

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

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5 KOHLER CO.,

6 Petitioner,

7 vs.

Case No. IPR2024-00700

8 DELTA FAUCET CO.,

U.S. Patent No. 10,393,363

9 Respondent.

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14 REMOTE DEPOSITION OF RICHARD W. KLOPP, Ph.D.

15 REDWOOD CITY, CALIFORNIA

16 FRIDAY, APRIL 25, 2025

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20 STENOGRAPHICALLY REPORTED BY:

21 ANDREA M. IGNACIO, CSR, RPR, CRR, CCRR, CLR ~ CSR

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

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KOHLER CO.,

Petitioner,

vs.

Case No. IPR2024-00700

DELTA FAUCET CO.,

U.S. Patent No. 10,393,363

Respondent.

_____/

Remote Deposition of Richard W. Klopp,
Ph.D., taken on behalf of Petitioner, Pursuant to
Notice, on Friday, April 25, 2025, beginning
at 9:00 a.m., and ending at 10:27 p.m., before me,
ANDREA M. IGNACIO, CSR, RPR, CCRR, CRR, CLR ~
License No. 9830.

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I N D E X

WITNESS: Richard W. Klopp, Ph.D.

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DEPOSITION PROCEEDINGS

FRIDAY, APRIL 25, 2025

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STENOGRAPHIC REPORTER: Per AB 3252:

My name is Andrea Ignacio. I am a California
licensed stenographer, No. 9830. I am a
code-compliant reporter. I will be producing a
transcript stenographically and it is automatically
admissible in Court.

RICHARD KLOPP, Ph.D.,

having been sworn as a witness
by the Certified Shorthand Reporter,
testified as follows:

MR. HERMAN: This is Patrick Herman from
Orrick, Herrington & Sutcliffe, and we're here today
in connection with a proceeding encapture --
encaptioned Kohler Co. vs. Delta Faucet Co. That's
case No. IPR202400700. And -- and I am counsel for
Petitioner.

Would counsel for patent owner like to
introduce themselves.

MR. ISRAELSEN: Yeah, this is Greg Israelson

09:00 1 from Wilmer Hale, representing Delta Faucet Co.

09:00 2 I'm joined by my colleague John Kim, also
09:00 3 from Wilmer Hale.

09:00 4

09:00 5 EXAMINATION

09:00 6 BY MR. HERMAN:

09:00 7 Q So good morning, Doctor.

09:01 8 A Good morning.

09:01 9 Q Have you ever been deposed before?

09:01 10 A I have.

09:01 11 Q How many times, would you say?

09:01 12 A It's probably in the 70s, but I don't keep
09:01 13 count.

09:01 14 Q So that's a lot. And despite probably being
09:01 15 an expert and very familiar with the proceeding, I'm
09:01 16 just going to go through a few -- a few basic ground
09:01 17 rules before we start just to make sure we're on the
09:01 18 same page and things go smoothly today.

09:01 19 The first is, as you've seen, there is a
09:01 20 court reporter here. So it's important that you
09:01 21 respond verbally so that they can record your
09:01 22 testimony; is that okay?

09:01 23 A Yes.

09:01 24 Q It's also important that we not talk over
09:01 25 each other so that there is a clear record. So I'll

09:01 1 do my best to wait for you to finish answering before
09:01 2 asking another question, and I ask that you wait until
09:01 3 I'm done with my question before answering; is that
09:01 4 okay?

09:01 5 A It is.

09:01 6 Q Next, you're entitled to a question you
09:01 7 understand. So if anything I ask is unclear, please
09:01 8 let me know, and I'll try to elaborate or explain.
09:02 9 Otherwise, I'll assume we're on the same page; is that
09:02 10 okay?

09:02 11 A That is okay.

09:02 12 Q I also ask that you not look at anything
09:02 13 during the deposition besides documents that I give
09:02 14 you. And over the course of today, I'll -- I'll be
09:02 15 putting exhibits into the chat for -- for you to
09:02 16 download and refer to. But in the event that you do
09:02 17 look at something that I have not given you, I ask
09:02 18 that you tell me; is that okay?

09:02 19 A So just so you know, I have printed copies of
09:02 20 the exhibits and my declaration and Cook's declaration
09:02 21 at my right elbow here.

09:02 22 Q Are they clean copies of those exhibits?

09:02 23 A They are.

09:02 24 Q So -- so you should feel free to use your
09:02 25 clean copies of those exhibits when we're talking

09:02 1 about them. But -- but if you are referring to
09:02 2 particular passages of those exhibits, I -- I ask that
09:02 3 you say so on the record; is that okay?

09:02 4 A It is.

09:02 5 Q Next, I ask that you not have any side
09:03 6 conversations or use technology to chat or otherwise
09:03 7 communicate with anyone during the deposition; is that
09:03 8 okay?

09:03 9 A It is.

09:03 10 Q And lastly, is there anything that would
09:03 11 prevent or interfere with your ability to testify
09:03 12 today?

09:03 13 A No.

09:03 14 MR. HERMAN: So I'm going to start by putting
09:03 15 into the chat a copy of an exhibit that's been
09:03 16 previously marked as Exhibit 2003.

09:03 17 (Document previously marked Exhibit 2003
09:03 18 for identification.)

09:03 19 MR. HERMAN: Q. You probably also have a
09:03 20 paper copy of that, but it wouldn't hurt to take a
09:03 21 look at the version I put in the chat just to confirm
09:03 22 that they are the same thing.

09:03 23 A Okay. Let's see. I see a green checkmark.
09:03 24 I guess if I click -- double-click it. Oh, here it
09:03 25 goes. Okay. All right.

09:03 1 I have it open.

09:03 2 Q So -- so what is Exhibit 2003?

09:03 3 A Let me verify that it's the whole thing
09:04 4 first.

09:04 5 Okay. 2003 is my declaration.

09:04 6 Q And it's your declaration relating to U.S.
09:04 7 Patent No. 10,393,363; is that right?

09:04 8 A That number is correct.

09:04 9 Q And is it okay if I refer to that today as
09:04 10 the '363 patent?

09:04 11 A Yes.

09:04 12 Q And is it okay if I refer to Exhibit 2003
09:04 13 occasionally as your '363 patent declaration or your
09:04 14 declaration?

09:04 15 A I will understand what you mean.

09:04 16 Q Now, is there anything in this dec- --
09:04 17 declaration that, sitting here today, you believe is
09:04 18 inaccurate?

09:04 19 A Well, there's some typos. I will say that.

09:04 20 Q But beyond typos, is there anything that you
09:04 21 would substantively -- or that you substantively
09:04 22 believe needs to be corrected?

09:04 23 A There's one quote of Cook text that
09:05 24 inadvertently has the word "not" inserted. And I
09:05 25 think when you read the declaration, you'll realize

09:05 1 that -- that it can't be right in the context. I
09:05 2 can't point you to a specific page, but it's -- it's
09:05 3 in there.

09:05 4 Q But it would be fair to say that that's a
09:05 5 typographical error; correct?

09:05 6 A Yeah. Correct.

09:05 7 Q Okay. So beyond typogal -- typographical
09:05 8 errors like that, you're -- you're not aware of any
09:05 9 substantive errors in your declaration; correct?

09:05 10 A Yeah, I -- I guess it depends on what you
09:05 11 mean by "substantive." But I'm not aware of anything
09:05 12 that's significant.

09:05 13 Q Now, if you could turn to the section of your
09:05 14 declaration that begins with paragraph 3.

09:05 15 A Probably better to give me a page, perhaps.

09:05 16 Q So it's the page that's labeled on the bottom
09:06 17 3, which I believe is page 4 of the PDF.

09:06 18 A Okay. I am there.

09:06 19 Q So paragraph 3 starts a section that's
09:06 20 entitled:

09:06 21 (As read):

09:06 22 "Qualifications and Experience."

09:06 23 Is that right?

09:06 24 A Yes.

09:06 25 Q All right.

09:06 1 And that continues on down through
09:06 2 paragraph 11; correct?

09:06 3 A Yes.

09:06 4 Q And in paragraph 10, which is on the page
09:06 5 that's labeled 6, you note that you:

09:06 6 (As read):

09:06 7 "Purchased and installed kitchen and
09:06 8 laboratory faucets."

09:06 9 Is that right?

09:06 10 A Yes.

09:06 11 Q Now, was that for your own use?

09:06 12 A I -- I don't -- yes.

09:06 13 Q How many such faucets would you say you have
09:06 14 installed for your own use?

09:06 15 A Probably half a dozen over the years.

09:06 16 Q In your view, is that relevant experience
09:07 17 that contributes to your ability to assess the patent
09:07 18 at issue here and the prior art?

09:07 19 A Yes, to some degree.

09:07 20 Q Now, you didn't actually design any of the
09:07 21 faucets that you installed; is that right?

09:07 22 A That is correct.

09:07 23 Q Were they commercially available products
09:07 24 that you purchased?

09:07 25 A Not all of them.

09:07 1 Q So some of them were commercially available
09:07 2 products; is that right?

09:07 3 A Yeah. Well, they were all commercially
09:07 4 available products. The issue is I -- there is one I
09:07 5 can think of that I did not purchase.

09:07 6 Q Some -- did someone give it to you?

09:07 7 A Essentially.

