In The Matter Of:

LifeCORE Fitness, Inc. v.
Woodway USA, Inc.

ROBERT GIACHETTI, Ph.D., P.E.
January 10, 2024
Patent No. 10,799,745

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Woodway USA, Inc.
IPR2024-00083

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

LIFECORE FITNESS, INC. d/b/a ASSAULT FITNESS,
Petitioner,
v.
WOODWAY USA, INC.
Patent Owner.

IPR023-00836
U.S. Patent No. 10,799,745

January 10, 2024
9:25 p.m.

The deposition of ROBERT GIACHETTI, Ph.D., P.E., called as a witness herein for examination, taken pursuant to the rules of the United States Patent and Trademark Office before JENNIFER L. BERNIER, a Certified Stenographic Reporter of the State of Illinois, CSR License No. 084-004190, Registered Merit Reporter and Certified Realtime Reporter, at Foley & Lardner LLP, 321 North Clark Street, Suite 3000, Chicago, Illinois.

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E X H I B I T S

Exhibits 1001 through 1030 were premarked and retained by counsel.

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P R O C E E D I N G S
JANUARY 10, 2024
- o0o -
(Deposition Exhibits 1001 through 1030 were premarked for identification.)
(Witness sworn.)
WHEREUPON:
ROBERT S. GIACHETTI, Ph.D., P.E., called as a witness herein, having been first duly sworn, was examined and testified as follows:
EXAMINATION
BY MS. RIEGER:
Q. Good morning, Dr. Giachetti.
A. Good morning.
Q. We met yesterday; but for the record, my name is Sarah Rieger and I'm one of the attorneys representing the patent owner in this matter.
Since the conclusion of yesterday's deposition, did you speak to Mr. Turner or any of his colleagues about the substance of your testimony?
A. Yeah. We spoke about what happened during the day.

Q. So was that a discussion about substance or just general impressions?
A. I think general impressions.
Q. Okay. Other than talking with Mr. Turner, did you do anything else in anticipation of today's deposition?
A. I just reviewed a few documents quickly, just skimming.
Q. And that's since yesterday's deposition that you reviewed those documents?
A. Yeah.
Q. Okay. What documents were those, if you recall?
A. I just skimmed through my declarations in the two patents that we didn't discuss yesterday.
Q. The '745 and the '580? Does that sound right?
A. Correct.
Q. Okay. All right. So please turn to Exhibit 1004 in your binder, Volume 1. This is a copy of your CV, correct?
A. It looks like it.
Q. Is your CV current, the one that was submitted in this matter?

A. Yeah, it looks current.
Q. No specific updates since it was submitted, as far as you're aware?
A. No, nothing of importance.
Q. So where did you go to undergrad, Dr. Giachetti?
A. Marquette, in Milwaukee, Wisconsin.
Q. When did you attend Marquette?
A. In the '90s.
Q. Okay. And what was your degree in?
A. Mechanical engineering.
Q. And you have a master's degree, correct?
A. I do.
Q. And where did you get your master's degree?
A. University of Illinois.
Q. And approximately what years were you in that program?
A. I would -- estimating, '98 to 2000.
Q. Okay. And did you complete a thesis as part of that program?
A. I did.
Q. What was your thesis related to?
A. Loading in the knee joint and also

total knee replacements.
Q. You didn't do any research or work related to treadmill design as part of that program, did you?
A. No. But that was all about gait and loading resulting from gait.
Q. So it was focused more on the physiological aspects of human movement compared to exercise equipment specifically?
A. Well, it was the mechanical aspects of gait as far as loading on the foot and the knee and the leg.
Q. Okay. You also have a Ph.D., correct?
A. That's correct.
Q. And where did you earn your Ph.D.?
A. University of Wisconsin.
Q. In approximately what years were you working on your Ph.D.?
A. From 2000 to 2008.
Q. Do you recall what the title of your dissertation was?
A. I don't actually remember the title of the Ph.D., but it was something about the center of pressure and Newtonian mechanics.
Q. Okay. And was your dissertation ever

