

Exhibit 2018

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

Case Number IPR2024-00603

Patent Number 9,023,203

CHAMPION LABORATORIES, INC.,)
FIRST BRANDS GROUP, LLC,)

Petitioners,)

-VS-

HENGST SE,)
Patent Owner.)

REMOTE DEPOSITION OF MICHAEL NRANIAN

The remote deposition upon oral examination of MICHAEL NRANIAN, a witness remotely sworn by me, Tara Gandel Hudson, RPR, CRR, a Notary Public in and for the County of Hancock, State of Indiana, taken on behalf of the Patent Owner, Hengst SE, with the witness located in South Lyon, Oakland County, Michigan, on the 13th day of December, 2024, scheduled to commence at 11:00 a.m. EST/10:00 a.m. CST, pursuant to the Federal Rules of Civil Procedure with written notice as to the time and place thereof.

APPEARANCES
(All appearing remotely.)

FOR THE PETITIONERS:

Champion Laboratories, Inc., First Brands Group, LLC
Quincy Lu
QUINN EMMANUEL URQUHART & SULLIVAN LLP
1109 First Avenue
Suite 210
Seattle, WA 98101
quincylu@quinnemmanuel.com

FOR THE PATENT OWNER:

Hengst SE

Patrick J. Smith
Andrew D. Burnham
GREER, BURNS & CRAIN, LTD.
200 West Madison Street
Suite 2100
Chicago, IL 60606
psmith@gbc.law
aburnham@gbc.law

INDEX OF EXAMINATION

	PAGE
DIRECT EXAMINATION	3
Questions by Patrick J. Smith	

INDEX OF EXHIBITS

	PAGE
Deposition Exhibit:	
Exhibit 1 - Nranian Declaration	18
Exhibit 2 - United States Patent 9,023,203	51

1 (11:38 a.m.)

2 (Reporter requested stipulation of counsel
3 to administer the oath remotely.)

4 MR. SMITH: Counsel for patent owner
5 stipulates.

6 THE REPORTER: Mr. Lu?

7 MR. LU: I'm sorry. Quincy Lu on behalf of
8 petitioner.

9 Yes, I do stipulate.

10

11 MICHAEL NRANIAN,
12 having been first remotely sworn to tell the truth,
13 the whole truth and nothing but the truth relating
14 to said matter, was examined and testified as
15 follows:

16

17 DIRECT EXAMINATION,

18 QUESTIONS BY PATRICK J. SMITH:

19 Q. My name is Patrick Smith, and with co-counsel
20 Andrew Burnham from Greer, Burns & Crain, we
21 represent patent owner, Hengst SE.

22 Could you please state your full name for
23 the record, please.

24 A. Michael Nranian.

25 Q. And what city and state do you currently reside?

1 A. South Lyon, L-Y-O-N, Michigan.

2 Q. Thank you, Mr. Nranian. I will do my best with
3 your last name, but as a Smith, I have a very
4 easy last name.

5 Have you had your deposition taken before?

6 A. Yes.

7 Q. Can you roughly estimate how many times?

8 A. It's on the CV. Probably 70. Somewhere around
9 there.

10 Q. Okay. Thank you.

11 And have you had remote depositions taken
12 recently?

13 A. Yes.

14 Q. Okay. Despite your obvious experience here with
15 the depositions and remote depositions, I'm just
16 going to repeat some basic rules and ways we can
17 proceed just to make sure everything is clear.

18 First of all, this is your deposition. If
19 you need to take a break, please let me know.
20 As long as the question isn't pending, we can
21 take a break, stretch our legs, get some water.
22 Additionally, please give me time to finish my
23 question before starting your answer.

24 Mr. Nranian, you understand that you're
25 testifying here under oath?

1 A. Yes.

2 Q. Is there any reason you can't give truthful or
3 complete testimony today?

4 A. No.

5 Q. Can you describe the room you're in.

6 A. Yes. It's my great room in my house.

7 Q. Okay. Thank you.

8 Is anyone in the room with you?

9 A. Just my two dogs.

10 Q. Hopefully we won't disturb them too much.

11 A. Well, they might need to go outside, so I might
12 ask for that.

13 Q. I would understand, and that is a perfectly
14 acceptable reason to ask for a break.

15 Do you have any paper documents in front of
16 you?

17 A. Yes.

18 Q. What documents do you have?

19 A. I have my declaration. I have Yokoyama. I have
20 Deschamps. I have Honermann. I have Cline. I
21 have -- I have an email that I wrote back in
22 January where I explain to Quincy what my
23 opinion is of what nolo channel means.

24 I have plaintiffs' final infringement
25 contentions, and I have the '203 patent. And

1 there are no marks or notes on any of these.

2 MR. LU: Can we take a quick break so I can
3 consult with the witness about the email that
4 he's talking about?

5 MR. SMITH: Can I just clarify something?

6 BY MR. SMITH:

7 Q. By "the '203 patent," do you mean
8 U.S. Patent Number 9,023,203?

9 A. Yes. I think that's the number, but it's the
10 '203 patent, yes.

11 MR. LU: Okay. Take a --

12 MR. SMITH: Yeah, take a break. That's
13 fine.

14 MR. LU: Sorry about that.

15 (A recess was taken between 11:43 a.m. and
16 is 11:45 a.m.)

17 MR. LU: For the record, I just spoke with
18 the witness, and I have instructed him to remove
19 that printout of the email. I don't know what's
20 in the email. I haven't looked at it. But if
21 it's between me and him, I consider that
22 privileged. So I told him to remove it from the
23 materials in front of him.

24 THE WITNESS: And I have done that.

25 MR. SMITH: Okay. We may come back to that

1 in a minute.

2 BY MR. SMITH:

3 Q. When I refer to the documents in front of you,
4 please note that I'm excluding the email we just
5 discussed. Is that understood?

6 A. Yes, sir.

7 Q. For the documents you have in front of you, are
8 there any handwritten notes on those?

9 A. No.

10 Q. Did you print them yourself?

11 A. I printed the one, the infringement contentions.
12 That's the only one I printed. The other ones
13 were shipped to me.

14 Q. Who shipped them to you?

15 A. In fact, I have the box. Quinn Emmanuel.

16 Q. When were they shipped?

17 A. If I remember, I got them -- oh, it says here
18 Thursday, December 5. Yeah. I got them, I
19 think, a week ago. Friday, if I remember.
20 Because I wanted them for the deposition that
21 was supposed to happen last week.

22 Q. Right. And I appreciate your flexibility in
23 moving it a week.

24 A. No, that's okay. No, I just -- but I wanted to
25 have -- because it's kind of hard to pop between

1 the Zoom and -- you know what I mean? -- and
2 pulling up the patents on the computer screen.

3 Q. Are you familiar with exhibits being shared
4 electronically in depositions?

5 A. Yes.

6 Q. Going forward, I will mark some exhibits that
7 probably are the same or appear to be the same
8 as the documents you have. If at any time
9 you're referring to your paper copies, can you
10 just make sure you let us know that that's what
11 you're looking at?

12 A. Yes, sir.

13 Q. Okay. Thank you very much.

14 Do you have any messaging applications open
15 on your computer?

16 A. No.

17 Q. I believe I saw you had your cellphone near you.

18 A. You want me to get rid of it? Here.

19 Q. Thank you.

20 What did you do to prepare for today's
21 deposition?

22 A. Met with Quincy and reviewed these documents.
23 Virtually, over like a Zoom, with Quincy. That
24 was yesterday and Wednesday and Thursday of last
25 week.

1 Q. About how long did you meet with Mr. Lu?

2 A. Well, let me say this. This month I probably
3 have around 20 hours so far. I met with Quincy
4 probably -- it was late yesterday, maybe about
5 two and a half, three hours. Something like
6 that. The week before, maybe about three or
7 four hours each day. Something like that. I
8 would have to go back and look at the -- but I
9 don't have that open.

10 Then the rest of the time I spent just
11 looking this stuff over again. Over like
12 Thursday and Friday of last week and this
13 morning and yesterday. And maybe Saturday last
14 week or Sunday.

15 Q. Thank you. Unless I say so, estimates are fine.
16 I'm not going to hold you to .1 of an hour.

17 A. Thank you.

18 Q. Are you currently employed?

19 A. Yes.

20 Q. Who is your employer?

21 A. The U.S. Army.

22 Q. How long have you been employed by the
23 U.S. Army?

24 A. Well, so in 2008, I started working at General
25 Dynamics, which is a defense contractor. Then I

1 worked for Raytheon. And then I came in as a
2 contractor for the U.S. Army in -- I want to say
3 it was 2010. And then in 2016, they hired me in
4 as a direct employee, and that's at the Army
5 base here in Warren. And I work there now.
6 I've been continuing on.

7 Q. Thank you.

8 What are your responsibilities in your
9 current role with the U.S. Army?

10 A. Well, actually, what I do is I analyze all the
11 different military vehicle systems, and I assess
12 them for risk, R-I-S-K, risk, and especially
13 related to cybersecurities. But that includes
14 engine systems, transmission systems, sensors,
15 everything. I've got -- I've been working in
16 the, you know, automotive and the auto industry
17 since 1985. So I'm an engineer there.

18 But right now, I specialize in
19 cybersecurity of the vehicle systems. And I
20 actually do penetration testing and
21 vulnerability analysis.

22 Q. Do you currently design any mechanical systems
23 for the U.S. Army?

24 A. Yeah. I have a say in the mechanical systems
25 because they all have not only mechanical risks

1 but, you know, electrical -- electronic risks
2 because, as you know, like, for example, oil
3 systems and transmission systems have the
4 associated sensors with them.

5 And so it all comes into play when you're
6 looking at the mechanical systems as well as the
7 electromechanical systems and the interfaces and
8 the avenues of risk involved in that.

9 Like, for example, I've done a lot of work
10 with engines and, you know, the related sensors,
11 including all the oil filters and, you know, the
12 diesel systems. We have LPH fuel systems. We
13 have robotic systems. We have -- they all have,
14 you know, oil filters in them and either oil
15 systems or filters in them. You know, various
16 kinds. And I assess the risks involved in that.

17 One of the things we've done, for example,
18 is we've been able to fool different vehicles,
19 and probably some of this is classified so I
20 shouldn't talk about it. But we've been able
21 to -- you know when you lose oil pressure, or
22 something like that, you get the warning lamps?
23 We've been able to fake that, things like that,
24 when it's actually fine. And we come up with
25 ways to mitigate that type of security risk, as

1 an example.

2 Q. Thank you.

3 About how much time a week do you spend
4 working for the U.S. Army?

5 A. Well, it's a full-time job, so I do that and
6 this.

7 Q. When you say "this," what do you mean?

8 A. My consulting work. I also have my own
9 consulting practice that I've had, basically,
10 since 2003. That's automotive design analysis.

11 Q. And you're currently performing work for your
12 consulting business as well?

13 A. That's right. Yeah.

14 Q. About how much time a week do you spend for your
15 consulting business?

16 A. Well, I don't get much sleep, let me say that.
17 Probably about 40 or 50 hours a week, typically.

18 Q. And the same would be for, then, the Army job?

19 A. Right.

20 Q. It sounds like you're working like a young
21 associate in a law firm.

22 A. I used to be that, too, but not young.

23 Q. This is a good transition. Let's jump over
24 there. Do you mind summarizing your education
25 for me, please.

1 A. Sure. So -- you know what? Let me start. I
2 grew up in Detroit just on the outskirts of
3 Delray. I got a scholarship to go to -- I went
4 to -- what would that be? -- I'm sorry.

5 I went to Cass Technical High School, which
6 is right in the middle of Detroit. And you had
7 to -- back then, they had to pick like 30 or 40
8 people out of each school to go. You had to
9 have really good grades. I started there in
10 1976 at Cass Tech.

11 And I always loved cars. So when I was at
12 Cass, I was in the science and arts curriculum
13 which is basically college preparatory
14 curriculum, but I also took, every semester I
15 was there, high school auto shop. And, you
16 know, got to do welding and work on cars.

17 And, you know, I had a 1967 Mustang, and I
18 did work on that and restored that. I changed
19 the clutch. Always did all my own work on that,
20 oil filters, you know, engine work. I always
21 used to glue the doughnut gaskets on the
22 exhaust.

23 Unfortunately, I sold that car back then
24 when I was young, and I wish I would have still
25 had it because I loved that car. Had a 289

1 four-barrel with a three-speed manual. It was
2 beautiful. Fastback.

3 Left Cass Tech and got a full-ride
4 scholarship to Wayne State University. And I
5 came into Wayne State, and my first degree was
6 in chemical engineering.

7 I also worked at my father's dry cleaners
8 during the summers and, you know, during
9 vacation time.

10 When I left Wayne -- after my first -- when
11 I got my BS in chemical engineering, I actually
12 worked as an adviser in a chemical engineering
13 department for a semester, if I remember, and
14 then I got a job working at Ford Motor Company.

15 And I came in there at Ford, I want to say
16 it was 1985. Yeah, '85. And I was a Ford
17 College graduate trainee there. I worked in all
18 kinds of different, you know, developments,
19 product development activities. Did a lot of
20 stuff at the proving grounds. Did a lot of --

21 I'm also a Ford Level 2 test track driver.
22 Worked on a lot of engine systems, automotive
23 systems, body mounts, suspension systems,
24 filtration systems, the whole nine yards. I
25 always loved cars.

1 Started there, worked there at Ford from
2 1985 to 1992. Then I went to Allied Signal
3 which is an automotive supplier. Worked there
4 for about a year and maybe nine months, if I
5 remember.

6 Then I went to General Motors Truck
7 Engineering. Worked there for two years.

8 Then Ford called me up and said, "Do you
9 want to come back?" And I said, "Okay, sure."
10 Went back to Ford. I think that was '95, if I
11 remember.

12 And then in '99, I worked in the part of
13 Ford that, you know -- because I had by that
14 time, you know, 20 years, you know -- well,
15 '95 -- '99, that would be what? Started in '85.
16 '85 -- oh, I was a summer intern, too, at a Ford
17 plant for a while when I was in college.

18 '85 to '99. That's 14, roughly 15 years.

19 I moved to the part of Ford that does the
20 work of being a corporate representative, an
21 expert witness. I did that from '99 to 2007.
22 And they flew me all over the country; right?
23 And I would analyze vehicles and warranty claims
24 and go to a lot of dealerships and look at
25 vehicles that were either involved in product

1 liability lawsuits or had issues with them. And
2 I would report that back to the -- my management
3 and also sometimes to the lawyers there.

4 Left Ford in 2007. In 2007, I left Ford
5 and actually went to work for Dechert in Texas,
6 and did intellectual property litigation for
7 about, oh, a little less than a year. My wife
8 became pregnant with twins. We'd been trying to
9 have twins for a long time. But back then,
10 there was that whole thing going on with the --
11 you know how everything, the economy imploded.

12 Came back home to Michigan. I couldn't
13 sell the house. Started working at General
14 Dynamics and Raytheon. And I think you know the
15 history from there that I already talked about.

16 Q. Okay. Thank you.

17 I think my question was more of your
18 education.

19 A. Oh, I'm sorry. I thought it was my -- okay. So
20 I have a -- my first degree was a BS in chemical
21 engineering. I also got a MS in electrical and
22 a BS in electrical and computer engineering. I
23 also have a MBA from Michigan.

24 And I have a law degree, and I'm also a
25 patent attorney. But I'm not here to offer any

1 legal opinions whatsoever. I'm not here to -- I
2 will never be giving any legal opinions. Every
3 opinion I give in this case is based on my
4 engineering and automotive background and
5 experience.

6 Q. Okay. Thank you. I believe it's on your CV,
7 but I'll just ask. Did you pass the bar exam?

8 A. Yeah.

9 Q. In which states?

10 A. Michigan and Texas. And I also passed the
11 patent bar a long time ago.

12 Q. Are you still an active member of the bar?

13 A. Yeah. Once I -- you know how hard those bar
14 exams are; right? I wasn't about to stop doing,
15 you know -- although I'm thinking about it now
16 because it's kind of costly to renew that every
17 year.

18 But no. I mean, I'm the type of person
19 that once I take one of those tests, I'm not
20 going to not pay the dues every year.

21 Q. I do recall that exam.

22 A. Yeah. I actually got a 172 on the multistate
23 when I took it.

24 Q. Thank you.

25 I'm going to introduce an exhibit. Give me

1 a moment.

2 Do you have the Exhibit Share folder
3 accessible?

4 A. I closed all that stuff. So how do I access
5 that? I'm sorry.

6 MR. SMITH: Maybe we should jump off the
7 record here for a second.

8 THE WITNESS: All right.

9 (A recess was taken between 12:05 p.m. and
10 12:06 p.m.)

11 BY MR. SMITH:

12 Q. I've marked Exhibit 1, a document entitled
13 Declaration of Michael Nranian in Support of
14 Petition For Inter Partes Review of
15 U.S. Patent Number 9,023,203.

16 (Deposition Exhibit 1 was presented for
17 identification.)

18 Q. Are you generally familiar with this document?

19 A. Yes, sir. I have it right in front of me.

20 Q. Do you mind jumping to the last page.

21 A. The last page. Yes. I'm there.

22 Q. That's your signature?

23 A. Right. Electronically. Yeah.

24 Q. And you understand we're here today to talk
25 about the -- this document?

1 A. Yes, sir.

2 Q. Okay. All right. You mentioned earlier you had
3 a -- was it a 1967 Mustang?

4 A. That's right. Yeah.

5 Q. Did that have a front bumper?

6 A. Yeah. Yes.

7 Q. Did it have a rear bumper?

8 A. Yeah. You want to know something? I actually
9 have a 1968 and a 1969 now in my garage. I love
10 classic cars. I always work on them. You know,
11 I actually -- but yes.

12 So the '68 is basically the same thing as
13 the '67. It doesn't have a 289, though. But
14 yeah. I mean, there's some little cosmetic
15 differences, and it's got a different engine.

