

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

THERABODY, INC.,

Petitioner,

v.

HYPERICE IP SUBCO, LLC,

Patent Owner.

Case Nos. PGR2025-00013 and PGR2024-00053
U.S. Patent Nos. 11,938,082 and 11,857,482

DEPOSITION OF NATHAN MORRILL

Friday, November 21, 2025

10:15 a.m.

Reported By: Debra B. Farfan, RDR, CRR, CRC

CSR No. 11648

Job No.: 120757

1 DEPOSITION OF NATHAN MORRILL, held at the
2 offices of:

3
4 WOMBLE BOND DICKINSON,
5 655 N Central Avenue, Suite
6 2300, Glendale, California 91203

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10 Pursuant to notice, before Debra Bollman
11 Farfan, Certified Shorthand Reporter, in and for
12 the State of California.

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1 A P P E A R A N C E S

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1 P R O C E E D I N G S

2

3 [COURT REPORTER, DEBRA B. FARFAN, CSR
4 NUMBER 11648, INTRODUCTION PURSUANT TO
5 CALIFORNIA BUSINESS AND PROFESSIONS CODE
6 SECTION 8016(B)(1).]
7

8

9 MR. BERG: Brad Berg from O'Melveny & Myers
10 on behalf of petitioner, Therabody.

11 MR. KELLAR: Kyle Kellar from Womble Bond
12 Dickinson on behalf of patent owner.

13

14 Whereupon,

15

16 NATHAN MORRILL,
17 called as a witness, was duly sworn and testified
18 under penalty of perjury as follows:

19

20 CROSS-EXAMINATION
21 BY MR. BERG:

22 Q. Good morning, Mr. Morrill.

23 A. **Good morning.**

24 Q. Can you please state your full name for the
25 record.

26 A. **My name is Nathan Hendley Morrill.**

27 Q. And do you understand that you're under
28 oath today, Mr. Morrill?

1 **A. I do.**

2 Q. And this is the same oath that you'd be
3 under, for example, if you were testifying in a
4 court of law. You understand that, right?

5 **A. I do.**

6 Q. Have you been deposed before?

7 **A. I have been.**

8 Q. How many times?

9 **A. About a dozen.**

10 Q. So I assume you're familiar with kind of
11 the ground rules of a deposition, how a deposition
12 works. But just to make sure that things go
13 smoothly, I'll just go over a couple things
14 briefly, if that's okay.

15 **A. Okay.**

16 Q. So you understand today's deposition is
17 being recorded stenographically. So it's important
18 to give verbal answers rather than, for example,
19 nodding or shaking your head.

20 Do you understand that?

21 **A. I do.**

22 Q. And you know that your attorney may object
23 to a question, but you are still required to answer
24 that question, unless your attorney instructs you
25 not to?

1 **A. Yes.**

2 Q. If at any point I cut off your answer for
3 whatever reason, it's inadvertent. Please let me
4 know, and I'll let you finish your answer. And
5 I'll do my best not to talk over you in general.
6 And I would likewise ask that you do the same for
7 me.

8 Is that okay?

9 **A. Okay.**

10 Q. And if at any point today you realize an
11 answer you've given was incomplete or incorrect,
12 just let me know, and I'll give you an opportunity
13 to complete or correct your answer.

14 Do you understand?

15 **A. I understand.**

16 Q. And it's not an endurance test today. We
17 can take breaks. I'll try to take a break every
18 hour or so. But if at any point you need a break
19 or want a break, just let me know, and we can take
20 a break. I would just ask that if there's a
21 question pending, that you answer that question
22 before we take a break.

23 Does that sound okay?

24 **A. That should be fine.**

25 Q. Mr. Morrill, can you please state your home

1 address.

2 A. It's 2515 North 600 West in Lehi, Utah.

3 Q. And do you know where your work address is?

4 A. It's 111 West Canyon Crest Road in Alpine,
5 Utah.

6 Q. Is there any reason that you cannot give
7 truthful and accurate testimony today?

8 A. No, there's no reason for that.

9 Q. Do you understand that today you are
10 appearing in connection with two separate PGR
11 proceedings?

12 A. Yes.

13 Q. And those are PGR2024-53 and PGR2025-13?

14 A. Yes.

15 Q. Did you submit expert declarations in both
16 of those matters?

17 A. I did.

18 Q. I'm just going to hand you what's been
19 previously marked as Exhibit 2005 in the PGR2025-13
20 matter.

21 A. Okay.

22 Q. Do you recognize that document?
23 (Previously marked Deposition Exhibit No.
24 2005 was reviewed.)

25 A. I do.

1 Q. And what is that document?

2 A. That is the declaration I prepared in the
3 matter of PGR2025-00013.

4 Q. And that one's covering U.S. Patent Number
5 11,938,082, correct?

6 A. Yes.

7 Q. Will you understand if I refer to this
8 document as the '082 declaration?

9 A. I will understand it as that.

10 Q. Now, let me hand you what's been previously
11 marked as Exhibit 2005 in the PGR2024-00053
12 proceeding.

13 Do you recognize that document?
14 (Previously marked Deposition Exhibit No.
15 2005 was reviewed.)

16 A. I do.

17 Q. And what is that?

18 A. That is the declaration I prepared in
19 regards to PGR2024-00053.

20 Q. And this declaration's with respect to
21 U.S. Patent 11,857,482; is that correct?

22 A. That is correct.

23 Q. So if I refer to this as the '482
24 declaration, you'll understand that I'm referring
25 to this document?

1 **A. Yes.**

2 (Previously marked Deposition Exhibit No.
3 1001 was reviewed.)

4 Q. Now, just so you have them available, I
5 just want to go ahead and mark the patents in these
6 two matters.

7 So this one has been marked as Exhibit 1001
8 in the '482 PGR, which just for the record is the
9 PGR2024-00053.

10 And then -- and you recognize that
11 document, Mr. Morrill?

12 **A. Yes.**

13 Q. And what is that document?

14 **A. It's the 11,857,482 patent.**

15 Q. And if I refer to this as the '482 patent,
16 will you understand I'm referring to this document?

17 **A. Yes.**

18 Q. And I'm going to hand you what's been
19 marked as Exhibit 1001 in the '082 proceeding,
20 which is PGR2025-00013.

21 Do you recognize this document?

22 **A. I do.**

23 Q. And what is this document?

24 **A. It's the U.S. Patent 11,938,082.**

25 Q. Okay. If I refer to this as the '082

1 patent, you'll understand what I'm referring to?

2 A. I will.

3 Q. And, in general, if I refer to the '082
4 PGR, will you understand that I'm referring to the
5 PGR proceeding dealing with the '082 patent?

6 A. Yes.

7 Q. And similarly, if I refer to the '482 PGR,
8 you'll understand I'm referring to the PGR
9 proceeding dealing with the '482 patent, correct?

10 A. Yes.

11 Q. Since we're dealing with both of these
12 proceedings today, if you ever have a question
13 about which proceeding a question of mine pertains
14 to, please let me know, and I'll clarify that.
15 Okay?

16 A. Okay.

17 Q. Now, if I refer to a POSITA, do you
18 understand that I mean a person of ordinary skill
19 in the art?

20 A. I do.

21 Q. And do you understand that this deposition,
22 along with your declarations, form your formal
23 testimony in these two PGR matters?

24 A. I do.

25 Q. Now, under the U.S. Patent Office rules, do

1 you understand that you're not permitted to discuss
2 the substance of your testimony with counsel during
3 breaks?

4 **A. I do understand those.**

5 Q. Mr. Morrill, how did you prepare for your
6 deposition today?

7 **A. I read through my declarations. I met with**
8 **counsel yesterday, and we discussed the**
9 **declarations.**

10 Q. Did you do any internet searching in
11 preparation for your deposition today?

12 **A. I did look up musculature versus**
13 **musculature. We had -- my understanding is**
14 **masculature was a misspelling of musculature. And**
15 **counsel had thought it was an older term that had**
16 **been used, and we looked and verified that it is**
17 **typically a misspelling --**

18 Q. Okay.

19 **A. -- of musculature.**

20 Q. Do you recall what websites you looked at
21 to verify that information?

22 **A. Not off the top of my head. I just did a**
23 **quick search, and Google AI said it's a typical**
24 **misspelling.**

25 Q. So is your understanding today that

1 masculature refers to musculature?

2 **A. As was my opinion before as well.**

3 Q. Okay. Did you do any other web searches in
4 preparation for your deposition today?

5 **A. No.**

6 Q. How long did you --

7 **A. Oh. Oh, sorry. We were talking about**
8 **cylindrical in nature, and looking up cylindricity**
9 **also includes ovoid shapes as well as circular**
10 **shapes.**

11 Q. You said "oval" shapes?

12 **A. Yes.**

13 Q. Okay.

14 **A. Ovoid.**

15 Q. Ovoid, okay.

16 Aside from counsel, did you meet with
17 anyone else in preparation for your deposition
18 today?

19 **A. I did not.**

20 Q. Did you -- you mentioned your declarations
21 already. Did you review any other documents in
22 preparation for your deposition today?

23 **A. I did look at other documents that were**
24 **referenced within the declarations, but nothing**
25 **else besides that.**

1 (Previously marked Deposition Exhibit No.
2 2006 was reviewed.)

3 Q. Okay. I'm going to hand you what's
4 previously been marked as Exhibit 2006. And this
5 particular exhibit is from PGR2024-00053, but I'll
6 represent that an exhibit -- an identical exhibit
7 bearing the same number has also been submitted in
8 the other proceeding.

9 Do you recognize this document?

10 A. I do.

11 Q. What is this document?

12 A. This is my CV.

13 Q. Now, looking at your education here, you
14 got your bachelor's of science in mechanical
15 engineering from the University of Utah; is that
16 right?

17 A. That is correct.

18 Q. And when did you receive that degree?

19 A. In May of 2004.

20 Q. And after you completed your bachelor's of
21 mechanical engineering, did you do any other
22 schooling?

23 A. I've done continuing education and courses,
24 but I have not done any formal schooling beyond
25 that.

1 Q. Did you have any particular emphasis in
2 your mechanical engineering degree?

3 A. General mechanical engineering.

4 Q. Okay. You don't have any legal education,
5 do you?

6 A. I do not.

7 Q. Now, after you graduated from the
8 University of Utah, what was your -- what was your
9 next -- well, let me say it this way.

10 After you graduated with your degree in
11 mechanical engineering, did you begin to work
12 professionally as a mechanical engineer?

13 A. I did.

14 Q. And where did you begin your career as a
15 mechanical engineer?

16 A. I had been working as an intern for Alpine
17 Engineering & Design, and continued as a mechanical
18 engineer for them.

19 Q. And Alpine Engineering & Design is the same
20 Alpine Engineering & Design that you currently work
21 for?

22 A. Yes, it is.

23 Q. Have you worked for Alpine Engineering &
24 Design continuously since you graduated from the
25 University of Utah in 2004?

1 **A. I have.**

2 Q. Have you held any other positions in that
3 time?

4 **A. What do you mean by "other positions"?**

5 Q. Let me clarify that.

6 Have you worked for any other companies in
7 that time, since you graduated in 2004 until the
8 present?

9 **A. I have not.**

10 Q. What kinds of -- well, when you started at
11 Alpine Engineering, were there particular types of
12 projects that you worked on?

13 **A. Alpine Engineering & Design is a consulting**
14 **firm.**

15 Q. Okay.

16 **A. And we do various designs and analyses for**
17 **clients. So it would depend on what the clients**
18 **needed, on what projects I would work on.**

19 Q. Did you specialize in any particular type
20 of projects?

21 **A. I've done various different products for**
22 **different clients. And as my CV shows, that I've**
23 **had experience working with mobile equipment,**
24 **hydraulic equipment. We've designed shields.**
25 **We've designed protective equipment. We've**

1 designed commercial equipment as well as
2 professional equipment and equipment that's
3 designed for consumer use.

4 It really just depends on what the client
5 needs and how we accomplish it.

6 We like to do new product development if
7 possible, where someone comes to us with an idea
8 and we try to help them see how that is
9 accomplished and how to fulfill that.

10 But it will depend on what the client
11 needs.

12 Q. Now, looking at your consulting focus on
13 the second page of your CV, one of the categories
14 near the bottom of that list is consumer products.

15 Are there any particular types of consumer
16 products that you've worked on?

17 A. We've worked on exercise piece of
18 equipment, we've worked on recreational devices
19 that a client might sell as a consumer product,
20 sports-related equipment, handheld devices.

21 Q. Anything else?

22 A. Well, I would have to think on that to give
23 a full list. Again, I have 21 years as a
24 professional engineer and a lot of products that
25 have crossed my desk in that time.

1 Q. Fair enough. So you mentioned exercise
2 equipment. What types of exercise equipment have
3 you worked on in your time at Alpine Engineering?

4 A. We just recently received a patent for a
5 piece of exercise equipment that is a constant
6 motion device that allows for a client to -- or a
7 user to exert force against it to the max of --
8 maximum capacity that they can produce while it
9 continually moves.

10 Q. It's like an elliptical-type machine or
11 more --

12 A. A strength training machine.

13 Q. A strength training machine?

14 A. Yes.

15 Q. And is that one of the patents that you
16 have listed here on your CV?

17 A. It is not. It's one I recently received.

18 Q. Other than that patent, are there any other
19 patents that you're aware that are missing from
20 your CV?

21 A. That is the only one I'm aware of that's
22 missing from my CV at this time.

23 Q. But you were an inventor on that patent
24 that you just mentioned?

25 A. I was.

1 Q. And that exercise constant motion machine
2 that you mentioned, what size of machine is that?

3 A. That is a large piece of equipment that's
4 meant for professional gyms to be used. So roughly
5 eight foot by about eight foot.

6 Q. Have there been any other exercise projects
7 that you've worked on over the years?

8 A. There have been some. One I remember
9 actually never went to market, but it was designed
10 as a core strengthening device. Worked on climbing
11 walls and -- I'd have to go back and look at each
12 one.

13 Q. Fair. Fair enough. And you also mentioned
14 that you worked on sports equipment --

15 A. Yes.

16 Q. -- in your time at Alpine Engineering?
17 What are some examples of the types of
18 sports equipment you've worked on?

19 A. I've worked on designing golf club head
20 attachments for quick changing and sizing, where
21 people can get a feel for the head with the shaft,
22 just to determine what they wanted, how they want
23 it to feel.

24 I've also helped design with golf bags.
25 And we've worked on different products for

1 different consumers -- camping equipment, outdoor
2 equipment.

3 Q. The golf head attachment, how does -- how
4 does that work to attach the golf head to the
5 shaft?

6 A. There are some NDAs that are involved in
7 that, but it's basically a quick-connect system
8 between a golf head and the handle to be able to
9 try out different heads on different sized handles
10 so someone can determine if it's the size that they
11 want and if it has the right feel that they would
12 like.

13 Q. When you say "a quick-connect system," what
14 are you referring to?

15 A. A system that allows you to quickly attach
16 the golf head to the handle, and then quickly
17 disconnect it as well, so that you can try various
18 heads with various handles.

19 Q. And in a quick-connect system -- well, I
20 guess in this particular quick-connect system, are
21 you required to use a tool to connect the two
22 pieces, or is it done without a tool?

23 A. Most quick-connect systems just require by
24 hand. And that's what this requires as well.

25 Q. And is there any threading that connects

1 the two in that system?

2 A. I don't feel comfortable going down the
3 road of exactly how they operate, just due to the
4 NDAs that we have in place regarding quick-connect
5 systems.

6 Q. And are these publicly available products?

7 A. They are used by a specific company to sell
8 their golf heads and golf clubs, basically.

9 So it's at a facility where you would go to
10 purchase the golf clubs, and they do the
11 connections between the heads and the handles on
12 site, and then you decide which ones you want. And
13 then later on, they permanently attach the club to
14 the head, using a different system.

15 Q. Uh-huh, okay. And to be clear, you feel
16 like disclosing whether it's a threaded connection
17 or not would be a violation of your NDA?

18 A. Well, I don't want to get into exactly how
19 it's done.

20 Q. Right.

21 A. It's a proprietary system that they have.

22 Q. Right.

23 A. There are several different ones that we
24 developed for them. The closest I can say some is
25 probably similar to a bayonet-style connector, but

1 **that's not all of them.**

2 Q. Okay. And then you mentioned that you've
3 also worked on handheld devices.

4 A. **Yes.**

5 Q. Is that right?

6 What are some examples of handheld devices
7 that you've worked on?

8 A. **I had a client that wanted to create a**
9 **therapeutic device that they generated**
10 **electromagnetic fields. They needed a case**
11 **designed for that, and they came to us for that.**

12 Had another client that needed a sensor
13 built into a handheld device so that they could use
14 it in manufacturing.

15 Those are two that come to mind right off.

16 Q. Have you designed an entire handheld device
17 before, or mostly components that go into handheld
18 devices?

19 A. **Mostly components that go into the handheld**
20 **devices. But it depends on what the client needs.**
21 **If they want us to design the entire handheld**
22 **device, we can.**

23 Q. Have you ever in your professional career
24 worked on massage -- massage devices of any type?

25 A. **I know that we've looked into several**

1 different concepts. I have not worked on one
2 personally. I've used them before, but it's well
3 within the capacity of our company to do that, if
4 required.

5 Q. When you say it's well within the capacity
6 of your company to do that, I assume it's well
7 within your capacity to do that?

8 A. Yes.

9 Q. And what would bring that within your
10 capacity to work on it?

11 A. It would be a customer's need. If they had
12 a device that they wanted to develop, and they
13 asked me to work on that, I could do that for them,
14 yes.

15 Q. Would there be any --

16 A. Oh. Sorry. I forgot. There was a client
17 that wanted to do -- it's kind of massage related.
18 She had an acupressure system she wanted to develop
19 within a sock, and I helped work on that. But
20 that's been many years ago. So it leans towards
21 massage, but it is not quite massage.

22 Q. I understand.

23 None of the patents that you have relate to
24 any type of massager, right?

25 A. They do not.

1 Q. And none of the patents you have relate to
2 any kind of handheld device, correct?

3 A. These patents do not relate to handheld
4 devices, no.

5 Q. And none of these patents relate to
6 exercise equipment, apart from the patent that's
7 not listed, correct?

8 A. Correct.

9 Q. Have you ever published any papers or
10 articles in professional journals?

11 A. I have not.

12 Q. Have you ever published any articles in
13 non-professional journals?

14 A. I have not.

15 Q. During your entire career, approximately
16 how many times have you testified at trial in a
17 patent case?

18 A. I have not testified at trial in a patent
19 case before.

20 Q. Approximately how many times have you
21 served as an expert witness in a patent case?

22 A. I'd say probably about a dozen times.

23 Q. And you've also served as an expert witness
24 in personal injury cases; is that right?

25 A. I have.

1 Q. What types of personal injury cases have
2 you been involved with?

3 A. I've been involved with thrill rides. I've
4 been involved with heavy equipment, with trailers,
5 with exercise equipment.

6 I can't think of everything right off the
7 top of my head.

8 Q. Have you provided any testimony or
9 submitted a report in any litigation in the last
10 four years?

11 A. In the last four years? I've submitted
12 several reports in litigation.

13 Q. Does your declaration contain a listing of
14 those cases that you submitted reports or testimony
15 in?

16 A. I'd have to look again to see if I -- I
17 usually submit a list of the cases that I've
18 testified in.

19 Q. Okay. Have you ever been retained on
20 behalf of Therabody for any purpose?

21 A. I have not.

22 Q. Prior to this case, have you ever been
23 retained in a case adverse to Therabody?

24 A. Prior to this case, no.

25 Q. Have you ever failed to qualify as an

1 expert in whole or in part in District Court
2 litigation?

3 A. I have been limited in a couple cases.

4 One, I was not the testifying expert
5 regarding warnings, and they wanted me not to make
6 any comment about what was actually on the device.
7 In that same case, the judge made a ruling
8 regarding meeting the law or not meeting the law
9 according to a regulation that was out there. So I
10 was not allowed to testify on that.

11 I had another case where a new lawyer took
12 over just before the Daubert motion was addressed,
13 and he did not understand what my training was
14 involving forklifts and my experience with them.

15 And I had just recently re-received my
16 forklift training a couple weeks before my report
17 was due. And the other side pointed that out, and
18 I was supposed to clarify at deposition or in trial
19 testimony, but the case settled before that
20 actually occurred.

21 Q. Has your testimony ever been excluded from
22 trial under Daubert or for any other reason?

23 A. Only in those two instances.

24 Q. Talking about the '482 declaration, when
25 did you first start working on that declaration?

1 **A. I would have to look back at my records to**
2 **know exactly when I started working on that.**

3 Q. Do you recall approximately how long it
4 took you to write your '482 declaration?

5 **A. Not off the top of my head, no.**

6 Q. Who else contributed to the writing of that
7 declaration?

8 **A. I know that with counsel, we did send**
9 **drafts back and forth on the declaration.**

10 Q. Did you copy parts of your declaration from
11 other documents?

12 **A. I know that the two declarations do contain**
13 **copies of each other.**

14 Q. By "copies of each other," you mean
15 substantial portions are identical between the two?

16 **A. Yes.**

17 Q. Now, if we go to page 3 of your '482
18 declaration, in paragraphs 10 and 11, you list all
19 the documents you reviewed in connection with this
20 case, right?

