

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

JUUL LABS, INC.,
Petitioner,
v.
NJOY, LLC,
Patent Owner

IPR2024-00160

Patent 11,497,864

IPR 2024-00161

Patent 10,334,881 B1

REMOTE VIDEO DEPOSITION
OF DANIEL HILLENBRANDT
Tuesday, November 5, 2024
9:33 a.m. EDT

Dana Welch, CSR, RPR, CRR

Tuesday, November 5, 2024

9:33 a.m. EDT

Remote Video Deposition of DANIEL
HILLENBRANDT, appearing via Zoom from
Strongsville, Ohio, held before Dana Welch,
Certified Shorthand Reporter, Registered
Professional Reporter, Certified Realtime
Reporter.



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I N D E X

WITNESS:

DANIEL HILLENBRANDT

EXAMINATION:

PAGE:

BY MR. DOKHANCHY

6

EXHIBITS MARKED:

NO. DESCRIPTION

PAGE:

Exhibit 2
Declaration of Atif Yardimici

70

Exhibit 4
Document labeled FUMA00007750 - 7755

76

Exhibit 7
Figure 2, Heating Element, '881 Patent

82

EXHIBITS PREVIOUSLY MARKED:

Exhibit 2023
Hillenbrandt Declarations in 161 IPR and
160 IPR

11

Exhibit 1001
'881 patent and '864 patent

15

Exhibit 1001 in 161 IPR, '881 patent

19

Exhibit 2029
Declaration Under 37 C.F.R. Section 1.131
by Gregory Conley

66

Transcript order

134

Exhibits transmitted electronically.

P R O C E E D I N G S

THE VIDEOGRAPHER: The time is now 9:33 a.m. Eastern time on Tuesday, November 5th, 2024. This begins the video-recorded deposition of Daniel Hillenbrandt taken in the matter of JUUL Labs, Inc. versus NJOY, LLC, filed in the United States Patent and Trademark Office before the Patent Trial and Appeal Board, case numbers of which are IP -- one moment, I'm sorry -- I'll start again -- IPR 2024-00160 and IPR 2024-00161.

My name is Anna Saunders. I'm the videographer with the firm Esquire Legal Solutions. Our court reporter is Dana Welch from the firm -- also with Esquire Deposition Solutions.

Counsel, will you please announce your name and whom you represent, after which the court reporter will please swear in the witness.

MR. DOKHANCHY: Reza Dokhanchy, Mintz Levin, on behalf of the petitioner.

MR. SIEGER: Matt Sieger with the law firm of Weil, Gotshal & Manges on behalf of the patent owner and the witness, and joined by Kathryn Leicht, Bojun Zhao and Barry Zhang, also



1 with the Weil firm.

2 COURT REPORTER: Due to this deposition
3 taking place remotely the parties will stipulate
4 that the court reporter may swear in the witness
5 remotely and that the witness has verified that
6 he is, in fact, Daniel Hillenbrandt. Will the
7 attorneys please indicate agreement by stating
8 your name and your agreement on the record,
9 beginning with counsel for plaintiff.

10 MR. DOKHANCHY: Reza Dokhanchy, for
11 petitioner. Yes, I agree.

12 MR. SIEGER: Matt Sieger, for patent
13 owner. Yes, we agree.

14 DANIEL HILLENBRANDT,
15 having provided proper identification,
16 was placed under oath and testified as follows:

17 EXAMINATION

18 BY MR. DOKHANCHY:

19 Q. Good morning, Mr. Hillenbrandt.

20 A. Good morning.

21 Q. You've been deposed before, correct?

22 A. Yes.

23 Q. Is that twice or has it been more since
24 the last time we spoke?

1 A. I believe it's only twice.

2 Q. That would be in the Fuma v. RJR
3 litigation and the NJOY v. JUUL litigation; is
4 that right?

5 A. Yes.

6 Q. All right. So I think you know kind of
7 how these go, but I'll just ask in particular
8 because we are remote, we're not in the same room
9 today, let's be careful not to speak over each
10 other so the court reporter can take everything
11 down. So I'll ask my questions. Unless your
12 attorney instructs you not to answer, he may
13 object, but you still have to answer my question,
14 I'll give you a chance to answer, then I'll ask
15 my next question.

16 Does that sound good?

17 A. Yes.

18 Q. Is there any reason you cannot give
19 truthful and accurate testimony today?

20 A. No.

21 Q. Is there anyone in the room with you
22 today?

23 A. Yes. Matthew and Kathryn.

24 Q. And that's Matthew Sieger and Kathryn

1 Leicht; is that right?

2 A. Yes.

3 Q. And you're sitting in front of a
4 computer; is that correct?

5 A. Yes.

6 Q. Do you have anything up on the screen in
7 front of you?

8 A. This video.

9 Q. Anything else?

10 A. Whatever site you guys are using to have
11 this in the background.

12 Q. Okay. Nothing else?

13 A. No.

14 Q. I understand you have some documents in
15 front of you or around you; is that correct?

16 A. Yes, I do.

17 Q. What do you have?

18 A. My declaration and exhibits or whatever
19 that they spoke of.

20 Q. Do you have anything else other than
21 those documents?

22 A. No.

23 Q. Do those documents have any markings or
24 notes or annotations on them?

1 A. No, they do not.

2 Q. Okay. What did you do to prepare for
3 your deposition today?

4 A. Yesterday went over things with Kathryn
5 and Matthew.

6 Q. And how long did you meet with those
7 folks?

8 A. Three, four hours, maybe.

9 Q. Did you review any documents during that
10 meeting?

11 A. The exhibits and my declarations.

12 Q. Okay. Did you review the '864 and '881
13 patents that you're here to testify about today?

14 A. No. We didn't really review them. They
15 were here.

16 Q. Okay. When you say "they were here," you
17 mean that you had physical copies of the patents
18 during your prep yesterday?

19 A. I believe they were present.

20 Q. Did you review your prior deposition
21 transcripts in preparation for your dep today?

22 A. I have reviewed those over the past on my
23 own.

24 Q. Understood.

1 Let's talk about your background a little
2 bit. You have no college degree, correct?

3 A. Correct.

4 Q. You are not a mechanical engineer,
5 correct?

6 A. Correct.

7 Q. I understand you have something called a
8 tool and die journeyman's certificate; is that
9 right?

10 A. Yes.

11 Q. Can you explain what that is?

12 A. It is a certificate that you receive
13 after approximately four years of working in the
14 trade, the tool and die trade. It's in the
15 machining sector of the industry. You get a wide
16 range of different experiences with that,
17 drafting and just other calculations to design
18 and to build stamping dies and things like that.

19 Q. What's a stamping die?

20 A. A stamping die is -- it's a tool used to
21 stamp out, punch out parts that may be used in
22 the automotive industry, just numerous different
23 things, usually a metal sheet that is formed or
24 stamped with holes or cuts or notches to be

1 further processed to make a manufactured part.

2 Q. Okay. Do you have any education in fluid
3 mechanics?

4 MR. SIEGER: Objection, scope.

5 A. No.

6 Q. Do you have any sort of experience with
7 fluid mechanics?

8 A. Just what I've learned in the field, in
9 the machine shop with hydraulics and things like
10 that, repairs on machines and other things.

11 Q. Okay. By 2009, had you had any
12 experience with electronic cigarettes?

13 MR. SIEGER: Form.

14 A. I first tried an electronic cigarette in
15 2008.

16 Q. Okay. Prior to coming up with the
17 inventions in your patents, had you designed or
18 analyzed any electronic cigarettes?

19 A. No.

20 Q. Okay. You've got a copy of your
21 declaration in front of you, it's Exhibit 2023 in
22 both the 160 and 161 IPR proceedings; is that
23 correct?

24 A. Yes.

1 Q. All right. Did you write that
2 declaration?

3 A. The declaration was prepared with my
4 words and transcribed by my attorneys.

5 Q. Okay. So you're saying you spoke out all
6 the words in your declaration and your attorneys
7 wrote those words down; is that what you're
8 saying?

9 MR. SIEGER: Objection, form.

10 And Dan, I'll just caution you not to
11 divulge any attorney-client communications, but
12 you can generally describe how the declaration
13 was put together.

14 A. My story was told in the declarations.

15 Q. All right. I don't understand your
16 answer. What I'm asking is, did you write the
17 declarations? And you said they were transcribed
18 by your attorneys. Transcription means there's a
19 speaker and a writer. So what I'm asking is, you
20 said you didn't write them. Did you speak your
21 declarations?

22 MR. SIEGER: Objection, form.

23 A. I'm sorry for confusing you. Discussed
24 my story and then it was put into the

1 professional legal form.

2 Q. Okay. But you didn't write the words of
3 your declaration, correct?

4 MR. SIEGER: Objection, form.

5 A. No.

6 Q. Okay. So let's go back to the '864 and
7 '881 patents, and I'm happy to put those up if it
8 will be helpful.

9 Did you review the patent applications
10 that led to the '881 and '864 patents before they
11 were filed?

12 MR. SIEGER: Objection, scope.

13 A. We reviewed them with our attorney.

14 Q. And who do you mean by "we"?

15 A. The inventors at Fuma.

16 Q. And those are Gregory Conley and
17 yourself?

18 A. Yes.

19 Q. Okay. Do you --

20 MR. DOKHANCHY: Withdrawn.

21 Q. Did you at the time believe that those
22 applications that led to the '881 and '864
23 patents accurately claimed your invention?

24 MR. SIEGER: Objection, scope.

1 And Dan, to the extent your belief came
2 from conversations with attorneys, advise you not
3 to divulge those communications.

4 Q. You may answer, Mr. Hillenbrandt.

5 A. My belief is that we understood or did --
6 repeat the question, please. I'm sorry.

7 Q. Sure.

8 At the time that your attorneys filed the
9 patent applications that led to the '864 and '881
10 patents and you and Mr. Conley reviewed those
11 applications, as you said, correct?

12 A. Yes.

13 Q. At that time, did you believe that the
14 claims in those applications accurately reflected
15 your invention?

16 MR. SIEGER: Objection, scope, calls for
17 a legal conclusion.

18 A. We were satisfied.

19 Q. And to be clear, you mean you were
20 satisfied that the claims in those applications
21 accurately reflected your invention, correct?

22 MR. SIEGER: Same objections.

23 A. Yes.

24 Q. Okay. Let's take the '864 patent, and,

1 again, if it's helpful to bring it up, I'll put
2 it on the screen. If you have it in front of
3 you, you're welcome to look at it.

4 The question is with respect to the '864
5 patent, which parts of the invention did you
6 contribute to?

7 MR. SIEGER: Objection, scope.

8 A. I would need to review the patent to do
9 that.

10 Q. Okay. Let's do that.

11 MR. DOKHANCHY: Could we get Exhibit 1001
12 from the 160 IPR. Great.

13 MR. SIEGER: And I think we have paper
14 copies, they're not currently in front Dan, but
15 I'll grab those and provide them to him.

16 Q. Mr. Hillenbrandt, you're welcome to refer
17 to the paper copies or the one that's up on the
18 screen that I'll be controlling here in a second.

19 A. I'm unable to really truly read what's on
20 the screen.

21 Q. I'll zoom in so it's a little easier.
22 Let me just get to the right section.

23 Zooming here on claim 1 of the '864
24 patent. How's that? Can you see claim 1?

1 A. Yes.

2 Q. I'll just read it into the record. As
3 I'm reading it, I want the question in your mind
4 to be which portions of this you contributed to,
5 that's going to be my question at the end. Okay?

6 A. I understand.

7 Q. So "A cartridge configured to couple to a
8 power source of an electronic vaporizer, the
9 cartridge comprising: a housing having an
10 interior and a solution holding medium adapted to
11 hold a solution, the housing having a first end
12 and second end that is opposite the first end,
13 the housing having a first aperture proximate the
14 first end and a second aperture proximate the
15 second end, the first end of the housing being
16 adapted to electrically couple to the power
17 source, the first aperture and the second
18 aperture being in communication with one another
19 to permit an airflow through the housing from the
20 first aperture to the second aperture; a heating
21 element located in the interior of the housing,
22 the heating element extending transversely to a
23 central longitudinal axis of the housing and
24 being at least partially exposed to the airflow,

1 the heating element being configured to vaporize
2 at least a portion of the solution for oral
3 provision to an individual in the airflow, the
4 heating element being responsive to electrical
5 power received from the power source; and an
6 airflow passageway in the housing, at least a
7 portion of the airflow passageway extending
8 centrally and axially with respect to the housing
9 wherein the airflow passageway extends centrally
10 and axially from the first aperture to the second
11 aperture."

12 Did I read that correctly?

13 A. I believe you did. I did not follow your
14 words as I was reading.

15 Q. That's okay.

16 A. I take your word that you read it word
17 for word.

18 Q. We've got it in the document, so it's not
19 a big deal. I just wanted to give you some time
20 to be able to review it.

21 Okay. So the question is, which
22 portions, if any, of claim 1 did you contribute
23 to as an inventor?

24 MR. SIEGER: Objection, scope.

1 Reza, can you direct me to where in his
2 declaration this is relevant to?

3 MR. DOKHANCHY: I think it's the whole
4 thing. He's an inventor talking about the
5 inventiveness of the patents, so I think it's
6 within the scope.

7 A. Greg Conley and myself would do
8 collaborations and discuss the ideas, bouncing
9 things back and forth, and together put together
10 this.

11 Q. Okay. So you're saying the whole thing
12 was a collaborative exercise between you and
13 Mr. Conley?

14 A. Correct.

15 Q. Is there any part of claim 1 that you can
16 say I didn't contribute to any part of that, that
17 was all Mr. Conley?

18 MR. SIEGER: Objection, form, scope.

19 A. I can't recall the conversations and how
20 they went at that time.

21 Q. So is the answer to my question, no?

22 MR. SIEGER: Objection, form,
23 mischaracterizes the witness' testimony.

24 A. I can't remember how the collaborations

1 went and how the actual conversation flowed.

2 Q. Right. I understand that. That's not my
3 question.

4 My question is, sitting here right now,
5 looking at claim 1, is there any part of claim 1
6 right now that you can say you didn't contribute
7 to, instead it was all Mr. Conley?

8 MR. SIEGER: Objection, form, scope,
9 asked and answered.

10 A. No. We talked back and forth and
11 discussed these ideas.

12 Q. Okay. And we can put it up again, the
13 '881 patent. But my question is with respect to
14 the '881 patent, would your answer be the same?

15 MR. SIEGER: Objection, scope.

16 A. I don't know what I'd be agreeing to
17 without you showing me.

18 Q. Okay. Let's look at the '881. So this
19 is Exhibit 1001 in the 161 IPR, this is the '881
20 patent, and let's go to claim 1.

21 All right. So I don't think I need to
22 read this into the record, but you are free to
23 look at the paper copy that you have, you're free
24 to look at the digital copy that's up on the

1 screen.

2 My question to you is claim 1 of the '881
3 patent, which is up on the screen, the question
4 is which parts, if any, of claim 1 of the '881
5 patent did you contribute to as an inventor?

6 MR. SIEGER: Objection to form and scope.

7 A. I'm trying to find the part in the patent
8 right now that you're at. It's too small on the
9 screen for me to read.