16 Q. Okay. But I guess the 1968 has a front bumper
17 and a rear bumper as well?

18 A. Right.

19 Q. If you were standing and looking at the rear end
20 of the car, would you say that's the rear
21 bumper?

22 A. Yeah.

23 Q. You wouldn't say it was the front bumper just
24 because it's the one that was in front of you;
25 is that correct?

1 A. Right. Yeah.

2 Q. And if you're driving your car in reverse, you
3 wouldn't say the rear bumper is the front bumper
4 because it's the direction the car is currently
5 traveling; is that correct?

6 A. That's right.

7 Q. So is it fair to say in the automotive industry,
8 front, rear, words like that might have meaning
9 beyond the orientation you're viewing it?

10 A. So having worked in the automotive industry, I
11 look at design drawings in particular, and it
12 depends. Right? If you're talking about the
13 entire vehicle, there's actually a grid system.
14 And the grid system is such that basically
15 there's an X, Y, and a Z axis. And the X axis
16 extends basically front to rear. The Y axis
17 typically extends right to left. And the Z axis
18 typically extends, you know, top to bottom. But
19 that's the vehicle.

20 If you're talking about different
21 components, now, you're talking about component
22 drawings. And component drawings can have their
23 own orientation. So it depends on what you're
24 talking about.

25 If you're talking about like what is called

1 a seating package layout drawing, it'll have the
2 grid system similar to the one I'm discussing.
3 But if you're talking about an individual
4 component, then they don't have that type of
5 axis system. And, you know, depending on how
6 they are placed in the vehicle, it may be
7 different.

8 Like you can have different components that
9 are placed, you know, like nuts. Just nuts or
10 bolts, for example. Right? You don't have a
11 drawing for a weld nut or a bolt. And that
12 doesn't have that orientation on it because it
13 can be placed in multiple locations on the
14 vehicle.

15 Q. And some things do have a specific orientation;
16 correct?

17 A. Yeah. Usually when you're talking about the
18 entire vehicle. Usually when you're talking
19 about like, you know, here's the seat. Here's
20 the driver's seat; right? The driver's seat
21 is -- because I told you about typically, it's
22 right to left. But it can be different
23 depending on the OEM and depending on the
24 drawing.

25 You know, the driver's seat is over here,

1 and the passenger's seat is over here. But that
2 would be like in a layout, what we used to call
3 or what we still call a layout, L-A-Y-O-U-T,
4 layout drawing that shows like, you know, where
5 things are in the vehicle.

6 But if you're talking about just the
7 driver's seat itself, that drawing won't have
8 that orientation because you might even have a
9 situation where, for example, the seat might be
10 common.

11 Q. I'm not talking about a seat. Let's talk about
12 a rear bumper.

13 A. All right. A rear bumper. Right? I mean,
14 yeah --

15 Q. Is that device always going to go on the rear of
16 a car?

17 A. Well, what you have is you have a layout drawing
18 that's going to show the rear bumper on the rear
19 of the car, but you also have a bumper drawing
20 that doesn't have that. So it's conceivable
21 that you could put that bumper on different
22 vehicles, and that drawing wouldn't have that
23 orientation on it.

24 Q. Would it still be called a rear bumper?

25 A. Yeah.

1 Q. Do you mind turning to paragraph 91 of your
2 declaration, please?

3 A. Actually, I have one more answer to that, that
4 I'd like to continue with, if it's okay?

5 Something like an oil filter isn't going to
6 have that type of orientation because you might
7 have common oil filters that are used on
8 engines, and they may have different
9 orientations depending on where they are mounted
10 on the engine.

11 Now, where did you want me to turn?

12 Q. Paragraph 91 which is on page 54.

13 A. Got it.

14 Q. If you could turn to page 55, it's the
15 continuation of that paragraph. It starts on
16 the next page.

17 A. Yes, sir.

18 Q. Here you state this sentence that concludes
19 with:

20 "The orientation of the insertable filter
21 medium could be upside-down."

22 Do you see that? The fourth line?

23 A. Yes.

24 Q. What do you mean by that?

25 A. Well, look. You could turn -- this is a picture

1 of Yokoyama. You could actually turn that
2 filter up -- in my opinion, a person of ordinary
3 skill in the art could actually take the
4 Yokoyama filter and just use it this way
5 (indicating) or just use it to the side or just
6 turn it that way.

7 Q. If I may, when you say "filter," do you mean
8 filter insert or entire filter device?

9 A. Well, the way the insert is made -- right? -- it
10 has been made up to that 10; right?
11 Component 10. Okay? So you couldn't
12 necessarily take because of the 3W things and
13 that -- you know, that ring there; right? You
14 couldn't take that and put it in and made up
15 with that head.

16 So you would have to take that filter in
17 Yokoyama and put it into that. But there's no
18 reason why you couldn't take that whole thing
19 and turn it this way.

20 MR. SMITH: Just for the record, the
21 witness is demonstrating with his hand.

22 THE WITNESS: Sorry.

23 MR. SMITH: That's all right. It isn't
24 going to come through in the deposition
25 transcript.

1 BY MR. SMITH:

2 Q. Again, just to clarify, so you turn the entire
3 filter --

4 Actually, if you look at the next page,
5 look at page 56. There's two images. You see
6 that?

7 A. Right.

8 Q. When you say "flip the filter," are you
9 referring to the structure shown in the picture
10 on the right there?

11 A. Well, it's the -- yeah. But it's not just
12 limited to that. Yes.

13 Q. But that includes a housing, other tubes
14 connecting to the filter housing, and some
15 mounting brackets. I'm sure there's more.

16 But all of that would be flipped upside
17 down?

18 A. Yeah.

19 Q. Okay. Because if it wasn't, and you just
20 flipped over the filter insert, would the filter
21 insert be able to be inserted into this filter
22 unit?

23 A. You would have to flip the cover up.

24 See Component 12 which is described as --
25 what are they called? Just to be specific.

1 They called -- I'm going to look at my copy of
2 Yokoyama, if that's all right.

3 So in Yokoyama, upper case half is 10
4 and --

5 Q. So if the upper case 10 was not flipped, could
6 you flip the filter insert?

7 A. Well, you would have to -- that -- right there.
8 Right? Where -- 47 and 46, that would have to
9 be on the other side.

10 Q. Let's try it like this. Looking at the image
11 following paragraph 91 of your declaration. Do
12 you see that?

13 A. Yeah.

14 Q. There's a bottom front panel and a top front
15 panel that's been labeled?

16 A. Right.

17 Q. Did you make these drawings?

18 A. These are drawings from the patent. I mean,
19 you're talking about the annotation?

20 Q. Yes.

21 A. In the first draft, I think I just put the
22 drawings in. The annotations actually followed
23 the ways described in the '203 patent. They
24 talk about a -- front panels. But the choice of
25 what you call the front panels, it's kind of

1 just arbitrary just to help, in my opinion, just
2 to help in the description.

3 I mean, there's no reason you couldn't
4 call -- I mean, you know, why do they even call
5 them front panels? You know what I mean? I
6 mean, they are not called, you know -- they just
7 had to use it, I think, to help in the
8 description of it in the specification.

9 Q. But they used it; correct?

10 A. Yeah. They used bottom.

11 Q. They called it bottom front panel; correct?

12 A. Bottom front panel.

13 MR. LU: Counsel, can you let the witness
14 finish his answer before asking a question?
15 Thank you.

16 A. Yeah, but that's the way they were -- they
17 helped in the description of it. But that
18 doesn't mean that somebody couldn't just take
19 that thing --

20 I mean, look. Anybody who has ever worked
21 in the automotive industry, for example, or
22 anybody who has ever worked on filters, like
23 even a freaking -- you know.

24 Like, I have a water softener, and it kind
25 of has the same type of screw-on type of thing

1 that you see right there in 10. And there's no
2 reason why that water softener couldn't get
3 flipped upside down in my basement. In fact, I
4 could take this computer right now and show you.
5 There's no reason why I couldn't take that whole
6 thing and turn it upside down, and it still
7 would work the same way.

8 BY MR. SMITH:

9 Q. Looking back at the image on page 55, are the
10 bottom front panel and top front panel identical
11 to Yokoyama?

12 MR. LU: Objection. Vague.

13 A. Yeah, it doesn't show.

14 BY MR. SMITH:

15 Q. How about, would you look at the image following
16 paragraph 94 of your declaration, please. It's
17 on page 57.

18 Do you see that image?

19 A. Which page? I'm sorry.

20 Q. 57 of the declaration. It's under paragraph 94.

21 A. Okay.

22 Q. Do you recognize this image?

23 A. Yes.

24 Q. What is this image?

25 A. That image is -- can you see that?

1 Q. Yes. You're for the record holding --

2 A. That's Yokoyama. That is Yokoyama Figure 3.

3 Q. Thank you.

4 And that is a view of the same structure
5 shown in the image on page 55 of your
6 declaration, just in a different view?

7 A. To answer that, I got to look and see what it
8 says about it.

9 Yeah. It says Figure 3 is a cross-section
10 view of the filter device taken along the arrows
11 33 in Figure 2, and then it says that Figure 2
12 is a prospective filter device 1.

13 THE WITNESS: Are you okay, Tara?

14 THE REPORTER: Yes.

15 MR. SMITH: Thank you for checking.

16 BY MR. SMITH:

17 Q. Looking at the figure on page 57, are the
18 structures identified as the bottom front panel
19 and top front panel identical?

20 A. Page 57. 40, you're talking about --

21 Oh, 40 is the filter elements. So we're
22 talking about --

23 Q. Would it be 43 and 44?

24 A. Upper plate 43 is attached to its upper end, and
25 disc-shaped lower plate 44 is attached to its

1 lower end.

2 So at basically paragraph 18, if it's okay
3 if I read it?

4 Q. Yeah.

5 A. Okay.

6 "As shown in Figures 1, 3, and 4, the
7 Filter Element 40 has a structure in which a
8 filter medium, 42, bent in a bellows shape, is
9 attached around a thin-walled, cylindrical inner
10 cylinder 41, configured in a lattice shape. And
11 a disc-shaped upper plate 43 is attached to its
12 upper end, and a disc-shaped lower plate 44 is
13 attached to its lower end."

14 Q. Thank you.

15 Looking, again, at the figure in
16 paragraph -- following paragraph 94 of your
17 declaration, are Elements 43 and 44 identical?

18 MR. LU: Objection. Vague.

19 A. You know, the thing is, is that it doesn't use
20 in Yokoyama, now that I look at it, the term --

21 Bear with me a second.

22 It doesn't use specifically, from what I
23 look at, now I just did a quick glance, the term
24 "bottom front panel" and "top front panel."

25 So, you know, it just says, as what we

1 talked about, upper plate 43 and lower plate 44;
2 right?

3 BY MR. SMITH:

4 Q. Using upper and lower?

5 A. Yeah. But what I'm saying, though, is that, you
6 know, a person of ordinary skill in the art
7 would know that you could just flip that around
8 and it would --

9 Q. That's not my question.

10 A. It would still work the same way. It does
11 use --

12 MR. LU: Counsel, can you -- go ahead.
13 Sorry to interject. I didn't mean to
14 interrupt you, Mr. Nranian.

15 Counsel, can you just let the witness
16 finish his answer before asking the next
17 question. Thank you.

18 A. Yeah. So that's what it says, you're right. It
19 says upper end and upper plate and lower plate.
20 But like I said, I could show you right
21 downstairs where I just turn around the filter
22 for my -- and it's case. Right? I could just
23 flip that around. It will still work the same
24 way.

25

1 BY MR. SMITH:

2 Q. Are Elements 43 and 44 in Yokoyama identical?

3 MR. LU: Objection. Vague. Asked and
4 answered.

5 A. Well, it doesn't actually show the lower part of
6 44 other than that cross section. But looking
7 at it, I mean, there's a break in 43, and it
8 looks like 44 goes all the way across.

9 BY MR. SMITH:

10 Q. 43 has a hole in the center?

11 A. Right.

12 Q. 44 does not have a hole in the center?

13 A. That's correct.

14 Q. If I flip the filter insert of Yokoyama over,
15 would I be able to put 44 and install it
16 properly?

17 A. Would if I flipped what over?

18 Q. The filter insert, Element 42.

19 A. You just have to turn that -- 12, I think is
20 what it was. Right? 12. And everybody would
21 know to do that. You just have to turn that the
22 other way.

23 Q. What if I didn't turn it the other way? Excuse
24 me. And I tried to insert the filter insert,
25 42, in an opposite configuration, would the

1 filter insert be properly inserted?

2 A. You mean take the -- well, no. It wouldn't go
3 into that hole there. But you could just turn
4 the whole thing over.

5 Q. Thank you.

6 MR. SMITH: It's 11:30 Chicago time. Would
7 everybody like a ten-minute break right now?
8 Let's go off the record.

9 (A recess was taken between 12:31 p.m. and
10 12:42 p.m.)

11 BY MR. SMITH:

12 Q. Could you please, if you're not there, go to
13 page 55 of your declaration.

14 A. Yes, sir, I'm there.

15 Q. Okay. And there's a text at the top. There's a
16 sentence that starts with the word "moreover."

17 Do you see that? Line 5?

18 A. Yes.

19 Q. You state:

20 "Moreover, a POSITA, P-O-S-I-T-A, would
21 understand that the entire filter device would
22 operate in an identical manner if upside-down."

23 A. That's correct.

24 Q. What do you mean by "identical"?

25 A. It's still a filter.

1 Q. Would every aspect of it be identical?

2 A. You would have to flip the whole thing upside
3 down. It's still a filter.

4 Q. Would the flows be the same?

5 A. Well, the inlet would still come through the
6 same way, and it would -- the outlet would still
7 come through the same way. I mean, you have to
8 look at -- right there. The next page. Right?

9 Q. Which page? I'm sorry?

10 A. I'm sorry. 56.

11 Q. Thank you. And what do I need to look at?

12 A. See where it says IP and OP?

13 Q. Yes.

14 A. So just take the thing. And the IP still would
15 be IP, and the OP would still be OP. And filter
16 stuff, the dirty stuff comes in through the IP,
17 and the filtered stuff goes out the OP.

18 Q. Within the filter housing, would the flows be
19 the same?

20 A. It would just go through the filter; right? The
21 filter medium. What do they call it, the
22 bellows shape? Is that what it was called? You
23 know what I mean. Look over on the next
24 picture; right? 42. It would still filter.

25 Q. Let's turn to page 57 of your declaration.

1 A. I'm there. I'm sorry.

2 Q. Okay. Thank you. When dirty oil comes in,
3 where does it come in?

4 A. Basically 15.

5 Q. And the clean oil leaves?

6 A. Right around -- well, 17 doesn't show it, but
7 that -- right above -- right below where 17 is.

8 Q. 17 appears to be an opening for the fluid to
9 come out? Is that --

10 A. Well, let me see what they call 17. But you
11 know what I mean. Yeah. They call 17 fuel
12 outflow route. 17.

13 So it says -- this is right in paragraph
14 0017 of Yokoyama. Right at the end there, it
15 says:

16 "Further, as shown in Figure 2, a fuel
17 inflow pipe IP is connected to the fuel inflow
18 route 15 of the upper case half ten, and a fuel
19 outflow pipe OP is connected to the fuel outflow
20 route 17."

21 Q. In the depicted orientation, can the fluid flow
22 up to 17 if there's no pressure from the system?

23 A. In the what? In the -- if the --

24 If there's no pressure in the system, could
25 the fluid flow up? If there's no pressure in

1 the system, the fluid's not flowing anywhere.

2 Q. So in this depicted orientation, gravity impacts
3 the flow of fluids?

4 MR. LU: Objection. Mischaracterizes the
5 testimony.

6 A. No, no. No. No, no. No.

7 If I take this, all right? And I turn that
8 filter, all right? That whole filter; right?
9 The whole thing. What did they call it? The
10 filter device. If I take that whole filter
11 device; right? And I just turn it upside down,
12 okay? And I turn -- like, let's say this is an
13 oil filter, and I'm not running the engine.
14 Nothing's flowing anywhere.

15 BY MR. SMITH:

16 Q. It would be full of oil, in your example, if
17 it's an oil filter?

18 A. Yeah.

19 Q. The filter insert is intended to be changed; is
20 that accurate?

21 A. Yes.

22 Q. In Yokoyama, how does that happen?

23 A. You unscrew it.

24 Q. You unscrew Element 32?

25 A. Let's see.

1 So 33, is 33 the threads? 33.

2 30, actually. You unscrew 30 from -- what
3 is it -- where did I just see that?

4 Unscrew 30 from 10, to be exact.

5 Q. Thank you.

6 When you're changing these, it's filled
7 with oil or fluid; is that correct?

8 A. Typically, yeah.

9 Q. And if that fluid isn't drained before you
10 unscrew 30 from 10, what will happen?

11 A. Before you unscrew 30 from 10, if the fluid
12 isn't drained?

13 Q. Yes.

14 A. It's in there.

15 Q. As I unscrew 30 from 10 and break a seal, what
16 will happen to the fluid in 10?

17 A. It will be there.

18 Q. Will it fall out?

19 A. I mean, it depends. If it's all gunky, no.
20 But, yeah. I mean, if you tip it over.

21 Q. In a typical arrangement, would this entire
22 thing be filled with oil when you were going to
23 change it?

24 A. They typically are, yeah. Maybe not entirely
25 filled, but, yeah. There's oil in there.

1 Q. Oil would extend above, let's say, the point
2 where the threads of 30 lock with the threads of
3 10?

4 A. It could.

5 Q. And if that wasn't drained when I unscrewed 30
6 from 10, the fluid above that line would spill.
7 Is that accurate?

8 A. Well, when you look at oil filters, okay, they
9 don't have a drain plug at all, typically. Oil
10 filters; right? So when you look at the oil
11 filter on a car, all right, it doesn't have a
12 drain plug. So usually what you do is you
13 unscrew it, whether it be angled or to the side
14 or to the bottom. I've seen a lot of them where
15 they are -- here. They are like that
16 (indicating). Okay. They could be like this;
17 they could be like that.

