

1 UNITED STATES PATENT AND TRADEMARK OFFICE

2 SIMPSON STRONG-TIE COMPANY, LLP

3 Petitioner,

4 CASE NO. PGR2021-00109

5 VS. PATENT NO. 11,021,867

6 COLUMBIA INSURANCE COMPANY

7 Patent Owner.

8 *****

9 ZOOM VIDEOTAPED DEPOSITION OF

10 W. ANDREW FENNELL

11 October 5, 2022

12 8:00 a.m. PST

13 *****

14 TAKEN BY:

15 JOHN SCHROEDER, ESQ.

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Simpson Strong-Tie Company Inc. v. Columbia Insurance Company

PGR2024-00050

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2DEPOSITION SUPPORT INDEX

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5Directions to Witness Not to Answer

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10Request for Production of Documents

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15Stipulations

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5Testimony of:

6W. ANDREW FENNELL

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13EXHIBITS

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15

16No. Description Page

17Exhibit (None)

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1W. ANDREW FENNELL,

2having been first duly sworn by the

3Certified Stenographic Realtime Reporter,

4testified as follows:

5EXAMINATION

6BY MR. SCHROEDER:

7Q. Welcome back, Mr. Fennell. I

8know that this is, I guess, probably, the

9third deposition that we've done together.

10So because I know that you've been through

11these depositions a few times, I will try

12to keep the spiel a little bit short, but

13just as a reminder, the court reporter's

14going to be taking down everything we say

15verbatim. So please try to not talk over

16me and I'll try not to talk over you. I

17think we've been pretty good about that in

18the past. Also, kind of as before, I'm

19going to try to go approximately an hour

20between breaks. If for any reason you

21need to, you know, take a break prior to

22when I, you know, call for a break, please

23just let me know. Also sometimes I lose

24track of time. Feel free to go, Hey, it's

25been about an hour, can we take a break?

Page 6 1 You know, this isn't trying -- this isn't 2 supposed to be an endurance test. 3 As before, can I ask that if you 4 don't understand any question that I pose 5 that you ask me to rephrase a question? 6 A. Yes. 7 Q. And to the extent that you 8 answer a question, can I assume that you 9 understood the question? 10 A. Yes. 11 Q. Before we get going, I want to 12 just ask real quick, are you aware that 13 the PTAB has provided preliminary guidance 14 regarding the contingent motion to amend? 15 A. Yes, I have heard of it. 16 Q. And have you reviewed that 17 guidance? 18 A. No. 19 Q. Okay. Just wanted to check 20 before we got going. So far in this 21 post-grant review proceeding, you have 22 submitted a couple of declarations; is 23 that correct? 24 A. Yes. 25 Q. And the most recent declaration	Page 8 1 the exhibits that I anticipate using on 2 share site or on share -- whatever it 3 is -- Veritext Exhibit Share. I believe I 4 gave your counsel most of the list of what 5 we will be going through, but to the 6 extent that there's anything you don't 7 have, it should be available on the 8 Exhibit Share. 9 A. Thank you. 10 Q. And in exhibit -- or in 11 Exhibit 1039, which is your declaration, 12 paragraph 23, can you read that paragraph 13 for me? 14 A. Yes. It says "I have been 15 informed that one of the claim 16 construction principles in patent law is 17 that the claims must be construed to be 18 consistent with the specification. Based 19 on my review of the '867 patent's 20 disclosure, Patent Owner's construction is 21 inconsistent with how a joist hanger is 22 described in the '867 patent 23 specification. The drawings of the '867 24 patent application, particularly Figures 2 25 and 7 reproduced below, clearly show the
Page 7 1 that you submitted was Exhibit 1039; is 2 that correct? 3 A. Yes. 4 Q. And do you have that declaration 5 in front of you today? 6 A. I do. 7 Q. We will be going through that 8 declaration pretty extensively, so please 9 keep that declaration handy, if you will. 10 A. I will. 11 Q. And true to the form, if you 12 could go ahead and open up your 13 declaration and go to paragraph 23. 14 THE COURT REPORTER: Just to 15 clarify, are you marking that now or 16 was it previously marked? 17 MR. SCHROEDER: It was 18 previously marked. Basically, all the 19 exhibits have already been put into 20 the record. And I don't plan on 21 introducing any new exhibits today. 22 BY MR. SCHROEDER: 23 Q. And, Mr. Fennell, in case you 24 don't have any of the exhibits that we use 25 today printed out and with you, I did put	Page 9 1 extension flange is separated from the 2 back panel of the channel-shaped portion 3 by a bend. The '867 patent specification 4 further discloses that the 'extension 5 portion includes extension flanges 6 extending from the channel-shaped portion 7 forming a bend between each extension 8 flange and the channel-shaped portion.' 9 [Exhibit 1001, column 2, lines 11 through 10 15; Exhibit 1002, 37.] The specification 11 also discloses that the hanger is 'formed 12 as one piece from a metal blank 100 that 13 is stamped from a sheet metal roll and 14 bent into shape.' [Exhibit 1001, 15 column 7, lines 15 through 17, and 16 Exhibit 1002, 45.] Accordingly, a POSITA 17 would understand" -- "would have 18 understood, in view of the specification 19 and drawings of the '867 patent, that the 20 extension flange include bends between the 21 channel-shaped portion and the connection 22 portion." 23 Q. All right. And then following 24 that paragraph, there's two figures, 25 correct?

Page 10 1 A. Yes. 2 Q. And those are figures 2 and 7 3 from Exhibit 1001; is that correct? 4 A. With annotations, yes. 5 Q. And those -- sorry. 6 Exhibit 1001 is the '867 patent, correct? 7 A. Yes. 8 Q. Would you agree that these two 9 figures that you've shown in Exhibit 1001 10 are representative of the other figures as 11 well? 12 MR. HIGGINS: Objection, form. 13 BY MR. SCHROEDER: 14 Q. With respect to the -- 15 THE COURT REPORTER: Did we have 16 an answer or are you rephrasing? 17 MR. SCHROEDER: Yeah, I'm going 18 to rephrase. 19 BY MR. SCHROEDER: 20 Q. With respect to the bends in the 21 extension flange that's shown in these 22 figures, figures 2 and 7, are these 23 figures representative of other figures 24 within the '867 patent? 25 MR. HIGGINS: Objection, form.	Page 12 1 extension flange, correct? 2 MR. HIGGINS: Objection, form. 3 A. Yes, between the flat section of 4 the extension and the back of the channel, 5 there's a bend. 6 BY MR. SCHROEDER: 7 Q. And that would be, looking at 8 this figure, it would be the -- on the 9 bottom, the -- where the -- where it's -- 10 you've got bend written twice, but it's 11 the bottom bend that would be the 12 transition between the extension flange -- 13 or wait -- and the channel-shaped portion? 14 MR. HIGGINS: Objection, form. 15 MR. SCHROEDER: Let me rephrase 16 that. 17 BY MR. SCHROEDER: 18 Q. Just looking at this figure just 19 so that we've got a frame of reference, 20 the transition between the channel-shaped 21 portion and the extension portion would be 22 the bottom bend that you're pointing to, 23 correct? 24 MR. HIGGINS: Objection, form. 25 A. Generally. I mean, on the
Page 11 1 BY MR. SCHROEDER: 2 Q. You may answer. 3 A. Yes. 4 Q. And in particular, the figure on 5 the right, which I believe was from 6 figure 7, you've pointed out basically 7 four bends here, correct? 8 A. Yes. 9 Q. And so two of these bends would 10 be on -- on the left extension flange, 11 correct? 12 MR. HIGGINS: Objection, form. 13 A. Yes, two of the bends are 14 associated with the extension flange on 15 the left. 16 BY MR. SCHROEDER: 17 Q. And then two of the bends are 18 associated with the extension flange on 19 the right, correct? 20 A. Yes. 21 Q. And so just focusing on one of 22 the extension flanges just -- I'm going to 23 pick the extension flange on the right, 24 there's one bend at the transition from 25 the channel-shaped portion to the	Page 13 1 right-hand side there is a bend that 2 achieves the transition between the back 3 face of the channel and the flat portion 4 of the extension. 5 BY MR. SCHROEDER: 6 Q. And then there's the second bend 7 is the transition between the extension 8 flange and the back flange, correct? 9 A. Yes, the flat portion of the 10 extension and the flat portion of the back 11 flange, there's a bend, yes. 12 Q. And that back flange is part of 13 the connection portion, correct? 14 A. Yes. 15 Q. So between those two 16 transitions, are there any bends within 17 the extension flange? 18 A. Partially. 19 Q. Where would the bend be between 20 those two transitions? 21 A. On the bend. 22 Q. And the bends are the 23 transitions, correct? 24 A. Yes. 25 Q. And so -- so between the

Page 14 1 transitions, there aren't any further 2 bends, correct? 3 MR. HIGGINS: Objection, form. 4 A. Can you repeat that, Counselor, 5 I was clearing my throat when you asked 6 the question? 7 BY MR. SCHROEDER: 8 Q. All right. So between those two 9 transitions, are there any further bends? 10 MR. HIGGINS: Objection, form. 11 A. No. 12 BY MR. SCHROEDER: 13 Q. And then if you could read 14 paragraph 24, and you can read it to 15 yourself, and then I'll ask you a specific 16 question about the paragraph, and let me 17 know after you've read it, though. 18 A. Okay. 19 Q. All right. And in paragraph 24, 20 you discuss about claims 7 and 12 both 21 reciting that "the front surface of the 22 back flange, not the entire back flange, 23 lie in a back flange plane," correct? 24 A. Yes. 25 Q. If you could, do you have	Page 16 1 question? 2 Q. All right. I'm going to change 3 the question a little bit just hopefully 4 maybe it will make it a little easier. 5 Do you see at approximately -- 6 I'm just trying to see which -- I guess, 7 it's column 12, approximately -- starting 8 at approximately line 35. It reads "Each 9 extension flange lying in an extension 10 flange plane." Do you see that? 11 A. I do. 12 Q. In that -- that portion of the 13 claim that I just read to you, is the word 14 "surface" included? 15 A. Well, no. 16 Q. It does not include the word 17 "surface" within that portion of the 18 claim; does it? 19 A. It does not. 20 MR. HIGGINS: Objection, form. 21 BY MR. SCHROEDER: 22 Q. And it does not specifically 23 identify the extension flange plane's 24 surface either; does it? 25 MR. HIGGINS: Objection, form.
Page 15 1 Exhibit 1001 available? 2 A. I do. 3 Q. If you could go ahead and look 4 at Exhibit 1001, claim 7, which is, I 5 believe, the second to last page and let 6 me know when you have it. 7 A. Okay. 8 Q. Claim 7 explicitly identifies 9 the "front surface lying in the back 10 flange plane," correct? 11 A. Yes. 12 Q. And so claim 7 to the -- is 13 showing -- let me rephrase this. 14 And so claim 7, the express 15 language of the claim limitation is "the 16 back flange has a front surface lying in a 17 back flange plane," correct? 18 A. Yes. 19 Q. If you were to go to claim 1, 20 which is right above it, does claim 1 21 expressly identify that a specific surface 22 of the extension flange lies in the 23 extension flange plane? 24 A. I'm sorry to do this, Counselor, 25 can you just repeat the last part of your	Page 17 1 A. No, it doesn't. 2 BY MR. SCHROEDER: 3 Q. You can either look at the 4 figures in your -- in your exhibit or in 5 your declaration at paragraph 23 or you 6 can look at the figure in 1001, but I'm 7 wanting you to look at what was figure 7 8 of 1001. 9 A. Okay. 10 Q. Approximately how long are the 11 extension flanges? 12 MR. HIGGINS: Objection, form. 13 A. They are approximately just over 14 an inch. 15 BY MR. SCHROEDER: 16 Q. There's space -- they're sized 17 to receive two sheets of 5/8 -- sorry, 18 tongue twister. Let me restate that. 19 They are sized such that the 20 hanger receives two sheets of 5/8-inch 21 drywall, correct? 22 MR. HIGGINS: Objection, form. 23 A. Generally, yes. 24 BY MR. SCHROEDER: 25 Q. And so that would be at least an

Page 18 1 inch and a quarter, correct? 2 A. Yes, yeah, two times 5/8 is an 3 inch and a quarter. 4 Q. And if you look at -- I'm trying 5 to just get a, I guess, probably 6 Exhibit -- or figure 11 of Exhibit 1001. 7 Is there any extra room in there in 8 between the sheathing and the hanger? 9 MR. HIGGINS: Objection, form. 10 BY MR. SCHROEDER: 11 Q. If you blow it up. 12 MR. HIGGINS: Objection, form. 13 A. I'm sorry, which figure are you 14 referring to now, Counselor? 15 BY MR. SCHROEDER: 16 Q. Figure 11. It shows a 17 sheathing. I'm sorry, the -- the spaces 18 between the sheathing and the 19 channel-shaped portion. So looking at 20 figure 11, is there a little bit of extra 21 space between the sheathing and the 22 channel-shaped portion? 23 MR. HIGGINS: Objection, form. 24 A. Possibly. 25 BY MR. SCHROEDER:	Page 20 1 I'll be willing to take from your memory. 2 And each of these bends is only 3 a quarter-circle bend, correct? 4 MR. HIGGINS: Objection, form. 5 A. Yes. 6 BY MR. SCHROEDER: 7 Q. Would you agree that the bent 8 portion -- so just looking at, for 9 instance, the bend where it transitions 10 from the extension flange to the 11 channel-shaped portion, would you agree 12 that the bent portion of the extension 13 flange makes up less than 25 percent of 14 the total length of the extension flange? 15 MR. HIGGINS: Objection, form. 16 A. Yes. 17 BY MR. SCHROEDER: 18 Q. Same question except for, would 19 you agree that that bent portion makes up 20 less than 10 percent of the extension 21 flange? 22 MR. HIGGINS: Objection, form. 23 A. It's hard to say, Counselor. 24 These details are not dimensioned. 25 BY MR. SCHROEDER:
Page 19 1 Q. And it would make sense that 2 there'd be a little bit of extra space to 3 give it some room to fit that sheathing 4 in, correct? 5 A. That makes some sense. 6 Q. And so the extension flange is 7 at least an inch and a quarter, correct? 8 MR. HIGGINS: Objection, form. 9 A. Well, the space -- the 10 sheathings are in between the back of the 11 channel and the back face of the 12 connector, I would agree with you is at 13 least an inch and a quarter. 14 BY MR. SCHROEDER: 15 Q. And it could be a little bit 16 more than that, correct? 17 MR. HIGGINS: Objection, form. 18 A. Yes. 19 BY MR. SCHROEDER: 20 Q. Does the specification provide 21 any indication of what the radius is of 22 these bends? 23 A. From memory, no, unless there's 24 a section you're pointing to. 25 Q. I don't think it's in there so	Page 21 1 Q. Do you know how large that 2 radius would need to be in practice? 3 MR. HIGGINS: Objection, form. 4 A. Well, generically, if we're just 5 talking about bending sheet metals, 6 ideally it would be a fairly tight radius, 7 Counselor. 8 BY MR. SCHROEDER: 9 Q. Going back to your declaration, 10 which is 1039, if you could read 11 paragraph 26 and let me know when you're 12 done. 13 A. Okay. 14 Q. And a little bit earlier we had 15 been discussing that the bends are a 16 transition from one component to another, 17 either the extension flange to the 18 channel-shaped portion or the extension 19 flange to the connection portion, correct? 20 MR. HIGGINS: Objection, form. 21 A. Generally, yes. 22 BY MR. SCHROEDER: 23 Q. And within paragraph 26, you 24 state that "the extension flange plane 25 coincides with a section of a flange

Page 22 1 located between the connection portion and 2 the channel-shaped portion," correct? 3 A. Yes. 4 Q. And then you state that this -- 5 and I probably should have just kept 6 reading the sentence, but next you state 7 that "not all the way from the 8 channel-shaped portion to the connection 9 portion," correct? 10 A. Yes. 11 Q. So my question is, would you 12 agree that the back flange coincides with 13 a plane from at least the conclusion of 14 the transition from the channel-shaped 15 portion through the start of the 16 transition to the back flange? 17 MR. HIGGINS: Objection, form. 18 A. Did your question refer to 19 the -- the front face of the back flange, 20 Counselor, or are you just talking about 21 the back flange in its entirety now? 22 BY MR. SCHROEDER: 23 Q. I'm talking about the back 24 flange in its entirety that it -- let me 25 rephrase this.	Page 24 1 A. Okay. 2 Q. Starting at the bottom, there's 3 a bend as the piece of metal transitions 4 from the channel-shaped portion to the 5 extension portion, correct? 6 MR. HIGGINS: Objection, form. 7 A. Yes. 8 BY MR. SCHROEDER: 9 Q. And there is a horizontal line 10 where that transition ends, correct? 11 MR. HIGGINS: Objection, form. 12 BY MR. SCHROEDER: 13 Q. Or there's a horizontal line 14 approximately where that transition ends, 15 correct? 16 MR. HIGGINS: Objection, form. 17 A. Yes. 18 BY MR. SCHROEDER: 19 Q. And then up a little bit on the 20 figure, there is a transition from the 21 extension flange to the back flange, 22 correct? 23 A. Yes. 24 Q. And that transition is a bend, 25 correct?
Page 23 1 Do you agree that there is at 2 least one plane that coincides with the 3 back flange from at least the conclusion 4 of the transition from the channel-shaped 5 portion through the start of the 6 transition to the back flange? 7 MR. HIGGINS: Objection, form. 8 A. I'm not trying to split hairs 9 with you. I just -- it's difficult to say 10 with the art the way it's illustrated, 11 Counselor, and my point in 26 was that if 12 we look at the extension flange plane or 13 the front surface of the back flange 14 plane, those are two-dimensional flat 15 surfaces and that the bend is in between. 16 There might be a portion of the bend that 17 touches the face of the back flange plane, 18 but it's -- as I say, it's hard to say. 19 BY MR. SCHROEDER: 20 Q. So if we go back to figure 7 -- 21 A. Yes. 22 Q. -- and we're looking at just for 23 the sake of talking about the same 24 extension flange, we're looking at the 25 extension flange on the right.	Page 25 1 A. Yes. 2 Q. And so -- and then in these 3 figures, there's a line where that 4 transition roughly starts, correct? 5 MR. HIGGINS: Objection, form. 6 A. Approximately, yes. 7 BY MR. SCHROEDER: 8 Q. Is there a -- would there be at 9 least one plane that would coincide with 10 the extension flange between those two 11 lines that we were just discussing? 12 A. Well, generally, yes, the flat 13 face of the part 60 occurs between those 14 two drafting lines you described. 15 Q. And would there be a plane 16 through the middle of the extension flange 17 too? 18 MR. HIGGINS: Objection, form. 19 A. Well, there could be multiple 20 planes. 21 BY MR. SCHROEDER: 22 Q. And for those multiple planes, 23 would they coincide with the extension 24 flange? 25 MR. HIGGINS: Objection, form.

