q. (By Ms. Holoubek) What is structurally different about the extension portion of the Yamaguchi hanger and the 339 patent hanger?

A. So I'm going to interpret the word structurally in your question. If by structurally you mean from a load path

standpoint it is a different load path because, as we discussed, as shown in Page 49 in the figure the end of the joist bears on the foundation wall. So any moment that is imparted into that hanger by the downward force of the joist can be resisted by bearing of that foundation wall.

The channel shaped portion that is disclosed by the 339 patent has no such bearing support behind it because the extension portion serves as a gap to enable drywall to be installed, not simply as an offset to bridge changes in the vertical location of the structure to which the hanger is being attached to. So structurally those are very different.

Q. So your understanding of the structural difference between Yamaguchi and the 339 patent is based on what you see as the use case of the Yamaguchi hanger.

Is that correct?

A. Define use case for me. How are you using those terms?

Q. Well, you said Yamaguchi was intended to be used on this foundation wall.

A. Correct.

Q. And the 339 patent was not intended to be used on a foundation wall.

Is that correct?

A. It is not specific to a foundation wall. The intent of that extension flange disclosed in the 339 patent is not

intended to serve as an offset to accommodate the offset in the foundation wall. That is correct.

Q. Could the Yamaguchi hanger be used on a frame wall?

MR. SCHROEDER: Objection; incomplete hypothetical.

A. Well, most frame walls would have the -- most frame walls would not have an offset such as the one shown between the sill plate and the foundation wall.

Q. (By Ms. Holoubek) Sure. I'm not talking about a frame wall with an offset.

I'm talking about a regular frame wall -- same kind of frame wall as is described in the 339 patent.

Can Yamaguchi's hanger be installed on a frame wall?

A. In theory it could be, yes.

Q. In Paragraphs 108 through 114 on Pages 51 through 54 of your declaration you refer to Simpson's internal testing of face mounted hangers.

Is that correct?

MR. SCHROEDER: Can you repeat the question?

MS. HOLOUBEK: Sure.

Q. (By Ms. Holoubek) In Paragraphs 108 to 114 on Pages 51 through 54 of your second declaration you refer to Simpson's internal testing of face mounted hangers.

Is that correct?

MR. SCHROEDER: Objection; mischaracterizes the

document.

Q. (Ms. Holoubek) I'm sorry, just in response to an objection. So you would agree that Paragraph 110 states that Simpson attempted different tests to install a face mounted hanger.

Is that correct?

A. That's correct.

Q. Okay. So Paragraphs 108 to 114 on Pages 51 to 54 of your declaration you refer to Simpson's internal testing of face mounted hangers.

Is that correct?

MR. SCHROEDER: Objection; mischaracterizes the document.

MS. HOLOUBEK: How does that mischaracterize the document when it's quoting directly from the words of the document?

MR. SCHROEDER: Because there is on Page 112 the words in a separate test.

Q. (By Ms. Holoubek) But, in that range those paragraphs refer to internal testing of face mounted hangers. Correct?

MR. SCHROEDER: Paragraph 112 does not.

That is a, I mean I don't --

MS. HOLOUBEK: Okay.

MR. SCHROEDER: I'm trying not to testify for him, but --

MS. HOLOUBEK: Okay.

Q. (By Ms. Holoubek) In Paragraph 110 you refer to Simpson's internal testing of face mounted hangers. Correct?

A. That is correct.

Q. Okay. And the images on Page 52 of your declaration show one particular hanger being tested.

Is that correct?

A. That is correct.

Q. The hanger in the images shown on 52 does not have top flanges.

Is that correct?

A. That is -- certainly the figure, the photograph on the right more clearly shows that it does not. And I think that's consistent with my previous testimony.

Q. Okay. And the hanger shown in the images on Page 52 also does not have an incline portion extending between the back flange and the channel shaped portion.

Is that correct?

A. If you can repeat the question.

It does not have an incline portion --

Q. -- extending between the back flange and the channel shaped portion.

Is that correct?

A. I'm not sure about that. I would have to have these figures -- these photos blown up.

Q. In these two figures do you see a back flange on one side of the hanger?

A. A back flange? It appears to me that there is a back flange, yes.

Q. And in these figures on Page 52 do you see a channel shaped portion?

A. I do.

Q. Do you see any inclined extension portion extending between the back flange and the channel shaped portion?

A. I do not. But, this photo was taken after excessive deformation, right. The top plate is completely rotated. The fasteners are bent and pulled out. The wood is splintered and deformed. So I'm not quite sure what that configuration looked like prior to all of that happening.

Q. I wasn't asking about the wall or the wood. I'm asking about the hanger and what you see in this hanger.

A. Yeah. No. I understand that. But, I guess my point is I don't know what gap was there originally and what has closed as a result of this failure -- or deformed.

Q. Okay.

A. In the deformed configuration I don't see that extension flange.

Q. Okay. You would agree that the hanger shown in the images on Page 52 is not the hanger shown in the Yamaguchi prior art. Correct?

A. I would agree with that.
Q. Okay. And then in -- on Page 53 the hanger shown in the images on Page 53 does not appear to have an incline portion extending between the back flange and the channel shaped portion.
Is that correct?
MR. SCHROEDER: Objection; vague.
You may answer.
A. I don't see it in these figures.
Q. (By Ms. Holoubek) And Yamaguchi does not have an extension portion that is level with the top flanges.
Is that correct?
MR. SCHROEDER: Again objection; vague.
You may answer.
A. Yeah. I guess the question confuses me a little.
When you say level with the top portion --
Q. (By Ms. Holoubek) Even with the top portion.
A. Okay. So the question is, if you could repeat it.
Q. Sure. Yamaguchi does not have an extension portion that is even with the top flanges.
Is that correct?
A. Even meaning the extension portion does not extend up vertically to the height of the top flange?
Q. Correct.
A. That is correct.

Q. So the hanger shown in the images on Page 53 is not the hanger shown in the Yamaguchi prior art.

Is that correct?

A. That's correct. It's not that -- it's not exactly that hanger.

Q. Okay. On Page 55 of your declaration you show a picture of Yamaguchi with a red triangular cavity.

Do you see that?

A. I do.

Q. And you say that cavity could not be filled with non-combustible materials.

Is that correct?

A. That's correct.

Q. Do you say that because you think the drywall would block access to the cavity after the drywall is installed?

MR. SCHROEDER: Objection; vague.