18 So typically, what you do is you unscrew
19 it. It doesn't have a drain. Right? I mean
20 the oil filters typically don't have a drain
21 plug in them. You just unscrew it like this.
22 Right? Then it comes out. And then you hold
23 your pan underneath, and you just tip it over a
24 little bit. And whatever is in there comes out.

25 Or you just typically take your drain pan,

1 and you put it underneath the drain plug and
2 drain that first. All right? There's a drain
3 plug on the bottom of the oil pan. You just
4 unscrew that, drain it. Don't lose the plug.

5 Then you go over, and you put your pan
6 underneath your oil filter. And then you
7 unscrew it. And then you just take the oil
8 filter after it's unscrewed, and you make sure
9 the pan is underneath like this. Right? You
10 unscrew it, and then you just go whoop. Then
11 you just throw the filter away or just throw it
12 in the pan.

13 Then you put the new filter on. And then
14 you put the drain plug in. Most of the time,
15 people forget to put the drain plug in when you
16 have issues like that; right? And then you fill
17 it with oil.

18 Q. Are there different types of filters for cars?

19 A. Yeah.

20 Q. Are you familiar with a canister filter?

21 A. Yes.

22 Q. Is that what you were just describing?

23 A. I was describing a typical oil filter.

24 Q. What type of oil filter?

25 A. I guess if you want to call it a canister

1 filter. I think you know what I'm talking
2 about.

3 Q. Is that -- sorry.

4 A. Go ahead.

5 Q. Were you finished?

6 A. Yeah.

7 Q. Is that different than a cartridge-type filter?

8 A. Oh, right. So a cartridge-type filter would be
9 like what I was talking about in terms of my
10 water softener. Where you have a lower and
11 upper case; right? And you just put the filter
12 in.

13 Q. What type of filter is shown in the image on
14 page 57 of your report?

15 A. That would be the like the water softener type.

16 Q. A cartridge?

17 A. Right. Yeah.

18 Q. Thank you.

19 Looking at that image, you see a structure
20 all the way at the bottom of Element 30? That
21 looks almost like an upside-down T.

22 A. Yep.

23 Q. Do you know what that is?

24 A. You know, it's not described, because I looked.
25 It's just shown. It's not described in Yokoyama

1 what that is. I didn't see anything in the
2 specification that describes what that is.
3 There's no number on it.

4 Q. Do you have an opinion as to what that is?

5 A. It could just be something that they molded on,
6 and it stuck. In other words, it's not
7 removable. Or it could be a drain hole.

8 Q. Would somebody ordinary skilled in the art
9 think --

10 A. Wait a minute, wait a minute.

11 The funny thing, though, is when you look
12 at that, it's like there's no threads or
13 anything in that picture. Right? That T thing?
14 There's no threads.

15 So it's like -- I mean, it doesn't say
16 anything about, like, any type of a gasket or
17 anything in there. Anything. So it might just
18 be something that they just plugged in and
19 molded on.

20 So I don't know if that's -- if you're
21 getting to this point. I don't know if that's a
22 drain or not because it's not described. And it
23 doesn't show -- like, you know how when I talked
24 about the plug at the end of the -- on the
25 bottom of the oil pan that drains the oil?

1 That's a threaded fastener. This doesn't show
2 any threads.

3 Might take it off or move it on, or whether
4 it's stuck there or what. I mean, look, I'd be
5 a little nervous if it was just pressure fit.
6 Because after a few times of removing it and
7 pulling it off and on, I would think that it
8 would leak. And that's going to make a mess.
9 And that's going to be an environmental hazard.

10 Q. It would be bad if it leaked?

11 A. Yeah.

12 Q. Would it be bad to get fluid, spill fluid?

13 A. Yeah.

14 Q. That's something you would want to avoid?

15 A. Yep.

16 Q. Can you turn to paragraph 40 of your
17 declaration, please. It's on page 29.

18 A. Okay.

19 Q. Starting at line 2, it states:

20 "It is appropriate to take account of the
21 inferences and creative steps that a person of
22 ordinary skill in the art would employ."

23 Do you see that?

24 A. Yes, I do.

25 Q. What inference would a person of ordinary skill

1 in the art draw regarding that structure?

2 A. I think the way I just described it. I mean, if
3 it's a drain plug, okay, if that's what you
4 think it is, it's going to have some issues. I
5 mean, so that's why, if it is a drain plug, you
6 would employ Cline's drain plug.

7 A person of ordinary skill in the art would
8 know that if you're going to have a drain plug
9 there, you want to use the one in Cline or
10 something similar to that because of the issues
11 I just talked about.

12 Q. But it's possible this is a drain plug?

13 A. Well, it would be a pretty bad design.

14 Q. But it's possible this is a drain plug?

15 A. I guess. But like I said, I wouldn't use it. I
16 think a person of ordinary skill in the art
17 wouldn't use it as a drain plug.

18 Q. We can stay here, stay with this image. I think
19 previously, we talked about turning this
20 entire -- just call it 1 from Yokoyama -- upside
21 down?

22 A. Are we back on -- are we back on page --

23 What was it? 55?

24 Q. 57, please.

25 A. Sorry. Sorry. Okay. Yes.

1 Q. So if hypothetically this was rotated upside
2 down --

3 A. Yeah.

4 Q. -- and we wanted to change the filter insert
5 inside of it?

6 A. Okay.

7 Q. We would unscrew 30 from 10; is that correct?

8 A. Right.

9 Q. And then we could remove 30; is that correct?

10 A. Right.

11 Q. And then we could remove, I guess maybe it's 42,
12 the insert?

13 A. I think 42 is the -- hold on a second. I'm
14 sorry.

15 42 is -- filter element is 40. Is that
16 what you're talking about?

17 Q. Yes, yes. 40. Thank you.

18 A. Okay. All right.

19 Q. So then we would remove Filter Element 40?

20 A. Yeah. So there's Filter Element 40 and Filter
21 Medium 42.

22 Q. They are connected, aren't they?

23 A. Right. Yes.

24 Q. So with this upside down, Element 30 being
25 removed and Element 40 being removed, there's

1 still going to be fluid within the -- what is
2 now the upside-down upper portion 10; correct?

3 A. Oh, with it upside down?

4 Q. Yes.

5 A. Right.

6 Q. That would allow the dirty fluid to mix with the
7 clean fluid; correct?

8 A. Take the -- if you took that off, it would allow
9 the dirty fluid -- conceivably, yeah, it could.

10 Q. Would that be bad?

11 A. Yeah. But, you know, like I said, when that
12 happens, you just make sure you drain it.
13 That's all.

14 Q. Would that be inefficient?

15 MR. LU: Objection. Vague.

16 A. Well, I mean, I guess what I'm saying is that
17 there's always going to be some type of a risk
18 where the fluid is still in there. And you just
19 have to take a rag and clean it out.

20 I mean, there could be fluid in there even
21 if it's of the orientation that you're talking
22 about; right? Because as you well know, I mean,
23 I've seen it a million times, where the inside
24 of the -- if it's oriented the way that it's
25 shown on page 57, there's some gunk in there.

1 And you got to just take a rag, a nice clean
2 rag, and just clean it. Because there's, you
3 know, dependent on how often you change, for
4 example, your oil, or after you change whatever
5 it is that is the medium that you're filtering
6 out, the fluid that you're filtering out, you
7 always want to clean that upper half with a rag
8 if there's stuff stuck in there.

9 BY MR. SMITH:

10 Q. Does the gunk tend to accumulate on either end
11 of the insert?

12 A. Yeah, it's usually on the -- the gunk -- well,
13 it's usually in the filter itself. Right?
14 There's gunk in the filter. That's why you
15 change it. I mean, you know, like when I change
16 my water softener filter. Right? What did you
17 call it? A cartridge filter?

18 If I put a clean one in, it's nice and
19 clean and white. If I leave it in there after a
20 month, it gets all dingy and orangey and brown.

21 If I leave it in there for four months,
22 it's pitch black. So it depends; right?
23 Usually it's in the filter itself. But what I
24 do is, is that I take and I clean, when I do
25 change it, you know, and it is oriented this

1 way, but it doesn't have any type of a drain
2 plug in it. It is oriented just like it's shown
3 in this figure on page 57.

4 I unscrew it, and I got to take my little
5 wrench and unscrew it. Right? Which is a pain
6 in the butt. Because you see how it's got 24
7 here? Right there, those -- which are the
8 places where it mounts onto the wall. Mine has
9 a bracket that mounts onto the wall like that.
10 When I go to take it off, I take my little black
11 wrench. But I'm always pulling on those
12 fasteners, and I got to be real careful to grab
13 it at the top and then twist it open. Right?

14 And then after I twist it open, I take it
15 down. And then I take a rag, and I clean right
16 above that -- that part there that you showed,
17 the 10? The equivalent of 10? And I clean
18 around that.

19 Q. Turn to paragraph 96 of your declaration,
20 please.

21 A. There. Thank you.

22 Q. You have in the image at the top of the page two
23 structures identified.

24 Do you see that?

25 A. You're talking about eccentric opening and

1 eccentric blocking element?

2 Q. Yes. Just for the record, it's eccentric,
3 E-C-C-E-N-T-R-I-C. That word will be used a lot
4 going forward.

5 You've identified Element 48 as the
6 eccentric blocking element; is that correct?

7 A. Right. The W-shaped portion. Right.

8 Q. The portions of the entire element?

9 A. What?

10 Q. The entire blue structure or just the portions?

11 A. In mine, it's green.

12 Are you talking about where it says
13 Eccentric Blocking Element?

14 Q. Yes.

15 A. Yeah. So those W-shaped portions -- right? --
16 are eccentric.

17 Q. Looking at the upper part of that image, it says
18 Eccentric Opening. Mine looks orange.

19 A. Right. Yeah. To me, it looks yellow but
20 maybe -- I'm colorblind, too, so please bear
21 with me.

22 Q. I apologize, then. I will try and stay away
23 from colors.

24 A. No, that's okay. I think I know what you mean.

25 Q. Is it your opinion that the entire opening

1 around that is the eccentric opening?

2 A. Well, what happens is, is that it's not in the
3 center. Okay? Because it's not in the center,
4 it's eccentric. In particular, the reason why
5 you know it's -- if you want to say eccentric or
6 eccentric, I guess I call it. The reason why
7 it's not eccentric is that those W-shape
8 portions, 48, are not in the center.

9 Q. Those portions 48 are part of a larger ring
10 structure that is identified as 47; is that
11 correct?

12 A. Right.

13 Q. And that Structure 47 is eccentric as well, in
14 your opinion?

15 A. Well, because it has those elements, 48, yeah.

16 Q. Is there anything located in this center on this
17 filter insert?

18 A. If you were to take and --

19 For example, go back to page 57. You see
20 how on page 57 there's a number that says 35.
21 Are you following me?

22 Q. Yes.

23 A. That's the center. Where the little squiggly
24 line is. Right? It may be a fraction of a
25 millimeter.

1 I mean, there is two 35s. Right? But the
2 one that's pointing to the center.

3 Q. I believe there's actually three 35s.

4 A. Yeah. There's three 35s, but the one in the
5 middle.

6 Q. Between Numbers 49 and 40?

7 A. Right. Yes. Thank you.

8 Q. Looking at the top part of that same image, you
9 see 18?

10 A. Yes.

11 Q. Is that in the center?

12 A. Give me just a second. I want to see what 18
13 is. Pipe portion. Pipe portion, 18. Where 18
14 is pointing to, no.

15 Q. The structure of the pipe portion, is that in
16 the center?

17 A. Yeah, you could say that's in the center. Yeah.
18 But that particular part, like the wall of the
19 pipe; right? I think that's pointing to
20 basically a wall of the pipe. That's not in the
21 center.

22 Q. So the outside wall of 18 would be eccentric?

23 A. Where 18 -- that point on that pipe wall is not
24 in the center. The pipe itself is centered;
25 right? But that point on that pipe, that's not

1 in the center.

2 Q. That pipe has an inner diameter?

3 A. So like, look. Here's my Bai bottle that I
4 haven't opened yet; right? Where my finger is;
5 right? Like if it's right in the center of the
6 cap, the Bai bottle is centered. If I'm talking
7 about this right here where I'm pointing to
8 right on the edge, like, for example, where you
9 see where the little cherry symbols are; right?

10 Q. Yes.

11 A. Those cherry symbols are not centered.

12 Q. Is the label those cherries are on centered?

13 A. Yeah, I would say it is.

14 Q. You must have gotten thirsty talking about your
15 cherries.

16 A. I'm sorry.

17 Q. Quite all right.

18 I'm going to mark Exhibit 2. Give me a
19 moment here.

20 (Deposition Exhibit 2 was presented for
21 identification.)

22 Q. So Exhibit 2 is the '203 patent.

23 A. Okay. Got it.

24 Q. Thank you.

25 Do you mind turning to Figure 6, please.

1 A. Okay. I'm there.

2 Q. Thank you.

3 You see Numbers 3.1 and 3.2?

4 A. Yes.

5 Q. Are those in the center?

6 A. 3.1 and 3.2. 3.1 -- partial planes, 3.1 and 3.2
7 is again visible. It says right here:

8 "The inclined Plane 3 with its two partial
9 Planes, 3.1 and 3.2, is, again, visible in the
10 center of the Filter Insert 2."

11 That's what it says. It says that on
12 Column 8 -- Column 8, line 12 to line 14.

13 But, you know, to me, they are not in the
14 center. They are on the center of the -- I
15 mean, so the filter insert, all right, that's
16 centered, but those planes are not -- you know,
17 where that particular number is referring to;
18 right? That's not in the center.

19 Where was that Figure 2 -- Figure 6.

20 Q. I'm sorry, I didn't want to interrupt. Are you
21 done?

22 A. Yes, sir. Yes.

23 Q. It looked like you were reading.

24 A. No, no. I'm just waiting. Thank you.

25 Q. Do you mind turning to Figure 17 of the '203

1 patent.

2 A. All right.

3 Q. Are you there?

4 A. Yes, sir.

5 Q. Do you see Reference Numeral 12?

6 A. Yes, I do.

7 Q. Is that structure in the center?

8 A. So it says the bottom 18 of the housing 10 in
9 the center of which the return 12.

10 Yes.

11 Q. Thank you.

12 Can we turn to paragraph -- page 58 of your
13 opinion, please.

14 A. Okay. Got it.

15 Q. If only one of the W-shaped portion was engaged
16 in only a portion of the Groove 22, would fluid
17 be able to leak out?

18 A. If only one of the W-shaped portions were in the
19 Groove 22, would fluid be able to leak out?

20 So the answer to that question is in
21 Yokoyama itself. Because it says in Yokoyama --
22 let me find it.

23 Look on paragraph 0033.

24 "For example, in the embodiment described
25 above, there are three blocking protrusions, 46

1 provided on the Filter Element 40 side, and
2 three pleated portions 19 provided on the upper
3 case half 10 side, but this is only an example.

4 "That is, the Locking Protrusions 46 may be
5 one or more, and the Pleated Portions 19 may be
6 formed in the same number as or greater than the
7 number of the Locking Protrusions 46."

8 So the answer to your question is, yeah,
9 right there, Yokoyama describes. You don't have
10 to use three of them, you could just use one.
11 When you just use one, when it's engaged, and a
12 POSITA would understand it when you just use
13 one, when it's engaged, it wouldn't leak out.

14 Q. But it would require more than just the W-shaped
15 portion; correct?

16 A. Yeah. But the W-shaped portion is the eccentric
17 part, and that meets the claim limitation.

18 Q. The colored ring, the image above paragraph 96.

19 A. Yes.

20 Q. The structure.

21 A. You're talking about 47?

22 Q. Yes. That entire ring is used to seal; correct?

23 A. That's right.

24 Q. Not only a portion; correct?

25 A. Yeah, the whole thing has a seal.

1 Q. Thank you.

2 A. I mean, look, if the ring didn't have the
3 W-shaped portions -- right? -- you could rotate
4 the thing around. Right?

5 See this? See the green thing where -- see
6 the bottle? Unscrew the cap. I can rotate that
7 around; right? Okay. But if I put a kink in
8 it, and that kink fits into the cap; right?
9 Let's say where my thumb is, now guess what?
10 Now it's got to spin with the cap. And that
11 little kink is eccentric. And the W-shaped
12 portions of Yokoyama, whether they be one or
13 three, are eccentric. And they are part of a
14 blocking element.

15 Q. Turn to paragraph 130 -- I'm sorry.

16 A. 140?

17 Q. 130 of your declaration.

18 A. Okay. I'm there, sir. Thank you.

19 Q. I'm sorry, I should have said --

20 A. No. Thank you for your patience with me. I
21 really appreciate it.

22 Q. The second sentence here, you say:

23 "A POSITA, P-O-S-I-T-A, would have been
24 motivated to use Cline's eccentric draining
25 mechanism because of its well-known benefits"?

1 A. Yep.

2 Q. Is it your opinion that a person of ordinary
3 skill in the art would put an eccentric blocking
4 element into the device shown in Yokoyama?

5 A. Yeah. You could do that, but you don't have to.
6 But you could.

7 Q. Would the device be rotated upside down, as we
8 talked about earlier?

9 A. Then you just put the --

10 Look, Yokoyama's blocking mechanism; right?
11 It works either way. Whether it's upside down
12 or the other way. Right? Because it seals.

13 Now, if you want to have a drain
14 mechanism -- right? -- you would probably want
15 to put the drain mechanism either on the bottom
16 or on the top.

17 Q. How would a drain mechanism on the top work?

18 A. Well, saying that if you take Yokoyama and you
19 orient it the other way; right? Like we talked
20 about. This is the top. You just put the drain
21 mechanism there (indicating). Or you put the
22 drain mechanism here. It just depends on how
23 you orient it. I've seen it both ways. It's
24 simple and an obvious way to do it.