21 **A. It does reference the documents that I**
22 **reviewed in this case, yes.**

23 Q. Are there any documents you considered or
24 upon which you relied in forming your opinions that
25 are not listed in this section?

1 **A. I can't think of any.**

2 Q. Did you review Hyperice's preliminary
3 patent owner response in this proceeding?

4 **A. Their response to this litigation? Or what**
5 **do you mean?**

6 Q. The response that they filed initially,
7 before the board made a decision to institute the
8 PGR in this proceeding?

9 **A. I believe I did.**

10 Q. And did you review the patent owner
11 response that was -- well, to which your
12 declaration was submitted as an exhibit?

13 **A. I believe I did.**

14 **Again, it says the table of exhibits are**
15 **provided with the Patent Owner's responses there at**
16 **the end of 10.**

17 Q. And so you take that as evidence that you
18 did review the patent owner's response?

19 **A. I've reviewed what was included with the**
20 **table of exhibits that were provided from the**
21 **patent owner's response.**

22 Q. Did you consider or rely on any
23 conversations with any individuals in forming your
24 opinions in this case?

25 **A. Again, I reviewed it, I looked it over.**

1 And based off of what I read, I formed my opinions
2 from what I reviewed.

3 Q. Did you talk to anyone at Hyperice in
4 connection with this case?

5 A. No, I did not.

6 I believe we talked with counsel once, just
7 discussing my being hired for this case, but that's
8 all I remember.

9 Q. So let's go to paragraph 60.

10 So in this section you lay out what your
11 understanding of a person of ordinary skill in the
12 art is in this case; is that right?

13 A. Yes.

14 Q. And in paragraph 65 -- well, sorry.

15 In paragraph 63 you state that: A person
16 of ordinary skill in the art as of July 1st, 2013,
17 would have had a degree in mechanical engineering
18 and/or industrial design, a working knowledge of
19 consumer product design, and human factors, and/or
20 at least three to five years' experience in
21 conceiving, designing, engineering or modifying
22 devices for human use and interaction.

23 Do you see that?

24 A. I do see that.

25 Q. When you say "a working knowledge of

1 consumer product design," what do you mean by that?

2 A. When you're designing a product for
3 consumers, you need to have an understanding of how
4 they're going to interact with the device, what
5 they're going to be using that device for, and what
6 level of skill they might have when they're using
7 that device.

8 Q. And what is a -- what qualifies as a device
9 for human use and interaction?

10 A. Any device that a human is actually going
11 to be using.

12 Most of the things that we design a human
13 is going to be interacting with in some way or
14 another, and you need to determine how they're
15 going to interact with it, what controls are in
16 place for them to use, how they are going to apply
17 the machine or the device that they're working
18 with, and make sure that it is designed for that
19 intended use.

20 Q. So, for example, a broom would be a device
21 for human use and interaction, right?

22 A. A broom would be a device for human use or
23 interaction.

24 Q. What about a forklift? Would a forklift be
25 a device for human use and interaction?

1 **A. It would be.**

2 Q. What about a roller coaster? Would a
3 roller coaster be a device for human interaction?

4 **A. It would be.**

5 Q. How about a basketball? Would a basketball
6 be a device for use -- for human use and
7 interaction?

8 **A. It is a device that someone does interact**
9 **with and use.**

10 Q. So if a person had a degree in mechanical
11 engineering and three to five years' experience in
12 designing any of those types of products, or any
13 other product for human use and interaction, they
14 would qualify as a person of skill in the art under
15 your definition?

16 **A. Again, it's going to depend on the device**
17 **and their knowledge of the interactions that are**
18 **applied. Any device that you're designing is going**
19 **to have certain effects on how it's used and what**
20 **is being done and how it responds with the human**
21 **body.**

22 **So having a knowledge based off of devices**
23 **that you might design and use as a person would**
24 **help you qualify to understand how to design a**
25 **device such as this.**

1 Q. So you would say a person of skill in the
2 art -- well, strike that.

3 Under your definition of a person of skill
4 in the art, someone would qualify as a person of
5 ordinary skill in the art for the '482 and '082
6 patents if they had a degree in mechanical
7 engineering and they had worked for three years on
8 designing brooms; is that right?

9 A. They would have an understanding of how the
10 broom needs to be used by the human, how that would
11 correspond to how their hands work with it, the
12 forces applied with it, and they would have an
13 understanding of designing how that reacts.

14 Q. And how would that understanding qualify
15 them as a person of ordinary skill in the art for
16 purposes of the '482 patent?

17 A. As purposes for the '482, having designed
18 equipment, it talks about modifying devices for
19 use. It's not talking about just a single device
20 doing one broom. It's talking about using and
21 designing devices or modifying devices for human
22 use. Not just maybe limiting themselves to only
23 one concept or one use throughout their tenure.

24 Q. So, for example, if I -- if someone
25 designed multiple brooms, then that would qualify

1 them, not if they just worked on a single broom?

2 A. You're talking about one single type of
3 device at that point, instead of multiple devices,
4 multiple uses and interactions.

5 Q. Sure. So if they designed a broom and a
6 dustpan, then that would be sufficient?

7 A. Again, they would probably need a little
8 broader experience in that to qualify.

9 But the idea is that they need to be able
10 to understand how to design for use with humans,
11 how to design for the engineering and the power
12 that would be within the devices, as well as how
13 the humans would interact with that.

14 Now, someone could come from designing a
15 broom into designing a massage gun or a percussive
16 massager, as is in this. But they would probably
17 need a little bit more trial and error to come to
18 the device in the end.

19 But they would have experience to at least
20 understand the basics of designing maybe the handle
21 structure, the support structure, and how the human
22 might interact with that. And then because they
23 don't necessarily have the experience of designing
24 a powered device, they would have to look a little
25 bit more into how to incorporate the motion and

1 provide that into it.

2 Q. And so, I guess, where in your definition
3 of a person of skill in the art do you provide
4 those limitations that you just described?

5 A. Well, as I mentioned, where it says
6 modifying devices for human use and interaction, it
7 says right there "devices," not device. So you
8 would need experience in designing for use and for
9 the intended purpose.

10 Q. You would agree with me that your statement
11 of this doesn't require any particular type of
12 device? For example, it doesn't require a power
13 device, right?

14 A. It does not specifically say "power device"
15 within that. It does -- as a mechanical engineer,
16 that is part of your training and understanding and
17 education, is mechanics as well as machines and
18 power sources.

19 Q. Now, you -- earlier, when we were looking
20 at the materials that you considered, you mentioned
21 that you reviewed Dr. Pratt's declaration, which
22 sets fourth his qualifications and experience.

23 Do you remember that?

24 A. Yes.

25 Q. Do you believe that Dr. Pratt would qualify

1 as a person of ordinary skill in the art under your
2 definition here?

3 **A. He has experience with a degree, he has**
4 **experience for making fasteners that are used by**
5 **humans, and he would qualify under that definition.**

6 Q. Now, in paragraph 65 you also discuss the
7 definition of a POSITA that Dr. Pratt put forward
8 in his declarations. Do you see that?

9 **A. I do.**

10 Q. And his definition, like yours, requires a
11 bachelor's degree in mechanical engineering or
12 related field. Do you see that?

13 **A. Yes.**

14 Q. And then he also requires two to three
15 years' experience in the research, design, and
16 development or testing of rotating or reciprocating
17 mechanisms. Do you see that?

18 **A. I do see that.**

19 Q. If the Patent Office were to adopt
20 Dr. Pratt's definition of a person of skill in the
21 art rather than your definition of a person of
22 skill in the art, would you qualify as a person of
23 ordinary skill in the art under that definition?

24 **A. For rotating and reciprocating mechanisms?**
25 **Yes, I would.**

1 Q. So what are some of the examples of
2 rotating and reciprocating mechanisms that you've
3 worked on?

4 A. I've designed multiple things that use
5 rotation, including saws, including reciprocation
6 with extendible booms, wenchers, landing gear, legs.
7 Tarping systems use rotation as well.

8 Q. What types of saws have you worked on?

9 A. I've designed brick saws.

10 Q. Meaning saws to cut bricks?

11 A. Yes.

12 Q. And how do those operate?

13 A. They have a motor that translates
14 rotational motion to a blade, and that, in turn,
15 cuts the brick as it's fed through on conveyer
16 systems.

17 Q. So that would be the motor is rotating and
18 the blade is also rotating; is that right?

19 A. That is true, yes.

20 Q. Do you have any experience with converting
21 rotation of a motor into linear motion?

22 A. Yes, I do.

23 Q. What are some examples of that experience?

24 A. As I mentioned, I have some patents
25 regarding tarping systems that have rotation motion

1 that also includes linear motion within that.

2 I've got to think of the different ones.

3 But we have designed multiple things where devices
4 rotate as well as linearly moved based off of the
5 rotation.

6 Q. When you say a tarping system, can you
7 describe a little bit more what you mean by that?

8 A. So I have a tarping system that will cover
9 a container for transport to prevent debris from
10 coming out of it. That has reciprocal -- or
11 rotating motion on it, and there are some
12 reciprocating devices built in that have linear
13 actuation within it for the locking mechanisms and
14 for how some of the parts move.

15 Q. So this is like a tarp to cover a load on a
16 truck or something; is that right?

17 A. That is one.

18 Now, also on the patent that's missing in
19 my CV, the exercise piece of equipment has
20 rotational motion that translates into linear
21 motion on cables and on rope. So that is then
22 reciprocating in and out based off of the
23 rotational motion of the motor.

24 Q. Now, the tarping system, is that like a
25 manually driven rotation, or is it a motor that

1 does the rotation in that?

2 **A. It's a hydraulic system.**

3 Q. Hydraulic system. And, I guess, can you
4 describe a little bit more the mechanism in the
5 exercise equipment that you have a patent on that
6 converts the rotation of the motor into a linear
7 motion?

8 **A. Basically what you have is you have a wench**
9 **system which has a cable that rotates around it**
10 **such that, as it rotates, the cable is drawn in and**
11 **out, creating reciprocation motion.**

12 Q. Okay. Now, are you familiar with the idea
13 of using, as part of the -- as part of the
14 translation from rotational motion to linear
15 motion, using a gearbox, for example?

16 **A. Very familiar with that, yes.**

17 Q. And how does that process work?

18 **A. So taking a gearbox to go from linear**
19 **motion -- or rotational motion into linear motion,**
20 **it's going to depend on how the gearbox is**
21 **designed. There are many different ways of doing**
22 **it. You'll typically have rotation with an arm out**
23 **away from the motor that then is directed into**
24 **either a piston or directed into an arm that then**
25 **drives the piston.**

1 And due to the rotational motion, you'll
2 either have what's called a yolk that goes around
3 it, or you'll have a push arm that's attached to it
4 that will then come in and out, which results in
5 reciprocating motion.

6 Q. Okay. Are you familiar with the concept of
7 using -- instead of using a gearbox, using a
8 direct-drive drive mechanism to translate that
9 rotational motion into linear motion?

10 A. I think I just described that, where you
11 have a direct drive, a pushing arm attached to the
12 rotation of it that will actually drive the piston
13 forward and back.

14 Q. Okay.

15 A. And I've worked on systems that use that.
16 I don't have a complete list of everything I've
17 designed, but understanding how that's done similar
18 to a crank shaft on even just a motor.

19 Q. So let's turn to paragraphs 57 and 58 of
20 your '482 declaration.

21 Here you offer what the plain and ordinary
22 meaning of the term percussive massager is,
23 correct?

24 A. Sorry, did you say paragraph 57 and 58, or
25 did you say page 57 and 58?

1 Q. Paragraph. I did the same thing. When I
2 could find myself, I was like: That's not right.

3 Yeah, paragraph 57 and 58.

4 A. Sorry.

5 Q. No problem.

6 So let me just re-ask my question now that
7 you're at the right spot.

8 So here in this section you offer your
9 opinion as to the plain and ordinary meaning of the
10 term "percussive massager," correct?

11 A. Yes.

12 Q. And in particular, at the end of
13 paragraph 57 you state: A POSITA would understand
14 that the plain and ordinary meaning of a percussive
15 massager is a device that provides a high-speed,
16 long stroke action to massage deep muscle tissue,
17 and most commonly is electromechanically driven.

18 Do you see that?

19 A. I see that, yes.

20 Q. So I'd like to talk about a few of these
21 pieces, but before I do, I'd like to talk about the
22 standard you applied in coming up with this
23 definition.

24 You say "A POSITA would understand that the
25 plain and ordinary meaning," and then you go on.

1 Do you see that?

2 A. Yes.

3 Q. And in Footnote 4 you say that you're
4 informed that the plain and ordinary meaning of the
5 claim term is the ordinary and customary meaning as
6 would be understood by a POSITA in the context of
7 the patent and its prosecution history.

8 Do you see that?

9 A. I do see that.

10 Q. In determining what the plain and ordinary
11 meaning of percussive massager is, what time period
12 did you consider?

13 A. Again, based off of the application time of
14 July 1st, 2013.

15 Q. So I noticed that you use the present
16 tense, a POSITA would understand, but your
17 testimony is that you're not applying what a POSITA
18 would understand today. You're applying what a
19 POSITA would have understood in 2013; is that
20 right?

21 A. My understanding is that I need to look at
22 it as would a POSITA from that time to understand
23 what a percussive massage would have.

24 And when we look at this, the patent
25 specifically points out that the device is designed

1 for deep muscle stimulation to increase muscle
2 metabolism and increase the lactic acid cycle and
3 relieve pain.

4 So part of it is creating that deep muscle
5 stimulation, and the term "percussive massager"
6 comes from that impact that occurs from the head.

7 Now, so my understanding is looking at what
8 a percussive massager could be interpreted as is
9 basically what is taught in there.

10 Q. So apart from the patent, which we'll get
11 to in a minute, did you consider any materials from
12 2013 or earlier in determining what the plain and
13 ordinary meaning of percussive massager was?

14 A. I looked at the patent, I looked at what
15 the patent was teaching, and I looked at the
16 language that was used in the claims to determine
17 what would be interpreted as a percussive massager,
18 as well as looking at the websites that were
19 referenced for other percussive massaging devices
20 listed earlier in the declaration.

21 Q. Now, those websites that you referenced,
22 were any of those from around the time of the
23 patent?

24 A. They were post the patent.

25 Q. They were what?

1 A. I believe they were post.

2 Q. Post?

3 A. Yes.

4 Q. Do you recall the time frame that those
5 articles were from?

6 A. I don't have that right in front of me.

7 Q. If I represented to you that none of them
8 were earlier than 2022, would you disagree with
9 that?

10 A. I'd have to look at that, but I can't agree
11 or disagree at this point.

12 Q. Is that consistent with your recollection?

13 A. Again, I'd have to look at the timestamps
14 and the dates that were published, but I recognize
15 that they were post.

16 Q. They were post. Did you look at any
17 materials that predated the patent?

18 A. I looked at some of the prior arts that was
19 listed and brought forth.

20 Q. Did you consider that in coming up with the
21 plain and ordinary meaning?

22 A. Again, some of the devices teach what would
23 be considered percussive massage in them. And I
24 believe Pivaroff actually talks about percussive
25 and concussive forces within that patent.

1 Q. You certainly don't cite to Pivaroff, for
2 example, in this section where you're describing
3 the plain and ordinary meaning of percussive
4 massage --

5 A. No, I --

6 Q. -- or percussive massager, right?

7 A. Sorry. No, I did not.

8 Q. I just ran out of breath, so --

9 A. Sorry. I thought you were done.

10 Q. No, no, no problem.

11 Did you look at any -- did you look for any
12 dictionaries, for example, that were published
13 before 2013 that talked about percussive massagers?

14 A. I did not look at a dictionary at that time
15 for that definition.

16 Q. Do you think a dictionary that had a
17 definition of percussive massager from around or
18 before 2013 would be relevant to the understanding
19 of a person of ordinary skill in the art at the
20 time of the invention?

21 A. It could help to understand that, looking
22 at what percussion is, and looking at what massage
23 is, and understanding that the two together create
24 percussive massages.

25 Q. If you found out that percussive massager

1 had a different definition in 2013 than the one you
2 applied, based on later sources, would that change
3 your opinion as to the meaning of the term in the
4 patent?

5 MR. KELLAR: Object to form.

6 THE WITNESS: I have not seen anything to
7 date that shows that.

8 BY MR. BERG:

9 Q. But if you did see something to date, you'd
10 want to consider that in your opinion?

11 MR. KELLAR: Same objection.

12 THE WITNESS: I would have to see that to
13 see if it would affect my opinion.

14 BY MR. BERG:

15 Q. So we looked at the Footnote 4 where you
16 talked about the plain and ordinary meaning and how
17 that's understood. You also provide some
18 additional information in paragraphs 15 and 16 of
19 your declaration, and paragraph 15 in particular.

20 Now, towards the end of paragraph 15, you
21 say: However, I also understand that the claims do
22 not stand alone and the plain and ordinary meaning
23 should be harmonized to the extent possible with
24 the patent specification and the prosecution
25 history of the patent.

1 Do you see that?

2 **A. I do see that.**

3 Q. And you testified that you looked at the
4 specification of the '482 patent in coming up with
5 your plain and ordinary meaning for percussive
6 massager, right?

7 **A. I did look at that.**

8 Q. And were you informed that with respect to
9 claim construction, the Federal Circuit has stated
10 that the specification is the single best guide to
11 the meaning of a disputed term?

12 MR. KELLAR: Object to form.

13 **THE WITNESS: My understanding is the**
14 **specification helps to understand what the claims**
15 **reference and helps to give body to what the claim**
16 **is teaching.**

17 BY MR. BERG:

18 Q. Let's go back to paragraph 57. So in your
19 definition here, there's a few components that I
20 want to talk about. The first is that it's a
21 device that provides a high-speed, long stroke
22 action to massage deep muscle tissue.

23 So just taking the first part of that, what
24 do you mean by high-speed?

25 **A. As we look at the patent, we talk about the**

1 fact that it reciprocates at a speed that will
2 allow for the deep muscle stimulation to occur.

3 Q. Where did that phrase "high-speed" come
4 from?

5 A. It came from my review of the different
6 documents within this case to look at what
7 constitute high speed for the patent.

8 So if we look at the actual claims
9 themselves in the '482 patent, it talks about --
10 let's see -- in 37: The percussive massager
11 claim 36, wherein the first speed and the second
12 speeds are each less than or equal to 3,600 strokes
13 per minute.

14 In 38 it talks about: The percussive
15 massager of claim 36, wherein the first speed and
16 the second speed are each greater than or equal to
17 600 strokes per minute.

18 And then in 39 it also talks about
19 predetermined speeds and ranges greater than 700
20 strokes per minute to less than 1,800 strokes per
21 minute.

22 Which are all high speed.

23 Q. So is the phrase "high speed" used in the
24 '482 patent?

25 A. I'd have to look to see if it specifically

1 says that. I don't remember if it specifically
2 calls out high speed, but it does talk about higher
3 RPMs, such as 600 RPM, like we said, and 3,600 RPM.

4 Q. Certainly none of the places that you cite
5 in this section use the words "high speed,"
6 correct?

7 A. They talk about an RPM that is considered
8 high speed.

9 Q. What citation to the '482 patent that you
10 have in this section refers to the RPMs?

11 A. Again, from my review, I just referenced
12 within the claims that talk about high speeds. But
13 here, my understanding comes from the review of
14 what a percussive massager is.

15 Earlier on -- let's see. Sorry.

16 Q. You're fine.

17 A. So when we go in and discuss percussive
18 massagers, I talk about my relative understanding
19 of what a percussive massager is. And from what
20 I've reviewed what a percussive massager is, it
21 typically talks about high speed, that it also has
22 high impact.

23 And then when we look at what is taught
24 within the patent, it's talking about the higher
25 speeds within the claims, such as I discussed, as

1 well as that it's there to create an impact that
2 will help relieve the pain or alleviate the lactic
3 acid buildup within the muscles, as is taught
4 within the patent there.

5 Q. So we'll come back to your -- what section
6 were you looking at there of your declaration?

7 A. Section 3.

8 Q. Okay, and what paragraph? Oh, paragraph 38
9 is where that starts?

10 A. Yes.

11 Q. Yeah, we'll come back to that in just a
12 second. But I want to go back to my question
13 because I don't think you actually answered my
14 question.

15 So in paragraph 57 and 58, where you
16 provided your claim construction for percussive
17 massager, you see that you cite to the '482 patent,
18 correct?