10 Q. It is a long claim.

11 A. Is there a column number on the top of
12 that page?

13 Q. Column 17 is where claim 1 is, should be
14 the second to last page or something like that.

15 A. Thank you for helping me find it.

16 Yes. Again, Mr. Conley and myself would
17 have been discussing all those portions of the
18 claim.

19 Q. Okay. So as far as you can remember, you
20 had contributions to all parts of claim 1 of the
21 '881 patent; is that right?

22 MR. SIEGER: Objection, form.

23 A. My memory serves that we discussed this
24 and went back and forth.

1 Q. Yeah, I understand, Mr. Hillenbrandt.

2 My question is this: As far as you
3 remember, you had contributions to all parts of
4 claim 1 of the '881 patent; is that correct or is
5 that incorrect?

6 MR. SIEGER: Objection, form, asked and
7 answered.

8 A. As I stated, we had collaborations where
9 we discussed things back and forth, and to
10 remember those conversations, I cannot remember
11 the flow of how they went and who said what as we
12 were discussing.

13 Q. Okay. Is there any part of claim 1 of
14 the '881 patent that you can identify right now
15 that you did not contribute to and was solely
16 Mr. Conley's idea?

17 MR. SIEGER: Objection, form, scope.

18 A. I cannot remember how the flow of our
19 conversation went when we were discussing these.

20 Q. All right. You and Mr. Conley conceived
21 of the inventions in the '881 and '864 patents in
22 or around late July 2009; is that correct?

23 A. Yes.

24 MR. SIEGER: Objection, form, scope,

1 calls for a legal conclusion.

2 Q. Okay. And who did you work with in the
3 process of conceiving of the inventions?

4 MR. SIEGER: Objection, scope.

5 A. What exactly do you mean?

6 Q. You're sitting there, I believe you
7 testified you were talking it through with
8 Mr. Conley, you were having conversations, you
9 said; is that correct?

10 A. Yes. We had conversations.

11 Q. And in those conversations, you were
12 conceiving of the inventions that would later be
13 embodied in the '881 and '864 patents, correct?

14 MR. SIEGER: Objection, form, scope,
15 legal conclusion.

16 A. Yes.

17 Q. Is there anyone else that you talked to
18 about e-cigarettes or the concepts that would
19 later be embodied in the '864 and '881 patents?

20 MR. SIEGER: Objection, form, scope.

21 A. At that point in time, myself and
22 Mr. Conley would have these collaborative
23 meetings and discuss these topics for
24 development.

1 Q. And my question is, is there anyone else
2 besides Mr. Conley that you talked to about
3 e-cigarettes and the concepts that would be
4 embodied in the '881 and '864 patents at that
5 time?

6 MR. SIEGER: Objection, form, scope.

7 A. As I answered, Mr. Conley and myself
8 discussed these.

9 Q. That's not an answer to my question,
10 Mr. Hillenbrandt. It's yes-or-no.

11 Is there anyone else other than
12 Mr. Conley, yes-or-no, that you talked to about
13 the concepts of e-cigarettes and the designs that
14 would go into the '881 and '864 patents?

15 MR. SIEGER: Same objections.

16 A. Are you referring to when we were
17 thinking about the concepts and bouncing the
18 ideas off each other or are you discussing after
19 we filed an application already? I'm confused on
20 the time frame that you're wanting me to discuss.

21 Q. So my question is about the first part of
22 your question. It's about the process when you
23 were discussing the concepts and coming up with
24 the ideas that would be embodied in the '881 and

1 '864 patents.

2 So the question is, at that time had you
3 been talking to anybody other than Mr. Conley
4 about e-cigarette design or the specific designs
5 that would end up in the '881 and '864 patents?

6 MR. SIEGER: Form, scope.

7 A. It would have been Mr. Conley and myself.

8 Q. And no one else, correct?

9 A. Nobody else that we were discussing these
10 here with that were giving us any input.

11 Q. So I see that you're qualifying the
12 answer to my question. So what do you mean by
13 that? Sounds like you were -- let me ask the
14 question.

15 Who were you talking to about e-cigarette
16 design and the designs of the '864 and '881
17 patents at that time, on or before late July
18 2009, that did not give you any input?

19 MR. SIEGER: Objection, form, scope,
20 foundation.

21 A. We would discuss things with our third
22 business partner, Rebecca Kim (phonetic), Rebecca
23 Moore, right now.

24 Q. Okay. Did Ms. Moore have any knowledge

1 of e-cigarette design that you were aware of in
2 that time frame?

3 MR. SIEGER: Objection, form, scope,
4 calls for speculation.

5 A. I can't remember at that point in time
6 what possibly her inputs were or thoughts or
7 ideas on it at that point in time.

8 Q. Okay. And at that point in time, did
9 Mr. Conley have any experience designing
10 e-cigarettes prior to July of 2009?

11 MR. SIEGER: Objection, form, scope,
12 calls for speculation.

13 A. I don't know what Mr. Conley's
14 experiences were.

15 Q. Okay. And did Mr. Conley have any
16 education in fluid dynamics by July 2009?

17 MR. SIEGER: Objection, form, scope.

18 A. I do not know Mr. Conley's education.

19 Q. Okay. So on or before July 2009, what
20 other e-cigarettes had you analyzed?

21 MR. SIEGER: Objection, form, scope.

22 A. We used a product, Smoke Fifty-One.

23 Q. Okay. Any others besides Smoke
24 Fifty-One?

1 MR. SIEGER: Objection, form.

2 A. We tried various different ones, but I
3 did not know the names of those products, they
4 were generics.

5 Q. How did those products differ at all from
6 Smoke Fifty-One, if you can remember?

7 MR. SIEGER: Objection, form, scope.

8 A. I don't recall differences.

9 Q. Okay. So what sort of technical research
10 did you do in the process of coming up with the
11 inventions that would be embodied in the '864 and
12 '881 patents?

13 MR. SIEGER: Objection, form, scope.

14 A. I did not do any technical research.

15 Q. Okay. So the inventive process leading
16 up to the filing was limited to conversations
17 between yourself and Mr. Conley; is that correct?

18 MR. SIEGER: Objection, form,
19 mischaracterizes the witness' testimony.

20 A. Can you please repeat the question?

21 Q. The inventive process leading up to the
22 filing of the patent applications that would come
23 to be the '864 and '881 patents was limited to
24 conversations between yourself and Mr. Conley

1 about design, correct?

2 MR. SIEGER: Same objections.

3 A. I'm going to believe that it was more
4 than conversations. We used, you know, life
5 experiences or industry experiences that we may
6 have had that are just -- came to us second
7 nature. I don't know how to explain it any
8 different than that, just life experiences that
9 we had.

10 Q. Right.

11 What I'm getting at is, you know, did you
12 take any classes to educate yourself on the
13 subject matter of e-cigarettes or fluid dynamics
14 or anything like that prior to July of 2009?

15 MR. SIEGER: Objection, form, scope.

16 A. No. There was no classes.

17 Q. Did you read any textbooks on fluid
18 dynamics or mechanical design or anything like
19 that in the process of coming up with your
20 inventions?

21 MR. SIEGER: Same objections.

22 A. Yeah, it's two different questions.

23 Q. Sorry. What's two different questions?

24 A. Fluid design or fluid dynamics and

1 design.

2 Q. Yeah. My question is did you read any
3 textbooks on, for example, fluid mechanics, or
4 for another example, mechanical design, or
5 anything like that in the process of coming up
6 with your inventions of the '881 and '864
7 patents?

8 MR. SIEGER: Objection, form, scope.

9 A. During my time as an apprentice in the
10 tool and die industry and going through my
11 apprenticeship, I did read design books,
12 manufacturing design, it was part of my
13 curriculum.

14 Q. Right. But that's about your tool and
15 die experience. I'm asking about e-cigarettes
16 and fluid mechanics.

17 So with that in mind, my question is when
18 you were coming up with the inventions in your
19 patents, the '864 and '881 patents, did you read
20 any textbooks about e-cigarette design or fluid
21 mechanics or anything like that?

22 A. No.

23 MR. SIEGER: Objection, form, scope.

24 Q. Okay. And why didn't you feel it was

1 necessary to read up on the subject matter before
2 coming up with your inventions?

3 MR. SIEGER: Objection, form, scope.

4 A. Electronic cigarettes were so new,
5 probably one out of a hundred people even knew
6 what they were, maybe even one out of a thousand,
7 I have no idea, but nobody knew what electronic
8 cigarettes were, so I really don't think there
9 were any books out there describing it.

10 Q. What about the underlying fluid mechanics
11 principles, why didn't you think it was necessary
12 for yourself to read up on the technical subject
13 matter of fluid dynamics when coming up with the
14 inventions in your patents?

15 MR. SIEGER: Objection, form, scope.

16 A. Again, we used our industry experience
17 and knowledge in our collaborations.

18 Q. And I understand at some point, you had a
19 prototype made at Fuma, a prototype cartridge; is
20 that correct?

21 A. Yes.

22 Q. Okay. And was your invention fully
23 formed in your mind before you made the prototype
24 or was it only until after the prototype that you

1 believe you came up with the invention?

2 MR. SIEGER: Objection, form.

3 A. Our prototype was to our design.

4 Q. Okay. So in your view, you had the full
5 invention in your mind before the prototype was
6 made; is that accurate?

7 MR. SIEGER: Objection, form, scope.

8 Slow down, give me a chance to object.

9 A. Yes.

10 Q. Okay. So you didn't feel the need to
11 do -- well, let me ask you this way: Other than
12 the prototype -- or actually, slightly
13 differently, here's the question.

14 Did you do any physical testing of your
15 idea before you had the prototype made or was the
16 prototype the first physical embodiment?

17 MR. SIEGER: Objection, form, scope.

18 And Reza, can you point us to where in
19 the declaration this line of questioning is
20 relevant to?

21 MR. DOKHANCHY: It's all relevant to the
22 invention process. If he's going to testify
23 about the invention process, the problems he
24 faced, the things he did to solve them, I'm

1 permitted to ask about when that happened and
2 what the context was.

3 MR. SIEGER: Can you just point me to a
4 paragraph in particular that you believe this is
5 relevant to?

6 MR. DOKHANCHY: It's relevant to at least
7 5 through 8.

8 MR. SIEGER: We disagree.

9 Q. Mr. Hillenbrandt, do you need me to
10 repeat the question?

11 A. Yes, please.

12 Q. Okay. Did you do any physical testing of
13 your idea before you had the prototype made or
14 was the prototype the first physical embodiment
15 of your invention?

16 MR. SIEGER: Objection, form, scope.

17 A. We did no physical testing prior.

18 Q. All right. And do you have your
19 declaration in front of you?

20 A. Yes.

21 Q. All right. Let's go to paragraph 6.

22 A. Yes.

23 Q. And here you say --

24 MR. SIEGER: Which declaration are you

1 referring to, because I believe the paragraph
2 numbering is different across both of them.

3 MR. DOKHANCHY: I'm looking at the 160.
4 So this is Exhibit 2023 in the 160 IPR.

5 MR. SIEGER: Okay. Thanks.

6 Q. All right. Mr. Hillenbrandt, is that the
7 one you have up in front of you?

8 A. With the footer at the bottom IPR
9 2024-00160?

10 Q. Yes, exactly.

11 A. Okay. Yes. I have that one in front of
12 me.

13 Q. All right. In paragraph 6 --

14 MR. DOKHANCHY: And could we get that up
15 on the screen just for everybody's ease of
16 reference.

17 THE VIDEOGRAPHER: Certainly.

18 Stand by.

19 And you have control, sir.

20 MR. DOKHANCHY: I think it's still on the
21 patent. We're looking for Exhibit 2023 in the
22 160 IPR.

23 THE VIDEOGRAPHER: That appears to be the
24 document I had up. I think it's just zoomed in.

1 Let me zoom back out, might be easier to find
2 what you're looking for.

3 Let me share it again. Before I do that,
4 let me verify the document name.

5 You're right. I'm sorry. Stand by.

6 This is the correct document, sir?

7 MR. DOKHANCHY: That's it.

8 THE VIDEOGRAPHER: Stand by. Let me give
9 you control.

10 There you are.

11 MR. DOKHANCHY: Thank you.

12 Q. All right. So we've got your declaration
13 up on the screen in the 160 IPR. You've also got
14 a paper copy. You can refer to either one. You
15 say in paragraph 6, "After experiencing issues
16 with commercially available e-cigarettes, Greg
17 Conley and I invented a new type of e-cigarette
18 that eliminated the issues with preexisting
19 e-cigarettes." And you go on to say, "Our new
20 e-cigarette had a transverse heating element in a
21 central airflow passageway surrounded by a
22 solution holding medium which allowed for a clear
23 path for the airflow to decrease the amount of
24 suction required to draw a vapor, separated the

1 airflow from the solution holding medium to
2 reduce liquid droplets in the airflow, and
3 separated the heating element from the solution
4 holding medium to prevent the burnt taste."

5 Do you see that, Mr. Hillenbrandt?

6 A. Yes, I see that.

7 Q. Okay. So let's take the first component
8 that you point out, which is a "central airflow
9 passageway." Do you see that term in paragraph
10 6?

11 A. Yes.

12 Q. What is a central airflow passageway?

13 MR. SIEGER: Objection, form, scope,
14 calls for a legal conclusion.

15 A. Our central airflow passageway was a
16 defined space.

17 Q. Okay. So anything that's a defined space
18 is a central airflow passageway; is that right?

19 MR. SIEGER: Objection, mischaracterizes
20 the witness' testimony.

21 A. The central airflow passageway we had did
22 not allow the batting material and cotton to
23 invade it and plug it up, as we had seen in other
24 products.

1 Q. Okay. So a central airflow passageway is
2 something that doesn't allow the batting material
3 to invade it and plug it up; is that right?

4 MR. SIEGER: Objection, form,
5 mischaracterizes the witness' testimony.

6 A. No, that is not a definition of a central
7 airflow passageway.

8 Q. Okay. Well, those words are used in your
9 claim. So I want to know what you as an inventor
10 think they mean.

11 So in your capacity as an inventor on
12 both of these patents, what did you mean when you
13 wrote in your claims, "central airflow
14 passageway"?

15 MR. SIEGER: Objection, form.

16 A. A passageway that was through the center
17 that was not obstructed -- it was just an air
18 flow passageway from one end to the other.

19 Q. Okay. Through the center of what?

20 A. Our cartridge.

21 Q. Okay. The second element that you say is
22 new in paragraph 6 is a "transverse heating
23 element."

24 Do you see that?

1 A. Yes.

2 MR. SIEGER: Objection, form,
3 mischaracterizes the document.

4 MR. DOKHANCHY: I don't see how that
5 mischaracterizes the document, but okay.

6 MR. SIEGER: Where it says what was new
7 was just the transverse heating element alone.

8 MR. DOKHANCHY: Did I say "just"?
9 Anyways, I'm not getting in this debate.

10 Q. All right. Mr. Hillenbrandt, what is a
11 transverse heating element?

12 A. A transverse heating element is the
13 heating element that comes across perpendicular,
14 or comes across.

15 Q. Across what?

16 A. The airflow passageway.

17 Q. Okay. And you're aware that there were
18 e-cigarettes before your invention that had a
19 transverse heating element, right?