25 Q. Let's go with the first hypothetical. If you

1 flipped it over and put it at the top, which is
2 now located in the lower bottom, would you be
3 also have to add a drain channel?

4 A. Yeah. No problem. That would be easy.

5 Q. Would you have to add a hose?

6 A. Not necessarily.

7 Q. You would have to make other changes to
8 accommodate the new flow of fluid; correct?

9 A. No, not necessarily. If you're trying to drain
10 it from the dirty side; right? I mean, if the
11 dirty fluid, if that's what you're aiming to
12 drain; right? The dirty part? You just put it
13 eccentrically either on the top or bottom. If
14 you want it to drain just by unscrewing the --
15 let's say it's --

16 Here itself -- it puts right in.

17 Q. What fits right in? I'm sorry, puts right in.

18 A. So look at Figure 6.

19 Q. Of?

20 A. Look on page 78.

21 Q. Thank you.

22 A. All you got to do is move that over to, you
23 know, when you flip Figure 6 over, all you got
24 to do is move that part over to the top part.
25 Simple and easy.

1 Q. I don't follow.

2 A. It does the same thing. You just take -- in
3 fact, I don't know if I can --

4 Just take this and put that here. That's
5 all. So you basically take 76. I think that's
6 66. 78.

7 The part in red. You see the box part in
8 red? Eccentric valve? See how there's a
9 rectangle there?

10 Q. Yes, I see that.

11 A. All you got to do is take that rectangle and
12 just put it up on the -- see where -- it doesn't
13 have it pointed out there, but see where -- see
14 where the Number 51 is? And the 10 is? In
15 Figure 6.

16 Q. In the top?

17 A. Yes. All you got to do is flip it over and put
18 it there. That's easy enough.

19 You could make it that way. Now you just
20 take your cartridge filter, okay. Then if you
21 have the way it's oriented in Figure 6, you put
22 it up there like that, or you take your
23 cartridge filter and put it in this way.

24 Q. Figure 6 is from Cline; is that correct?

25 A. Right.

1 Q. In Figure 6, the eccentric valve is at the
2 bottom; is that correct?

3 A. Yep. In that table. But if you just flip
4 Figure 6 over, all you got to do is put the
5 eccentric valve over there where I said, by 10
6 and 51. It'll work the same way. It's a
7 simple, you know, design choice.

8 I mean, look, as I talked about --
9 right? -- I worked in the automotive industry
10 for decades. And like I talked about when I
11 had -- I talked about in my discussion for
12 motivations to combine, there's something that
13 happens in the automotive industry as a design
14 and release engineer. And I was also an
15 engineering management, something called
16 packaging space.

17 So what happens is if you ever looked at a
18 lot of the engine compartments, just like under
19 your hood, it's a very crowded area. One thing
20 you have to account for is design for assembly,
21 design for disassembly, and design for service.

22 So a lot of times, you don't just put a
23 drain plug like that, an eccentric valve, in the
24 center. Or you don't put it -- what is shown in
25 Figure 6. You put it where somebody who is

1 going to service that equipment can reach it.
2 And so there's definitely, and it's been known
3 for decades, that you can move those drainage
4 systems around depending on where it is to ease
5 disassembly and ease service.

6 And I talk about that at length in my
7 motivation to combine descriptions. That's
8 something that a person of ordinary skill in the
9 art would readily understand. It's easy to move
10 that stuff around, and it's done frequently.

11 Q. Turn to page 57, please.

12 A. Yes.

13 Q. Is it your opinion that you would add that
14 eccentric valve to this device?

15 A. So I argued this both ways. Right? I argued
16 this Yokoyama by itself. But I also argued
17 Yokoyama with Cline.

18 So, you know, you could do it either way.

19 Q. Let me rephrase.

20 For your second ground, combining Yokoyama
21 and Cline.

22 A. Okay.

23 Q. Is it your opinion that a person of ordinary
24 skill in the art would simply add that drain
25 valve here?

1 A. Well, I guess it's not that general, simple
2 thing the way you said it. That's covered in my
3 declaration of how and why, and there's pages
4 and pages that I discuss in my motivation to
5 combine arguments of Yokoyama with Cline which
6 begin on --

7 75. Begin on page 75. And go on for
8 page 82. So there's basically -- what is that?
9 Over six pages discussing why a POSITA would be
10 motivated to combine Yokoyama's filter with
11 Cline's eccentric drain valve.

12 Q. Looking at the image on page 57 of your report.

13 A. Uh-huh.

14 Q. If there was an eccentric blocking element
15 extending down from Element 44 --

16 A. Okay.

17 Q. -- how would you screw on Cap 30?

18 A. If there was what? How would you screw on
19 Cap 30?

20 Well, actually, what happens is you don't
21 really screw on Cap 30. You take and you screw
22 the bottom -- or that whole thing. Right? Is
23 that 44? Is that what they call it? 44? 44.
24 No. 44 was the -- 40. You take and you take
25 40, and you screw it in -- you take that and you

1 put that on.

2 In fact, you kind of really just -- the way
3 it's shown, it can be counterclockwise or
4 clockwise. The incline planes that you see
5 there. Right? You just take and you -- and the
6 Nose 46, you just take and that helps position
7 it. And then either this way or this way -- and
8 I'm turning my wrist, my left wrist clockwise
9 and counterclockwise -- positions the nose into
10 the groove. Now, you could do that with that
11 filter element like this or like this. Works
12 the same way.

13 MR. SMITH: It's 12:40 in Chicago. Why
14 don't we take -- jump off the record here
15 quickly.

16 (A recess was taken between 1:40 p.m. and
17 2:02 p.m.)

18 BY MR. SMITH:

19 Q. Can you please turn to page 119 of your
20 declaration, please.

21 A. All right. Thank you.

22 Q. Do you see the last sentence in paragraph 214?

23 A. Yes.

24 Q. It reads:

25 "Because the basket is part of the filter

1 housing, the ring filter insert has rotated
2 relative to the filter housing."

3 A. Yes.

4 Q. Do the claims of the '203 patent use the phrase
5 "has rotated"?

6 A. The claims of the '203 patent, "has rotated"?
7 So we're talking about Claim 1.

8 "The inclined plane and nose are arranged
9 to be movable in relation to each other in such
10 a way that they slide along each other and bring
11 the blocking element into engagement with the
12 eccentric opening by rotating filter insert
13 relative to filter housing" --

14 Did I make a typo there? Is that Claim 1?
15 Let me double-check.

16 It says on Column 16, Line 10, by rotating.

17 Q. Would you read that entire clause, please.

18 A. Are you talking about:

19 "The inclined plane and the nose arrange
20 should be movable in relation to each other in
21 such a way that they slide along each other and
22 bring the blocking element into engagement with
23 the eccentric opening by rotating the ring
24 filter insert relative to the filter housing"?

25 Q. Thank you.

1 That phrase in Claim 1 does not use the
2 word or term "has rotated," does it?

3 A. It doesn't say specifically "has rotated." But
4 I mean, you know, I guess I could change that to
5 say in my declaration -- I guess I could say the
6 ring filter insert is being rotated relative to
7 the filter housing, if you're worried about the
8 past tense.

9 Q. Could you read --

10 A. Or I could say the ring filter insert by this
11 rotation has rotated --

12 I mean, I guess, yeah. I mean, if you want
13 to pick hairs, it doesn't say "has," but it's
14 rotated or rotating.

15 Q. It specifies what element rotates; correct?

16 A. Are you talking about --

17 Are you saying that --

18 So:

19 "The inclined plane and nose arranged to be
20 movable to each other in such a way that they
21 slide along each other and bring the blocking
22 element into engagement with the eccentric
23 opening by rotating the ring filter insert
24 relative to the filter housing"?

25 So we're talking about the incline plane

1 and nose sliding along each other; right? That
2 sliding along is done by rotation. Right? And
3 it brings these -- engagement of the blocking
4 element with the eccentric opening. And you
5 rotate the ring filter insert relative to the
6 filter housing.

7 So here, we're still, by rotating, bringing
8 the ring filter insert relative to the filter
9 housing.

10 Q. The claim does not say "by rotating the filter
11 housing relative to the ring filter insert"; is
12 that correct?

13 A. It says "by rotating the ring filter insert
14 relative to the filter housing."

15 Q. So that specifies the ring filter insert
16 rotates?

17 A. Relative to the filter housing; right.

18 Q. And not the filter housing rotates relative to
19 the ring filter insert?

20 A. It doesn't say rotating the housing relative to
21 the ring filter insert? Is that what you're
22 saying?

23 MR. SMITH: Could you read my last
24 question, please.

25 I can read it.

1 BY MR. SMITH:

2 Q. And not the filter housing rotates relative to
3 the ring filter?

4 A. The claim says "by rotating the ring filter
5 insert relative to the filter housing."

6 Q. And this specifies the filter insert rotating?

7 A. Right, relative to the filter housing. Yes.

8 Q. But it rotates?

9 A. Yes.

10 Q. Is the same limitation in Claim 15?

11 A. If you look at the Column 17, Line 56:

12 "By rotating the ring filter insert
13 relative to the filter housing."

14 Q. Is that the same? I mean, nearly identical?

15 A. "By rotating the ring filter insert relative to
16 the filter housing."

17 Claim 1.

18 "By rotating the ring filter insert
19 relative to the filter housing."

20 Claim 15.

21 So, yeah, I mean, Honermann says:

22 "The ring filter insert is rotated relative
23 to the filter housing."

24 I mean, you read Honermann. A person would
25 understand that's what's going on. I guess I

1 don't understand.

2 Q. Could you turn to page 115 of your declaration,
3 please.

4 A. Wait, page 115?

5 Q. Yes, 1-1-5.

6 A. Yes.

7 Q. Paragraph 206, do you see that paragraph?

8 A. Yes.

9 Q. You state:

10 "The basket 304 is part of the filter
11 housing as depicted in Figure 8."

12 Do you see that sentence?

13 A. Yes.

14 Q. Is that your opinion?

15 A. Yeah.

16 Q. Turn back to paragraph 214 on page 119, please.

17 A. Okay.

18 Q. In sentence or line that starts:

19 "Which further causes the basket to rotate
20 to an unlocked position."

21 Do you see that?

22 A. I'm on 119.

23 Q. Page 119. Yes. Paragraph 214. The third from
24 the bottom line of that paragraph.

25 A. "Which further causes the basket to rotate to an

1 unlocked position."

2 Yes.

3 Q. And you've opined the basket is part of the
4 housing?

5 A. Yes. So the way Cline works, okay, is that
6 there's actually like --

7 So the filter rotates; right. The basket
8 rotates. So there's sets of incline ramps.
9 Right? And sets of protrusions.

10 Q. Where does it say the filter rotates?

11 A. Well, you are rotating the filter when you put
12 it in.

13 Q. Is the engagement of the surfaces 122 and 121
14 and slide surfaces 314, 318 causing the insert
15 to rotate in Honermann?

16 A. Hold on a second. Please. Let me bring that
17 up. You mentioned which elements? 122.

18 Q. 121, 122?

19 A. Okay. So 121 is the protrusion; right? The
20 first protrusion? And 122 is the second
21 protrusion. Is that what you're saying?

22 Q. You're saying.

23 A. No. I mean, what was your question?

24 Q. Oh, okay. In Honermann, the sliding surfaces is
25 the sliding surfaces of 121 and 122 and 314 and

1 318?

2 A. Hold on. Let me find 314. 314 --

3 First slide surface, 314. Second slide
4 surface, 318. Okay.

5 Q. Are those on the basket?

6 A. The first -- you mean 314 and 318?

7 Q. Yes.

8 A. So look at Figure 24. And Figure 24 is --
9 Figure 6 -- oh, no. I'm sorry.

10 Figure 24 is a prospective view of the
11 basket.

12 So, yeah, 314 and 318 are on the basket.

13 Q. Which you opined is part of the filter housing;
14 correct?

15 A. Yeah. I mean, anybody would know that it could
16 be part of the filter housing, yeah. That --

17 Q. Can you -- please finish.

18 A. Yeah.

19 Q. Thank you.

20 Can you turn back to page 119 of your
21 opinion.

22 A. Okay.

23 Q. Paragraph 214, please.

24 A. 19. Yes.

25 Q. Can you just read the second and third

1 sentences, please.

2 A. On 214?

3 Q. Yes, please.

4 A. "In my opinion, Honermann in view of Cline
5 render obvious this limitation. For example,
6 Honermann discloses as the first protrusion 121
7 [i.e. nose] engages first slide surface 314
8 [inclined plane], it causes the Basket 304 to
9 rotate."

10 Q. The next sentence, please.

11 A. "This rotation puts the basket in a second
12 locked position which allows the second
13 protrusion to engage the second slide surface
14 318 which further causes the basket to rotate to
15 an unlocked position."

16 Q. Is that your opinion?

17 A. Yeah. I mean, you could lock it, too, I guess,
18 depending on which way you're locating it. But
19 it says, it's like a two-step rotation incline.

20 Q. Would you turn to page 115 of your declaration,
21 please.

22 A. Yes.

23 Q. The image Figure 24, on the bottom.

24 Do you see that?

25 A. Yep.

1 Q. That's the basket from Honermann; is that
2 correct?

3 A. Right.

4 Q. Does that extend from the top to the bottom in
5 Honermann?

6 A. The what?

7 Q. Let me rephrase.

8 Within the filter insert, does the basket
9 extend from the top to the bottom?

10 A. So those figures hold it. Okay? You see
11 Figures 306, 307; right? They hold it. So
12 there's that basket.

13 So look at -- what's a good figure? Look
14 at -- so you see like Figure 7 in Honermann,
15 Figure 7 is a prospective cross-section view of
16 the filter cartridge. Okay. And it's a cross
17 section of that. So there's a filter cartridge;
18 right?

19 And then -- kind of like Figures 8 and 9;
20 right? They show the basket. Right? So
21 there's this filter cartridge. There's this
22 basket with these fingers. And these fingers --
23 for example, 306, which is described as -- what
24 do they call them?

25 Bear with me. I'm sorry, let me see what

1 they actually call 306.

2 306, the legs. This frees the legs of the
3 basket relative to the Projection 218.

4 So they call them legs. I call them
5 fingers, but they actually call them legs.

6 So you got that filter element. You got
7 the basket.

8 So what's your question again? I'm sorry?

9 Q. I'll ask it newly. Based on this, do the legs
10 or fingers, 306, extend down to the Panel 42 in
11 Honermann?

12 A. Panel 42. What's Panel 42? Panel 42 -- second
13 end cap.

14 No. It's just -- that second end cap is
15 part of the filter assembly -- or the filter
16 element, I should say, not assembly. Filter
17 element.

18 Q. I'm sorry. Do you mind just moving your papers
19 down? Unfortunately, my hearing is not as good
20 as it was --

21 A. So 42 is part of that -- what do they call it?
22 42 is part of the -- bear with me. Bear with me
23 one second.

24 Filter cartridge. I think. Let me make
25 sure.

1 So if you look at column -- no, I'm sorry.

2 Paragraph 85. It says:

3 "Filter cartridge, 38, Figure 6 and 7."

4 And it says:

5 "References made to Figure 6 and 7 which
6 illustrate one embodiment of the filter
7 cartridge 38 useable in this arrangement. In
8 the embodiment shown, the filter cartridge 38
9 includes first and second opposite end caps, 41
10 and 42 in a tubular construction of filter media
11 44 extending between the first and second end
12 caps."

13 So there's a filter media 44 which has end
14 caps 41 and 42.

15 Was your question related to 42 or 41?

16 Q. 42.

17 A. 42. Yeah. Right? So no, from there, it
18 doesn't touch 42. Is that your question?

19 Q. Thank you. Yes.

20 Do you mind turning to, I think it's
21 paragraph 55, is what I asked?

22 A. That is what you're talking about, the
23 declaration; right?

24 Q. Yes, thank you. Are you there?

25 A. Yeah. This describes DE227?

1 Q. Yes. Can you read that first sentence, please?

2 A. "The incline plane is on the inner circumference
3 of the shell of filter housing, and the nose is
4 on the outer circumference of the filter insert,
5 essentially the opposite of what the '203
6 claims."

7 And we're talking about DE227.

8 Q. Thank you. Why is that important that it's the
9 opposite of what the patent claims?

10 A. Well, that little minor, very obvious
11 distinction is what got this thing through.
12 Over DE227. The '203, I mean.

13 Q. Which is not relied on for your opinion at all;
14 is that correct?

15 A. No.

16 MR. LU: Objection. Vague.

17 A. Yeah. I looked at it for sure, yeah.

18 BY MR. SMITH:

19 Q. Are you relying on the DE227 for any grounds of
20 invalidity in this opinion?

21 A. No, no.

22 I mean, it's within the knowledge of a
23 POSITA; right? But I specifically use that as a
24 reference. I didn't need to. I mean, there's
25 all kinds of other references I can use. These

1 are just exemplary. If that's what the question
2 is, I guess.

3 Q. I believe you've answered the question.

4 MR. SMITH: Take a five-minute break here.
5 I think I might be winding down.

6 (A recess was taken between 2:33 p.m. and
7 2:41 p.m.)

8 BY MR. SMITH:

9 Q. Mr. Nranian, are you inventor on any patents?

10 A. Yes.

11 Q. How many?

12 A. Two.

13 Q. Generally, what does the technology of those
14 patents relate to?

15 A. One has to do with spintronics, and the other
16 one has to do with basically the mechanical
17 structure of body armor. B-O-D-Y A-R-M-O-R.
18 Like for soldiers.

19 Q. Are there any applications that were filed that
20 never matured into a patent in which you were an
21 inventor?

22 A. You know, I wrote a lot of them up as an
23 inventor when I was -- in my job at the Army. I
24 didn't do so much --

25 Oh, I did have a -- when I was at General

1 Motors, because they didn't want to pay the
2 money for a patent, I did a statutory invention
3 registration. I really didn't do any as an
4 inventor at Ford, I don't think.