19 A. Yes.

20 Q. And I see two citations to the '482 patent:
21 column 1, lines 22 to 25 --

22 A. Yes.

23 Q. -- and column 7, lines 20 to 23.

24 Correct?

25 A. Yes.

1 Q. Do you see any other citations to the '482
2 specification or claims in this section?

3 A. That is all that I cited in that section,
4 yes.

5 Q. Now, my question is: Do the words "high
6 speed" appear in either of those two citations?

7 A. I don't remember right off the top of my
8 head.

9 I do not see them specifically saying
10 anything about speed at that point, no.

11 Q. And sitting here today, you're not aware of
12 anywhere in the '482 patent that uses the phrase
13 "high speed," correct?

14 A. I would have to re-read it just to verify.
15 I can't think of it off the top of my head.

16 Q. Now, you did mention some particular
17 strokes per minute that are in the claims. And
18 those are also in the specification. And I want to
19 just go ahead and look at those for a second.

20 So if you turn to column 3, starting at the
21 very bottom in line 67, and read through column 4,
22 line 3, it says: In some embodiments, the
23 operating speed of the massaging device is
24 generally between about 600 and 3,600 strokes per
25 minute.

1 Do you see that?

2 A. I do see that.

3 Q. Do you consider the 3,600 strokes per
4 minute to be high speed?

5 A. For this use, yes, I do.

6 Q. Do you consider 600 strokes per minute to
7 be high speed?

8 A. I do for this.

9 Q. Where would you draw the line when
10 something becomes no longer high speed? Is there a
11 particular strokes per minute that would no longer
12 be high speed in your opinion?

13 A. I haven't created a cutoff at this point
14 for high speed. But if we start looking towards,
15 say, the Mabuchi patent where it talks about
16 patting, that doesn't necessarily take something
17 that needs to be done at high speed, and would be
18 difficult to be done at high speed.

19 Q. But sitting here today, you don't know
20 where the line is between high speed and low speed
21 in terms of strokes per minute?

22 A. Right here we have a definition that they
23 have that is considered to be high speed within a
24 range of 600 strokes per minute to 3,600 strokes
25 per minute.

1 Q. When you say it "is considered to be," who
2 considers it to be that?

3 A. I consider that as a POSITA to be high
4 speed.

5 Q. Okay. Somewhere lower than 600 would be
6 not high speed anymore, correct?

7 A. I haven't created a range for that, but
8 somewhere below that, yes.

9 Q. For example, ten strokes per minute would
10 not be high speed?

11 A. That could be considered not high speed.

12 Q. Would you consider it in this context to be
13 not high speed?

14 A. That would be a stroke every six seconds,
15 so that would not be high speed in my consideration
16 of this.

17 Q. How about if it was 100 strokes per minute?
18 Would that be considered high speed in this context
19 in your opinion?

20 A. That's still faster than -- you're talking
21 about maybe less than a second. But it's still
22 fairly low speed.

23 Q. So that would not be considered high speed?

24 A. No.

25 Q. How about 300 strokes per minute?

1 A. You'd be starting to get to around five
2 taps per second at that, which would be approaching
3 higher speeds, yes.

4 Q. So for purposes of your construction where
5 it says high speed, would 300 strokes per minute
6 qualify as high speed?

7 A. It could qualify as high speed.

8 Q. How would you determine if it qualified as
9 high speed?

10 A. Again, it's going to depend on
11 experimentation to see if it actually is providing
12 the response needed for relieving the lactic acid
13 buildup as well as the soreness in the muscles at
14 that speed.

15 Q. So whether or not something is high speed
16 would depend on whether it's providing the desired
17 therapeutic benefit; is that right?

18 A. At least in the discussion of a percussive
19 massager, yes. You could have something that is
20 high speed in another situation that might be even
21 ten -- say, ten instances per minute could be high
22 speed for some interactions or some devices. But
23 for a percussive massager, necessarily, that would
24 not be high speed for that.

25 Q. And can you point to any objective

1 boundaries that a person of skill in the art would
2 use to determine if something was high speed or not
3 high speed in the context of your definition?

4 A. Again, because you're trying to create a
5 percussion that is at a higher speed, as is taught
6 in the patent, then it's going to depend on how
7 many times it can actually cause a stroke and how
8 many impacts that you get per percussion.

9 Now, if you're doing like you said, ten
10 strokes per minute for a percussive massager, that
11 is not going to be very high speed. This is going
12 to be there, and then every six seconds, again,
13 it's going to be very slow.

14 And that will, in itself for that, be slow.
15 But in other operations, ten operations per minute
16 might be fast for a machine.

17 Now, percussive massage, because it is
18 intended to be fast, it needs to have multiple
19 impacts that occur. Now, 300 puts five impacts per
20 second, which could be considered high speed. It's
21 going to depend on how that affects the impact and
22 how that affects the therapy and the need to be
23 testing that would be performed at that point.

24 But in this patent, they have disclosed
25 that they run at 600 to 3,600 strokes per minute,

1 **which I consider to be high speed at that point.**

2 Q. So is it your opinion that this patent only
3 covers speeds between 600 and 3,600 strokes per
4 minute?

5 A. That is not what the claims say. That is
6 the range that it goes within. And it does teach
7 that some embodiments incorporate that.

8 Q. So there could be other embodiments that
9 would practice the patent that were less than that,
10 for example?

11 A. There could be.

12 Q. And do you have any opinion on how far down
13 it could go and still practice the patent?

14 A. Again, within the claim language itself,
15 when we look at that, it does not specify that
16 there is a specific speed for a percussive
17 massager, but we would -- it would need to be in a
18 range that would actually create that percussion
19 massage.

20 Q. Now, the therapeutic benefits from
21 percussive massage are not just based on the speed
22 of the impact, but also based on other things, for
23 example, the stroke length of the impact, correct?

24 A. That is correct.

25 Q. So is it your understanding that at --

1 well, that some particular speed might create the
2 correct therapeutic benefits at a particular stroke
3 length but not at another particular stroke length?

4 **A. Sorry, can you repeat that.**

5 Q. Sure. So if I considered that there's at
6 least two levers that I can move to determine
7 whether I get a therapeutic effect, speed and
8 stroke length, I could change either one of those
9 to achieve that therapeutic effect; is that right?

10 MR. KELLAR: Object to form.

11 **THE WITNESS: There's going to be specific**
12 **things that you're trying to affect. You might**
13 **have a deeper soreness within a muscle that needs a**
14 **longer stroke to affect that. And that's going to**
15 **depend on if you're trying to do percussive massage**
16 **at that point.**

17 You could have a massaging instance where
18 it is just a pressure that's applied. And that's
19 not done at high speed. But that can be done to
20 relieve pressure within a muscle or relieve
21 soreness. But that's not percussive massage at
22 that point because it's a pressure over a longer
23 duration.

24 Now, for the percussion massage, it's
25 multiple hits with the depth adjustment. So if

1 we're talking about adjusting those, you're going
2 to have a point where it's no longer percussive
3 massage if it's too slow or it's not deep enough.

4 BY MR. BERG:

5 Q. So if we look at claim 34, in the last
6 limitation, you see that it -- the piston is caused
7 to reciprocate at a predetermined stroke length at
8 a first speed.

9 Do you see that?

10 A. I do see that, yes.

11 Q. So if your definition of percussive
12 massager were adopted in this case, you would agree
13 that that first speed would be limited to only high
14 speeds; is that correct?

15 A. That first speed?

16 Q. Uh-huh.

17 A. As it says: the piston reciprocates a
18 predetermined stroke length at a first speed.

19 At high speed, yes. I would assume that to
20 be within the high speed.

21 Q. When you say you'd assume it to be within
22 the high speed, do you mean that if your definition
23 of percussive massager was adopted, that first
24 speed would be required to be high speed?

25 MR. KELLAR: Object to form.

1 **THE WITNESS:** When I read the patent, it
2 talks about a percussive massager that as it --
3 let's see.

4 So quick release connection at the distal
5 end of the piston, wherein the quick release
6 connector is -- now, it does not say whether it was
7 a fast speed or not. It just says that it's
8 reciprocating at a first speed.

9 Percussive massagers typically operate at
10 the higher speeds. And my understanding would be
11 that as the head is being attached and detached in
12 this instance, that it would be done at high speed,
13 or within a speed that was set on the device that
14 would fall within percussive massage.

15 BY MR. BERG:

16 Q. Do you see anywhere in the patent where it
17 indicates that the first speed has to be a high
18 speed?

19 A. I don't remember anything off the top of my
20 head that indicates that.

21 Q. Now, the word that we're talking about here
22 appears in the preamble of claim 34, right at the
23 top of claim 34, "percussive massager comprising."
24 Do you see that?

25 A. I see that.

1 Q. Now, outside of the claims, do you see
2 anywhere in the patent that uses the word
3 "percussive"?

4 A. Now, within the scope of the patent, I see
5 where the claims say percussion massager, and then
6 the scope then references what and how to interpret
7 what percussive massage is.

8 Q. You'd agree that the patent itself does not
9 provide any definition of percussive massager?

10 A. They define what the device does, which, in
11 turn, can be interpreted to be percussive massage,
12 because it states that this is a percussive
13 massager, and we turn to the scope to say what is
14 defined to create percussive massage at that point.

15 Q. But the patent itself doesn't ever talk
16 about percussive massage, using those words, right?

17 A. Not that I remember.

18 Q. And it doesn't ever talk about high speed,
19 does it?

20 A. Again, it talks about running the 600 to
21 3,600 RPM.

22 Q. But doesn't provide any description of what
23 high speed is?

24 A. It doesn't specifically say this is high
25 speed, this is low speed. But it does say a speed

1 **that it operates at or can operate at.**

2 Q. Now, you have another part here. After
3 "high-speed," it says "long stroke action."

4 Do you see that? We're in paragraph 57.

5 **A. Yes.**

6 Q. I'm sorry, just so the record is clear,
7 because I referred to the paragraph 57.

8 Do you see the part where it says "long
9 stroke action"?

10 **A. I do.**

11 Q. Okay. Where did the phrase "long stroke
12 action" come from?

13 **A. It's based off of the idea that it is**
14 **longer than a vibration massage might be or a**
15 **surface-level vibration massage would be. And we**
16 **see it is taught that there is a stroke that occurs**
17 **within the device.**

18 Q. So long stroke action would be -- well, I
19 guess, let me say it this way.

20 You understand long stroke action only in
21 contrast to vibration action; is that right?

22 **A. Not only in contrast to vibration, but**
23 **understanding there are different types of**
24 **massagers out there. And with a percussive**
25 **massage, it's not just vibrating side to side.**

1 It's actually causing an impact or a penetration --
2 not the best word for that -- but it is causing an
3 impact.

4 And in order to create that impact, there
5 needs to be a longer stroke than just a soft touch
6 or, as it were, a non-long contact, just a short
7 stroke.

8 At some point, you're going to not see
9 benefits in the muscles without that longer stroke.

10 Q. How do you know that?

11 A. Based off experience using percussive
12 massagers. If you don't actually have them
13 reaching certain points, they're not going to have
14 the same effect on the muscle.

15 Q. Certainly you're not an expert on the
16 therapeutic benefits of percussive massagers?

17 MR. KELLAR: Object to form.

18 THE WITNESS: I've used percussive
19 massagers and felt the benefits that they have.
20 But I'm not a complete expert on everything that
21 they can do or how to do them properly.

22 BY MR. BERG:

23 Q. Now, does the -- does the patent use the
24 term "long stroke action"?

25 A. I don't remember if it uses that term

1 specifically.

2 Q. You would agree with me that none of the
3 citations that you provide to the patent use the
4 term "long stroke action," correct?

5 A. No, they do not.

6 Again, I've referenced previously that most
7 percussive massagers have a stroke of at least
8 8 millimeters from the teaching within the field,
9 and this also teaches that it has a stroke that can
10 be adjusted to have the benefits necessary to be a
11 percussive massager.

12 Q. And so in 2013, when this patent was
13 issued, did you see any evidence that
14 8 millimeters, which is the distance you just
15 referenced, was the understood length for
16 percussive massagers?

17 A. Again, I didn't see anything specifically
18 for 2013, but I did see that is a general
19 understanding of what a percussive massage stroke
20 can be around.

21 Q. A general understanding as of what time
22 frame?

23 A. Again, from the references that I had
24 before that we've discussed.

25 Q. So in the 2020s, you've seen indication

1 that 8 millimeters would constitute a long stroke
2 length?

3 A. That that would constitute a percussive
4 massage.

5 Q. And a percussive massage has to have a long
6 stroke length, according to your definition here in
7 paragraph 57?

8 A. It needs to have a stroke that's long
9 enough to be able to activate the necessary
10 response on the muscle and help with the pain
11 relief within the muscle.

12 Q. So the distance of the stroke length and
13 whether it's a long stroke length or not under this
14 definition would relate to whether or not it gives
15 certain therapeutic benefits; is that right?

16 A. Yes.

17 Q. And where would you draw the line between
18 long stroke action and not long stroke action?

19 A. It's going to be determined from
20 experimentation and testing to determine how well
21 the stroke actually affects the muscles underneath.
22 But I would say it needs to at least proceed
23 similar to what I said, about 8 millimeters or so,
24 to actually create percussive massage.

25 Q. So if I was looking at this claim and

1 trying to design a product that didn't infringe,
2 and I was applying your definition here of
3 percussive massager, what you're saying is that I'd
4 need to test that device. And if it provided
5 therapeutic benefits, then I would be in a long
6 stroke length; and if it didn't, I wouldn't be in a
7 long stroke length?

8 MR. KELLAR: Object to form. Calls for a
9 legal conclusion.

10 THE WITNESS: Sorry. You're saying if you
11 had a stroke length that did not provide the
12 benefit when you were attempting to use it, that it
13 would not provide a long stroke length. It's going
14 to depend on where you're using it and how you're
15 using it.

16 Again, as the patent discusses, there might
17 be places that you might need to reach a different
18 muscle or be able to adjust the stroke length to
19 alleviate the pain, according to where it's at.

20 And so you might be in an area where it's
21 not providing therapeutic relief because that is
22 not the stroke length necessary, and in another
23 area it might provide the therapeutic relief that
24 it is designed for by the adjusting of the stroke
25 length.

1 BY MR. BERG:

2 Q. So, for example, if I was using a
3 percussive massager -- well, I could do percussive
4 massage on a large muscle group like my thigh,
5 correct?

6 A. Yes.

7 Q. And I would need a certain stroke length
8 and -- well, I'd need a certain stroke length in
9 order to get the therapeutic benefits of doing
10 percussive massage on my thigh; is that right?

11 A. It's going to depend on where in the thigh,
12 but there will be variables that are set, depending
13 on if you're trying to get a deeper massage on a
14 quadriceps or if you're trying to get more relief
15 at the surface level than the quadricep itself.
16 But, yes, you're going to need a certain length
17 stroke to cause that.

18 Q. And if I was to use the percussive
19 massager -- well, I could do percussive massage on
20 a smaller muscle group as well, like my forearm,
21 for example, right?

22 A. You could use it for that, yes.

23 Q. But I would -- but a different stroke
24 length would be required for it to be considered
25 percussive massage compared to my thigh; is that

1 right?

2 A. Not necessarily. It's going to depend on
3 what kind of relief you're trying to get from the
4 percussive massage and where within the muscle. If
5 it's at surface or closer to the surface level of
6 the muscle, you could have a similar stroke length
7 between the two. Or if it's down deep within your
8 forearm versus just midrange in your quadricep
9 versus trying to get deeper into the quadricep
10 itself.

11 Q. So whether something is percussive massage
12 or not depends on the therapeutic benefit that I'm
13 trying to get?

14 A. That's part of what the percussive massage
15 is there for, is trying to reach muscle groups, is
16 my understanding. And, again, you're going to have
17 different therapies that you're trying to get for
18 the different muscles and different areas that
19 you're trying to relieve.

20 When I've used them before, I've had some
21 times where it's a sore muscle towards the top, and
22 you might not push as hard and not try to get the
23 same deep penetration with it, versus where you
24 might have a deeper muscle and you need to try to
25 push harder or you would want a longer stroke to

1 help get closer to relieving that pressure within
2 the muscle.

3 Q. So if I took a percussive massager -- well,
4 let's use a concrete example.

5 What type of percussive massager do you
6 use?

7 A. I have -- I don't remember the brand, but I
8 have a handheld percussive massager.

9 Q. Do you use a Hypervolt?

10 A. I do not.

11 Q. Do you use a Theragun?

12 A. No, I do not.

13 Q. So we'll just take your -- but you do have
14 a percussive massager?

15 A. I do.

16 Q. And you would consider it to be a
17 percussive massager?

18 A. I would.

19 Q. And if you hold the percussive massager
20 against your muscle and operate it, it's providing
21 percussive massage?

22 A. When I hold it against the skin, it can
23 provide percussive massage, yes.

24 Q. But it doesn't necessarily provide
25 percussive massage?

1 A. Again, it's -- at a high speed, it has a
2 longer stroke of over 8 millimeters, where it is
3 hitting and impacting the muscle.

4 Q. Now, if you --

5 A. But you can push it hard against your body
6 where it's no longer percussing and it's more just
7 pushing on it, but --

8 Q. And what if you were to hold -- so say your
9 percussive massager has a stroke length of
10 8 millimeters, what if you were to hold it
11 7.9 millimeters from your skin, would it provide
12 percussive massage?

13 A. It would be touching your skin at that
14 point and not necessarily penetrating to the
15 muscle.

16 Q. So would it be providing percussive
17 massage?

18 MR. KELLAR: Object to form.

19 THE WITNESS: Again, I don't think that it
20 necessarily would be at that point. Again, the
21 percussive massage is trying to penetrate into the
22 muscle. And if you're only going surface level,
23 it's not necessarily providing that benefit from
24 the percussive massage.

25 ///

1 BY MR. BERG:

2 Q. Now, of course, in this matter, we're
3 looking at an apparatus claim that's directed to a
4 percussive massager, not percussive massage itself,
5 correct?

6 A. That is correct.

7 Q. So would you agree with me that I should be
8 able to determine what a percussive massager is,
9 regardless of the therapeutic effect that I'm
10 trying to get from using that device?

11 A. Now, the hypothetical you put out is that
12 you're using a percussive massager not to create
13 percussive massage. It's still a percussive
14 massager at that point, just not necessarily
15 providing percussive massage.

16 Q. What makes it a percussive massager at that
17 point?

18 A. Whether it can provide the benefits of
19 percussive massage. Whether you're doing it skin
20 level or not, it's still a percussive massager,
21 even if it is not providing percussive massage at
22 that point.

23 Q. So regardless of how I use it, it would
24 still be a percussive massager or not be a
25 percussive massager; is that fair?

1 **A. According to the definition of the device,**
2 **yes.**

3 MR. BERG: I know we've got lunch coming
4 like relatively soon. Are you good to keep going
5 until we get there?

6 MR. KELLAR: It's up to the witness.

7 MR. BERG: Do you want to take a break, or
8 do you want to just keep going for another
9 20 minutes or so --

10 **THE WITNESS: I'm okay for now.**

11 MR. BERG: -- and then when lunch gets
12 here, we can break?

13 **THE WITNESS: Okay.**

14 MR. BERG: Okay.

15 BY MR. BERG:

16 Q. So earlier you testified that the stroke
17 length that you consider a long stroke action would
18 be about 8 millimeters; is that right?

19 **A. Yes.**

20 Q. So a device that provided a stroke action
21 that was only 6 millimeters would not be a
22 percussive massager; is that right?

23 MR. KELLAR: Object to form.

24 **THE WITNESS: I think that it's going to**
25 **depend on testing to see if it actually provides**

1 the benefits of percussive massage.

2 But, in general, I've seen some that have 8
3 or higher. I've seen one that says 4 millimeters.

4 But, again, it's going to depend on the
5 benefits it's actually receiving whether it's a
6 percussive massage.

7 BY MR. BERG:

8 Q. So it's going to depend on how it's used
9 whether it's a percussive massager or not?

10 A. It's going to depend on if it actually
11 penetrates and provides the therapy that is
12 necessary for a percussive massage.

13 Q. So it doesn't so much depend on the
14 specific stroke length so much as whether or not it
15 can provide that therapeutic benefit; is that
16 right?

17 A. The stroke length is going to be necessary
18 to provide the benefit from the therapy. You could
19 have a stroke length that is very small and
20 provides no benefit whatsoever. It is very
21 superficial. And then at that point it is not
22 percussive massage.

23 It's going to have to be tested to see if
24 it's actually hitting the muscle groups that it's
25 designed for and make sure that it is providing the

1 relief that it is designed for.

2 Now, in general, most percussive massagers
3 have a stroke length greater than 8 millimeters.
4 But, again, it would have to be tested to verify
5 that it is actually performing percussive massage
6 in a setting to determine if it's working or not.

7 Q. So without performing that testing, you'd
8 be unable to tell me if a 4-millimeter stroke
9 length would qualify under your definition of long
10 stroke -- well, a percussive massager having a long
11 stroke action; is that right?

12 MR. KELLAR: Object to form.

13 THE WITNESS: Again, it's going to depend
14 on if it actually benefits and performs a
15 percussive massage. It would require testing to
16 actually say is this beneficial or not?