20 MR. SIEGER: Objection, form, foundation.

21 A. No, I'm not.

22 Q. Okay. So even still, sitting here today,
23 you're not aware of that; is that right?

24 MR. SIEGER: Objection, form, scope.

1 A. Correct. I'm not aware.

2 Q. Okay. And you are aware that there were
3 e-cigarettes before your invention that had a
4 central airflow passageway, correct?

5 MR. SIEGER: Objection, form, scope,
6 foundation.

7 A. I don't recall that.

8 Q. Okay. So as far as you're aware, both
9 the central airflow passageway and transverse
10 heating element were completely new with your
11 '864 and '881 patents; is that right?

12 MR. SIEGER: Objection, form, scope.

13 A. There was nothing on the market that even
14 compared to what we designed.

15 Q. Not my question, Mr. Hillenbrandt.

16 Here's the question. As far as you're
17 aware, both the central airflow passageway and
18 the transverse heating element were components
19 that were entirely new to the marketplace in your
20 '864 and '881 patents, correct?

21 MR. SIEGER: Objection, form, scope,
22 mischaracterizes the witness' testimony.

23 A. The only way I can answer it is that
24 there was nothing on the market that was like

1 what we had.

2 Q. Well, was there anything on the market
3 that had a central airflow passageway before your
4 invention?

5 MR. SIEGER: Objection to form, asked and
6 answered.

7 A. I don't recall.

8 Q. Was there anything on the marketplace
9 that had a transverse heating element before your
10 inventions?

11 MR. SIEGER: Objection to form, asked and
12 answered.

13 A. I don't recall.

14 Q. Okay. Then the logical conclusion is, as
15 far as you recall, both the transverse heating
16 element and the airflow passageway were entirely
17 new in your inventions; is that correct?

18 MR. SIEGER: Objection, form,
19 mischaracterizes the witness' testimony.

20 A. As I said, there was nothing that -- that
21 was as we invented it here.

22 Q. Why are you not able to answer my
23 question, Mr. Hillenbrandt?

24 MR. SIEGER: Objection, form,

1 argumentative.

2 A. I thought I answered your question.

3 Q. You didn't.

4 Here's the question: Is it true or false
5 that as far as you remember, there was nothing on
6 the marketplace or in the public knowledge before
7 your inventions that had either a central airflow
8 passageway or a transverse heating element?

9 MR. SIEGER: Objection, form, asked and
10 answered, argumentative.

11 A. My answer is I am unaware of anything
12 that had the transverse heating element across a
13 central airflow passageway.

14 Q. So you've combined them both together, a
15 transverse heating element and the central
16 airflow passageway. My question is about "or."

17 So let me ask the question. As far as
18 you're aware, no product or prior art before your
19 inventions had either a central airflow
20 passageway or a transverse heating element, is
21 that correct or is that not correct,
22 Mr. Hillenbrandt?

23 MR. SIEGER: Objection, form, scope,
24 asked and answered.

1 A. As I said, I have not seen anything like
2 our invention.

3 Q. That's not my question. We can sit here
4 all day until you answer my question,
5 Mr. Hillenbrandt. I need a yes-or-no.

6 Is it correct, yes-or-no, that before
7 your invention, nothing on the marketplace or in
8 the prior art had a central airflow passageway or
9 a transverse heating element, as far as you're
10 aware?

11 MR. SIEGER: Objection, form, asked and
12 answered, compound.

13 A. Yeah, that's multiple questions. And my
14 answer is there was nothing configured the way we
15 configured our invention.

16 Q. You haven't answered my question,
17 Mr. Hillenbrandt.

18 MR. SIEGER: Reza, just because he's not
19 giving you the answer you want doesn't mean he
20 hasn't answered it. He's answered your question
21 multiple times now.

22 MR. DOKHANCHY: He hasn't. I asked are
23 you aware of anything on the marketplace prior to
24 your invention with a central airflow passageway

1 or a transverse heating element. It's a
2 yes-or-no question.

3 Q. Are you aware or not?

4 MR. SIEGER: Objection, form, scope,
5 asked and answered. And if the witness can't
6 answer yes or no, he can't answer yes or no.

7 A. Yeah, I cannot answer except that there
8 was nothing configured like our invention.

9 Q. Okay. So you can't answer my question
10 yes-or-no; is that right?

11 A. If you would like to say so.

12 Q. I'm asking for your testimony. Can you
13 answer my question yes-or-no?

14 MR. SIEGER: Objection, form, scope,
15 argumentative.

16 A. I've answered your question the best I
17 could.

18 Q. So you can't answer yes-or-no?

19 MR. SIEGER: Objection, argumentative,
20 asked and answered.

21 A. No.

22 Q. All right. You've heard of the Smoke
23 Fifty-One Duo device, right?

24 A. Yes.

1 Q. You were employed by Smoke Fifty-One,
2 right?

3 A. I was not employed by Smoke Fifty-One.

4 Q. You were a member of Smoke Fifty-One,
5 right?

6 A. Smoke Fifty-One was a product that was
7 owned by Smoke Anywhere, and he had a business,
8 Smoke Fifty-One Ohio, which was a
9 distributorship, two different entities.

10 Q. Okay. You were employed by Smoke
11 Fifty-One Ohio, correct?

12 A. Correct.

13 Q. And you had an ownership interest in
14 Smoke Fifty-One Ohio, correct?

15 A. Correct.

16 Q. What was your role as an employee of
17 Smoke Fifty-One Ohio?

18 MR. SIEGER: Objection, form, scope.

19 A. I was a vice president and I did sales.

20 Q. What were your obligations as vice
21 president of Smoke Fifty-One Ohio?

22 MR. SIEGER: Objection, form, scope.

23 A. We had three members of Smoke Fifty-One
24 Ohio, and we all had a title. My role was

1 whatever needed to be done. We all worked
2 together to achieve our goals.

3 Q. Okay. So did you focus on sales as vice
4 president of Smoke Fifty-One Ohio?

5 MR. SIEGER: Objection, scope.

6 A. The three of us focused on what we needed
7 to do with the company.

8 Q. I don't understand what that means.

9 What did you do as vice president and
10 sales administrator or sales focused employee of
11 Smoke Fifty-One Ohio other than take care of
12 business?

13 A. We tried to get retail spots to sell the
14 products.

15 Q. And when you say "we," is that something
16 that you personally did?

17 MR. SIEGER: Objection, form.

18 A. I also did it, yes, along with the other
19 two members.

20 Q. Okay. And what was the time frame of
21 your employment of Smoke Fifty-One Ohio?

22 A. The beginning of 2009.

23 Q. Okay. When did that end?

24 A. I don't recall the exact date, but it

1 was, you know, first half of the year.

2 Q. Okay. Did you leave Smoke Fifty-One Ohio
3 when you formed Fuma with Mr. Conley?

4 MR. SIEGER: Objection, form, scope.

5 A. Well, we -- the three members who were
6 Smoke Fifty-One Ohio became Fuma.

7 Q. Okay. The transcript is a little
8 unclear. I think what you're saying is the
9 company Smoke Fifty-One Ohio became Fuma; is that
10 correct?

11 A. Well, it stopped doing business, and then
12 we started a new company named Fuma International
13 LLC.

14 Q. And I think you said this, but Smoke
15 Fifty-One Ohio was the distributor of the Smoke
16 Fifty-One Duo electronic cigarette; is that
17 right?

18 A. Correct.

19 Q. What was Mr. Conley's affiliation with
20 Smoke Fifty-One Ohio?

21 MR. SIEGER: Objection, form, scope.

22 A. He was the president.

23 Q. So you've seen the Smoke Fifty-One Duo
24 cartridges, right?



1 A. I've used them, yes.

2 Q. And, in fact, you saw the internals of
3 that, didn't you?

4 A. I saw what it looked like with the
5 plastic cap popped off the top.

6 Q. And you looked down inside the barrel, so
7 to speak, of the cylindrical cartridge of the
8 Smoke Fifty-One Duo after the cap was popped off;
9 is that right?

10 A. Yes.

11 Q. Did the Smoke Fifty-One Duo have a
12 transverse heating element?

13 MR. SIEGER: Objection, form.

14 A. I do not believe it did.

15 Q. What would you call the heating element
16 in the Smoke Fifty-One Duo? Would you call it
17 parallel as opposed to transverse?

18 MR. SIEGER: Objection, form, vague.

19 A. I do not know.

20 Q. Do you recall what the orientation of the
21 heating coil was in the Smoke Fifty-One Duo?

22 A. Over the past years, I've seen pictures
23 of what it was over the past few years.

24 Q. And what would you describe the

1 orientation as; if it's not transverse, what word
2 would you use?

3 MR. SIEGER: Objection, form.

4 A. It was vertical, and it was not in the
5 airflow.

6 Q. I think you said it was not in the air
7 flow, is that what you said?

8 A. Yes.

9 Q. And why was it not in the airflow?

10 A. When I looked down into the cap, it was
11 just a bunch of cotton smashed in there, that was
12 all you could see. And then along the outer edge
13 of the inside of the cylinder was a burnt area, a
14 burnt spot that came along the outer edge. I was
15 aware the heating element would be to burn like
16 that.

17 Q. Okay.

18 COURT REPORTER: I'm sorry, I couldn't
19 understand that. Did you say that you were or
20 were not aware that the heating element would
21 burn?

22 THE WITNESS: Oh, I said that it would be
23 the --

24 COURT REPORTER: I just couldn't

1 understand you.

2 THE WITNESS: Yes. I'm sorry.

3 What I was trying to describe is because
4 when I seen the burnt area on the outer perimeter
5 of the inside of the tube, that was burnt there,
6 I would speculate that the heating element was
7 where the burn -- intense burn mark was.

8 Q. And so can you describe the location of
9 the burn mark? If you're looking down the barrel
10 of the cartridge, are you saying it's on the
11 outside part of the inner part of the cartridge?

12 A. It was -- if I could describe it in a way
13 that everybody could understand, it was on the
14 inside outer diameter edge, if that makes sense.

15 Q. I think I get what you're saying, but I'm
16 not sure it's totally clear.

17 So if you're looking into the cartridge
18 after taking the top off and you've got this
19 space that's inside the outer shell of the
20 cartridge, you're saying the burn marks were
21 towards the outside of that inner space; is that
22 right?

23 A. The burn marks were almost touching the
24 outside edge.

1 Q. The outside edge of the inner space of
2 the cartridge; is that right?

3 MR. SIEGER: Objection, form.

4 A. Correct. If you're describing looking
5 through the inside diameter of the cylinder, it
6 would have been as far to the outside as possible
7 along the inside of the wall.

8 Q. Okay. And so that's what led you to
9 believe that the heating element was in the
10 batting material, correct?

11 MR. SIEGER: Objection, form.

12 A. Correct.

13 Q. Okay. All right. Let's talk about this
14 first benefit of your invention that you listed
15 here, and that's the allowance for a clear path
16 for the airflow. And my question is does the
17 heating element being transverse create the clear
18 path or is it the central airflow passageway that
19 creates the clear path?

20 A. Can you please direct me to where you're
21 reading "clear path"?

22 Q. Sure. If you'll look at your
23 declaration, which is up on the screen, and you
24 also have in front of you, in the 160 IPR,

1 there's a paragraph 6.

2 A. Uh-huh.

3 Q. And in the second sentence --

4 A. Yes.

5 Q. -- it says "our new e-cigarette," do you
6 see that sentence?

7 A. Yes.

8 Q. And the first benefit you list, among a
9 few, is that it "allowed for a clear path for the
10 airflow."

11 Do you see that?

12 A. Yes. And what I was describing there is
13 that like when I just described to you that when
14 the cap was off the 51, it was just a bunch of
15 cotton stuffed in there.

16 Our design allowed for a pathway that
17 would allow -- that would allow the air to flow
18 through and not through -- not through cotton.

19 Q. So the central and axial passageway going
20 through the cotton is the thing that causes the
21 clear path for the airflow; is that fair?

22 MR. SIEGER: Objection, form.

23 A. Can you please repeat that?

24 Q. Sure.

1 The central and axial airflow passageway
2 of your invention is the thing that causes the
3 clear path for the airflow; is that fair?

4 MR. SIEGER: Objection, form.

5 A. Our airflow passageway is surrounded by
6 the liquid holding medium, which separates it
7 from the airflow passageway, allowing for airflow
8 to flow through from one end to the other.

9 Q. The heating element being transverse is
10 not the thing that causes the clear airflow path,
11 right?

12 MR. SIEGER: Objection, form.

13 A. The heating element allows for the
14 vaporization of the nicotine to be done in the
15 airflow passageway.

16 Q. Right.

17 I'm just talking about the airflow
18 itself. You said the problem was that before,
19 the airflow was going through cotton material,
20 right?

21 A. I don't know how it was getting through,
22 but it obstructed with -- like I said, it was a
23 wad of cotton stuck in there, so there was
24 nothing defined.

1 Q. All right. And the way that you achieved
2 greater airflow in your invention is a central
3 airflow passageway, correct?

4 MR. SIEGER: Objection, form.

5 A. The airflow in the central passageway is
6 a way to get more airflow.

7 Q. Okay. The coil being vertical or
8 transverse, that changed from vertical to
9 transverse in your invention, that didn't cause
10 greater airflow?

11 MR. SIEGER: Objection, form, vague,
12 mischaracterizes the witness' testimony.

13 A. Please repeat that because it's not
14 making sense what you said.

15 Q. Yeah. What I'm trying to get at is where
16 does this benefit of a clear path for the airflow
17 come from? Does it come from just the
18 passageway, or does it come from turning the
19 coil?

20 So my question is, does the turning of
21 the coil in your invention from vertical to
22 transverse create a clear path for the airflow,
23 or does that benefit come from the airflow
24 passageway?

1 MR. SIEGER: Objection, form.

2 A. The airflow passageway is one step of
3 creating the airflow.

4 Q. Okay. And orienting the coil from
5 vertical to horizontal, that doesn't create a
6 clear path for the airflow, does it?

7 MR. SIEGER: Objection, form.

8 A. What you're trying to say, you don't say
9 where the coil is, so I don't know how to answer
10 the question there. You're just kind of leaving
11 the coil as a separate entity out there without
12 describing where it is.

13 Q. Well, let's say there's a central airflow
14 passageway, right? Do you have that in mind?

15 A. Yes.

16 Q. All right. And then the first version
17 you've got a vertical coil, right?

18 MR. SIEGER: Objection, form, vague.

19 Q. Do you have that in your mind?

20 A. The first version didn't have a central
21 airflow.

22 Q. No, it does.

23 A. If you're referring to in comparison with
24 the vertical coil to the outside, so you're

1 describing something that I had never seen.

2 Q. Okay. Well, you're an inventor in this
3 space, I think you can imagine what I'm saying.

4 So imagine an e-cigarette with a central
5 airflow passageway through batting material.

6 Okay? Do you have that in mind?

7 MR. SIEGER: Objection, argumentative.

8 A. You're asking me to speculate your ideas?

9 Q. I'm asking you to visualize this. Can
10 you do that?

11 A. Okay. Visualize your descriptions.

12 Q. All right. You've got a central and
13 axial airflow passageway and in that passageway
14 is a vertical coil. Understood?