09:07 8 Q Okay. Now, turning back to paragraph 9, you
09:07 9 note that you have done engineering work related to a
09:07 10 wide variety of faucets and spray heads; is that
09:07 11 right?

09:07 12 A Yes.

09:07 13 Q And you go on to mention intellectual
09:07 14 property analysis of magnetic pull-down style spray
09:08 15 heads; is that right?

09:08 16 A Correct.

09:08 17 Q And you also note that you purchased and
09:08 18 disassembled several such spray heads; is that right?

09:08 19 A Correct.

09:08 20 Q Now, were the spray heads that you purchased
09:08 21 and disassembled and did this engineering work in
09:08 22 connection with, were those commercially available
09:08 23 spray heads?

09:08 24 A Yes.

09:08 25 Q So the work you're describing here entails

09:08 1 looking at commercially available spray heads for
09:08 2 purposes of assessing an intellectual property issue;
09:08 3 is that true?

09:08 4 A That is correct.

09:08 5 Q So you did not design any of the spray heads
09:08 6 that you looked at; is that right?

09:08 7 A I did not.

09:08 8 Q Have you ever designed a spray head?

09:08 9 A I think I've probably cobbled together
09:08 10 something from some commercially available nozzles,
09:08 11 but nothing like, you know, something that would be
09:08 12 for sale.

09:08 13 Q So for cob- -- cobbled together, cobbled
09:08 14 together for -- for your own purposes.

09:08 15 Is that a fair assessment?

09:08 16 A It is.

09:08 17 Q Have you ever designed any other plumbing
09:09 18 fixture besides a spray head?

09:09 19 A Well, I've designed various plumbing hookups
09:09 20 and connections in -- in concert with remodels and
09:09 21 things like that, as well as parts of my hobbies. But
09:09 22 I haven't designed, say, a kitchen faucet, per se.

09:09 23 Q And you also have not designed a pendant
09:09 24 showerhead; is that true?

09:09 25 A That's true.

09:09 1 MR. HERMAN: Now, I'm going to put into the
09:09 2 chat another exhibit. Just give me a minute to bring
09:09 3 up the right window here. All right.

09:09 4 (Document previously marked Exhibit 1004
09:09 5 for identification.)

09:09 6 MR. HERMAN: Q. So this exhibit has been
09:09 7 previously marked as Exhibit 1004, which I suspect you
09:09 8 also have a copy of. But -- but please look at what
09:09 9 I've put into the chat just to make sure that we're
09:09 10 talking about the same thing.

09:10 11 A So let me flip quick to the end.

09:10 12 Yes, I -- I recognize this.

09:10 13 Q So what is Exhibit 1004?

09:10 14 A It is the Tseng patent, Petitioner's
09:10 15 Exhibit 1004.

09:10 16 Q And Tseng Exhibit 1004 is one of the
09:10 17 references that you reviewed in association with your
09:10 18 declaration; correct?

09:10 19 A That is correct.

09:10 20 Q Is it fair to say that Tseng relates
09:10 21 generally to a pullout faucet with an illuminating
09:10 22 light?

09:10 23 A That is fair.

09:10 24 Q Now, Tseng, throughout its specification and
09:10 25 its figures, discusses three embodiments of that

09:10 1 faucet; is that right?

09:10 2 A That's my understanding.

09:10 3 Q Now, if we'd turn to paragraph 31 of -- of
09:11 4 Tseng. And I'll tell you what page that's on as soon
09:11 5 as I find it myself. That's on page 29 of the PDF.

09:11 6 A Okay. I'm there.

09:11 7 Q Paragraph 31 begins a section that's
09:11 8 entitled:

09:11 9 (As read):

09:11 10 "Brief description of the drawings."

09:11 11 Right?

09:11 12 A That's correct.

09:11 13 Q And if you read through the paragraphs that
09:11 14 follow in this particular section, we see that
09:11 15 Figures 1 through 26 all relate to what Tseng calls
09:11 16 the first embodiment; correct?

09:11 17 A That is consistent with my understanding.

09:11 18 Q And Figures 27 through 31 relate to what
09:11 19 Tseng calls the second embodiment; true?

09:11 20 A That's true.

09:11 21 Q And Figures 32 through 37 relate to what
09:12 22 Tseng calls the third embodiment; correct?

09:12 23 A That is correct.

09:12 24 Q Now, if we turn down to paragraph 70, which
09:12 25 is on the next page, paragraph 70 is part of the

09:12 1 discussion of Tseng's first pullout faucet embodiment;
09:12 2 right?

09:12 3 A Correct.

09:12 4 Q And here, Tseng explains that this first
09:12 5 embodiment includes, quote, "a light conductor."

09:12 6 A Yes, the spray head 30 includes a light
09:12 7 conductor 31.

09:12 8 Q And the paragraph goes on to explain that
09:12 9 that light conductor includes input faces 311 for
09:12 10 inputting light, and output face 313 for outputting
09:13 11 light, and a light transmission portion that transmits
09:13 12 light between that input and the output face; correct?

09:13 13 A Well, I might as well read the whole
09:13 14 paragraph because you skipped a little bit.

09:13 15 (As read):

09:13 16 "The spray head 30 includes a light conductor
09:13 17 31 made of translucent material to guide light, as
09:13 18 shown in FIGS. 7 to 10."

09:13 19 Two -- or "The light conductor 31 has plural
09:13 20 input faces 311 for inputting the lights, a light
09:13 21 transmission portion 312 for transmitting the light,
09:13 22 and an output face 313 for outputting the lights."

09:13 23 Q So to summarize, the first embodiment
09:13 24 includes a light conductor with an input face, an
09:13 25 output face, and a light transmission portion in

09:13 1 between; correct?

09:13 2 A Well, importantly, it's translucent. And
09:13 3 otherwise, that's a correct statement.

09:13 4 Q And you don't dispute that that light
09:14 5 conductor discussed there qualifies as a light pipe,
09:14 6 as that term is used in the '363 patent; correct?

09:14 7 MR. ISRAELSEN: Object to form.

09:14 8 THE WITNESS: Well, let me go look
09:14 9 specifically at the figure, and -- let's see.
09:14 10 Figure...

09:14 11 I think that would, in some ways, possibly
09:14 12 act as a light pipe.

09:14 13 MR. HERMAN: Q. Now, if we turn down to
09:14 14 paragraph 90, and paragraph 90 can be found on page 32
09:14 15 of the referenced PDF.

09:15 16 A Okay. I'm there.

09:15 17 Q Paragraph 90 is the beginning of a discussion
09:15 18 of Tseng's second embodiment; correct?

09:15 19 A Correct.

09:15 20 Q And that continues on until paragraph 95; is
09:15 21 that right?

09:15 22 A That's correct.

09:15 23 Q And in those paragraphs spanning paragraph 90
09:15 24 to 95, Tseng discusses what it calls a difference of a
09:15 25 pullout faucet of a second embodiment from that of the

09:15 1 first embodiment; right?

09:15 2 A That's correct.

09:15 3 Q Now, the primary difference between the two
09:15 4 embodiments is, that in the first embodiment, water
09:15 5 actually passes through channels in the light
09:15 6 conductor, while that does not happen in the second
09:15 7 embodiment; true?

09:15 8 MR. ISRAELSEN: Object to form.

09:15 9 THE WITNESS: I'm not sure I would call that
09:15 10 the primary difference. It is a difference.

09:16 11 MR. HERMAN: Q. And that's a difference
09:16 12 that's actually mentioned in paragraph 90; correct?

09:16 13 MR. ISRAELSEN: Object to form.

09:16 14 THE WITNESS: It -- well, what it says is:
09:16 15 (As read):

09:16 16 "Wherein conducting member 36 does not
09:16 17 conduct and penetrate the lights."

09:16 18 Q The conducting -- the member 36 is the member
09:16 19 that guides water, right, not -- not light; correct?

09:16 20 MR. ISRAELSEN: Objection.

09:16 21 THE WITNESS: I believe that that's correct.

09:16 22 MR. HERMAN: Q. And in the remainder of
09:16 23 paragraphs -- the rest of paragraphs 90 through 95,
09:16 24 Tseng also discusses structural differences between
09:16 25 the light conductor of the first embodiment and the

09:16 1 light conductor of the second embodiment; true?

09:16 2 A That is correct.

09:16 3 MR. ISRAELSEN: Same objection.

09:16 4 MR. HERMAN: Q. Nowhere in those paragraphs
09:16 5 does Tseng state that the second embodiment uses a
09:17 6 different material to form its light conductor than
09:17 7 the first embodiment; correct?

09:17 8 A I think it's implied because the second
09:17 9 embodiment is enhancing -- somewhere in here, it -- it
09:17 10 enhances light transmission. And translucency of --
09:17 11 in the first embodiment would be -- would work against
09:17 12 enhanced transmission.

09:17 13 Q So my question was different.

09:17 14 Was there any explicit mention of the
09:17 15 material used as being different between the first and
09:17 16 the second embodiment in paragraphs 90 through 95?

09:17 17 MR. ISRAELSEN: Object to form.

09:17 18 THE WITNESS: I don't believe there's an
09:17 19 expressed statement to that effect.

09:17 20 MR. HERMAN: Q. Now, turning to
09:18 21 paragraph 91, in this paragraph, Tseng notes that the
09:18 22 pullout faucet of its second embodiment includes a
09:18 23 light conductor; correct?