You may answer.

A. In part, yes.

Q. (By Ms. Holoubek) What are the reasons you think that that cavity would be -- could not be filled with non-combustible materials?

A. So if the cavity were attempted to be filled prior to the insertion of the drywall I think that would be difficult to do because the insertion of that drywall would likely disrupt that cavity. And the fire stopping of a membrane penetration

typically requires some degree of precision in its installation to be successful. Similarly, if the cavity were to try to be filled after the drywall is installed then you could not access is from the drywall side in order to carefully fill it.

Q. The image shown on Page 55 of your declaration -- your second declaration -- is a cross section of drywall.

Is that correct?

A. That's correct.

Q. And in this arrangement this cavity would be surrounded by drywall on all sides.

Is that correct?

MR. SCHROEDER: Objection; vague.

A. I'm not -- when you say this cavity you're referring to the cavity that is pointed at by the red arrow?

Q. (By Ms. Holoubek) Yes, the one you've labeled cavity.

A. Okay. What do you mean by surrounded by drywall on all sides?

Q. Well, you would have drywall on the bottom of the cavity. Right?

A. Correct.

Q. And this figure shows drywall above the cavity.

Is that correct?

A. That's correct.

Q. And if this is a cross section that drywall would extend up on both sides of the cavity.

Is that correct?

A. Yes. But, if one were to somehow try and notch or cut this drywall to configure around that offset, the angled extension flange, if you want to call it that, I don't see how you could fill that section after installation. In other words, the side -- the drywall, the membrane, would have a penetration and I don't see how you could fill that cavity. And if you left that cavity unfilled then you have a significant breach in the fire resistant drywall membrane that serves to protect the wall.

Q. Since the cavity would be surrounded by the drywall why would it need to be filled?

Wouldn't the drywall itself serve as the protection in the cavity?

A. I think it would depend on how you cut and insert that drywall -- because it seems to me that when you cut it you're still going to leave a cavity behind those sloping side flanges. I don't know how you can cut around the hanger as shown in Yamaguchi and avoid that. Because unlike the 339 hanger you don't have a narrow slit. Right? So even at that narrow slit area you have a void or a cavity.

But, the reason that the 339 fire hanger or the fire hanger disclosed in the 339 patent can function as a firewall hanger is because that slit is very small, right. The disruptions in the drywall are minimized.

That's not the case in the Yamaguchi hanger. I don't

know how that cavity could be covered with drywall on all sides as you have stated.

MS. HOLOUBEK: We've been going about an hour. Should we take a break?

MR. SCHROEDER: Okay.

(Discussion was had off the record.)

Q. (By Ms. Holoubek) First during the break did you talk to anyone about the substance of your deposition here today?

A. No.

Q. During any of the breaks today has anyone given you feedback on the manner in which you are answering questions?

A. No.

Q. Starting at Paragraph 127 on Page 58 of your declaration you address the prior art grounds based on Robinson.

Is that correct?

A. That is correct.

MR. SCHROEDER: Can you repeat what paragraph?

MS. HOLOUBEK: Sure. Paragraph 127.

Q. (By Ms. Holoubek) And you would agree that the Robinson hanger is intended to hold a joist end spaced away from the wall frame.

Is that correct?

A. I would agree with that, yes.

Q. Okay. In Paragraph 130 of your declaration you indicate that in the Robinson ground the resultant cutouts in

the sheathing would be substantial in size. Correct?

A. That's correct.

Q. But, you would also agree that the 339 patent claims require cutting into the sheathing.

Is that correct?

A. A much smaller opening which I think we've been referring to as a slit or slot. But, yes, they involve cutting into the drywall.

Q. So how does the opening in the 339 patent claims differ from the opening shown here in the figures on Page 59 of your declaration.

MR. SCHROEDER: Can you repeat the question?

MS. HOLOUBEK: Sure.

Q. (By Ms. Holoubek) How does the opening in the 339 patent claims differ from the opening shown here in the figures on Page 59 of your declaration?

A. I think it's much smaller. As we discussed the 339 patent teaches that the gap between the extension flange and the cut portion of the drywall preferably should be no greater than an eighth of an inch. Clearly that is not the case here. The larger the opening the greater the risk that you will not be able to achieve the required fire resistance rating with this degree of penetration.

Q. So for the opening in the 339 patent you mentioned earlier when talking about that one-eighth of an inch gap that's

a gap between the interior edges of the drywall cutout and the extension flange.

Is that correct?

A. Yeah. I don't know what you mean by the interior edges of the drywall cutout.

But, it would be the gap between the sides of the extension flange and the cut edge of the drywall after the fire resistant drywall is inserted and moved into place.

Q. So in the figure on the left side of Page 59 wouldn't the drywall be cut within a very short distance away from the edges of the extension portion of the Robinson hanger?

A. It could be. You still, though -- you don't have a slit, right. You have a cutout, which is more substantial in size and certainly much wider than the narrow slit.

Q. In Paragraph 131 of your declaration you say that the opening in the sheathing would not be filled by non-combustible materials.

Is that correct?

A. That's correct.

Q. Why couldn't non-combustible materials be inserted into the opening in the sheathing, say that you showed illustrations for in Page 59 here?

A. Well, I think the configuration of the hanger would make that difficult. You have that green area, which is referred to as a mount. So you have a substantial piece of

steel that is penetrating that drywall.

You also have, I think, the large opening below that which from a practical standpoint once the hanger -- pardon me. Once the joist is installed -- and presumably one of the objectives of this combination would be to enable the joist to be installed before the drywall. So once the joist is in place and you move the drywall into the position that it's shown the joist or structural member would cover that gap, right.

Q. But, if the joist or structural member covers that gap then isn't the gap covered? Or are you saying that that's not sufficiently fire resistant?

A. Well, the joist -- one joist, wood joist, is not a non-combustible material.

Q. If it is a wood treated joist which is common in Class III or Type III construction would that solve the problem?

A. Well, a fire treated joist is still not a non-combustible material, right. The fire treatment non-combustibility is a material definition. It doesn't get changed by a fire treatment.

Q. But, fire treated lumber is accepted for Type III construction in the building code, isn't it?

A. For use in exterior walls, yes.

Q. Okay.

A. Not necessarily for use as a fire stop for membrane penetrations.

Q. Okay.

A. And even then -- I mean the joist doesn't get inserted through the drywall, right. The joist just simply butts up against the drywall.