15 MR. SIEGER: Objection, form, incomplete
16 hypothetical.

17 A. I'm trying to envision it.

18 Q. Okay. So in that scenario you've got a
19 central and axial airflow passageway in a
20 vertical coil. Going from that design to the
21 same design, and the only thing you do is you
22 turn the coil, does that change make a clearer
23 path for the airflow?

24 MR. SIEGER: Objection, form, scope,

1 incomplete hypothetical.

2 A. Yeah, I cannot envision what you're
3 trying to say because that is not the experiences
4 that I had during the conception time that me and
5 Mr. Conley were designing our e-cigarette.

6 Q. Okay. So you can't imagine the scenario
7 that I'm putting forth because it's not something
8 that you actually worked on; is that what you're
9 saying?

10 MR. SIEGER: Objection, form, scope.

11 A. What you're -- what you're trying to
12 describe there is -- you know, without seeing
13 what you're trying to describe, is hard to follow
14 and understand what you're saying. It leads me
15 to make guesses and inaccurate conclusions of
16 your thought process.

17 Q. Okay. Well, let's talk about the central
18 and axial airflow passageway. How did you know
19 when you were coming up with your invention that
20 a central and axial airflow passageway would
21 allow for a clear path for the airflow?

22 MR. SIEGER: Objection, form, scope.

23 Just real quick, Reza, we've been going
24 for about an hour, so when you get to a good

1 stopping point, I think it would be a good time
2 for a break.

3 MR. DOKHANCHY: Yeah. We'll just do a
4 couple more questions on this and then we'll take
5 a break, Mr. Hillenbrandt.

6 A. Okay. Would you please repeat your
7 question for me again? Thank you.

8 Q. Sure.

9 When you were coming up with your
10 inventions in the '864 and '881 patents, how did
11 you know that a central and axial airflow
12 passageway would lead to a clear path for the
13 airflow?

14 MR. SIEGER: Objection, form, scope.

15 A. Our invention with the central axial
16 airflow with the transverse heating element was
17 our invention to vaporize within the airflow
18 passageway.

19 Q. Yeah. How did you know that that design
20 with the central airflow passageway would lead to
21 greater airflow?

22 MR. SIEGER: Objection, form, scope,
23 asked and answered.

24 A. We felt it was very important to vaporize

1 the solution in the airflow passageway.

2 Q. Yeah, that doesn't answer my question,
3 Mr. Hillenbrandt.

4 You're sitting down and you're trying to
5 solve a problem. You say I want greater airflow.
6 How did you know that putting a central airflow
7 passageway would lead to that result?

8 MR. SIEGER: Objection, form and scope,
9 mischaracterizes the witness' testimony.

10 A. The invention is the airflow passageway
11 with the transverse heating element allowing the
12 liquid to be vaporized within that airflow
13 passageway.

14 Q. Yeah. I'm not asking about that.

15 You listed in your paragraph 6, one of
16 the benefits is that it allowed for a clear path
17 through the airflow to decrease the amount of
18 suction required to draw a vapor, right? You
19 wrote that in your declaration?

20 A. That is what my declaration says, yes.

21 Q. Okay. And you believe that's correct,
22 right?

23 A. That allows for the air to pass through,
24 yes.

1 Q. All right. So when you're sitting down
2 and coming up with your invention, how did you
3 know that a central airflow passageway would
4 allow for a clear path for the airflow?

5 MR. SIEGER: Objection, form, scope,
6 asked and answered.

7 A. We wanted to vaporize the liquid in the
8 airflow.

9 Q. But that's not the benefit I'm talking
10 about. You wrote in your declaration that the
11 design allowed for a clear path for the airflow,
12 right? You see that, the clear path?

13 A. Yes. The design as a whole thing. In a
14 design, you have multiple facets that come
15 together to complete the design. It is one
16 portion of it.

17 Q. Yeah, I understand.

18 I'm just talking about one of those
19 benefits, the clear path. How did you know that
20 your design with the central airflow passageway
21 would allow for a clear path through the airflow?

22 MR. SIEGER: Objection, form.

23 A. That airflow passageway, if you break it
24 down, is a clear path. Then you add the

1 transverse heating element to allow the
2 vaporization in the airflow passageway.

3 Q. So the airflow passageway is the clear
4 path. How did you know that putting an airflow
5 passageway in the middle would result in smoother
6 airflow? How did you know that without your --
7 without a lack of fluid dynamics training?

8 MR. SIEGER: Objection, form, scope,
9 foundation.

10 A. In the discussions of our idea, we felt
11 strongly that putting a horizontal -- a
12 transverse heating element across the airway and
13 vaporizing in the airway could provide us the
14 solution we were looking for.

15 Q. Mr. Hillenbrandt, I need you to actually
16 answer my question. So focus on my question
17 about the airflow.

18 A. I was trying to answer your question, and
19 your question is very -- seems deceiving to me.
20 Instead of a clear answer of what was in my mind
21 at the time, you are trying to, you know, take
22 away from the concept. I thought you wanted to
23 find out what was going on in our head while we
24 were designing this.

1 Q. Yeah. I understand you may feel certain
2 ways about my questions, but I'm entitled to ask
3 them the way I want them. And I'm reading from
4 your declaration, Mr. Hillenbrandt.

5 You have said that one of the benefits is
6 that the design allowed for a clear path for the
7 airflow and that the central airflow passageway
8 created that clear path.

9 So my question to you is, without any
10 training in fluid dynamics or e-cigarette design,
11 how did you know that a central airflow
12 passageway would create a clear path for the
13 airflow?

14 MR. SIEGER: Objection, form,
15 argumentative, vague.

16 A. That the clear path was just my
17 description in this declaration to help describe
18 my invention through the airflow passageway. It
19 is, just as I'm answering questions right now,
20 describing what was going through my head, that
21 that's part of what is represented here in my
22 declaration.

23 So it's how I chose to describe my
24 thoughts in my declaration. And to pick apart

1 because I chose to use a word "clear," "clear
2 path" in my declaration, to pinpoint the word
3 clear and try to turn the word clear into
4 something else is not appropriate when I was
5 trying to encompass what my idea was and what was
6 in my head at the time allowing for a airflow
7 passageway clear of a big ball of cotton that was
8 in there from prior e-cigarettes that failed the
9 industry and failed the market.

10 Q. But how did you know that it would work?
11 How did you know that putting a path down the
12 middle would create better airflow? You didn't
13 have any formal training.

14 So my question is, how did that light
15 bulb moment occur where you thought, hey, let's
16 put a path down the middle?

17 MR. SIEGER: Objection, form, scope,
18 argumentative, asked and answered.

19 A. As far as formal training on the niche
20 practices you're discussing, my life experiences
21 and Mr. Greg Conley's life experiences in the
22 jobs that we had to do put us in positions where
23 we learned a lot that you're not going to learn
24 in a textbook. Things trial and error throughout

1 our past experiences in our fields gave us ideas.
2 I mean, experiences can sometime go way farther
3 than a textbook.

4 MR. SIEGER: Is now a good time for the
5 break?

6 MR. DOKHANCHY: Yeah. I think just one
7 more question, and then we'll take a break.

8 Q. And that is, someone looking at the
9 problem of cotton material blocking the airflow,
10 wouldn't the first thing they try be put a path
11 down the middle for better airflow?

12 MR. SIEGER: Objection, form, scope,
13 speculation.

14 A. A design is a bunch of different ideas
15 that come together to solve a problem to create
16 your end goal of how you want your product to be.

17 Q. And if your goal is better airflow,
18 putting a tube down the middle is the most
19 obvious solution, wouldn't you agree?

20 MR. SIEGER: Objection, form, scope,
21 calls for expert testimony.

22 A. Airflow is just one portion of the
23 invention.

24 Q. I understand that.

1 I'm just talking about that portion,
2 which is what I've been trying to say over and
3 over. I'm just talking about the airflow
4 portion. We can talk about the --

5 MR. SIEGER: Objection.

6 Q. -- next and we will.

7 So here's my question: If someone saw a
8 problem with airflow being blocked by cotton
9 material, isn't putting a tube down the middle
10 the most obvious solution to that problem?

11 MR. SIEGER: Objection, form, scope,
12 calls for expert testimony.

13 A. The design of our product is multifaceted
14 with multiple things that were done to create a
15 better product. So to whittle away at one
16 portion of it, I -- it's a whole concept, it's a
17 whole design.

18 Q. I understand that, Mr. Hillenbrandt, but
19 you're not answering my question. I'm just
20 asking about part of the design. And I'm allowed
21 to ask whatever part of the design I want.

22 So I want you to focus your answer on my
23 question, not about other things that you want to
24 talk about. My question is just about part of

1 the design. Do you understand that?

2 MR. SIEGER: Objection, argumentative. I
3 think he's answered your question a few times
4 now.

5 MR. DOKHANCHY: He has not.

6 Q. Mr. Hillenbrandt, do you understand my
7 question is about just part of your design,
8 yes-or-no?

9 MR. SIEGER: Objection, form.

10 A. Yes. I understand you're pointing at one
11 portion of it.

12 Q. Okay. With that knowledge, when someone
13 is looking at the problem of airflow being
14 blocked by cotton material, the most obvious
15 thing is to put a tube down the middle of the
16 cartridge, isn't it?

17 MR. SIEGER: Objection, form, scope,
18 asked and answered, calls for expert testimony.

19 A. That is a first step to many steps in
20 creating a design that is going to work the way
21 we wanted it to.

22 MR. DOKHANCHY: All right. Let's take a
23 break for ten minutes.

24 THE VIDEOGRAPHER: Hearing no objection,

1 we are going off the record. The time 10:52.

2 (Proceedings interrupted at 10:52 a.m. and
3 reconvened at 11:03 a.m.)

4 THE VIDEOGRAPHER: We are back on the
5 record. The time 11:03 a.m.

6 BY MR. DOKHANCHY:

7 Q. All right. Mr. Hillenbrandt, did you
8 speak to anybody during the break?

9 A. No, I -- if you're asking if I discussed
10 anything, no, I did not.

11 Q. I'm just asking did you talk to anybody
12 during the break?

13 A. I talked to counsel about lunch.

14 Q. Okay. Did you talk about anything other
15 than lunch?

16 A. No.

17 Q. Okay. All right.

18 MR. DOKHANCHY: Can we get the previous
19 exhibit up on the screen.

20 Q. Or actually, Mr. Hillenbrandt, you can
21 just refer to your paper copy just to make things
22 easier.

23 All right. Let's talk about the next
24 benefit of your design that you list, and that's

1 about the middle of paragraph 6, you see that it
2 "separated the airflow from the solution holding
3 medium to reduce liquid droplets in the airflow."

4 Do you see that?

5 A. Yes.

6 Q. And what do you mean by that?

7 MR. SIEGER: Objection, form.

8 A. Problems we found with the electronic
9 cigarettes at the time were leaking, getting the
10 liquid in your mouth as you're trying to inhale.
11 We wanted to prevent that from happening.

12 Q. And what did you mean by that it
13 "separated the airflow from the solution holding
14 medium"?

15 A. It isolated it away from the airflow
16 passageway.

17 Q. And that's in contrast with the air
18 flowing through the nooks and crannies of the
19 solution holding medium, for example, of batting
20 material; is that the distinction?

21 A. That's not our design.

22 Q. Right.

23 What I'm saying is your design is
24 distinguished from the other design and the other

1 design is the air flowing through nooks and
2 crannies of cotton batting material, for example,
3 right?

4 MR. SIEGER: Objection, form.

5 A. That's what I believe was happening.

6 Q. Okay.

7 MR. DOKHANCHY: All right. Let's look at
8 Exhibit 2029 in the '160 matter.

9 Q. That's an exhibit to your declaration,
10 Mr. Hillenbrandt. Do you have a paper copy of
11 that?

12 A. Yeah. I have the exhibit you're speaking
13 of in front of me.

14 Q. Okay. And you helped her prepare this,
15 correct?

16 MR. SIEGER: Objection, form.

17 A. Yeah. I was involved in the preparation
18 of this.

19 Q. Okay. And specifically, you helped to
20 create it?

21 A. I worked with my counsel to create this
22 document.

23 Q. Okay. And you believe this document is
24 accurate, right?

1 A. Yes.

2 Q. Okay. And this document explains where
3 the various claim components in the '864 patent
4 can be found in the Fuma cartridge; is that
5 correct?

6 A. I would have to read the document again
7 to answer your question.

8 Q. Okay. Well, take a quick look at
9 paragraph 5, which is on page 2. You'll see that
10 paragraph 5 states, "The relationship of the
11 subject matter of the claims to the product," and
12 you'll see that the product is the Fuma
13 cartridge, "And the componentry thereof shown in
14 Exhibit A is set forth below."

15 And then it goes on to use the claim
16 language and it says, "See Figure 2, see Figures
17 2 through 9, et cetera, throughout the subsequent
18 paragraphs."

19 Do you see that?

20 A. I see what you're referring to.

21 Q. Okay. And if you can flip to Exhibit A,
22 you'll see photographs of the Fuma cartridge that
23 you describe in your declaration and there's some
24 annotations with the claim language.

1 A. Yes.

2 Q. Okay.

3 A. I see it.

4 Q. All right. And if you'll go to Figure 6,
5 please.

6 A. Okay.

7 Q. What are we seeing here in Figure 6?

8 MR. SIEGER: Objection, form.

9 A. The cartridge to the left is a fully
10 assembled cartridge. The cartridge to the right
11 was cut around the bottom and then the portion,
12 the lower portion remained on the bottom and the
13 upper portion was slid -- slid up to expose
14 the -- that portion of the cartridge.

15 Q. What is the component that is labeled
16 "central and axial airflow passageway"?

17 MR. SIEGER: Objection, form, vague.

18 A. That there represents our airflow
19 passageway that we had in our cartridge.

20 Q. And is that a woven material?

21 A. Yes.

22 Q. What's the purpose of that woven
23 material?

24 A. To provide an airflow passageway.

1 Q. Okay. And the batting material goes
2 around the outside or went around the outside; is
3 that right?

4 A. Yes.

5 Q. All right. And you know that the Smoke
6 51 Duo also had woven spacers separating the
7 airflow from the batting material, right?

8 MR. SIEGER: Objection, form, scope,
9 foundation.

10 A. I did not see any.

11 Q. But since then, you've learned that the
12 Smoke 51 Duo has woven spacers that create an
13 airflow passageway, right?

14 MR. SIEGER: Objection, form, scope,
15 vague as to time.

16 A. I can't remember what their's looks like.

17 MR. DOKHANCHY: Okay. Well, let's bring
18 up Exhibit 2.

19 THE VIDEOGRAPHER: Stand by.

20 MR. SIEGER: Is this Exhibit 2 to the
21 Hillenbrandt deposition?

22 MR. DOKHANCHY: This is this current
23 Deposition Exhibit 2. It's a new exhibit. Yeah,
24 sorry, we didn't use Exhibit 1. I premarked it,

1 and so we're going to start with Exhibit 2.