5 And I think I wrote a few up in the Army,
6 but I don't think -- we had kind of lazy patent
7 attorneys, government workers. They didn't want
8 to do a lot of them. But there were a bunch of
9 invention disclosures that I wrote up that I was
10 an inventor on or co-inventor on.

11 Q. You're a member of the patent bar; yes?

12 A. Yes.

13 Q. Have you ever prosecuted an application?

14 A. Yes. I don't -- my name isn't on it, though,
15 because back when I was doing that, the partners
16 always put their name on it even though you did
17 all the work.

18 Q. I'm sure there are some associates that would
19 understand that.

20 A. And a lot of office actions, too.

21 Q. Were you able to overcome the rejections in the
22 office action?

23 A. You know what? I did that only for a few
24 months. I don't know how that ended up. I did
25 that at my buddy's law firm in -- when was it?

1 I think -- when was it? 2009 and '10. And, you
2 know, I did some -- I did office action
3 responses, and I did some PTC things. Right?
4 PTC. And you know the international ones;
5 right? And the -- I actually did some stuff for
6 Canada. I think my name was on that one, now
7 that I think of it. And somebody from Canada.
8 But I can't say for sure whatever happened.

9 Some of them were pretty tough because it
10 was like their third or fourth office action
11 response; right? So you got to make some
12 pretty -- I call them Mona Lisa-type claims to
13 get over the rejections. You know what I mean?

14 Q. I think I understand.

15 I believe you also meant PCT.

16 A. Yeah, PCT. I'm sorry. PTC --

17 Patent Cooperation Treaty. Sorry.

18 Q. No patents relating to the automotive industry?

19 A. Well, the ones that I did, the spintronics one
20 was. And I did a lot of invention disclosures
21 in the Army that were engine-related. I
22 remember I did one that actually had to do with
23 a posed piston configuration on an engine, but
24 they never wanted --

25 They were lazy, those patent lawyers. They

1 had a -- if you got them to do, like, ten a
2 year, it was something. And that was for
3 everybody; right?

4 I actually used to go to the -- used to
5 have a patent evaluation committee, and I used
6 to go and argue why it should go forward; right?
7 But then getting them to do it was another
8 matter. We used to have those meetings like
9 once a month. And the inventors would go in,
10 and we would argue why we think it should go
11 forward. And then they would pick the ones to
12 go forward.

13 Yeah. So there were a lot of them. I
14 mean, they weren't -- they didn't turn into
15 applications. They were pretty detailed
16 invention disclosures. And a lot of them were
17 engine-related. You know, military-related,
18 too. A lot of them were mechanical.

19 Yeah. So, yeah, automotive-related for
20 sure. In fact, the ones that I -- statutory
21 invention registration was automotive-related
22 when I was at GM.

23 MR. SMITH: I have no further questions at
24 this time.

25 MR. LU: I also have no further questions.

1 THE REPORTER: Read and sign?

2 THE WITNESS: Please.

3 MR. LU: You can send it to me. Typically
4 we don't need a signature, but you can send it
5 to me, that's fine.

6 THE WITNESS: I like to read and sign,
7 Quincy, if that's okay.

8 MR. LU: Sure, that's fine. You can send
9 it to me.

10 THE WITNESS: Only because I want to -- you
11 know, I mean, look, Tara you're fantastic but
12 sometimes the words get a little mixed up. I
13 just want to -- you know what I mean. Thank
14 you, thank you. It's my fault probably. You
15 know what I'm saying?

16 MR. LU: Tara, let me clarify something.
17 Would you be charging me for the transcript if
18 you're just sending it to me to get it reviewed
19 by the witness because I don't -- we don't want
20 to or need to buy the transcript. And I don't
21 need a rush job either. Like typically in an
22 IPR the -- I don't typically get the transcript
23 and I just wait for the other side to file it
24 with their briefing.

25 So if the witness wants to sign it, I'm

1 fine with that, but I don't think my client is
2 going to be willing to pay for the transcript,
3 if that makes sense.

4 THE REPORTER: Didn't you get realtime?
5 Then you get the transcript too.

6 Do you need it sooner than ten business
7 days?

8 MR. LU: No.

9 MR. SMITH: I do need it sooner. Can I say
10 Wednesday?

11 MR. LU: Just send me the invoice for
12 whatever it is for the realtime -- just like --
13 if it's going to be a separate line item for the
14 transcript, then I don't want that. But if it
15 comes with the realtime, then that's fine.

16 I don't know what you guys charge and not
17 charge, but I definitely got the realtime, so
18 invoice me for that if it comes with the
19 transcript, if it's all one package.

20 Mnrnian@charter.net.

21 (Time noted: 2:55 p.m.)

22 AND FURTHER THE DEPONENT SAITH NOT.

23

24

25

1 STATE OF INDIANA)
) SS:
2 COUNTY OF HANCOCK)

3 I, Tara Gandel Hudson, RPR, CRR, a Notary
4 Public in and for the County of Hancock, State of
5 Indiana at large, do hereby certify that
6 MICHAEL NRANIAN was by me remotely sworn to tell the
7 truth, the whole truth, and nothing but the truth in
8 the aforementioned matter;

9 That the foregoing was taken on behalf of the
10 Patent Owner, Hengst SE, with the witness located in
11 South Lyon, Oakland County, Michigan, on the 13th
12 day of December, 2024, scheduled to commence at
13 11:00 a.m. EST;

14 That said matter was reported stenographically
15 and transcribed to English under my direction, and
16 that the transcript is a true record of the
17 testimony received remotely; and that the signature
18 of Mr. Nranian to his deposition was requested;

19 That the parties were represented by their
20 counsel as aforementioned.

21 I do further certify that I am a disinterested
22 person in this matter; that I am not a relative or
23 attorney of either party, or otherwise interested in
24 the event of this action, and am not in the employ
25 of the attorneys for either party.

Tara Gaudel Hudson

My Commission Expires March 27, 2032

Veritext Legal Solutions
1100 Superior Ave
Suite 1820
Cleveland, Ohio 44114
Phone: 216-523-1313

December 19, 2024
Michael Nranian
Mnranian@charter.net

Case Name: Champion Laboratories, Inc., Et Al. v. Hengst SE

Veritext Reference Number: 7041797

Deposition Date: 12/13/2024

Dear Sir/Madam:

Enclosed you will find a transcript of your deposition.

As the reading and signing have not been expressly
waived, please review the transcript and note any
changes or corrections on the errata sheet
included, indicating the page, line number, change and
reason for the change. Sign at the bottom of the sheet
in the presence of a notary and forward the errata sheet
back to us at the address shown above or email to
production-midwest@veritext.com.

If the errata is not returned within thirty days of your receipt of
this letter, the reading and signing will be deemed waived.

Sincerely,

Production Department

NO NOTARY REQUIRED IN CA

DEPOSITION REVIEW
CERTIFICATION OF WITNESS

ASSIGNMENT REFERENCE NO: 7041797

CASE NAME: Champion Laboratories, Inc., Et Al. v. Hengst SE

DATE OF DEPOSITION: 12/13/2024

WITNESS' NAME: Michael Nranian

In accordance with the Rules of Civil
Procedure, I have read the entire transcript of
my testimony or it has been read to me.

I have made no changes to the testimony
as transcribed by the court reporter.

Date Michael Nranian

Sworn to and subscribed before me, a
Notary Public in and for the State and County,
the referenced witness did personally appear
and acknowledge that:

They have read the transcript;

They signed the foregoing Sworn
Statement; and

Their execution of this Statement is of
their free act and deed.

I have affixed my name and official seal

this _____ day of _____, 20____.

Notary Public

Commission Expiration Date

DEPOSITION REVIEW
CERTIFICATION OF WITNESS

ASSIGNMENT REFERENCE NO: 7041797

CASE NAME: Champion Laboratories, Inc., Et Al. v. Hengst SE

DATE OF DEPOSITION: 12/13/2024

WITNESS' NAME: Michael Nranian

In accordance with the Rules of Civil Procedure, I have read the entire transcript of my testimony or it has been read to me.

I have listed my changes on the attached Errata Sheet, listing page and line numbers as well as the reason(s) for the change(s).

I request that these changes be entered as part of the record of my testimony.

I have executed the Errata Sheet, as well as this Certificate, and request and authorize that both be appended to the transcript of my testimony and be incorporated therein.

Date Michael Nranian

Sworn to and subscribed before me, a Notary Public in and for the State and County, the referenced witness did personally appear and acknowledge that:

They have read the transcript;
They have listed all of their corrections in the appended Errata Sheet;
They signed the foregoing Sworn Statement; and
Their execution of this Statement is of their free act and deed.

I have affixed my name and official seal this _____ day of _____, 20____.

Notary Public

Commission Expiration Date

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

ERRATA SHEET
VERITEXT LEGAL SOLUTIONS MIDWEST
ASSIGNMENT NO: 7041797

PAGE/LINE(S) / CHANGE /REASON

Date Michael Nranian
SUBSCRIBED AND SWORN TO BEFORE ME THIS _____
DAY OF _____, 20____ .

Notary Public

Commission Expiration Date

&	11:30 33:6	1820 83:2	52:25 63:4,6
& 2:4,10 3:20	11:38 3:1	19 54:2,5 69:24	74:5,12
0	11:43 6:15	83:4	2032 82:8
0017 35:14	11:45 6:16	1967 13:17	206 67:7
0033 53:23	12 25:24 32:19	19:3	210 2:5
1	32:20 52:12	1968 19:9,16	2100 2:11
1	53:5,9	1969 19:9	21162 82:4
1 2:22 9:16	12/13/2024	1976 13:10	214 62:22
18:12,16 29:12	83:8 84:3 85:3	1985 10:17	67:16,23 69:23
30:6 43:20	121 68:13,18,19	14:16 15:2	70:2
63:7,14 64:1	68:25 70:6	1992 15:2	216-523-1313
66:17	122 68:13,17,18	1:40 62:16	83:3
1-1-5 67:5	68:20,25	2	218 72:3
10 24:10,11	12:05 18:9	2 2:23 14:21	22 53:16,19
26:3,5 28:1	12:06 18:10	29:11,11 35:16	24 47:6 69:8,8
37:4,10,11,15	12:31 33:9	42:19 51:18,20	69:10 70:23
37:16 38:3,6	12:40 62:13	51:22 52:10,19	27 82:8
44:7 45:2	12:42 33:10	20 9:3 15:14	289 13:25
47:17,17 53:8	130 55:15,17	84:16 85:22	19:13
54:3 58:14	13th 1:19 81:11	86:22	29 42:17
59:5 63:16	14 15:18 52:12	200 2:11	2:02 62:17
77:1	140 55:16	2003 12:10	2:33 75:6
10:00 1:19	15 15:18 35:4	2007 15:21	2:41 75:7
1100 83:1	35:18 66:10,20	16:4,4	2:55 80:21
1109 2:5	16 63:16	2008 9:24	3
115 67:2,4	17 35:6,7,8,10	2009 77:1	3 2:17 29:2,9
70:20	35:11,12,20,22	2010 10:3	30:6 52:8
119 62:19	52:25 66:11	2016 10:3	3.1 52:3,6,6,6,9
67:16,22,23	172 17:22	2024 1:19	3.2 52:3,6,9
69:20	17th 82:2	81:12 82:3	3.2. 52:6
11:00 1:19	18 2:22 30:2	83:4	30 13:7 37:2,2
81:13	50:9,12,13,13	203 5:25 6:7,10	37:4,10,11,15
	50:22,23 53:8	26:23 51:22	38:2,5 40:20

44:7,9,24 61:17,19,21 304 67:10 70:8 306 71:11,23 72:1,2,10 307 71:11 314 68:14,25 69:2,2,3,6,12 70:7 318 68:14 69:1 69:4,6,12 70:14 32 36:24 33 29:11 37:1,1 37:1 35 49:20 35s 50:1,3,4 38 73:3,7,8 3w 24:12	72:21,22 73:10 73:14,15,16,17 73:18 43 29:23,24 30:11,17 31:1 32:2,7,10 44 29:23,25 30:12,17 31:1 32:2,6,8,12,15 61:15,23,23,23 61:24 73:11,13 44114 83:2 46 26:8 53:25 54:4,7 62:6 47 26:8 49:10 49:13 54:21 48 48:5 49:8,9 49:15 49 50:6	45:25 47:3 49:19,20 60:11 61:12 58 53:12	9 9 71:19 9,023,203 1:3 2:23 6:8 18:15 91 23:1,12 26:11 94 28:16,20 30:16 95 15:10,15 96 47:19 54:18 98101 2:6 99 15:12,15,18 15:21
4	5	6	a
4 30:6 40 12:17 13:7 29:20,21 30:7 42:16 44:15,17 44:19,20,25 50:6 54:1 61:24,25 41 30:10 73:9 73:14,15 42 30:8 32:18 32:25 34:24 44:11,13,15,21 72:10,12,12,12	5 7:18 33:17 50 12:17 51 2:23 58:14 59:6 54 23:12 55 23:14 28:9 29:5 33:13 43:23 73:21 56 25:5 34:10 66:11 57 28:17,20 29:17,20 34:25 40:14 43:24	6 51:25 52:19 57:18,23 58:15 58:21,24 59:1 59:4,25 69:9 73:3,5 60606 2:12 66 58:6 67 19:13 68 19:12 682534 82:7	a.m. 1:19,19 3:1 6:15,16 81:13 able 11:18,20 11:23 25:21 32:15 53:17,19 76:21 above 35:7 38:1,6 47:16 53:25 54:18 83:17 aburnham 2:13 acceptable 5:14 access 18:4 accessible 18:3 accommodate 57:8 accordance 84:5 85:5
		7	
		7 71:14,15 73:3 73:5 70 4:8 7041797 83:7 84:2 85:2 86:2 75 61:7,7 76 58:5 78 57:20 58:6	
		8	
		8 52:12,12 67:11 71:19 82 61:8 85 14:16 15:15 15:16,18 73:2	

account 42:20 59:20 accumulate 46:10 accurate 36:20 38:7 acknowledge 84:11 85:16 act 84:14 85:20 action 76:22 77:2,10 81:24 actions 76:20 active 17:12 activities 14:19 actually 10:10 10:20 11:24 14:11 16:5 17:22 19:8,11 20:13 23:3 24:1,3 25:4 26:22 32:5 37:2 50:3 61:20 68:6 72:1,5 77:5,22 78:4 add 57:3,5 60:13,24 additionally 4:22 address 83:17 administer 3:3 adviser 14:12 affixed 82:2 84:15 85:21	aforemention... 81:8,20 ago 7:19 17:11 ahead 31:12 40:4 aiming 57:11 al 83:6 84:3 85:3 allied 15:2 allow 45:6,8 allows 70:12 analysis 10:21 12:10 analyze 10:10 15:23 andrew 2:10 3:20 angled 38:13 annotation 26:19 annotations 26:22 answer 4:23 23:3 27:14 29:7 31:16 53:20 54:8 answered 32:4 75:3 anybody 27:20 27:22 69:15 apologize 48:22 appeal 1:1 appear 8:7 84:11 85:15	appearances 2:1 appearing 2:1 appears 35:8 appended 85:11,18 application 76:13 applications 8:14 75:19 78:15 appreciate 7:22 55:21 appropriate 42:20 arbitrary 27:1 area 59:19 argue 78:6,10 argued 60:15 60:15,16 arguments 61:5 armor 75:17 army 9:21,23 10:2,4,9,23 12:4,18 75:23 76:5 77:21 arrange 63:19 arranged 63:8 64:19 arrangement 37:21 73:7 arrows 29:10	art 24:3 31:6 41:8 42:22 43:1,7,16 56:3 60:9,24 arts 13:12 asked 32:3 73:21 asking 27:14 31:16 aspect 34:1 assembly 59:20 72:15,16 assess 10:11 11:16 assignment 84:2 85:2 86:2 associate 12:21 associated 11:4 associates 76:18 attached 29:24 29:25 30:9,11 30:13 85:7 attorney 16:25 81:23 attorneys 76:7 81:25 authorize 85:11 auto 10:16 13:15 automotive 10:16 12:10 14:22 15:3
---	---	--	---