Page 26 1 A. Well, some of the multiple 2 planes would be parallel and coincide with 3 the face of the portion of the extension 4 flange we just discussed. 5 BY MR. SCHROEDER: 6 Q. Returning to your declaration, 7 Exhibit 1039, starting at paragraph 32 and 8 going through paragraph 33, you have a 9 discussion regarding the construction of 10 the claim limitation extension flanges are 11 configured to extend through the sheathing 12 while maintaining a two-hour fire 13 resistance rating. Do you see that? 14 A. I do. 15 Q. And then in paragraph 33, you 16 argue that "Patent Owner's proposed 17 construction for claims 5 and 17 is 18 premised on how the hanger would be used, 19 not the structure of the hanger itself." 20 Do you see that? 21 A. I do. 22 Q. Is it your understanding that 23 claims for apparatuses are only limited to 24 strictly reciting the structure of the 25 apparatus?	Page 28 1 was actually going to be used, not of the 2 structure of the hanger itself. 3 BY MR. SCHROEDER: 4 Q. Well -- 5 A. You're going to have to ask it a 6 different way. I'm sorry. 7 Q. All right. So my question is, 8 is it your understanding that apparatuses 9 must be described within the claim 10 strictly based on their structure? 11 MR. HIGGINS: Objection, form. 12 A. Well, irrespective, I think 13 there should be, you know, reasonable 14 certainty of how the POSITA interprets the 15 claim. 16 BY MR. SCHROEDER: 17 Q. In patent law, is it permissible 18 to use functional claim limitations to 19 describe an apparatus? 20 MR. HIGGINS: Objection, form. 21 A. Oh, I don't think I know the 22 answer to that, Counselor. 23 BY MR. SCHROEDER: 24 Q. When you say "structure" within 25 your declaration, what do you mean?
Page 27 1 MR. HIGGINS: Objection, form. 2 A. Well, I think the words of the 3 declaration here speak for themselves, 4 Counselor. As you can see, I say that "A 5 POSITA would not have been able to 6 determine with reasonable certainty what 7 structure is required by the hanger to 8 'minimally disturb the fire barrier' -- 9 particularly since the 'fire barrier' 10 includes not just the sheathing and the 11 hanger, but any other fire mitigation 12 materials incorporated into the barrier." 13 BY MR. SCHROEDER: 14 Q. And my question was a little bit 15 different. My question was regarding your 16 understanding of -- of what the 17 requirements are for claims. And in 18 particular, my question was, is it your 19 belief that claims must be -- must 20 strictly recite the structure of a claimed 21 apparatus as compared to its function? 22 MR. HIGGINS: Objection, form. 23 A. Maybe I'm missing the subtlety 24 of your question, Counselor. I just was 25 looking at the claim and how the hanger	Page 29 1 A. Well, something that a POSITA 2 would understand, so if, for example, 3 we're talking about paragraph 33, the 4 function is "minimally disturb the fire 5 barrier." When I use the term "structure" 6 in this sentence, it's what physically 7 achieves that performance goal of 8 "minimally disturb the fire barrier." And 9 I just don't have a, in my opinion as the 10 POSITA, certainty as to what that means. 11 Q. Was "minimally disturb the fire 12 barrier" within the claim limitation 13 itself? 14 A. No. 15 Q. Do you know whether it's 16 permissible to define or to -- let me 17 rephrase that. 18 Can claims for an apparatus 19 define the structure of the apparatus in 20 reference to the environment in which that 21 apparatus would be used? 22 MR. HIGGINS: Objection, form. 23 A. I'm really not sure, Counselor. 24 BY MR. SCHROEDER: 25 Q. All right. So would you agree

Page 30 1 that there are walls that have a two-hour 2 fire rating? 3 MR. HIGGINS: Objection, 4 foundation. 5 BY MR. SCHROEDER: 6 Q. Would you agree within the 7 fire -- various fire codes that there is a 8 description of walls that would meet a 9 two-hour fire rating? 10 A. If you mean wall assemblies, 11 then I agree, yes. 12 Q. Okay. Wall assemblies, yes. 13 I'll -- I will use wall assemblies. 14 And do you agree that one of the 15 configurations of wall assemblies that is 16 known within the art to meet a two-hour 17 fire rating is a wall assembly that uses 18 two layers of 5/8-inch type X gypsum 19 attached to each side? 20 A. Yes. 21 Q. And that configuration is 22 well-known in the art, correct? 23 MR. HIGGINS: Objection, form. 24 A. Generally, yes. 25 BY MR. SCHROEDER:	Page 32 1 around the hanger and that cutout around 2 the hanger didn't closely conform to that 3 hanger, that it could impact whether or 4 not that wall would be able -- or would 5 still be capable of passing a two-hour 6 fire test? 7 MR. HIGGINS: Objection, form. 8 A. I mean, in the hypothetical it 9 had like three or four parts there and 10 some missing information, Counselor. 11 Yeah, I generally agree with you. 12 BY MR. SCHROEDER: 13 Q. Do you agree that the design of 14 a hanger would dictate the size of cutout 15 that would be required in the sheathing to 16 install it on one of these wall assemblies 17 with a, you know, two-hour fire rating? 18 MR. HIGGINS: Objection, form. 19 MR. SCHROEDER: Let me rephrase 20 that because I probably jumbled it a 21 little. 22 BY MR. SCHROEDER: 23 Q. Do you agree that the design of 24 a hanger would dictate the size of the 25 cutout that would be required in order for
Page 31 1 Q. And that configuration is 2 discussed in the specification of the '867 3 patent, correct? 4 MR. HIGGINS: Objection, form. 5 A. Generally, yes. 6 BY MR. SCHROEDER: 7 Q. Do you agree that for wall 8 assemblies of this configuration that 9 we're discussing with the two 5/8-inch 10 type X gypsum on each side, that 11 penetrations or cutouts in the wall may 12 render that wall to no longer being 13 capable of passing a two-hour fire test? 14 A. Yes. 15 Q. And so if you were to cut a hole 16 in the drywall and just leave that hole 17 there, it's questionable whether or not 18 that wall -- or that wall assembly could 19 still pass a two-hour fire test, correct? 20 MR. HIGGINS: Objection, form. 21 A. Generally, yes. 22 BY MR. SCHROEDER: 23 Q. Do you agree that with this wall 24 assembly that we've been discussing, that 25 if you were to do a cutout in the drywall	Page 33 1 that hanger to be used on a wall assembly 2 with two layers of type X gypsum attached 3 to each side? 4 A. Likely, yes. 5 Q. Do you agree that the design of 6 a hanger can, therefore, impact or have an 7 effect on whether or not the wall assembly 8 would be able to pass a two-hour fire 9 test? 10 MR. HIGGINS: Objection, form. 11 A. Likely, yes. 12 BY MR. SCHROEDER: 13 Q. So likely, yes, the design of a 14 hanger could impact whether or not a wall 15 that -- or a wall assembly that the hanger 16 is installed on would be capable of 17 passing a two-hour fire test? 18 MR. HIGGINS: Objection, form. 19 A. Yes. 20 BY MR. SCHROEDER: 21 Q. And in the past, you've 22 discussed how there's various putties that 23 could be added to a wall to maintain the 24 two-hour fire test; is that correct? 25 A. I have.

Page 34 1 Q. When these other materials such 2 as putties are added to a wall, would it 3 be the hanger or would it be the putty 4 that maintains that fire rating of the 5 wall assembly? 6 MR. HIGGINS: Objection, form. 7 A. It theoretically could be 8 either, but most likely the fire-resistive 9 putty or intumescent that's been detailed. 10 BY MR. SCHROEDER: 11 Q. Returning to your declaration, 12 paragraphs 34 through 36 discuss the claim 13 construction of the claim limitation "The 14 connection portion and channel...portion 15 being in a fixed" -- we're going to skip 16 some of that -- "relation relative to one 17 another." Do you see that heading E in 18 your declaration? 19 A. I do. 20 Q. Would a hanger in which the 21 connection portion and channel-shaped 22 portion have a fixed relation relative to 23 one another as the result of other items 24 within the hanger's environment qualifies 25 meeting the fixed claim limitation?	Page 36 1 Q. And so anything could be fixed 2 just by its environment that it's used in; 3 is that correct? 4 MR. HIGGINS: Objection, scope. 5 MR. SCHROEDER: Let me rephrase 6 that. 7 BY MR. SCHROEDER: 8 Q. According to your interpretation 9 of the word "fixed" as used in the claim, 10 components can be fixed by the environment 11 in which they're used in? 12 MR. HIGGINS: Objection, form. 13 A. Well, I think paragraph 34 14 describes the construction I have used. 15 BY MR. SCHROEDER: 16 Q. So if I were -- let me -- let me 17 think how I want to phrase this. 18 So your -- your opinion is that 19 fixed or that rigidly fixed covers any 20 circum- -- or let me rephrase that. 21 Your opinion is that the 22 limitation fixed covers any circumstance 23 in which one component is secured and 24 another component is secured? 25 MR. HIGGINS: Objection, form.
Page 35 1 MR. HIGGINS: Objection, form. 2 A. I'm afraid my engineer brain 3 went in about four different directions 4 there, Counselor, so -- 5 BY MR. SCHROEDER: 6 Q. All right. 7 A. -- maybe you can reword it and 8 help me out and narrow it a bit? 9 Q. Okay. So what I'm asking is, 10 you know, let's say the hypothetical is 11 that the -- that you've got a hanger with 12 multiple different parts, and the 13 connection portion is secured to a wall 14 and the channel-shaped portion is secured 15 to a beam, which is itself a stationary 16 item, would the effect of securing the 17 channel-shaped portion to the beam and the 18 connection portion to the wall meet that 19 claim limitation? 20 MR. HIGGINS: Objection, form. 21 A. Well, I think we're -- we're 22 describing, you know, an installed hanger 23 now in its intended function, and I would 24 describe that as fixed at that point. 25 BY MR. SCHROEDER:	Page 37 1 A. Again, I am -- it says it nicely 2 there in paragraph 34. It just says such 3 that "components are...such that they do 4 not move freely with respect to each 5 other." That -- that's fixed. 6 BY MR. SCHROEDER: 7 Q. And it doesn't matter, though, 8 that they're -- they're fixed to something 9 else; is that correct? 10 MR. HIGGINS: Objection, form. 11 A. I'm just looking at it through 12 the lens of how a POSITA would look at it, 13 Counselor, and coming up with a common 14 sense usage. 15 BY MR. SCHROEDER: 16 Q. So the components of a hanger 17 under your interpretation can be fixed by 18 their environment; is that correct? 19 MR. HIGGINS: Objection, form. 20 A. They could be. 21 BY MR. SCHROEDER: 22 Q. And so under your 23 interpretation, even a hanger that has 24 some type of pivoting mechanism such as a 25 hinge, if you drop it into concrete and

Page 38 1 the concrete hardens that that hanger 2 would now have a fixed relationship 3 between the connection portion and the 4 channel-shaped portion? 5 MR. HIGGINS: Objection, scope, 6 objection, form. 7 A. That's quite a hypothetical, 8 Counselor. I'm not sure how to help you 9 there. 10 BY MR. SCHROEDER: 11 Q. Well, let's say it's the Timony 12 hanger and I were to drop, you know, 13 the -- the retrofit plates into a tub of 14 concrete and I were to drop the connection 15 portion or the channel-shaped portion into 16 a tub of concrete and let it -- walk away 17 and let it harden for a week. Would those 18 now be -- have a fixed relation relative 19 to one another? 20 MR. HIGGINS: Objection, scope, 21 objection, form. 22 A. In the abstract in the 23 hypothetical, yes. 24 THE WITNESS: Counselor, maybe 25 another question or three and then	Page 40 1 MR. SCHROEDER: Actually let me 2 rephrase that and let me back it up. 3 BY MR. SCHROEDER: 4 Q. Would you agree that a hanger 5 that is formed of 12- to 14-gauge steel 6 could be manipulated? 7 A. Yes. 8 Q. Would you agree that it would 9 take some force, though, to manipulate 10 that 12- to 14-gauge steel? 11 MR. HIGGINS: Objection, form. 12 A. Oh, yes, it would take some 13 force. 14 BY MR. SCHROEDER: 15 Q. Now, approximately how much 16 force? 17 A. That's hard to say. I am not 18 going to move it with my pinky, but if I 19 have a big enough hammer, no problem. 20 Q. I think now would be a good time 21 for a break. 22 A. Thank you. 23 (Whereupon, a brief recess is 24 taken.) 25 BY MR. SCHROEDER:
Page 39 1 take a break. 2 MR. SCHROEDER: Yeah, I'm almost 3 ready to move on to a new topic so 4 maybe five more minutes? 5 THE WITNESS: Yeah, sure. 6 BY MR. SCHROEDER: 7 Q. If that's okay. 8 So looking at Exhibit 1001 which 9 is the '867 patent, lines 10:22 through 10 10:29 identify the gauge of metal or 11 identify a gauge of metal that is 12 disclosed for hangers. Can you tell me 13 what that gauge of steel is? 14 A. Which column are you in now? 15 Q. It should be column 10, line -- 16 line 22 through 29, unless my notes are 17 wrong. 18 A. You are correct. The -- at 19 approximately line 28, there's a reference 20 to 12- to 14-gauge steel. 21 Q. Would you agree that 12- to 22 14-gauge steel that is bent into shape 23 would require force to manipulate it 24 further? 25 MR. HIGGINS: Objection, form.	Page 41 1 Q. Starting at paragraph 41 of your 2 declaration, which is Exhibit 1039, you 3 provide an opinion regarding whether the 4 claim limitation each extension flange 5 lying in an extension flange plane is 6 definite; is that correct? 7 A. I do. 8 Q. Is it your understanding that 9 absolute precision is required under the 10 definiteness standard? 11 A. Well, there should be enough 12 precision that the POSITA understands what 13 is being described and that there isn't 14 room for misinterpretation or multiple 15 interpretations. 16 Q. In paragraph 41, towards the 17 middle of the paragraph, you state "It is 18 not clear exactly where the extension 19 flange ends and the channel-shaped portion 20 or connection portion begins because a 21 curve exists between the flat parts of 22 each." Did I quote that correctly? 23 A. Yes. 24 Q. If you could jump to 25 paragraph 88 of your declaration. In

Page 42 1 paragraph 88 you describe your 2 understanding of the boundaries of one of 3 the prior art's extension flange and back 4 flange or what you're identifying as 5 extension flange and back flange as being 6 defined by a miter angle; is that correct? 7 MR. HIGGINS: Objection, form. 8 A. Yes. 9 BY MR. SCHROEDER: 10 Q. And specifically you state that 11 "a POSITA would have understood the 12 boundaries of Timony's retaining portion 13 203 and retrofit plate 230 would generally 14 be defined by a miter angle, as 15 demonstrated below," and there's an image 16 below that, correct? 17 A. Yes. 18 Q. And that image below shows a 19 miter angle between those two portions, 20 correct? 21 A. It does. 22 Q. And you agree, at least with 23 respect to Timony, that a person of skill 24 in the art would understand where these 25 boundaries are?	Page 44 1 I believe it was paragraph 90; is that 2 correct? 3 A. Yes, there's a -- there's a 4 tighter bend shown within paragraph 92. 5 Q. And within this paragraph 92, 6 you're still showing the miter angle, 7 correct? 8 A. Yes, I've adopted a similar 9 miter angle as the patent owner response 10 had. 11 Q. And so you had no problem 12 concluding that Timony's retaining portion 13 230-A and hanging portion 2 -- or 14 retaining portion 203-A and hanging 15 portion 230-A would meet along -- along a 16 miter angle, correct? 17 MR. HIGGINS: Objection, form. 18 MR. SCHROEDER: Let me rephrase 19 that because I know I jumbled it, just 20 so it's a clean record. 21 BY MR. SCHROEDER: 22 Q. You had no problem concluding 23 that Timony's retaining portion 203-A and 24 hanging portion 230-A met along a miter 25 angle?
Page 43 1 A. Yes. 2 MR. HIGGINS: Objection, form. 3 A. Yes, as I write here, it 4 describes my understanding and opinion. 5 BY MR. SCHROEDER: 6 Q. And then in paragraph 90, we -- 7 there's a discussion about that there 8 would be bends rather than a sharp 9 90-degree, correct, for Timony -- let me 10 rephrase that. 11 In paragraph 90 you -- you 12 discuss that it's patent owner's 13 contention that there would be a bend 14 between the retrofit plates 230-A and 15 230-B, correct? 16 A. Yes. 17 Q. And within these -- the figure 18 shown, and I know that this figure came 19 from the patent owner's response, there's 20 a miter angle between -- in that bend, 21 correct? 22 A. That's correct. 23 Q. And then in paragraph 92, you 24 provide yet another figure of Timony that 25 has a sharper bend than the one shown in,	Page 45 1 A. Yes. 2 Q. And your opinion did not change 3 when considering that the retaining 4 portion 203-A and the hanging portion 5 230-A resulted from a bend with a radius? 6 MR. HIGGINS: Objection, form. 7 A. No, I think that's correct. 8 BY MR. SCHROEDER: 9 Q. If you could go back to 10 paragraph 46. 11 A. Okay. 12 Q. And paragraphs 46 and 47 concern 13 whether claims 5 and 17 have adequate 14 written descriptions; is that correct? 15 A. Yes. 16 Q. And in paragraph 46 you quote 17 language from the certificate of 18 correction, correct? 19 A. Yes. 20 Q. And can you read that quote for 21 me? 22 A. "Patent Owner asserts that the 23 Certificate of Correction -- adding 24 'rating of a wall assembly including the 25 wall and the sheathing' -- mooted my