09:18 24 A Correct.

09:18 25 Q And that light conductor includes an input

09:18 1 face, an output face, and a light transmission

09:18 2 portion; correct?

09:18 3 A Well, is it singular -- I mean, when I look
09:18 4 at it, I see more than one input face. If...

09:18 5 I mean, they describe it in the singular
09:18 6 here, input face 311. But when you look at the
09:18 7 figures, there's four of them.

09:18 8 Q So there's at least one, maybe more, input
09:18 9 faces. There's a transmission, light transmission
09:18 10 portion in between, and at least one output face; is
09:18 11 that true?

09:18 12 MR. ISRAELSEN: Objection.

09:18 13 THE WITNESS: Yes.

09:18 14 MR. HERMAN: Q. And those components, the
09:19 15 light conductor with at least one input face, at least
09:19 16 one output face, and a light transmission portion in
09:19 17 between, are also present in the first embodiment,
09:19 18 albeit in structurally different form; correct?

09:19 19 MR. ISRAELSEN: Object to form.

09:19 20 THE WITNESS: There is significant structural
09:19 21 difference, but there is light. I mean, it's -- I
09:19 22 think it's implied that light transmission transmits
09:19 23 from an input face to an output face through a -- a
09:19 24 light transmission portion.

09:19 25 MR. HERMAN: Q. And that transmission occurs

09:19 1 in both embodiments, both the first and second
09:19 2 embodiment; true?

09:19 3 MR. ISRAELSEN: Object to form.

09:19 4 THE WITNESS: Generally speaking, yes.

09:19 5 MR. HERMAN: Q. Now, if we turn to
09:19 6 paragraph 96, paragraph 96 is the beginning of the
09:19 7 discussion of Tseng's third embodiment; correct?

09:19 8 A That is correct.

09:20 9 Q And that discussion of the third embodiment
09:20 10 continues down to what looks like paragraph 101; true?

09:20 11 A Yes, that appears to be correct.

09:20 12 Q And again, in these paragraphs, spanning 96
09:20 13 through 101, Tseng explains that it is discussing a
09:20 14 difference of a pullout faucet of a third embodiment
09:20 15 from that of the second embodiment; correct?

09:20 16 MR. ISRAELSEN: Object to form.

09:20 17 THE WITNESS: That's what paragraph 96
09:20 18 states.

09:20 19 MR. HERMAN: Q. Now, nowhere in
09:20 20 paragraphs 96 through 101 does Tseng state that it
09:20 21 uses a different material to make the light conductor
09:20 22 of its third embodiment as compared to either the
09:20 23 second or the first embodiment; true?

09:20 24 MR. ISRAELSEN: Objection.

09:20 25 THE WITNESS: Well, I think, again, it's

09:21 1 implied by the enhanced light transmission, and I
09:21 2 think that -- I forget whether the third embodiment
09:21 3 adds another word to that. I'd have to look at my
09:21 4 declaration.

09:21 5 But the implication is that you would not
09:21 6 want translucency in the third embodiment or the
09:21 7 second embodiment as compared to the first embodiment,
09:21 8 that it is disclosed as translucent.

09:21 9 MR. HERMAN: Q. Now, in none of those
09:21 10 paragraphs 96 through 101 is any specific material
09:21 11 mentioned; correct?

09:21 12 A I believe that's --

09:21 13 MR. ISRAELSEN: Objection.

09:21 14 THE WITNESS: I believe that's correct.

09:21 15 MR. HERMAN: Q. In fact, the only material
09:21 16 that's mentioned anywhere in Tseng is a translucent
09:21 17 material; correct?

09:21 18 MR. ISRAELSEN: Objection.

09:21 19 THE WITNESS: I would have to search that to
09:21 20 confirm.

09:21 21 MR. HERMAN: Q. That's not something you've
09:21 22 done already?

09:21 23 MR. ISRAELSEN: Objection.

09:21 24 THE WITNESS: I may have, but it's not on top
09:22 25 of my head whether they, for example, I don't know,

09:22 1 mention acrylic or something somewhere in there, so...

09:22 2 MR. HERMAN: Q. Now, the word "transparent"
09:22 3 appears nowhere in Tseng; correct?

09:22 4 A Well, let me search and confirm that.
09:22 5 Acrobat is not finding that word.

09:22 6 Q But the word "translucent" does appear in
09:22 7 Tseng; correct?

09:22 8 A It does --

09:22 9 MR. ISRAELSEN: Objection.

09:22 10 THE WITNESS: -- with respect to the first
09:22 11 embodiment.

09:22 12 MR. HERMAN: Q. Now, that third embodiment
09:22 13 that's discussed in paragraphs 96 through 101, that
09:22 14 embodiment also includes a light conductor with an
09:22 15 input face, an output face, and a light transmission
09:22 16 portion in between; correct?

09:22 17 MR. ISRAELSEN: Object to form.

09:22 18 THE WITNESS: That's correct.

09:22 19 MR. HERMAN: All right.

09:22 20 Q So those are components that are also shared
09:22 21 by the first and the second -- second embodiment;
09:22 22 true?

09:22 23 MR. ISRAELSEN: Objection.

09:22 24 THE WITNESS: But variously numbered and
09:23 25 described.

09:23 1 MR. HERMAN: All right.

09:23 2 Q So all three embodiments include a light
09:23 3 conductor; correct?

09:23 4 MR. ISRAELSEN: Object to form.

09:23 5 THE WITNESS: They do.

09:23 6 MR. HERMAN: Q. All three embodiments
09:23 7 include a light conductor that has at least one output
09:23 8 face and at least one input face; correct?

09:23 9 MR. ISRAELSEN: Object to form.

09:23 10 THE WITNESS: That's correct.

09:23 11 MR. HERMAN: Q. And all three embodiments
09:23 12 include a light transmission portion between that
09:23 13 input face and that output face that's intended to
09:23 14 transmit light from the input face to the output face;
09:23 15 correct?

09:23 16 MR. ISRAELSEN: Objection.

09:23 17 THE WITNESS: Its structure is different, but
09:23 18 at the high level they all have a portion that
09:23 19 transmits light.

09:23 20 MR. HERMAN: Q. Now, the first embodiment
09:23 21 assigns the number 31 to its light conductor; is that
09:23 22 right?

09:23 23 A I believe that's correct.

09:23 24 Q And the second and third embodiment,
09:23 25 respectively, use the numbers 37 and 38 for their

09:24 1 light conductors; correct?

09:24 2 A Let me --

09:24 3 MR. ISRAELSEN: Object to form.

09:24 4 THE WITNESS: -- I'm pretty sure about the
09:24 5 37. Let me confirm the 38.

09:24 6 Yes, that seems to be correct.

09:24 7 MR. HERMAN: Q. Is it your understanding
09:24 8 that Tseng uses different numbers to refer to
09:24 9 components that are meant be to be structurally and
09:24 10 functionally different from embodiment to embodiment?

09:24 11 MR. ISRAELSEN: Object to form.

09:24 12 THE WITNESS: I -- I would believe that.

09:24 13 MR. HERMAN: Q. But it uses the same number
09:24 14 to refer to components that are meant to be the same
09:24 15 from -- from embodiment to embodiment; correct?

09:24 16 MR. ISRAELSEN: Object to form.

09:24 17 THE WITNESS: Generally speaking, I think
09:24 18 that's what they do. So, for example, input face and
09:24 19 output face are common.

09:24 20 MR. HERMAN: Q. Now, if you could turn to
09:24 21 paragraph 68 for me. That's on page 30 of the PDF.

09:25 22 A Okay. I'm there.

09:25 23 Q About in the middle of that paragraph, Tseng
09:25 24 references that the first embodiment includes a
09:25 25 plurality of LED elements 40.

09:25 1 Do you see that?

09:25 2 A I do see that.

09:25 3 Q Now, the second and third embodiments also
09:25 4 use LED elements 40; correct?

09:25 5 MR. ISRAELSEN: Object to form.

09:25 6 THE WITNESS: I'm just confirming that. I
09:25 7 think that's correct. Yes.

09:25 8 MR. HERMAN: Q. I got that right? The
09:25 9 second and third embodiments also use LED elements 40;
09:26 10 correct?

09:26 11 MR. ISRAELSEN: Object to form.

09:26 12 THE WITNESS: I -- I see it for the third
09:26 13 embodiment. And I guess the easy thing for me to do
09:26 14 is just go to the figures and confirm.

09:26 15 40 and -- yes.

09:26 16 MR. HERMAN: Q. So all three embodiments are
09:26 17 using LED elements 40; true?

09:26 18 MR. ISRAELSEN: Object to form.

09:26 19 THE WITNESS: True.

09:26 20 MR. HERMAN: Q. Now, if we'd turn to
09:26 21 Figure 13.

09:26 22 Figure 13 is one of the figures that shows
09:26 23 the first embodiment; correct?

09:26 24 A Correct.

09:26 25 Q And -- and Figure 30 -- 13 is a

09:26 1 cross-sectional view that is zooming into, among other
09:26 2 things, the LED element 40; correct?

09:27 3 MR. ISRAELSEN: Objection.

09:27 4 THE WITNESS: Correct.

09:27 5 MR. HERMAN: Q. And in this particular
09:27 6 figure, light from the LED 40 will enter the input
09:27 7 face that's labeled 311; correct?