Q. Is steel considered a fire resistant material?

A. Well, the term fire resistant material I don't really think it's a term of art in the Code.

Steel is a non-combustible material, but it's also a very significant heat conductor.

Q. If the 339 patent hanger's extension flanges were separated out to the width as is shown here in Robinson would they have the same issues with respect to fire penetration as you mentioned for Robinson here in Paragraph 131?

MR. SCHROEDER: Objection; vague and incomplete hypothetical.

You may answer.

A. If the extension flanges were separated but everything else was kept the same then presumably you could install the drywall by inserting it and moving it after cutting two slots to allow those separated extension flanges to be inserted into the slots.

Q. (By Ms. Holoubek) That's actually -- I'm sorry. That would be similar to how you would do it with a Cullen hanger.

Is that correct?

A. Oh, I don't know how you would do it with a Cullen

hanger.

Q. Well, the Cullen hanger would require two slots.

Is that correct?

MR. SCHROEDER: Objection; vague, asked and answered.

MS. HOLOUBEK: I'll rephrase.

Q. (By Ms. Holoubek) The Cullen hanger would require two slots to be cut out of the drywall for installation around the legs of the hanger.

Is that correct?

A. Depending on how it were modified, yes. But, I was answering your question.

So it would clearly be different than Robinson because you would not have this large cutout that's depicted by Mr. Finnell [phonetic].

You would still potentially have the issue that you still have two slots, right. So instead of having one slot with the gap on either side of it you would have two slots with two gaps on either side of each slot. So you would be increasing the disruption in the drywall membrane.

Q. In Paragraph 134 on Page 61 of your second declaration you mention that Robinson's hanger would be relatively expensive to produce.

Is that correct?

MR. SCHROEDER: Can you repeat the question?

MS. HOLOUBEK: Sure.

Q. (By Ms. Holoubek) In Paragraph 134 on Page 61 of your declaration you mention that Robinson's hanger would be relatively expensive to produce.

Is that correct?

A. Relatively expensive and difficult, yes, that's correct.

Q. But, the Robinson hanger could still be produced.

Is that correct?

A. It could be, yes.

Q. And in Paragraph 134 you also mention that Robinson's hanger cannot be made from a single piece of metal.

Is that correct?

A. I state it is not clear that such an angle could be formed from a single piece of metal. So it's not immediately evident to me how you could form that from a single piece of metal.

Q. Is it possible that it could be produced from a single piece of metal?

A. Well, I don't know. It depends how it's modified. I think you reach a point where the complexity of trying to form it from a single piece of metal exceeds the cost of making it in two or more sections and connecting them together somehow.

Q. Do any of the claims of the 339 patent require that the hanger be made from a single piece of metal?

A. No. They do not. They do not address the manufacturing process.

Q. So I am going to hand you what has previously been marked as Exhibit 1031. One of you may be missing the last page -- I think it came out of the paper clip.

MR. SCHROEDER: I don't think it's me --

THE WITNESS: I think it's me -- no. I've got that.

MS. HOLOUBEK: The paper clip came off in transit.

MR. SCHROEDER: You don't quite realize what the last page is until...

MS. HOLOUBEK: That's right.

Q. (By Ms. Holoubek) Please refer to Page 6 of -- well, first of all do you recognize this document that's labeled as Exhibit 1031?

A. I do, yes. I don't immediately see where it's labeled as Exhibit 1031.

Q. It's actually in white text there because it overlaps the image.

A. I've got it. I see it, yes.

Q. What is this document?

A. Well, this is an industry publication called Architectural Record which was cited as one of the prior art exhibits in the Petition. And it was designated by the term

Arch Record, A-r-c-h R-e-c-o-r-d.

Q. Okay. Please turn to Page 6 of Arch Record.

A. Okay. I've got it.

Q. So in the lower portion of Page 6 of Arch Record you would agree that Arch Record discloses two different wall assemblies, an Option A and an Option B as you've -- actually as they're written here.

Is that correct?

A. It illustrates two different wall assemblies and yes, they are labeled Option A and Option B.

Q. You would agree that Option B of Arch Record shows a top cord of the truss extending over the top plate of the wall frame.

Is that correct?

A. Option B?

Q. Yes.

A. Yeah. It actually shows the top cord which appears to be two separate members. But, yes, both of those members appear to extend at the top of the wall or bear out to the top of the wall.

Q. And you would agree that Option B of the Arch Record figures on Page 6 shows a triangular shaped nailing plate connecting a web of the truss to a portion of the top cord that rests on the wall frame.

Is that correct?

A. That's correct.
Q. Is it fair to say that the triangular shaped nailing plate is a structural connector?
A. It is. It is not a structural connection in the same sense that a firewall hanger is. But, yes. It serves a structural purpose. It holds the truss together.
Q. And that triangular nailing plate is a metal component.
Is that correct?
A. Typically, yes.
Q. And you would agree that Option B of Arch Record shows sheathing extending vertically all the way to the floor sheathing above the floor trust.
Is that correct?
A. It does -- certainly a portion of the sheathing. It's a dashed line. So it would be the portion that would be behind this plate. But, yes.
Q. And you would agree that Option B of Arch Record shows sheathing installed between the truss and the wall frame.
Is that correct?
MR. SCHROEDER: Objection; vague.
A. I'm not sure what you mean by between the truss and the wall frame.
There is clearly sheathing between, let's say, the bottom quarter of the truss and the wall frame, between the

diagonal web member of the truss and the wall frame. Since the top cords extend over and bear onto the framed wall presumably there is no sheathing there.

Q. (By Ms. Holoubek) Okay. So the top cords interrupt the sheathing.

Is that correct?

A. As it's drawn here, yes.

Q. And that would be considered a through penetration -- is that correct -- there in Option B?

A. Well, it would be considered at least a membrane penetration, right, because it penetrates the fire rated sheathing on one side.

Q. In the version shown in Option B wouldn't that top cord have to penetrate the fire rated sheathing on both sides?

A. Well, it doesn't show that in Option B, Right. It simply shows it bearing on top of the wall and it shows the drywall on one side.

Q. The dotted lines that extend upward from the sheathing are labeled continue gypsum to bottom of sheathing.

Is that correct?