Page 46 1 opinion set forth in my first declaration 2 that sheathing alone does not have a 3 two-hour fire rating." 4 Q. All right. And then can you 5 read the -- the second sentence of 6 paragraph 47? Actually, wait a second. 7 Can you read the first paragraph or the 8 first sentence of paragraph 47? 9 A. "As explained in my declaration, 10 the '867 patent specification does not 11 describe what structural features of the 12 extension flange allow the hanger to 13 achieve a two-hour fire resistance 14 rating." And the second sentence -- 15 Q. All right. I just wanted that 16 first sentence. 17 Would you agree that the 18 language of the claim, though, as 19 assert -- or as in the certificate of 20 correction is discussing that it's the 21 rating of the wall assembly, not the 22 hanger, that achieves the two-hour fire 23 rating? 24 MR. HIGGINS: Objection, form. 25 A. Yes, it's talking about the	Page 48 1 would have recognized that Bundy's 2 suggestion to 'cover and protect' 3 structural members goes beyond just 4 fireproofing. Particularly, a POSITA 5 would have understood that sheathing can 6 be used for soundproofing, insulation, and 7 aesthetic applications, as further 8 described below." 9 Q. If you could open Exhibit 1007, 10 which is Bundy, and let me know when you 11 have it. 12 A. Okay. 13 Q. And in particular, can you go to 14 column 5, line 17? And can you read that 15 sentence that spans from line 17 to line 16 20? 17 A. "In the present invention, two 18 layers of 5 inch" -- "5/8-inch drywall is 19 preferred. Drywall is naturally fire 20 resistant and can be used to cover and 21 protect the structural members of a 22 building." 23 Q. Does that sentence provide any 24 indication how the drywall is protecting 25 the structural members of the building
Page 47 1 assembly, which includes all of the bits. 2 BY MR. SCHROEDER: 3 Q. Right. And so it's not the 4 hanger by itself that achieves the 5 two-hour fire rating according to the 6 certificate of correction? 7 A. Yes. 8 Q. Starting at paragraph 48, you 9 provide an opinion regarding motivation to 10 combine the teachings of the various prior 11 art; is that correct? 12 A. Yes. 13 Q. If you could turn to 14 paragraph 51, and, if you could, read the 15 first sentence -- or actually read the 16 first -- read all -- the whole paragraph, 17 actually. Read paragraph 51 into the 18 record, if you could. 19 A. No problem. 20 "While Bundy describes that 21 drywall is 'naturally fire resistant,' 22 Bundy describes that drywall can 'be used 23 to cover and protect the structural 24 members of a building.' [Exhibit 1007, 25 column 5, line 17 through 21.] A POSITA	Page 49 1 other than that the drywall provides fire 2 resistance? 3 MR. HIGGINS: Objection, form. 4 A. Well, yes and no. I mean, yes, 5 there's references to fire resistance, but 6 "cover and protect" means cover and 7 protect. In my opinion, a POSITA would 8 know that means -- could mean more -- more 9 than that. 10 BY MR. SCHROEDER: 11 Q. And in particular it first 12 states that "drywall is naturally fire 13 resistant," and it uses the word "and" as 14 the transition, correct? 15 A. Yes. 16 Q. It doesn't say anything about 17 soundproofing; does it? 18 A. Well, I think that was the yes 19 part of my -- well, the no part of the 20 previous answer was that I think the 21 POSITA knows that cover and protect is 22 multi-function. 23 Q. Would a member need to be 24 protected from sound? 25 A. Well, we're talking assemblies

Page 50 1 here. It may well be part of an -- an 2 acoustic-rated assembly. 3 Q. But would the structural member 4 need to be protected from sound? 5 MR. HIGGINS: Objection, form. 6 A. It depends. For its structural 7 performance, unlikely, but there's all 8 sorts of reasons why we have 9 acoustic-rated assemblies that feature 10 structural members. 11 BY MR. SCHROEDER: 12 Q. Does Bundy have anything to do 13 with soundproofing? Let me rephrase that. 14 Does Bundy discuss soundproofing 15 anywhere within the patent? 16 A. From memory, I don't believe so. 17 Q. Does Bundy discuss the 18 insulative value of sheathing? 19 A. Again, from memory, I don't 20 recall a thermal discussion. 21 Q. Does Bundy discuss aesthetics of 22 sheathing and hangers? 23 MR. HIGGINS: Objection, form. 24 A. Same answer, Counselor. 25 BY MR. SCHROEDER:	Page 52 1 figures on a few of these sets, but the 2 first set at the top of this chart is 3 light gauge steel stud walls, correct? 4 A. Yes. 5 Q. And then the second set is heavy 6 gauge steel stud walls; is that correct? 7 A. Yes. 8 Q. And the third set is wood stud 9 walls; is that correct? 10 A. Yes. 11 Q. Does Exhibit 1042 identify 12 putting this QuietRock product on brick or 13 masonry walls? 14 A. No, not within this document. 15 Q. Do you have Exhibit 1043 with 16 you? 17 A. I do and I have that in front of 18 me. 19 Q. All right. And in Exhibit 1043 20 you point to I believe it's figure 105 on 21 page 115; is that correct? 22 A. I do. 23 Q. And on this page it has the 24 soundproofing rating of various 25 constructions, correct?
Page 51 1 Q. Moving to paragraph 52 of your 2 declaration, which again was Exhibit 1039, 3 and let me know when you have it back in 4 front of you. 5 A. Oh, I do. 6 Q. Okay. Paragraph 52 discusses 7 QuietRock gypsum panels; is that correct? 8 A. It does. 9 Q. And you have a few exhibits 10 identified in paragraph 52. In 11 particular, you identify Exhibit 1042; is 12 that correct? 13 A. Yes. 14 Q. Can you or do you have 15 Exhibit 1042 available? 16 A. I do. 17 Q. Could you please get -- or open 18 it up? 19 A. Okay. 20 Q. Exhibit 1042 shows some diagrams 21 of the use of the QuietRock product on 22 various wall structures, correct? 23 A. It does. 24 Q. And it's got kind of three sets 25 of figures it's showing. There's multiple	Page 53 1 A. Yes, it shows the STC rating. 2 Q. And so a wood frame wall with 3 just one layer of regular half-inch gypsum 4 wallboard has a 32 rating, correct? 5 MR. HIGGINS: Objection, form. 6 BY MR. SCHROEDER: 7 Q. Let me correct. One layer of 8 the gypsum wallboard on each side of the 9 wall? 10 A. That would be correct. 11 Q. And then transitioning from 12 half-inch gypsum to a 5/8-inch gypsum on 13 both sides of the wall in, I guess, A of 14 this table shows that the STC rating would 15 be 37; is that correct? 16 A. Yes. 17 Q. And then looking at C, it 18 provides a STC rating for 8-inch concrete 19 block, correct? 20 A. Yes, of 45. 21 Q. And so a concrete block has 22 significantly more sound protection than 23 the -- the wood frame wall with a 5/8-inch 24 gypsum wallboard on each side, correct? 25 MR. HIGGINS: Objection, form.

Page 54 1 A. In this case, yes, the -- the 2 bigger the number, the more acoustic 3 resistance you have, so, yes, the block at 4 45 has more resistance than either of the 5 single layer of sheetrock applications on 6 each side. 7 BY MR. SCHROEDER: 8 Q. And D right below it shows the 9 fire -- or the STC rating putting a 10 half-inch board -- or sound-deadening 11 board over a half-inch gypsum wallboard on 12 each side, correct? 13 A. Yes. 14 Q. And this structure here has a 46 15 STC rating, correct? 16 A. It does. 17 Q. And so there's only really a 18 movement of one between the structure 19 shown in C that's just a cinderblock and 20 the structure shown in D, which is wood 21 frame walls with sound-deadening board on 22 it, correct? 23 A. Yes, yes. 24 Q. And you've got the -- the 25 paragraph -- the actual text above the --	Page 56 1 over from the one column to the other, it 2 states "However, the hypothetical rating 3 of 45 cannot be obtained in this 4 construction. An 8-inch concrete block 5 wall (example, 105,C) has the minimum 6 rating, but this construction is not 7 always practical in a wood-frame house"; 8 is that correct? 9 A. Yes. 10 Q. And so it's identifying that 11 this concrete block would meet what would 12 be considered acceptable, but that it's 13 just not applicable to use concrete blocks 14 in wood-framed construction a lot of 15 times? 16 MR. HIGGINS: Objection, form. 17 A. You know, I think I see what 18 you're asking, Counselor. My intent of 19 using the reference is simpler than this, 20 and you can mix masonry and wood frame and 21 it's frequently done, but I don't disagree 22 that as isolated the sentences you read 23 out say what they say. 24 BY MR. SCHROEDER: 25 Q. And Exhibit 1043 does not
Page 55 1 this table is cut off because we were only 2 provided this one page, but within this -- 3 what is shown here, would you agree that 4 it's -- that there's a sentence that says 5 "However, the hypothetical rating of 45 6 cannot be obtained in this construction"? 7 MR. HIGGINS: Objection, scope, 8 objection, form. 9 BY MR. SCHROEDER: 10 Q. Actually, let's start with the 11 sentence that's cut off here and remember, 12 this is your exhibit. This wasn't mine. 13 The very first line has -- 14 starts with "likely has an STC rating of 15 45 or greater." Can I infer from this 16 partial line that an STC rating of 45 or 17 greater is considered desirable? 18 MR. HIGGINS: Objection, form. 19 A. It depends. 20 BY MR. SCHROEDER: 21 Q. And in particular, the concrete 22 block meets that 45 STC rating, correct? 23 A. Generally, yes. 24 Q. And in particular, in this text 25 portion of this page where it's wrapping	Page 57 1 disclose anywhere using sound-deadening 2 panels such as the QuietRock product on 3 concrete block walls; does it? 4 A. No. 5 Q. Would you agree that 6 soundproofing is generally not considered 7 a safety concern? 8 A. It depends. It -- there is a 9 difference between fire-life safety and 10 health, you know, and hearing protection 11 safety, for example, occupational safety. 12 So it really would depend what type of 13 safety you're describing, Counselor. 14 Q. Would you agree that cutting 15 drywall out around a joist hanger would 16 have a -- let me back this up. 17 Assuming that a product like the 18 QuietRock sheathing was used on the wall, 19 would you agree that cutting the drywall 20 out around a joist hanger would have 21 minimal impact as to the overall 22 soundproofing of the wall? 23 A. No, no, I wouldn't agree with 24 that. 25 Q. Would the -- would the QuietRock

Page 58 1 still provide soundproofing for the wall 2 even with a small cutout in it? 3 MR. HIGGINS: Objection, form. 4 A. Analogous to our discussion 5 earlier of fire resistivity and 6 maintaining it at or near hanger cutouts, 7 a similar discussion could be had about 8 other performance criteria at cutouts such 9 as thermal or acoustic. 10 BY MR. SCHROEDER: 11 Q. So let's say in the standard 12 room when you have a door wide open, sound 13 from outside the room comes inside the 14 room, correct? 15 MR. HIGGINS: Objection, form. 16 A. Yes, open doors allow sound -- 17 sound transmission. 18 BY MR. SCHROEDER: 19 Q. So if I were to close the door, 20 would that significantly lower the 21 volume -- or lower the amount of sound 22 that would come into the room? 23 MR. HIGGINS: Objection, scope, 24 objection, form. 25 A. It's a hypothetical, but it	Page 60 1 here, Counselor. The same materials that 2 are used for thermal resistivity 3 improvement may well be part of the 4 life-safety fire resistive assembly. 5 Beyond that, whether a wall has thermal 6 resistance, again, may be safety just 7 depending on habitability of the room. 8 Q. So if there was a small cutout 9 around a hanger in the drywall, would you 10 agree that there may be a slight draft 11 from that cutout, but that generally the 12 wall still is providing a thermal barrier 13 between the two sides of the wall. 14 MR. HIGGINS: Objection, form. 15 A. Again, yes, there -- there's 16 some less performance from a wall with a 17 hole in it versus a contiguous wall, 18 whether we're talking thermal or acoustic. 19 BY MR. SCHROEDER: 20 Q. But the wall would still provide 21 a thermal barrier, it just might have a 22 draft, correct? 23 MR. HIGGINS: Objection, form. 24 A. In the hypothetical, yes. 25 BY MR. SCHROEDER:
Page 59 1 depends. 2 BY MR. SCHROEDER: 3 Q. Would it -- and let me then add 4 in the additional bit that the door 5 doesn't have a sweep on it such that there 6 might be a quarter-inch gap between the 7 floor and the bottom of the door, would 8 closing the door still reduce the volume 9 of sound coming from outside the room into 10 the room? 11 MR. HIGGINS: Objection, scope, 12 objection, form. 13 A. It could. It's just a 14 hypothetical I'm afraid and maybe that's 15 my fault, but I don't know the material of 16 the door, whether there's hardware, 17 whether there's, you know, weather 18 stripping, et cetera, on this, so I'm not 19 sure I can help you right now. 20 BY MR. SCHROEDER: 21 Q. Moving on to paragraph 53, would 22 you agree that providing thermal 23 insulation is not a safety concern? 24 MR. HIGGINS: Objection, form. 25 A. I'm afraid it depends, again,	Page 61 1 Q. And returning back to the idea 2 of soundproofing, the wall would still 3 provide a sound barrier, it just may allow 4 a little bit of extra sound through if 5 there was a hole in the wall? 6 MR. HIGGINS: Objection, form, 7 objection, scope. 8 A. From experience, acoustic 9 ratings are relatively sensitive, so even 10 small defects in the acoustic-rated 11 assembly matter, whether it be sound 12 transmission or vibrations, but, you know, 13 we're just talking hypothetically so the 14 holes will have an effect. 15 BY MR. SCHROEDER: 16 Q. Moving to paragraph 54, you 17 provide that the POSITA would also 18 understand "that drywall can be installed 19 to wall structures of all types simply to 20 improve the aesthetic appeal of the room. 21 For example, drywall's light color 22 typically brightens a room." Do you see 23 that? 24 A. I do. 25 Q. Is there any reason why paint

Page 62 1 cannot be applied directly to concrete or 2 masonry? 3 MR. HIGGINS: Objection, form. 4 A. No. Paint could be applied 5 directly to masonry. 6 BY MR. SCHROEDER: 7 Q. And would you agree that paint 8 is even commonly applied to concrete and 9 masonry? 10 MR. HIGGINS: Objection, scope, 11 objection, form. 12 A. Again, yes. 13 BY MR. SCHROEDER: 14 Q. And you agree that paint's 15 available in white? 16 A. Yes. 17 Q. Moving on to paragraph 57, if 18 you would, go ahead and take a minute to 19 read paragraph 57 just so you 20 refamiliarize yourself with it. Let me 21 know when you're ready. 22 A. Okay. 23 Q. All right. So first I want 24 to -- I want to direct you to the last 25 sentence on the bottom of page 24, it	Page 64 1 the sheathing? 2 A. Yes, on the exterior surface of 3 this -- 4 Q. The brick is over the sheathing, 5 correct? 6 A. Yes. 7 Q. And the sheathing is not over 8 the brick? 9 A. Well, if you're standing on the 10 outside of this wall, the first material 11 you would see is the brick. 12 Q. And then it goes on to state, 13 it's on the exterior surface of a 14 2-by-4-inch wood stud at 16-inch OC; is 15 that correct? 16 A. Yes, then there's some wood 17 framing after the outer layer of gyp 18 sheathing. 19 Q. Well, and so what we're 20 discussing here is a wood stud wall, 21 correct? 22 A. Yes. 23 Q. With a layer of gypsum sheathing 24 attached to the wood studs, correct? 25 A. Yes.
Page 63 1 states "For example, the Brick Industry 2 Association's pamphlet titled 'Fire 3 Resistance of Brick Masonry,' notes that 4 gypsum sheathing can be placed on the 5 exterior surface of masonry walls or on a 6 brick veneer loadbearing wall to achieve a 7 fire" -- "2 hour fire resistance rating." 8 And then you cite to a couple of 9 tables in Exhibit 1040, correct? 10 A. Yes. 11 Q. All right. If you could open 12 Exhibit 1040 for me, and turn to table 1 13 once you have it open. 14 A. Okay. I'm there. 15 Q. And I believe that right here 16 you are referring to within this table the 17 last row 15, exterior walls or interior 18 walls; is that correct? 19 A. Yes. 20 Q. And so looking at the 21 construction beam described, it says 2 and 22 a quarter inch by 3 and -- I think that's 23 three-quarter-inch clay face brick with 24 cored holes over half-inch gypsum 25 sheathing, correct, that the brick is over	Page 65 1 Q. And then the brick over the 2 sheathing, correct? 3 A. Yes. 4 Q. And then it's talking about them 5 using type X gypsum on the interior 6 surface, correct? 7 A. Yes. 8 Q. And so there's no sheathing 9 being installed over the brick, correct? 10 MR. HIGGINS: Objection, form. 11 A. That's correct. 12 BY MR. SCHROEDER: 13 Q. And then you provide within your 14 declaration paragraph 57 "As another 15 example, the National Timber Development 16 Council's manual (NTDC manual) titled 17 'Multi-Residential Timber Framed 18 Construction' notes that 'fire grade 19 lining,' such as 'plasterboard,' may be 20 applied to 'timber, brick or masonry' 21 structural members"; is that correct? 22 A. Yes. 23 Q. And then you specifically point 24 to Exhibit 1041, page 15, figure 8-A, 25 correct?