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published, as far as you're aware?
A. I don't know.
Q. Did you work at all when you were in your graduate or Ph.D. programs?
A. Yes.
Q. And where did you work?
A. So I was a research assistant and a teaching assistant while I was getting my master's. I also started the master's while I had a job in industry. And then when I was a Ph.D. student, I taught a number of courses in departments of mechanical engineering, department of kinesiology; and I also had an internship at BioTechPlex one time.
Q. As far as your -- your teaching was concerned, what kinds of topics did you -- did you teach about?
A. So I taught engineering economy. I taught general physics 1, 2, 3, and 4. I was the discussion leader for a while. That was as an undergraduate.
Then in graduate school, I taught engineering economy, substituted teaching for dynamics. And then as a -- at Wisconsin, I taught vibrations, which they called dynamic systems, so

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that encompassed springs-mass dampers, fluid systems, electrical systems, basically anything that oscillated or had some time-dependent transients in there.
And I also taught biomechanics in the department of kinesiology --
(Reporter clarification.)
A. Sorry.
Biomechanics in the department of kinesiology, and that was a course geared to physical therapists and other people who were taking kinesiology as a major. So that incorporated a lot of exercise-type applications and discussing the biomechanics related to those -- those things.
BY MS. RIEGER:
Q. You mentioned working in industry for a period of time during your studies. Where exactly did you work?
A. So after undergraduate, I then got a job at a place called Alloy Sling Chain. And then after Alloy Sling Chain, I worked for a place called Braner USA.
(Reporter clarification.)
A. Braner USA.

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Q. And what kind of companies are Alloy Sling Chain and Braner USA? What industry are they in?
A. So Alloy Sling Chain is an industrial -- you could call it a supply company, but they also do their own fabrication and design work, predominantly large metal structural elements. So most of their work at that time was anything that would hang off the end of a crane.
So there was a lot of wire rope, I-beams, trolleys, lifting hooks, all sorts of -- you know, lifting tongs, all sorts of stuff. So I did some design work for them and some estimating for jobs.
And then Braner USA is the old coiling machinery where that is basically giant rolls of sheet metal and they make the processing lines to trim them and re-roll them into smaller or, basically, custom sizes.
Q. So your work for those two companies, did that involve the design of treadmills or other exercise equipment in any way?
A. No. But that gave me a lot of experience designing things with the simple mechanical elements that are present in treadmills.

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Q. And did any of your teaching topics while you were in your graduate or Ph.D. programs involve the specific design of treadmills or any exercise equipment?
A. Well, we certainly used treadmills as part of teaching, as well as my research assistant positions. Treadmills played a large role in that as far as studying how people walk.
Q. So you used treadmills as part of -- as part of those -- as part of that classwork; is that correct?
A. As the classwork, we used them as part of a research assistantship that I had. I disassembled a treadmill, reassembled it, and basically made sure that it was running for the purposes that we needed.
Q. Were those all motorized treadmills?
A. Yes.
Q. You mentioned disassembling an existing treadmill. You never personally designed a new treadmill; is that correct?
A. That's right.
Q. Did you work anywhere else before March of 2009?
A. Well, technically I'm the vice

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president of Gia Villa, which is a pasta sauce company in Chicago. So you can find that at Whole Foods and Mariano's.

But outside of the internship at BioTechPlex, I don't recall having other -- other work outside of research assistantships and teaching assistantships that I -- that I had.

Q. What kind of work did you do when you were at BioTechPlex? You were an intern there, you mentioned, correct?

A. Correct. So that was a biomedical -- small biomedical firm. And while I was there, I was working on finite element analysis for assay trays.

Q. So you weren't designing any new exercise equipment or treadmill specifically in that role either, correct?

A. That's correct.

Q. Okay. You're a licensed professional engineer; is that right?

A. That's right.

Q. Has your license ever been suspended or revoked?

A. No.

Q. All right. So let's go to Exhibit 1003

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in your binder. Do you recognize this document?

A. It's a couple hundred pages. But just flipping through it, it looks like my declaration. And the first page says it's my declaration, and the last page has my signature. So it looks like the declaration for the '849 patent.