17 But 4 millimeters, I don't have that right
18 off the top of my head at the moment. I'd have to
19 look at it and consider it.

20 BY MR. BERG:

21 Q. And you haven't done that?

22 A. I have not.

23 Q. How about 2 millimeters? Could a
24 percussive massager have a stroke action of
25 2 millimeters?

1 A. Again, I don't think that would be a very
2 long stroke length for 2 millimeters. And I don't
3 know that it would have any benefit besides surface
4 level. But it would require testing to verify
5 that.

6 Q. Now, in this section you cite to column 7,
7 lines 20 to 23. Can we go ahead and go to that
8 part of the '482 patent.

9 A. Yes.

10 Q. So this says: In some instances it may be
11 desirable to adjust the throw or stroke length of
12 the massaging head to work on larger or smaller
13 muscle groups, or deeper or shallower points of
14 stress or soreness in the muscle.

15 Do you see that?

16 A. I do see that.

17 Q. So you would agree with me that the patent
18 discloses a massager that has variable stroke
19 length, right?

20 A. It does state that in the specification of
21 the patent.

22 Q. And, in fact, the title of the patent is
23 "Massage Device Having Variable Stroke Length,"
24 right?

25 A. Yes.

1 Q. So is it your opinion that the patent only
2 covers long stroke action?

3 MR. KELLAR: Object to form.

4 THE WITNESS: My opinion is based off the
5 fact that it does adjust and that it needs to be
6 enough to actually cause therapeutic pressure to be
7 applied to the muscle by the stroke.

8 BY MR. BERG:

9 Q. But it could be relieving -- it could be
10 providing therapeutic effect at shallower points in
11 the muscle as well, right?

12 A. That is what is taught here; that it can be
13 for shallower or smaller muscle groups, yeah, or
14 shallower points.

15 Q. So it doesn't necessarily need to be a
16 stroke length that provides only deep tissue
17 massage, right?

18 A. It needs to be able to provide relief on
19 the muscle.

20 Q. Either deep tissue or not deep tissue?

21 A. That is what is taught here.

22 Q. And is there anything in claim 34 that
23 would tell you as a person of skill in the art that
24 claim 34 doesn't cover shallower massage as taught
25 in column 7, lines 20 to 23?

1 MR. KELLAR: Object to form.

2 THE WITNESS: Can you restate your
3 question.

4 BY MR. BERG:

5 Q. Sure. Is there anything in claim 34 that
6 would tell you -- well, strike that.

7 Is there anything in claim 34 that would
8 indicate to you that the embodiment we just looked
9 at in column 7, lines 7 to 23, is not covered by
10 claim 34?

11 MR. KELLAR: Same objection.

12 THE WITNESS: I don't see anything that
13 would exclude that from what is taught in 34.

14 BY MR. BERG:

15 Q. And you would agree that -- well, let me
16 ask this a little differently.

17 What are all the bases you relied on for
18 including the words "long stroke action" in your
19 understanding of the plain and ordinary meaning of
20 percussive massager?

21 A. My understanding of the idea that is taught
22 here, that it is attempting to reach below the
23 surface level and actually stimulate the muscle for
24 relief. It's attempting more than just a surface
25 effect, such as a vibrator massage might be. It's

1 actually attempting to impact the muscle, and the
2 stroke needs to be long enough to provide that
3 relief.

4 Q. Now, here in paragraph 58, you reference a
5 few exhibits: Exhibit 2020, 2021, and 2027.

6 Do you see that?

7 A. I do see that.

8 Q. And if we go back to the earlier part that
9 you mentioned on your understanding of percussive
10 massagers in paragraph 38.

11 A. Uh-huh.

12 Q. You see that you also reference those
13 exhibits and some other exhibits?

14 A. In paragraph 38?

15 Q. And, well, in that section, Section 3.

16 A. Sorry, you lost me there for a second.

17 Q. No problem. So if you go to Section 3,
18 which begins with paragraph 38.

19 A. Yes.

20 Q. Do you see that you reference those same
21 three exhibits -- 2021, 2020, and 2027 -- here?

22 A. Yes.

23 Q. And you reference some other exhibits as
24 well, correct?

25 A. Yes.

1 Q. Let's go ahead and look at a couple of
2 those. So I'll hand you what's been marked as
3 Exhibit 2020.

4 (Previously marked Deposition Exhibit No.
5 2020 was reviewed.)

6 A. Okay.

7 Q. Do you recognize this document,
8 Mr. Morrill?

9 A. I do.

10 Q. And do you see that this document is dated
11 July 4th, 2021?

12 A. I do see that.

13 Q. And this is specifically a Therabody
14 document, correct?

15 A. That is.

16 Q. Now, if you turn to page 2, there is a
17 section called "How Does Theragun Work?"
18 Do you see that?

19 A. I do see that.

20 Q. The first sentence of that paragraph
21 states: Theragun pioneered a revolutionary field
22 of recovery known as percussive therapy, not to be
23 confused with vibration therapy.

24 Do you see that?

25 A. I do see that.

1 Q. Do you agree with that statement?

2 A. That they pioneered it?

3 Q. Yeah.

4 A. That's what they are claiming there, is
5 that they pioneered it, and saying there is a
6 difference between vibration therapy and percussive
7 therapy.

8 Q. Do you know when Theragun released its
9 first commercial product?

10 A. I don't know that off the top of my head,
11 no.

12 Q. Are you aware of any commercial percussive
13 products that predated Therabody's first percussion
14 massage gun?

15 A. I was thinking of Pivaroff, but that is
16 more of a professional massage gun at that point.
17 And I can't think of anything right off the top of
18 my head. I'd have to look.

19 Q. Do you know if Pivaroff was ever released
20 as a product?

21 A. I have not looked to see if it ever was.

22 (Court Reporter Clarification.)

23 Q. Now, in paragraph 38, and we've discussed
24 this already, you say you have personal experience
25 using percussive massage devices. Do you see that?

1 **A. Yes.**

2 Q. Have you ever used a Theragun device?

3 **A. I have not used a Theragun device, no.**

4 Q. Have you ever used a Hypervolt device?

5 **A. I have not.**

6 Q. When was the last time that you used a
7 percussive massage device?

8 **A. Probably a few months ago.**

9 Q. Do you recall the time period in which you
10 first used a percussive massage device?

11 **A. The first time I used one, I would have to**
12 **look back. We had a former employee who wanted a**
13 **percussive device, and the ones that he had used,**
14 **he didn't like as much. And ended up retrofitting**
15 **a jigsaw to provide the percussive massage that he**
16 **wanted. And that was the first time that I'd used**
17 **one.**

18 **But it's probably 10, 12 years ago.**

19 Q. And so at that time, 10 or 12 years ago,
20 your friend couldn't find a device that operated
21 how he wanted, and so he retrofitted a jigsaw to
22 provide that benefit; is that right?

23 **A. That is right.**

24 Q. Did you -- did you try using that
25 retrofitted jigsaw?

1 **A. Yes, I did.**

2 Q. And did you think that it provided
3 benefits?

4 **A. I thought it was helpful. But I was not**
5 **working out as hard as he was and didn't need quite**
6 **the same device.**

7 Q. Fair enough.

8 When is the first time you recall hearing
9 the term "percussive massage gun"?

10 **A. I don't remember.**

11 Q. Fair enough.

12 I'm going to hand you what's been marked as
13 Exhibit 2021 in this proceeding.

14 (Previously marked Deposition Exhibit No.
15 2021 was reviewed.)

16 **A. Okay.**

17 Q. Is this another one of the documents that
18 you looked at to determine what's meant by
19 percussive massager?

20 **A. It is one that I did reference, yes.**

21 Q. And do you see the date on this document?

22 **A. September 2024.**

23 Q. Okay. You can set that one aside.

24 MR. KELLAR: Brad, lunch is here, so maybe
25 next time we get to a good stopping point.

1 MR. BERG: Okay, perfect. That's good to
2 know.

3 (Previously marked Deposition Exhibit No.
4 2018 was reviewed.)

5 BY MR. BERG:

6 Q. Okay. I'll hand you what's been previously
7 marked as Exhibit 2018. Is this another one of the
8 documents that you looked at to determine what's
9 meant by percussive massager?

10 A. This is another document that I looked at
11 that describes what percussive massage is out in
12 the field at this time the document was produced.

13 Q. And this document is dated February 2nd,
14 2022; is that right?

15 A. It is.

16 Q. Okay. You can set that one aside.

17 A. Now, within these documents they discuss
18 what percussive massage is and how it is
19 interpreted and described. And it falls in line
20 with what is taught within the '482 patent, where
21 it's there for deeper tissue massage and there to
22 relieve pain and stress within the muscle.

23 MR. BERG: Let's go ahead and take a break,
24 if you guys are good with that, and we can grab
25 some lunch.

1 **THE WITNESS: Okay.**

2

3 (Lunch Recess ensued from 11:59 a.m.
4 to 12:40 p.m.)

5

6 BY MR. BERG:

7 Q. Welcome back, Mr. Morrill.

8 So when we left, we were, I think, looking
9 at paragraph -- Section 3, starting at paragraph
10 38, about percussive massage and percussive
11 massagers.

12 In paragraph 39 you state: I also agree
13 that percussive massage is markedly different from
14 vibration massage, which is at high speed but
15 topical rather than deep massage.

16 Do you see that?

17 **A. I do see that.**

18 Q. And then you say: Often the stroke length
19 of vibration massagers may be zero or near zero,
20 compared to the 8-plus millimeters stroke length
21 for percussive massagers.

22 Do you see that?

23 **A. I do see that.**

24 Q. Where did you get your understanding of
25 what a vibration massage is?

1 A. I've had experience with vibration
2 massagers in the past, and I understand that
3 typically what happens with a vibration massage,
4 it's only surface level; that it only moves maybe
5 side to side and not actually trying to penetrate
6 into the skin to affect the deeper muscle tissues,
7 but set against the skin to create a vibration at
8 that localized place.

9 Q. So your understanding is that vibration
10 massagers differ from percussive massagers because
11 the head moves side to side rather than into the
12 skin?

13 A. Well, it might not even be a head. It
14 might be the device itself vibrates such that it is
15 just going side to side.

16 Q. So even a device with a small stroke
17 length, if it was penetrating into the skin would
18 not be a vibration massager; is that right?

19 A. It's going to depend on the motion of the
20 device, and if it is penetrating in, it might also
21 have a vibration element with it.

22 Q. I see. So in order to be a vibration
23 massage, it would need to have side-to-side
24 movement, not just into-the-skin movement; is that
25 right?

1 A. It would need some form of vibration to
2 facilitate the vibration massage.

3 Q. It would need some form of vibration,
4 but --

5 A. Not necessarily in, but, like you said,
6 side to side or --

7 Q. But when you say "some form of vibration,"
8 that could be either side to side or in and out?

9 A. It's going to depend on the device. But
10 most vibration massagers that I'm familiar with
11 don't actually have something that comes out. It's
12 just the device itself vibrates.

13 Q. Okay. Now, if we go back to the claim
14 construction section in paragraph 58, you give some
15 additional detail about vibration massagers; that
16 they have very small, almost zero, stroke length,
17 creating a surface-buzzing sensation.

18 Is that what you were just referring to a
19 second ago, Mr. Morrill?

20 A. In essence.

21 Q. Do you have an understanding of what the
22 therapeutic benefits of vibration massage is/are?

23 A. I understand that it does help relieve
24 muscle or soreness from the vibration, and it helps
25 move it -- I don't understand all of the medical

1 reasons it helps. I just understand how it works,
2 and I've had experience using them before.

3 Q. And do vibration massage devices provide
4 deep muscle relief?

5 A. I felt relief from a vibration massage, but
6 not necessarily deep muscle relief.

7 Q. Are there any articles or publications or
8 patents from the 2013 time frame that informed your
9 understanding of vibration massagers and their
10 differences compared to percussion massagers?

11 A. I know that Harris teaches about percussion
12 massage and vibration massage.

13 Q. A device that does both?

14 A. Yes.

15 Q. And in that context, how is the vibration
16 massage piece performed?

17 MR. KELLAR: Object to form.

18 THE WITNESS: I would have to re-read it to
19 see.

20 BY MR. BERG:

21 Q. Okay. Now, looking at the '482 patent
22 again, the '482 patent doesn't disclose differences
23 between vibration and percussive massagers, right?

24 A. I don't remember it describing that, yes, a
25 difference.

1 Q. If you go to column -- column 1, starting
2 at line 26, do you see this is in the "Background"
3 section of the patent?

4 A. I do.

5 Q. And do you see here in lines -- starting at
6 line 26, it says: Vibration massaging devices are
7 available on the market today; however, those
8 devices suffer from many deficiencies. Many of the
9 prior art massaging devices are bulky, get very
10 hot, are noisy, and/or are difficult to use for
11 extended period of time.

12 Do you see that?

13 A. I do see that.

14 Q. Are you aware of any other disclosures
15 related to vibration massagers in the '482 patent?

16 A. That's the only disclosure I remember after
17 re-reading it.

18 Q. So there are no disclosures, for example,
19 on the amount of force a vibration massager has to
20 have in part, right?

21 A. It doesn't teach about vibration massagers,
22 other than it's trying to overcome limitations that
23 it sees in vibration massagers.

24 Q. And are those limitations related to the
25 stroke length, for example?

1 **A. It does not mention the stroke length as**
2 **part of the limitations.**

3 Q. Are those limitations related to the speed
4 at which the device operates?

5 **A. It specifically says that they're bulky,**
6 **that they can get hot and are noisy and difficult**
7 **to use for extended periods of time.**

8 Q. Did you consider any -- well, strike that.
9 Let's look at an exhibit.

10 Mr. Morrill, are you familiar with the
11 Hypervolt products?

12 **A. I've seen some of them.**

13 Q. Have you ever handled any of them?

14 **A. I have not.**

15 Q. Let's go ahead and mark this as
16 Exhibit 1023.

17 Have you ever seen Exhibit 1023 before,
18 Mr. Morrill?

19 (Deposition Exhibit No. 1023 was marked for
20 identification and attached hereto.)

21 **A. I don't remember seeing it before.**

22 Q. I'll represent to you that it's a printout
23 of Hyperice's official website for the Hypervolt
24 product.

25 Now, if you go to page 5 of this exhibit,

1 do you see there is a section that's called "About
2 Us"?

3 **A. I see that.**

4 Q. And another section on this page that's
5 titled "Our History"?

6 **A. I see that.**

7 Q. Now, in "Our History," if you go down to
8 the second sentence, do you see the sentence that
9 says: Building on years of expertise in vibration
10 technology, Hyperice introduced the original
11 Hypervolt in 2018, aiming to make state-of-the-art
12 percussion massage available to everyone.

13 Do you see that?

14 **A. I do see that.**

15 Q. Is it your understanding that the Hypervolt
16 is a percussive massage device?

17 MR. KELLAR: Object to form.

18 **THE WITNESS: That's what it states here,**
19 **that the Hyperice was introduced as a**
20 **state-of-the-art percussion massage.**

21 BY MR. BERG:

22 Q. And based on your experience having seen a
23 Hypervolt, do you concur with that opinion that
24 it's a percussive massage device?

25 MR. KELLAR: Object to form.

1 **THE WITNESS:** Again, we're just looking at
2 images from a website that is saying that it is a
3 percussive massage device. And I would have to
4 assume it has a reciprocating head that causes
5 percussive massage. But I haven't seen this one
6 necessarily operate.

7 BY MR. BERG:

8 Q. Have you seen any Hypervolts operate?

9 A. I've seen videos of them, but I have not
10 held one in my hand to look at specifically.

11 Q. Based on the videos you've seen, they
12 appear to be a percussive massage device?

13 A. They appear to be, yes.

14 Q. Now, in that part that we read, Hyperice
15 specifically says that they introduced the original
16 Hypervolt in 2018, building on years of expertise
17 in vibration technology.

18 Do you agree that vibration technology and
19 percussive technology are similar?

20 MR. KELLAR: Object to form.

21 **THE WITNESS:** So you're asking if I believe
22 that vibration technology and percussive technology
23 are similar?

24 BY MR. BERG:

25 Q. Yes.

1 A. It's going to be determined -- or be
2 determined by how you create the vibration, but it
3 can be created by a reciprocating motion within a
4 drive.

5 Q. So this seems believable that Hyperice
6 could have used expertise in vibration technology
7 to develop a percussion massage gun; is that
8 correct?

9 MR. KELLAR: Object to form.

10 THE WITNESS: Now, whether they could or
11 they did, I don't know. It's asking me to come to
12 a conclusion based off saying that they use
13 vibration to create a percussion massager. So that
14 is what they are saying they did.

15 Both of them can be used with a
16 reciprocating motion that causes something to move
17 side to side. Now, creating the percussive massage
18 from that, I don't know how they did that right
19 off. All I can rely on is what I've seen so far.

20 BY MR. BERG:

21 Q. Would you agree that a person of skill in
22 the art in designing a percussive massager would
23 look to vibration massagers as analogous art?

24 MR. KELLAR: Object to form.

25 THE WITNESS: Again, they perform a

1 different type of massage. So I don't know that
2 they would look, necessarily, to a vibration device
3 to create the percussive motion. They can use
4 similar drive mechanisms, maybe. But, again, two
5 different machines for two different outcomes.

6 (Deposition Exhibit No. 1022 was marked for
7 identification and attached hereto.)

8 BY MR. BERG:

9 Q. Uh-huh.

10 Let's go ahead and mark this as
11 Exhibit 1022.

12 So Exhibit 1022 is a press release from
13 Hyperice upon introducing the Hypervolt in 2018.

14 Do you see that, Mr. Morrill?

15 A. I see that it's the Hyperice being
16 introduced by Hypervolt -- or introduces Hypervolt
17 by Hyperice.

18 Q. And do you see here that they refer to the
19 Hypervolt as a state-of-the-art vibration massage
20 device?

21 A. I see that.

22 Q. Now, in the first paragraph here that
23 begins "Los Angeles," if you go -- do you see the
24 sentence that says "After innovating"?

25 A. Okay.

1 Q. It says: After innovating the fitness and
2 sports performance technology space with the
3 creation of the first-ever high-intensity vibrating
4 roller, Hyperice set out to develop a cutting-edge
5 portable massage therapy device accessible to all
6 consumers.

7 Do you see that?

8 A. I do see that.

9 Q. Are you familiar with the vibrating roller
10 from Hyperice?

11 A. I am not.

12 Q. Now, the next paragraph says: The
13 cordless, state-of-the-art vibration device
14 provides a multitude of benefits: Increases range
15 of motion; helps relieve muscle pain, stiffness and
16 soreness; increases circulation and blood flow;
17 easy to use for self-myofascial release and
18 massage.

19 Do you see that?

20 A. I do see that.

21 Q. Are those benefits consistent with a
22 percussive massager, in your experience?

23 MR. KELLAR: Object to form.

24 THE WITNESS: It appears to have similar
25 benefits.

1 BY MR. BERG:

2 Q. Now, if you go to the next paragraph, the
3 last sentence, Hyperice refers to this device as --
4 well, it says: makes the Hypervolt a must-have
5 device for all health and wellness focused
6 customers -- or consumers, personal trainers,
7 massage therapists, and sports performance
8 professionals.

9 Do you see that?

10 A. I do see that.

11 Q. So Hyperice states that the Hypervolt can
12 be used by both consumers and professionals, right?

13 MR. KELLAR: Object to form.

14 THE WITNESS: It does say that it can be
15 used by consumers as well as personal trainers,
16 massage therapists, and sports performance
17 professionals.

18 BY MR. BERG:

19 Q. So would you consider the Hypervolt a
20 consumer device or a professional device?

21 MR. KELLAR: Object to form.

22 THE WITNESS: It appears to be one that can
23 be used in both segments.

24 BY MR. BERG:

25 Q. You see in the next paragraph there are

1 some statements attributed to Anthony Katz.

2 Do you see that?

3 **A. Yes.**

4 Q. Do you know who Anthony Katz is?

5 **A. Not off the top of my head, no, I do not.**

6 Q. I'll represent to you that Mr. Katz is the
7 founder of Hyperice.

8 And one of the statements that Mr. Katz has
9 here is that: Over the past six years, we have
10 acquired substantial knowledge relative to
11 vibration technology. We put all that knowledge
12 into the development of the Hypervolt.

13 Do you see that?

14 **A. I do see that.**

15 Q. Do you understand Mr. Katz to be saying
16 that the vibration technology they had previously
17 developed was relevant to developing the Hypervolt?

18 MR. KELLAR: Object to form.

19 **THE WITNESS: It appears to be what he is**
20 **saying.**

21 BY MR. BERG:

22 Q. Do you agree with the statement that
23 "knowledge relative to vibration technology" is
24 applicable to percussive massage technology?

25 MR. KELLAR: Object to form.

1 **THE WITNESS:** What he's saying is that they
2 used their knowledge of vibration technology to
3 help them develop the Hypervolt.