A. That's correct.

Q. And the bottom of sheathing that's mentioned in that label is the floor sheathing of the floor above the truss.

Is that correct?

A. That's correct.

Q. So the -- and the blue that's shown there, the sheeting that we're talking about extending vertebrally, is shown here in Option B as five-eighths inch Type X gypsum.

Is that correct?

A. That's correct.

Q. And that's the gypsum that's referred to with a dotted line instruction of continue gypsum to bottom of sheathing.

Is that correct?

A. That's correct.

Q. So if the gypsum starts below the top cord of the truss don't the dotted lines indicate that around the sides of the top cord the gypsum goes all the way up to the top floor -- or I'm sorry, to the floor above the top cord?

A. That's how I would interpret those dotted lines, yes. That what you're looking at is beyond the truss and the portion of the sheathing that extends all the way up to the floor.

Q. And the five-eighths inch Type X gypsum sits in front of -- or sits on one side of the wall framing.

Is that correct?

A. That's correct. Either under the top plates where it's interrupted by the trusses or between the top plates and up to the bottom of the floor between the trusses.

Q. And the top cord of the truss sits on top of the wall framing.

Is that correct?

A. It bears on that wall, yes.
Q. So in order for the top cord of the truss to bear on that wall framing wouldn't the top cord of the truss have to pass completely through the gypsum on the face of the wall?
A. That's correct. I mean the two sheets of gypsum would need to be interrupted at that point to allow the top cord to bear on the wall.
Q. And that interruption would be a through penetration.
Is that correct?
A. Well, it would be penetration.
Q. In what situation would it not be a through penetration?
A. Well, the term through penetration is sometimes used to mean penetrating through the wall as opposed to penetrating the membrane or the fire resistant material on one side.
Q. I see. Thank you. I was confused by that.
So in this case the top cord would be considered as having a through penetration of the gypsum.
Is that correct?
A. You could word it that way, yes. I mean it penetrates the fire resistant material and somehow that must be compensated for.
Q. Okay. You would agree the top cord goes all the way through from one side to the other of the gypsum sheathing.
Is that correct?

A. That's correct, yes.
Q. And in this particular type of framing the gypsum would be slit up behind the bottom cord of the truss and around the top cord after the truss was mounted on the wall framing.
Is that correct?
MR. SCHROEDER: Objection; foundation.
You can answer.
A. Well, it could be. I don't see anything in this document that addresses the sequence of construction. So I don't know what sequence was followed in constructing Option B.
Q. (By Ms. Holoubek) Okay. I'm going to hand you Exhibit 1032 labeled as Cummins.
Do you recognize this document?
A. I do.
Q. What is this document?
A. Well, this is one of the pieces of prior art that was cited in the Petition, and specifically it references -- so this is one of the pieces of prior art cited in the Petition. And specifically it is a US patent for a hurricane tie where the named inventor is Commins, C-o-m-m-i-n-s.
Q. Is this the same Commins that is referenced in Paragraph 150 of your second declaration.
A. It is, yes.
Q. Prior to introduction of the DU hanger were any joist hangers labeled specifically for use on fire resistant wall

assemblies?

A. I don't know that. I didn't study that as part of my work.

Q. So you're not sure whether anything labeled a fire resistant joist hanger existed prior to introduction of the DU hanger?

A. I don't know that.

Q. But, joist hangers were still used for fire resistant wall assemblies prior to 2013.

Is that correct?

A. I would assume they were. Joist hangers have been around for a long time. And a requirement for fire ratings on walls have been around for a long time.

Q. So prior to 2013 a hanger didn't need to be labeled as specifically for use for fire resistant wall assemblies in order to be used on fire resistant wall assemblies.

Is that correct?

MR. SCHROEDER: Objection; vague.

Again, you may answer.

A. Well, I'm not sure of that. That would be a determination that the Code official needed to make. Whether he felt -- however the installation was done if he felt the fire rating of the wall was preserved then he would accept it. But, that would be a determination that he would need to make.

Q. (By Ms. Holoubek) You mention in Paragraph 58 that

Commins provides no suggestion that it was intended for use on fire resistant wall assemblies.

Could Commins still be used in fire resistant wall assemblies even if it wasn't specifically intended as such?

A. So when you say could be used on fire resistant wall assemblies -- Commins is a hurricane tie. It is not a joist hanger, a load bearing element to support a joist or a trust in the same way that we have been discussing some of the other prior art examples. So it would not be used in a fire resistant wall assembly in the same way.

Q. You say it would not be used in a fire resistant wall assembly in the same way. But, my question was whether it could be used in a fire resistant wall assembly at all.

A. How? Where would the fire resistant drywall be?

Q. Are you saying that no buildings using fire resistant wall assemblies also used hurricane ties?

A. No. I'm not saying that at all.

There is no mention of fire resistance anywhere in Commins. There is no warning to minimize, for example, disruptions or cuts in fire resistant drywall or fire resistant sheathing.

So Commins, you know, certainly could have been used as a hurricane tie in the attic space of a single family home that happened to have a fire rated wall between the home and the garage. But, I would not consider that to be a case where

Commins is used as part of a fire resistant wall assembly in the same manner that the firewall hangers that we have been discussing are used as part of a fire resistant wall assembly.

Q. You mentioned earlier that a fire resistant wall assembly can be made up of many different components.

Is that correct?

A. That's correct.

Q. Do all the components in a fire resistant wall assembly need to have been designed with the express purpose of use in a fire resistant wall assembly?

A. No. They don't. But, the system -- the assembly of the components -- needs to have been demonstrated that it will achieve the required fire rating. So, for example, one can achieve a fire rating with conventional wood studs, with sill plate, gypsum drywall, finishing of the gypsum drywall joints and screws that are attached at a certain spacing. So those wall studs and the wall plate that are used do not necessarily need to be marketed as a fire resistive stud. But, the assembly of the components needs to show that it can perform to the required fire resistance rating.

Q. Turning back to Arch Record and Page 6. So you would agree that Option B and Option B shown there on Page 6 of Arch Record are alternative solutions for constructing a firewall assembly and wood frame construction.

Is that right?

A. Yes. I believe that's what they are depicted or represented to show.

Q. And in Paragraph 161 of your declaration you say that the installations of Option A and Option B would have required approval by local building officials on a project by project basis.

Is that correct.

A. I believe that's correct, yes.

Q. Don't most new building construction projects require plan approval by local building officials prior to starting construction?