2 (Exhibit 2, Declaration of Atif
3 Yardimici, marked for identification.)

4 MR. SIEGER: Is this available for us to
5 download?

6 MR. DOKHANCHY: Yeah, it should be. If
7 you have the Box link, you should be able to
8 download it.

9 Q. Okay. So this -- you'll see this cover
10 page is from -- I think you've been deposed on
11 this document twice before, so it will probably
12 be familiar to you. It has some previous
13 markings, that's why it's Exhibit 4 and Exhibit
14 11, and then in this deposition it's Exhibit 2.

15 This is a declaration of an expert
16 witness in the Fuma v. RJR case, and for the
17 record, case 1:19-cv-260, document 84-4.

18 And, you know, take your time to review
19 if you want, Mr. Hillenbrandt, but this is a
20 document you've seen before and been deposed on
21 before.

22 Mr. Yardimici or Dr. Yardimici did some
23 CT scans of the Smoke 51 Duo product. I want to
24 jump to those, and I think you'll probably

1 recognize them.

2 So...

3 MR. SIEGER: I'm just going to object to
4 scope for this line of questioning based off this
5 document.

6 Q. Okay. So you understand,
7 Mr. Hillenbrandt, that Dr. Yardimici submitted
8 this report and this is his CT scan of the Smoke
9 51 Duo product, right?

10 MR. SIEGER: Objection, form, scope,
11 mischaracterizes the document.

12 A. I don't know what that product is.

13 Q. Okay. Let's go up a little bit. So
14 you'll see on page 16 of 125, Mr. Yardimici is
15 showing the outside of a Smoke 51 Duo cartridge
16 with the box and the green cartridge.

17 Do you see that?

18 MR. SIEGER: Objection, form, scope,
19 foundation.

20 A. I see the images which you're showing me.

21 Q. Okay. And later on, on page 18, he's
22 showing what he says is a CT scan of the Smoke 51
23 Duo, correct?

24 MR. SIEGER: Objection, form, scope,

1 speculation.

2 A. I do see what you're saying. And I do
3 recall -- I was not deposed on this for the
4 R.J. Reynolds case, but this last case or this
5 JUUL case, I was.

6 Q. All right. And so Mr. Yardimici is
7 saying that there are woven spacers to support
8 the central opening in the Smoke 51 Duo here on
9 page 18.

10 Do you see that?

11 MR. SIEGER: Objection, form, scope,
12 mischaracterizes the document.

13 A. And what I recall talking to our counsel
14 from the R.J. Reynolds case, I don't believe
15 these products were from the time frame that our
16 products were developed.

17 Q. Okay. What's your basis for that?

18 A. Oh, what my past counsel's told me.

19 Q. And did they give you any documentation
20 or evidence to support that assertion to you?

21 MR. SIEGER: Objection, form.

22 Dan, I'll just caution you not to divulge
23 communications with attorneys. But to the extent
24 you have any independent understanding or

1 recollection as to why that is, you can answer.

2 A. I do not have any independent, nor should
3 I divulge any conversations with client -- or
4 attorneys.

5 Q. All right. So if Mr. Yardimici is right
6 about the woven spacers, then the Smoke 51 Duo
7 had something you would call an airflow
8 passageway much like the Fuma cartridge, right?

9 MR. SIEGER: Objection, form, scope,
10 mischaracterizes the document, foundation, expert
11 testimony.

12 A. I'm not versed in reading CT scans, so
13 it's, to me, very confusing looking at this to
14 understand truly what's going on.

15 Q. Okay. But you understand air is going to
16 flow in the bottom and out the top, right?

17 MR. SIEGER: Objection, form, scope.

18 A. I would doubt those products there --
19 like I said, it's hard to understand the CT scan.
20 But I don't feel that I could truly see exactly
21 what is going on or understand the differences in
22 the different shading on the CT scan.

23 Q. Right. I'm just talking about at a
24 high-level.

1 Let's go up to an easier figure. Let's
2 go to page 16. And so we've got the outside of
3 the Smoke 51 Duo cartridge here, right?

4 MR. SIEGER: Objection, form, scope,
5 mischaracterizes the document.

6 A. The outside cartridge or the cartridge
7 you're speaking of?

8 Q. Yes.

9 A. I see the cartridge you're speaking of.

10 Q. Okay. And you know that air is going to
11 go in the hole on the right-most image in that
12 kind of metal looking area in the middle of the
13 end of the cartridge, right?

14 MR. SIEGER: Objection, form, scope,
15 foundation.

16 A. Air would come in somewhere there.

17 Q. And one image to the left, with that
18 white plastic cap, air is going to exit the
19 cartridge there in that hole in the middle on the
20 end, right?

21 MR. SIEGER: Objection, form, scope.

22 A. Air would come out there.

23 Q. All right. Then going to page 18.
24 Assuming that this is an accurate CT scan of that

1 same cartridge, air is going to enter the bottom,
2 go through the middle, and exit the top, right?

3 MR. SIEGER: Objection, form, scope,
4 calls for speculation.

5 A. And that I do not see how it exits. I'm
6 not trained to read a CT scan. I'm not -- I
7 don't have experiences with CT scans, reading
8 them.

9 Q. Okay. Sorry. Were you finished?

10 A. Then you got the dark shaded spot, it
11 doesn't pass all the way through is the only
12 observation I could make with my limited
13 knowledge.

14 Q. Okay. Setting aside whether it passes
15 all the way through, do you have any reason to
16 disagree that air flows through the middle in
17 that dark portion?

18 MR. SIEGER: Objection, form, scope,
19 speculation.

20 A. I cannot determine how the air flows
21 through that.

22 MR. DOKHANCHY: Okay. All right. Let's
23 bring up Exhibit 4 to this deposition. I'll ask
24 the court reporter to please publish that.

1 (Exhibit 4, Document labeled FUMA00007750
2 - 7755, marked for identification.)

3 THE VIDEOGRAPHER: Stand by.

4 Q. All right. And I believe you've been
5 deposed on this document before, too,
6 Mr. Hillenbrandt. It was Exhibit 16, I believe,
7 to your ITC deposition. And do you recall this
8 document, Exhibit 16?

9 A. Yes. I've seen the document.

10 Q. And to be clear, it's Exhibit 4 in this
11 deposition.

12 What are we looking at here?

13 A. This is a document that Mr. Conley
14 presented to me of some notes along the side and
15 a drawing in the middle.

16 Q. Does this relate to the invention of the
17 '864 and '881 patents?

18 MR. SIEGER: Objection, form, vague.

19 A. Trying to read it. It's very small and
20 hard for me to read.

21 MR. SIEGER: Can you give
22 Mr. Hillenbrandt control so that he can navigate
23 the document himself?

24 MR. DOKHANCHY: I'm happy to, but let's

1 see if this solves the problem.

2 Q. Can you see that better,
3 Mr. Hillenbrandt?

4 A. I see.

5 Q. And is this an inventor notebook from
6 Mr. Conley?

7 MR. SIEGER: Objection, form, vague.

8 A. This is notes that he had made.

9 Q. And up here on the left, you see there's
10 an image with an X through it and the annotation
11 of "old."

12 Do you see that?

13 A. I see that.

14 Q. And what Mr. Conley is indicating is this
15 is the old design that he wanted to improve upon;
16 is that right?

17 MR. SIEGER: Objection, form,
18 speculation, foundation.

19 A. I don't recall the conversation around
20 this document.

21 Q. Okay. I think you testified about it in
22 your other deposition, so we don't need to dwell
23 on it.

24 But in this old diagram, he's indicating

1 the airflow entering this cylindrical shape at
2 the bottom where there's a hole.

3 Do you see that?

4 MR. SIEGER: Objection, form, scope,
5 vague.

6 A. I see what you're pointing to on the
7 document.

8 Q. And then there's a sort of separated
9 central tube that reaches the top and has another
10 hole at the other end.

11 Do you see that?

12 MR. SIEGER: Objection, form, vague.

13 A. I see what you're pointing to.

14 Q. Okay. And in this diagram the air would
15 flow through that first hole at the bottom, along
16 this tube, and then exit the top, right?

17 MR. SIEGER: Objection, form, scope,
18 calls for speculation.

19 A. Yeah, I can't recall the conversation
20 around this document and what Mr. Conley may have
21 been trying to describe.

22 Q. Okay. Do you have any reason to think
23 that the air would flow somewhere else in this
24 tube other than in this tube within this

1 cylinder?

2 MR. SIEGER: Objection, form, scope.

3 A. I cannot make a determination on what the
4 drawing is to portray.

5 Q. Okay. You don't have any reason to think
6 that the air is not going to flow through that
7 tube in the old figure, right?

8 MR. SIEGER: Objection, form, scope,
9 asked and answered.

10 A. I do not recall the conversation around
11 this document and cannot guess what reason we
12 were talking about that.

13 Q. Okay. In your view, does this depiction
14 with the old label show a central and axial
15 airflow passageway?

16 MR. SIEGER: Objection, form, scope,
17 speculation.

18 A. Again --

19 MR. SIEGER: Incomplete hypothetical.
20 Sorry. Go ahead.

21 THE WITNESS: I'm sorry.

22 MR. SIEGER: No. That's fine.

23 A. Again, I do not recall the subject matter
24 of discussions around this document; I just don't

1 remember.

2 MR. DOKHANCHY: One second. I'm going to
3 upload a document.

4 Q. All right. Let's talk about the heating
5 element extending transversely across the airflow
6 passageway. Are you familiar with that language
7 in your claims?

8 A. Yes. What document are you at and where
9 can I follow along, please?

10 Q. Sure.

11 Do you have the '864 patent in front of
12 you?

13 A. Yes. '864.

14 Q. All right. If you go back to column 17
15 where claim 1 was.

16 A. Yeah. I'm at column 17.

17 Q. Okay. You see around line 31 there's an
18 element that says "a heating element located in
19 the interior of the housing, the heating element
20 extending transversely to a central longitudinal
21 axis of the housing."

22 Do you see that?

23 A. Yes.

24 Q. And I think you mentioned earlier, in

1 your view that means that it extends across the
2 airflow passageway; is that fair?

3 MR. SIEGER: Objection, form to the
4 extent it mischaracterizes the witness'
5 testimony.

6 A. What I can say is this is a complicated
7 legal document, that our invention is to have the
8 transverse heating element to vaporize in the
9 central airflow passageway.

10 Q. Okay. All right. Do you have the '881
11 patent in front of you as well?

12 A. Yes.

13 Q. And it's also column 17, if you could
14 please turn to that.

15 A. Yes. I'm there.

16 Q. So around line 42 in the '881 patent, in
17 column 17 it says "wherein the heating element
18 extends transversely across the airflow
19 passageway."

20 Do you see that?

21 A. Yes.

22 MR. DOKHANCHY: Okay. All right. Could
23 we please publish Exhibit 7 to this deposition.
24 The numbering is not going to be consecutive, but

1 I think we can manage that.

2 (Exhibit 7, Figure 2, Heating Element,
3 '881 Patent, marked for identification.)

4 THE VIDEOGRAPHER: Certainly. While you
5 had control, I was unable to download it, so I'm
6 downloading it right this moment.

7 MR. DOKHANCHY: Okay.

8 Q. And Mr. Hillenbrandt, while we're doing
9 that, can you just turn to Figure 2 of the '881
10 patent that you have in front of you?

11 A. Okay. I'm there.

12 Q. Just take a look at that. We're going to
13 be using that figure for a couple of questions.
14 So it's going to be in the new exhibit as well.
15 I just wanted you to take a look at that while
16 we're waiting.

17 So if you can see Exhibit 7 up on the
18 screen, you'll see Figure 2 from your patents.

19 Do you recognize that?

20 MR. SIEGER: Objection, form. What's on
21 the screen has been annotated with additional
22 words that are not found in the '881 patent.

23 MR. DOKHANCHY: I don't think that's
24 true, but I'm happy to explain that.

1 MR. SIEGER: How is that not true? It
2 literally has words written on it that are not in
3 Figure 2 of the patent.

4 MR. DOKHANCHY: You said they're not in
5 the patent. They are in the patent.

6 MR. SIEGER: They're not --

7 THE WITNESS: They're not in the diagram
8 Figure 2 that --

9 COURT REPORTER: Okay. I can't
10 understand everybody talking at the same time.
11 So if you want to be on the record, we need to
12 speak one at a time.

13 THE WITNESS: My apologies.

14 A. I'm looking at Figure 2 of the '881
15 patent, and it does not have those annotations
16 that are represented in this document that is on
17 the screen.

18 Q. Okay. What you're referring to are the
19 words "heating element" under 222; "absorbent
20 material" under 204; and "airflow passageway"
21 under 214, correct?

22 A. Those are the annotations, yes.

23 Q. Okay. And those are the words that the
24 specification uses to identify those elements

1 222, 204, and 214; is that your recollection?

2 MR. SIEGER: Dan, take your time. If you
3 want to review the document to confirm that, feel
4 free to.

5 A. Yeah. I need to review and make sure
6 that that would be --

7 Q. Okay. We'll do that in a second. But
8 just looking at Figure 2, do you understand that
9 222 is the heating element?

10 A. Yes.

11 Q. Do you understand that 204 is the
12 absorbent material?

13 MR. SIEGER: Objection.

14 Just for the record, are you directing
15 him to Figure 2 in just the '881 patent or
16 Figure 2 that's shown here on the screen?

17 MR. DOKHANCHY: Figure 2 of the '881
18 patent.

19 Q. Do you understand, Mr. Hillenbrandt, in
20 Figure 2 of the '881 patent that item 222 is the
21 heating element?

22 MR. SIEGER: And, again, if you want to
23 confirm the specification, feel free to do so.

24 A. I'm going to read through those.

1 Yes. That's specified as a heating
2 element.

3 Q. And item 204 is described as the
4 absorbent material; is that correct?

5 A. Allow me a moment to find that, please.
6 Yes. Absorbent material, 204.

7 Q. Okay. And item 214 is described as the
8 airflow passageway; is that correct?

9 A. Airflow passageway, 214. Yes, I see it
10 in the document.

11 Q. So on Exhibit 7, the first page, Figure
12 2, do those annotations that I've added
13 accurately describe the numbers that are in the
14 figure?

15 MR. SIEGER: Objection, form.

16 A. What am I -- what am I comparing this to,
17 again, please?

18 Q. So this is Figure 2 of the '881 patent on
19 Exhibit 7, page 1 that added the annotations for
20 heating element, 222; absorbent material, 204;
21 and airflow passageway, 214. And my question is,
22 do you agree that those labels are accurate?

23 A. Yes, those labels are corresponding with
24 the annotations of the --

1 (Clarification by the reporter.)

2 THE WITNESS: The labels correspond with
3 the numbers.

4 Q. These are really just for ease of
5 reference, but I understand that we want to go
6 through them. So I'm glad we're on the same page
7 now.

8 That heating element in Figure 2, does
9 that extend transversely across the airflow
10 passageway?

11 MR. SIEGER: Objection, form, scope.

12 A. Yes.

13 Q. Okay. So we'll go down to the next page,
14 and I've replaced that heating element with a
15 straight line heating element that is not a coil,
16 it's just a straight line, and it gets hot and it
17 vaporizes the liquid.