4 BY MR. BERG:

5 Q. Do you understand the Hypervolt to be a
6 vibration device or a percussive device?

7 MR. KELLAR: Object to form.

8 **THE WITNESS:** Again, I'd have to look at it
9 specifically. It might have parts of both.

10 This is, I think, outside the scope, but
11 I'm not sure. Is this what you're portraying as
12 portrayed by the 11 -- or the '482 patent?

13 BY MR. BERG:

14 Q. Well, I'll represent to you that in the
15 District Court litigation that underlies this,
16 Hyperice has taken the position that the '482
17 patent is practiced by the Hypervolt.

18 A. Okay. No, it doesn't preclude it from
19 having both vibration and percussive massage
20 technology in it.

21 Q. And by vibration technology, you would mean
22 something that goes side to side instead of in and
23 out?

24 A. From my understanding of a vibration
25 machine, it typically is a side-to-side motion.

1 Q. You'd agree, at least as of 2018, there
2 wasn't a clear dividing line, then, between
3 percussive massagers and vibration massagers?

4 MR. KELLAR: Object to form.

5 THE WITNESS: Now, the term might have
6 developed from a vibration massager, possibly. The
7 distinction from what I've been able to see lately
8 or is considered that percussive massage is that
9 deeper-stroke, higher-speed impact that happens
10 with percussion.

11 BY MR. BERG:

12 Q. When you say the distinction from what
13 you've been able to see lately, you're referring to
14 all of the post-2020 articles that you cite in your
15 declaration; is that right?

16 A. That is my understanding of what a
17 percussive massager is. And percussive massage has
18 been taught by devices before. They might not have
19 used the exact term "percussive massager" at the
20 time.

21 Q. And you didn't look at any sources that
22 were from 2013 in determining what was meant by
23 percussive massager, right?

24 MR. KELLAR: Object to form.

25 THE WITNESS: I've looked at what is

1 considered a percussive massager and saw that what
2 is being taught by the patent correlates with
3 percussive massage.

4 BY MR. BERG:

5 Q. All right. Let's go to a distinction that
6 you make in your declaration that we just touched
7 on a little bit between consumer and
8 professional-grade products. So let's take a look
9 at paragraph 43 of your declaration.

10 Well, actually, we can start with paragraph
11 40. That's where I think you first made that
12 distinction.

13 Now, you state that percussive massagers
14 are most often designed to be used by the general
15 consuming public without any specialized training,
16 and that such products are generally called
17 consumer products. Right?

18 A. Yes.

19 Q. And then on the other end of the spectrum,
20 professional products are products that are
21 designed for use by individuals after receiving
22 certain certification, licensing, or training,
23 correct?

24 A. Yes.

25 Q. And apart from the target audience for

1 using the device, what are the differences, in your
2 mind, between a consumer product and a
3 professional-grade product?

4 A. Between a consumer product and a
5 professional grade? So as we stated here,
6 sometimes there are consumer products that can be
7 used in a professional environment.

8 But oftentimes with a professional piece of
9 equipment, you might need further training, as I
10 stated. You might need to have a better
11 understanding of what you're using. There's
12 usually more in-depth understanding of the warnings
13 and the hazards associated with the product that
14 you would need to understand before operating it.

15 If we talk about the exercise piece of
16 equipment that we recently received the patent on,
17 it has a professional setting. It's not intended
18 for at-home use because of the hazards that are
19 associated with it. And you have to understand
20 what risks there are associated with the machine to
21 operate it properly.

22 Q. Now, does a product become a professional
23 product because it's used in a professional
24 setting, or is it because of the factors that you
25 just mentioned?

1 A. It can be both. It is designed,
2 specifically, to be used in a professional setting
3 for people who are trained. And sometimes you
4 might have a consumer product that can be used both
5 professionally and at home.

6 Q. Uh-huh. In designing consumer products --
7 well, you've designed both consumer products and
8 professional products, correct?

9 A. Yes, I have.

10 Q. In designing profession -- or consumer
11 products, is it common for a person, an engineer,
12 to look at professional products for how to design
13 the consumer product?

14 A. It can be something that helps you
15 understand what the device is designed for and
16 understanding the operation. You can look at
17 professional products to help design consumer
18 products.

19 But it's understood that certain safeties
20 might need to be put in place or certain things
21 might need to be changed in order to turn a
22 professional product into a consumer product.

23 Q. And what if you were doing the opposite?
24 If you were starting from a consumer product and
25 you wanted to create a professional product --

1 well, if you wanted to create a professional
2 product, would it be common to look at consumer
3 products in that space for how to develop that
4 product -- that professional product?

5 **A. It can be used in that way.**

6 Q. Paragraph 44 you talk about professional
7 devices being designed with a focus on higher
8 performance. Do you see that?

9 **A. Yes.**

10 Q. What do you mean by higher performance?

11 **A. Oftentimes when you're designing a**
12 **professional piece of equipment, it might not have**
13 **some limitations placed on it that you want in a**
14 **consumer setting.**

15 **If you look at, say, blenders or mixers,**
16 **for instance, at-home mixer is going to be limited**
17 **by the size of the motor, the size of the bowl.**

18 **You go to a professional setting and you**
19 **have mixers that can be almost the size of this**
20 **room that we are in. And at that time you need a**
21 **much larger blade, you need a much larger motor**
22 **that can operate with a lot more power.**

23 **And so there's a difference between the**
24 **performance that you have, typically, between a**
25 **consumer product and a professional product.**

1 Q. Is there any defined criteria for what
2 qualifies a product as high-performance in this
3 context?

4 A. In which context?

5 Q. The context of the distinction between a
6 professional device and a consumer device?

7 A. It's going to depend on the industry. It's
8 going to depend on what is being used and how.

9 If we take gym equipment, you have some
10 equipment that becomes classified as either
11 professional grade or gym -- I think it's Class S
12 for sports grade versus Class H for home. And
13 there are distinctions between the two.

14 If it's supposed to be used in a specific
15 setting, you have certain criteria that you're
16 going to look at differently than others.

17 Q. Let's go to paragraph 80 of your
18 declaration.

19 Now, do you see in paragraph 80 you're
20 discussing the Pivaroff reference?

21 A. Yes.

22 Q. And if you go down a little bit, you say:
23 Thus, in my opinion, and as explained above, and
24 different from the '082 patent, Pivaroff is
25 directed to a professional-grade percussive

1 massager used by professionals in the chiropractic,
2 medical, and physical therapy fields and not by the
3 consuming public.

4 Do you see that?

5 **A. I do see that.**

6 Q. First, just a clarification question here.
7 We're looking at the '482 declaration, and this
8 references the '082 patent. I assume that's just a
9 typo here?

10 **A. Yes.**

11 Q. So can you explain a little bit your
12 opinion that the '482 and '082 patents are directed
13 to consumer products and not professional-grade
14 products?

15 MR. KELLAR: Object to form.

16 **THE WITNESS: Reviewing it says it can be**
17 **used for therapeutic use, but it doesn't**
18 **specifically say it is only intended to be used by**
19 **medical professionals or by professionals, where**
20 **when you read Pivaroff, Pivaroff specifically says**
21 **its intended market is for -- or its unintended use**
22 **is for professionals in chiropractic, medical, and**
23 **physical therapy fields.**

24 BY MR. BERG:

25 Q. You'd agree that the product described in

1 the '482 and the '082 patents could be used by
2 professionals in those fields, right?

3 **A. It could be. It doesn't preclude it from**
4 **being used in a professional setting, even if it**
5 **was made for a consumer market.**

6 Q. Okay. Let's go back to the claim
7 construction section of your declaration, and I
8 want to look at the claim term "massaging head"
9 which you describe in paragraph 59.

10 Do you see that?

11 **A. I do.**

12 Q. Now, just for context, if we look at the
13 '482 patent, claim 34, you see that the massaging
14 head here is referenced in the last limitation.

15 It says: a quick release connector at the
16 distal end of the piston, wherein the quick release
17 connector is configured to secure a first massaging
18 head while the piston reciprocates.

19 Do you see that?

20 **A. I do see that.**

21 Q. So you understand that, for example, if we
22 were to look at one of the figures, like, for
23 example, Figure 2, that the massaging head would be
24 element 130 there; is that right?

25 **A. Yes.**

1 Q. So if we look at your definition of what
2 the plain and ordinary meaning of massaging head
3 is, do you see that you state in paragraph 59 of
4 your declaration that it says: The end piece of a
5 percussive massager that contacts the user's body
6 and is capable of providing percussive massage,
7 i.e., high-speed, deep tissue massage.

8 Do you see that?

9 A. I do see that.

10 Q. Where did this language come from?

11 MR. KELLAR: Object to form.

12 THE WITNESS: Again, in the context of a
13 percussive massage, the head is the part that is
14 intended to create the contact between the
15 percussive massager and the user's body, where it's
16 translating that high-speed percussive massage to
17 the user's body.

18 BY MR. BERG:

19 Q. Does a end piece attachment need to be
20 specifically designed for percussive massage, or
21 would any attachment that -- let me strike that.

22 Does an end piece attachment need to be
23 specifically designed for percussive massage to fit
24 within your definition of massaging head here?

25 A. So you're asking if any piece can be used

1 for percussive massage, just by attaching it?

2 Q. No. I'm asking if the end piece has to be
3 specifically designed for percussive massage to fit
4 within your definition here.

5 A. Now, a massaging head for this instance to
6 translate the percussive massage, it needs to be
7 designed for percussive massage.

8 Q. And what would go into designing a massage
9 head for percussive massage?

10 A. It's going to depend on what surface
11 contact you want, what area you want the percussive
12 massage to affect, how wide of an area. It's going
13 to have to be able to withstand the forces the
14 percussive massager is going to be applying, meet
15 the right strength criteria.

16 Q. Now, I noticed that in this section you
17 cite to one passage from the '482 patent, correct?

18 A. Yes.

19 Q. Let's go ahead and go to that passage,
20 which is columns 6, line 51 to 53.

21 Now, I'm going to start reading just a
22 little bit earlier, line 49. It says: When
23 providing a deep tissue massage using a massaging
24 device, such as, for example, massaging device 100,
25 it may be desirable to switch massaging heads to

1 work on different muscles or different portions of
2 muscles during massage.

3 Do you see that?

4 **A. I do see that.**

5 Q. What from that statement, which is the only
6 basis you list in your declaration for your
7 construction of massaging head, tells you that
8 massaging head should be understood in the way that
9 you describe here as the end piece of a percussive
10 massager that contacts the user's body and is
11 capable of providing percussive massage, i.e.,
12 high-speed, deep tissue massage?

13 MR. KELLAR: Object to form.

14 **THE WITNESS: Again, this is talking about**
15 **that there is a desire to have different shape**
16 **heads to make contact with the body.**

17 It also shows, when we're talking about
18 Figure 6A and Figure 6B, that there are different
19 shapes that might be desired for making contact.

20 And it's within the context of the patent
21 that there can be different muscle groups that you
22 want to affect for different, as it says here --
23 sorry. I lost my place.

24 BY MR. BERG:

25 Q. No problem.

1 A. That you have a desire to switch the heads
2 to work on different muscles or different portions
3 of muscles during the massage.

4 And from the context of the patent, what it
5 teaches, what it shows in the figures and it
6 describes in there that there's a desire to switch
7 the head to affect different areas and have
8 different effects on the muscles, you might switch
9 the massage head out. And it's understood that the
10 part that makes contact with the body is the
11 massage head.

12 Q. Okay. So I understand you to be saying
13 that that passage you see is supporting the part of
14 your construction that said it's the end piece of a
15 massager and that it contacts the user's body.

16 What in that passage supports your
17 statement that it has to be a percussive massager?

18 MR. KELLAR: Object to form.

19 THE WITNESS: Now, overall, this is
20 referencing the patent as talking about a
21 percussive massage device and that it is using the
22 different heads to perform the percussive massage
23 from the claims.

24 BY MR. BERG:

25 Q. Of course, the patent doesn't use the word

1 "percussive massage" except in the claims, right?

2 **A. That is where it is used, is in the claims.**

3 Q. And, in fact, you reviewed the prosecution
4 history in this case, right?

5 **A. Yes.**

6 Q. And you're aware that the language
7 "percussive massage," percussive massage was not
8 added to the claims until after 2022, right?

9 **A. That is my understanding, yes.**

10 Q. Okay.

11 **A. It is how they were able to get the patent,**
12 **is by limiting the language from an apparatus down**
13 **to a percussive massage.**

14 Q. Uh-huh.

15 So do you believe that the specification is
16 only describing a percussive massager?

17 **A. Now, whether the specification can be read**
18 **on other devices does not change the fact that the**
19 **claim language specifically sets it for percussive**
20 **massage devices only.**

21 Q. But right here we're talking about the term
22 "massaging head," not the term "percussive
23 massager," right?

24 **A. We are talking about the term "massaging**
25 **head."**

1 Q. Uh-huh. And so is there anywhere in the
2 specification that you can point me to that limits
3 the massaging head to a massaging head capable of
4 providing percussive massage?

5 A. Now, the claim language limits it in the
6 preamble that it is only for percussive massage.

7 Q. So that wasn't my question. My question
8 was: Can you point me to anywhere in the
9 specification that would make you limit the term
10 "massaging head" to only percussive massage?

11 A. Based off of the file history and based off
12 of what was put forth before the patent
13 examination -- or the patent examiner, percussive
14 massage became the limiting factor for this patent.

15 Whether -- you can have a device that maybe
16 practices A, B, C, and have many of those out
17 there, but once it's limited down, it needs to have
18 A, B, C, and D as well.

19 This specifically says within the claim
20 language it has to be for a percussive massager,
21 and limits it through the claim language.

22 Q. So that still wasn't an answer to my
23 question. So let me ask it one more time.

24 Can you point me to anywhere in the
25 specification that would make you limit the term

1 "massaging head" to only percussive massage?

2 A. Again, because the specification is what
3 reads towards the claim language, the claim
4 language says it's a massage head for percussive
5 massage devices.

6 Q. So the answer is no?

7 MR. KELLAR: Object to form.

8 THE WITNESS: I've asked and answered your
9 question.

10 BY MR. BERG:

11 Q. Well, you didn't --

12 A. Well, I've -- sorry. I've answered your
13 question. Sorry.

14 Q. Okay. So can you point me to a passage in
15 the specification that limits massage head to
16 percussive massager heads?

17 A. A massage head doesn't necessarily need to
18 be percussive massage only. But within the context
19 of this patent, it's describing that the massage
20 heads are for percussive massage, based off of the
21 claim language.

22 Q. So when you say in the context of this
23 patent, you're only referring to the claim
24 language, not anything in the body of the
25 specification; is that right?

1 A. The body of the specification talks about
2 high-impact massage, which can be construed as
3 percussive massage. The massage head for this
4 device is being used in that context.

5 Q. So what passage of the specification do you
6 point me to for that limitation that you just
7 articulated?

8 A. Where it says in the "Background," 1, at
9 line -- what is it, 22? So the invention relates
10 generally to medical devices, and more
11 particularly, to a deep muscle stimulation device
12 used to increase muscle metabolism, increasing the
13 lactic acid cycle and relieve pain.

14 It's specifically designed for a deep
15 muscle stimulation, and relates to a device that
16 provides that.

17 Q. And that would only be a percussive massage
18 device that could provide that benefit?

19 A. According to the claim language, that is
20 what it's providing.

21 Q. The claim language? What do you mean by
22 that?

23 A. In the claim it limits this to a percussive
24 massage for the claim itself. Now, it might not be
25 the only thing that can provide deep tissue

1 message, but the head for this is read in context
2 of the percussive message. Within the language it
3 says a "message head."

4 It's understood that the part that makes
5 contact with the person in relation to the
6 percussive device or the percussive message device
7 as described is the message head.

8 Q. Now, you keep pointing to the preamble
9 here, and we talked about how that language,
10 "percussive massager," wasn't added until later in
11 the prosecution. And I think you testified a
12 second ago that originally some of the claims,
13 including claim 1, used the term "an apparatus"
14 instead of "a percussive massager," right?

15 A. Originally it was an apparatus.

16 Q. Originally claim 1 was an apparatus.
17 Claim 34 was always a percussive massager, right?

18 A. I'd have to look back to refresh my memory.

19 Q. Well, I'll represent to you that's the
20 case. So let's talk about claim 1.

21 So if instead of saying "a percussive
22 massager," it said "an apparatus," would you have a
23 different understanding of what massaging head
24 meant in the claims?

25 A. If it said "an apparatus," at that point it

1 would no longer be limiting the massaging head to a
2 percussive massage device at that point.

3 Q. So there's nothing about the words
4 "massaging head," per se, that give rise to this
5 plain and ordinary meaning. It's only those words
6 in the context of the preamble that's a percussive
7 massager; is that right?

8 MR. KELLAR: Object to form.

9 THE WITNESS: Again, the claim language
10 states that this is a device that is a percussion
11 massage device and that the massage head is part of
12 that.

13 BY MR. BERG:

14 Q. Okay. Now, there's, obviously, a bunch of
15 other terms in these claims that you don't address
16 specifically here. You only address percussive
17 massager and massaging head explicitly in this part
18 of your declaration, correct?

19 A. That is correct.

20 Q. Is it fair to say that in understanding the
21 other words in this claim, you also gave them their
22 plain and ordinary meaning?

23 MR. KELLAR: Object to form.

24 THE WITNESS: Yes. That is typically what
25 you do with the patent, is you accept the plain and

1 **ordinary meaning of the word as a POSITA would see**
2 **it.**

3 BY MR. BERG:

4 Q. Okay. So there's another word in here that
5 I do want to talk about. And if you look at
6 claim 34, after the percussive massager preamble,
7 the first limitation is "a housing." Do you see
8 that?

9 A. **I do see that.**

10 Q. What's your understanding of what the plain
11 and ordinary meaning of a housing is in this
12 context?

13 MR. KELLAR: Object to form.

14 **THE WITNESS:** Well, when we look at the
15 **plain and ordinary meaning for housing, it**
16 **specifically points to the housing for this unit,**
17 **where we're looking at -- let's see -- 104, and I**
18 **believe it's 102 as well.**

19 BY MR. BERG:

20 Q. Generally, in your experience as a
21 mechanical engineer, are you familiar with
22 housings?

23 A. **I am familiar with housings.**

24 Q. What is -- what are housings?

25 A. **Housings typically are the outer component**

1 that contains the movable parts within it or parts
2 of the machine itself.

3 Q. And if we look at column 5, starting on
4 line 58, there's some different housings mentioned.
5 If you just kind of look from line 58 of column 5,
6 through, let's just say, line 18 of column 6, can
7 you just go ahead and read those to yourself.

8 A. Okay.

9 Q. Now, there were several different types of
10 housings described in the sections that I had you
11 look at, correct?

12 MR. KELLAR: Object to form.

13 THE WITNESS: There were several different
14 components of a housing that are described.

15 BY MR. BERG:

16 Q. So, for example, there's a drive housing
17 218, do you see that?

18 A. I see a drive housing -- let's see. Yeah,
19 218, yes.

20 Q. And then later, there's an upper drive
21 housing in column 6, line 2, right?

22 A. Yes.

23 Q. And a lower drive housing?

24 A. Yes.

25 Q. And it also says in line 3 that motor 210

1 includes a motor housing; is that right?

2 **A. It does say there's a motor housing.**

3 Q. And later on it says, in line 10, that
4 there's a main housing. Do you see that?

5 **A. I see main housing.**

6 Q. And you see that the main housing has a
7 first cavity and a second cavity -- well, sorry.
8 Excuse me.

9 The main housing has a first cavity. Do
10 you see that?

11 **A. I do see that.**

12 Q. And then do you see it talks about an upper
13 housing?

14 **A. Yes.**

15 Q. And you see that upper housing contains a
16 second cavity?

17 **A. I see where it says that.**

18 Q. And if you go down to line 15, it says:
19 The exemplary embodiments describe a main housing
20 102 and upper housing 104. These may be portions
21 made up of a single structure or multiple
22 structures secured to each other.

23 Do you see that?

24 **A. I do see that.**

25 Q. Are all these uses of housing in columns 5

1 and 6 consistent with outer components that contain
2 movable parts within it or parts of the machine
3 itself?

4 MR. KELLAR: Object to form.

5 THE WITNESS: My understanding is it
6 discusses housings that contain components within
7 them or make up a structure.

8 BY MR. BERG:

9 Q. So in other words, the '482 patent is using
10 the word "housing" in the way that you testified
11 you typically understand housing as a mechanical
12 engineer; is that fair?

13 MR. KELLAR: Object to form.

14 THE WITNESS: I think it states what it
15 teaches: that it uses housing, as it says, to hold
16 the bearings in place; that it has an upper
17 housing, a lower housing; that there is a housing
18 for the motor, and that bolts onto a drive housing.

19 So it incorporates that it is a component
20 that contains it.

21 BY MR. BERG:

22 Q. So earlier you testified that housings are
23 typically the outer component that contains the
24 movable parts within it or parts of the machine
25 itself.