09:27 8 A Correct.

09:27 9 MR. ISRAELSEN: Objection.

09:27 10 MR. HERMAN: Q. So light must be coming out
09:27 11 of the side of the LED that's touching that input
09:27 12 face 311; true?

09:27 13 MR. ISRAELSEN: Objection.

09:27 14 THE WITNESS: No.

09:27 15 MR. HERMAN: Q. So as you construe Tseng,
09:27 16 there is no direct correlation between the side of the
09:27 17 LED that's touching the input face and how light is
09:27 18 emitted; is that correct?

09:27 19 MR. ISRAELSEN: Objection.

09:27 20 THE WITNESS: That's not the -- that is not
09:27 21 the side. That's the bottom in this view.

09:27 22 MR. HERMAN: Q. The -- the bottom of what?

09:27 23 A The LED.

09:27 24 MR. ISRAELSEN: Objection.

09:27 25 THE WITNESS: It's -- it's pointing downward.

09:27 1 MR. HERMAN: Ah. But -- so -- so -- so maybe
09:28 2 I'll just rephrase my question.

09:28 3 Q So light will need to emit from the LED from
09:28 4 the portion of the LED that is touching input
09:28 5 face 311; correct?

09:28 6 MR. ISRAELSEN: Object to form.

09:28 7 THE WITNESS: At least some of it, yes.

09:28 8 MR. HERMAN: Q. And I refer to that portion
09:28 9 as a "side." But you're pointing to -- is that in
09:28 10 this figure, you would call that portion the bottom of
09:28 11 the LED; correct?

09:28 12 MR. ISRAELSEN: Objection.

09:28 13 THE WITNESS: I think it's important because
09:28 14 of Cook's declaration having LED light incorrectly
09:28 15 coming out what I would call the side. So I don't
09:28 16 want "side" to be somehow a blessing of what Cook
09:28 17 wrote.

09:28 18 So let's talk about light coming out the
09:28 19 bottom of the LED where it faces 311.

09:28 20 MR. HERMAN: All right.

09:28 21 Q So light is coming out of the LED where it
09:28 22 faces 311; correct?

09:28 23 MR. ISRAELSEN: Object to form.

09:28 24 THE WITNESS: Correct.

09:28 25 MR. HERMAN: Q. And again, the LED in this

09:29 1 figure is labeled 40; correct?

09:29 2 MR. ISRAELSEN: Objection.

09:29 3 THE WITNESS: Correct.

09:29 4 MR. HERMAN: Q. Now, if we'd turn to
09:29 5 Figure 36.

09:29 6 Figure 36 is the figure that relates to the
09:29 7 third embodiment; correct?

09:29 8 MR. ISRAELSEN: Objection.

09:29 9 THE WITNESS: Cor- -- let's see. Third
09:29 10 embodiment. That's correct.

09:29 11 MR. HERMAN: Q. And the LED in this figure
09:29 12 is again labeled 40; true?

09:29 13 A True.

09:29 14 Q Now, in this particular figure, one of the
09:29 15 shorter depicted sides of 40 is touching input
09:29 16 face 311; correct?

09:29 17 MR. ISRAELSEN: Objection.

09:29 18 THE WITNESS: Correct.

09:29 19 MR. HERMAN: Q. And in Figure 13, one of the
09:29 20 longer depicted sides of LED 40 is shown touching
09:29 21 input face 311; correct?

09:29 22 MR. ISRAELSEN: Object to form.

09:29 23 THE WITNESS: Correct.

09:29 24 MR. HERMAN: Q. Now, in your opinion, in
09:30 25 Figure 36, LED 40 will emit light downward towards the

09:30 1 input face that's labeled with the element 311;

09:30 2 correct?

09:30 3 A Correct.

09:30 4 Q But again, in this figure, Figure 36, one of
09:30 5 the shorter sides of the LED 40 is what's touching
09:30 6 face 311; true?

09:30 7 MR. ISRAELSEN: Object to form.

09:30 8 THE WITNESS: True, but it doesn't matter.

09:30 9 MR. HERMAN: Q. Now, if the same LED 40 is
09:30 10 used in both Figures 13 and 36, this means that light
09:30 11 will need to be coming out of both one of the long and
09:30 12 the short sides of the LED; true?

09:30 13 MR. ISRAELSEN: Object to form.

09:30 14 THE WITNESS: No, not at all. 40 is just
09:30 15 generically an LED. You can configure LEDs for light
09:30 16 to come out the short side, the -- the broad side, the
09:30 17 other side to the right.

09:30 18 It would be understood that the light is
09:30 19 coming out of the LED and into 311. And 311 is always
09:31 20 oriented such that light would be coming downward from
09:31 21 the LED.

09:31 22 MR. HERMAN: Q. So in your view, one of
09:31 23 ordinary skill in the art would understand that LEDs
09:31 24 can be configured in a variety of different ways such
09:31 25 that they emit light in whichever way the person of

09:31 1 ordinary skill in the art wants it to emit light.

09:31 2 That's what you just testified; true?

09:31 3 MR. ISRAELSEN: Objection.

09:31 4 THE WITNESS: That's correct.

09:31 5 MR. HERMAN: Q. Now, if we'd turn to
09:31 6 paragraph 79.

09:31 7 Paragraph 79 is part of a discussion of
09:31 8 Tseng's first embodiment; correct?

09:31 9 A That's correct.

09:31 10 Q And in this paragraph, Tseng explains that
09:31 11 the first embodiment's light conductor includes a
09:32 12 circular rib 31D that exposes outside to enhance
09:32 13 illumination effect; right?

09:32 14 MR. ISRAELSEN: Object to form.

09:32 15 THE WITNESS: That's what it says.

09:32 16 MR. HERMAN: Q. What does the phrase
09:32 17 "exposes outside" in Tseng mean to you?

09:32 18 MR. ISRAELSEN: Object to form.

09:32 19 THE WITNESS: You can see it in the figure
09:32 20 that that portion of the light conductor piece
09:32 21 extend -- is extended radially outward towards the --
09:32 22 the periphery of the spray head.

09:32 23 MR. HERMAN: Q. Now, a moment ago, we talked
09:32 24 about Figure 36 of Tseng which relates to the third
09:32 25 embodiment; is that right?

09:32 1 MR. ISRAELSEN: Object to form.

09:32 2 THE WITNESS: Yes. Among -- well, so I don't
09:32 3 have to have -- flip back and forth, I'm going to pull
09:32 4 up my paper copy. All right.

09:33 5 So I'm looking at the Figure 36 in my paper
09:33 6 copy, and then I'm -- I've got still paragraph 79 up
09:33 7 on my screen.

09:33 8 MR. HERMAN: Q. And in para- -- in
09:33 9 Figure 36, Tseng labels one particular surface with
09:33 10 the number 311; is that right?

09:33 11 MR. ISRAELSEN: Object to form.

09:33 12 THE WITNESS: That's correct.

09:33 13 MR. HERMAN: Q. And -- and in your view,
09:33 14 because Tseng has done that, because Tseng has pointed
09:33 15 to that one particular surface with the label 311, you
09:33 16 believe that is where light will be entering Tseng's
09:33 17 light conductor in that embodiment; correct?

09:33 18 MR. ISRAELSEN: Object to form.

09:33 19 THE WITNESS: That is correct. That's
09:34 20 consistent with the description, and that's consistent
09:33 21 with enhanced illumination.

09:34 22 MR. HERMAN: Q. So in your view, there is
09:34 23 importance to the surfaces that Tseng has chosen to
09:34 24 number in his figures; true?

09:34 25 MR. ISRAELSEN: Object to form.

09:34 1 THE WITNESS: That's a generally true
09:34 2 statement.

09:34 3 MR. HERMAN: Q. Now, if we'd turn to
09:34 4 paragraph 94.

09:34 5 Paragraph 94 is part of the discussion of
09:34 6 Tseng's second embodiment; is that right?

09:34 7 A That is talking about the second embodiment.

09:34 8 Q And at the end of that paragraph, Tseng notes
09:34 9 that this embodiment includes a circular rib 371 that
09:34 10 exposes outside to enhance light transmission and
09:35 11 illumination; right?

09:34 12 MR. ISRAELSEN: Object to form.

09:34 13 THE WITNESS: That is the -- the language
09:34 14 that you read.

09:34 15 MR. HERMAN: Q. So the purpose of circular
09:34 16 rib 371 is to expose outside to enhance light
09:35 17 transmission and illumination; true?

09:35 18 MR. ISRAELSEN: Objection.

09:35 19 THE WITNESS: That's -- that's what the
09:35 20 language says.

09:35 21 MR. HERMAN: Q. And if we'd turn to
09:35 22 Figure 27, which is on page 20.

09:35 23 A All right.

09:35 24 So I'm now looking at my paper copy.

09:35 25 Q Figure 27 is a figure that relates to the

09:35 1 second embodiment; true?

09:35 2 A That's correct.

09:35 3 Q And Tseng labels rib 371 in Figure 27;
09:35 4 correct?

09:35 5 MR. ISRAELSEN: Object to form.

09:35 6 THE WITNESS: That's correct. That's
09:35 7 correct.

09:35 8 MR. HERMAN: Q. And the label 371 points to
09:35 9 a surface on the side of Tseng's pullout faucet not
09:36 10 the bottom; correct?