18 Is that heating element in version 2 of
19 Figure 2, as I've labeled it in Exhibit 7, does
20 that heating element extend transversely across
21 the airflow passageway?

22 MR. SIEGER: Objection, form, scope,
23 incomplete hypothetical.

24 Reza, can you point me where in the

1 declaration that this line of questioning is
2 relevant to?

3 MR. DOKHANCHY: Same paragraphs where
4 he's talking about the inventiveness of these
5 claims.

6 MR. SIEGER: Calls for a legal
7 conclusion, calls for expert testimony.

8 Q. You may answer, Mr. Hillenbrandt.

9 A. I'm familiar with my heating coil that --
10 I'm not familiar with what you're trying to draw
11 or actually see there.

12 Q. Okay. Well, I'm describing it to you.

13 So in Figure 2, there's a coil. In
14 version 2 of Figure 2, which I've created,
15 there's a straight heating element going across
16 the airflow passageway.

17 My question to you is does that heating
18 element in version 2 of Figure 2 in Exhibit 7
19 extend transversely across the airflow
20 passageway?

21 MR. SIEGER: Objection, form, scope,
22 incomplete hypothetical, calls for expert
23 testimony.

24 A. Yeah, I'm not familiar with the straight

1 heating element as to where the resistance could
2 allow that to heat up, so I don't know if it
3 would heat in the airflow passageway.

4 I'm sorry. I'm just not familiar with
5 that.

6 Q. I understand.

7 My question is not about whether it would
8 heat. I'm just asking about whether it extends
9 transversely, which is the claim language of your
10 claims.

11 So assume for the purpose of my question
12 that it does heat and it does vaporize. It's
13 just a wire going straight across, but it gets
14 hot enough and it does vaporize the liquid into a
15 vapor.

16 So my question is, does that heating
17 element with those properties in version 2 of
18 Figure 2 extend transversely across the airflow
19 passageway?

20 MR. SIEGER: Objection, form, scope,
21 calls for a legal conclusion, incomplete
22 hypothetical, calls for expert testimony.

23 A. Hypothetically, as you're describing it
24 in the way that you drew it there, that it goes

1 across transversely --

2 Q. Okay.

3 A. -- possibly, if it's in the center.

4 Q. Okay. What you mean is if you were
5 looking down the hole, down the barrel, as long
6 as it's going across the center, you would agree
7 that it goes transversely across the passageway?

8 MR. SIEGER: Same objections, vague.

9 A. And you're asking me to see that your
10 hypothetical line going across goes across that,
11 I can -- I will say I see what you're trying to
12 say there, going transversely across.

13 Q. Okay. And not only you see what I'm
14 trying to say, in this depiction as I've
15 described it, that heating element does go
16 transversely across the airflow passageway. Do
17 you agree?

18 A. In your hypothetical, I see what you're
19 saying there.

20 Q. And you agree it does go transversely
21 across the passageway, right?

22 MR. SIEGER: Same objections.

23 A. That your hypothetical does look
24 transverse.

1 Q. Okay. So let's add in version 3, instead
2 of just going across, it goes across once, it
3 comes back to the first side, and then it goes
4 back to the second side again. So what's going
5 on in Figure 2, version 3 of Exhibit 7 is this
6 red heating element extends from the left side of
7 the passageway all the way to the right side, or
8 just to it, doubles back to the first side, and
9 then returns to the third side and connects up to
10 the electrical lead.

11 Do you understand that, Mr. Hillenbrandt?

12 MR. SIEGER: Objection, scope, incomplete
13 hypothetical.

14 A. Now it's beginning to get a little
15 foggier there without seeing an actual device to
16 understand what you're saying to try to follow
17 along. I mean, it's --

18 Q. So in the previous image, we saw the
19 heating element go across and connect up to the
20 lead wire on the other side of the passageway.
21 In version 3, the heating element goes across,
22 does not connect to the heating element, comes
23 back to the first side across the passageway
24 again, does not connect to the heating element,

1 and on the third pass, it goes across to the
2 other side of the airflow passageway and connects
3 up to the electrical lead.

4 Does that make sense, that zigzag?

5 MR. SIEGER: Objection, form. And just
6 note that this is entirely outside the scope of
7 Mr. Hillenbrandt's declaration and calls for
8 expert testimony.

9 A. This gets kind of confusing for me to
10 follow, you know, your speculative ideas here in
11 trying to describe it to me, I know you're trying
12 to do a good job, but it's a little hard to
13 follow.

14 Q. I'm happy to explain further.

15 All this wire does is go across the
16 passageway three times. So my question is, if
17 the heating element, instead of going across
18 once, goes across three times, does it still
19 extend transversely to the airflow passageway?

20 MR. SIEGER: Objection, form, scope,
21 calls for expert testimony, incomplete
22 hypothetical, vague, confusing.

23 A. As you're describing it, and the way you
24 drew it horizontally, would speculate that it

1 does --

2 Q. Okay.

3 A. -- is what you're trying to achieve as
4 far as going across.

5 Q. Okay. And in version 4 of Figure 2, just
6 continuing the same concept, and I'll describe
7 it, and let me know if it makes sense
8 conceptually to you: In version 4 of Figure 2,
9 the heating wire goes across the airflow
10 passageway essentially five times instead of
11 three as in the previous one.

12 So in version 4, the heating element goes
13 across the passageway, comes back, goes across,
14 comes back, goes across, and on that fifth time
15 crossing the airflow passageway connects up to
16 the heating wire 226.

17 And so my question is in version 4 of
18 Figure 2, does that heating element extend
19 transversely across the airflow passageway?

20 MR. SIEGER: Objection to form, scope,
21 expert testimony, vague, incomplete hypothetical.

22 A. On this one here that you drew, I don't
23 feel I have enough information to answer that
24 question. I cannot see the paths that it's

1 taking from the top view, and it's just very
2 confusing and I don't know what I'm looking at
3 here, so I'm very sorry.

4 Q. Okay. Well, again, I'm happy to describe
5 it.

6 So if you were looking down the cross
7 section, this wire would simply go across the
8 middle of that cross section and come back and go
9 across and come back and go across. So it would
10 take five passages across the airflow passageway
11 through the middle of the cross section.

12 Does that clarify the structure of the
13 heating element?

14 MR. SIEGER: Same objections.

15 A. I still cannot picture what you're saying
16 in my mind. I'm sorry.

17 Q. So it's similar to version 3, where there
18 was three passages across the airflow passageway,
19 but in version 4, the heating element passes
20 across through the middle of the passageway five
21 times, and on the fifth time across, it
22 terminates at the heating wire 226.

23 MR. SIEGER: Same objections.

24 MR. DOKHANCHY: I haven't asked the

1 question yet.

2 Q. Does that heating element extend
3 transversely across the airflow passageway when
4 it goes across and comes back five times?

5 MR. SIEGER: Same objections.

6 A. I cannot make that determination from
7 this drawing.

8 Q. What's preventing you from making that
9 determination?

10 MR. SIEGER: Objection, form.

11 A. I still am not understanding what you're
12 trying to do, or actually envisioning it within
13 my head. It's confusing.

14 Q. You can imagine a piece of wire that
15 zigzags, is bent and zigzags back and forth five
16 times. Can you imagine that?

17 MR. SIEGER: Objection, form, asked and
18 answered.

19 A. No, because the zigzag could look a
20 thousand different ways. I really, you know --
21 it's a very vague on what -- I can't interpret
22 this.

23 Q. I'm just asking you to picture that. You
24 can picture a wire that goes across something and

1 comes back five times, you can envision at least
2 one way that that could happen, couldn't you?

3 MR. SIEGER: Objection, form.

4 A. It's very confusing. I'm having a hard
5 time trying to visualize what you're doing.

6 Q. Well, just take away this figure. Just
7 think about the concept of a piece of wire, and
8 that piece of wire has a length, it gets bent, it
9 comes back that same length, it goes across a
10 third time that same length, and it's a zigzag
11 that is just a series of straight lines.

12 MR. SIEGE: Objection, outside the scope
13 of the declaration.

14 A. Yes. I still can't picture what that
15 would look like. I'm sorry.

16 Q. So you can't picture a bent wire in a
17 zigzag shape, is that what you're saying?

18 MR. SIEGER: Objection, argumentative,
19 asked and answered.

20 A. A bent wire could be, like I said, bent
21 hundreds, thousands of different ways. But to
22 try to figure out what you're actually seeing,
23 I'm not following it.

24 Q. What's one way a wire could be bent into

1 a zigzag shape?

2 MR. SIEGER: Same objections.

3 A. It could look a lot of different ways. I
4 don't know. I mean --

5 Q. What's one way?

6 MR. SIEGER: Same objections.

7 A. I just don't know how to picture that in
8 the application that you're trying to use it in
9 and that's where I think I'm getting a block on
10 this because I'm trying to, you know, envision
11 what you're saying here. It's just not allowing
12 me to. I'm sorry.

13 Q. When you said a piece of wire could be
14 bent into a zigzag millions of ways, you should
15 be able to give me one way. So what's one way
16 that a piece of wire could be bent into a zigzag?

17 MR. SIEGER: Objection, argumentative,
18 mischaracterizes the witness' testimony.

19 A. I mean, it could be bent tight, loose,
20 sharp bends, open bends. I don't know. It's a
21 lot of -- I mean, I'm trying to envision what
22 you're saying here, and, I'm sorry, I just can't.

23 Q. All right. So looking at Figure 2,
24 version 4, do you have any reason to say that

1 that heating element that passes back and forth
2 five times the airflow passageway does not extend
3 transversely?

4 MR. SIEGER: Objection, form, scope,
5 asked and answered.

6 A. Yeah, I'm -- I'm -- I don't know the path
7 of the wire. I'm sorry.

8 Q. It goes across the middle, as I already
9 said.

10 MR. SIEGER: Is there a question?

11 Q. Yeah. Same question with the knowledge
12 that it goes across the middle.

13 So with the knowledge that the heating
14 wire in version 4, Figure 2, goes across the
15 middle of the cross section of the airflow
16 passageway, do you have any reason to disagree
17 that that heating element extends transversely to
18 the airflow passageway?

19 MR. SIEGER: Objection, form, scope,
20 calls for expert testimony.

21 A. I just can't make a determination on
22 speculating what's in your mind and what you're
23 thinking on this. I'm sorry.

24 Q. Okay. So you can't point me to any

1 reason you'd say that doesn't extend transversely
2 across the airflow passageway, correct?

3 MR. SIEGER: Objection, form, scope,
4 mischaracterizes the witness' testimony.

5 A. I'm saying I don't understand what's
6 inside your head that you're speculating on that
7 you want me to speculate on as well.

8 Q. Okay. What more is required to extend
9 transversely to an airflow passageway beyond
10 wires going across the airflow passageway?

11 MR. SIEGER: Same objections.

12 A. I cannot -- I'm just having a hard time
13 picturing what that would be like.

14 Q. You're having a hard time picturing that
15 a wire goes across a passageway?

16 MR. SIEGER: Objection, mischaracterizes
17 the witness' testimony, scope.

18 A. What our discussion is with all those
19 zigzags and how the zigzags are configured and
20 everything like that, I still am having a hard
21 time following what your description is, is what
22 I'm saying.

23 Q. I'm not asking --

24 MR. DOKHANCHY: Let's take the exhibit

1 down so I can make it a little bit clearer that
2 I'm not asking about the figure.

3 Q. So Mr. Hillenbrandt, what is required of
4 a heating element to extend transversely across
5 the airflow passageway other than the heating
6 element goes across the passageway?

7 MR. SIEGER: Objection, form, scope.

8 A. The heating element crosses our
9 passageway for vaporization in our airflow.

10 Q. So my question is, in order to extend
11 transversely across the airflow passageway, is
12 there anything more required than the wire goes
13 across the passageway?

14 MR. SIEGER: Same objections, asked and
15 answered.

16 A. Our invention, our heating element
17 crosses transversely across the airflow
18 passageway, which will allow the vaporization in
19 the airflow passageway.

20 Q. Is there anything more required for a
21 heating element to be a transverse heating
22 element beyond what you just said?

23 A. I mentioned our heating coil going
24 transversely across airflow passageway allowing

1 for vaporization in the airflow passageway.

2 Q. Is anything more required than that to be
3 a transverse heating element?

4 MR. SIEGER: Objection, form, scope,
5 calls for expert opinion.

6 A. The way ours works is our heating element
7 transversely goes across the airflow passageway
8 to allow vaporization in the airflow passageway.

9 Q. Is anything more than that required for a
10 heating element to be transverse? Yes or no.

11 MR. SIEGER: Objection, form, scope,
12 calls for expert testimony.

13 A. I'm not sure if you're wanting me to give
14 you a Webster's dictionary version of what
15 transverse is or what your question is.

16 I'm trying to answer it by saying our
17 heating coil transversely goes across the airflow
18 passageway to allow for vaporization in the
19 airflow passageway.

20 Q. Okay. And as long as that occurs, the
21 heating element is transverse, correct?

22 MR. SIEGER: Same objections.

23 A. Our heating element is going across --
24 transversely across the airflow passageway.

1 Q. As long as the heating element goes
2 across the airflow passageway in a way that
3 allows for vaporization in the passageway, you
4 would say that heating element is transverse,
5 right?

6 MR. SIEGER: Objection, scope,
7 mischaracterizes the witness' testimony.

8 A. Our heating element transversely goes
9 across the airflow passageway allowing for
10 vaporization in the airflow.

11 Q. You're not answering my question. I'm
12 not asking what your heating element does.
13 Listen to my question, Mr. Hillenbrandt.

14 The question is: In the claims of your
15 patent that say transverse heating element or
16 heating element extends transversely, you as an
17 inventor would consider that met as long as the
18 heating element goes across the passageway in a
19 way that allows vaporization to happen in that
20 airflow passageway; is that correct?

21 MR. SIEGER: Objection, form, scope,
22 expert testimony.

23 A. A heating coil that goes across the
24 airflow passageway transversely is in our patent,

1 yes.

2 Q. I'm not asking you that. I'm asking you
3 about what you understand the claim terms to
4 mean. Do you get what I'm asking you,
5 Mr. Hillenbrandt?

6 MR. SIEGER: Objection, form,
7 argumentative.

8 (Simultaneous speaking.)

9 MR. SIEGER: Let him speak.

10 A. The heating coil transversely goes across
11 our airflow passageway to allow for vaporization
12 in the airflow passageway.

13 Q. All right. I'm asking you about the
14 meaning of the claim term "extend transversely
15 across the airflow passageway." Do you
16 understand that that's what I'm asking you about?

17 MR. SIEGER: Objection, form, scope,
18 calls for a legal conclusion, calls for expert
19 testimony.

20 A. Yes. Transversely going across the
21 airflow passageway.

22 Q. And I'm asking you about what those words
23 mean.

24 Do you understand that?

1 A. So you're asking me the Webster
2 dictionary version of what those words are?

3 Q. No. Just what they mean to you.

4 A. What they mean to me is they go across
5 the airflow passageway. Our coil goes across the
6 airflow passageway to allow vaporization in the
7 airflow is what it means to me.