1 Do you remember that?

2 A. I remember saying something along those
3 lines, yes.

4 Q. Is housing in these two columns used in
5 that same way that you described your understanding
6 to be?

7 A. It appears to teach that it is something
8 that contains something within it.

9 MR. BERG: We've been going for about an
10 hour. I'm happy to take a break, if you guys want
11 to take a short break.

12 MR. KELLAR: Yeah, that sounds good. Thank
13 you.

14

15 (Recess ensued from 1:38 p.m. to 1:44 p.m.)

16

17 (Previously marked Deposition
18 Exhibit No. 1005 was reviewed.)

19 BY MR. BERG:

20 Q. Mr. Morrill, I'm going to hand you what's
21 been marked as Exhibit 1005 in both the '482 and
22 '082 PGRs.

23 Do you recognize this device -- or this
24 document?

25 A. I do recognize this document.

1 Q. And if I refer to this as Mabuchi, will you
2 understand I'm talking about this patent?

3 A. Yes.

4 Q. Now, in your declaration you describe
5 Mabuchi starting in paragraph 67. Do you see that?

6 A. Yes.

7 Q. And your description goes all the way
8 through to paragraph 77, correct?

9 A. Yes.

10 Q. Now, looking at Figure 1 of Mabuchi, which
11 you've annotated on page 28 of your declaration.

12 A. Uh-huh. Yes, sorry.

13 Q. Would you agree with me that Mabuchi
14 operates by converting the rotational motion of the
15 motor into linear motion that's ultimately driving
16 a piston, referred to as the actuator, that moves a
17 pater and pater assembly?

18 A. Mabuchi teaches that it does transfer
19 rotational motion into linear motion that does move
20 a pater assembly.

21 Q. If we go to Mabuchi, column 1, particularly
22 the paragraph that begins at line 31, do you see
23 that one of the objects of Mabuchi is to provide a
24 device that repeatedly pats the skin by causing a
25 pater or pater assembly to hit the skin at a

1 given rate to impact the skin's surface?

2 A. I see where it says that.

3 Q. Is that consistent with your understanding
4 of Mabuchi?

5 A. My understanding is that it creates a
6 patting effect on the skin.

7 Q. Are you aware of anywhere in Mabuchi where
8 it specifies the rate at which it's required to hit
9 the skin?

10 A. I don't believe that Mabuchi specifies the
11 rate at which it hits the skin, other than that it
12 is to simulate patting or tapping of the palm or
13 the finger.

14 Q. And where is that disclosure at?

15 A. Let's see. I'm trying to remember exactly
16 where it says that.

17 There it is. Okay. I thought it was in
18 column 1. So if you go to column 1, 14: It is a
19 wide-spread practice as beauty treatment to
20 repeatedly tap or pat the skin surface with
21 fingertips or palms.

22 It talks how conventional devices don't do
23 that. So they're trying to -- that is what they're
24 trying to overcome, is a device that does not treat
25 the skin like tapping or patting would be done with

1 the palms or the fingertips.

2 Q. So I guess I'm just having a hard time
3 connecting the dots there.

4 So I see in the "Description of the Prior
5 Art," it says: It is a wide-spread practice as
6 beauty treatment to repeatedly tap or pat the
7 skin's surface with fingertips or palms.

8 I guess I'm not seeing where it says that
9 Mabuchi is trying to imitate that with its device.

10 A. It says in the "Description of the Prior
11 Art" that: Conventionally, various apparatuses
12 have been invented to produce similar face-lifting
13 effects, in which included are an apparatus for
14 applying vibration to the skin surface and an
15 apparatus for patting parts of the body.

16 The vibrators, however, only press and/or
17 knead the skin, causing the skin to stretch. This
18 may result in loosening of the skin or wrinkling in
19 some cases. On the other hand, the conventional
20 patten device which is intended mainly for the
21 massage of the muscular tissues, not for beauty
22 treatment of the skin. In this case, the
23 conventional patting device --

24 (Court Reporter Clarification.)

25 Sorry.

1 In this sense, the conventional patting
2 device belongs to the category of massager.

3 So it's talking about the prior art that is
4 attempting to do similar things don't do that. And
5 it is what they're trying to overcome, is devices
6 that will allow for patting or tapping similar to
7 fingertips or palms. That is my understanding.

8 Q. But you can't point me to anywhere that
9 links the Mabuchi device to the patting or tapping
10 of the skin surface with fingertips or palms; is
11 that right?

12 A. It specifically says that, if we go down
13 to, say, between 35 and 40, that a device -- that
14 it's maintaining the distance between the device
15 and the skin surface being patted, and both a plate
16 member and cushion member comprising a patten
17 assembly fitted to the actuator are adapted to
18 protrude slightly from the end of the face to the
19 space.

20 So it's talking about treating patting and
21 causing patting throughout Mabuchi.

22 Q. Uh-huh.

23 A. In the preamble it says the other devices
24 don't do the same thing as a finger or a palm. And
25 this is now saying, in order to produce patting,

1 similar to what they discussed there, repeated
2 tapping or patting of the skin's surface with
3 fingertips or palms.

4 Q. Okay. So let's talk about that term,
5 "patting."

6 So you would agree that some patting
7 devices are massagers, right?

8 MR. KELLAR: Object to form.

9 THE WITNESS: In what context?

10 BY MR. BERG:

11 Q. Well, I'm referring to the context you just
12 read a second ago in column 1, line 26 to 28, where
13 it says: In this sense, the conventional patting
14 device belongs to the category of massager.

15 Do you see that?

16 A. I do see that.

17 Q. And do you agree that some patting devices
18 belong to the category of massager?

19 A. It does state that some patting devices are
20 construed as a massager, and it's making
21 distinction between Mabuchi and those massaging
22 devices.

23 Q. And Mabuchi is a patter device as well,
24 correct?

25 A. It is a patter device.

1 Q. So, in other words, as a simplification, if
2 we think of patter devices as a superset of
3 devices, there would be some subset of those
4 devices that are massagers and some subset of those
5 devices that are devices like Mabuchi. Is that
6 fair?

7 MR. KELLAR: Object to form.

8 THE WITNESS: That is what Mabuchi states,
9 that there are some patting devices that would fall
10 under massaging and that they are trying to
11 overcome that by creating a patting device that is
12 not a massager.

13 BY MR. BERG:

14 Q. What's your understanding of how the patter
15 or patter assembly interacts with a user's skin in
16 the device described by Mabuchi?

17 A. My understanding is that Mabuchi has a
18 resilient member at the distal end of the device
19 such that the full stroke of the patter is not
20 fully pressed into the person's skin, that it
21 merely is a surface-level contact.

22 Q. Now, if you go to column 2, lines 53 to 55,
23 it describes the patter or patter assembly as
24 comprising a plate member, a cushion member, a
25 patter body, and a patter slide tube, correct?

1 MR. KELLAR: Object to form.

2 THE WITNESS: That is what it says.

3 BY MR. BERG:

4 Q. And that patter or patter assembly is
5 connected to the actuator of the Mabuchi device,
6 correct?

7 A. That is what it states.

8 Q. Now, if you turn over to column 3, starting
9 at line -- I guess it's about -- well, let's
10 actually -- we'll come back to column 3.

11 Let's go to column 4, about line 11. Do
12 you see the sentence that says "That is, the
13 cushion member 8"?

14 A. I see that spot.

15 Q. Okay. I'm going to continue reading from
16 there: cushion member 8 of the patter assembly 6
17 strikes the skin surface at the velocity v so long
18 as the skin surface being treated exists at the
19 open face of the space guide 5.

20 Do you see that?

21 A. I do see that.

22 Q. So having reviewed Mabuchi in connection
23 with this PGR, do you agree that the patter
24 assembly strikes the skin surface at a certain
25 velocity?

1 **A. I agree that the patter surface is moving**
2 **at a velocity when it does make contact with the**
3 **skin.**

4 Q. And if we go back to column 3, do you see
5 around line, I guess, 39 through 51, it provides a
6 formula for calculating the velocity of the
7 actuator?

8 **A. Yes.**

9 Q. And that velocity relates to several
10 variables here, right?

11 **A. It does.**

12 Q. Including the radius of the crank shaft,
13 the length of the rod, the rotating angle of the
14 rotating disk, angular velocity of the rotating
15 disk, and then some combinations of those; is that
16 right?

17 **A. That's what it shows.**

18 Q. Do you understand this formula for
19 velocity?

20 **A. It's the formula for determining linear**
21 **velocity from rotational velocity based at a**
22 **distance R.**

23 Q. And is that something you're familiar with
24 from your work as a mechanical engineer?

25 **A. Yes.**

1 Q. And does it appear to be an accurate
2 formula?

3 A. It appears to be accurate.

4 Q. Now, as a mechanical engineer, would you
5 understand that you could change the quantity -- or
6 you could change the values associated with these
7 variables to achieve a different velocity? Right?

8 MR. KELLAR: Objection to form.

9 THE WITNESS: So can you restate the
10 question?

11 BY MR. BERG:

12 Q. Sure. Do you understand that if you wanted
13 to change the velocity in formula 1, that you could
14 do so by adjusting the values of the different
15 variables, for example, the radius of the crank
16 shaft or the length of the rod or the rotating
17 angle or the angular velocity of the rotating disk?

18 A. That will affect the speed, the linear
19 speed, yes.

20 Q. And if you as a mechanical engineer were
21 designing a device based on Mabuchi, you'd be able
22 to achieve a range of different velocities by
23 pulling those levers in your design; is that
24 correct?

25 MR. KELLAR: Object to form.

1 **THE WITNESS:** Now, while Mabuchi does teach
2 how to determine the linear speed that is outputted
3 when you change those variables, it doesn't
4 necessarily determine the force with which it
5 actually makes contact with the face or how it
6 actually pats.

7 It merely says these are ranges and what
8 speed it will be running at with the variables
9 based off of this formula.

10 BY MR. BERG:

11 Q. But to go back to my question, as a
12 mechanical engineer, if you were designing a device
13 based on Mabuchi, you'd be able to achieve a range
14 of different velocities by pulling on the levers
15 represented by these different variables in
16 formula 1, correct?

17 MR. KELLAR: Object to form.

18 **THE WITNESS:** By changing the variables,
19 you can change the speeds.

20 BY MR. BERG:

21 Q. Now, you did mention a second ago that
22 Mabuchi is talking here about velocity, but not
23 necessarily about force that's being imparted; is
24 that right?

25 A. Yes.

1 Q. How would you determine what force is being
2 imparted?

3 A. The force that's being imparted is
4 dependent on the momentum of the device, as well as
5 because of what Mabuchi teaches with the resilient
6 members that it uses will -- that, in fact, affects
7 the force that's created because there will be
8 decelerations that occur, based off of the
9 resiliency, and will result in the force that's
10 actually seen.

11 Q. And so the -- the force that's imparted is
12 dependent on the momentum, and that momentum would
13 be influenced by -- well, I guess, let me ask this.

14 What factors would influence that momentum?

15 A. Momentum is basically the mass of the
16 object and the speed of the object.

17 Q. So the momentum here would be the mass of
18 the patter or patter assembly along with the speed
19 of the patter or patter assembly; is that right?

20 A. That would affect its momentum.

21 Q. And then to determine the ultimate force
22 that was being imparted to the user, you'd have to
23 look at additional factors as well, including
24 the -- I think you testified about the resilient
25 member; is that right?

1 **A. Yes.**

2 Q. And that's because -- well, if we look at
3 one of these figures.

4 So if we look at Figure 8, for example,
5 which I think you've also annotated in your
6 declaration -- yeah. On page 32 of your
7 declaration, you annotated Figure 8.

8 But the resilient member that you're
9 referring to is number 11 in this figure, correct?

10 **A. Yes.**

11 Q. And it looks like number 11 is depicted as
12 being a spring?

13 **A. It is depicted as being a spring.**

14 Q. And so the force that's ultimately imparted
15 to the user would depend on the momentum that
16 the -- that the head of the patten assembly or the
17 patten has, along with the -- I guess it would be
18 the K value of that spring; is that right?

19 **A. The spring constant for the spring, yes.**

20 Q. And so if it was a stiffer spring, would
21 that make the force greater or smaller in this
22 case?

23 **A. A stiffer spring would make it greater.**

24 Q. And so as a mechanical engineer, thinking
25 about Mabuchi, you would understand that you could

1 change the force at which the patter impacted the
2 user by changing the velocity and/or by changing
3 the spring that's in the resilient member; is that
4 right?

5 A. My understanding is that those can be
6 changed to change the force with which Mabuchi is
7 teaching.

8 My understanding is also that Mabuchi is
9 trying to simulate the force of just patting or
10 tapping with the fingers and the palm of the hand.
11 And so the desired effect is to have it simulate
12 that patting effect.

13 Q. Now, would you mind turning to column 5 of
14 Mabuchi.

15 Now, at the end of the top paragraph there,
16 if you start at line 5, there is a sentence that
17 starts "In this way." Do you see that?

18 A. I see that.

19 Q. It says: In this way, the patter contacts
20 the skin before the actuator has reached its
21 extended dead center position so that there is
22 still some velocity at the patter when it contacts
23 the skin.

24 Do you see that?

25 A. I do see that.

1 Q. How do you understand what's being meant
2 here by "before the actuator has reached its
3 extended dead center position"?

4 A. The actuator itself will reach a dead
5 center position when it is fully -- if we look at
6 the images provided, let's say Figure 4, where you
7 can see it has reached a dead-center position where
8 the mechanism 3 is in line with the piston.

9 Q. I see. And so by reaching -- by contacting
10 the skin before it's reached that position, that
11 ensures that there is some velocity of the patten
12 when it touches the skin; is that right?

13 A. There is some velocity on the patten at the
14 time it makes contact.

15 Q. Now, if you go to the next paragraph,
16 starting in column 10 -- or column 10 -- sorry,
17 line 10, it says: Figures 6 and 7 are diagrams
18 illustrating another embodiment of the beauty
19 treatment device according to this invention, where
20 a cushion member 8A is fitted to the plate member 7
21 to substitute for the resilient member that is
22 compressed while the patten assembly 6 strikes the
23 skin surface.

24 Do you see that?

25 A. I do see that.

1 Q. So is it your understanding, then, that
2 some embodiments of Mabuchi have a resilient member
3 like we looked at in Figure 8, and some embodiments
4 of Mabuchi do not have a resilient member like in
5 Figure 8?

6 A. It is my understanding that not all of them
7 have a spring as a resilient member.

8 My understanding of this is teaching that
9 the cushion member then becomes a resilient member.

10 Q. And so let's look at what that cushion
11 member is. So this is in Figures 6 and 7, and the
12 cushion member is 8A. Correct?

13 A. Yes.

14 Q. So if we look at Figures 6 and 7, do you
15 see that 8A is the portion of the patten assembly
16 that makes contact with the user's skin?

17 A. I do see that is the portion that makes
18 contact with the user's skin.

19 Q. In these embodiments, there's no resilient
20 member, right?

21 A. No, there is.

22 Q. What's the resilient member?

23 A. The cushion member is the resilient member.

24 Q. Oh, I see.

25 A. If you look at Figure 6 in relation to

1 **Figure 7, the one shows Figure -- or 8A being**
2 **compressed in Figure 6, and in Figure 7 it shows 8A**
3 **not being compressed. And so it is acting as a**
4 **resilient member, according to Mabuchi's teachings.**

5 Q. Right. So in other words, 8A would be some
6 compressible material that, when it impacted the
7 user, would reduce the force that was being
8 imparted to the user; is that right?

9 A. It is some member that would give or
10 compress, reducing the force that would be
11 generated by Mabuchi to simulate the tapping of the
12 finger or the palm.

13 Q. And as a mechanical engineer, would you
14 understand that you could replace 8A with any
15 number of different types of materials, for
16 example?

17 MR. KELLAR: Object to form.

18 THE WITNESS: Again, to practice what
19 Mabuchi is teaching, my understanding is that you
20 can replace it with multiple materials, but your
21 desired effect is still to have a patting system,
22 similar to a finger or a palm making contact.

23 And so you would not just replace it with
24 any material, but you'd replace it with a material
25 that would simulate such an effect.

1 BY MR. BERG:

2 Q. What would happen if you replaced it with a
3 rigid material?

4 A. If you replaced it with a rigid material,
5 it would not practice what Mabuchi is teaching.

6 Q. What would it do?

7 A. It would then reach a full stroke.

8 Q. And it would impart greater force to the
9 user?

10 A. It could impart greater force to the user,
11 beyond what Mabuchi is intended and what Mabuchi
12 teaches.

13 Q. Would it be outside of your skill set --
14 well, let me rephrase that.

15 Would it be outside the skill set of a
16 person of skill in the art to replace the cushion
17 member 8A with a more rigid material?

18 MR. KELLAR: Object to form.

19 THE WITNESS: It is not outside the skill
20 set of someone to replace 8A with a more rigid
21 member, but then again, it would go against what
22 Mabuchi teaches and is practicing.

23 BY MR. BERG:

24 Q. Would it be difficult to make that
25 replacement?

1 A. Again, well, it would not be difficult to
2 make that replacement. It would be outside what
3 Mabuchi teaches and what Mabuchi intends its use
4 for.

5 Q. Now, if you go back to your declaration and
6 paragraph 70, you talk a little bit about a
7 component called the space guide. Do you see that?

8 A. I do see that.

9 Q. What's your understanding of the role of
10 the space guide in Mabuchi?

11 A. My understanding of the space guide is it
12 is there to create a specific distance between the
13 user's face and the patter assembly as it
14 reciprocates in and out.

15 Q. Now, you cite, in paragraph 72, column 5,
16 lines 39 to 51. Do you see that?

17 A. Paragraph 72.

18 Q. Sorry, paragraph 70.

19 A. Okay.

20 Q. Oh, yeah, I said paragraph 72. I
21 apologize.

22 A. That's okay. I was trying to figure out
23 where you were at.

24 So you say in paragraph 70 where I
25 recite --

1 Q. You point to -- when you're talking about
2 the space guide, you cite to column 5, lines 39 to
3 51 of Mabuchi, right?

4 A. Column 5, 39 through 51.

5 Q. Now, you would agree with me in that
6 section, and in particular if you look at lines 46
7 to 51 of Mabuchi, that Mabuchi describes what the
8 result would be if you eliminated the space guide,
9 right?

10 A. It does say what would happen if you
11 eliminated the space guide.

12 Q. And what would that result be?

13 A. Well, he talks about it being kept in
14 contact with the skin surface at all times to exert
15 a pushing force onto the skin, rather than the
16 patting force. It's teaching away from what he's
17 intended.

18 Q. And so if you removed the space guide, the
19 patten assembly would exert a greater force on the
20 user's skin; is that right?

21 MR. KELLAR: Object to form.

22 THE WITNESS: It could exert a greater
23 force. It's going to depend on the resilient
24 member as well as how far it actually goes. We
25 discussed earlier that part of the force is

1 dependent upon the momentum of the object, this
2 being the patter assembly and the speed.

3 If you are completely compressed without
4 it, now you have no speed behind it, and it's
5 really dependent on the force that can be generated
6 by the reciprocating motor.

7 BY MR. BERG:

8 Q. Okay.

9 A. That, again, doesn't practice what Mabuchi
10 teaches.

11 Q. Now, if you skip ahead to paragraph 73 of
12 your declaration, you describe the patter assembly
13 as a complex mechanism that is designed to avoid
14 applying a pushing force to the user's skin.

15 Do you see that?

16 MR. KELLAR: What paragraph are we in?

17 MR. BERG: Paragraph 73.

18 THE WITNESS: It's at the very bottom of
19 page 31 and goes over to 32.

20 I do see that.

21 BY MR. BERG:

22 Q. And in paragraph 74, you explain your
23 understanding of Mabuchi, that the combination of
24 the complex patter assembly and the space guide
25 avoid exerting a pushing force on the skin -- the

1 skin surface, rather than patting the skin; is that
2 right?

3 **A. It is intended to create a patting effect**
4 **to the skin, rather than just a pushing force.**

5 Q. Now, at the end of that paragraph 74, you
6 say: Operating together, the space guide 5 and the
7 patter assembly 6 ensure that Mabuchi's beauty
8 treatment device has an effective stroke length of
9 zero or near zero when in contact with the skin.
10 That is, it does not press into the user's body
11 beyond the open end of the space guide.

12 Is that right?

13 MR. KELLAR: Object to form.

14 **THE WITNESS: Yes, I do say that it**
15 **produces a zero, or near zero, effect when it makes**
16 **contact.**

17 BY MR. BERG:

18 Q. Now, when you're talking about stroke
19 length here, are you talking about the depth that
20 the device penetrates into the skin, or are you
21 talking about the distance that the actuator
22 travels?

23 **A. I'm talking about the end travel beyond the**
24 **spacer guide. So the effective stroke length of**
25 **the patter assembly as it reaches the end of the**

1 guide, when it's up against the skin, becomes near
2 zero.

3 There will be some give from the skin, but
4 with the way he's talking about it, it will be
5 similar to a finger or palm patting. While it's
6 making contact, it's not trying to penetrate deeply
7 into the skin. It's merely trying to do a
8 surface-level pat.