Q. Or the 849 IPR?

A. Yes, that's right. I'm sorry. The '745 patent.

Q. Yeah. And if you turn to page 253, the very last page --

A. Okay.

Q. -- that's your signature, correct?

A. That's right.

Q. Did you review the declaration for completeness and accuracy before you signed it?

A. Yes.

Q. And at that time to today, does this declaration reflect all of the opinions that you've reached in connection with the '745 patent matter?

A. Yeah. I think it's reflective of my opinions.

Q. At the beginning of your declaration, roughly on pages 5 to 6, you provided a list of exhibits.

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A. Okay.

Q. Apart from the materials listed on that list of exhibits, did you analyze any other publications or materials when forming your opinions in this declaration?

A. Well, certainly, when I did a prior art search, I came across a number of other pieces of prior art. But these are the pieces of art and other pieces of information that I used to formulate my opinions in this case.

Q. And are any -- all the assumptions that you made in forming your opinions identified in your declaration?

A. I believe so.

Q. And are you aware of any facts or other materials that are inconsistent with or at least not fully consistent with the opinions in your declaration?

A. I'm not sure what you mean by that.

Q. I'll repeat the question. Are you aware of any facts or other materials that are inconsistent with your opinions in this case?

MR. TURNER: Objection. Form.

A. Not outside of -- not within this list here.

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Q. Are you aware of anything that's not on that list that would be inconsistent with your opinions?

A. No.

Q. Okay. So if we turn to paragraph 10 -- or sorry -- paragraph 107, at least the section starting at paragraph 107 --

A. Okay.

Q. -- in this section, you discuss construction of terms --

(Reporter clarification.)

Q. In this section, you discuss the construction of terms in the challenged claims, right?

A. Yes.

Q. And the definitions that you applied are specifically provided in paragraphs 109 through 111; is that right?

A. That's correct.

Q. You testified during your deposition yesterday that you applied these claim constructions when forming your opinions in all of the grounds in your declaration related to the '884 patent. Am I remembering that correctly?

MR. TURNER: Objection. Misstates

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testimony.
A. I have a little recollection of what I said yesterday; but I think, where appropriate, I applied these -- these constructions.
Q. Where did you apply these constructions in this declaration?
A. In the claims that are listed here on page 69.
Q. In all grounds?
A. Grounds 2.
Q. Do you identify any other claim constructions in this section?
A. No.
Q. Do you identify any other claim constructions anywhere else in your declaration?
A. I don't believe so. And I used the plain -- plain definitions for any other terms.
Q. Did you ever explain what the, to use your words, plain definitions applied are and how they are different from what's in this section?
A. Well, there is nothing to differentiate in this section, so I did not do that.
Q. What do you mean that there is nothing to differentiate in this section?
A. Well, you asked me to define like how

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I -- how I differentiated plain terms throughout the rest. And since the plain terms were used for all the other claim constructions, I didn't need to define what the plain terms were. So they're just understood as -- as plain and ordinary.
Q. Did you ever explain what the plain and ordinary meaning of "shaft" is?
A. No.
Q. Did you ever explain what the plain and ordinary meaning of "safety device" is?
A. I don't recall doing that.
Q. Did you ever explain what the plain and ordinary meaning of "substantially prevent" is?
A. I don't believe I did that.
Q. Is the definition of shaft provided in paragraph 109 consistent with your understanding of the plain and ordinary meaning of the word "shaft"?
A. Yeah. I think that's essentially the same thing.
Q. Is the definition provided in paragraph 110 of safety device consistent with your understanding of the plain and ordinary meaning of the term "safety device"?
A. I think it's consistent with the way the '745 patent uses it.