Page 66 1 A. Yes. 2 Q. Can you go ahead and open 3 Exhibit 1041 and go to that figure 8-A? 4 A. Yes. 5 Q. Give me a second. I'm trying to 6 get there as well. All right. So looking 7 at figure 8-A and I'm going to, just for 8 the -- the simplicity of it, I'm going to 9 be talking about the figure on the left on 10 8-A. So on the figure on the left, it's 11 showing a single stud wall between post; 12 do you see that? 13 A. Yes. 14 Q. And then it has what is 15 highlighted green; is that correct, 16 attached on both sides of that wood stud? 17 A. Yes, there's a highlighted 18 sheathing colored green on both sides. 19 Q. And that's sheathing, correct? 20 A. Yes. 21 Q. And then it's showing brick on 22 the exterior of that sheathing; is that 23 correct? 24 A. Yes. 25 Q. And it's not showing sheathing	Page 68 1 masonry of a concrete or masonry wall? 2 MR. HIGGINS: Objection, form. 3 A. I would agree with it the way 4 you worded it. 5 BY MR. SCHROEDER: 6 Q. And both examples that we looked 7 at had studs or were stud-framed walls, 8 correct? 9 A. Wood framing was part of each of 10 those assemblies. 11 Q. And would you agree that for 12 each example that we were looking at, the 13 brick and gypsum were provided for the 14 purposes of providing fire protection to 15 the wood-frame wall? 16 MR. HIGGINS: Objection, form. 17 MR. SCHROEDER: Let me rephrase 18 that. 19 BY MR. SCHROEDER: 20 Q. For each of the examples that we 21 were looking at, did the combination of 22 brick and gypsum provide fire protection 23 for the wood-frame wall? 24 A. Yes, and that's why I selected 25 these exemplars is because testing fire
Page 67 1 on the exterior of the brick; is that 2 correct? 3 A. Yes. 4 Q. And so it's -- it's just showing 5 brick on the exterior of both sides of the 6 wall; is that correct? 7 MR. HIGGINS: Objection, form. 8 A. It's all part of the rated pier 9 here. They're saying they are -- in fact, 10 the title of the figure it says that it's 11 a single stud wall between concrete or 12 masonry piers, but -- 13 BY MR. SCHROEDER: 14 Q. So both Exhibit 1040 that we 15 were looking at a minute ago and 16 Exhibit 1041, neither of these figures 17 show gypsum installed over concrete or 18 masonry walls? 19 MR. HIGGINS: Objection, form. 20 MR. SCHROEDER: Let me rephrase 21 that. 22 BY MR. SCHROEDER: 23 Q. Do either Exhibit 1040 or 24 Exhibit 1041 show any instance of gypsum 25 being installed over the concrete or	Page 69 1 walls is expensive. Anytime a designer 2 can point to a listed assembly that's 3 pretested, it gives the designer more 4 flexibility and choice of materials. So I 5 selected these to show that there were 6 tested, listed assemblies that feature 7 masonry in combination with gypsum 8 sheathing. 9 Q. And both examples that you 10 showed were wood-framed walls, correct? 11 A. Yes, they also had as part of 12 the assembly a wood-framing system. 13 Q. And so they weren't purely a 14 foundation wall? 15 MR. HIGGINS: Objection, form. 16 A. Oh, the one we were just looking 17 at in Exhibit 1041 is part of a 18 foundation. 19 BY MR. SCHROEDER: 20 Q. And that's that footer or 21 structural post? 22 A. Well, they're referring to them 23 as masonry piers. 24 Q. Okay. And let me -- let me ask 25 this a little differently.

Page 70 1 Do any of the exhibits that you 2 provided show gypsum being applied on the 3 face of an exterior -- or on the exterior 4 face of a masonry wall or concrete wall to 5 provide fire protection? 6 MR. HIGGINS: Objection, form. 7 A. I don't believe so, but as I've 8 opined previously, I don't see the 9 limitation of adding sheathing, gypsum 10 sheathing to the outside of an otherwise 11 noncombustible material to comply with a 12 listed assembly that might be recognized 13 by a jurisdiction. 14 BY MR. SCHROEDER: 15 Q. The application of the hanger at 16 issue, though, is referring to providing a 17 space for sheathing on the outside of the 18 wall, correct? 19 MR. HIGGINS: Objection, form. 20 A. Generally, yes. 21 BY MR. SCHROEDER: 22 Q. And so the constructions shown 23 in Exhibits 1040 and 1041 are not the 24 applications for which the hanger that 25 we're discussing is intended; is that	Page 72 1 Q. So your statement in paragraph 2 57 that the fire -- that "The Brick 3 Industry Association's pamphlet titled 4 'Fire Resistance of Brick Masonry,'" that 5 you state that it "notes that gypsum 6 sheathing can be placed on the exterior 7 surface of masonry walls." Is sheathing 8 being shown on the exterior surface of the 9 masonry walls? 10 MR. HIGGINS: Objection, form. 11 A. I agree that's what I wrote and 12 I am talking about it's on the exterior of 13 the exterior wall, but it may not be the 14 first material encountered when viewed 15 from the outside, but it is part of an 16 assembly. 17 BY MR. SCHROEDER: 18 Q. But it's not the exterior 19 surface of that assembly, correct? 20 MR. HIGGINS: Objection, form. 21 A. Correct, it's not the outer-most 22 surface of the exterior of the exterior 23 wall. 24 MR. SCHROEDER: I believe that 25 now would be a good time for a break.
Page 71 1 correct? 2 MR. HIGGINS: Objection, form. 3 A. If we stay with 1041, for 4 example, there's opportunity to use 5 hangers in and around the sheathing, the 6 vertical sheathing. 7 BY MR. SCHROEDER: 8 Q. And is the sheathing over the 9 concrete or masonry? 10 MR. HIGGINS: Objection, form. 11 A. It really depends. I mean, 12 we're only looking at a cross-section here 13 at the piers itself. I don't know what 14 the balance of the wall looks like in this 15 hypothetical so I don't know. 16 MR. HIGGINS: We're approaching 17 the one-hour mark. 18 MR. SCHROEDER: All right. 19 Yeah. This is the last on this topic 20 before we move on. I just want to 21 make sure I have this wrapped up and 22 then we'll take a break. 23 MR. HIGGINS: Thank you, 24 Counsel. 25 BY MR. SCHROEDER:	Page 73 1 (Whereupon, a brief recess is 2 taken.) 3 BY MR. SCHROEDER: 4 Q. Welcome back. Just asking, did 5 you communicate with anyone over the break 6 regarding this deposition? 7 A. I did not. 8 Q. I would like you to return to 9 your declaration, if you have that. And 10 we will be starting back up at 11 paragraph 59. Are you there? 12 A. Yes. 13 Q. So starting at paragraph 59, you 14 provided a couple of paragraphs regarding 15 your opinion as to whether the Gilb '792 16 hanger is compatible with wood-frame 17 construction; is that correct? 18 A. I do. 19 Q. And in paragraph 59, you 20 identify that in Exhibit 1041, figure B 21 shows an example of ledgers continuing to 22 be used in platform framing; is that 23 correct? 24 A. Yes, that was figure 4-B. 25 Q. If you could go ahead and open

Page 74 1 up Exhibit 1041 to figure 4-B, let me know 2 when you have it. Do you have it? 3 A. I do. 4 Q. And looking at figure 4-B, I'm 5 assuming that you are discussing the 6 figure on the left; is that correct? 7 A. Yes. 8 Q. And does Exhibit 1041 identify 9 any metal ledgers? 10 MR. HIGGINS: Objection, form. 11 A. Well, if you read the text 12 that's on this graphic, it says that 13 "additional 45 mm thick joist, ledger, 14 trimmer or blocking to maintain fire 15 resistance." So even though pictorially 16 we don't see a, quote, ledger, it 17 recognizes that -- or certainly not 18 prohibited from integrating one at this 19 location. And as I said in my declaration 20 at the end of paragraph 59, a POSITA 21 certainly would not have been deterred 22 from using a metal ledger with platform 23 framing. 24 BY MR. SCHROEDER: 25 Q. But in figure 4-B, it's	Page 76 1 BY MR. SCHROEDER: 2 Q. And fire blocking works by 3 blocking the path that the fire could 4 spread, correct? 5 A. Yes, yes. In the -- if you 6 think of it as a chain that -- where one 7 ends and another starts, that -- the 8 building official that's doing plan check 9 is looking to avoid a broken chain. 10 Q. And in the case of figure 4-B, 11 the 45-millimeter ledger acts as a fire 12 block, correct? 13 A. Yes, generally a 2 by timber 14 member is recognized as fire stopping or 15 draft stopping in resistive assemblies. 16 Q. And the sheathing is showing 17 terminating below that ledger, correct? 18 A. In this detail, yes. 19 Q. Going back to your declaration, 20 and going to paragraph 61 specifically, go 21 ahead and take a minute to read paragraph 22 61 to yourself to refamiliarize yourself 23 with it. 24 A. Okay. 25 Q. And do you have Exhibit 1035 in
Page 75 1 discussing a 45-millimeter thick ledger 2 or -- correct? 3 A. Yes, in this case it shows a -- 4 a 3-inch thick or 45-millimeter -- I'm 5 sorry -- that would be just over 2 inches. 6 2-inch thick ledger that is face mounted 7 onto the wall here. Part of the graphic 8 is to show continuity of the sheathing to 9 a building official in a way that they'll 10 recognize. 11 Q. Right. And in particular, it's 12 a -- is that a wood timber ledger? 13 MR. HIGGINS: Objection, form. 14 A. Or generally in the iconography 15 of these details, a rectangle with an X 16 through it does suggest timber as a 17 material. 18 BY MR. SCHROEDER: 19 Q. And it also provides that this 20 45-millimeter thick joist, ledger, trimmer 21 or blocking is to maintain fire 22 resistance; is that correct? 23 MR. HIGGINS: Objection, form. 24 A. Well, as used in the assembly, 25 yes.	Page 77 1 front of you? Let me know when you find 2 it. 3 A. I do. 4 Q. And Exhibit 1035 is the Gilb 5 '792 prior art reference that is being 6 discussed in paragraph 61 of your 7 declaration, correct? 8 A. It is. 9 Q. And if you would, go to 10 column 1, line 34. And it's really this 11 paragraph that -- that line 34 is in, but 12 this paragraph, let me know if you 13 disagree, is discussing one of the defects 14 or problems with prior art metal ledger 15 hangers, correct? 16 MR. HIGGINS: Objection, form. 17 A. Yes, it is talking historically 18 about previous hangers. 19 BY MR. SCHROEDER: 20 Q. And in particular, it describes 21 that with -- with these prior metal ledger 22 systems that when a typical purlin-type 23 hanger was attached to the ledger, which 24 would be in the form of either an angle or 25 a U-channel, that the loading would cause

Page 78 1 deflection of the outstanding leg of that 2 angle or U-channel, correct? 3 A. Yes, that was the problem in the 4 past. 5 Q. And kind of put that into 6 layman's terms is that it was causing the 7 ledger to deform and let that -- that 8 ledge that's coming vertically or coming 9 horizontally perpendicular from the wall 10 would allow that or would -- that leg 11 would start to bend; is that what it's 12 describing? 13 MR. HIGGINS: Objection, form. 14 A. Yes, yeah, the -- yeah, the 15 portion that sticks out of the wall 16 deflected as described. 17 BY MR. SCHROEDER: 18 Q. Right. And then, if you go to 19 column 2 starting at line 33, it's 20 describing the hanger of the invention 21 that's being described in the Gilb '792 22 patent, correct? 23 A. Yes. 24 Q. And so the description here is 25 not that prior ledger system that had this	Page 80 1 A. The -- the portion that's 2 underneath is certainly going all the way 3 back to the wall. 4 BY MR. SCHROEDER: 5 Q. But it is -- it is -- it's going 6 underneath and actually touching that 7 lower surface of that outstanding leg, 8 correct? 9 MR. HIGGINS: Objection, form. 10 BY MR. SCHROEDER: 11 Q. I believe it uses the word "in 12 registration with." 13 MR. HIGGINS: Objection, form. 14 A. Sorry to do this, Counselor, I 15 was just looking at -- between figures and 16 the text and going backwards and forwards 17 and try to put it in the front of my 18 brain. Can you ask your question one more 19 time, please? 20 Q. All right. So in this column 2 21 at approximately line 43, it discusses 22 that the "gusset member 15...is formed 23 with a top edge 16 in registration with 24 the lower face of the outstanding leg 3 of 25 the ledger."
Page 79 1 defect, but it's the inventive feature of 2 this patent, correct? 3 MR. HIGGINS: Objection, form. 4 A. Yes. This section you just 5 cited talks about improvements to avoid 6 deflection under concentrated loads as 7 discussed in the past. 8 BY MR. SCHROEDER: 9 Q. Going to line 41 of this column, 10 42, it describes and I won't read it "A 11 first gusset member 15 is operatively and 12 ridgedly connected to the top flange," 13 correct, or "top flange 8"? 14 A. Yes. 15 Q. And then it goes on to say that 16 this gusset member "is formed with a top 17 edge 16 in registration with the lower 18 face 5 of the outstanding leg 3 of the 19 ledger," correct? 20 A. Yes. 21 Q. And so what it's saying is this 22 gusset is going under that outstanding leg 23 and is touching the bottom part of that 24 leg, correct? 25 MR. HIGGINS: Objection, form.	Page 81 1 MR. HIGGINS: Objection, form. 2 BY MR. SCHROEDER: 3 Q. Is that correct? 4 A. That's what it says. I'm just 5 going to look at what 3 is. And, yes, 6 yes, it's in contact with 3, I agree. 7 Q. All right. And so that -- that 8 gusset 15 is contacting the ledger 3, 9 correct? 10 MR. HIGGINS: Objection, form. 11 A. Yes. 12 BY MR. SCHROEDER: 13 Q. And also in column 2, it 14 discusses that the length -- that the 15 hanger 7 has a top flange 8 that "is 16 adapted for connection of the upper 17 face...of the outstanding ledger...3," and 18 that's around lines 33 through 35? 19 A. Yes. 20 Q. And so it's describing that the 21 hanger has a top flange that's connecting 22 to that outstanding leg 3 and then it has 23 a gusset member underneath that 24 outstanding leg 3 that's contacting the 25 ledger, correct?

Page 82 1 A. Yes. 2 MR. HIGGINS: Objection, form. 3 BY MR. SCHROEDER: 4 Q. And then it describes a similar 5 construction for gusset member 22 from 6 column 2, line 59 through 62? 7 MR. HIGGINS: Objection, form. 8 A. Yes. 9 BY MR. SCHROEDER: 10 Q. If you could go to column 4, 11 lines 56 of this patent, can you read the 12 sentence that spans from line 56 to line 13 58? 14 A. "The gusset, because it is 15 attached to the lower leg 2 of the ledger 16 prevents bending of the outstanding leg 3 17 of the metal ledger." 18 Q. So when it says "the gusset," is 19 it referring to the gusset members 15 and 20 22 that we were discussing a minute ago? 21 MR. HIGGINS: Objection, form. 22 A. In part, yes. 23 BY MR. SCHROEDER: 24 Q. And is this sentence suggesting 25 that the gusset members are providing	Page 84 1 A. Yes. 2 Q. And that's the principle of 3 operation disclosed within the Gilb '792 4 patent, correct? 5 MR. HIGGINS: Objection, form. 6 A. As presented, yes. 7 BY MR. SCHROEDER: 8 Q. Going back to your declaration, 9 starting at paragraph 63, I think it is 10 only paragraph 63, you have a opinion 11 regarding that Timony is compatible with 12 wood-frame construction. Do you see that? 13 A. I do. 14 Q. Does the Timothy patent provide 15 any disclosure -- actually, let's back up 16 a second. 17 Do you have Timony available in 18 front of you? 19 A. I do. 20 Q. And that is Exhibit 1008, 21 correct? 22 A. Yes. 23 Q. And in Timony 1008, your -- your 24 combination or your usage of Timony is 25 primarily with respect to the embodiment
Page 83 1 reinforcement for that outstanding leg 3 2 of the ledger? 3 MR. HIGGINS: Objection, form. 4 A. In part, yes. 5 BY MR. SCHROEDER: 6 Q. Does the Gilb '792 patent 7 disclose any embodiment in which the 8 ledger was not present? 9 MR. HIGGINS: Objection, form. 10 A. From memory, no. 11 BY MR. SCHROEDER: 12 Q. Would you agree that the 13 disclosed principle of operation for the 14 hanger described in Gilb '792 patent is 15 for use of the hanger with a ledger? 16 MR. HIGGINS: Objection, form. 17 A. Well, in isolation, yes. In 18 combination or common usage, no. 19 BY MR. SCHROEDER: 20 Q. The -- the described structure 21 of the hanger disclosed in the Gilb '792 22 patent describes the use of a top flange 23 that connects to a ledger and gussets that 24 provide reinforcement of the ledger, 25 correct?	Page 85 1 shown in figure 8 that has retrofit 2 braces; is that correct, or is a retrofit 3 style hanger? 4 A. Yes, figures 8 and 9. 5 Q. And if I were to call the 6 component that attaches to the wall a 7 bracket, would you understand what I'm 8 discussing? 9 A. Yes. 10 Q. And the bracket has a number 11 of -- looking at figure 8, that bracket 12 would consist of -- or would comprise 13 203-A and 230-A; is that correct? I'm 14 just trying to make sure that we're -- 15 we're talking about the same thing here. 16 So in figure 8, if I were to call that 17 L-shaped metal the bracket, you would 18 understand what I'm talking about? 19 A. Yes. 20 Q. Okay. And that bracket that's 21 shown in figure 8, it generally has a 22 height of the bracket along the bend 23 between the component that looks like it's 24 203-A and 260-A, correct? 25 MR. HIGGINS: Objection, form.