17:4 20:7,10 27:21 59:9,13 77:18 78:19,21 ave 83:1 avenue 2:5 avenues 11:8 avoid 42:14 axis 20:15,15 20:16,17 21:5	35:4 50:20 58:5 61:8 75:16 basket 62:25 67:10,19,25 68:3,7 69:5,11 69:12 70:8,11 70:14 71:1,8 71:12,20,22 72:3,7 bear 30:21 48:20 71:25 72:22,22 beautiful 14:2 behalf 1:18 3:7 81:9 believe 8:17 17:6 50:3 75:3 77:15 bellows 30:8 34:22 benefits 55:25 bent 30:8 best 4:2 beyond 20:9 bit 38:24 black 46:22 47:10 blocking 48:1,6 48:13 53:25 55:14 56:3,10 61:14 63:11,22 64:21 65:3	blue 48:10 board 1:1 body 14:23 75:17 bolt 21:11 bolts 21:10 bottle 51:3,6 55:6 bottom 20:18 26:14 27:10,11 27:12 28:10 29:18 30:24 38:14 39:3 40:20 41:25 53:8 56:15 57:2,13 59:2 61:22 67:24 70:23 71:4,9 83:15 box 7:15 58:7 bracket 47:9 brackets 25:15 brands 1:4 2:3 break 4:19,21 5:14 6:2,12 32:7 33:7 37:15 75:4 briefing 79:24 bring 63:10,22 64:21 68:16 bringing 65:7 brings 65:3 brown 46:20	bs 14:11 16:20 16:22 buddy's 76:25 bumper 19:5,7 19:16,17,21,23 20:3,3 22:12 22:13,18,19,21 22:24 bunch 76:8 burnham 2:10 3:20 burns 2:10 3:20 business 12:12 12:15 80:6 butt 47:6 buy 79:20
b			c
b 75:17 back 5:21 6:25 9:8 13:7,23 15:9,10 16:2,9 16:12 28:9 43:22,22 49:19 67:16 69:20 76:15 83:17 background 17:4 bad 42:10,12 43:13 45:10 bai 51:3,6 bar 17:7,11,12 17:13 76:11 barrel 14:1 base 10:5 based 17:3 72:9 basement 28:3 basic 4:16 basically 12:9 13:13 19:12 20:14,16 30:2			c 48:3,3,3 ca 83:25 call 22:2,3 26:25 27:4,4 34:21 35:10,11 36:9 39:25 43:20 46:17 49:6 61:23 71:24 72:1,4,4 72:5,21 77:12 called 15:8 20:25 22:24 25:25 26:1 27:6,11 34:22 59:15

canada 77:6,7 canister 39:20 39:25 cap 51:6 55:6,8 55:10 61:17,19 61:21 72:13,14 caps 73:9,12,14 car 13:23,25 19:20 20:2,4 22:16,19 38:11 careful 47:12 cars 13:11,16 14:25 19:10 39:18 cartridge 40:7 40:8,16 46:17 58:20,23 71:16 71:17,21 72:24 73:3,7,8 case 1:2 17:3 26:3,5 31:22 35:18 40:11 54:3 83:6 84:3 85:3 cass 13:5,10,12 14:3 causes 67:19,25 70:8,14 causing 68:14 cellphone 8:17 center 32:10,12 49:3,3,8,16,23 50:2,11,16,17 50:21,24 51:1	51:5 52:5,10 52:14,14,18 53:7,9 59:24 centered 50:24 51:6,11,12 52:16 certificate 85:11 certification 84:1 85:1 certify 81:5,21 champion 1:4 2:3 83:6 84:3 85:3 change 37:23 44:4 46:3,4,15 46:15,25 64:4 83:14,15 85:8 86:3 changed 13:18 36:19 changes 57:7 83:13 84:7 85:7,9 changing 37:6 channel 5:23 57:3 charge 80:16 80:17 charging 79:17 charter.net 83:5 charter.net. 80:20	check 63:15 checking 29:15 chemical 14:6 14:11,12 16:20 cherries 51:12 51:15 cherry 51:9,11 chicago 2:12 33:6 62:13 choice 26:24 59:7 circumference 74:2,4 city 3:25 civil 1:20 84:5 85:5 claim 54:17 63:7,14 64:1 65:10 66:4,10 66:17,20 claims 15:23 63:4,6 74:6,9 77:12 clarify 6:5 25:2 79:16 classic 19:10 classified 11:19 clause 63:17 clean 35:5 45:7 45:19 46:1,2,7 46:18,19,24 47:15,17 cleaners 14:7	clear 4:17 cleveland 83:2 client 80:1 cline 5:20 43:9 58:24 60:17,21 61:5 68:5 70:4 cline's 43:6 55:24 61:11 clockwise 62:4 62:8 closed 18:4 clutch 13:19 college 13:13 14:17 15:17 colorblind 48:20 colored 54:18 colors 48:23 column 52:12 52:12 63:16 66:11 73:1 combine 59:12 60:7 61:5,10 combining 60:20 come 6:25 11:24 15:9 24:24 34:5,7 35:3,9 comes 11:5 34:16 35:2 38:22,24 80:15 80:18
--	--	---	---

commence 1:19 81:12 commission 82:7,8 84:19 85:25 86:25 committee 78:5 common 22:10 23:7 company 14:14 compartments 59:18 complete 5:3 component 20:21,22 21:4 24:11 25:24 components 20:21 21:8 computer 8:2 8:15 16:22 28:4 conceivable 22:20 conceivably 45:9 concludes 23:18 configuration 32:25 77:23 configured 30:10 connected 35:17,19 44:22 connecting 25:14	consider 6:21 construction 73:10 consult 6:3 consulting 12:8 12:9,12,15 contentions 5:25 7:11 continuation 23:15 continue 23:4 continuing 10:6 contractor 9:25 10:2 cooperation 77:17 copies 8:9 copy 26:1 corporate 15:20 correct 19:25 20:5 21:16 27:9,11 32:13 33:23 37:7 44:7,9 45:2,7 48:6 49:11 54:15,22,24 57:8 58:24 59:2 64:15 65:12 69:14 71:2 74:14 corrections 83:13 85:17	cosmetic 19:14 costly 17:16 counsel 3:2,4 3:19 27:13 31:12,15 81:20 counterclock... 62:3,9 country 15:22 county 1:17,18 81:2,4,11 84:10 85:15 court 84:7 cover 25:23 covered 61:2 crain 2:10 3:20 creative 42:21 cross 29:9 32:6 71:15,16 crowded 59:19 crr 1:17 81:3 cst 1:20 current 10:9 currently 3:25 9:18 10:22 12:11 20:4 curriculum 13:12,14 cv 4:8 17:6 cybersecurities 10:13 cybersecurity 10:19 cylinder 30:10	cylindrical 30:9 d d 2:10 75:17 date 83:8 84:3 84:9,19 85:3 85:13,25 86:20 86:25 day 1:19 9:7 81:12 82:2 84:16 85:22 86:22 days 80:7 83:19 de227 73:25 74:7,12,19 dealerships 15:24 dear 83:9 decades 59:10 60:3 december 1:19 7:18 81:12 82:3 83:4 dechert 16:5 declaration 2:22 5:19 18:13 23:2 26:11 28:16,20 29:6 30:17 33:13 34:25 42:17 47:19 55:17 61:3 62:20 64:5
---	--	---	--

67:2 70:20 73:23 deed 84:14 85:20 deemed 83:20 defense 9:25 definitely 60:2 80:17 degree 14:5 16:20,24 delray 13:3 demonstrating 24:21 department 14:13 83:23 dependent 46:3 depending 21:5 21:23,23 23:9 60:4 70:18 depends 20:12 20:23 37:19 46:22 56:22 depicted 35:21 36:2 67:11 deponent 80:22 deposition 1:12 1:16 2:21 4:5 4:18 7:20 8:21 18:16 24:24 51:20 81:18 83:8,10 84:1,3 85:1,3 depositions 4:11,15,15 8:4	deschamps 5:20 describe 5:5 described 25:24 26:23 40:24,25 41:22 43:2 53:24 71:23 describes 41:2 54:9 73:25 describing 39:22,23 description 27:2,8,17 descriptions 60:7 design 10:22 12:10 20:11 43:13 59:7,13 59:20,21,21 despite 4:14 detailed 78:15 detroit 13:2,6 development 14:19 developments 14:18 device 22:15 24:8 29:10,12 33:21 36:10,11 56:4,7 60:14 diameter 51:2 diesel 11:12	differences 19:15 different 10:11 11:18 14:18 19:15 20:20 21:7,8,22 22:21 23:8 29:6 39:18 40:7 dingy 46:20 direct 2:17 3:17 10:4 direction 20:4 81:15 dirty 34:16 35:2 45:6,9 57:10,11,12 disassembly 59:21 60:5 disc 29:25 30:11,12 discloses 70:6 disclosures 76:9 77:20 78:16 discuss 61:4 discussed 7:5 discussing 21:2 61:9 discussion 59:11 disinterested 81:21	distinction 74:11 disturb 5:10 document 18:12,18,25 documents 5:15,18 7:3,7 8:8,22 dogs 5:9 doing 17:14 76:15 double 63:15 doughnut 13:21 downstairs 31:21 draft 26:21 drain 38:9,12 38:19,20,25 39:1,2,2,4,14 39:15 41:7,22 43:3,5,6,8,12 43:14,17 45:12 47:1 56:13,15 56:17,20,22 57:3,9,12,14 59:23 60:24 61:11 drainage 60:3 drained 37:9 37:12 38:5 draining 55:24 drains 41:25
---	--	--	---

draw 43:1 drawing 21:1 21:11,24 22:4 22:7,17,19,22 drawings 20:11 20:22,22 26:17 26:18,22 driver 14:21 driver's 21:20 21:20,25 22:7 driving 20:2 dry 14:7 dues 17:20 dynamics 9:25 16:14	65:4 eccentrically 57:13 economy 16:11 edge 51:8 education 12:24 16:18 either 11:14 15:25 46:10 56:11,15 57:13 60:18 62:7 79:21 81:23,25 electrical 11:1 16:21,22 electromecha... 11:7 electronic 11:1 electronically 8:4 18:23 element 30:7 32:18 36:24 40:20 44:15,19 44:20,24,25 48:1,5,6,8,13 54:1 55:14 56:4 61:14,15 62:11 63:11,22 64:15,22 65:4 72:6,16,17 elements 29:21 30:17 32:2 49:15 68:17 email 5:21 6:3 6:19,20 7:4	83:17 embodiment 53:24 73:6,8 emmanuel 2:4 7:15 employ 42:22 43:6 81:24 employed 9:18 9:22 employee 10:4 employer 9:20 enclosed 83:10 ended 76:24 engage 70:13 engaged 53:15 54:11,13 engagement 63:11,22 64:22 65:3 68:13 engages 70:7 engine 10:14 13:20 14:22 19:15 23:10 36:13 59:18 77:21,23 78:17 engineer 10:17 59:14 engineering 14:6,11,12 15:7 16:21,22 17:4 59:15 engines 11:10 23:8	english 81:15 entered 85:9 entire 20:13 21:18 24:8 25:2 33:21 37:21 43:20 48:8,10,25 54:22 63:17 84:5 85:5 entirely 37:24 entitled 18:12 environmental 42:9 equipment 60:1 equivalent 47:17 errata 83:13,16 83:19 85:7,10 85:18 86:1 especially 10:12 essentially 74:5 est 1:19 81:13 estimate 4:7 estimates 9:15 et 83:6 84:3 85:3 evaluation 78:5 event 81:24 everybody 32:20 33:7 78:3
e			
e 48:3,3 earlier 19:2 56:8 ease 60:4,5 easy 4:4 57:4 57:25 58:18 60:9 eccentric 47:25 48:1,2,6,13,16 48:18 49:1,4,5 49:6,7,13 50:22 54:16 55:11,13,24 56:3 58:8 59:1 59:5,23 60:14 61:11,14 63:12 63:23 64:22			

exact 37:4 exam 17:7,21 examination 1:16 2:15,17 3:17 examined 3:14 example 11:2,9 11:17 12:1 21:10 22:9 27:21 36:16 46:4 49:19 51:8 53:24 54:3 70:5 71:23 exams 17:14 excluding 7:4 excuse 32:23 executed 85:10 execution 84:14 85:19 exemplary 75:1 exhaust 13:22 exhibit 2:21,22 2:23 17:25 18:2,12,16 51:18,20,22 exhibits 2:20 8:3,6 experience 4:14 17:5 expert 15:21 expiration 84:19 85:25 86:25	expires 82:8 explain 5:22 expressly 83:11 extend 38:1 71:4,9 72:10 extending 61:15 73:11 extends 20:16 20:17,18 f fact 7:15 28:3 58:3 62:2 78:20 fair 20:7 fake 11:23 fall 37:18 familiar 8:3 18:18 39:20 fantastic 79:11 far 9:3 fastback 14:2 fastener 42:1 fasteners 47:12 father's 14:7 fault 79:14 federal 1:20 figure 29:2,9 29:11,11,17 30:15 35:16 47:3 51:25 52:19,19,25 57:18,23 58:15 58:21,24 59:1	59:4,25 67:11 69:8,8,9,10 70:23 71:13,14 71:15 73:3,5 figures 30:6 71:10,11,19 file 79:23 filed 75:19 fill 39:16 filled 37:6,22 37:25 filter 23:5,20 24:2,4,7,8,8,16 25:3,8,14,20,20 25:21 26:6 29:10,12,21 30:7,8 31:21 32:14,18,24 33:1,21,25 34:3,15,18,20 34:21,24 36:8 36:8,10,10,13 36:17,19 38:11 39:6,8,11,13,20 39:23,24 40:1 40:7,8,11,13 44:4,15,19,20 44:20 46:13,14 46:16,17,23 49:17 52:10,15 54:1 58:20,23 61:10 62:11,25 63:1,2,12,13,24 63:24 64:6,7	64:10,23,24 65:5,6,8,8,10 65:11,13,14,15 65:17,18,19,21 66:2,3,4,5,6,7 66:12,13,15,16 66:18,19,22,23 67:10 68:7,10 68:11 69:13,16 71:8,16,17,21 72:6,15,15,16 72:24 73:3,6,8 73:10,13 74:3 74:4 filtered 34:17 filtering 46:5,6 filters 11:11,14 11:15 13:20 23:7 27:22 38:8,10,20 39:18 filtration 14:24 final 5:24 find 53:22 69:2 83:10 fine 6:13 9:15 11:24 79:5,8 80:1,15 finger 51:4 fingers 71:22 71:22 72:5,10 finish 4:22 27:14 31:16 69:17
--	---	--	---

finished 40:5 firm 12:21 76:25 first 1:4 2:3,5 3:12 4:18 14:5 14:10 16:20 26:21 39:2 56:25 68:20 69:3,6 70:6,7 73:9,11 74:1 fit 42:5 fits 55:8 57:17 five 75:4 flew 15:22 flexibility 7:22 flip 25:8,23 26:6 31:7,23 32:14 34:2 57:23 58:17 59:3 flipped 25:16 25:20 26:5 28:3 32:17 57:1 flow 35:21,25 36:3 57:8 flowing 36:1,14 flows 34:4,18 fluid 35:8,21,25 37:7,9,11,16 38:6 42:12,12 45:1,6,7,9,18 45:20 46:6 53:16,19 57:8	57:11 fluid's 36:1 fluids 36:3 folder 18:2 follow 58:1 followed 26:22 following 26:11 28:15 30:16 49:21 follows 3:15 fool 11:18 ford 14:14,15 14:16,21 15:1 15:8,10,13,16 15:19 16:4,4 76:4 foregoing 81:9 84:13 85:18 forget 39:15 formed 54:6 forward 8:6 48:4 78:6,11 78:12 83:16 four 9:7 14:1 46:21 fourth 23:22 77:10 fraction 49:24 freaking 27:23 free 84:14 85:20 frees 72:2 frequently 60:10	friday 7:19 9:12 front 5:15 6:23 7:3,7 18:19 19:5,16,23,24 20:3,8,16 26:14,14,24,25 27:5,11,12 28:10,10 29:18 29:19 30:24,24 fuel 11:12 35:11,16,17,18 35:19 full 3:22 12:5 14:3 36:16 funny 41:11 further 35:16 67:19,25 70:14 78:23,25 80:22 81:21	getting 41:21 78:7 give 4:22 5:2 17:3,25 50:12 51:18 giving 17:2 glance 30:23 glue 13:21 gm 78:22 go 5:11 9:8 13:3,8 15:24 22:15 31:12 33:2,8,12 34:20 39:5,10 40:4 47:10 49:19 56:25 61:7 78:4,6,6,9 78:10,12 goes 32:8 34:17 going 4:16 8:6 9:16 16:10 17:20,25 22:15 22:18 23:5 24:24 26:1 37:22 42:8,9 43:4,8 45:1,17 48:4 51:18 60:1 66:25 80:2,13 good 12:23 13:9 71:13 72:19 gotten 51:14
		g	
		gandel 1:17 81:3 82:6 garage 19:9 gasket 41:16 gaskets 13:21 gbc.law 2:12,13 general 9:24 15:6 16:13 61:1 75:25 generally 18:18 75:13	

government 76:7 grab 47:12 grades 13:9 graduate 14:17 gravity 36:2 great 5:6 greater 54:6 green 48:11 55:5 greer 2:10 3:20 grew 13:2 grid 20:13,14 21:2 groove 53:16 53:19 62:10 ground 60:20 grounds 14:20 74:19 group 1:4 2:3 guess 19:16 39:25 43:15 44:11 45:16 49:6 55:9 61:1 64:4,5,12 66:25 70:17 75:2 gunk 45:25 46:10,12,14 gunky 37:19 guys 80:16	h hairs 64:13 half 9:5 26:3 35:18 46:7 54:3 hancock 1:17 81:2,4 hand 24:21 82:2 handwritten 7:8 happen 7:21 36:22 37:10,16 happened 77:8 happens 45:12 49:2 59:13,17 61:20 hard 7:25 17:13 hazard 42:9 head 24:15 hearing 72:19 help 27:1,2,7 helped 27:17 helps 62:6 hengst 1:7,18 2:8 3:21 81:10 83:6 84:3 85:3 hereunto 82:1 high 13:5,15 hired 10:3 history 16:15	hold 9:16 38:22 44:13 68:16 69:2 71:10,11 holding 29:1 hole 32:10,12 33:3 41:7 home 16:12 honermann 5:20 66:21,24 68:15,24 70:4 70:6 71:1,5,14 72:11 hood 59:19 hopefully 5:10 hose 57:5 hour 9:16 hours 9:3,5,7 12:17 house 5:6 16:13 housing 25:13 25:14 34:18 53:8 63:1,2,13 63:24 64:7,24 65:6,9,11,14,17 65:18,20 66:2 66:5,7,13,16,19 66:23 67:11 68:4 69:13,16 74:3 hudson 1:17 81:3 82:6 huh 61:13 hypothetical 56:25	hypothetically 44:1
			i i.e. 70:7 identical 28:10 29:19 30:17 32:2 33:22,24 34:1 66:14 identification 18:17 51:21 identified 29:18 47:23 48:5 49:10 il 2:12 illustrate 73:6 image 26:10 28:9,15,18,22 28:24,25 29:5 40:13,19 43:18 47:22 48:17 50:8 54:18 61:12 70:23 images 25:5 impacts 36:2 imploded 16:11 important 74:8 incline 62:4 64:25 68:8 70:19 74:2 inclined 52:8 63:8,19 64:19 70:8