A. They do, yes.

Q. And isn't it common for building inspectors to inspect construction on a project by project basis?

A. Yes. I would say that's typical.

Q. And isn't it common for building inspectors to inspect framing once framing is complete and before drywall is installed?

A. Again, it depends on the jurisdiction. In my opinion they would inspect details more carefully if they were non-standard details.

So, just as an example, Option B shows the top cord as we discussed penetrating through the two layers of drywall. So as we discussed you have a breach there of the fire resistive membrane. If this is a non-standard detail, if it doesn't have

a specific test from Underwriters' Laboratories or another accredited agency that shows that this configuration meets it to our rating -- and I don't see anywhere in this document where that is referenced or confirmed -- then I would expect a Code official or a fire inspector to view that type of configuration more closely as opposed to a configuration where a firewall hanger is used that has a supporting test report.

Q. Okay. And looking at that Option B. Earlier we talked about the top cord of the truss extending all the way through the sheathing. You would agree that the triangular shaped nailing plate also extends all the way through the sheathing as depicted in Option B.

Is that correct?

MR. SCHROEDER: Objection; vague.

A. Well, I'm not sure exactly where the top of the sheathing terminates. But yes. Certainly the portion of the plate that is above the top of the fire resistive drywall or fire resistive sheathing, whatever product it is, yes, that would penetrate through that material.

Q. (By Ms. Holoubek) Okay. And those dotted lines, again, show that the sheathing would terminate at the floor above the truss.

Is that correct?

A. Well, the underside of the floor sheathing above the truss, so yes. They would terminate there -- except in the

locations where the sheathing is interrupted by the top cord of the truss and the connector plate or at least a portion of the connector plate.

Q. Going back to Paragraph 161 where you were talking about the local building officials. You mentioned that things happen on a jurisdiction by jurisdiction basis. Aren't there some jurisdictions where it's common for building inspectors to inspect framing once the framing is complete and before drywall goes up?

A. It is not uncommon to have a framing inspection, yes. That's correct.

Q. And is it -- isn't it common for building inspectors to also inspect the drywall installation once the drywall installation is complete?

A. I'm not sure of that. They may review the plans where fire resistive ratings are required. They may -- depending on the jurisdiction -- inspect fire rated walls.

Building inspectors in my experience do not typically inspect regular drywall construction.

Q. In Paragraph 168 of your second declaration you say that when Arch Record concepts are combined with Commins the resultant hanger would need fire caulking.

Is that correct?

A. It would have been expected, yes.

Q. And fire caulking around penetrations was a pretty

common process prior to 2013.

Is that right?

A. Yes. It was certainly done. It increases complexity and it increases cost. But, yes, it was done.

Q. Do the 339 patent claims prohibit the use of fire caulking?

MR. SCHROEDER: Objection; vague.

You may answer.

A. There is nothing in the claims that either endorses or prohibits fire caulking. The discussion about having passed an E814 test would imply that the fire caulking is not needed.

Q. (By Ms. Holoubek) If the -- scratch that.

For the FWH hanger do you need fire caulking around the penetration caused by the FWH hanger?

A. I don't know that because I haven't studied the FWH literature for that requirement.

Q. For the hanger shown in the 339 patent if you were installing that hanger would you need fire caulking around the cutout shown in the 339 patent?

A. So, again, similar to the answer I gave previously there is nothing in the patent that either requires or prohibits the use of fire caulk. I would expect that it would not be required because typically if you can pass an E814 test, minimize the gap or disruption in the drywall, in the fire resistive rated drywall, you would not need fire stopping or

fire caulking. That is one of the purposes of running that test.

Q. Can you describe -- you said that was the ASTM 814 test?

A. E; E as in Edward.

Q. Can you repeat the name of the test? I apologize, I didn't write it down.

A. Yes. So let me -- I'll give you the full title. So the acronym is ASTM. The test standard is E as in Edward, 814. And the title is Standard Test Method For Fire Tests Of Penetration Fire Stop Systems.

Q. What does that test look at to determine whether or not a gap around a penetration satisfies the Code?

MR. SCHROEDER: Objection; foundation. And objection; outside the scope of his Direct.

You may answer.

A. So just generally speaking there is an ASTM test method, ASTM E as in Edward 119 -- 1-1-9 -- which tests a complete wall assembly without a penetration. Subjects it to a certain time temperature curve. Requires that it be loaded if it's a load bearing wall. And there is some other details associated with it. But, it's essentially a test that establishes that the wall itself has the required fire rating.

The penetration fire test takes a penetration and tests the penetration either treated with a fire stop material

or untreated. And it looks at the temperature transmission and the flaming -- potential flaming -- through that penetration when it's subjected to a tight temperature curve.

The results of that test are an F rating and a T rating, which are measured in durations. And that essentially is an indication of the resistance of the penetration to temperature transmission and the passage of flame.

If that test shows that the penetration meets the same hourly duration as the base wall then it is accepted typically that that penetration as tested could be installed in that wall as tested and it would not compromise the original fire resistance rating of that wall.

Q. (By Ms. Holoubek) So how does an inspector in the field looking at a rough cut gap around a penetration -- how does the inspector in the field determine whether that gap satisfies the fire code?

A. Well, if he's looking at it prior to it being completed then he doesn't know. But, typically the building plans would reference a design number. If you look at the UL Fire Resistance Directory, for example, you will see many, many fire rated wall systems. You will see many, many through penetration rated systems. Warnock Hersey, other independent testing agencies publish similar directories. That information is typically available online.

So if design drawings show a UL wall design number

XXXX and a rated through penetration YYY the inspector would have access to the description of what that wall is and what that through penetration configuration should be. He will then typically make sure that the rating on those satisfies the Code requirements. And then depending on how diligent he is, he may look at the as-built configuration and convince himself that yes, the materials used here are consistent with what's in the design.

Q. (By Ms. Holoubek) Okay. If the opening of the sheathing cutout in the 339 patent claims was cut too wide would that opening need fire caulking?

MR. SCHROEDER: Objection; incomplete hypothetical.

You may answer.

A. In theory it may. I mean the wider the opening the wider the gap the more difficult it would be to pass the fire test. So depending on how wide it was and what configuration was tested it may.

Q. (By Ms. Holoubek) Is it possible to caulk around the penetration of the 339 hanger?

MR. SCHROEDER: Objection; vague.