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Q. And would that be the plain and ordinary meaning for purposes of the '745 patent, in your opinion?
A. Can you repeat that question?
Q. You testified that the definition provided for safety device is consistent with the way the '745 patent uses the term safety device.
A. Correct.
Q. Does that mean that, in your opinion, the plain and ordinary meaning of safety device for purposes of the '745 patent is consistent with the definition provided in paragraph 110?
MR. TURNER: Objection. Form.
A. No. I think it's the way that it's used in the '745 patent.
Q. What is your opinion regarding the plain and ordinary meaning of "safety device"?
A. I think a safety device is something that's implemented to provide safety.
Q. Is the definition for "substantially prevent" in paragraph 111 consistent with your understanding of the plain and ordinary meaning of substantially prevent?
A. It seems reasonable to me.
Q. So at least for "shaft" and

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"substantially prevent," your opinions based on the plain and ordinary meaning of the term would be consistent with your opinions using these definitions?
A. I think that's reasonable.
Q. And would that -- would -- with respect to the '580 declaration, do you recall if you applied any specific claim constructions?
A. I don't recall, but I think it would be consistent with what's here on this page.
Q. Okay. All right. Let's just quickly, without necessarily losing our place in your declaration, look at Exhibit 1010, just the front page. Do you recognize -- do you recognize this document?
A. This looks like the front page of the Schonenberger patent.
Q. And that's U.S. Patent No. 4,614,337; is that right?
A. That's what it says.
Q. Right. And if I refer to this as the Schonenberger, you'll understand what I'm referring to, right?
A. Correct.
Q. Did you read Schonenberger in its

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entirety?
A. Yes.
Q. And was that before or after you drafted -- or started drafting your declaration?
A. Before.
Q. Schonenberger does not disclose a curved running surface, does it?
A. I think it -- I think it shows it. Because you can see that they say that the belt follows the path of the smaller rollers, and you can see that that pathway is not flat the entire way across the running surface.
Q. Where exactly does it show that?
A. In Figure 12.
Q. So in your opinion, Figure 12 shows a curved running surface?
A. Figure 12, in conjunction with what the words in the patent state, tell me that that is a curved running surface.
Q. Where do you say that in your declaration?
A. Well, I would say that in my declaration I state that Schonenberger doesn't expressly disclose that. However, I think it implicitly does, and I don't believe that that is

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stated in the -- in the disclosure.
Q. So your declaration --
A. Or the declaration. Excuse me.
Q. So referring to, for example, paragraph 144, which is on page 86, that's -- that paragraph reads: Schonenberger does not expressly disclose that at least a portion of the running belt is curved.
Did I read that correctly?
A. Right. And that's the portion that I was just describing to you a second ago.
Q. Nowhere in your declaration do you explain if or how Schonenberger implicitly or inherently discloses a curved running surface; is that correct?
A. That's right.
Q. But sitting here today, it is your opinion that Schonenberger inherently discloses a curved running surface?
A. I think it's -- I think it's implicit because it describes how the surface goes over rollers 12 and that it needs to follow rollers 12. And you can see that rollers 12 are flat in the middle and then curved downward at the end, and it states that the running surface has to follow

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rollers 12.
So there is a little bit of a dip in there, which means that it's not all the way flat.
Q. If we look at Figure 12 in Schonenberger, which, again, is Exhibit 1010, you said that that combined with some written disclosure in Schonenberger implicitly discloses a curved running surface; is that right?
A. Well, I think it discloses it as far as not a surface that's entirely flat. So maybe it's mostly flat; but in between the pulleys at the end and the first roller 12a that's in there, you can see that if Schonenberger tells us that the running surface has to follow the profile of rollers 12, that there is, in fact, a dip in -- in the profile.
So that portion of the running surface would not be considered flat and would be curved.
Q. So how do you know that the --
A. And I could follow that up by saying that Schonenberger also discloses that the running belt should be a little bit above the rollers. So when you step on the running surface, it has to curve with the front and rear higher than wherever the foot is, just by the nature of the loading.
So it gives a gap between rollers 12

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and the running surface before the foot hits it. So once your foot does touch it, then just by definition, the running belt has to take a curvature.
Q. Is any of that in your declaration?
A. No. And I have that statement in the declaration that says Schonenberger does not expressly disclose it. But certainly, all the description that I've just given you is contained within the specification of Schonenberger.
Q. You've referred to Figure 12. Is Figure 12 to scale? Does Schonenberger ever say that?
MR. TURNER: Objection.
A. No.
MR. TURNER: Form.
A. No. But it does describe the relative sizing of the rollers 12 in regarding to the pulleys at the end and describes the relative size of rollers 12a, basically saying that those should be about the same size or bigger to provide an easy turnaround for the belt.
Q. So you testified earlier that Schonenberger discloses that the running belt should be a little bit above the rollers and that