included 83:14 includes 10:13 25:13 73:9 including 11:11 incorporated 85:12 index 2:15,20 indiana 1:17 81:1,5 82:7 indicating 24:5 38:16 56:21 83:14 individual 21:3 industry 10:16 20:7,10 27:21 59:9,13 77:18 inefficient 45:14 inference 42:25 inferences 42:21 inflow 35:17,17 infringement 5:24 7:11 inlet 34:5 inner 30:9 51:2 74:2 insert 24:8,9 25:20,21 26:6 32:14,18,24,24 33:1 36:19 44:4,12 46:11 49:17 52:10,15 63:1,12,24	64:6,10,23 65:5,8,11,13,15 65:19,21 66:5 66:6,12,15,18 66:22 68:14 71:8 74:4 insertable 23:20 inserted 25:21 33:1 inside 44:5 45:23 install 32:15 instructed 6:18 intellectual 16:6 intended 36:19 inter 18:14 interested 81:23 interfaces 11:7 interject 31:13 intern 15:16 international 77:4 interrupt 31:14 52:20 introduce 17:25 invalidity 74:20 invention 76:2 76:9 77:20 78:16,21	inventor 75:9 75:21,23 76:4 76:10,10 inventors 78:9 invoice 80:11 80:18 involved 11:8 11:16 15:25 ip 34:12,14,15 34:16 35:17 ipr 79:22 ipr2024-00603 1:2 issues 16:1 39:16 43:4,10 it'll 21:1 59:6 item 80:13	kinds 11:16 14:18 74:25 kink 55:7,8,11 know 4:19 6:19 8:1,10 10:16 11:1,2,10,11,14 11:15,21 13:1 13:16,17,20 14:8,18 15:13 15:14,14 16:11 16:14 17:13,15 19:8,10 20:18 21:5,9,19,25 22:4 24:13 27:4,5,6,23 30:19,25 31:6 31:7 32:21 34:23 35:11 40:1,23,24 41:20,21,23 43:8 45:11,22 46:3,15,25 48:24 49:5 52:13,16 57:23 58:3 59:7 60:18 64:4 69:15 75:22 76:23,24 77:2 77:4,13 78:17 79:11,13,15 80:16 knowledge 74:22
		j	
		j 2:9,17 3:18 january 5:22 job 12:5,18 14:14 75:23 79:21 jump 12:23 18:6 62:14 jumping 18:20	
		k	
		k 10:12 kind 7:25 17:16 26:25 27:24 62:2 71:19 76:6	

known 55:25 60:2	legs 4:21 72:2,2 72:4,5,9	lock 38:2 70:17	38:14 48:3
l	length 60:6	locked 70:12	59:18,22 75:22
l 4:1 22:3	letter 83:20	locking 54:4,7	76:8,20 77:20
label 51:12	level 14:21	long 4:20 9:1	78:13,16,18
labeled 26:15	liability 16:1	9:22 16:9	love 19:9
laboratories	limitation	17:11	loved 13:11,25
1:4 2:3 83:6	54:17 66:10	look 9:8 15:24	14:25
84:3 85:3	70:5	20:11 23:25	lower 29:25
lamps 11:22	limited 25:12	25:4,5 26:1	30:1,12,13
large 81:5	line 23:22	27:20 28:15	31:1,4,19 32:5
larger 49:9	33:17 38:6	29:7 30:20,23	40:10 57:2
late 9:4	42:19 49:24	34:8,11,23	lph 11:12
lattice 30:10	52:12,12 63:16	38:8,10 41:11	lu 2:4 3:6,7,7
law 12:21	66:11 67:18,24	42:4 51:3	6:2,11,14,17
16:24 76:25	80:13 83:14	53:23 55:2	9:1 27:13
lawsuits 16:1	85:7 86:3	56:10 57:18,20	28:12 30:18
lawyers 16:3	lisa 77:12	59:8 66:11	31:12 32:3
77:25	listed 85:7,17	69:8 71:13,13	36:4 45:15
layout 21:1	listing 85:7	73:1 79:11	74:16 78:25
22:2,3,4,17	litigation 16:6	looked 6:20	79:3,8,16 80:8
lazy 76:6 77:25	little 16:7 19:14	40:24 52:23	80:11
leak 42:8 53:17	38:24 42:5	59:17 74:17	lyon 1:18 4:1
53:19 54:13	47:4,10 49:23	looking 8:11	81:11
leaked 42:10	51:9 55:11	9:11 11:6	m
leave 46:19,21	74:10 79:12	19:19 26:10	m 75:17
leaves 35:5	llc 1:4 2:3	28:9 29:17	madam 83:9
left 14:3,10	llp 2:4	30:15 32:6	made 24:9,10
16:4,4 20:17	located 1:18	40:19 48:17	24:14 73:5
21:22 62:8	49:16 57:2	50:8 61:12	84:7
legal 17:1,2	81:10	looks 32:8	madison 2:11
83:1 86:1	locating 70:18	40:21 48:18,19	make 4:17 8:10
	locations 21:13	lose 11:21 39:4	26:17 39:8
		lot 11:9 14:19	42:8 45:12
		14:20,22 15:24	

57:7 58:19 63:14 72:24 77:11 makes 80:3 management 16:2 59:15 manner 33:22 manual 14:1 march 82:8 mark 8:6 51:18 marked 18:12 marks 6:1 materials 6:23 matter 3:14 78:8 81:8,14 81:22 matured 75:20 mba 16:23 mean 6:7 8:1 12:7 17:18 19:14 22:13 23:24 24:7 26:18 27:3,4,5 27:6,18,20 31:13 32:7 33:2,24 34:7 34:23 35:11 37:19,20 38:19 41:15 42:4 43:2,5 45:16 45:20,22 46:15 48:24 50:1 52:15 55:2 57:10 59:8	64:4,12,12 66:14,21,24 68:23 69:6,15 70:17 74:12,22 74:24 77:13 78:14 79:11,13 meaning 20:8 means 5:23 meant 77:15 mechanical 10:22,24,25 11:6 75:16 78:18 mechanism 55:25 56:10,14 56:15,17,21,22 media 73:10,13 medium 23:21 30:8 34:21 44:21 46:5 meet 9:1 meetings 78:8 meets 54:17 member 17:12 76:11 mentioned 19:2 68:17 mess 42:8 messaging 8:14 met 8:22 9:3 michael 1:12 1:16 3:11,24 18:13 81:6 83:5 84:4,9	85:4,13 86:20 michigan 1:19 4:1 16:12,23 17:10 81:11 middle 13:6 50:5 midwest 83:18 86:1 military 10:11 78:17 millimeter 49:25 million 45:23 mind 12:24 18:20 23:1 51:25 52:25 72:18 73:20 mine 47:8 48:11,18 minor 74:10 minute 7:1 33:7 41:10,10 75:4 mischaracteri... 36:4 mitigate 11:25 mix 45:6 mixed 79:12 mnranian 80:20 83:5 molded 41:5,19 moment 18:1 51:19 mona 77:12	money 76:2 month 9:2 46:20 78:9 months 15:4 46:21 76:24 morning 9:13 motivated 55:24 61:10 motivation 60:7 61:4 motivations 59:12 motor 14:14 motors 15:6 76:1 mounted 23:9 mounting 25:15 mounts 14:23 47:8,9 movable 63:9 63:20 64:20 move 42:3 57:22,24 60:3 60:9 moved 15:19 moving 7:23 72:18 multiple 21:13 multistate 17:22 mustang 13:17 19:3
---	---	---	--

n	note 7:4 83:12	obvious 4:14	43:3,25 44:6
n 4:1 48:3	noted 80:21	56:24 70:5	44:18 48:24
name 3:19,22	notes 6:1 7:8	74:10	49:3 51:23
4:3,4 76:14,16	nothing's 36:14	oem 21:23	52:1 53:14
77:6 83:6 84:3	notice 1:20	offer 16:25	55:7,18 58:20
84:4,15 85:3,4	nranian 1:12	office 1:1 76:20	60:22 61:16
85:21	1:16 2:22 3:11	76:22 77:2,10	67:17 68:5,19
near 8:17	3:24 4:2,24	official 84:15	68:24 69:4,22
nearly 66:14	18:13 31:14	85:21	71:10,16 79:7
necessarily	75:9 81:6,18	oh 7:17 15:16	once 17:13,19
24:12 57:6,9	83:5 84:4,9	16:7,19 29:21	78:9
need 4:19 5:11	85:4,13 86:20	40:8 45:3	ones 7:12 77:4
34:11 74:24	number 1:2,3	68:24 69:9	77:19 78:11,20
79:4,20,21	6:8,9 18:15	75:25	op 34:12,15,15
80:6,9	41:3 49:20	ohio 83:2	34:17 35:19
nervous 42:5	52:17 54:6,7	oil 11:2,11,14	open 8:14 9:9
never 17:2	58:14 83:7,14	11:14,21 13:20	47:13,14
75:20 77:24	numbers 50:6	23:5,7 35:2,5	opened 51:4
new 39:13 57:8	52:3 85:7	36:13,16,17	opening 35:8
newly 72:9	numeral 53:5	37:7,22,25	47:25 48:18,25
nice 46:1,18	nut 21:11	38:1,8,9,10,20	49:1 63:12,23
nine 14:24 15:4	nuts 21:9,9	39:3,6,7,17,23	64:23 65:4
nolo 5:23	o	39:24 41:25,25	operate 33:22
nose 62:6,9	o 4:1 22:3	46:4	opined 68:3
63:8,19 64:19	33:20 55:23	okay 4:10,14	69:13
65:1 70:7 74:3	75:17,17	5:7 6:11,25	opinion 5:23
notarial 82:2	oakland 1:18	7:24 8:13 15:9	17:3 24:2 27:1
notary 1:17	81:11	16:16,19 17:6	41:4 48:25
81:3 82:7	oath 3:3 4:25	19:2,16 23:4	49:14 53:13
83:16,25 84:10	objection 28:12	24:11 25:19	56:2 60:13,23
84:18 85:15,23	30:18 32:3	28:21 29:13	67:14 69:21
86:23	36:4 45:15	30:2,5 33:15	70:4,16 74:13
	74:16	35:2 36:12	74:20
		38:8,16 42:18	

opinions 17:1,2 opposite 32:25 73:9 74:5,9 oral 1:16 orange 48:18 orangey 46:20 ordinary 24:2 31:6 41:8 42:22,25 43:7 43:16 56:2 60:8,23 orient 56:19,23 orientation 20:9,23 21:12 21:15 22:8,23 23:6,20 35:21 36:2 45:21 orientations 23:9 oriented 45:24 46:25 47:2 58:21 outer 74:4 outflow 35:12 35:19,19 outlet 34:6 outside 5:11 50:22 outskirts 13:2 overcome 76:21 own 12:8 13:19 20:23	owner 1:8,18 2:8 3:4,21 81:10 p p 33:20 55:23 p.m. 18:9,10 33:9,10 62:16 62:17 75:6,7 80:21 package 21:1 80:19 packaging 59:16 page 2:16,21 18:20,21 23:12 23:14,16 25:4 25:5 28:9,17 28:19 29:5,17 29:20 33:13 34:8,9,25 40:14 42:17 43:22 45:25 47:3,22 49:19 49:20 53:12 57:20 60:11 61:7,8,12 62:19 67:2,4 67:16,23 69:20 70:20 83:14 85:7 86:3 pages 61:3,4,9 pain 47:5	pan 38:23,25 39:3,5,9,12 41:25 panel 26:14,15 27:11,12 28:10 28:10 29:18,19 30:24,24 72:10 72:12,12,12 panels 26:24,25 27:5 paper 5:15 8:9 papers 72:18 paragraph 23:1,12,15 26:11 28:16,20 30:2,16,16 35:13 42:16 47:19 53:12,23 54:18 55:15 62:22 67:7,7 67:16,23,24 69:23 73:2,21 part 15:12,19 32:5 47:16 48:17 49:9 50:8,18 54:17 55:13 57:12,24 57:24 58:7,7 62:25 67:10 68:3 69:13,16 72:15,21,22 85:9 partes 18:14	partial 52:6,8 particular 20:11 49:4 50:18 52:17 parties 81:19 partners 76:15 party 81:23,25 pass 17:7 passed 17:10 passenger's 22:1 past 64:8 patent 1:1,1,3,8 1:18 2:8,23 3:4 3:21 5:25 6:7,8 6:10 16:25 17:11 18:15 26:18,23 51:22 53:1 63:4,6 74:9 75:20 76:2,6,11 77:17,25 78:5 81:10 patents 8:2 75:9,14 77:18 patience 55:20 patrick 2:9,17 3:18,19 pay 17:20 76:1 80:2 pct 77:15,16 pending 4:20 penetration 10:20
--	--	--	--

people 13:8 39:15 perfectly 5:13 performing 12:11 person 17:18 24:2 31:6 42:21,25 43:7 43:16 56:2 60:8,23 66:24 81:22 personally 84:11 85:15 petition 18:14 petitioner 3:8 petitioners 1:5 2:2 phone 83:3 phrase 63:4 64:1 pick 13:7 64:13 78:11 picture 23:25 25:9 34:24 41:13 pipe 35:17,19 50:13,13,15,19 50:20,23,24,25 51:2 piston 77:23 pitch 46:22 place 1:21 placed 21:6,9 21:13	places 47:8 plaintiffs 5:24 plane 52:8 63:8 63:19 64:19,25 70:8 74:2 planes 52:6,9 52:16 62:4 plant 15:17 plate 29:24,25 30:11,12 31:1 31:1,19,19 play 11:5 please 3:22,23 4:19,22 7:4 12:25 23:2 28:16 33:12 42:17 43:24 47:20 48:20 51:25 53:13 60:11 62:19,20 63:17 65:24 67:3,16 68:16 69:17,23 70:1 70:3,10,21 74:1 79:2 83:12 pleated 54:2,5 plug 38:9,12,21 39:1,3,4,14,15 41:24 43:3,5,6 43:8,12,14,17 47:2 59:23 plugged 41:18	point 38:1 41:21 50:23,25 pointed 58:13 pointing 50:2 50:14,19 51:7 pop 7:25 portion 45:2 48:7 50:13,13 50:15 53:15,16 54:15,16,24 portions 48:8 48:10,15 49:8 49:9 53:18 54:2,5 55:3,12 posed 77:23 posita 33:20 54:12 55:23 61:9 74:23 position 62:6 67:20 68:1 70:12,15 positions 62:9 possible 43:12 43:14 practice 12:9 pregnant 16:8 preparatory 13:13 prepare 8:20 presence 83:16 presented 18:16 51:20 pressure 11:21 35:22,24,25	42:5 pretty 43:13 77:9,12 78:15 previously 43:19 print 7:10 printed 7:11,12 printout 6:19 privileged 6:22 probably 4:8 8:7 9:2,4 11:19 12:17 56:14 79:14 problem 57:4 procedure 1:20 84:5 85:5 proceed 4:17 product 14:19 15:25 production 83:18,23 projection 72:3 properly 32:16 33:1 property 16:6 prosecuted 76:13 prospective 29:12 69:10 71:15 protrusion 68:19,20,21 70:6,13
--	--	--	---

protrusions 53:25 54:4,7 68:9 provided 54:1 54:2 proving 14:20 psmith 2:12 ptc 77:3,4,16 public 1:17 81:4 82:7 84:10,18 85:15 85:23 86:23 pulling 8:2 42:7 47:11 pursuant 1:20 put 22:21 24:14 24:17 26:21 32:15 39:1,5 39:13,14,15 40:11 46:18 55:7 56:3,9,15 56:20,21 57:1 57:12 58:4,12 58:17,21,23 59:4,22,24,25 62:1 68:11 76:16 puts 57:16,17 70:11	53:20 54:8 65:24 68:23 72:8 73:15,18 75:1,3 questions 2:17 3:18 78:23,25 quick 6:2 30:23 quickly 62:15 quincy 2:4 3:7 5:22 8:22,23 9:3 79:7 quincylu 2:6 quinn 2:4 7:15 quinnemman... 2:6 quite 51:17	reading 52:23 83:11,20 reads 62:24 real 47:12 really 13:9 55:21 61:21 62:2 76:3 realtime 80:4 80:12,15,17 rear 19:7,17,19 19:20 20:3,8 20:16 22:12,13 22:15,18,18,24 reason 5:2,14 24:18 27:3 28:2,5 49:4,6 83:15 85:8 86:3 recall 17:21 receipt 83:19 received 81:17 recently 4:12 recess 6:15 18:9 33:9 62:16 75:6 recognize 28:22 record 3:23 6:17 18:7 24:20 29:1 33:8 48:2 62:14 81:16 85:9	rectangle 58:9 58:11 red 58:7,8 refer 7:3 reference 53:5 74:24 83:7 84:2 85:2 referenced 84:11 85:15 references 73:5 74:25 referring 8:9 25:9 52:17 regarding 43:1 registration 76:3 78:21 rejections 76:21 77:13 relate 75:14 related 10:13 11:10 73:15 77:21 78:17,17 78:19,21 relating 3:13 77:18 relation 63:9 63:20 relative 63:2,13 63:24 64:6,24 65:5,8,11,14,17 65:18,20 66:2 66:5,7,13,15,19 66:22 72:3 81:22
q	r		
question 4:20 4:23 16:17 27:14 31:9,17	r 10:12 48:3 75:17,17 rag 45:19 46:1 46:2,7 47:15 ramps 68:8 raytheon 10:1 16:14 reach 60:1 read 30:3 63:17 64:9 65:23,25 66:24 69:25 74:1 79:1,6 84:5,6,12 85:5 85:6,17 readily 60:9		