You can answer.

A. Again, I didn't study that. It certainly is possible to provide an acceptable fire stop around the penetrant at a penetration. Now, whether you can do it for a very narrow

opening I'm not sure. I didn't study that.

So in theory it would be possible. But, I'm sure there are configurations that are much more difficult to accomplish that on than others.

Q. (By Ms. Holoubek) In Paragraph 169 of your declaration you say that fire caulking completely around Cullen hangers side walls would not be feasible in the proposed use of Cullen because the joist or truss would block access to the gap between the inner surfaces of the side walls and the edge of the cutout in the drywall.

Do you see that?

A. I do.

Q. So when you're describing the gap between the inner surfaces of the side walls and the edge of the cutout and the drywall you're talking about the piece of drywall that extends up between Cullen's side walls.

Is that correct?

A. Correct. On the inner side of Cullen's side walls.

Q. So you agree that a drywall installer could cut a slot near enough to fit around the two extension flanges of the 339 patent hanger pretty closely.

Is that correct?

A. Yes. I mean there's nothing in the prior art that teaches that or discloses that. But, yes, as I testified -- just as you could cut a slot to accommodate the extension

flanges in the 339 patent you could cut a slot around these side walls.

Q. So you could cut a narrow slot around the side walls of Cullen hanger.

Is that correct?

A. You could.

Q. When installing -- actually, I want to go back to something you said just a minute ago.

When we were talking about an overcut around the extension flange of the 339 patent would the back panel of the 339 hanger panel block access to the gap around the extension flanges if the opening in the sheathing is overcut?

MR. SCHROEDER: Going to object as vague.

You may answer.

A. Yeah. I think I understood your question, but if you could ask me again, please.

Q. (By Ms. Holoubek) Okay. In the 339 wouldn't the back panel of the hanger block access to the gap around the extension flanges if the opening in the sheathing is overcut?

A. So by back panel you're referring to the back of the channel shaped portion?

Q. Yes.

A. Yes. To some extent I think it would. I don't know to what extent you could, you know, see over that to see the very top portion perhaps. But, yes. Your statement is correct.

It would be obscured in large part by that back panel.

Q. Let's assume a scenario where the extension flanges in the 339 patent are separated so that they're no longer touching behind a joist.

A. (Witness nodded head.)

Q. In that scenario wouldn't the 339 patent hanger have the same problem of a gap between the two extension flanges behind the joist that you describe in Paragraph 169 regarding Cullen?

MR. SCHROEDER: Objection; incomplete hypothetical.

A. Well, I don't think the issue is blocking the gap. The issue is do you need to fire caulk that gap.

Q. (By Ms. Holoubek) Well, your Paragraph 169 says it would block access to the gap. So isn't that issue blocking the gap?

A. Well, the entire sentence says, but fire caulking completely around Cullen hangers side walls would not be feasible in Simpson's proposed use of Cullen because the joist or trust would block access to the gap.

Q. Right. And in the scenario of the 339 patent where you're now widening the distance between the two extension flanges out to the same distance as shown in Cullen wouldn't the 339 patent have a similar problem?

A. Well, so there's two separate questions there. Would

they block your view of the gap? Yes. But, presumably if you measured or controlled or knew what the slot width was and you knew what the width or the thickness of the extension flange was the fact that you couldn't see the gap would not necessarily be problematic, right. You could inspect the slot. You know what the dimension is. You can determine whether when you slide it in place that gap is acceptable or not.

So the issue that I'm raising in 169 is not that you can't see the gap for inspection. But, you could not fire caulk the gap if needed. And, again, the test -- the ability or the need to fire caulk that gap is not simply dependent on the size of the gap. It's dependent on the test.

So in the case of the 339 hanger given the configuration of the extension flanges, given the load bearing capacity of the hanger -- because, again, it's a load bearing element, it would be tested as a load bearing element in the wall test. Given the thickness of the steel, right, and the amount of heat that that steel will transfer through the fire resistive membrane, all of those factors determine how big that gap could be before you would need to fire caulk it.

In the case of the 339 disclosure it was determined that that gap should be preferably less than or equal to one-eighth of an inch.

All I'm saying in 169 is that since the gap is blocked if you needed to fire caulk it you couldn't.

Q. In a scenario where the 339 extension flanges are spaced apart to the same width as shown in Cullen you would have a similar problem that you could not fire caulk a gap that ended up being too big.

Is that correct?

A. If you needed to caulk it and you couldn't access that gap yes, that would provide difficulty.

Q. Okay. In Paragraphs 177 to 178 of your declaration you say that the access extending along the side walls of Cullen's hanger cannot extend through the planar front surface of the back flange due to the bend between Cullen's side walls and the back flange. Correct?

MR. SCHROEDER: Can you repeat that question?

MS. HOLOUBEK: Do that.

THE REPORTER: "Q. Okay. In Paragraphs 177 to 178 of your declaration you say that the access extending along the side walls of Cullen's hanger cannot extend through the planar front surface of the back flange due to the bend between Cullen's side walls and the back flange. Correct?"

A. That's correct. That's what 177 says.

Q. (By Ms. Holoubek) And in Paragraph 179 on Page 79 you state that the planar front surface of the back flange cannot be met by the non-planar surface of the bends.

Is that correct?

A. If you could repeat that because I'm not immediately

finding that in Paragraph 179.

Q. Sure. And I'll point you to the fourth line of Paragraph 179. You say, limitation 25.F requires a quote planar front surface unquote with a back flange and thus cannot be met by the non-planar surface within the radius of the bends.

Is that correct?

A. Correct. You read that correctly.

Q. Okay. Didn't you state in Paragraph 17 that a planar extension plate can include a bend?

A. The planar extension plate can include a bend, yes. I did state that -- or at least a portion of the bend can be considered part of the planar extension plate.

Q. So what's the difference between a planar extension plate and a planar front surface?

A. So I don't think the distinction that I'm making is between a planar extension plate and a planar front surface.

I think the distinction has to do with the fact that this is a geometric requirement. It's not a question of is the bend part of the planar front surface or not.

So in other words, even if I were to take that bend and separate it out and let's say half of it on the planar front surface and the other on the side panel of the channel shaped section it still would not intersect, right. I would have to actually go completely outside the bend in order to have it intersect.