8 Q. And as long as that happens, you would
9 say that's a transverse heating element?

10 MR. SIEGER: Objection, form, scope,
11 calls for expert testimony.

12 A. I can speak of our coil in our electronic
13 cigarette going transversely across the airflow
14 passageway allowing for vaporization in the
15 airflow.

16 Q. Okay. So you can't give me your
17 understanding of the full scope of a transverse
18 heating element, correct?

19 MR. SIEGER: Objection, form, scope,
20 mischaracterizes witness' testimony, calls for
21 expert testimony.

22 A. I just explained my scope of the
23 transverse heating element, which is our heating
24 element going transversely across the airflow

1 passageway to allow for vaporization in the
2 airflow.

3 MR. DOKHANCHY: Okay. Let's take a
4 ten-minute break.

5 MR. SIEGER: Is now a good time for
6 lunch?

7 MR. DOKHANCHY: Let's go half an hour or
8 do you want more time?

9 MR. SIEGER: Let's go off the record, we
10 can talk.

11 THE VIDEOGRAPHER: Hearing no objection,
12 we are going off the record. The time 11:57 a.m.

13 (Proceedings interrupted at 11:57 a.m. and
14 reconvened at 12:42 p.m.)

15 THE VIDEOGRAPHER: We are back on the
16 record. The time 12:42 p.m.

17 BY MR. DOKHANCHY:

18 Q. Welcome back, Mr. Hillenbrandt.

19 A. Welcome back.

20 Q. All right. Did you speak to anybody
21 during the break?

22 A. No, I did not.

23 Q. Okay. All right. So we were talking
24 about the heating element extending transversely.

1 Do you recall that?

2 A. Refresh where we're at if you've got
3 images or whatever we were looking at prior.

4 Q. Sure.

5 MR. DOKHANCHY: Let me bring up the '881
6 patent. If you have that in front of you, you
7 can just -- and I don't know that we need to put
8 it on the screen. I think you can just take that
9 down, and Mr. Hillenbrandt has a paper copy.

10 Q. So if you go back to that same column 17,
11 claim 1 that we were talking about before, that's
12 what I'm referring to.

13 A. Okay.

14 Q. All right. And so you see the claim
15 language column 17, line 43 -- 42 onward,
16 actually, it says, "wherein the heating element
17 extends transversely across the airflow
18 passageway."

19 Do you see that?

20 A. Yes, I do.

21 Q. And that's what you describe in your
22 declaration as the transverse heating element,
23 correct?

24 A. Yes.

1 Q. All right. What are the benefits of such
2 a transverse heating element?

3 MR. SIEGER: Objection, form.

4 A. The benefits in our device with the
5 transverse heating element, it allows for us to
6 draw the liquid into the heating element in the
7 airflow passageway and vaporize it in the airflow
8 passageway.

9 Q. Okay. And why couldn't you do that with
10 a vertical coil?

11 MR. SIEGER: Objection, form, scope.

12 A. With it going through the coil?

13 Q. Let's say with or without.

14 A. We prefer the method of across the
15 airflow passageway transversely in our device.

16 Q. Why is that?

17 A. It will deliver better performance for
18 what we were looking for.

19 Q. In what way?

20 A. In the vaporization of the nicotine.

21 Q. Why would the transverse heating element
22 provide better vaporization of the nicotine?

23 MR. SIEGER: Objection, form.

24 A. It allowed us to draw the liquid from the

1 bedding material through the wick into the center
2 of the airflow passageway vaporizing in the
3 airflow passageway to use the product.

4 Q. Why couldn't you do that with a vertical
5 coil?

6 MR. SIEGER: Objection, form, scope.

7 A. In certain applications it could be a
8 vertical coil to vaporize, but it would be a
9 different format.

10 Q. Different in what way?

11 A. It would not be in an airflow passageway,
12 as we are using it.

13 Q. You're saying you couldn't have a
14 vertical coil in an airflow passageway?

15 MR. SIEGER: Objection, form, scope.

16 A. All I could speak of is that our coil
17 going across transversely achieved what we wanted
18 it to achieve in the vaporization of our product.

19 Q. Okay. Do you have a belief that the
20 transverse coil achieved better vaporization than
21 what would have been achieved if you had had a
22 vertical coil in the airflow passageway?

23 MR. SIEGER: Objection, form and scope,
24 incomplete hypothetical.

1 A. I cannot determine that because I have
2 not tried that.

3 Q. Where did you get the idea for a
4 transverse heating element?

5 MR. SIEGER: Objection, form, scope.

6 A. In the collaborations I had with
7 Mr. Conley, in the back and forth conversations
8 and discussions and ideas we were discussing.

9 Q. And what was the light bulb moment where
10 you said, aha, let's use a transverse coil?

11 A. I don't know that we had just like one
12 necessarily light bulb moment. It was just an
13 accumulation of ideas and in discussions that
14 evolved into the patent that we have right now.

15 Q. Is there any reason that your invention
16 would not work with a vertical coil?

17 MR. SIEGER: Objection, form, scope,
18 calls for speculation.

19 A. Yeah, without trying it as you're
20 presenting it, initially thinking in my head
21 wondering how you're bringing the wick into the
22 scenario and how that would correspond with
23 everything, I'm not sure I could, you know, give
24 you a good guess on that right now.

1 Q. Okay. You know that the claims of your
2 patent don't all require a wick, right?

3 MR. SIEGER: Objection, form, foundation.

4 A. Yeah, I would have to go back and read
5 the -- all the claims thoroughly. It's been a
6 long time.

7 Q. Why don't you take a look at claim 1 of
8 the '881 patent, which should still be in front
9 of you.

10 A. Uh-huh.

11 Q. You don't see the word "wick" or
12 "wicking" or anything like that in claim 1 of the
13 '881 patent, right?

14 A. No, let me read it again, please.

15 Yes. We do not cite a wick there.

16 Q. All right. And if you go up to Figure 2
17 of that same patent, I have a question. Let me
18 know when you're there.

19 A. I'm there.

20 Q. In Figure 2, if there's no wick, how does
21 the liquid get to the coil?

22 MR. SIEGER: Objection, form, scope.

23 A. Here, I cannot remember the specific
24 reason it was depicted to show this view of it.

1 Q. Do you have any belief or understanding
2 from a technical perspective how in Figure 2
3 without a wick, the liquid would get to the coil?

4 MR. SIEGER: Objection, form, scope.

5 A. Again, I cannot remember what we were
6 discussing and what our thoughts were at the time
7 of this depiction.

8 Q. Okay. What about right now, sitting here
9 today, as you're looking at Figure 2, can you
10 tell me how the liquid would get from the
11 solution holding medium to the coil in Figure 2
12 without a wick?

13 MR. SIEGER: Objection, form, scope.

14 A. There's a possibility, as we've stated in
15 the patent as well, could use a ceramic heating
16 element, which could be then porous, which would
17 allow liquid to come into the heating element
18 itself for vaporization.

19 Q. And how would the connection happen
20 between the ceramic coil and the heating --
21 excuse me -- and the liquid storage medium? It
22 would have to be in contact, right?

23 MR. SIEGER: Objection, form, vague.

24 A. We never created that, so that would be

1 speculation on my part how we would finish
2 designing that aspect of the product to achieve
3 that goal. But it would have leads coming off
4 that would make connections.

5 Q. I think you're talking about the
6 electrical connections there, right?

7 A. Yes. Yes. To make the ceramic heating
8 element function.

9 Q. And then the ceramic heating element in
10 order to absorb the liquid would have to be
11 touching the batting material, right?

12 MR. SIEGER: Objection, form, scope.

13 A. It would -- without making a working
14 prototype of that, it would be hard for me to
15 determine how we would design that. But the
16 portion of ceramic would have to come in contact
17 to draw the liquid from the bedding material.

18 Q. Can you grab the '864 patent? And I want
19 to direct you to claim 1, which is in claim --
20 excuse me -- column 17.

21 A. I'm presuming you would like me to read
22 to myself claim 1 so I can follow along with you?

23 Q. You're welcome to re-read it. We read it
24 before. But I have a question about one of the

1 claim terms. If you want to read it right now,
2 feel free.

3 A. And would you like to speed up the
4 process and direct me to a portion I should read?

5 Q. Absolutely.

6 So my question is about the language at
7 column 17, line 22. It says, "the housing having
8 a first end and a second end that is opposite the
9 first end, the housing having a first aperture
10 proximate the first end and a second aperture
11 proximate the second end."

12 Do you see that?

13 A. Yes. I read it.

14 Q. What does the word "proximate" mean to
15 you in that sentence?

16 MR. SIEGER: Objection, form, scope,
17 calls for expert testimony, calls for a legal
18 conclusion.

19 A. Yes. That was -- I cannot answer the
20 question you're asking on that.

21 Q. Why not?

22 A. In working with our patent prosecutor on
23 this document, when we were speaking of
24 everything it was easier to understand. But then

1 reading it -- you know, if I was to sit down with
2 him again and go over that, it would -- I would
3 understand it easier then.

4 Q. Okay. Well, I'm just asking about the
5 claims that are in your patent, and I just want
6 to know if you have a particular understanding of
7 the word "proximate."

8 So the question is in claim 1 of the '864
9 patent, what does it mean for the first aperture
10 to be proximate the first end?

11 MR. SIEGER: Same objections, asked and
12 answered.

13 A. Yes, like I previously stated, I cannot
14 answer that question for you.

15 Q. Is there a particular distance that you
16 believe the term proximate covers?

17 MR. SIEGER: Same objections, vague.

18 A. Again, I cannot answer that question on
19 that term.

20 Q. And is that because the word proximate is
21 unclear to you, or why is that?

22 MR. SIEGER: Objection, form, scope.

23 A. Again, I -- let me read it one more time.
24 I'm still not going to be able to answer

1 that question for you. I apologize.

2 Q. Okay. Can you go up to Figure 2 of the
3 '864 patent?

4 A. It appears to only have one figure in it,
5 so I'm guessing that is a figure you're speaking
6 of.

7 Q. The '864 --

8 A. No. I was looking at the cover page.
9 I'm sorry. Hold on, please.

10 Okay. I'm on Figure 2.

11 Q. Okay. At the bottom of Figure 2, do you
12 see an opening there in this cross section? Do
13 you see that in Figure 2, it's labeled "212"?

14 A. Yes, I do.

15 Q. And that's where the air will come into
16 the airflow passageway; is that right?

17 MR. SIEGER: Objection, form, scope.

18 A. Looking back at 212 in the patent, 212 is
19 labeled as the second aperture.

20 Q. And so the top part of Figure 2 is where
21 the user will place their mouth and the bottom
22 part is where the air will come in; is that
23 right?

24 A. Yes.

1 Q. Okay. Is that aperture 212 proximate the
2 first end of the cartridge in Figure 2?

3 MR. SIEGER: Objection, form, scope,
4 calls for expert testimony.

5 A. Yeah, again, I'm not going to be able to
6 answer the proximity question again.

7 Q. Okay. So then I take it you also
8 couldn't tell me how far into the cartridge
9 vertically that first aperture can be and still
10 satisfy the claim language?

11 MR. SIEGER: Objection, form, scope,
12 vague, calls for expert testimony.

13 A. Yes. I will not be able to answer that
14 as well.

15 Q. All right. Let's jump back to the
16 claims, back to column 17.

17 A. Okay. I'm there.

18 Q. All right. Claim 3 says, "The cartridge
19 of claim 1, wherein the airflow passageway has a
20 length extending intermediate of the heating
21 element and the second aperture, the airflow
22 passageway having an interior between the heating
23 element and the second aperture, the interior
24 having no cross-sectional area measured

1 perpendicular to the central longitudinal axis of
2 the housing smaller in cross-sectional area than
3 a cross-sectional area of the second aperture."

4 Do you see that language?

5 A. Yes, I do.

6 Q. What does that mean?

7 MR. SIEGER: Objection, form, scope.

8 A. This, again, working with my prosecution
9 counsel on these claims, they were put in legal
10 form, and it becomes easier for me to understand
11 this when talking to him about it.

12 Q. Okay. Can you tell me, sitting here
13 right now, what the addition of claim 3 means?

14 MR. SIEGER: Same objections, asked and
15 answered.

16 A. And so I'm going to have to go with my
17 last answer on this.

18 Q. Sorry. Are you done?

19 A. Yes, I'm done.

20 Q. And your last answer is that no, you
21 cannot tell me what the words in claim 3 mean,
22 correct?

23 MR. SIEGER: Objection, form.

24 A. Yes. When I review it with my

1 prosecuting attorney, it's easier for me to
2 understand. Yes.

3 Q. Okay. Can you tell me why the addition
4 of claim 3 is innovative?

5 MR. SIEGER: Objection, form, scope,
6 calls for a legal conclusion, calls for expert
7 testimony.

8 A. Yeah, that's going to go back to my
9 answer with working with my prosecuting attorney
10 on these claims and going back and understanding
11 them, again, what we were doing there.

12 Q. Okay. So sitting here right now, looking
13 at claim 3 right now, you can't tell me anything
14 innovative about claim 3, can you?

15 MR. SIEGER: Same objections, asked and
16 answered.

17 A. I can tell you that without my
18 prosecuting attorney it's hard for me to
19 understand it.

20 Q. Okay. How did you conceive of the idea
21 of what's in claim 3 of the '864 patent?

22 MR. SIEGER: Objection, scope.

23 A. Okay. Again, because this is a complex
24 legal document, I would refer to having to

1 discuss it with my prosecuting attorney to fully
2 understand and remember what we were after here.

3 Q. Okay. And I have the same series of
4 questions for all the dependent claims in this
5 patent. And I'm happy to go one by one. But we
6 could maybe deal with it this way: Would your
7 answer be the same about the claim language in
8 each of the dependent claims of the '864 patent
9 as to this line of questioning that I've asked
10 you about claim 3?

11 MR. SIEGER: Objection, form, scope,
12 vague.

13 A. I can't answer that question to say that
14 the whole document would be like that, no.

15 Q. All right. Well, let's go to claim 4.
16 Please read that to yourself. So let me know
17 when you're done.

18 A. It would probably be the same answer.

19 Q. Let's go to claim 6, "The cartridge of
20 claim 5, further in combination with a power
21 source adapted to be electronically coupled to
22 the first end of the housing, the power source
23 including a battery."

24 I would have the same questions about

1 claim 3: What does it mean, why is it
2 innovative, and how did you conceive of the idea?

3 MR. SIEGER: Objection, scope.

4 Q. Mr. Hillenbrandt, are you able to answer
5 any of those questions?

6 A. I'm still reading, if that's okay with
7 you.

8 Okay. I'm ready for you to repeat the
9 question again if you could, please.

10 Q. Sure.
11 What does the addition of claim 6 mean?

12 MR. SIEGER: Objection, scope.

13 A. Claim 6 would require me to understand
14 completely claim 5, and there's some things that
15 I would also need to speak to my prosecuting
16 attorney on.

17 Q. Okay. So without speaking to your
18 prosecuting attorney, you can't tell me what the
19 addition of claim 6 means; is that right?