Page 86 1 A. Yes, yes, there's a vertical 2 dimension there. 3 BY MR. SCHROEDER: 4 Q. Right. Does -- does Timony 5 provide any dimensions for that vertical 6 dimension? 7 A. No, it's pictorial. 8 Q. Does Timony disclose the spacing 9 of the holes 207-A and 207-B? 10 MR. HIGGINS: Objection, form. 11 A. I don't recall. Feel free to 12 point it out in the text if it exists. 13 BY MR. SCHROEDER: 14 Q. I'm not aware of it existing. I 15 was making sure that I didn't miss it. 16 Does Timony describe that 17 bracket being installed on a wood-framed 18 wall? 19 MR. HIGGINS: Objection, form. 20 A. I'm not aware of that within the 21 patent. However, it's my opinion that it 22 could easily be installed on a wood 23 substrate. 24 BY MR. SCHROEDER: 25 Q. And does Timony describe that	Page 88 1 Q. All right. You can stop reading 2 there. 3 Where in Gilb '792 is it taught 4 that there needs to be control of the 5 location of the end of a structural 6 element? 7 A. Well, it's not specifically. 8 It's just when using these hangers to 9 receive structural elements such as joists 10 or trusses, that it is common design 11 practice and would be understood by a 12 POSITA that positioning the end of the 13 joist is useful to achieving the designed 14 installation. 15 Q. But that fact was not gleaned 16 from the Gilb '792 patent, correct? 17 MR. HIGGINS: Objection, form. 18 A. My discussion was why I'd be 19 motivated to add the stop in combining the 20 Gilb, Tsukamoto, or Timony hangers. 21 BY MR. SCHROEDER: 22 Q. But to repeat the question, that 23 fact was not actually gleaned from the 24 Gilb '792 prior art, correct? 25 MR. HIGGINS: Objection, form.
Page 87 1 bracket specifically being installed on 2 the top plate of a wood-frame wall? 3 MR. HIGGINS: Objection. 4 A. Not specifically. 5 BY MR. SCHROEDER: 6 Q. Going back to your declaration, 7 starting at paragraph 65 through 8 paragraph 68, you discuss the motivation 9 that a POSITA would have to add a stop to 10 each of the hangers disclosed in the Gilb 11 '792 Timony and Tsukamoto, correct? 12 A. Correct. 13 Q. And could you read the first 14 sentence of paragraph 66 for me? 15 A. "The rationales for combining 16 Bundy's stop with Gilb '792 and Tsukamoto 17 and for adding a stop to Timony's retrofit 18 hanger, as explained in my previous 19 declaration, are based on facts gleaned 20 from the prior art, not guided by the '867 21 patent...As explained in my first 22 declaration, adding a stop would allow the 23 hangers in each of Gilb '792, Timony, and 24 Tsukamoto to control the location of the 25 end of the structural element."	Page 89 1 A. Well, no, it doesn't 2 specifically show a stop. 3 BY MR. SCHROEDER: 4 Q. And that fact was not gleaned 5 from the Timony prior art either; was it? 6 MR. HIGGINS: Objection, form. 7 A. Same answer as to motivation. 8 BY MR. SCHROEDER: 9 Q. But, again, the question is, was 10 that fact gleaned from Timony itself? 11 MR. HIGGINS: Objection, form. 12 A. I'm not sure how to help you 13 further, Counselor. I look at these 14 hangers and I see windows of possibility 15 for making a small tweak and -- and 16 getting the stop in there if it helps 17 installers get the joists in the right 18 place. 19 BY MR. SCHROEDER: 20 Q. But that wasn't actually taught 21 in Timony, correct? 22 MR. HIGGINS: Objection, form. 23 A. I don't want to arm wrestle with 24 you, but I don't see why not. The -- 25 BY MR. SCHROEDER:

Page 90 1 Q. Did Timony discuss a stop? 2 A. Well, it has stops. If -- they 3 are intended for a slightly different 4 alignment purpose, but whereas one sticks 5 out and helps align with the outer face of 6 the sheathing could easily poke inwards 7 and help align with the end of the joist. 8 If you looked at figure 4, you'd see what 9 I was talking about. 10 Q. But Timony itself does not 11 discuss the need to control the location 12 of the end of a structural element, 13 correct? 14 A. Correct. 15 Q. Does Tsukamoto discuss the need 16 of -- to control the location of the end 17 of a structural element? 18 A. Tsukamoto is a little bit 19 different in that its channel -- oh, no, I 20 take that back. I apologize. 21 Yeah, same answer as before. 22 Q. And that answer is that 23 Tsukamoto does not teach the need to 24 control the location of the end of the 25 structural element?	Page 92 1 the art using Timony for its intended 2 purpose feel it necessary to control the 3 end of the structural element? 4 MR. HIGGINS: Objection, form. 5 A. Same answer. 6 BY MR. SCHROEDER: 7 Q. So for the Gilb '792 patent, 8 there's -- as disclosed in the Gilb '792 9 patent, is there any -- let me put it this 10 way. Let me rephrase that. 11 What material is located beneath 12 the hanger as disclosed in the Gilb '792 13 patent? 14 MR. HIGGINS: Objection, form. 15 A. Can you make this multiple 16 choice? 17 BY MR. SCHROEDER: 18 Q. Well, okay. So I'm -- I'm 19 reading your declaration and your 20 declaration and paragraph 66 -- 66 says 21 "This provides an obvious benefit of 22 providing another support surface for the 23 hanger and protecting any material that 24 may be located beneath the hanger." Do 25 you see that?
Page 91 1 MR. HIGGINS: Objection, form. 2 A. Not specifically, but, again, I 3 see no problem adding one there if I'm 4 integrating sheathing between the end of 5 the joist and the face of the wall. 6 BY MR. SCHROEDER: 7 Q. Does Bundy disclose the need to 8 control the location of the end of the 9 structural element? 10 A. From memory, I'm not aware of 11 any reference to it. 12 Q. Why would a person of skill in 13 the art using the Gilb '792 patent for its 14 intended purpose feel it necessary to 15 control the end of the structural element? 16 MR. HIGGINS: Objection, form. 17 A. Well, in the -- in the 18 hypothetical, it would be to -- could be 19 to establish bearing lengths within the 20 seats of the channel portions that for a 21 given span, for a given member, to make 22 sure that there's the correct engagement 23 length of the structural member. 24 BY MR. SCHROEDER: 25 Q. Why would a person of skill in	Page 93 1 A. Oh, okay. 2 Q. And so my question to you is, 3 what material is disclosed as being 4 located beneath the hanger of the '792 5 patent? 6 A. Okay. So we're talking about 7 beyond the hanger here so it -- such as 8 the sheathing that would be, if you put a 9 stop in, the joist would not poke in and 10 hit the material beyond the hanger. What 11 is disclosed beyond in the patent could be 12 anything, anything on the wall assembly. 13 I don't know specifically how to answer 14 beyond that. 15 Q. Wouldn't the material that was 16 located beneath the hanger be the metal 17 ledger? 18 MR. HIGGINS: Objection, form. 19 A. That would be the metal hanger 20 itself and the wall. 21 BY MR. SCHROEDER: 22 Q. Well, the material directly 23 beneath or located beneath the hanger is 24 the metal ledger, correct? 25 MR. HIGGINS: Objection, form.

Page 94 1 A. Well, in a literal sense, below 2 the top flange of the hanger is the metal 3 ledger as shown. 4 BY MR. SCHROEDER: 5 Q. So I guess maybe I'm not 6 understanding what you meant by "located 7 beneath the hanger." Are you meaning 8 vertically located beneath the hanger or 9 are you meaning located between the hanger 10 and the wall structure? 11 A. The latter. I mean, in context, 12 we're talking about my motivation for 13 making a small tweak and putting a stop in 14 to control the end of, let's say, a joist 15 and that would not only establish, say, 16 bearing length, but it will also protect 17 the end of the joist from poking the 18 sheathing that's beyond and underneath. 19 Q. And does the Gilb '792 patent 20 disclose the use of sheathing beyond or 21 underneath the hanger? 22 A. It doesn't specifically show it, 23 but that was my opinion was that I see an 24 easy opportunity to insert it right there. 25 Q. And for -- for Tsukamoto, what's	Page 96 1 the top of page 2? 2 MR. HIGGINS: Objection, form. 3 A. Oh, yes. 4 BY MR. SCHROEDER: 5 Q. And it specifically discusses 6 that -- that there are issues regarding 7 that they're influenced by the thickness 8 of the foundations, that they require 9 notches on the side surfaces of the 10 foundations; do you see that? 11 A. I see that. 12 Q. And would you agree that later 13 in the patent in -- on page 3, it 14 identifies the advantages of the device in 15 section C and right below that it states 16 reference numeral 8 is a foundation? 17 A. Yes. 18 Q. And then also on paragraph -- on 19 page 3, it discusses the results under 20 (i), that "The beam hanger according to 21 the present application can be used 22 regardless of the thickness of the 23 foundation, which facilitates 24 construction," and then under Roman 25 numeral (ii) "It is not necessary to form
Page 95 1 the intended purpose of Tsukamoto? 2 MR. HIGGINS: Objection, form. 3 A. In its most basic form, it's 4 another hanger for connecting a -- a 5 horizontal -- near-horizontal member to a 6 wall. 7 BY MR. SCHROEDER: 8 Q. Do you have Tsukamoto available? 9 A. I do. 10 Q. Can you go ahead and open it for 11 me? 12 A. Certainly. I have it now. 13 Q. And Tsukamoto, just for the 14 record, is Exhibit 1009, correct? 15 A. Yes. 16 Q. And in Exhibit 1009, it 17 discusses that -- that -- I'm trying to -- 18 I wasn't prepared to go down this rabbit 19 hole -- it discusses that the hanger's 20 intended for foundation walls, correct? 21 MR. HIGGINS: Objection, form. 22 BY MR. SCHROEDER: 23 Q. For instance, on page 2, it 24 discusses that the -- the negative aspects 25 of conventional S-shaped hangers, correct,	Page 97 1 notches in the foundation." Do you see 2 that? 3 A. Yes. 4 Q. Does Tsukamoto discuss the use 5 of the disclosed hanger on wood-framed 6 walls? 7 A. Well, if you look at figures 5 8 and 6, there's a wood element, again, 9 rectangle with a cross in it. 10 Q. And then below that, what 11 element is the foundation wall, correct? 12 A. Right, on figure 6 is -- you can 13 see the 8 that you referenced before that 14 here they're calling it a foundation, but 15 I -- I look at these details and 16 cross-section and I see no problem with 17 installing this on a framed wall below 18 the -- that wooden top piece or 19 integrating sheathing for that matter. 20 Q. But as far as the actual patent 21 itself, it's discussing the use of this 22 hanger exclusively with foundational 23 walls; it's not discussing it with 24 wood-framed walls, correct? 25 MR. HIGGINS: Objection, form.

Page 98 1 A. Generally, I agree. I mean, 2 they're talking about foundations here 3 rather than wood-framed walls and I've 4 already discussed the windows of 5 opportunity I see immediately here. 6 BY MR. SCHROEDER: 7 Q. And so in the application which 8 Tsukamoto is showing this hanger being 9 used, what is the material located closest 10 to the -- what is the material of the wall 11 located closest to the joist? 12 MR. HIGGINS: Objection, form. 13 A. Well, at the upper portion of 14 the joist shown, it shows a timber nailer. 15 At the lower portion of the joist shown, 16 it is calling out, in this case, a 17 concrete or masonry foundation. 18 BY MR. SCHROEDER: 19 Q. And would a concrete -- would 20 the concrete or masonry foundation 21 protrude further towards that joist than 22 that timber member up on top? 23 A. That's -- that's a designer's 24 choice whether to make the timber nailer 25 the same width as the wall or to have it	Page 100 1 to the material below. 2 Q. And for Timony, which, again, 3 was Exhibit 1008, what is the intended -- 4 or what is the disclosed use of the Timony 5 hanger? 6 MR. HIGGINS: Objection, form. 7 A. In a simplest form, for 8 attaching joists to walls beyond. 9 BY MR. SCHROEDER: 10 Q. Specifically, Timony in the 11 abstract discusses that the -- there is 12 described a hanger for hanging an object 13 from a composite wall. And then it 14 describes the composite wall has a 15 concrete core, a foam outer wall and a 16 second outer wall, correct? 17 A. Yes. 18 Q. Does Timony describe any other 19 application for its hanger other than for 20 use on composite walls that have a 21 concrete core? 22 A. Strictly speaking, no. 23 MR. SCHROEDER: We've been going 24 for about an hour. It would probably 25 be a good time to take a break.
Page 99 1 wider or narrower than the frame, the wall 2 below. 3 Q. Would the foundation need to be 4 protected from the joist? 5 MR. HIGGINS: Objection, form. 6 A. In isolation, no. As we 7 discussed before, there is all sorts of 8 reasons I may want to cover or protect a 9 substrate and all sorts of reasons I may 10 want to control the end of the joist. 11 BY MR. SCHROEDER: 12 Q. But in particular, I'm trying to 13 focus on the reason that you put in your 14 declaration, which is to protect material 15 that may be located beneath the hanger. 16 And so I'm trying to understand what 17 materials are located beneath the hanger. 18 MR. HIGGINS: Objection. 19 MR. SCHROEDER: That wasn't a 20 question. That was a statement. 21 BY MR. SCHROEDER: 22 Q. Would the timber at the top of 23 that foundational wall require protection 24 from the joist? 25 A. No, it's in a similar category	Page 101 1 (Whereupon, a luncheon recess is 2 taken.) 3 BY MR. SCHROEDER: 4 Q. Welcome back. Hopefully your 5 child's okay. And just checking, over the 6 break, did you have any conversations with 7 anyone regarding your testimony today? 8 A. I did not. 9 Q. Okay. So returning back to your 10 declaration, which is Exhibit 1039, 11 starting on paragraph 69, you have a 12 section of your declaration that discusses 13 the Gilb '792-Bundy combination; is that 14 correct? 15 A. Yes. 16 Q. And, if you would, can you turn 17 to paragraph 74 of your declaration? 18 A. Okay. 19 Q. And actually just for context, 20 let's go back to paragraph 71. In this 21 proceeding, patent owner has made a 22 argument that one of the reasons why the 23 Gilb '792 hanger would not be configured 24 for use with -- with sheathing -- or at 25 least with sheathing extending beyond the

Page 102 1 bottom of the ledger is that in order to 2 install the hanger or to install sheathing 3 under the bottom of the -- or past the 4 bottom of the ledger would require a 5 spacing between the wall and the 6 sheathing; is that correct? 7 MR. HIGGINS: Objection, form. 8 BY MR. SCHROEDER: 9 Q. Are you aware that patent owners 10 made that argument? 11 MR. HIGGINS: Objection, form. 12 A. Yes, yes, I am. 13 BY MR. SCHROEDER: 14 Q. Okay. And you addressed this 15 argument in your declaration, correct? 16 A. I do. 17 Q. And in particular, on -- at 18 paragraph 74, you make the statement that 19 "the '867...hanger is also made of sheet 20 metal, and any sheathing in the wall 21 assembly therefore" -- "thereof is 22 necessarily separated from the wall by a 23 distance equal to the thickness of the 24 sheet metal." And then you go on to state 25 "Based on [your] years of experience in	Page 104 1 you referenced. 2 Q. And it's typified by a 3 by 3 by 3 one-quarter inch up to 3 by 6 by 4 one-quarter inch angled sections; is that 5 correct? 6 A. Yes. 7 Q. And so that one-quarter inch 8 would be the thickness of the metal for 9 that ledger; is that correct? 10 A. Yes. 11 Q. And if you were to go to 12 column 2, lines 49 through 52, does it 13 provide the gauge of the metal for the 14 hanger itself? 15 A. It does. 16 Q. And in particular, the gusset 17 member is described as being 7 gauge; is 18 that correct? 19 MR. HIGGINS: Objection, form. 20 BY MR. SCHROEDER: 21 Q. Does it provide the gauge for 22 the gusset member? 23 A. It does and it does call it a 7 24 gauge. It goes on to describe the 25 stirrups as 12 gauge.
Page 103 1 the field, sheathing can be installed such 2 that one portion of the sheathing rests on 3 the back flange of the hanger, such as the 4 back flange described in the '867 patent, 5 with the lower portion of the sheathing 6 still being flush against the wall 7 structure. Here, in the setting of the 8 Gilb '792, the thickness of the metal 9 hanger is not so great as to create new 10 problems where none existed before. Do 11 you see that? 12 MR. HIGGINS: Objection, form. 13 A. I do see that. 14 BY MR. SCHROEDER: 15 Q. And did what I recite match 16 what's in your declaration? 17 A. Yes. 18 Q. If you could turn to 19 Exhibit 1035? And Exhibit 1035 is the 20 Gilb '792 patent, correct? 21 A. Yes. 22 Q. If you were to look at column 1, 23 lines 23 -- 22 through 25, is a size of 24 ledger provided? 25 A. Yes, it's described here where	Page 105 1 Q. Do you dispute that the -- that 2 7-gauge steel has a thickness of 3 approximately .179 inches? 4 A. That sounds about right. I 5 would have to look it up in a table, which 6 I'm happy to do, but that doesn't sound 7 outrageous. 8 Q. All right. And in particular, 9 the combination that we're discussing 10 would be putting the sheathing over both 11 the ledger and any base 36 of the hanger; 12 is that correct? 13 MR. HIGGINS: Objection. 14 THE WITNESS: Sorry, Counsel, 15 for talking over your objection. 16 A. Yes. 17 BY MR. SCHROEDER: 18 Q. And so if I wanted to know how 19 thick those pieces were together, I would 20 add the one-quarter inch for the thickness 21 of the ledger, correct, and the .179 22 inches for the 7-gauge steel to get the 23 total thickness there; is that correct? 24 A. Yes. 25 Q. And just doing the math, that