09:36 11 MR. ISRAELSEN: Object to form.

09:36 12 THE WITNESS: I would view the callout 371 as
09:36 13 reaching further than merely the surface. It does
09:36 14 seem to reach into the body of that rib structure.

09:36 15 MR. HERMAN: Q. But it passes through a side
09:36 16 surface, not a bottom surface, that label, 3- -- 371;
09:36 17 true?

09:36 18 MR. ISRAELSEN: Object to form.

09:36 19 THE WITNESS: The -- the -- the callout line
09:36 20 does pass through a side surface.

09:36 21 MR. HERMAN: Q. And it does not pass through
09:36 22 a bottom surface; correct?

09:36 23 MR. ISRAELSEN: Object to form.

09:36 24 THE WITNESS: That's -- that's how it's
09:36 25 drawn.

09:36 1 MR. HERMAN: Q. Now, if we'd turn to
09:36 2 paragraph 98.

09:36 3 Paragraph 98 is part of the discussion with
09:36 4 Tseng again that relates to the third embodiment;
09:36 5 correct?

09:36 6 MR. ISRAELSEN: Object to form.

09:36 7 THE WITNESS: That's correct.

09:36 8 MR. HERMAN: Q. And here, Tseng explains
09:37 9 that its light conductor has -- in the third
09:37 10 embodiment -- has an annular protrusion 383 extended
09:37 11 outwardly; is that right?

09:37 12 MR. ISRAELSEN: Object to form.

09:37 13 THE WITNESS: That is correct.

09:37 14 MR. HERMAN: Q. And Tseng notes at the
09:37 15 beginning of paragraph 98, that the purpose of that
09:37 16 annular protrusion 383 is to enhance light
09:37 17 transmission; correct?

09:37 18 MR. ISRAELSEN: Object to form.

09:37 19 THE WITNESS: That -- that is the language
09:37 20 that is there.

09:37 21 MR. HERMAN: Q. Now, Figure 32, which is on
09:37 22 page 23 of the PDF of Tseng, it is a figure that shows
09:37 23 one view of the third embodiment; correct?

09:37 24 A That's correct.

09:38 25 Q And in that figure, Tseng has labeled annular

09:38 1 protrusion 383; correct?

09:38 2 MR. ISRAELSEN: Object to form.

09:38 3 THE WITNESS: It has.

09:38 4 MR. HERMAN: Q. And the label 383 points to
09:38 5 a side surface on the pullout faucet, not a bottom
09:38 6 surface; correct?

09:38 7 A That is correct.

09:38 8 MR. ISRAELSEN: Object to form.

09:38 9 MR. HERMAN: Q. Now, looking at Figure 32,
09:38 10 is it your opinion that absolutely no light whatsoever
09:38 11 emitted by LEDs 40 will make its way to the side
09:38 12 surface to which item number 383 is pointing?

09:38 13 MR. ISRAELSEN: Objection.

09:38 14 THE WITNESS: I -- I don't think I could say
09:38 15 that.

09:38 16 MR. HERMAN: Q. So at least some light will
09:38 17 make its way to that side surface, in your view; true?

09:38 18 MR. ISRAELSEN: Objection.

09:38 19 THE WITNESS: Well, according to the, say,
09:39 20 paragraph 98, the rib is extending outwardly to
09:39 21 enhance light transmission. And a person of ordinary
09:39 22 skill in the art would understand that the reason to
09:39 23 do that is to get it out of the way of the down-coming
09:39 24 light. That is not to say that some photons would not
09:39 25 leak -- because nothing is perfect -- would leak or

09:39 1 scatter, even, in a trans- -- transparent material and
09:39 2 reach that surface 383.

09:39 3 MR. HERMAN: Q. So even if the material was
09:39 4 transparent, some photons would make their way to
09:39 5 surface 383; correct?

09:39 6 MR. ISRAELSEN: Objection.

09:39 7 THE WITNESS: I think that is believable.

09:39 8 MR. HERMAN: Q. Now, if the material that
09:39 9 the light conductor is made out of is translucent,
09:39 10 would light photons also make their way to surface
09:39 11 383?

09:39 12 MR. ISRAELSEN: Objection.

09:39 13 THE WITNESS: Well, you would lose enhanced
09:39 14 illumination. But again, no one could say that no
09:40 15 photons at all would reach 383.

09:40 16 MR. HERMAN: Q. So you'll agree that
09:40 17 regardless of whether the light conductor is made of
09:40 18 translucent or transparent material, light photons
09:40 19 will make their way, at least to some degree, to
09:40 20 surface 383?

09:40 21 MR. ISRAELSEN: Objection.

09:40 22 THE WITNESS: Well, the question is, is it a
09:40 23 meaningful amount; and I don't believe it would be.
09:40 24 So cannot say that no photons whatsoever would get
09:40 25 there, but the way I read 363 is that no meaningful

09:40 1 light would reach 383, because that would defeat the
09:40 2 enhanced illumination part.

09:40 3 (Document previously marked Exhibit 1008
09:40 4 for identification.)

09:40 5 MR. HERMAN: Q. Now, I'm going to put
09:40 6 another exhibit into the chat. Let me go where I want
09:40 7 to. I'm going to put another exhibit into the chat,
09:40 8 which -- which has been previously marked as
09:40 9 Exhibit 1008.

09:40 10 Let me know when you have a chance to look at
09:40 11 that.

09:41 12 A Okay. I have it.

09:41 13 Q What is Exhibit 1008?

09:41 14 A So Exhibit 1008 is a translation of what is
09:41 15 called the Mizuno patent. It's Petitioner's
09:41 16 Exhibit 1008.

09:41 17 Q And this is another of the prior art
09:41 18 references that you re- -- reviewed and assembled in
09:41 19 your declaration; correct?

09:41 20 MR. ISRAELSEN: Object to form.

09:41 21 THE WITNESS: That's correct.

09:41 22 MR. HERMAN: Now, in paragraph 2 of Mizuno,
09:41 23 which is on the second page, Mizuno states that:

09:41 24 (As read):

09:41 25 "Conventionally, various types of faucets

09:41 1 have been installed in water-running hygiene equipment
09:42 2 rooms such as kitchens and washrooms."

09:42 3 Do you see that?

09:42 4 A I do.

09:42 5 Q So generally speaking, what Mizuno teaches is
09:42 6 a hydroelectric generator that's intended for use with
09:42 7 these types of conventional kitchen and washroom
09:42 8 faucets; true?

09:42 9 MR. ISRAELSEN: Objection.

09:42 10 THE WITNESS: At a high level, that is true.

09:42 11 MR. HERMAN: Q. Now, if we look back at
09:42 12 Tseng, which is Exhibit 1004, which I believe you
09:42 13 already have. And if you can turn to paragraph
09:42 14 1064(b), which is on page 33.

09:42 15 A Okay.

09:42 16 Q At the end of that paragraph, Tseng explains
09:42 17 that its pullout faucet has the same size and
09:42 18 appearance as a conventional one; true?

09:43 19 MR. ISRAELSEN: Object to form.

09:43 20 THE WITNESS: You basically read that
09:43 21 correctly.

09:43 22 MR. HERMAN: Q. So what Tseng is trying to
09:43 23 express is that its pullout faucet is of the
09:43 24 conventional faucet size; correct?

09:43 25 MR. ISRAELSEN: Object to form.

09:43 1 THE WITNESS: Conventional pullout faucet
09:43 2 size, which I'm familiar with.

09:43 3 (Document previously marked Exhibit 1001
09:43 4 for identification.)

09:43 5 MR. HERMAN: Q. Now, I'm going to put
09:43 6 another exhibit into the chat. This one has been
09:43 7 previously marked as Exhibit 1001. Let me know when
09:43 8 you have a chance to look at that.

09:43 9 A Okay. I'm there.

09:43 10 Q What is Exhibit 1001?

09:44 11 A 1001 is petitioner's exhibit, and it's also
09:44 12 the '363 patent.

09:44 13 Q And this is the '363 patent that you reviewed
09:44 14 in connection with your declaration; correct?

09:44 15 A Yes.

09:44 16 Q Now, on the cover of the '363 patent, there's
09:44 17 an abstract; true?

09:44 18 A True.

09:44 19 Q And the abstract references a spray head for
09:44 20 dispensing water; correct?

09:44 21 A It does.

09:44 22 Q The abstract does not specifically mention
09:44 23 the kitchen pull-down faucet or a showerhead; correct?

09:44 24 MR. ISRAELSEN: Object to form.

09:44 25 THE WITNESS: The abstract does not do that.

09:44 1 MR. HERMAN: Q. Now, if you turn to column 1
09:44 2 of the '363 patent, which appears on page 16 of the
09:44 3 PDF, there's a section entitled:

09:44 4 (As read):

09:45 5 "Background and summary of the disclosure."

09:45 6 Do you see that?

09:45 7 A I do.

09:45 8 Q And the very first paragraph in that section
09:45 9 says:

09:45 10 (As read):

09:45 11 "The present invention relates to fluid
09:45 12 delivery devices, and more particularly, to an
09:45 13 illumination device for a spray head."

09:45 14 Do you see that?

09:45 15 A Yes.

09:45 16 MR. ISRAELSEN: Object to form.

09:45 17 MR. HERMAN: Q. That paragraph also does not
09:45 18 mention either a kitchen pull-down faucet or a
09:45 19 showerhead; correct?