20 MR. SIEGER: Objection, form,
21 mischaracterizes the witness' testimony.

22 A. As I stated before, this is a very
23 complex legal document. Again, and I would refer
24 to the consult of my prosecuting attorney to

1 refresh me.

2 Q. Okay. Why is the addition of claim 6
3 innovative?

4 MR. SIEGER: Same objections.

5 A. I just answered this question for you.

6 Q. So why is it innovative?

7 MR. SIEGER: Objection, asked and
8 answered, scope.

9 A. You asked and I answered, I would --
10 without re-discussing this claim with my
11 prosecuting attorney to understand completely the
12 language, complex language, I would need that to
13 understand it better.

14 Q. Okay. How did you come up with and
15 invent the ideas in claim 6 that are added to
16 claim 5?

17 MR. SIEGER: Objection, scope.

18 A. Again, without a refresher with my
19 prosecuting attorney on the claims to understand
20 their flow and the process for which we're
21 applying them in understanding the claim 5
22 better, I cannot answer the question.

23 Q. Okay. Please read claim 7 to yourself,
24 and tell me when you're done.

1 A. That also refers to claim 5, which would
2 be my same answer.

3 Q. Okay. And you understand my questions
4 are just about the additional language in the
5 dependent claims, so not claim 5, but just what
6 claim 7 adds to claim 5; with that understanding,
7 is your answer the same?

8 A. Without me fully understanding claim 5,
9 it's hard for me to answer the questions of the
10 other claims that involve claim 5.

11 Q. Okay. Let's jump down to claims 10
12 through 20. You see that those depend from claim
13 9, and claim 16 depends from claim 15, which
14 depends from claim 9?

15 A. I'm ready for you to repeat the question
16 again. Thank you.

17 Q. Okay. This is going to be the same
18 series of questions. Is there any claim within
19 the span of claims 10 through 20 where you can
20 give me an answer about what the claims mean, why
21 the claims are innovative, or how you conceived
22 of the idea that is embodied in the additional
23 claim language in those dependent claims 10
24 through 20?

1 MR. SIEGER: Objection, form, scope,
2 compound. Similar to nearly every question
3 that's been asked during this deposition, these
4 questions are entirely outside the scope of
5 Mr. Hillenbrandt's declaration.

6 Mr. Hillenbrandt submitted a limited
7 declaration in these IPR proceedings. And the
8 other lack of relevance, these questions that
9 have been asked are not only inappropriate but
10 harassing.

11 But, Mr. Hillenbrandt, you can answer.

12 A. As I stated, this being a very complex
13 legal document and the language used in it, it is
14 easier for me to understand working with my
15 prosecuting attorney.

16 Q. Okay. So can you answer any of the
17 questions that I asked with respect to claims 10
18 through 20 or do you need to talk to your
19 attorney?

20 MR. SIEGER: Objection, asked and
21 answered, not to mention completely outside the
22 scope of his declaration.

23 A. Yeah, I would not be able to answer those
24 without understanding some of the language used

1 in the claims from my prosecuting attorney.

2 Q. Would your answer be the same as to
3 claims 20, 23, and 24?

4 MR. SIEGER: Objection, form, scope.

5 Reza, I know you're going to point to
6 paragraphs 5, 6, and 7, but please articulate to
7 me how this line of questioning is relevant and
8 within the scope of the declaration.

9 MR. DOKHANCHY: I think it's pretty
10 obvious. Mr. Hillenbrandt is --

11 MR. SIEGER: It's not obvious to me, so
12 articulate it to me. I want to know.

13 MR. DOKHANCHY: Don't cut me off, Matt.
14 I'm answering the question.

15 It is obvious. Let me explain it to you.

16 MR. SIEGER: Please do.

17 MR. DOKHANCHY: Mr. Hillenbrandt
18 submitted a declaration saying that his invention
19 is innovative, different over the prior art, and
20 all these great things about it. I presume that
21 covers all of the claims of the patent.

22 Q. Mr. Hillenbrandt, if your declaration
23 only alleges that your innovations are embodied
24 in claim 1, please tell me that now. But you

1 said in your declaration --

2 MR. DOKHANCHY: Matt, Mr. Hillenbrandt
3 said in his declaration that he came up with an
4 invention. Those inventions are embodied in
5 patents at issue in this IPR. So I'm entitled to
6 learn about the inventiveness of all of those
7 claims.

8 So that's the relevance. It's incredibly
9 relevant, actually, so I really don't understand
10 those objections whatsoever.

11 Q. Mr. Hillenbrandt, let me ask you: Do you
12 believe that all of the claims of your patent are
13 innovative?

14 A. The claims in our patent were
15 collaboratively done with myself and Greg Conley
16 in working with the prosecuting attorney in
17 drafting the claims.

18 Q. Okay. That's not an answer to my
19 question.

20 MR. DOKHANCHY: So I think in the light
21 of his declaration, which purports to be about
22 the inventions of his patents, that declaration
23 covers all claims, not just some of them. So I
24 can ask whatever questions I want about the

1 inventiveness of the patent, the claims, how he
2 came to it, why it's different than the prior
3 art. So I'm going to continue.

4 MR. SIEGER: Have at it.

5 Q. Mr. Hillenbrandt, would your answer be
6 the same about what the claims mean, why it's
7 innovative, and how you conceived of the claims
8 embodied in claims 22 to 24, as previously, that
9 you don't know and you need to talk to your
10 lawyer?

11 MR. SIEGER: Objection, scope, compound.

12 A. Yes. To interpret the language in here,
13 it's been a little confusing to me without going
14 over this with my prosecuting attorney.

15 Q. All right. Will your answer be the same
16 as to claims 26 to 28?

17 MR. SIEGER: Same objections.

18 A. Yes. This requires me to study the
19 document in great lengths to sit down and break
20 down each of the claims and how it affects the
21 next claim, and I don't feel that I have enough
22 time to study this document to understand and
23 reflect back on each of the claims and how they
24 affect the other claim.

1 Q. You can take all the time you want, so if
2 you want to sit and read the whole thing, that's
3 fine.

4 Can you tell me what any of the words --
5 MR. DOKHANCHY: Withdrawn.

6 Q. Can you tell me what any of the additions
7 in claim language of 26, 27, and 28 add to the
8 claims, why they're innovative and how you
9 conceived of them?

10 MR. SIEGER: Objection, scope, compound.

11 A. Looking at the document, it does require
12 me to go back to the beginning and fully
13 understand, to interpret each and every one as it
14 adds to each claim and understand all the
15 language properly.

16 Q. Do you have the '881 patent?

17 A. Yes. I have the '881.

18 Q. All right. Please turn to claim 1 in
19 column 17.

20 A. Okay. I'm there.

21 Q. All right. Claim 2 under claim 1 says
22 "The cartridge of claim 1 wherein the heating
23 element is a coil having a maximum diameter, the
24 airflow passageway having a length having a

1 circular cross section having a diameter along a
2 majority of the length, the maximum diameter of
3 the coil being smaller than the diameter of the
4 circular cross section of the length of the
5 airflow passageway."

6 Do you see that?

7 A. I am reading it.

8 Q. What does that language mean?

9 MR. SIEGER: Objection, scope, calls for
10 a legal conclusion, calls for expert testimony.

11 A. Yes. Without the -- without the
12 discussion with my prosecuting attorney on this,
13 I can't answer that question.

14 Q. All right. Why is the addition of claim
15 2 innovative?

16 MR. SIEGER: Same objections.

17 A. Again, I'm going to have to refer back to
18 my last answer.

19 Q. How did you conceive of the additions
20 embodied in claim 2 of the '881 patent?

21 MR. SIEGER: Same objections.

22 A. Same answer.

23 Q. Okay. Would your answer to the three
24 questions I asked about claim 2 be the same with

1 respect to claim 3?

2 A. Again, the legal definitions and
3 descriptions here in this document are easier for
4 me to understand with my prosecuting attorney.

5 Q. I understand they may be easier to
6 understand. But can you answer the questions I
7 asked about claim 2, about claim 3, or can you
8 not answer them?

9 MR. SIEGER: Objection, asked and
10 answered, scope, calls for a legal conclusion.

11 A. I cannot answer them.

12 Q. All right. Same series of questions with
13 respect to claim 4 of the '881 patent. Would
14 your answer be the same as it was with respect to
15 claims 2 and 3 with respect to claim 4 of the
16 '881 patent?

17 MR. SIEGER: Same objections.

18 A. Yes. With all the claims working upon
19 one another, having a legal description of the
20 claims and myself not being able to understand
21 the legal descriptions completely, cannot answer
22 the question.

23 Q. All right. Same answer as to claim 5?

24 MR. SIEGER: Same objections.

1 A. I would have the same answer.

2 Q. All right. Is it the same answer as to
3 claim 6?

4 A. Claims 6 just describes the solutions
5 that are in the liquid holding medium.

6 Q. Okay. Why are those solutions in claim 6
7 innovative over prior e-cigarettes?

8 MR. SIEGER: Objection, scope, calls for
9 a legal conclusion, calls for expert testimony.

10 A. Again, this is a complex legal document,
11 and how all the claims work together and
12 independently is that of a legal opinion and
13 testimony that I am not qualified to give.

14 Q. Okay. The same three questions I've been
15 asking, would your answer be the same as to claim
16 7?

17 MR. SIEGER: Same objections.

18 A. Again, this would be expert testimony,
19 and to fully understand this document, I would
20 have to speak with my prosecuting attorney as we
21 go over.

22 Q. Can you tell me what the words in claim 7
23 mean?

24 MR. SIEGER: Same objections.

1 A. That would be -- that would be asking me
2 to provide expert testimony in a complex legal
3 document that I don't feel I am able to do.

4 Q. I'm not asking you to provide expert
5 testimony. It's your patent. Do you know what
6 the words in your patent mean?

7 MR. SIEGER: Objection, form,
8 argumentative.

9 A. And I'm going to refer to my last answer.

10 Q. Are you able to tell me what the
11 advantage provided by the addition in claim 7 is?

12 MR. SIEGER: Same objections.

13 A. My same answer.

14 Q. And are you able to tell me how you
15 conceived of the concept embodied in claim 7?

16 A. That would be my same answer.

17 Q. All right. Let's jump down to claim 26.
18 Read that claim and let me know when you're done.

19 MR. SIEGER: We're approaching an hour on
20 the record, so maybe after you go through this
21 line of questioning, we can take a short break.

22 MR. DOKHANCHY: That's fine.

23 A. Again, with the complexity of this legal
24 document and understanding everything, I would

1 have to refer back to my original -- my previous
2 answer.

3 Q. Okay. Can you tell me what advantages
4 over the prior art claim 6 -- excuse me -- claim
5 26 adds?

6 MR. SIEGER: Same objections.

7 A. That would be my same answer of
8 understanding the complex legal document and not
9 being an expert or an attorney to be able to
10 properly answer that question.

11 Q. Are you a person of ordinary skill in the
12 art of these patents?

13 MR. SIEGER: Objection, scope, calls for
14 a legal conclusion.

15 A. Not sure the question that -- I
16 understand the question that you're asking.

17 Q. Do you consider yourself a person of
18 ordinary level of understanding of the concepts
19 embodied in the '881 and '864 patents?

20 MR. SIEGER: Objection, scope, vague.

21 A. I understand that they are very complex
22 legal documents.

23 Q. Right.

24 I'm talking about the subject matter, the

1 concepts in the patents, not the document itself.

2 You understand the distinction?

3 Mr. Hillenbrandt, do you understand the
4 distinction?

5 A. Um, I'm not sure I completely follow you.

6 Q. So the patents cover concepts like
7 passageways, heating elements, cartridges, vapor.

8 Are you a person of ordinary skill,
9 meaning you have an average level of competency
10 in those concepts, fluid dynamics, et cetera?

11 MR. SIEGER: Objection, scope, calls for
12 a legal conclusion.

13 A. As far as -- I do not have the experience
14 to write a complex legal document. I have the
15 ability to create ideas and convey the ideas and
16 work with others to compile ideas, as I did with
17 Mr. Conley.

18 Q. And I think there was one more question
19 about 27. Can you tell me -- so that idea that's
20 in claim 27, can you tell me how you came up with
21 that idea?

22 MR. SIEGER: Objection, scope, calls for
23 a legal conclusion, expert testimony.

24 A. I'm going to have to refer back to my

1 last answer of being a legal document, not being
2 an expert in the art of writing patents and the
3 language that I would have to refer to the
4 counsel of my prosecuting attorney for complete
5 understanding and guidance through it.

6 MR. DOKHANCHY: Pending any redirect, I
7 have no further questions.

8 Thank you, Mr. Hillenbrandt.

9 MR. SIEGER: Let's just take a ten-minute
10 break, if that's okay.

11 THE VIDEOGRAPHER: Hearing no objection,
12 we are going off the record. The time 1:42 p.m.

13 (Proceedings interrupted at 1:42 p.m. and
14 reconvened at 1:49 p.m.)

15 THE VIDEOGRAPHER: We are back on the
16 record. The time 1:49 p.m.

17 MR. SIEGER: I have no questions.

18 THE VIDEOGRAPHER: I just need to ask on
19 the video record, did you want a copy of the
20 video, and, if so, did you want it synched to the
21 transcript?

22 MR. SIEGER: No. But let's do an
23 expedited transcript, but otherwise, we don't
24 need the video.

1 THE VIDEOGRAPHER: Okay. How about you,
2 counsel, did you want it synced or not?

3 MR. DOKHANCHY: No need for it to be
4 synced.

5 THE VIDEOGRAPHER: This concludes today's
6 testimony given by Daniel Hillenbrandt. We are
7 now going off the record on Tuesday, November 5,
8 2024, the time 1:50 p.m.

9 (Whereupon, this deposition was concluded
10 at 1:50 p.m.)

11 (Transcript order requested.)

12 MR. SIEGER: Three-day.

13 MR. DOKHANCHY: Three-day.

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CERTIFICATE

I, Dana Welch, Registered Professional Reporter, Certified Realtime Reporter, do hereby certify that DANIEL HILLENBRANDT, the witness whose deposition is hereinbefore set forth, was duly sworn by me before the commencement of such deposition, and that such deposition was taken before me and is a true record of the testimony given by such witness.

I further certify that the adverse party was represented by counsel at the deposition. I further certify that I have no disqualifying interests, personal or financial, in any party in this action.

I further certify that the deposition of DANIEL HILLENBRANDT, occurred remotely on November 5, 2024 via Zoom, commencing at 9:33 a.m. and concluding at 1:50 p.m.

Dana Welch

Dana Welch, CSR, RPR, CRR

DEPOSITION ERRATA SHEET

Assignment No. J11905447

Case Caption: JUUL Labs v. NJOY

DECLARATION UNDER PENALTY OF PERJURY

I, DANIEL HILLENBRANDT, declare under penalty of perjury that I have read the entire transcript of my deposition taken in the captioned matter or the same has been read to me, and the same is true and accurate, save and except for changes and/or corrections, if any, as indicated by me on the DEPOSITION ERRATA SHEET hereof, with the understanding that I offer these changes as if still under oath.

Signed on the ____ day of

_____, 2024.

DANIEL HILLENBRANDT

ERRATA SHEET

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