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when you step on the running surface, it has to curve with the front -- wherever the foot is, just by nature of the loading. Does that sound correct?
A. That's absolutely correct.
Q. So is it your opinion sitting here today that any running belt that has any degree of give between it and the rollers underneath it is automatically a curved running surface?
A. No. I don't think that that's necessarily true. But in Schonenberger, they definitely are making that a specific feature of their running belt where they're saying, hey, in this invention, you need to put a gap here so that the running surface can move downward a measurable amount.
Other inventions just say, oh, this is a flexible element or this is that. So in those inventions, I wouldn't consider those necessarily curved. But in here -- in Schonenberger, that is a feature that they are expressly stating in their specification, that they do want that movement and they do want that curvature.
Q. Why didn't you mention any of this in your declaration?
A. I believe that what I put in the

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declaration is more compelling as a -- as a case for combining the elements, and I didn't rely on any of that in -- in adding these -- these pieces of art together.
Q. Can you point me to precisely where in Schonenberger, if at all, it describes the running surface itself as being curved or nonlinear?
A. Yeah. So in this one, just in column 2, it talks about the slats preferably formed with stiffening projections and ribs to prevent bowing. And that's around line 20.
But then down below that, around lines 30 to 40, it then talks about the distance of being half a centimeter between those rigid slats and the support rollers underneath it.
So just those two pieces of information tell you that you've got a rigid slat that's not giving that then has to lower when the person is loading it while using it, causing the running surface to curve.
Q. How does the disclosure that includes language talking about specific ways to prevent bowing imply that there is curvature when a user steps on the treadmill?
A. Well, those two things are disconnected

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from a technical perspective in this patent. So the bowing is for the slat. And if the slat doesn't bow, but you have to have that half a centimeter taken up, that means that the belt itself has to do the deforming, not the slats.
So that is a -- not a bowing from right to left. That is a bowing from front to back, which is the profile on the treadmill. So there is your curve right there.
Q. So the slats do not have any bow or curvature to them individually; is that right?
A. Well, that's what the part of column 2 that I read to you is telling me.
Q. So yes, the slats do not have any curvature to them on an individual basis?
A. I mean, you could make it with a curve, I suppose, if that's what you're asking.
Q. No. I'm asking for your understanding of what Schonenberger itself explicitly discloses with respect to the slats. The slats themselves do not deform when a user steps on them; is that right?
A. Well --
Q. Based on the disclosure you just read to me and your interpretation of it.

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A. Well, everything, to a certain degree, deflects when a load is placed on it. That's just the nature of everything, every material.
But I think, in the context of this patent, in this Section 2 where it describes resilient slats that are -- have stiffeners on them and it states -- where is that? -- so it has a stiffening projection, and it has transverse ribs to prevent their bowing through.
So if I am reading that, this specification is telling me that I -- I don't want the bending where the gap is taken up to come from the slats. It needs to come from the belt. So that's what that tells me, as a technical person.
Q. Let's go back to your declaration, specifically page 83. In kind of the lower third of this page, you discuss what you've designated element 1.5. Do you see that?
A. On page 83?
Q. Yes, 83 of your declaration, the bottom of page 83. There is 1.5, a running belt at least partially supported by -- et cetera, et cetera. Do you see that in bold?
A. Oh, I see it, yes. Sorry.
Q. That element reads, as I was saying

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before: "A running belt at least partially supported by at least one of the front running belt pulley and the rear running belt pulley, wherein the running belt includes a running surface, at least a portion of which is curved."

Did I read that correctly?

A. That's what the boldfaced text there reads, yes.

Q. The wherein clause at the end of that phrase, where it says "wherein the running belt includes a running surface, at least a portion of which is curved," do you understand that to mean that the running belt needs to be curved or that the running surface needs to be curved?

A. So I think that that could be one or the other or both connected. Because sometimes the running belt and running surface are the same thing.