9 Q. So, now, earlier when we were discussing
10 percussive massager in the context of the '482
11 patent, we talked about stroke length. Do you
12 remember that?

13 A. Yes, I do remember that.

14 Q. So if I had a percussive massager and I
15 held it -- like we -- I think we talked about this
16 example.

17 Say my percussive massager had a total
18 stroke length of 8 millimeters, an amplitude of 8
19 millimeters, and I held it 7.9 millimeters away
20 from my face, in that context, would you say that
21 the stroke length is 8 millimeters
22 or .1 millimeters?

23 A. For the percussive massager, it is still a
24 stroke length of 8 millimeters.

25 What we're talking about with Mabuchi is

1 you have this patten assembly that, while
2 internally the piston might have the stroke length
3 that stays consistent, once it makes contact with
4 the skin, the resilient member reduces the
5 effective stroke length beyond the spacer device to
6 near zero.

7 Q. So when you provided your construction of
8 percussive massager that it had a long stroke
9 action, were you referring to the effective stroke
10 length or the stroke length?

11 A. In a percussive massager, the stroke length
12 is the effective stroke length, typically, when
13 it's being used.

14 Now, in this case, you have two different
15 things that affect the stroke length. You'll have
16 a reciprocation motion inside and a piston that has
17 a consistent and constant stroke.

18 But once this resilient member comes into
19 effect and the patten assembly makes contact with
20 the skin beyond the spacer, that stroke length
21 becomes zero when it's up against the person's skin
22 or against any other thing. If I put it to the
23 table, it controls that.

24 So, effectively, it prevents it from going
25 beyond the spacer, and it is intended to be that,

1 just to create that pushing pressure, not
2 necessarily the percussion effect that you would
3 see with a percussive massager.

4 Q. And so that effect of the spacer guide
5 would be a similar effect to if I held a percussive
6 massager far enough away from my body that it was
7 near the end of its stroke length; is that right?

8 A. Not completely. Like Mabuchi teaches,
9 without that spacer assembly, it then will push
10 into the skin and not have the same effect.

11 Mabuchi specifically teaches to have the
12 resilient member or the cushion member to not -- or
13 protrude beyond the spacer device when it makes
14 contact with the skin.

15 If I was to hold this device such that it
16 was hitting into my skin 1 millimeter, it's still
17 hitting in at the full stroke length. It's got the
18 momentum that's behind it now. It's not the same
19 effect that Mabuchi is trying to teach about.

20 Q. You'd agree, for example, that if I -- just
21 taking 8 millimeters again as an arbitrary
22 number -- if I had an 8-millimeter amplitude
23 massage gun and I held it 7.9 millimeters from my
24 skin, that that long amplitude would result in it
25 disconnecting from my skin after every stroke,

1 right?

2 **A. It would disconnect from the skin after**
3 **every stroke.**

4 Q. Okay. Now, Mabuchi provides a number of
5 different embodiments for how the pater assembly
6 is connected, right, which it refers to as the
7 pater connecting mechanism, right?

8 **A. It does disclose several disconnecting**
9 **mechanisms.**

10 Q. So, for example, it says in column 5, lines
11 65 through 67: The beauty treatment device of this
12 invention, therefore, has a pater connecting
13 mechanism for facilitating the changing of the
14 pater assembly, some forms of which are shown in
15 Figures 8 through 20.

16 Right?

17 **A. That is what it says.**

18 Q. And then it proceeds to give some examples
19 from Figures 8 and 9 in column 6 of that pater
20 connecting mechanism, right?

21 **A. It does say in column 6 that the connection**
22 **mechanism of this invention is shown in Figures 8**
23 **and 9.**

24 Q. And then if we go down to about line 52 of
25 column 6, it says that Figures 10 through 12 show

1 another example of a patter connecting mechanism,
2 right?

3 **A. That's what it states.**

4 Q. And that is a different connecting
5 mechanism than the one shown in Figures 8 and 9?

6 **A. I believe it is, yes.**

7 Q. Okay. And then if we go to column 7,
8 line 8, you see that Figures 13 and 14 show another
9 example of the connecting mechanism, right?

10 **A. It does show another example.**

11 Q. And that's a different example of a
12 connecting mechanism than the previous two,
13 correct?

14 **A. I believe it is.**

15 Q. Okay. And then in column 7 at lines 34 to
16 35, it says: Figures 15 and 16 show another
17 example of the connecting mechanism according to
18 this invention.

19 Do you see that?

20 **A. I do see that.**

21 Q. And that's yet another different example of
22 the connecting mechanism?

23 **A. It's showing another example of a
24 connecting mechanism that can be used for this.**

25 Q. And Figure 17, when we get down to line 58,

1 is yet another example of the patter connecting
2 mechanism?

3 **A. That's what it says.**

4 Q. And Figures 18 and 19 are another different
5 example of the patter connecting mechanism; is that
6 right?

7 **A. It does show another one in Figure 18 and**
8 **19, yes.**

9 Q. And the patter connecting mechanism in
10 Figures 18 and 19 use some magnets, right?

11 **A. That is correct. They do use magnets in**
12 **Figures 18 and 19.**

13 Q. In your work as a mechanical engineer, have
14 you worked with magnets?

15 **A. I have.**

16 Q. And the type of magnets described here in
17 Mabuchi is -- I think you say in your declaration
18 is a radially oriented alternating polarity magnet,
19 right?

20 **A. Yes.**

21 Q. Can you describe what is meant by a
22 radially oriented alternating polarity magnet?

23 **A. It means that around the axis of the**
24 **magnet, one side will be north and the other side**
25 **will be south, positive or negative, as it were.**

1 Q. Okay. And that's contrasted to other
2 magnets that, for example, the entire surface would
3 be a north polarity, and the opposite surface would
4 be a south polarity; is that right?

5 A. That is correct.

6 Q. What are those types of magnets referred to
7 as?

8 A. I believe it's a polar -- I might have to
9 look it up again, but --

10 Q. Okay. I just wanted to use the right word,
11 but I wasn't positive what it was.

12 A. No, I've looked it up, and I know it, and
13 I've seen it before, but I don't remember off the
14 top of mind.

15 Q. So in -- just for -- so in paragraph 77 of
16 your declaration, you talk about the '482 patent
17 having those types of magnets, and you refer to
18 them as two opposing magnets arranged with their
19 different poles facing the connection direction of
20 the massaging head and the piston.

21 Do you see that?

22 A. I do see that.

23 Q. And those are those other types of magnets
24 that we were talking about?

25 A. Where one faces in one polarity and the

1 other faces another polarity, yes.

2 Q. Okay. So if I just refer to those as
3 opposing magnets, which is, I guess, the language
4 you used in 77, you'll understand what I'm talking
5 about?

6 A. I will understand that, yes.

7 Q. All right. And in your work as a
8 mechanical engineer, have you worked with both
9 opposing magnets and radially oriented alternating
10 polarity magnets?

**11 A. I've worked with several magnets and
12 similar ones, yes.**

13 Q. Now, if you were to take two opposing
14 magnets, two small opposing magnets, and orient
15 them so that the north pole of one was facing the
16 north pole of the other and try to bring those
17 together, what would happen?

18 A. They would push themselves apart.

19 Q. Now, if you were to hold those magnets
20 loosely so they were in that same orientation and
21 bring them together, what would happen?

22 MR. KELLAR: Object to form.

**23 THE WITNESS: That's going to depend on how
24 strong the magnets are and how close they come
25 together.**

1 BY MR. BERG:

2 Q. Assume that you bring them very close
3 together and they're reasonably strong magnets.

4 MR. KELLAR: Same objection.

5 **THE WITNESS: They will typically flip**
6 **around on their -- themselves without anything**
7 **constraining them and cause the poles to go back**
8 **together.**

9 BY MR. BERG:

10 Q. Now, let's consider the radially oriented
11 alternating polarity magnets, and let's just
12 imagine a scenario where you had one radially
13 oriented alternating polarity magnet at the bottom
14 of a tube fixed in place.

15 Okay? Do you understand the setup that I'm
16 referring to?

17 **A. I believe so. You're saying you have a**
18 **radially oriented magnet at the bottom of a tube.**

19 Q. Uh-huh. Now, let's say that you took
20 another radially oriented magnet and you held it
21 into that tube and you constrained it from
22 rotating, and you held it so that the north sides
23 of the two magnets lined up with each other.

24 What would the effect be as you lowered
25 that magnet towards the one at the bottom of the

1 tube?

2 A. They would repulse --

3 MR. KELLAR: Object to form.

4 THE WITNESS: -- from each other.

5 (Court Reporter Clarification.)

6 THE WITNESS: Repulse away from each other.

7 BY MR. BERG:

8 Q. Now, what would happen if instead you
9 rotated the top magnet so that the south pole side
10 was over the north pole side of the magnet at the
11 bottom of the tube?

12 MR. KELLAR: Same objection.

13 THE WITNESS: At that point they would
14 become connected together or attract each other.

15 BY MR. BERG:

16 Q. Now, assume the scenario that you orient
17 the top magnet so that the north pole is over the
18 north pole again, but instead of holding that
19 magnet firmly, you allowed it to rotate as you
20 pushed it down. What would happen?

21 MR. KELLAR: Object to form.

22 THE WITNESS: It's going to depend on the
23 situation. Typically, if you just let it drop and
24 there's no reciprocation that's occurring, it can
25 realign itself. But with reciprocation from the

1 other end, there is a chance that it will just push
2 it right out, if you are not trying to constrain
3 it, and cause it to fall.

4 BY MR. BERG:

5 Q. If I only pushed -- if I only exerted a
6 downward force, but didn't hold it in a particular
7 orientation, would it itself align in the way that you
8 just described?

9 A. Not always.

10 MR. KELLAR: Object to form.

11 BY MR. BERG:

12 Q. What would cause it to align or not
13 self-align?

14 MR. KELLAR: Objection to form.

15 THE WITNESS: It's going to depend on the
16 motion that's happening.

17 With what Mabuchi teaches, they have the
18 polar -- the poles on the faces opposite. If you
19 had it misaligned, and with what is being taught in
20 the '482 patent, if you have reciprocation
21 occurring and you're just trying to push it, you'll
22 get initial push that can cause it to start to
23 move. And as it pulls back, it can fall out
24 without actually making contact, if you're only
25 trying to provide that vertical motion like you're

1 saying.

2 It's not always going to be able to align,
3 and you're not going to be able to guarantee that
4 it will align if you just try to drop it in place.

5 BY MR. BERG:

6 Q. So if we're just talking about my tube
7 setup, and not -- not -- with no reciprocating
8 motion, you'd agree that they would self-align in
9 that situation that I'm only exerting a downward
10 force and not constraining the rotation?

11 MR. KELLAR: Objection to form.

12 THE WITNESS: They can self-align, but
13 other times they can actually keep themselves
14 repulsed if they're in the right orientation. They
15 won't always self-align.

16 BY MR. BERG:

17 Q. What would cause them to not self-align in
18 that situation that I'm pushing it down towards the
19 other one?

20 A. Again, if you have it where the north and
21 the north are aligned and the south and the south
22 are aligned, it's less likely that they will
23 self-align; that they would repulse each other.

24 And if you're just providing merely
25 guidance and allowing them to go together on their

1 own, you can have them repulse each other.

2 Q. But if I wasn't merely providing guidance,
3 I was actually exerting a downward force?

4 MR. KELLAR: Object to form.

5 THE WITNESS: Again, it will depend on the
6 situation. But I'd have to test to see exactly
7 what would happen every time. But it's not
8 guaranteed that you will align them every time.

9 BY MR. BERG:

10 Q. Would you agree with me that in many cases
11 they would align in that scenario?

12 MR. KELLAR: Object to form.

13 THE WITNESS: I will agree that it can
14 align, but not necessarily every time.

15 BY MR. BERG:

16 Q. Now, looking at -- going back to Mabuchi
17 and talking about this magnet patter connection
18 embodiment, the patent for this connection
19 connecting -- patter connecting mechanism doesn't
20 use any kind of threaded connector, correct?

21 A. Any type of threaded connector at all
22 within it, or merely at the magnetic?

23 Q. At the interface between the -- so,
24 specifically, the patter connecting mechanism
25 doesn't use any sort of threading, correct?

1 **A. The magnets do not have any threading on**
2 **them.**

3 Q. And is there any threading on any part of
4 the patter connecting mechanism in Figures 18 and
5 19?

6 **A. There could be threaded connections there.**
7 **I don't know right off. But where the magnets make**
8 **contact, it does not specify threading there.**

9 Q. Okay. Now, in column 8, at line --
10 starting at line 18, it talks about how a user can
11 change the patter assembly by turning the patter
12 assembly or the flange in either direction.

13 Do you see that?

14 MR. KELLAR: Object to form.

15 **THE WITNESS: I see where it says that you**
16 **can rotate the flange.**

17 BY MR. BERG:

18 Q. Where are you looking?

19 **A. So, like you said, in 18: To change the**
20 **patter assembly 6, the coupling 14 or the flange 15**
21 **or both are turned.**

22 Q. Okay. So either the coupling 14 or the
23 flange 15 can be turned, right?

24 **A. You can turn either one. But if you don't**
25 **turn both, they will stay together.**

1 Q. Or at least you'd need to hold one of them
2 fixed and turn the other one, right?

3 A. Yes.

4 Q. And when we're talking about components 14
5 and 15, if we look at Figure 19, 15 is on the
6 patter assembly side, and 14 is on the actuator
7 side; is that right?

8 A. That's correct.

9 Q. Now, why does turning the two components
10 cause a disconnection?

11 A. By holding one fixed and rotating the
12 other, it changes the alignment of the poles from
13 being north to south to being north to north and
14 south to south, which then pushes them apart,
15 repulses them.

16 Q. Now, when we go down to -- starting at
17 line 26, instead of talking about disconnecting,
18 Mabuchi is now talking about connecting the patter
19 assembly to the actuator, right?

20 A. 26, it says: When connecting the patter
21 assembly to the actuator 4.

22 Q. And specifically it says that to do that:
23 "the end face of the actuator is brought in close
24 contact with the end face of the flange 15."

25 Right?

1 **A. It does say that.**

2 Q. Does it say anywhere in this section that
3 the two need to be brought into close contact in a
4 particular orientation?

5 **A. It says that they need to be brought into**
6 **close contact with each other. It's understood,**
7 **because of the way the magnets are set up, that**
8 **just bringing them up into close contact doesn't**
9 **necessitate that they will be connected.**

10 Q. When you say it's understood, you mean it's
11 understood by --

12 **A. A POSITA.**

13 Q. -- a POSITA reading this patent?

14 **A. Yes.**

15 Q. But it's not stated in the patent; is that
16 right?

17 **A. It says that you need to bring them in**
18 **close contact and make the coupling.**

19 Q. Okay. Now, if we go down to the next
20 paragraph that begins at line 33, and we look at
21 the last sentence of that paragraph, it says: In
22 addition, positive connection can be ensured
23 without positioning the actuator and the patter
24 assembly.

25 Do you see that?

1 A. **Sorry. I was just reading it.**

2 Q. No, you're fine.

3 A. **Would you restate that again.**

4 Q. Yeah. So I'm in the paragraph that begins
5 at line 33.

6 A. **Mm-hmm.**

7 Q. And reading the last sentence of that
8 paragraph, it says: In addition, positive
9 connection can be ensured without positioning the
10 actuator 4 and the patter assembly 6.

11 Do you see that?

12 A. **I do see that.**

13 Q. What do you understand is meant by "without
14 positioning" in that sentence?

15 A. **If we look at the paragraph before it, it
16 says: The connection mechanism utilizing the
17 different polarities of the magnet 43 and 44 ensure
18 positive connection of the actuator 4 and patter
19 assembly 6, both of which are subject to vibrations
20 caused by high-speed reciprocation motion. In
21 addition, positive connection can be ensured
22 without positioning the actuator 4 and the patter
23 assembly 6.**

24 My understanding is that when they are
25 together, they are positioned and they will hold

1 together.

2 Q. So I guess I'm not -- I see where you read
3 there. I'm just not following what you're saying
4 it means that positive connection can be ensured
5 without positioning the actuator and the patter
6 assembly.

7 A. My understanding is that --

8 MR. KELLAR: Object to form.

9 THE WITNESS: Sorry.

10 My understanding is that when they are
11 connected together, you don't need to do anything
12 further to position them. They are together. And
13 that they have a connection at that point when they
14 are together.

15 BY MR. BERG:

16 Q. Now, do you see in that sentence that you
17 read me, the end of that sentence refers to the
18 "high-speed reciprocating motion" of Mabuchi?

19 A. I do see it says "high-speed reciprocating
20 motion."

21 Q. What do you understand is meant by
22 "high-speed reciprocating motion" there?

23 A. My understanding is that it is a speed to
24 simulate finger patting or palm patting, that
25 the -- what would be high speed for Mabuchi would

1 be similar to what could be generated by a hand or
2 a finger.

3 Q. And what -- I guess, what is your basis for
4 that conclusion?

5 A. Again, based off of what Mabuchi is
6 teaching is trying to overcome other devices that
7 do not provide similar contact between -- that
8 simulate finger contact or palm contact.

9 Q. So in this context, how many strokes per
10 minute would you say is high speed?

11 A. In this context, it would depend on how
12 many contacts you can create with a finger in an
13 amount of time on the face or a palm. But it's
14 going to be probably lower than 100 RPM.

15 Q. How did you come up with lower than
16 100 RPM?

17 A. Based off of how many contacts I can create
18 in one second. It's not very much. And if I'm
19 trying to pat, that is going to determine the
20 speed. 100 is a rough estimate at this point. But
21 it would be high speed for this device.

22 Q. Are you trained in massage?

23 A. I've actually had some training in massage,
24 yes.

25 Q. And what was that training?

1 **A. It was called Chua K'a massage. It was a**
2 **Korean-style massage.**

3 Q. And did you develop skills for patting or
4 tapping rapidly in that training?

5 **A. That training dealt mostly with long**
6 **pressure compression.**

7 Q. Since you mentioned it, I did want to go to
8 paragraph 117 of your declaration.

9 So here you say that the speeds claimed in
10 claim 38 are greater than or equal to 600 strokes
11 per minute. And 600 strokes per minute is
12 equivalent of 10 strokes per second, a feat
13 impossible for users to achieve with their
14 fingertips or palms and thus does not mimic manual
15 patting.

16 Do you see that?

17 **A. I do see that.**

18 Q. How did you determine 600 strokes per
19 minute is a feat impossible for a user to achieve
20 with their fingertips or palms?

21 **A. That is ten strikes in one second. I don't**
22 **know of anyone that can do that.**

23 Q. Did you do any research to figure out if
24 professionals are able to do that?

25 **A. I have not seen anyone that can do that.**

1 Q. So in your personal experience, you've
2 never seen someone that can tap that fast?

3 A. To my knowledge, no.

4 Q. Have you done a lot of testing of people to
5 see how fast they can tap?

6 A. I have not performed an extensive test of
7 that, no.

8 Q. Have you done any testing of that?

9 A. Done some testing, but not very much. It's
10 not something that I used for this. But my
11 understanding is even trying to, myself, when you
12 go for one second, I can only do three or four
13 before a second is up.

14 Q. Now, you're assuming that you're just
15 tapping with a single finger?

16 A. I'm assuming that it's a single-finger tap,
17 much like Mabuchi being either a single palm or a
18 single point of contact.

19 Q. Does Mabuchi indicate that it's a single
20 finger?

21 A. Mabuchi teaches that it is a surface that
22 is making contact.

23 Q. Do you agree that if I tap with multiple
24 fingers at once, I can tap faster than with a
25 single finger?

1 A. You can. But at that point it is no longer
2 making contact in the same spot, as Mabuchi would
3 be doing.

4 Q. And where does Mabuchi say that what it's
5 simulating is making contact in the same spot?

6 A. Mabuchi's device in and of itself teaches
7 that. When you look at the device, it is either
8 making contact at the same time with the waveform
9 patter, or it is making contact in one area as it
10 goes in and out.

11 Q. There are actually a surprising number of
12 articles talking about how fast gamers can hit
13 buttons on their game control. Did you look at any
14 of those?

15 A. I did not.

16 Q. Do you have any idea how fast gamers can
17 mash a button on their game control?

18 A. Not off the top of my head, no.

19 Q. Did you look at how fast estheticians can
20 tap with a finger?

21 A. I have not.

22 Q. So the only basis you have for the
23 statements you make in paragraph 117 is just your
24 own anecdotal experience?

25 A. Yes.

1 Q. Okay.

2 A. Based off of it creating ten taps per
3 second is very difficult to do and would not be
4 something the average person would do.

5 Q. It's not something the average person would
6 do, or it's a feat impossible for a user to
7 achieve?

8 A. Most users are not dexterous enough to do
9 that.

10 Q. All right. You can go ahead and set
11 Mabuchi aside.

12 MR. KELLAR: Is this a good point for a
13 break?

14 MR. BERG: Sure, we can take a break.

15

16 (Recess ensued from 2:45 p.m. to 2:54 p.m.)