Q. Wouldn't this be considered a de minimus bend?

The figure that's shown here on Page 79.

A. I think the bend itself is de minimus.

But, if I look at Page 178 and I look at that red dotted line that is the outer most -- labeled outward most axis I would actually need to take that line and extend it out past the bend in order to have it intersect the side panel of the channel shape section, right.

So it's not a question of is half the bend on one side and half of the bend on the other. Even if you make that assumption that they are joined at the bend I think you still would not satisfy this limitation.

Q. So how is that any different than what's shown for the 339 hanger?

A. In terms of?

Q. Well, you say that the axis of the 339 hanger -- I'm sorry.

You were just referring to the axis that's shown on Page 78. Correct?

A. Well, specifically I was referring to the figure that's shown on -- in Paragraph 178. But, I think they are depicting the same thing; one is just a simpler version.

Q. Okay. So how is the axis normal to the planar front surface in a different configuration as compared to the side walls of Cullen? How is that any different from the

relationship between the planar front surface of the 339 and the extension flanges?

We can maybe look at -- I guess it's Figure 7. In Figure 7, Reference No. 66 in the 339 patent points to the planar front surface of the back flange.

Is that correct?

A. I'm sorry, what number?

Q. 66.

A. Yes. Correct.

Q. And then reference number 60 points to the extension flange.

Is that correct?

A. 60 does, yes.

Q. Would you say that the axis of element 60 in the 339 patent does not intersect the planar front surface of the back flange? 66 in the planar back patent.

A. So if I go back to Claim 25. Claim 25 says the axis intersecting the side panel of the channel shaped portion and the planar front surface of the back flange.

So it is not referring to the extension flange. It is referring to the side panels of the channel shaped portion, which would be elements 46.

Q. So, I understand that. Does that mean you would agree that in Figure 7 the extension flange -- there is an axis extending along the extension flange, it would not intersect

the, you call it the planar surface of element 66?

A. Using the same logic and as depicted in Figure 7 yes.

Q. In Paragraph 184 of your declaration you say that Figure 2 of Robinson shows the mount as a solid block.

Is that correct?

A. That's correct.

Q. Didn't you previously today say that you couldn't tell how Robinson was formed?

A. I don't recall that testimony. I recall testifying that it is not clear to me that Robinson could be formed from a single piece of metal and that, in fact, it may be more cost effective but still more costly to fabricate it out of several plates and join them together.

Q. In Paragraph 183 of your declaration you said that there is no explanation on the internal construction of the mount.

Is that correct?

A. In Paragraph 183, yes. It states that there is no illustration or description in Robinson about the internal construction of the mount.

Q. And in Paragraph 185 you note that Figure 3 of Robinson does not show a mount.

Is that correct?

A. That's correct.

Q. So Robinson's figures show different configurations of

the hanger.

Is that correct?

A. That's correct.

Q. On Page 84 of your declaration you include a colored side view of Robinson's hanger.

Is that correct?

A. That is correct.

Q. And in this figure a sort of obstruction midway has been added to the open cavity of Figure 3, kind of right below the Reference No. 126.

Is that correct?

A. That is correct.

Q. And so you would agree that this image on Page 84 appears to match what a side view of Exhibit 24 would look like.

Is that correct?

MR. SCHROEDER: Objection; vague.

You may answer.

A. Yes. I think the element -- the horizontal element that you said was located right below the arrow designating 126 would be the element that's designated as 136 in Figure 2. So to that extent yes. They are consistent.

Q. (By Ms. Holoubek) Is it your understanding that every figure of a patent is required to show every possible element of a given embodiment?

MR. SCHROEDER: Objection; foundation.

A. No. It is not. But, I think the figures to the fact that they are consistent or inconsistent in the specification that you clearly need to inform the person of ordinary skill in the art what is being disclosed.

Q. (By Ms. Holoubek) But, you would agree that a patent's figures can omit some parts of a structure in order to focus on other parts of the structure.

Is that correct?

MR. SCHROEDER: Objection; foundation.

A. They can. But, in this case it's not just figures being -- having things missing. It's figures being inconsistent. Right. So it's showing one way in one figure, it's shown a different way in another figure. And there is no explanation in the specification to inform a person of ordinary skill in the art why these figures are different. Are they different embodiments? Are they an error? So yes. The figures can be different.

But, again, I think a person of ordinary skill in the art needs to understand what is being disclosed.

Q. Doesn't Robinson indicate that certain aspects of the hanger shown in Figure 2 were optional?

A. Yeah. I would need to go back through a version of Robinson to see if that exact statement is there.

Q. In your recollection do you recall whether Robinson indicates that certain features as shown in Figure 2 are

optional?

MR. SCHROEDER: Objection; asked and answered.

A. Yeah. I don't recall that specifically.

Q. (By Ms. Holoubek) Do the figures of the 339 patent show extension flanges that are separated from each other by a gap?

A. I don't believe they do.

Q. In Paragraph 197 on Page 193 of your declaration -- I'll let you get there.

MR. SCHROEDER: Just asking. We've been going about an hour and ten minutes. I just, it seems like you are transitioning between topics.

MS. HOLOUBEK: That's fair. We can take a break.

THE WITNESS: I'm sorry, it's 197 of --

MS. HOLOUBEK: We're going to go ahead and take a break and we'll pick it up there in about fifteen minutes.

(Discussion was had off the record.)

Q. (By Ms. Holoubek) In Paragraph 197 on Page 93 of your declaration you mention that secondary considerations must be considered when analyzing obviousness.

Is that correct?

A. When present, yes.

Q. What's your understanding of secondary considerations?

A. Well, secondary considerations are objective factors that aid in the determination of whether something was obvious

or not obvious. And so I listed on Page 93 of my report a number of typical secondary considerations that I've dealt with in the past. So commercial success, unexpected results, copying, skepticism, things of that sort. So there are objective considerations that assist in the determination of obviousness or nonobviousness as the case may be.

Q. Okay. Can you turn to Paragraph 240 of your declaration? It's on Page 109.

A. Got it.

Q. The last line of Paragraph 240 refers to the method claimed in Claim XXX of the 339 patent.

Do you see that?

A. I do.

Q. What should Claim XXX actually refer to?

A. Well, it talks about the installation sequence. So it should refer to the two independent claims, 1 and 27 -- or it may have simply referred to Claim 1. But, it would be those two claims.