09:45 20 MR. ISRAELSEN: Object to form.

09:45 21 THE WITNESS: That particular sentence does
09:45 22 not say that.

09:45 23 MR. HERMAN: Q. Now, there's a paragraph
09:45 24 that begins at about line 27 in column 1, that begins
09:45 25 "the present disclosure provides"; do you see that?

09:45 1 A I do.

09:45 2 Q And in the middle of the paragraph, the word
09:45 3 "illustratably" appears; correct?

09:45 4 MR. ISRAELSEN: Object to form.

09:45 5 THE WITNESS: I see that word.

09:45 6 MR. HERMAN: Q. And the -- following
09:46 7 illustratably, the word -- there's -- it says "the
09:46 8 spray head may"; do you see that?

09:46 9 A You read that correctly.

09:46 10 Q And then there's two reference examples, a
09:46 11 pull-down spray head, and a pendant showerhead
09:46 12 configured to be suspended downwardly from the
09:46 13 ceiling; do you see that?

09:46 14 MR. ISRAELSEN: Object to form.

09:46 15 THE WITNESS: I see those words.

09:46 16 MR. HERMAN: So what that sentence is
09:46 17 expressing is that the pull-down spray head and the
09:46 18 pendant showerhead are illustrative nonlimiting
09:46 19 examples of the patent subject matter; correct?

09:46 20 MR. ISRAELSEN: Object to form.

09:46 21 THE WITNESS: To me, the limiting part comes
09:46 22 in the claims. They are citing potential -- at a high
09:46 23 level, potential embodiments.

09:46 24 MR. HERMAN: Q. And in this particular
09:46 25 portion of the specification, '363 calls those

09:47 1 potential embodiments illustrative; correct?

09:47 2 MR. ISRAELSEN: Objection.

09:47 3 THE WITNESS: The -- that is the word the
09:47 4 inventors used.

09:47 5 (Document previously marked Exhibit 1006
09:47 6 for identification.)

09:47 7 MR. HERMAN: Q. Now, I'm going to put an
09:47 8 exhibit that's been previously marked Exhibit 1006 in
09:47 9 the chat.

09:47 10 Let me know when you've got that.

09:47 11 A Okay. I'm there.

09:47 12 Q What is Exhibit 1006?

09:47 13 A So 1006 is Petitioner's Exhibit 1006. It is
09:47 14 the Carter reference.

09:47 15 Q And this is the Carter reference that you
09:47 16 reviewed in connection of your declaration; correct?

09:47 17 A That is correct.

09:48 18 Q Now, if we look at the abstract of the Carter
09:48 19 reference, which is on the cover, it begins by
09:48 20 referencing a plumbing fixture using an integrated
09:48 21 light pipe; do you see that?

09:48 22 MR. ISRAELSEN: Objection to form.

09:48 23 THE WITNESS: You read that correctly.

09:48 24 MR. HERMAN: Q. And if we turn to
09:48 25 paragraph 3 of Carter.

09:48 1 Let me know when you're there.

09:48 2 A I see that.

09:48 3 Q Paragraph 2 is part of the section that
09:48 4 Carter entitles:

09:48 5 (As read):

09:48 6 "Field of the invention."

09:48 7 Correct?

09:48 8 MR. ISRAELSEN: Object to form.

09:48 9 THE WITNESS: Correct.

09:48 10 MR. HERMAN: Q. And the paragraph begins
09:48 11 with a sentence that reads:

09:48 12 "The present invention relates generally to
09:48 13 the field of illuminated plumbing fixtures."

09:48 14 Correct?

09:48 15 MR. ISRAELSEN: Object to form.

09:48 16 THE WITNESS: And then it continues:

09:48 17 (As read):

09:49 18 "More specifically..."

09:49 19 Blah, blah, blah, but you -- you did read
09:49 20 that sentence correctly.

09:49 21 MR. HERMAN: Q. And the field that Carter
09:49 22 identifies itself as relating generally to is the
09:49 23 field of illuminated plumbing fixtures; true?

09:49 24 MR. ISRAELSEN: Objection.

09:49 25 THE WITNESS: That -- that is what that first

09:49 1 sentence says.

09:49 2 MR. HERMAN: Q. Is a kitchen spray head a
09:49 3 plumbing fixture?

09:49 4 A It is.

09:49 5 MR. ISRAELSEN: Objection.

09:49 6 MR. HERMAN: Is a showerhead a plumbing
09:49 7 fixture?

09:49 8 MR. ISRAELSEN: Objection.

09:49 9 THE WITNESS: It is, but not under the "more
09:49 10 specifically" continuation of Carter's paragraph 3.

09:49 11 MR. HERMAN: Q. Now, if we turn to
09:49 12 paragraph 7 of Carter.

09:49 13 That's part of the summary of the invention;
09:49 14 correct?

09:49 15 MR. ISRAELSEN: Object to form.

09:49 16 THE WITNESS: Correct.

09:49 17 MR. HERMAN: Q. Paragraph 7 lists materials
09:49 18 that can be employed when forming Carter's light pipe;
09:49 19 true?

09:49 20 MR. ISRAELSEN: Object to form.

09:49 21 THE WITNESS: I would say only at a high
09:50 22 level.

09:50 23 MR. HERMAN: Q. So there is a number 3 kind
09:50 24 of about two-thirds of the way down the paragraph that
09:50 25 is followed by the words "integrated light pipe" or

09:50 1 "second shot is a."

09:50 2 Do you see that?

09:50 3 A I do.

09:50 4 MR. ISRAELSEN: Object to form.

09:50 5 MR. HERMAN: Q. And then it goes on to
09:50 6 reference clear/clear tinted/clear colored/semi-clear
09:50 7 plastic; correct?

09:50 8 MR. ISRAELSEN: Object to form.

09:50 9 THE WITNESS: You read those words correctly.

09:50 10 MR. HERMAN: Q. So those are materials that
09:50 11 Carter contemplates using when forming its light pipe;
09:50 12 true?

09:50 13 MR. ISRAELSEN: Object to form.

09:50 14 THE WITNESS: At a high level. When you say
09:50 15 "materials," I'm thinking polycarbonate, acrylic,
09:50 16 things like that. I don't think Carter gets to that
09:50 17 level.

09:50 18 MR. HERMAN: Now, I've got one more exhibit
09:51 19 which I'd like you to take a look at. That's
09:51 20 Exhibit 2009.

09:51 21 (Document previously marked Exhibit 2009
09:51 22 for identification.)

09:51 23 MR. HERMAN: Q. For some reason, this one is
09:51 24 very large, so it may take a minute to download. Let
09:51 25 me know when you've got that.

09:51 1 A Okay. I have that.

09:51 2 Q So what is Exhibit 2009?

09:51 3 A This is Delta Exhibit 2009. It is what I
09:51 4 would call the '874 patent. It is -- my recollection
09:51 5 is it's prior art cited in Tseng and -- what else? I
09:51 6 think -- I think that's about it.

09:51 7 I think -- well, yeah. I don't believe --
09:51 8 Petitioner put it forth, and Cook -- Cook was not
09:52 9 familiar with it, as I recall.

09:52 10 Q This is a document that you reviewed in
09:52 11 arriving at the opinions in your declaration; correct?

09:52 12 A That is correct, within limited -- you know,
09:52 13 for limited use.

09:52 14 Q Now, correct me if I'm wrong, but I think one
09:52 15 of the things you said about this reference is that in
09:52 16 your view, a POSITA would have reviewed the
09:52 17 '874 patent to further understand the problem Tseng
09:52 18 addresses; is that correct?

09:52 19 MR. ISRAELSEN: Objection.

09:52 20 THE WITNESS: That's correct.

09:52 21 MR. HERMAN: Q. And -- and I believe you
09:52 22 also expressed the opinion that a POSITA would have
09:52 23 preserved the benefits identified in the '874 patent
09:52 24 when implementing Tang -- Tseng; correct?

09:52 25 MR. ISRAELSEN: Objection.

09:52 1 THE WITNESS: I believe that's correct.

09:52 2 MR. HERMAN: All right.

09:52 3 Q Now, could you turn to column 3 of the
09:53 4 '874 patent, which is on page 9 of the PDF. Let me
09:53 5 know when you're there.

09:53 6 A Okay. I'm there.

09:53 7 Q In column 3, starting at about line 18, there
09:53 8 is a paragraph that references a light-permeable light
09:53 9 guide outflow pipe 50.

09:53 10 Do you see that?

09:53 11 MR. ISRAELSEN: Object to form.

09:53 12 THE WITNESS: I see that.

09:53 13 MR. HERMAN: Q. And the rest of the
09:53 14 paragraph explains that that light-permeable light
09:53 15 guide outflow pipe 50 has a light transmission
09:53 16 region 52 and an input face 56 and an end face 58;
09:53 17 correct?

09:53 18 MR. ISRAELSEN: Objection.

09:54 19 THE WITNESS: Correct. So it's describing
09:54 20 structure that's -- that's quite similar to Tseng.

09:54 21 MR. HERMAN: Q. So -- so that
09:54 22 light-permeable light guide outflow pipe 50 is largely
09:54 23 analogous to Tseng's light conductor; true?

09:54 24 MR. ISRAELSEN: Objection.

09:54 25 THE WITNESS: I would say that at -- at a --

09:54 1 at a very high level.