Page 106 1 equals about .429 inches; is that correct? 2 A. Yes. 3 Q. And you compared that thickness 4 with the thickness of the '867 patent 5 hanger; is that correct? 6 MR. HIGGINS: Objection, form. 7 A. Yes. 8 BY MR. SCHROEDER: 9 Q. If you could, go to 10 Exhibit 1001, which is the '867 patent. 11 Let me know when you have it open. And 12 approximately column 10, lines 29 -- or 22 13 through 29 provides a gauge for the steel 14 hanger. Can you find that? 15 A. Yes and yes. 16 Q. And what is the gauge that is 17 provided in the -- or disclosed in the 18 '867 patent? 19 A. It initially describes 12 to 14 20 gauge. 21 Q. And when talking about sheet 22 metal, a higher gauge is actually a 23 thinner piece of metal, correct? 24 A. No, that's the opposite. 25 Q. So -- so a -- well, so a	Page 108 1 wall to account for any gap created by the 2 metal ledger"; is that correct? Did I 3 state that correctly? 4 A. You did state it correctly and, 5 in fact, I showed that in a figure, an 6 annotated figure back in paragraph 72. 7 Q. So if we were to add furring 8 strips to the wall or -- would those 9 furring strips need to be applied to each 10 stud? 11 MR. HIGGINS: Objection, form. 12 A. Yes, that's -- the nature of 13 furring is to have the substrate be in a 14 similar plane. 15 BY MR. SCHROEDER: 16 Q. And it would take time to 17 install a furring strip on any given stud, 18 correct? 19 A. Yes, seconds on end. 20 Q. Right. And that would be a 21 carpenter that would do that; is that 22 correct? 23 A. Carpenter or even the 24 drywallers, whoever's job it is to 25 establish the plane of the finished wall.
Page 107 1 12-gauge steel has a thickness of -- 2 actually, when I say "a higher gauge," I 3 mean a 12-gauge piece of metal is thinner 4 than a 7-gauge piece of metal, correct? 5 A. Yes. 6 Q. All right. And -- yeah, I 7 probably used poor terminology there. 8 And would you dispute that 9 12-gauge steel has a thickness of 10 approximately .105 inches? 11 A. Again, I think that's -- that's 12 correct. 13 Q. And you would agree that .429 14 inches is approximately four times the 15 thickness of .105 inches, correct? 16 A. Yes. 17 Q. Going back to your declaration, 18 paragraph 75, let me know when you have 19 it. 20 A. I'm there. 21 Q. In paragraph 75 you state "If 22 there is a gap large enough to merit 23 mitigation, a POSITA would have understood 24 that additional sheathing or furring 25 strips can be applied directly against the	Page 109 1 Q. And that would be applied to 2 every stud throughout the construction of 3 potentially a multi-family living 4 structure, correct? 5 A. Where the ledger or whatever is 6 creating a big enough offset, yes. 7 Q. And so that could be hundreds of 8 studs in, let's say, an apartment 9 building? 10 MR. HIGGINS: Objection, form. 11 A. Hypothetically, yes. 12 BY MR. SCHROEDER: 13 Q. Maybe even thousands? 14 MR. HIGGINS: Objection, form. 15 A. Same. 16 BY MR. SCHROEDER: 17 Q. And each of these furring strips 18 would require someone to install it on the 19 stud, it would -- let me back up. 20 Each of these -- to put a 21 furring strip on each stud, you would have 22 to, one, have the cost of the material 23 itself, correct? 24 A. Yes. 25 Q. The cost of the labor to install

Page 110 1 it, correct? 2 A. Yes. 3 Q. And the cost of any fasteners, 4 whether it's nails or screws to install 5 it, correct? 6 A. Yes. 7 Q. The other option you provided is 8 to add additional sheathing; is that 9 correct? 10 A. Yes, you could put a layer of 11 sheathing instead. 12 Q. And this would be probably a 13 half-inch layer of sheathing; is that 14 correct? 15 A. It depends. It's whatever the 16 furring is required. 17 Q. And, again, the sheathing would 18 have an expense, correct? 19 A. Yes. 20 Q. And it would be the expense of 21 the material and the labor to install it? 22 A. Yes. 23 Q. You also identify within 24 paragraph 75 that "A POSITA would have 25 also understood that Gilb '792's wall can	Page 112 1 discusses that, in your opinion, the Gilb 2 '792 hanger could be installed -- or 3 "mounted directly against the vertical 4 face of the upper frame wall without a 5 ledger"; is that correct? 6 A. Yes. 7 Q. And that's your opinion that it 8 could be done, correct? 9 A. Yes. 10 Q. And then this next paragraph, 11 you also then discuss that the "base 36 12 includes holes intended to receive screws 13 that screw through the ledger into the 14 wall"; is that correct? 15 A. That's correct, yeah, screws 16 connect directly to the wall. 17 Q. When the hanger is used with a 18 ledger, does the hanger directly contact 19 the wall? 20 MR. HIGGINS: Objection, form. 21 A. It primarily contacts the 22 vertical front face of the ledger, but it 23 could also contact some of the shim 24 material below. 25 BY MR. SCHROEDER:
Page 111 1 include a recess sized to receive the 2 ledger's leg." 3 How would a recess be provided 4 into a wall? 5 A. Well, if it was a timber wall, 6 you'd simply dado or machine a recess 7 or -- you would -- so that the channel 8 could be inset into the face of the 9 framing member. 10 Q. And that would, again, result in 11 extra labor; would that be correct? 12 MR. HIGGINS: Objection, form. 13 A. Yes. 14 BY MR. SCHROEDER: 15 Q. Is cost of installation 16 considered by a POSITA when designing a 17 hanger? 18 A. In some respect, yes. 19 Q. Continuing on, paragraphs 78 and 20 79 describe your opinion as to why the 21 Gilb '792's base is configured to engage a 22 vertical face of an upper plate of a frame 23 wall. Do you see that? 24 A. I do. 25 Q. And the first paragraph 78	Page 113 1 Q. And that's assuming there's a 2 shim material? 3 A. Yes. 4 Q. And does the Gilb '792 patent 5 discuss using the shim material? 6 A. Not directly, no. 7 Q. And the use of the shim material 8 is only if one were to decide to use this 9 hanger on the wood-framed wall with 10 sheathing installed up past the ledger, 11 correct? 12 A. That -- that would be correct 13 for what you described. I wouldn't 14 describe it as only. 15 Q. But the -- the Gilb reference 16 itself doesn't discuss using this 17 ledger-style hanger in that application, 18 correct? 19 MR. HIGGINS: Objection, form. 20 A. I'm afraid we're going to have 21 to start again, Counselor. I -- my last 22 answer made it worse. 23 BY MR. SCHROEDER: 24 Q. Okay. So the Gilb '792 patent 25 does not disclose using a ledger at --

Page 114 1 with this hanger system on a wood-framed 2 wall; is that correct? 3 A. No. 4 Q. And in particular in the 5 background of the invention in column 1, 6 the first paragraph of the Gilb '792 7 patent describes that the -- that ledger 8 systems of this type were intended for use 9 around the inside parameter of buildings 10 and/or at internal concrete or masonry 11 walls, correct? 12 A. That's what it's describing, 13 yes. 14 Q. And it specifically talks about 15 attaching metal hangers or metal ledgers 16 such as angle or U shape both attached to 17 the concrete or masonry wall by means of 18 anchor bolts, correct? 19 A. Yes. 20 Q. It's not discussing wood-framed 21 walls here; is it? 22 A. No. 23 Q. And likewise, it doesn't discuss 24 the use of furring -- of furring strips 25 anywhere in here; does it?	Page 116 1 Q. Does Timony disclose -- 2 actually, let me rephrase that. 3 In particular, you've primarily 4 been looking when discussing Timony at the 5 retrofit application or retrofit 6 embodiment of Timony, correct? 7 A. Yes. 8 Q. And the retrofit embodiment 9 consists of essentially three components, 10 correct? 11 MR. HIGGINS: Objection, form. 12 BY MR. SCHROEDER: 13 Q. If you have Timony available, I 14 believe it is Exhibit 1008. Please go 15 ahead and retrieve it. 16 A. I have that in front of me. 17 Q. All right. And in particular, 18 looking at figure 8, you have a U-shaped 19 portion that has number 265, I believe; is 20 that correct? 21 A. Yes. 22 Q. And then you have two brackets, 23 one of them is, I think -- I don't know if 24 it's got a number for the whole thing. I 25 think it might be 230-A and the other one
Page 115 1 MR. HIGGINS: Objection, form. 2 A. Not directly. 3 BY MR. SCHROEDER: 4 Q. And as disclosed in the Gilb 5 '792 patent, the hanger is contacting the 6 ledger, correct? 7 A. Yes. 8 Q. And the hanger does not directly 9 touch the wall in any of the figures shown 10 in the Gilb '792 patent; is that correct? 11 MR. HIGGINS: Objection, form. 12 A. Correct. 13 BY MR. SCHROEDER: 14 Q. Returning to your declaration, 15 starting at paragraph 83, you have a 16 section of your declaration discussing 17 your opinion as to whether Timony 18 discloses every challenge claim element? 19 A. Yes. 20 Q. And subsection A of this section 21 relates to whether Timony discloses a 22 "connection portion and channel-shaped 23 portion being in a fixed, spaced apart 24 relation," correct? 25 A. Yes.	Page 117 1 would be 230-B; is that correct? 2 A. Yes. 3 Q. And those are three separate 4 components at least off the shelf, 5 correct? 6 MR. HIGGINS: Objection, form. 7 A. Yes. 8 BY MR. SCHROEDER: 9 Q. And those components are not 10 fixed prior to installation of the hanger 11 and joist in the field, correct? 12 MR. HIGGINS: Objection, form. 13 A. Oh, I think paragraphs 84 and 85 14 describe my understanding of fixed with 15 respect to the claim language. 16 Q. But off the shelf, these 17 components are not fixed; are they? 18 MR. HIGGINS: Objection, form. 19 A. Oh, I would agree that at the 20 time of purchase, yeah, they're not fixed. 21 BY MR. SCHROEDER: 22 Q. Upon installation, what fixes 23 the brackets 230-A and 230-B in place? 24 A. Fasteners. 25 Q. And those are fasteners into the

Page 118 1 wall, correct? 2 A. Yes. 3 Q. And upon installation, what 4 fixes the U-shaped portion 265 in place? 5 A. Fasteners. 6 Q. And that fastener goes through 7 the U-shaped portion and the bracket and 8 into the -- whatever member it is that's 9 being supported, correct? 10 A. Yes. 11 Q. And would the components be able 12 to stay in their position if the wall and 13 the member being supported were not 14 present? 15 MR. HIGGINS: Objection, form. 16 MR. SCHROEDER: Let me rephrase 17 that. 18 BY MR. SCHROEDER: 19 Q. Would the components of the 20 hanger, the three components that are 21 using various fasteners remain in their 22 fixed position if the wall element and the 23 object being supported were not present? 24 MR. HIGGINS: Objection, form. 25 A. I mean, under that hypothetical,	Page 120 1 Timony's hanger is constructed of multiple 2 components and the '867 patent hanger is 3 only one component? 4 MR. HIGGINS: Objection, form. 5 A. Out of context, I would agree 6 with what you just said. In the context 7 of paragraph 91, I -- I still see no 8 problem with what I've written there. 9 BY MR. SCHROEDER: 10 Q. So you go on to state that "No 11 structural modifications would have needed 12 to have been made to make" -- "have been 13 made to Timony's hanger (as depicted in 14 Patent Owner's own drawing) for a POSITA 15 to have used Timony's hanger in a wood 16 frame construction, where sheathing would 17 be inserted between the back flange and 18 the channel-shaped portion of Timony." Do 19 you see that? 20 A. Yes. What type of sheathing did 21 you call it out as or did you just -- 22 Q. I think I just called it 23 sheathing. 24 A. Okay. Then, yes. 25 Q. Now, Timony, though -- we -- we
Page 119 1 no. 2 BY MR. SCHROEDER: 3 Q. Returning back to your 4 deposition -- not your deposition -- your 5 declaration. It's getting late. I want 6 to move to paragraph 91. 7 A. Okay. 8 Q. In paragraph 91 you state, in 9 your opinion "there is no structural 10 difference between Timony's hanger and the 11 hanger of the '867 patent, as illustrated 12 above" -- "by the above comparison between 13 Patent Owner's representation of Timony 14 and the '867 patent hanger as illustrated 15 in Figure 7." 16 Would you agree that the hanger 17 illustrated in figure 7 is a hanger that 18 is constructed from just one component? 19 MR. HIGGINS: Objection, form. 20 MR. SCHROEDER: Let me rephrase 21 this question. 22 BY MR. SCHROEDER: 23 Q. Would you agree that one 24 structural difference between Timony and 25 the hanger of the '867 patent is that	Page 121 1 just discussed a minute ago that Timony is 2 constructed of separate components, 3 correct? 4 A. At the time of purchase, it's 5 separate pieces in the retrofit, yes. 6 Q. And it's separate pieces right 7 up until the moment of installation, 8 correct? 9 MR. HIGGINS: Objection, form. 10 A. Okay. 11 BY MR. SCHROEDER: 12 Q. At what point in the 13 construction of a structure, i.e., a 14 building, would Timony's hanger be 15 installed on a wood-framed wall? 16 MR. HIGGINS: Objection, form. 17 A. Well, in the broader sense, 18 during a retrofit, if I'm talking about 19 the retrofit application, the -- the wall 20 preexists, the introduction of the new 21 joist member. 22 BY MR. SCHROEDER: 23 Q. And would the sheathing already 24 be in place? 25 MR. HIGGINS: Objection, form.

Page 122 1 A. Probably, because I would need 2 to be cutting through the sheathing to 3 make the little holes to insert the 4 attachment bracket. 5 BY MR. SCHROEDER: 6 Q. And so we're cutting away the 7 holes that the attachment bracket would be 8 installed into, correct? 9 A. Yes. 10 Q. At this point, how is the 11 sheathing being installed over the 12 bracket? 13 MR. HIGGINS: Objection. 14 A. It's not. The bracket simply 15 passes through the sheathing's own wall 16 attachment. 17 BY MR. SCHROEDER: 18 Q. And so in this type of 19 application, the back flange, there's no 20 sheathing being inserted between the back 21 flange and the channel-shaped portion of 22 Timony, correct? 23 A. Correct. 24 Q. Would you agree that the method 25 of installing Timony's retrofit kit	Page 124 1 Q. And you would then want to align 2 the -- the support and object such that 3 the apertures align between the retrofit 4 plate and that -- that support, correct? 5 MR. HIGGINS: Objection, form. 6 A. Yes. 7 BY MR. SCHROEDER: 8 Q. And then you would secure the 9 support, the object and the -- the 10 retaining portion -- or the retrofit 11 plates together with a securing means such 12 as a screw or nails that would go through 13 the apertures, correct? 14 MR. HIGGINS: Objection, form. 15 A. Yes. 16 BY MR. SCHROEDER: 17 Q. Do you agree that prior to 18 installing the fasteners for the retaining 19 portion into the wall that the -- and 20 installing the fasteners into -- let me 21 rephrase this. 22 Do you agree that each of the 23 components are able to be moved freely 24 around prior to the installation of the 25 fasteners?
Page 123 1 includes, first, cutting away a portion of 2 the foam wall or sheathing to accommodate 3 the retaining portion of the retrofit 4 plate? 5 MR. HIGGINS: Objection, form. 6 A. Yes. 7 BY MR. SCHROEDER: 8 Q. And then fastening that 9 retaining portion of the retrofit plate to 10 the concrete core wall or the wood stud 11 wall in the application you're thinking? 12 A. Yes. 13 Q. And then positioning the support 14 265 and -- that support 265 is that 15 channel-shaped portion, correct, the 16 U-shaped portion? 17 A. Yes. 18 Q. So then the next step is 19 positioning that support and the object 20 between the hanging ends of the retrofit 21 plates -- 22 MR. HIGGINS: Objection, form. 23 BY MR. SCHROEDER: 24 Q. -- correct? 25 A. Yes.	Page 125 1 MR. HIGGINS: Objection, form. 2 MR. SCHROEDER: Let me -- let me 3 rephrase it because I'm still garbling 4 it. 5 BY MR. SCHROEDER: 6 Q. One second. 7 Do you agree that by having 8 separate components and multiple apertures 9 in the separate components that the 10 various components can be adjusted during 11 installation? 12 MR. HIGGINS: Objection, form. 13 A. Well, the beauty of this is it 14 allows for joists of different depth to be 15 installed for the given design 16 application. So, yes, some -- some 17 adjustment is possible during install. 18 BY MR. SCHROEDER: 19 Q. And I'm trying to re-find that 20 in here real quick. 21 And so if one of the components 22 was -- was not installed exactly even with 23 the other one, the -- the fact that 24 there's multiple apertures would help 25 still put it all together, correct?