Q. Okay. I think earlier in the deposition you mentioned that the independent claims are what you focused on for this declaration, second declaration.

Is that correct?

A. Well, primarily. I mean I read them all. I think your question was in the context of what did you do to prepare for the deposition. So in preparing for the deposition there

simply wasn't time to review the thousands and thousands and thousands of pages. So I did focus more on the independent claims.

Q. And then in Paragraph 354 on Page 152 of your declaration --

A. Okay.

Q. -- you mentioned that there must be a nexus between secondary considerations and the claimed invention.

Is that correct?

A. That's correct.

Q. What's your understanding of the term nexus that you use in Paragraph 354?

A. A correlation. So in other words, if one is evaluating secondary considerations there has to be a tie-in or a correlation between that secondary consideration and the claimed invention. So, in other words, if one of the secondary considerations is commercial success is that commercial success being driven by the merits of the claimed invention or is it being driven by another factor that, you know, has nothing to do with the claimed invention.

Q. And how do you determine whether a secondary consideration has nexus to the claimed invention?

MR. SCHROEDER: Objection; vague.

You may answer.

THE WITNESS: Okay.

A. So in the preceding paragraphs of this report I cite to numerous examples in the documents that I reviewed; declarations, emails, deposition testimony and the like that I thought was evidence of secondary considerations that demonstrated nonobviousness. [redacted]

So establishing a nexus between that merit and the secondary considerations that I looked at. And there is others, right. The skepticism. [redacted] Structural capacity, for example. All of which I think is tied to claims in the 339 patent.

In addition to that I attached four claim charts that I prepared, one addressing the MiTech hanger and then three variations of the Simpson hanger.

Q. (By Ms. Holoubek) Does Claim 1 of the 339 patent indicate what fire rating is necessary for the fire resistant

wall assembly recited in Claim 1?

A. It doesn't, no. It doesn't give a specific fire rating. It uses the terms firewall hanger, fire retardant sheath. So I think a person more skilled in the art would understand that this is being used on a fire rated wall.

But, no, it doesn't give the specific rating.

Q. So would Claim 1 apply to a wall of any fire resistive rating?

A. Well, it could presumably, yes.

MS. HOLOUBEK: I have no other questions.

I'll pass the witness.

MR. SCHROEDER: All right. I would like to take about fifteen minutes to gather my thoughts and so.

MS. HOLOUBEK: Sure.

(Discussion was had off the record.)

EXAMINATION

QUESTIONS BY MR. SCHROEDER:

Q. You have a background in engineering.

Is that correct?

A. I do, yes.

Q. Are you a lawyer?

A. I am not.

Q. Have you ever taken the patent bar?

A. No. I have not.

Q. Do you know the legal requirements as to when it is permitted to import limitations from the embodiments and the specification into the claims?

A. To import limitations from the specifications into the claims?

Q. Correct.

A. I do not.

Q. If you could look at the 339 patent, which I believe was Exhibit 1001.

A. I have it.

Q. And if you would just go ahead and read Claim 1 silently to yourself; I just want to ask you a few questions.

A. (Witness complied.) I've read it.

Q. In describing the hanger does the claim recite an extension portion?

A. It does.

Q. Does the claim recite an extension flange?

A. Claim 1 does not.

Q. In seeing how Claim 1 does not recite an extension flange does Claim 1 have any claim limitation regarding whether the extension flanges need to be abutting?

A. It does not.

Q. Does Claim 1 identify any size of the opening that this should be cut into the fire retardant sheathing?

A. It does not.

Q. Does Claim 1 recite any requirement regarding close conformance?

A. It does not.

Q. If you could turn to your second declaration -- I believe that is Exhibit 2050 -- and turn to Page 59.

A. I have it.

Q. Do you recall discussing these figures that are on Page 59 earlier in the day?

A. I do.

Q. And in particular do you recall discussing the claim limitation open outwardly regarding these figures?

A. I do.

Q. If you could the image on the right, does that image show an edge of the sheathing?

A. It does.

Q. Does that image show any cutout in the sheathing?

A. It does. And just -- to be precise it's labeled as drywall. But, I think in the course of the testimony the terms fire resistant drywall and fire resistant sheathing have been used -- at least on my part -- interchangeably.

Q. And does that opening extend through the front face of the fire retardant sheathing?

A. It does.

Q. Does that opening open outwardly from the exterior edge that you discussed a minute ago?

A. It does.

Q. Do you know what the legal requirements are regarding whether preambles are treated as limiting?

A. In a general sense I do.

Q. Can you explain what your understanding is?

A. If the preamble provides information which serves as a limitation to the claim then yes, it could be limiting.

So it really depends on the information that is provided within the preamble.

Q. Were you asked to construe the claim term fire resistive wall assembly when preparing your declarations?

A. I was not.

MR. SCHROEDER: I have no further questions.

MS. HOLOUBEK: Okay.

(Discussion was had off the record.)

MS. HOLOUBEK: I have no further questions. So you're done for the day.

MR. SCHROEDER: We want to review and sign.

(Witness was excused and signature not waived.)

(Deposition conclude at 4:58 p.m.)

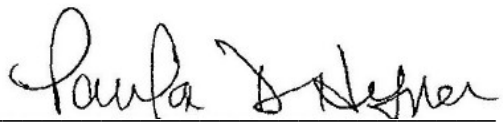
CERTIFIED REPORTER'S CERTIFICATE
RSMo 492.010

I, Paula D. Hefner, a Registered Merit Reporter and Certified Court Reporter, within and for the State of Missouri, do hereby certify that there came before me on July 24th, 2025 at the law offices Stinson, LLP, 7700 Forsyth Boulevard, Suite 1100, St. Louis, Missouri 63105,

RICHARD KACZKOWSKI,

who was by me first duly sworn to testify to the truth of all knowledge touching and concerning the matters in controversy in this cause; that the witness was thereupon carefully examined under oath, and said examination was reduced to writing by me, according to my best knowledge and belief; and that this deposition is a true and correct record of the testimony given by the witness, and said deposition is herewith returned to MICHELLE K. HOLOUBEK, ESQ., Sterne Kessler, 1101 K. Street NW, 10th Floor, Washington, DC 20005 for filing with the court.

I further certify that I am neither attorney nor counsel for, nor related nor employed by any of the parties hereto, or financially interested in this action.



Paula D. Hefner, Reporter

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