09:54 2 MR. HERMAN: Q. So -- so generally, it's
09:54 3 intended to transmit light that's generated by LEDs
09:54 4 from a location within the spray head to the out --
09:54 5 the -- the -- the end face 58; correct?

09:54 6 MR. ISRAELSEN: Objection.

09:54 7 THE WITNESS: That's how I would read that.

09:54 8 MR. HERMAN: Q. Now, if we'd turn down to
09:54 9 the paragraph that starts at line 52, also in
09:54 10 column 3. Let me know when you're there.

09:54 11 A Okay. I'm there.

09:54 12 Q That paragraph explains that light source 70
09:55 13 emits light that is input at the input face 56, and
09:55 14 then is output from both the end face 58 and the outer
09:55 15 surface area 72; correct?

09:55 16 MR. ISRAELSEN: Objection.

09:55 17 THE WITNESS: I think you paraphrased that a
09:55 18 bit. So, for example, I -- I don't think I see the
09:55 19 word "emits."

09:55 20 But anyway, we -- we can read the paragraph,
09:55 21 if you want.

09:55 22 MR. HERMAN: Q. So to paraphrase, light is
09:55 23 input into the end face 58, and then light is output
09:55 24 from both the end -- sorry. Strike that. Let me
09:55 25 start again.

09:55 1 Light is input into the input face 56;

09:55 2 correct?

09:55 3 A Correct.

09:55 4 Q Light then proceeds through the light

09:55 5 transmission region 52; correct?

09:55 6 A That -- that seems to jive with the structure

09:56 7 that's disclosed.

09:56 8 Q And then per the '874 patent, light is at

09:56 9 least partially output from the output -- outflow pipe

09:56 10 50 at the end face 58; correct?

09:56 11 A That's correct.

09:56 12 Q And then the '874 patent says:

09:56 13 (As read):

09:56 14 "Moreover, light may also be output from the

09:56 15 outflow pipe 50 in the region of the exposed outer

09:56 16 surface area 72."

09:56 17 Correct?

09:56 18 MR. ISRAELSEN: Object to form.

09:56 19 THE WITNESS: Well, let me see what that

09:56 20 exposed outer surface 72 is.

09:56 21 So I think you read that language correctly.

09:56 22 MR. HERMAN: Q. So light is coming out of

09:56 23 both the end face 58 and the region of the exposed

09:56 24 outer surface area 72 between the shoulder 60 and the

09:56 25 end face 58; correct?

09:56 1 MR. ISRAELSEN: Objection.

09:56 2 THE WITNESS: Well, that -- I mean, that --
09:56 3 that sentence says:

09:56 4 (As read):

09:57 5 "Moreover, light may also be output from the
09:57 6 outflow pipe 50 in the region of the exposed outer
09:57 7 surface area 72 between the shoulder 60," which I see,
09:57 8 "and the end face 58 apart from the -- apart from in
09:57 9 the region of the bead 42."

09:57 10 Which -- okay. Yeah, it's a little confusing
09:57 11 exactly what that's talking about with respect to 42.
09:57 12 So it's -- it's not entirely clear what's going on
09:57 13 there.

09:57 14 MR. HERMAN: Q. So if we'd look at Figure 2
09:57 15 of the '874 patent.

09:58 16 Let me know when you're there.

09:58 17 A Okay. I'm there on the paper version.

09:58 18 Q All right.

09:58 19 End face 58 is labeled at the bottom of
09:58 20 Tseng's spray -- or the '874 patent's spray head;
09:58 21 correct?

09:58 22 MR. ISRAELSEN: Object to form.

09:58 23 THE WITNESS: Correct.

09:58 24 MR. HERMAN: Q. And outer surface area 72 is
09:58 25 labeled out of the side of Tseng's -- or the

09:58 1 '874 patent's spray head; correct?

09:58 2 MR. ISRAELSEN: Object to form.

09:58 3 THE WITNESS: Yeah. Only on the left side,
09:58 4 though.

09:58 5 MR. HERMAN: Q. And as we just read, the
09:58 6 '874 patent discusses light coming out of both
09:58 7 end face 78 and outer surface area 72; correct?

09:58 8 MR. ISRAELSEN: Objection.

09:58 9 THE WITNESS: Well, let me confirm that that
09:58 10 language you were talking about before applies --
09:59 11 which figure that applies to -- Figures 1, 2, and 4.
09:59 12 I'm just trying to figure out whether they're also
09:59 13 talking about Figure 3 there or not.

09:59 14 It kind of seems to me they're only talking
09:59 15 about Figure 2 in that -- with that res- -- with
09:59 16 respect to that.

09:59 17 MR. HERMAN: Q. And -- and we were just
09:59 18 referring to Figure 2 as well; correct?

09:59 19 MR. ISRAELSEN: Objection.

09:59 20 THE WITNESS: Well, we started talking about
09:59 21 Figure 3.

09:59 22 MR. HERMAN: Q. That may have been a
09:59 23 mistake. I intended to direct you to Figure 2.

09:59 24 A Okay. All right.

09:59 25 So earlier, I was answering with respect to

09:59 1 Figure 3.

09:59 2 Q All right.

09:59 3 So in Figure 2, outer surface area 72 is
10:00 4 labeled on the side of the '874 patent's spray head;
10:00 5 correct?

10:00 6 MR. ISRAELSEN: Objection to form.

10:00 7 THE WITNESS: Only on the left side.

10:00 8 MR. HERMAN: Q. So it's -- it's present on
10:00 9 the left side of Tseng's spray head, correct, or the
10:00 10 '874 patent's --

10:00 11 MR. ISRAELSEN: Object to form.

10:00 12 MR. HERMAN: Q. -- spray head; correct?

10:00 13 MR. ISRAELSEN: Object to form.

10:00 14 THE WITNESS: Correct.

10:00 15 MR. HERMAN: Q. And end face 58 is on the
10:00 16 bottom of the depicted spray head in Figure 2;
10:00 17 correct?

10:00 18 MR. ISRAELSEN: Object to form.

10:00 19 THE WITNESS: Correct.

10:00 20 MR. HERMAN: Q. And for -- and per the
10:00 21 '874 patent, light is emitted both from end face 58
10:00 22 and from outer surface area 72; true?

10:00 23 MR. ISRAELSEN: Object to form.

10:00 24 THE WITNESS: So according to '874, column 3,
10:00 25 lines -- about 57 to 60, that -- that is what that

10:00 1 says.

10:00 2 MR. HERMAN: Q. Now, if we'd turn to
10:00 3 column 4.

10:01 4 Starting at line 2, Tseng states that the --
10:01 5 or the '874 patent states that:

10:01 6 (As read):

10:01 7 "Light emitted by the diode 74 emerges
10:01 8 through the end face 58 and through the outer surface
10:01 9 area 72."

10:01 10 Correct?

10:01 11 MR. ISRAELSEN: Object to form.

10:01 12 THE WITNESS: You read that correctly.

10:01 13 MR. HERMAN: All right.

10:01 14 Q So in the '874 patent, light is not emitted
10:01 15 out of face 30 -- 58 like a flashlight. Instead, it
10:01 16 comes out of face 58 and outer surface 72; true?

10:01 17 MR. ISRAELSEN: Object to form.

10:01 18 THE WITNESS: Well, I don't think you can
10:01 19 rule out that the light is coming out of 58 to act
10:01 20 like a flashlight to illuminate and better see the
10:01 21 dirt on your dishes or whatever. You can't rule that
10:01 22 out.

10:01 23 MR. HERMAN: Q. The '874 patent, however,
10:01 24 expressly states that light is also coming out of
10:01 25 outer surface area 72; doesn't it?

10:02 1 MR. ISRAELSEN: Object to form.

10:02 2 THE WITNESS: It contains that language.

10:02 3 MR. HERMAN: Q. And light is coming out of
10:02 4 outer surface area 72 despite the fact that light
10:02 5 enters only via input face 56; correct?

10:02 6 MR. ISRAELSEN: Object to form.

10:02 7 THE WITNESS: Well, let me see.

10:02 8 That would seem to be the implication.

10:02 9 MR. HERMAN: Q. Now, if we'd turn to
10:02 10 column 6. There is a paragraph that begins at about
10:02 11 line 27. Let me know when you're there.

10:03 12 A Okay. I'm there.

10:03 13 Q In the middle of the paragraph, the
10:03 14 '874 patent says that:

10:03 15 (As read):

10:03 16 "The end face may have virtually any desired
10:03 17 form, with the result that an incidence of light from
10:03 18 the outflow pipe 50 can be influenced virtually as
10:03 19 desired."

10:03 20 Correct?

10:03 21 MR. ISRAELSEN: Object to form.

10:03 22 THE WITNESS: So you did read that language
10:03 23 correctly.

10:03 24 MR. HERMAN: Q. And then the '874 patent
10:03 25 goes on to explain that:

10:03 1 (As read):

10:03 2 "The exposed outer surface area may likewise
10:03 3 be buried in its optical properties, for example, by
10:03 4 the surface being roughened with the result that the
10:03 5 emerging light is scattered to a greater extent, or by
10:03 6 the outer surface area being colored."

10:03 7 Do you see that?

10:03 8 MR. ISRAELSEN: Object to form.