17

18 BY MR. BERG:

19 Q. Okay. Mr. Morrill, you've talked about how
20 percussive massagers are meant to provide a deep
21 tissue massage, correct?

22 A. Yes.

23 Q. Are you aware of other ways besides
24 percussion massagers that muscles can get a deep
25 tissue massage?

1 A. There are other forms of massage that can
2 reach deep tissues that aren't necessarily
3 percussive.

4 Q. So, for example, a professional masseuse
5 could give a manual deep tissue massage?

6 A. Yes.

7 Q. Now, because the percussive massager is
8 also providing deep tissue massage, is it fair to
9 say that the number of strokes of the percussive
10 massager would be similar to the number of strokes
11 that a person doing a manual massage could do?

12 MR. KELLAR: Object to form.

13 THE WITNESS: I don't necessarily agree
14 with that. Many times manual massage is a slower
15 process and not necessarily a fast, deep tissue
16 massage, but a slower, consistent force, where
17 they're kneading it or moving it.

18 BY MR. BERG:

19 Q. But it provides similar deep tissue muscle
20 relief?

21 A. Yes.

22 Q. But percussive massagers achieve that end
23 by using a greater number of impacts per minute?

24 A. That's one of the ways they achieve it,
25 yes. I don't know, I just discussed it's a longer

1 **stroke and rapid speed.**

2 Q. All right. I'm going to hand you what's
3 been marked as Exhibit 1007 in both of these
4 proceedings.

5 Do you recognize this document,
6 Mr. Morrill?

7 (Previously marked Deposition Exhibit No.
8 1007 was reviewed.)

9 **A. I do recognize it.**

10 Q. And this is the Pivaroff reference,
11 correct?

12 **A. Yes, it appears to be the Pivaroff**
13 **reference.**

14 Q. And in the '482 declaration that we've been
15 looking at, you describe the Pivaroff reference,
16 correct?

17 **A. I do.**

18 Q. Oh, you know what? Before we get to
19 Pivaroff, I did want to ask you one other question
20 about Mabuchi. It's on page 35 of your
21 declaration, just as we're getting to the Pivaroff
22 section.

23 Do you see Figure 19 of Mabuchi there?

24 **A. I do.**

25 Q. Do you see that the actuator has a portion

1 that sticks out from the magnet that inserts into
2 the patter?

3 **A. I do see that.**

4 Q. And do you see that that portion that
5 sticks out has a tapered shape?

6 **A. It does.**

7 Q. In your experience as a mechanical
8 engineer, why would a designer use a tapered shape
9 there?

10 **A. The tapered shape helps for alignment. It**
11 **also would help with alignment of the spring as it**
12 **moves.**

13 Q. When you say it helps with alignment, it
14 would help guide the patter onto the actuator?

15 **A. It can be used to help guide the patter**
16 **onto the actuator.**

17 Q. All right. So we were about to talk about
18 Pivaroff, which I think your description starts on
19 the next page at paragraph 79. Do you see that?

20 **A. I do see that.**

21 Q. Now, you described Pivaroff as a deep
22 muscle stimulator device, correct?

23 **A. I believe I'm taking that directly from**
24 **Pivaroff. But, yes, I do.**

25 Q. And you would consider Pivaroff to be a

1 percussive massager?

2 **A. Pivaroff teaches that it uses percussive**
3 **and concussive forces in massage.**

4 Q. What's meant by concussive forces?

5 **A. Pivaroff teaches that it has material**
6 **inside of the head that, when it moves separately**
7 **from the percussion head, creates concussive forces**
8 **inside of that head.**

9 Q. Now, if we look at column 1 of Pivaroff,
10 the sentence starting at line 50, do you see in
11 that sentence it describes: a deep muscle
12 stimulation device having a body, which includes a
13 holding portion with an electric motor held
14 therein?

15 Do you see that?

16 **A. I see that.**

17 Q. And if we go over to the next column,
18 column 2, the paragraph that starts at line 30, it
19 talks about: a body 12 comprised of an elongated,
20 substantially hollow handle 14, and a top element
21 or housing 16, and a hollow head.

22 Do you see that?

23 **A. I do see that.**

24 Q. And so if we look at Figure 6, do you
25 understand that that hollow handle is the portion

1 that's extending down vertically that houses the
2 motor?

3 A. That is my understanding.

4 When I look at that, it appears that they
5 mislabeled it as part of the housing 14. Or,
6 sorry, no, that's wrong. The handle is labeled 14.
7 It appears the upper housing was mislabeled as 14.

8 Q. I see.

9 A. But, yes.

10 Q. Now, you're drawing a distinction between
11 the hollow housing -- or, sorry, the hollow handle
12 14 and the top element or housing 16, which you've
13 noted is mislabeled in Figure 6; is that right?

14 A. That's what it appears to be, yes.

15 Q. Now, the motor -- well, I guess, can you
16 describe how the motor in the hollow handle has its
17 rotational motion translated into linear motion in
18 the top element?

19 A. In the top element, the motor is connected
20 via 28, which is the coupling system between the
21 motor. That coupling system then, in turn, turns
22 the cam means 30, which is basically like a
23 flywheel. That then, in turn, pushes on 34, being
24 the reciprocating link. And that translates the
25 motion into 38, being the rod.

1 Q. And so there's components that are
2 communicating between the handle -- mechanically
3 communicating between the handle and the top
4 housing; is that right?

5 A. There are components that are within the
6 housing, and there are components within the handle
7 that communicate together.

8 Q. Now, if we go to the description of
9 Figure 6 of, which is in column 3, do you see that
10 the top housing of the device is preferably made
11 from the same material as the handle?

12 A. I do see that.

13 Q. And this paragraph refers to "the top
14 hollow housing" and then later refers to just "the
15 top housing 16."

16 Do you understand that there's another
17 housing besides the top housing?

18 MR. KELLAR: Objection to form.

19 THE WITNESS: So you're asking if there's
20 another housing besides the top hollow housing?

21 BY MR. BERG:

22 Q. Uh-huh, yes.

23 A. My understanding is that it calls the top
24 hollow housing, number 16, the top hollow housing
25 in this.

1 Q. I guess my question is if you have any
2 opinion as to why it uses the modifier "top" for
3 the housing 16, rather than just calling it the
4 housing 16, if there are no other housings?

5 A. Well, when we look at Figure 1, it appears
6 there might be a removable top plate; that it could
7 be referencing that the top of it is hollow, and
8 that creates the shape that we're looking at, being
9 hollow to receive the -- as we said, the rod and
10 that cam.

11 Q. Now, in your declaration, you offer the
12 opinion that the handle is not a housing; is that
13 correct?

14 MR. KELLAR: Objection to form.

15 THE WITNESS: I offered the opinion that
16 the handle in this case is not part of that top
17 housing.

18 BY MR. BERG:

19 Q. Not part of the top housing. Do you agree
20 that the handle is a housing for the motor?

21 A. In this case, it acts as a housing for the
22 motor, but it's not part of the housing on top of
23 the device.

24 Q. Now, talking about the massage head in
25 Pivaroff, can you describe at a high level your

1 understanding of what the massage head is here?

2 A. The massage head, again, as we talked about
3 earlier, the part that makes contact with the body.

4 Within this massage head, it's a titanium
5 structure that is filled with various components,
6 and then it is securedly attached to the rod.

7 Q. When you say it's filled with various
8 components, what do you understand Pivaroff to
9 teach in that regard?

10 A. Again, he said the best results were based
11 off of what is shown in -- let's see.

12 It says: In particular, it has been found
13 that improved and extraordinary results are
14 obtained by using a mixture of 10 grains of
15 diamond, 25 grains of ruby, 200 grains of copper,
16 and 100 grains of carbon, for a total of 335 grains
17 of material.

18 Q. Now, he doesn't describe in here, at least
19 I didn't see that Pivaroff describes in here, how
20 you get those grains into the massage head; is that
21 right?

22 A. He describes that there is a removable
23 section, as I discussed in my report, which would
24 imply that is how you get them into the massage
25 head.

1 Q. Would getting that combination of 10 grains
2 of diamond, 25 grains of ruby, 200 grains of
3 copper, and 100 grains of carbon into the massage
4 head be a quick process for a person of skill in
5 the art?

6 MR. KELLAR: Objection to form.

7 **THE WITNESS: In which way?**

8 BY MR. BERG:

9 Q. Well, I guess I'm curious how you would --
10 as a mechanical engineer, how you would go about
11 filling that massage head with that specific
12 quantity of materials.

13 A. You would have to measure out the materials
14 individually, and then you would have to fill them
15 inside the massage head and then close the massage
16 head up.

17 Pivaroff teaches about a threaded
18 connection on the head that you could use to
19 disconnect that to fill it.

20 Q. Now, you mentioned that Pivaroff teaches
21 that there's a particular combination that has been
22 found to provide improved and extraordinary
23 results, correct?

24 A. That is what he has stated.

25 Q. Now, he also discloses, though, if we look

1 at column 2, starting at line 66: It has been
2 found that various mixtures of these granular
3 materials produce improved and superior results.

4 Do you see that?

5 **A. I do see that.**

6 Q. And then he goes on to provide a table that
7 has 11 different preferred mixtures; is that right?

8 **A. He specifies 11 various preferred mixtures,**
9 **yes.**

10 Q. And so you understand that Pivaroff is
11 limiting his invention to only a single one of
12 these mixtures?

13 **A. My understanding is he's saying that he has**
14 **a preferred mixture but that it can be changed.**

15 Q. And that, in some sense, all of these 11
16 mixtures are preferred mixtures, correct?

17 **A. In some sense, they are preferred. But he**
18 **said that the one has improved and extraordinary**
19 **results.**

20 Q. Now, you've mentioned a couple of times the
21 threaded connector that connects the message head
22 of Pivaroff with the body of Pivaroff, correct?

23 **A. I've mentioned the threaded connection.**

24 Q. And that's, for example, shown in Figure 1
25 where you can see the threads on 42?

1 A. That is one connection at that point for 42
2 connecting it, yes. But that's not what I've
3 mentioned --

4 Q. Oh.

5 A. -- as the connection between the head.

6 That is merely the connection between the
7 head and the body, not necessarily the body in
8 itself.

9 Q. What -- when you were mentioning the
10 connection between -- threaded connection that
11 allows you to remove the head, what connection were
12 you referring to?

13 A. In the body of Pivaroff, he talks about a
14 connection within which connects 40, necessarily,
15 to it. Let's see.

16 So if we look at column 2 at line 50, it
17 talks about: The hollow head 44 includes a hollow
18 body 46 and a cap element 48 held thereon, as by
19 means of threads formed there between.

20 Q. Oh, okay. So this is -- this is
21 specifically the threading that's holding the cap
22 on the hollow head?

23 A. Yes.

24 Q. Okay. And there's also a threaded
25 connection that is disclosed by Pivaroff as

1 connecting the head to the body; is that right?

2 **A. That is correct.**

3 Q. And if we look at column 2, lines 50 to 54,
4 it describes one embodiment of that connection,
5 right?

6 **A. Column 2, lines 50 through?**

7 Q. 54.

8 **A. Okay.**

9 Q. And do you read that that is a description
10 of one embodiment of the connection between the
11 massaging head and the body of Pivaroff?

12 **A. That is my understanding of the connection**
13 **that he describes in this.**

14 Q. Do you understand Pivaroff to be limiting
15 his invention to only that type of connection
16 between the massaging head and the body?

17 MR. KELLAR: Objection to form.

18 **THE WITNESS: My understanding is that's**
19 **how he is describing it as connected to the body.**

20 BY MR. BERG:

21 Q. Now, if we look at the claims of Pivaroff,
22 if we look at claim 1, for example, there's a
23 limitation, the fifth limitation down starts with
24 "the titanium hollow head." Do you see that?

25 **A. I see that.**

1 Q. It says: the titanium hollow head being
2 attached to a linkage means coupled to a finger to
3 allow reciprocation of the hollow head a
4 predetermined amount, in a rapid manner, determined
5 by the speed of the electric motor.

6 Do you see that?

7 **A. I do see that.**

8 Q. Pivaroff doesn't mention a threaded
9 connection there, right? He instead refers to a
10 linkage means?

11 MR. KELLAR: Objection to form.

12 **THE WITNESS: He does state a linkage means**
13 **between the two.**

14 BY MR. BERG:

15 Q. As a mechanical engineer, would you
16 understand that there are other linkage means that
17 could be used in addition to a threaded connection?

18 **A. Yes, I understand that you could use other**
19 **means to connect the two together.**

20 Q. And similarly, if we go to claim 4, which
21 is another independent claim, the fourth limitation
22 here states: the titanium hollow head being
23 attached to a rod and a link coupled to the offset
24 means to allow reciprocation of the titanium hollow
25 head a distance of between about 1/8 and 1/2" in a

1 rapid motion.

2 Do you see that?

3 A. I do see that.

4 Q. Again, this claim doesn't mention a
5 threaded connection, right?

6 A. It merely states that you need to have a
7 coupling between the two that can allow for that
8 motion of the head. So whatever connection you
9 have will be able -- have to be able to sustain the
10 weight of the head, sustain its motion, sustain --
11 sorry -- sustain the concussive forces that are
12 generated by the materials within it.

13 So you're going to want a coupling means
14 that will be robust enough to be able to sustain
15 that and be able to actually cause it to be
16 practicable.

17 Q. And a person of skill in the art would
18 understand that there's multiple types of links
19 that could be used that meet those criteria, right?

20 A. A POSITA would recognize that there are
21 multiple types, and they would have to make sure
22 whatever they use is strong enough to allow for it
23 to reciprocate without coming apart and detached.

24 Q. All right. You can set the '482
25 declaration aside, and we'll spend a little bit of

1 time with the '082 declaration.

2 So I'll hand you what's been marked as
3 Exhibit 1009 on the '082. Do you recognize this
4 document?

5 (Previously marked Deposition Exhibit No.
6 1009 was reviewed.)

7 **A. I do.**

8 Q. And this is the Colloca reference, correct?

9 **A. It is. Or it appears to be.**

10 Q. And what is the device described by
11 Colloca?

12 MR. KELLAR: Objection to form.

13 **THE WITNESS: It says it's an**
14 **"Electromechanical Adjusting Instrument."**

15 BY MR. BERG:

16 Q. And if we look at paragraph 1 of Colloca,
17 which is, I think, maybe where you were looking
18 at --

19 **A. That was the title.**

20 Q. Oh, the title. Fair enough.

21 Well, the same language is used in
22 paragraph 1. So let's go to paragraph 1.

23 (Court Reporter Clarification.)

24 Okay. So in paragraph 1, describing the
25 field of the invention, it states: Particularly,

1 it involves the field of electromechanical
2 manipulation/adjusting instruments used to apply
3 controlled dynamic forces to the human body.

4 Do you see that?

5 **A. I do see that.**

6 Q. What is meant by a controlled dynamic
7 force?

8 **A. My understanding from what Colloca teaches,**
9 **that it applies a force to the body dynamics;**
10 **typically means that it's something in motion, not**
11 **held at a steady state.**

12 **But it is applied in a controlled way to**
13 **the human body.**

14 Q. So a percussive massager also applies a
15 dynamic force to the human body; is that right?

16 **A. It does provide a percussive force or**
17 **dynamic force to the human body, but not in the**
18 **same way, necessarily, that Colloca teaches.**

19 Q. And Colloca does include a -- well, so
20 let's go to paragraph 34 of Colloca.

21 And in paragraph 34, I want to direct your
22 attention to two components. One is the thrust
23 nose piece 130, and the other is the impact head
24 70.

25 Do you see those two components listed

1 there?

2 **A. I do see them listed.**

3 Q. And if we look at the figures of Colloca,
4 for example, Figure 1 -- actually, let's look at
5 Figure 2. You see that the thrust nose piece
6 appears to be attached to the body of Colloca and
7 has a hollow bore to receive a protruding end of
8 the impact head 70, correct?

9 **A. I see that 70 is inserted into 130.**

10 Q. And 70 is the impact head?

11 **A. Yes.**

12 Q. Is it your understanding that that impact
13 head is held securely by the thrust nose piece?

14 **A. My understanding it is held in place by the**
15 **thrust nose piece, and it relies on pressure from**
16 **the individual when they apply it to the spine for**
17 **adjustment.**

18 Q. Now, you would agree that one of the goals
19 of Colloca was to provide a device like this, to
20 provide a manipulation adjusting instrument that
21 had interchangeable impact heads, right?

22 MR. KELLAR: Objection to form.

23 **THE WITNESS: My understanding is that**
24 **there are interchangeable heads for Colloca.**

25 ///

1 BY MR. BERG:

2 Q. And, in fact, in column -- or paragraph 10,
3 one of the disadvantages referenced to overcome
4 from the prior art is that the prior art devices
5 "do not provide a thrust nose piece to accept
6 interchangeable impact heads."

7 Do you see that?

8 A. I see where they say that.

9 Q. And to that end, if we look at
10 paragraph 56, paragraph 56 describes different
11 interchangeable impact heads?

12 A. My understanding -- let's see, 56.

13 That is what it states, that it has various
14 impact heads that can be used.

15 Again, the way Colloca teaches that they're
16 used is that they are placed in it, and then the
17 impact heads are secured against someone's skin and
18 force is applied before it can even be turned on.

19 So the securing device holding the head
20 doesn't necessarily have to be strong enough to
21 resist the vibration that is sent out or the
22 impact, but merely hold it in place to apply force.

23 Q. And the paragraph 56 references an element
24 78 called the impact coupler. Do you see that?

25 A. I do.

1 Q. You can see that all of the different
2 impact heads on Colloca include that 78 element?
3 Right?

4 A. I do see that they have a 78 element.

5 Q. And paragraph 56 describes element 78 as
6 "typically a soft material such as an O-ring to
7 form a press fit with the thrust nose piece 130."

8 Do you see that?

9 A. I do see that.

10 Q. What is your understanding of the purpose
11 of that O-ring or that impact coupler 78?

12 A. My understanding is, as it states, it
13 creates -- let's see -- a press fit as it's thrust
14 in so that it can hold that impact head in place
15 when it's inserted.

16 Q. In other words, that O-ring -- just trying
17 to understand what "press fit" means. It means
18 basically that O-ring provides some friction that
19 holds the massager head so it -- or not the
20 massager -- the impact head so that it doesn't fall
21 out of the thrust nose piece; is that right?

22 A. When it's inserted into it. Doesn't
23 necessarily guarantee it would be held in if it was
24 subject to the impact head without pressure being
25 applied to the body.

1 Q. Right.

2 Mr. Morrill, do you expect to supplement
3 your report at any point?

4 A. Not at this time.

5 Q. Sitting here today, do you plan to review
6 any additional materials?

7 A. I don't have a plan to review any
8 additional materials at this time.

9 Q. Have your opinions changed at all as a
10 result of today's deposition?

11 A. Not that I can think of.

12 Q. Are your opinions regarding these two PGRs
13 fully contained within your two declarations?

14 A. I believe so, yes.

15 Q. Have you identified, either today or prior,
16 any errors in your declarations that you would like
17 to correct?

18 A. There are some small grammatical errors,
19 but nothing major.

20 Q. Are there any that you'd like to put on the
21 record today?

22 A. No.

23 Q. All right. In that case, I don't have any
24 further questions.

25 MR. KELLAR: Give us five minutes?

1 MR. BERG: Yeah.

2

3 (Recess ensued from 3:29 p.m. to 3:31 p.m.)

4

5 MR. KELLAR: There's no redirect from
6 Patent Owner.

7 MR. BERG: Great. We're done, then.

8

9 (PROCEEDINGS CONCLUDED AT 3:32 p.m., 186.)

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1 REPORTER'S CERTIFICATION

2 I, Debra Bollman Farfan, Registered
3 Diplomat Reporter, Certified Realtime Reporter,
4 and C.S.R. No. 11648, in and for the State of
5 California, do hereby certify:

6 That prior to being examined, the witness
7 named in the foregoing deposition was by me duly
8 sworn to testify to the truth, the whole truth, and
9 nothing but the truth;

10 That said deposition was taken down by me
11 in shorthand at the time and place therein named
12 and thereafter reduced to typewriting under my
13 direction, and the same is a true, correct, and
14 complete transcript of said proceedings;

15 I further certify that the adverse party
16 was represented by counsel at the deposition.

17 I further certify that the deposition of
18 NATHAN MORRILL, occurred at the offices
19 of Womble Bond Dickinson, LLP, at 655 N Central
20 Avenue, Suite 2300, Glendale, California 91203,
21 on Friday, November 21, 2025, at 10:00 a.m. to 3:32
22 p.m.

23 I further certify that I am not interested
24 in the event of the action.

25 Signature was not requested.

1 Witness my hand this 23rd day of November, 2025.

2

3

4

A handwritten signature in blue ink, appearing to read "Debra Bollman Farfan", is written over a horizontal line.

5

Debra Bollman Farfan, CA CSR No. 11648

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RDR, RMR, CRR, CRC

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