Page 126 1 MR. HIGGINS: Objection, form. 2 A. No, I think the intent still 3 here is that holes from the bracket line 4 up with holes in a portion of the channel 5 to achieve the installed alignment. 6 BY MR. SCHROEDER: 7 Q. So if you were to go to 8 paragraph 48 of Timony, and the last 9 sentence of paragraph 48 of Timony states 10 "Further, apertures 270 and corresponding 11 apertures 275 permit an installer to 12 accommodate moderate discrepancies in the 13 heights of retrofit plates 230-A and 230-B 14 after they are fastened to composite wall 15 210," correct? 16 A. That's what it says, yes. 17 Q. In addition, by -- by Timony 18 having separate components, different 19 thicknesses of foam or sheathing would be 20 permitted, correct? 21 MR. HIGGINS: Objection, form. 22 BY MR. SCHROEDER: 23 Q. Strike that. 24 A. That would be possible, yes. 25 Q. All right. Moving on to	Page 128 1 between Timony's retaining portion 203 and 2 retrofit plate 230 can be set at different 3 radii to minimize or eliminate any 4 separation between the end of Timony's 5 retaining portion 203 and core 250"; did I 6 read that correctly? 7 A. Yes. 8 Q. How would choosing a different 9 radii eliminate this separation? 10 MR. HIGGINS: Objection, form. 11 A. I wouldn't say minimize or 12 eliminate and now we're talking about the 13 tolerance of wood-framed construction 14 where often even a gap where you can stick 15 a credit card might be considered 16 negligible and might not make a 17 difference. As shown in the annotated 18 image here, it's a tight bend and it's -- 19 it's either in contact or there's a 20 negligible gap there. 21 BY MR. SCHROEDER: 22 Q. And in this drawing you're still 23 showing the foam wall directly contacting 24 the core 250, correct? 25 A. I did show that, yes.
Page 127 1 paragraph 92. 2 A. Okay. 3 Q. The last sentence of paragraph 4 92 states that "portion 203" -- or 5 "retaining portion 203 and retrofit plate 6 230 could be formed by bending at a 7 smaller radius and still allow Timony's 8 retrofit plate 230 to" -- "230 to extend 9 to core 250, as demonstrated below." Do 10 you see that? 11 MR. HIGGINS: Objection, form. 12 A. Yes. 13 BY MR. SCHROEDER: 14 Q. Would you agree that even a 15 tighter bend would still bring the corner 16 of -- that's -- of the bracket that is 17 closest to the wall away from the wall a 18 little bit? 19 MR. HIGGINS: Objection, form. 20 MR. SCHROEDER: Let me rephrase 21 that -- or -- or let me back up. 22 BY MR. SCHROEDER: 23 Q. The first sentence of paragraph 24 92 states "Furthermore, a POSITA would 25 have understood that a bend defined	Page 129 1 Q. And -- I don't think I'm going 2 to go there. All right. 3 But you would agree that 4 there -- there would be at least some 5 spacing, even if it's minimal, between the 6 end of Timony's retaining portion 203 and 7 core 250? 8 MR. HIGGINS: Objection, form, 9 objection, asked and answered. 10 A. If you went all the way back to 11 talking about extension portions that are 12 in the plane, then, yes, I'd agree with 13 you. 14 BY MR. SCHROEDER: 15 Q. I'm actually trying to just 16 identify whether or not there would be 17 a -- a space, any space, even thin enough 18 to slide a credit card in -- 19 MR. HIGGINS: Objection. 20 BY MR. SCHROEDER: 21 Q. -- between the retaining portion 22 203 and core 250 right there at that bend? 23 MR. HIGGINS: Objection, asked 24 and answered and objection, form. 25 A. You know, I think once you put

Page 130 1 those screws through, it's -- it's hard in 2 contact. 3 BY MR. SCHROEDER: 4 Q. And I'm looking at -- strictly 5 at that corner with the curvature. 6 MR. HIGGINS: Objection, form, 7 objection, asked and answered. 8 A. Yeah, I'd just refer you back to 9 the -- if it's there, it's negligible to 10 the eyes of the POSITA. 11 MR. HIGGINS: Counsel, we're 12 approaching the one-hour mark here in 13 a minute or two. 14 MR. SCHROEDER: I was actually 15 going to say that this would probably 16 be a good time to take a break. 17 (Whereupon, a brief recess is 18 taken.) 19 BY MR. SCHROEDER: 20 Q. Welcome back. Returning back to 21 your declaration, which is Exhibit 1039. 22 A. Okay. 23 Q. Starting at paragraph 96, you 24 provide an opinion regarding the 25 Tsukamoto-Bundy combination; is that	Page 132 1 you're -- you're identifying the upper 2 edge with an arrow pointed there, correct? 3 A. Yes, yeah. 4 Q. Now, my question is, it's 5 pointing at the transition between the 6 component that's numbered 3-B and the 7 component that's numbered 3-A, correct? 8 A. Yes. 9 Q. And this hanger that's depicted 10 here is, once again, bent sheet metal, 11 correct? 12 A. It is. 13 Q. And so what's being shown -- and 14 this is a side profile -- is that -- that 15 transition from 3-B to 3-A is a bend of 16 the metal, correct? 17 MR. HIGGINS: Objection, form. 18 A. Yes. 19 BY MR. SCHROEDER: 20 Q. Okay. And just to make sure I 21 kind of phrased it right, so that the 22 transition from 3-B to 3-A is through a 23 bend, correct? 24 A. Yes. 25 Q. And if we were to go back to
Page 131 1 correct? 2 A. I do. 3 Q. And if you would, turn to 4 paragraph 105, I believe it's page 48 of 5 your declaration? 6 A. Yes. 7 Q. And in paragraph 105, you 8 discuss where you believe a free edge is 9 shown in the Tsukamoto figure; is that 10 correct? 11 A. I do. 12 Q. And in particular, you identify 13 the free edge, I believe, as being the 14 inner section of -- and this is the 15 figure 3 -- as being the inner section 16 between the portion that's labeled 3-B and 17 the top flange that's labeled 3-A; is that 18 correct? 19 MR. HIGGINS: Objection, form. 20 A. The annotated image at the end 21 of paragraph 105 shows that nicely. It is 22 a -- it takes figure 3 from the patent and 23 adds the green annotation. 24 BY MR. SCHROEDER: 25 Q. Right. And in particular,	Page 133 1 paragraph 88, you discussed how for Timony 2 certain components, in particular a 3 retaining portion 203 and a retrofit plate 4 230 would generally be defined or their 5 boundaries would be defined by a miter 6 edge; is that correct? 7 MR. HIGGINS: Objection, form. 8 A. Yes. 9 BY MR. SCHROEDER: 10 Q. Or a miter angle? 11 So returning back to the figure 12 shown in paragraph 105, figure 3 from 13 Tsukamoto, would you agree that similar to 14 your discussion regarding Timony that the 15 boundaries between 3-B and 3-A would be 16 along a miter angle within that bend? 17 MR. HIGGINS: Objection, form, 18 objection, scope. 19 A. I hadn't really thought about it 20 in this context. If you look at my 21 declaration of one -- in paragraph 106, 22 the context I'm using it here, if I read 23 the last sentence, it says "Under a proper 24 construction, a POSITA would have 25 recognized that the upper edge of

Page 134 1 Tsukamoto's connection plates are 'free' 2 because they are exposed." I would have 3 to think about it further about applying 4 any miter lines on -- on that transition. 5 BY MR. SCHROEDER: 6 Q. Well, you applied that miter 7 line on the transition for Timony, 8 correct? 9 A. I did. 10 Q. And so I guess my question is, 11 what would be different on Tsukamoto 12 regarding whether or not there would be a 13 miter line defining the -- the transition 14 from one component to another? 15 MR. HIGGINS: Objection, form, 16 objection, scope. 17 A. Well, if you go back to 18 paragraph 88, my discussion there really 19 was in the context of defining the 20 surfaces of the extension portion and 21 the -- having inner surfaces that go all 22 the way to the back. This is the other 23 surfaces. That was the context there and 24 you have to read the whole paragraph 88 25 for context.	Page 136 1 opinions with respect to the substitute 2 claims, and first I would like to direct 3 you to paragraph 124. 4 A. Okay. 5 Q. And in paragraph 124, you 6 discuss "Bending single sheet metal 7 hangers has been common practice for field 8 installers to mitigate misalignments 9 during installation, and multiple hangers 10 are stamped out of a single sheet 11 metal" -- or "single sheet of sheet metal 12 are nonetheless identified as 'adjustable' 13 or 'skewable.'" Do you see that? 14 A. I do, and I agree with that. 15 Q. And I wanted to ask you 16 specifically, are these adjustable or 17 skewable hangers specifically marketed as 18 such? 19 A. Oh, generally, yes. 20 Q. And then other hangers are not 21 marketed as being adjustable or skewable, 22 correct? 23 MR. HIGGINS: Objection, form, 24 objection, scope. 25 MR. SCHROEDER: Let me rephrase
Page 135 1 BY MR. SCHROEDER: 2 Q. Well, you are stating that the 3 boundary between those portions of Timony 4 would be recognized to be defined by a 5 miter angle, correct? 6 MR. HIGGINS: Objection, form. 7 A. It was an obvious way of 8 describing it when I looked at it and 9 wrote the declaration. 10 BY MR. SCHROEDER: 11 Q. Your declaration also includes 12 your opinion regarding substitute claims 13 that were submitted by the patent owner, 14 correct? 15 A. Yes, yes, the motion to amend, 16 yes. 17 Q. Right. And I think we already 18 established that you are aware that the 19 Patent Office provided some guidance 20 regarding that motion to amend but that 21 also you have not reviewed that guidance, 22 correct? 23 A. That is correct, and yes. 24 Q. I would like to ask you still 25 some questions regarding some of your	Page 137 1 that. 2 BY MR. SCHROEDER: 3 Q. Not all hangers are identified 4 as being adjustable or skewable; is that 5 correct? 6 A. Yes. 7 Q. And so the adjustable or 8 skewable hangers are specifically marketed 9 as such and then there are other hangers 10 that are not marketed that way, correct? 11 MR. HIGGINS: Objection, form, 12 objection, scope. 13 MR. SCHROEDER: Let me rephrase 14 it. 15 BY MR. SCHROEDER: 16 Q. Actually, I don't even think I 17 need to rephrase it. I think that I'm 18 just going to strike the question. 19 Moving to paragraph 127. 20 A. Okay. 21 Q. You provide an opinion that the 22 claim limitation "'the first extension 23 flange being unbent between the 24 channel-shaped portion and the back 25 flange' lacks written support"; is that

Page 138 1 correct? 2 A. Yes. 3 Q. Would you agree that a piece of 4 metal is either bent or it's unbent? 5 MR. HIGGINS: Objection, form. 6 A. It really depends in this 7 hypothetical how we find the piece of 8 metal. 9 BY MR. SCHROEDER: 10 Q. Well, I guess what I'm asking 11 is, is being bent or unbent an either/or 12 proposition? It is either bent or it is 13 not bent? 14 MR. HIGGINS: Objection, form. 15 A. Probably need a little more 16 information before we can have a useful 17 discussion. 18 BY MR. SCHROEDER: 19 Q. Well, I'm trying to kind of -- 20 you take the position that -- that this 21 limitation has a -- has a negative 22 limitation, and so I'm trying to drill 23 down and determine whether this limitation 24 is -- whether -- if something is bent or 25 unbent that it's an either/or proposition?	Page 140 1 yes or no question, correct? 2 MR. HIGGINS: Objection, form. 3 A. I'd still need to be describing 4 it in terms of flatness, Counselor, so. 5 BY MR. SCHROEDER: 6 Q. So do you interpret unbent to 7 mean flat? 8 A. Generally, and that's what -- 9 you know, through the eyes of a POSITA if 10 we're talking sheet metal, generally 11 thinking of it as starting off as a flat 12 element. 13 Q. And so as a POSITA, you would 14 understand that if something is referred 15 to as being unbent that it is flat, 16 correct? 17 MR. HIGGINS: Objection, form. 18 A. Yes, yes. It's always tempting 19 to start with the most simple form. 20 BY MR. SCHROEDER: 21 Q. Moving on to paragraph 128, you 22 provide an opinion regarding the claim 23 limitation "The connection portion 24 including a top flange extending 25 rearwardly from a remainder of a
Page 139 1 MR. HIGGINS: Objection. 2 BY MR. SCHROEDER: 3 Q. Either it has a bend or it 4 doesn't have a bend, correct? 5 MR. HIGGINS: Objection, form. 6 A. I think where I'm struggling 7 with this is, if we're starting with a 8 flat piece of sheet metal, that might help 9 guide us. 10 BY MR. SCHROEDER: 11 Q. Okay. Let's start with a flat 12 sheet of piece metal {sic}. Is that 13 unbent? 14 A. Generally, yes. 15 Q. And if you were to take the 16 piece of sheet metal and stamp a bend into 17 the sheet metal, would that piece of sheet 18 metal now qualify as being bent? 19 A. Yes. 20 Q. And would that piece of sheet 21 metal no longer qualify as being unbent? 22 A. Yes. 23 Q. And so my question is, when I 24 look at a piece of sheet metal and someone 25 were to ask me is it unbent, it would be a	Page 141 1 connection portion," and your opinion is 2 that this claim limitation lacks written 3 support, correct? 4 A. Yes. 5 Q. And the basis of your opinion is 6 that you believe that claim 39 is 7 identifying three portions or three 8 elements of the connection portion; is 9 that correct? 10 A. Yes. 11 Q. And those three elements are a 12 back flange, a top flange and the 13 remainder of the connection portion, 14 correct? 15 A. Yes. 16 Q. What does the word "remainder" 17 mean? 18 A. That's what I was struggling to 19 put in context here. Usually "remainder" 20 means the bit left over. 21 Q. All right. And would you agree 22 that that general concept applies within 23 the art of hangers? 24 MR. HIGGINS: Objection, form. 25 A. Yeah, I'm going to need some

Page 142 1 help there. Maybe because it's getting 2 late. 3 BY MR. SCHROEDER: 4 Q. All right. Do you believe that 5 the word "remainder" has any special 6 meaning within the art? 7 A. No, I think it has -- it's just 8 common usage that -- like I said, it's the 9 bit left over. 10 Q. And does the '867 patent 11 specification define what a remainder is? 12 A. From memory, I don't see that, 13 but feel free to point something out if 14 you think it exists. 15 Q. I don't know if I put this on 16 the list of documents for you to have 17 available, but do you have paper 46 or the 18 contingent motion to amend? They're the 19 same thing, it's that's kind of the paper 20 number for it, available? 21 A. I do have that, yes. 22 Q. All right. And if you could, go 23 to page 43 of it? And that's like page 43 24 of the PDF, I think it's page 9 of one of 25 the appendixes and give me a second to get	Page 144 1 128, you paraphrase this paragraph by 2 removing a couple of sections from it and 3 adding an "and"; is that correct? 4 A. Yes. 5 MR. HIGGINS: Objection, form. 6 BY MR. SCHROEDER: 7 Q. Would you agree that there's 8 multiple thoughts occurring within this 9 paragraph? 10 MR. HIGGINS: Objection, form. 11 BY MR. SCHROEDER: 12 Q. Or there's multiple phrases 13 within this paragraph? 14 MR. HIGGINS: Objection, form. 15 A. Sure. 16 BY MR. SCHROEDER: 17 Q. And as I read it, I put commas 18 between those phrases or -- or through -- 19 let me rephrase that. 20 As I read that, I put commas 21 between those clauses, correct? 22 MR. HIGGINS: Objection, form. 23 A. Okay. 24 BY MR. SCHROEDER: 25 Q. And so there was one clause that
Page 143 1 that open as well. 2 So at the bottom of page 43, we 3 have a paragraph that continues on to the 4 next page, correct? 5 A. Yes. 6 Q. And I'm going to read this 7 paragraph out loud and I'm going to put a 8 few pauses where there's commas. 9 "A connection portion configured 10 for attachment to the frame wall, the 11 connection portion including a back flange 12 configured for engaging a vertical face of 13 the upper plate of the frame wall, the 14 connection portion and channel-shaped 15 portion being in a fixed, spaced-apart 16 relation relative to one another, the 17 connection portion including a top flange 18 extending rearwardly from a remainder of 19 the connection portion and arranged to 20 overlie an upper surface of the wooden 21 upper plate when the hanger is installed 22 on the frame wall, the top flange 23 including a rear edge located rearwardly 24 of the back flange?" 25 So going back to your paragraph	Page 145 1 talked about the connection portion 2 including a back flange, correct? 3 A. Yes. 4 Q. Did that clause identify that 5 there was a back flange and a top flange 6 and a remainder all within the same 7 clause? 8 MR. HIGGINS: Objection, form. 9 A. Yes. 10 BY MR. SCHROEDER: 11 Q. All within the same clause, but 12 before a comma? 13 MR. HIGGINS: Objection, form. 14 A. I mean, for clarity, I think my 15 paragraph 129 defines my thoughts on this 16 matter, but -- I think I'm agreeing so far 17 with what you're saying. 18 BY MR. SCHROEDER: 19 Q. Well, what I'm trying to say, 20 though, is that wouldn't a reasonable 21 interpretation be that it's identifying 22 the connection portion as having a back 23 flange and then it goes on, says a few 24 other things and then says, the connection 25 portion includes a top flange and then

Page 146 1 describes that top flange? 2 MR. HIGGINS: Objection, form. 3 BY MR. SCHROEDER: 4 Q. And that when it's describing 5 the top flange -- 6 MR. HIGGINS: Counselor, can you 7 let the witness answer the question? 8 A. You know, I think the best I can 9 do for you here, Counselor, is just read 10 in the part of paragraph 129 that I wrote 11 here that discusses my -- the basis for my 12 opinion here, where it says in 129 "In my 13 opinion, a POSITA would have construed the 14 'remainder of the connection portion' to 15 be a distinct element from the recited 16 'back flange,'" and "given that the plain 17 language of the claims introduces the 18 remainder of the connection portion as a 19 separate element from the back flange. 20 Because the 'remainder of the connection 21 portion' is a distinct, separate element 22 from the 'back flange,' the scope of 23 claim 39 appears to recite a hanger having 24 a top flange extending from something 25 other than its back flange."	Page 148 1 BY MR. SCHROEDER: 2 Q. Why did you choose to treat the 3 quote that you put in paragraph 128 as one 4 clause? 5 MR. HIGGINS: Objection, form. 6 A. I don't know at this time. 7 BY MR. SCHROEDER: 8 Q. Would you agree that as written 9 in the actual claim itself, there's two 10 separate clauses, one describing the back 11 flange and one describing the top flange? 12 MR. HIGGINS: Objection, form, 13 objection, asked and answered. 14 A. Yeah, no, I think I've already 15 weighed in on this, Counselor. 16 BY MR. SCHROEDER: 17 Q. If the two -- if the portion of 18 this paragraph that talks about the back 19 flange and the portion of the paragraph 20 that talks about the top flange are 21 treated as two separate clauses, would 22 there be any reason why the remainder 23 would have to be a separate element from 24 the back flange? 25 MR. HIGGINS: Objection, form,
Page 147 1 BY MR. SCHROEDER: 2 Q. Where does claim 39 delineate 3 that the remainder of the connection 4 portion doesn't include the back flange? 5 MR. HIGGINS: Objection, form. 6 A. Well, it says that "the 'top 7 flange extends rearwardly from a remainder 8 of the connection portion.'" 9 BY MR. SCHROEDER: 10 Q. And that clause you just read to 11 me, though, doesn't identify the back 12 flange as being separate from the 13 remainder of the connection portion? 14 MR. HIGGINS: Objection, form. 15 A. Yeah. 16 BY MR. SCHROEDER: 17 Q. Would you agree that your quote 18 within paragraph 128 omits clauses? 19 MR. HIGGINS: Objection, form. 20 A. Well, strictly speaking, yes. 21 I'm simply looking to see how a POSITA 22 would read that claim and understand it 23 and then provide opinion in this 24 declaration here. To me, it's -- it's not 25 clear.	Page 149 1 objection, asked and answered. 2 A. Yeah, I mean, you could restore 3 the quote to -- the complete quote rather 4 than the paraphrase as shown in 128, and 5 it doesn't help me resolve my issues as 6 described in 129. 7 BY MR. SCHROEDER: 8 Q. Moving to paragraph 131 -- 9 A. Okay. 10 Q. -- you provide an opinion that 11 claims 24 through 35 "should be found 12 unpatentable as lacking enablement," 13 correct? 14 A. Yes. 15 Q. And you base this opinion on the 16 fact that -- that certain claims do not 17 require a top flange; is that correct? 18 A. I'm not sure I follow that. My 19 understanding of the concept of enablement 20 is described in paragraph 130. 21 Q. So in paragraph 130, you state 22 that you "have been informed that claims 23 lack enablement when omitting a feature 24 that is taught by the specification to be 25 essential."