release 59:14	request 85:9,11	31:2,18,20,22	64:10,23 65:5
relied 74:13	requested 3:2	32:11,20 33:7	65:8,11,13,15
relying 74:19	81:18	34:8,8,20,24	65:19,21 66:3
remember 7:17	require 54:14	35:6,7,7,13,14	66:4,12,15,18
7:19 14:13	required 83:25	36:7,8,8,11	66:22
15:5,11 77:22	reside 3:25	38:10,11,19,22	risk 10:12,12
remote 1:12,16	response 77:11	39:2,9,16 40:8	11:8,25 45:17
4:11,15	responses 77:3	40:11,17 41:13	risks 10:25
remotely 1:16	responsibilities	44:8,10,18,23	11:1,16
2:1 3:3,12 81:6	10:8	45:5,22 46:13	robotic 11:13
81:17	rest 9:10	46:16,22 47:5	role 10:9
removable 41:7	restored 13:18	47:7,13,15	room 5:5,6,8
remove 6:18,22	return 53:9	48:7,7,15,19	rotate 55:3,6
44:9,11,19	returned 83:19	49:12,24 50:1	65:5 67:19,25
removed 44:25	reverse 20:2	50:7,19,25	68:15 70:9,14
44:25	review 18:14	51:4,5,5,7,8,9	rotated 44:1
removing 42:6	83:12 84:1	51:17 52:7,15	56:7 63:1,5,6
render 70:5	85:1	52:18 53:2	64:2,3,6,11,14
renew 17:16	reviewed 8:22	54:9,23 55:3,4	66:22
repeat 4:16	79:18	55:7,8 56:10	rotates 64:15
rephrase 60:19	rid 8:18	56:12,14,19	65:16,18 66:2
71:7	ride 14:3	57:10,12,16,17	66:8 68:7,8,10
report 16:2	right 7:22	57:17 58:25	rotating 63:12
40:14 61:12	10:18 12:13,19	59:9 60:15	63:16,23 64:14
reported 81:14	13:6 15:22	61:22 62:5,21	64:23 65:7,10
reporter 3:2,6	17:14 18:8,19	65:1,2,17 66:7	65:13,20 66:4
29:14 79:1	18:23 19:2,4	68:7,9,19 71:3	66:6,12,15,18
80:4 84:7	19:18 20:1,6	71:11,18,20,20	68:11
represent 3:21	20:12,17 21:10	73:17,23 74:23	rotation 64:11
representative	21:20,22 22:13	77:3,5,11 78:3	65:2 70:11,19
15:20	22:13 24:9,10	78:6	roughly 4:7
represented	24:13,23 25:7	ring 24:13 49:9	15:18
81:19	25:10 26:2,7,8	54:18,22 55:2	route 35:12,18
	26:16 28:1,4	63:1,23 64:6	35:20

rpr 1:17 81:3 rules 1:20 4:16 84:5 85:5 running 36:13 rush 79:21	screen 8:2 screw 27:25 61:17,18,21,21 61:25 se 1:7,18 2:8 3:21 81:10 83:6 84:3 85:3 seal 37:15 54:22,25 82:2 82:6 84:15 85:21 seals 56:12 seat 21:19,20 21:20,25 22:1 22:7,9,11 seating 21:1 seattle 2:6 second 18:7 30:21 44:13 50:12 55:22 60:20 68:16,20 69:3,25 70:11 70:12,13 72:12 72:14,23 73:9 73:11 section 29:9 32:6 71:15,17 security 11:25 see 23:22 25:5 25:24 26:12 28:1,18,25 29:7 33:17 34:12 35:10 36:25 37:3	40:19 41:1 42:23 47:6,24 49:19 50:9,12 51:9 52:3 53:5 55:5,5,5 58:7,8 58:10,12,13,13 62:4,22 67:7 67:12,21 70:24 71:10,14,25 seen 38:14 45:23 56:23 sell 16:13 semester 13:14 14:13 send 79:3,4,8 80:11 sending 79:18 sense 80:3 sensors 10:14 11:4,10 sentence 23:18 33:16 55:22 62:22 67:12,18 70:10 74:1 sentences 70:1 separate 80:13 service 59:21 60:1,5 set 82:1 sets 68:8,9 shape 30:8,10 34:22 49:7 shaped 29:25 30:11,12 48:7	48:15 53:15,18 54:14,16 55:3 55:11 share 18:2 shared 8:3 sheet 83:13,15 83:16 85:7,10 85:18 86:1 shell 74:3 shipped 7:13 7:14,16 shop 13:15 show 22:18 28:4,13 31:20 32:5 35:6 41:23 42:1 71:20 showed 47:16 shown 25:9 29:5 30:6 35:16 40:13,25 45:25 47:2 56:4 59:24 62:3 73:8 83:17 shows 22:4 side 24:5 26:9 38:13 54:1,3 57:10 79:23 sign 79:1,6,25 83:15 signal 15:2 signature 18:22 79:4 81:17
s			
s 10:12 33:20 55:23 85:8,8 86:3 saith 80:22 saturday 9:13 saw 8:17 saying 31:5 45:16 56:18 64:17 65:22 68:21,22 79:15 says 7:17 29:8 29:9,11 30:25 31:18,19 34:12 35:13,15 48:12 48:17 49:20 52:7,11,11 53:8,21 63:16 65:13 66:4,21 70:19 73:2,4 scheduled 1:19 81:12 scholarship 13:3 14:4 school 13:5,8 13:15 science 13:12			

82:4 signed 84:13 85:18 signing 83:11 83:20 similar 21:2 43:10 simple 56:24 57:25 59:7 61:1 simply 60:24 sincerely 83:21 sir 7:6 8:12 18:19 19:1 23:17 33:14 52:22 53:4 55:18 83:9 situation 22:9 six 61:9 skill 24:3 31:6 42:22,25 43:7 43:16 56:3 60:8,24 skilled 41:8 sleep 12:16 slide 63:10,21 64:21 68:14 69:3,3 70:7,13 sliding 65:1,2 68:24,25 smith 2:9,17 3:4,18,19 4:3 6:5,6,12,25 7:2 18:6,11 24:20	24:23 25:1 28:8,14 29:15 29:16 31:3 32:1,9 33:6,11 36:15 46:9 62:13,18 65:23 66:1 74:18 75:4,8 78:23 80:9 softener 27:24 28:2 40:10,15 46:16 sold 13:23 soldiers 75:18 solutions 83:1 86:1 somebody 27:18 41:8 59:25 77:7 sooner 80:6,9 sorry 3:7 6:14 13:4 16:19 18:5 24:22 28:19 31:13 34:9,10 35:1 40:3 43:25,25 44:14 51:16 52:20 55:15,19 57:17 69:9 71:25 72:8,18 73:1 77:16,17 sounds 12:20 south 1:18 4:1 81:11	space 59:16 specialize 10:18 specific 21:15 25:25 specifically 30:22 64:3 74:23 specification 27:8 41:2 specifies 64:15 65:15 66:6 speed 14:1 spend 12:3,14 spent 9:10 spill 38:6 42:12 spin 55:10 spintronics 75:15 77:19 spoke 6:17 squiggly 49:23 ss 81:1 standing 19:19 start 13:1 started 9:24 13:9 15:1,15 16:13 starting 4:23 42:19 starts 23:15 33:16 67:18 state 1:17 3:22 3:25 14:4,5 23:18 33:19	67:9 81:1,4 82:7 84:10 85:15 statement 84:13,14 85:19 85:19 states 1:1 2:23 17:9 42:19 statutory 76:2 78:20 stay 43:18,18 48:22 stenographic... 81:14 step 70:19 steps 42:21 stipulate 3:9 stipulates 3:5 stipulation 3:2 stop 17:14 street 2:11 stretch 4:21 structure 25:9 29:4 30:7 40:19 43:1 48:10 49:10,13 50:15 53:7 54:20 75:17 structures 29:18 47:23 stuck 41:6 42:4 46:8 stuff 9:11 14:20 18:4 34:16,16
---	---	---	--

34:17 46:8 60:10 77:5 subscribed 84:10 85:14 86:21 suite 2:5,11 83:2 sullivan 2:4 summarizing 12:24 summer 15:16 summers 14:8 sunday 9:14 superior 83:1 supplier 15:3 support 18:13 supposed 7:21 sure 4:17 8:10 13:1 15:9 25:15 39:8 45:12 72:25 74:17 76:18 77:8 78:20 79:8 surface 69:3,4 70:7,13 surfaces 68:13 68:14,24,25 suspension 14:23 sworn 1:16 3:12 81:6 84:10,13 85:14 85:18 86:21	symbols 51:9 51:11 system 20:13 20:14 21:2,5 35:22,24 36:1 systems 10:11 10:14,14,19,22 10:24 11:3,3,6 11:7,12,12,13 11:15 14:22,23 14:23,24 60:4	taken 1:17 4:5 4:11 6:15 18:9 29:10 33:9 62:16 75:6 81:9 talk 11:20 18:24 22:11 26:24 60:6 talked 16:15 31:1 41:23 43:11,19 56:8 56:19 59:8,10 59:11 talking 6:4 20:12,20,21,24 20:25 21:3,17 21:18 22:6,11 26:19 29:20,22 40:1,9 44:16 45:21 47:25 48:12 51:6,14 54:21 63:7,18 64:16,25 73:22 74:7 tara 1:17 29:13 79:11,16 81:3 82:6 tech 13:10 14:3 technical 13:5 technology 75:13 tell 3:12 81:6 ten 33:7 35:18 78:1 80:6	tend 46:10 tense 64:8 term 30:20,23 64:2 terms 40:9 test 14:21 testified 3:14 testifying 4:25 testimony 5:3 36:5 81:17 84:6,7 85:6,9 85:12 testing 10:20 tests 17:19 texas 16:5 17:10 text 33:15 thank 4:2,10 5:7 8:13,19 9:15,17 10:7 12:2 16:16 17:6,24 27:15 29:3,15 30:14 31:17 33:5 34:11 35:2 37:5 40:18 44:17 47:21 50:7 51:24 52:2,24 53:11 55:1,18,20 57:21 62:21 63:25 69:19 73:19,24 74:8 79:13,14
	t t 22:3 33:20 40:21 41:13 48:3 55:23 table 59:3 take 4:19,21 6:2,11,12 17:19 24:3,12 24:14,16,18 27:18 28:4,5 33:2 34:14 36:7,10 38:25 39:7 42:3,20 45:8,19 46:1 46:24 47:4,10 47:10,14,15 49:18 56:18 58:2,4,5,11,20 58:22 61:21,24 61:24,25 62:5 62:6,14 75:4		

thereof 1:21 thin 30:9 thing 16:10 19:12 24:18 27:19,25 28:6 30:19 33:4 34:2,14 36:9 37:22 41:11,13 54:25 55:4,5 58:2 59:19 61:2,22 74:11 things 11:17,23 21:15 22:5 24:12 77:3 think 6:9 7:19 15:10 16:14,17 26:21 27:7 32:19 40:1 41:9 42:7 43:2 43:4,16,18 44:13 48:24 50:19 58:5 72:24 73:20 75:5 76:4,5,6 77:1,6,7,14 78:10 80:1 thinking 17:15 third 67:23 69:25 77:10 thirsty 51:14 thirty 83:19 thought 16:19 threaded 42:1	threads 37:1 38:2,2 41:12 41:14 42:2 three 9:5,6 14:1 50:3,4 53:25 54:2,10 55:13 throw 39:11,11 thumb 55:9 thursday 7:18 8:24 9:12 time 1:20 4:22 8:8 9:10 12:3,5 12:14 14:9 15:14 16:9 17:11 33:6 39:14 78:24 80:21 times 4:7 42:6 45:23 59:22 tip 37:20 38:23 today 5:3 18:24 today's 8:20 told 6:22 21:21 took 13:14 17:23 45:8 top 20:18 26:14 28:10 29:19 30:24 33:15 47:13,22 50:8 56:16,17,20 57:1,13,24 58:16 71:4,9 touch 73:18	tough 77:9 track 14:21 trademark 1:1 trainee 14:17 transcribed 81:15 84:7 transcript 24:25 79:17,20 79:22 80:2,5 80:14,19 81:16 83:10,12 84:5 84:12 85:5,11 85:17 transition 12:23 transmission 10:14 11:3 traveling 20:5 treaty 77:17 trial 1:1 tried 32:24 truck 15:6 true 81:16 truth 3:12,13 3:13 81:7,7,7 truthful 5:2 try 26:10 48:22 trying 16:8 57:9 tubes 25:13 tubular 73:10 turn 23:11,14 23:25 24:1,6 24:19 25:2	28:6 31:21 32:19,21,23 33:3 34:25 36:7,11,12 42:16 47:19 53:12 55:15 60:11 62:19 67:2,16 69:20 70:20 78:14 turning 23:1 43:19 51:25 52:25 62:8 73:20 twins 16:8,9 twist 47:13,14 two 5:9 9:5 15:7 25:5 47:22 50:1 52:8 70:19 75:12 type 11:25 17:18 21:4 23:6 27:25,25 39:24 40:7,8 40:13,15 41:16 45:17 47:1 77:12 types 39:18 typical 37:21 39:23 typically 12:17 20:17,18 21:21 37:8,24 38:9 38:18,20,25
--	--	--	--

79:3,21,22 typo 63:14	unscrewed 38:5 39:8	v	w
u	unscrewing 57:14	v 83:6 84:3 85:3	w 48:7,15 49:7 53:15,18 54:14 54:16 55:3,11
u 22:3 u.s. 6:8 9:21,23 10:2,9,23 12:4 18:15 uh 61:13 under 4:25 28:20 59:18 81:15 underneath 38:23 39:1,6,9 understand 4:24 5:13 18:24 33:21 54:12 60:9 66:25 67:1 76:19 77:14 understood 7:5 unfortunately 13:23 72:19 unit 25:22 united 1:1 2:23 university 14:4 unlocked 67:20 68:1 70:15 unscrew 36:23 36:24 37:2,4 37:10,11,15 38:13,18,21 39:4,7,10 44:7 47:4,5 55:6	upper 26:3,5 29:24,24 30:11 30:12 31:1,4 31:19,19 35:18 40:11 45:2 46:7 48:17 54:2 upside 23:21 25:16 28:3,6 33:22 34:2 36:11 40:21 43:20 44:1,24 45:2,3 56:7,11 urquhart 2:4 use 24:4,5 27:7 30:19,22 31:11 43:9,15,17 54:10,10,11,12 55:24 63:4 64:1 74:23,25 useable 73:7 used 12:22 13:21 22:2 23:7 27:9,10 48:3 54:22 78:4,4,5,8 using 31:4 usually 21:17 21:18 38:12 46:12,13,23	vacation 14:9 vague 28:12 30:18 32:3 45:15 74:16 valve 58:8 59:1 59:5,23 60:14 60:25 61:11 various 11:15 vehicle 10:11 10:19 20:13,19 21:6,14,18 22:5 vehicles 11:18 15:23,25 22:22 veritext 83:1,7 86:1 veritext.com. 83:18 view 29:4,6,10 69:10 70:4 71:15 viewing 20:9 virtually 8:23 visible 52:7,9 vs 1:6 vulnerability 10:21	wait 41:10,10 67:4 79:23 waiting 52:24 waived 83:12 83:20 wall 47:8,9 50:18,20,22,23 walled 30:9 want 8:18 10:2 14:15 15:9 19:8 23:11 39:25 42:14 43:9 46:7 49:5 50:12 52:20 56:13,14 57:14 64:12 76:1,7 79:10,13,19 80:14 wanted 7:20,24 44:4 77:24 wants 79:25 warning 11:22 warranty 15:23 warren 10:5 water 4:21 27:24 28:2 40:10,15 46:16

way 24:4,6,9,19 27:16 28:7 31:10,24 32:8 32:22,23 34:6 34:7 40:20 43:2 45:24 47:1 56:11,12 56:19,24 58:19 58:21,23 59:6 60:18 61:2 62:2,7,7,12 63:10,21 64:20 68:5 70:18 wayne 14:4,5 14:10 ways 4:16 11:25 26:23 56:23 60:15 we've 11:17,18 11:20,23 wednesday 8:24 80:10 week 7:19,21 7:23 8:25 9:6 9:12,14 12:3 12:14,17 weld 21:11 welding 13:16 went 13:3,5 15:2,6,10 16:5 west 2:11 whatsoever 17:1	whereof 82:1 white 46:19 whoop 39:10 wife 16:7 willing 80:2 winding 75:5 wish 13:24 witness 1:16,18 6:3,18,24 15:21 18:8 24:21,22 27:13 29:13 31:15 79:2,6,10,19,25 81:10 82:1 84:1,4,11 85:1 85:4,15 word 33:16 48:3 64:2 words 20:8 41:6 79:12 work 10:5 11:9 12:8,11 13:16 13:18,19,20 15:20 16:5 19:10 28:7 31:10,23 56:17 59:6 76:17 worked 10:1 14:7,12,17,22 15:1,3,7,12 20:10 27:20,22 59:9 workers 76:7	working 9:24 10:15 12:4,20 14:14 16:13 works 56:11 62:11 68:5 worried 64:7 wrench 47:5,11 wrist 62:8,8 written 1:20 wrote 5:21 75:22 76:5,9 x x 20:15,15 y y 4:1 20:15,16 22:3 75:17 yards 14:24 yeah 6:12 7:18 10:24 12:13 14:16 17:8,13 17:22 18:23 19:4,6,8,14,22 20:1 21:17 22:14,25 25:11 25:18 26:13 27:10,16 28:13 29:9 30:4 31:5 31:18 35:11 36:18 37:8,20 37:24,25 39:19 40:6,17 42:11 42:13 44:3,20 45:9,11 46:12	48:15,19 49:15 50:4,17,17 51:13 54:8,16 54:25 56:5 57:4 64:12 66:21 67:15 69:12,15,16,18 70:17 73:17,25 74:17,17 77:16 78:13,19,19 year 15:4 16:7 17:17,20 78:2 years 15:7,14 15:18 yellow 48:19 yep 40:22 42:15 56:1 59:3 70:25 yesterday 8:24 9:4,13 yokoyama 5:19 24:1,4,17 26:2 26:3 28:11 29:2,2 30:20 32:2,14 35:14 36:22 40:25 43:20 53:21,21 54:9 55:12 56:4,18 60:16 60:17,20 61:5 yokoyama's 56:10 61:10 young 12:20,22 13:24
--	---	--	--

z
z 20:15,17 zoom 8:1,23