10:03 9 THE WITNESS: You skipped over a bunch of
10:04 10 stuff, like curved face that may suggest a lensing
10:04 11 effect that would enhance the flashlight effect. But
10:04 12 you did read the language that is on that page.

10:04 13 MR. HERMAN: Q. So one of the benefits that
10:04 14 the '874 patent is articulating is that its outflow
10:04 15 pipe 50 can be structured as desired to influence how
10:04 16 light is being omitted; correct?

10:04 17 MR. ISRAELSEN: Object to form.

10:04 18 THE WITNESS: I'm sorry. Did you call that a
10:04 19 benefit? What -- what -- please repeat the question.

10:04 20 MR. HERMAN: Yeah.

10:04 21 Q One of the benefits that's articulated in
10:04 22 the '874 patent is the outflow pipe 50 can be
10:04 23 influenced virtually as desired to change the way that
10:04 24 light is emitted; correct?

10:04 25 MR. ISRAELSEN: Objection to form.

10:04 1 THE WITNESS: I'm not sure I'd characterize
10:04 2 it as a benefit.

10:04 3 MR. HERMAN: Q. But it's a feature that's
10:04 4 identified in the '874 patent; true?

10:04 5 MR. ISRAELSEN: Object to form.

10:04 6 THE WITNESS: So '874 talks about it.

10:05 7 MR. HERMAN: Q. Now, if you can turn back to
10:05 8 column 4, there's a paragraph that begins at about
10:05 9 line 24.

10:05 10 Let me know when you're there.

10:05 11 A Okay. I'm there.

10:05 12 Q That paragraph begins "the supply of
10:05 13 electrical energy."

10:05 14 Do you see that?

10:05 15 MR. ISRAELSEN: Object to form.

10:05 16 THE WITNESS: I see that.

10:05 17 MR. HERMAN: Q. And the paragraph concludes
10:05 18 by referencing batteries or accumulators may also be
10:05 19 used instead of the power pack.

10:05 20 Do you see that?

10:05 21 MR. ISRAELSEN: Object to form.

10:05 22 THE WITNESS: A -- the language is:

10:05 23 (As read):

10:05 24 "A power pack is used as energy source for
10:05 25 the power supply, although batteries or accumulators

10:06 1 may also be used instead of the power pack."

10:06 2 MR. HERMAN: Q. So what the '874 patent is
10:06 3 expressing here is that its faucet could either be
10:06 4 hardwired or it may be supplied with power using
10:06 5 batteries; correct?

10:06 6 MR. ISRAELSEN: Object to form.

10:06 7 THE WITNESS: Well, '874 is still hardwired.
10:06 8 It's just the wire is a lot shorter. It goes from the
10:06 9 batteries depicted below the countertop up to the
10:06 10 spray head.

10:06 11 MR. HERMAN: Q. Now, if we turn to column 8,
10:06 12 and specifically, the paragraph that begins at line
10:06 13 32.

10:06 14 Let me know when you're there.

10:07 15 A I'm just reading it. Okay.

10:07 16 Q So that paragraph references a switching
10:07 17 element, which may be designed as a flow monitor which
10:07 18 detects water flow; correct?

10:07 19 MR. ISRAELSEN: Object to form.

10:07 20 THE WITNESS: You read that correctly.

10:07 21 MR. HERMAN: Q. And the '874 patent also
10:07 22 explains in that paragraph that lights are switched on
10:07 23 and power supplied to the lights only when water is
10:07 24 flowing if you're using such a switching element;
10:07 25 correct?

10:07 1 MR. ISRAELSEN: Object to form.

10:07 2 THE WITNESS: I -- I think you've added some
10:07 3 things there that don't -- that aren't -- aren't said,
10:08 4 like "only."

10:08 5 MR. HERMAN: Q. But the general purpose of
10:08 6 the switching element is you turn the lights on when
10:08 7 the water is flowing and turn the lights off when the
10:08 8 water is not flowing; correct?

10:08 9 MR. ISRAELSEN: Object to form.

10:08 10 THE WITNESS: Let's see.

10:08 11 Well, frankly, it doesn't say anything about
10:08 12 turning off in that paragraph.

10:08 13 MR. HERMAN: Q. Well, the paragraph before,
10:08 14 it does say -- reference "many diverse possibilities
10:08 15 are conceived for switching on and switching off the
10:08 16 light source 70"; true?

10:08 17 MR. ISRAELSEN: Object to form.

10:08 18 THE WITNESS: Those words are in that
10:08 19 paragraph.

10:08 20 MR. HERMAN: Q. And one of those
10:08 21 possibilities is using the switching element that's
10:08 22 discussed in the paragraph that begins at paragraph --
10:08 23 at line 32; true?

10:08 24 MR. ISRAELSEN: Same objection.

10:08 25 THE WITNESS: Can you repeat the question.

10:09 1 MR. HERMAN: Q. So one of the ways that the
10:09 2 '874 patent contemplates switching on and switching
10:09 3 off the light source 70 is using the switching element
10:09 4 designed as a flow monitor that's discussed in
10:09 5 paragraph 32.

10:09 6 Is that a fair reading of the '874 patent?

10:09 7 MR. ISRAELSEN: Objection.

10:09 8 THE WITNESS: I think you could get that
10:09 9 understanding.

10:09 10 MR. HERMAN: All right.

10:09 11 I don't have any further questions.

10:09 12 MR. ISRAELSEN: All right.

10:09 13 Can we take a five-minute break.

10:09 14 MR. HERMAN: Sure. Yeah. However much time
10:09 15 you need.

10:09 16 MR. ISRAELSEN: All right. Thanks.

10:09 17 (Recess taken.)

10:09 18

10:09 19 EXAMINATION

10:09 20 BY MR. ISRAELSEN:

10:25 21 Q Dr. Klopp, earlier, you were asked some
10:25 22 questions about Tseng's LED element 40.

10:25 23 Do you recall that discussion?

10:25 24 A Yes.

10:25 25 Q And you were also asked some questions about

10:25 1 Tseng's orientation of LED element 40.

10:25 2 Do you recall that discussion?

10:25 3 A Yes.

10:25 4 Q And you were asked some questions about
10:25 5 Tseng's input face 311 and output face 313.

10:25 6 Do you recall that discussion?

10:25 7 A Generally, yes.

10:25 8 Q What is your opinion of how a person of
10:25 9 ordinary skill in the art would have understand
10:25 10 Tseng's disclosure regarding the direction of light --
10:25 11 strike that.

10:25 12 What is your opinion of how a person of
10:25 13 ordinary skill in the art would have understood
10:25 14 Tseng's disclosure regarding the direction of how
10:25 15 light would emit from Tseng's spray head?

10:25 16 A It's downward, because the LEDs are pointing
10:25 17 downward into that input face 311 toward that output
10:26 18 face 313.

10:26 19 MR. ISRAELSEN: I have no further questions.

10:26 20 MR. HERMAN: Nothing else from me.

10:26 21 So I think, with that, Doctor, we're -- I
10:26 22 think we're done. So thank you for your time, and --
10:26 23 and enjoy the rest of your afternoon, which I think
10:26 24 you've just gotten a little bit more back of, but
10:26 25 maybe you lwere expecting it in advance, but...

10:26 1 STENOGRAPHIC REPORTER: Off the record.

10:26 2 And does everyone need a copy?

10:26 3 MR. HERMAN: I'll need a transcript. I do
10:26 4 not need a rough; but the transcript, unfortunately, I
10:26 5 need relatively quickly because I need to file it by
10:26 6 the 30th next week. So I need it before then.

10:26 7 STENOGRAPHIC REPORTER: You'll have it by
10:26 8 Monday. I have your standing order.

10:26 9 Counsel, do you need a copy?

10:26 10 MR. ISRAELSEN: We don't need any rush or
10:26 11 anything. Just -- actually, we don't need a copy.

10:27 12 Actually, can we have one just at regular
10:27 13 speed, not a rush?

10:27 14 STENOGRAPHIC REPORTER: Sure.

15 (WHEREUPON, the deposition concluded
16 at 10:27 a.m.)

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DECLARATION UNDER PENALTY OF PERJURY

I, Richard W. Klopp, Ph.D., do hereby certify
under penalty of perjury that I have read the
foregoing transcript of my remote deposition, taken
on April 25, 2025, that I have made such
corrections as appear noted herein in ink;
initialed by me; that my testimony contained
herein, as corrected, is true and correct.

Dated this ____ day of _____, 2025, at

_____.

SIGNATURE OF WITNESS

CERTIFICATE OF STENOGRAPHIC REPORTER

I, ANDREA M. IGNACIO, hereby certify that the witness in the foregoing remote deposition was by me sworn to tell the truth, the whole truth, and nothing but the truth in the within-entitled cause;

That said remote deposition was taken in shorthand by me, a disinterested person, at the time and place therein stated, and that the testimony of the said witness was thereafter reduced to typewriting, by computer, under my direction and supervision;

That before completion of the deposition, review of the transcript [] was [x] was not requested. If requested, any changes made by the deponent (and provided to the reporter) during the period allowed are appended hereto.

I further certify that I am not of counsel or attorney for either or any of the parties to the said deposition, nor in any way interested in the event of this cause, and that I am not related to any of the parties thereto.

Dated:



ANDREA M. IGNACIO, RPR, CRR, CCRR, CLR, CSR No. 9830

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Richard W. Klopp, Ph.D.

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