Page 150 1 A. Yes. 2 Q. What feature is supposedly 3 omitted from the claims that the 4 specification teaches to be essential? 5 A. It was the top flange. 6 Q. And where within the 7 specification did the '867 patent identify 8 the top flange as being essential? 9 A. I was looking at the '799 10 application for these references. And so 11 I've describe even -- described where my 12 problems with top flange derive in 13 paragraph 131. 14 Q. So -- so you're stating that 15 within the app -- okay. I don't have it 16 actually in the exhibits that are 17 available. I can make it available or if 18 you have Exhibit 102 available already, 19 you can go ahead and open that. 20 A. I found it and I've opened it. 21 Q. If you could, within the 22 Exhibit 102 identify where the application 23 calls the top flange essential? 24 MR. HIGGINS: Objection, form. 25 A. In this document, the page	Page 152 1 Application does not include any mechanism 2 or method for fastening the back flange 3 (the only other part the connection 4 portion described in the '799 Application) 5 to the top plate." 6 Q. So my question is, though, does 7 the application ever actually describe the 8 top flange as being essential? 9 MR. HIGGINS: Objection, asked 10 and answered. 11 MR. SCHROEDER: I would 12 disagree, but I would let him answer 13 whether or not it actually describes 14 it as being essential. 15 A. Well, I think the POSITA looks 16 at it and knows that it's essential 17 because whereas there are little 18 attachment holes in the top plate, top 19 flange, no such provision for attachment 20 exists in the back flange. 21 BY MR. SCHROEDER: 22 Q. You would agree that the 23 specification describes embodiments of the 24 invention, correct? 25 A. Yes.
Page 151 1 numbers right at the bottom, the tiny page 2 numbers, if you look at -- between pages 3 35 and 58, that's where the text starts 4 being broken out as paragraph numbers. 5 I'll just simply read from my declaration 6 here in paragraph 131 that "Based on my 7 review, each hanger embodiment of the '799 8 Application includes a top flange with 9 fastening elements. And the specification 10 never describes the top flange as being an 11 optional feature used in a preferred 12 embodiment. Nowhere does the '799 13 Application disclose that the back flange 14 alone includes some mechanism to attach to 15 the hanger" -- "attach the hanger to the 16 wall, nor does the '799 Application 17 identify a tool that could be used that 18 would fit in between the channel-shaped 19 portion and the back flange so as to 20 fasten the back flange to a top plate. If 21 the hanger described in the '799 22 Application was constructed as disclosed 23 in the '799 Application, but without a top 24 flange, such a hanger would fall off the 25 top plate. This is because the '799	Page 153 1 Q. And that there could be other 2 embodiments of an invention that aren't 3 specifically identified in the patent, but 4 would still fall within the claims, 5 correct? 6 MR. HIGGINS: Objection, form. 7 A. I apologize. I lost the plot 8 there for a second so please repeat, 9 Counselor. I apologize. 10 BY MR. SCHROEDER: 11 Q. Does a -- in claiming an 12 invention, does the inventor have to 13 identify every potential embodiment for 14 the invention? 15 MR. HIGGINS: Objection, form, 16 objection, scope. 17 A. Well, I don't actually know the 18 answer to that. 19 BY MR. SCHROEDER: 20 Q. Can the enablement requirement 21 in patent law be met by the knowledge 22 within the art? 23 MR. HIGGINS: Objection, form, 24 objection, scope. 25 MR. SCHROEDER: Let me rephrase

Page 154 1 it actually because I probably messed 2 it up. 3 BY MR. SCHROEDER: 4 Q. Can the enablement requirement 5 be met by the knowledge of a POSITA? 6 MR. HIGGINS: Objection, form, 7 objection. 8 A. Well, I did in this example 9 here, that in viewing the art and reading 10 the spec, identified the issue I pointed 11 out in -- in paragraph 131. 12 BY MR. SCHROEDER: 13 Q. My question is actually whether 14 or not the enablement requirement could be 15 met by knowledge that's already in purview 16 of a person with skill -- of skill in the 17 art? In other words, if the patent 18 doesn't say something, can a person of 19 skill in the art know how to do it and it 20 still is enabled? 21 MR. HIGGINS: Objection, form, 22 calls for a legal conclusion. 23 A. Yeah, I'm not sure how to help 24 you, Counselor, other than my 25 understanding of enablements in	Page 156 1 objection, scope. 2 A. Yes. 3 BY MR. SCHROEDER: 4 Q. Moving on to paragraph 135, can 5 you read paragraph 135 for me? 6 A. Sure. It says "Based on my 7 review, neither the substitute claim 8 itself nor the '867 patent provides a 9 baseline for comparison for the term 10 'permanently' to inform a POSITA about the 11 claim scope with reasonable certainty. In 12 my opinion 'permanently fixed' here could 13 encompass alternate meanings, a 14 channel-shaped extension and connection 15 portions are: (1) simply not intended to 16 be moved after being manufactured, or (2) 17 connected in such a manner (e.g., welded) 18 that prevents any movement, even when 19 exposed to a significant amount of force. 20 Accordingly, it is unclear how permanent 21 the fixed, spaced relation is needed for 22 the channel-shaped and connection portions 23 to be considered 'permanently 24 fixed...relative to another.'" 25 Q. So in particular, you're
Page 155 1 paragraph 130. 2 BY MR. SCHROEDER: 3 Q. You provided a legal conclusion 4 that the claims lack enablement, correct? 5 MR. HIGGINS: Objection, form. 6 A. I mean, I wrote what I wrote. 7 BY MR. SCHROEDER: 8 Q. Were face-mounted hangers known 9 in the art? 10 MR. HIGGINS: Objection, form. 11 A. Oh, they are. 12 BY MR. SCHROEDER: 13 Q. In fact, at least Timony would 14 be a face-mounted hanger, correct? 15 A. The retrofit one, yes. 16 Q. Would a POSITA have the skill 17 and knowledge to select the mechanism or 18 method to fasten a face-mounted hanger to 19 a wall? 20 A. Yes. 21 Q. And if -- if you were to take 22 the Gilb '867 hanger and remove the top 23 plate or the top flange, would that now be 24 a face-mounted hanger? 25 MR. HIGGINS: Objection, form,	Page 157 1 providing two alternate potential meanings 2 for the term "permanently fixed," correct? 3 A. Yes. 4 Q. You provide that it's "simply 5 not intended to be moved after being 6 manufactured"? 7 A. Yes. 8 Q. Or "connected in such a manner 9 (example, welded) that prevents any 10 movement, even when exposed to a 11 significant amount of force"? 12 A. Right. 13 Q. Within the patent application, 14 was there any disclosure regarding welding 15 the components together in such a way that 16 they could never be moved? 17 MR. HIGGINS: Objection, form. 18 A. As you ask it, no, I don't 19 recall any. 20 BY MR. SCHROEDER: 21 Q. But within the application, it 22 does provide gauges for the metal to be 23 stamped and bent, correct? 24 MR. HIGGINS: Objection, form. 25 A. Yes, we discussed them earlier.

Page 158 1 BY MR. SCHROEDER: 2 Q. And in particular, looking at 3 Exhibit 1002, I believe it is 4 paragraph 4 -- or page 48 of the document 5 and there's a paragraph 67, and it states 6 that the truss hanger 26 is stamped from 7 12- to 14-gauge steel, correct? 8 A. That's what it says, yes. 9 Q. And we've discussed this 10 disclosure previously just in the context 11 of the '867 patent rather than the 12 application it granted from, correct? 13 A. Yes. 14 Q. Would you agree that 12- to 15 14-gauge steel can be moved with 16 sufficient force? 17 MR. HIGGINS: Objection, form. 18 A. Did you say can or can't? 19 BY MR. SCHROEDER: 20 Q. Can or could. 21 MR. HIGGINS: Objection, form. 22 A. Oh, yes, you -- yeah, you could 23 move 12 to gauge -- 12- to 14-gauge sheet 24 metal with sufficient force. 25 BY MR. SCHROEDER:	Page 160 1 Q. Mr. Fennell, we just have a 2 couple more questions for you. 3 You answered questions earlier 4 today regarding the Gilb '792 hanger and 5 its disclosure of use with the ledger. 6 Would a person of ordinary skill in the 7 art have understood that Gilb '792's 8 hanger can also be used without a ledger? 9 A. Yes. 10 Q. You answered some questions 11 earlier today regarding the installation 12 of Timony's hanger as in a retrofit 13 construction. Would a person of ordinary 14 skill in the art have understood that 15 Timony's hanger can also be used on a new 16 wall construction before sheathing is 17 installed? 18 A. Yes. 19 MR. HIGGINS: No further 20 questions. 21 REDIRECT EXAMINATION 22 BY MR. SCHROEDER: 23 Q. I have a few follow-up 24 questions. 25 A. Okay.
Page 159 1 Q. And I also believe you said 2 earlier that you wouldn't be able 3 necessarily be able to move 12- to 4 14-gauge sheet metal with your pinky, 5 though, correct? 6 A. Right. 7 Q. It would require some degree of 8 force, correct? 9 A. Yes. 10 Q. And I think you mentioned that 11 you could probably do it with a hammer? 12 MR. HIGGINS: Objection, form. 13 A. Yes. 14 MR. SCHROEDER: I don't believe 15 that I have any further questions. 16 MR. HIGGINS: Thank you, 17 Counsel. We would like to take 20 18 minutes to see if we want to -- have 19 any other questions that we would like 20 to ask the witness. 21 MR. SCHROEDER: Okay. 22 (Whereupon, a brief recess is 23 taken.) 24 EXAMINATION 25 BY MR. HIGGINS:	Page 161 1 Q. Give me one minute, though, to 2 find them. If Timony's retrofit hanger 3 was installed on a wood-framed wall prior 4 to the installation of sheathing, what 5 would be the purpose of leaving a -- 6 actually, let me rephrase that. 7 If Timony's retrofit hanger was 8 installed on a wall prior to the 9 installation of sheathing, would the 10 hanger be able to be installed abutting up 11 against -- or would the structural member 12 that's being held by the hanger be able to 13 be installed abutted directly up against 14 the wood-framed wall? 15 MR. HIGGINS: Objection, form. 16 A. It could or it could be held 17 away and allow for some void space behind, 18 plus fire detailing, the putties that we 19 talked about, et cetera, the designer 20 wouldn't have a problem detailing it one 21 way or the other. 22 BY MR. SCHROEDER: 23 Q. But Timony's retrofit hanger, if 24 there was nothing already -- if there was 25 no sheathing already attached to the wall,

Page 162 1 there would be no reason why that 2 structural member could not be abutted 3 directly up against the wood-framed wall, 4 correct? 5 MR. HIGGINS: Objection, form, 6 objection, asked and answered. 7 MR. SCHROEDER: Let me rephrase 8 that. 9 BY MR. SCHROEDER: 10 Q. There's nothing structurally 11 about Timony's retrofit hanger that would 12 prevent the structural member from being 13 abutted up against the wood-framed wall; 14 is that correct? 15 MR. HIGGINS: Objection, form, 16 objection, scope. 17 A. No, I think my previous answer 18 covered that, Counselor. 19 BY MR. SCHROEDER: 20 Q. Your previous answer being that 21 the member could be abutted directly up 22 against the wall, correct? 23 MR. HIGGINS: Objection, form. 24 A. My previous answer was that it 25 could either way, it's really -- the	Page 164 1 CERTIFICATION 2 3 I, BELLE VIVIENNE, a Nationally 4 Certified Realtime Reporter, do hereby 5 certify: 6 That the witness whose testimony as 7 herein set forth, was duly sworn by me; 8 and that the within transcript is a true 9 record of the testimony given by said 10 witness. 11 I further certify that I am not 12 related to any of the parties to this 13 action by blood or marriage, and that I am 14 in no way interested in the outcome of 15 this matter. 16 IN WITNESS WHEREOF, I have hereunto 17 set my hand this 11th day of October 2022. 18 19 <i>Belle Vivienne</i> 20 BELLE VIVIENNE, CRK, CCR, RPR 21 22 * * * 23 24 25
Page 163 1 POSITA or the designer would have no 2 problem either holding it away from the 3 face of the wall and letting sheathing be 4 behind it or letting it go all the way to 5 the wall and then detailing around it. 6 MR. SCHROEDER: No further 7 questions. 8 MR. HIGGINS: No redirect. 9 THE COURT REPORTER: Can you 10 state your transcript order? 11 MR. HIGGINS: We want a rough 12 draft. Can we get it when 13 Mr. Schroeder gets it? 14 MR. SCHROEDER: Tuesday morning 15 is fine. 16 (Time noted: 2:57 p.m.) 17 18 _____ 19 W. ANDREW FENNELL 20 21 _____ 22 Subscribed and sworn to 23 before me this _____ 24 day of _____ 2022. 25 _____ Notary Public	Page 165 1 Veritext Legal Solutions 2 1100 Superior Ave 3 Suite 1820 4 Cleveland, Ohio 44114 5 Phone: 216-523-1313 6 7 October 11, 2022 8 9 To: Mr. Higgins 10 11 Case Name: Simpson Strong-Tie Company, Inc. v. Columbia Insurance 12 Company 13 Veritext Reference Number: 5503758 14 Witness: W. Andrew Fennell Deposition Date: 10/5/2022 15 16 Dear Sir/Madam: 17 18 Enclosed please find a deposition transcript. Please have the witness 19 review the transcript and note any changes or corrections on the 20 included errata sheet, indicating the page, line number, change, and 21 the reason for the change. Have the witness' signature notarized and 22 forward the completed page(s) back to us at the Production address 23 shown 24 above, or email to production-midwest@veritext.com. 25 If the errata is not returned within thirty days of your receipt of this letter, the reading and signing will be deemed waived. Sincerely, Production Department NO NOTARY REQUIRED IN CA

Page 166 1 DEPOSITION REVIEW CERTIFICATION OF WITNESS 2 3 ASSIGNMENT REFERENCE NO: 5503758 3 CASE NAME: Simpson Strong-Tie Company, Inc. v. Columbia Insurance Company DATE OF DEPOSITION: 10/5/2022 4 WITNESS' NAME: W. Andrew Fennell 5 In accordance with the Rules of Civil Procedure, I have read the entire transcript of 6 my testimony or it has been read to me. 7 I have made no changes to the testimony as transcribed by the court reporter. 8 9 _____ 9 Date W. Andrew Fennell 10 Sworn to and subscribed before me, a 11 Notary Public in and for the State and County, 12 the referenced witness did personally appear and acknowledge that: 13 They have read the transcript; 14 They signed the foregoing Sworn Statement; and 15 Their execution of this Statement is of their free act and deed. 16 I have affixed my name and official seal 17 this _____ day of _____, 20____. 18 _____ 18 Notary Public 19 _____ 19 Commission Expiration Date 20 21 22 23 24 25	Page 168 1 ERRATA SHEET VERITEXT LEGAL SOLUTIONS MIDWEST ASSIGNMENT NO: 5503758 2 PAGE/LINE(S) / CHANGE /REASON 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____ 9 _____ 10 _____ 11 _____ 12 _____ 13 _____ 14 _____ 15 _____ 16 _____ 17 _____ 18 _____ 19 _____ 20 _____ 20 Date W. Andrew Fennell 21 SUBSCRIBED AND SWORN TO BEFORE ME THIS _____ 22 DAY OF _____, 20____. . 23 _____ 24 Notary Public 25 _____ 25 Commission Expiration Date
Page 167 1 DEPOSITION REVIEW CERTIFICATION OF WITNESS 2 3 ASSIGNMENT REFERENCE NO: 5503758 3 CASE NAME: Simpson Strong-Tie Company, Inc. v. Columbia Insurance Company DATE OF DEPOSITION: 10/5/2022 4 WITNESS' NAME: W. Andrew Fennell 5 In accordance with the Rules of Civil Procedure, I have read the entire transcript of 6 my testimony or it has been read to me. 7 I have listed my changes on the attached Errata Sheet, listing page and line numbers as 8 well as the reason(s) for the change(s). 9 I request that these changes be entered as part of the record of my testimony. 10 11 I have executed the Errata Sheet, as well 12 as this Certificate, and request and authorize 13 that both be appended to the transcript of my 14 testimony and be incorporated therein. 15 _____ 15 Date W. Andrew Fennell 16 17 Sworn to and subscribed before me, a 18 Notary Public in and for the State and County, 19 the referenced witness did personally appear 20 and acknowledge that: 21 They have read the transcript; 22 They have listed all of their corrections 23 in the appended Errata Sheet; 24 They signed the foregoing Sworn Statement; and 25 Their execution of this Statement is of their free act and deed. 26 I have affixed my name and official seal 27 this _____ day of _____, 20____. 28 _____ 28 Notary Public 29 _____ 29 Commission Expiration Date	

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Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

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

(A) to review the transcript or recording; and

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

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

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

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COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

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

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