And, for example, in Schonenberger, which is where we were just discussing, if your right foot is standing in the middle of it and causing that curvature, which we just discussed is inherent to Schonenberger, and you place your other foot forward of it, the running belt and running surface will definitely not be flat there and will

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be curved.

But I think the running surface is part of the running belt, if I remember correctly that the running belt is -- forms that.

Q. So is it possible for the running belts to be curved, but the running surface not to be curved, hypothetically speaking?

A. Well, I think, for example, in Schonenberger when it's not being used, the running surface is possibly not curved. But once you start using it, then it becomes curved.

So I suppose if you're going to specify during use, then probably the belt and the surface are going to both take the same profile.

Q. That wasn't quite what I was asking.

My question was whether, hypothetically speaking, it would be possible to have a running belt that is curved that simultaneously has a running surface that is not curved.

A. Right. Well, the running belt and the running surface aren't the same throughout the entirety of the treadmill. So most of the running belts are curved because they go around pulleys or they're a hamster wheel.

So the running surface and the running

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belt aren't the same at all points on the treadmill. So they could be the same, and they could be different.

Q. Please look at paragraph 141.

Actually, before that, do I understand your testimony correctly in thinking that it is your opinion that any deflection because of a footfall constitutes a curve?

A. I don't think that accurately represents what I was just describing.

Q. And what were you just describing?

A. So I was discussing the curvature from front to back of the Schonenberger treadmill. And if we're going to talk about bending of slats, that would be a transverse or a left-to-right bending.

Q. Well, I'm not referring to bending of slats. I'm referring to your testimony earlier about that supposed curvature. That curvature is the results solely of the -- of a foot strike, correct?

A. You're talking about the curvature of a slat? Is that --

Q. No. I am talking about what you testified earlier about the running belt in Schonenberger, in your opinion, being curved

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because when a user runs on it, it depresses where the user's foot strikes.

In your opinion, does that depression or deflection necessarily mean that the belt is curved?

A. So a couple of things with that question. One, the running belt and the running surface are -- are not always the same thing.

Second of all, it's not just the foot strike. So while the user is applying force to the treadmill running surface, there will be a curvature imparted front to back. And that is something that is explicitly built into Schonenberger. And the entire time that the user is exerting forces on that running surface, Schonenberger will have a curvature from front to back.

And that necessitates that when they place their second foot on the running surface, that that portion will be curved while they are using it.

Q. So let's look at paragraph 141 of your declaration, which is on page 84. In that beginning of that sentence, you say: Each of the slats 4 is covered with a cushioning material or

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cover 16 that forms the running surface.
A. Okay.
Q. Am I correct in understanding that in this paragraph, it's your opinion that the covering of the slats is what constitutes the running surface?
A. I think that that is the material that forms the running surface. The running surface is, generally speaking, the top of the treadmill where the user is expected to place their feet.
Q. You never say that in this paragraph or anywhere else in describing Schonenberger, do you?
A. It's certainly not in this paragraph. I don't recall if that is in my description of Schonenberger here, but certainly running surface is defined in some of those treadmill standards that we discussed yesterday. And I'm not sure where else we might find it.
Q. If you look at paragraph 142, that paragraph right after paragraph 141 that we were just talking about --
A. Paragraph 142, okay.
Q. -- you state there that -- that: The movable surface 1 ("running belt") is supported by the pulleys 10.

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Did I read that correctly?
A. Yes.
Q. Is it -- does this paragraph indicate that it is your opinion that the entire movable surface 1 is equivalent to the running belt?
A. I think in the portion that that's referring to, in the graphic below that's annotated, the movable surface 1, basically the top there where the user's feet would be expected to contact the treadmill, is -- wait, please strike that.
So the running belt is the thing that wraps around all the way. And we've illustrated that there with the highlighting.
Q. And is that movable surface 1?
A. That's what Schonenberger labels as movable surface 1.
Q. Right.
So we talked about paragraph 144 before, where you said Schonenberger does not expressly disclose that at least a portion of the running belt is curved. The claim requires that the running surface be curved; is that right?
A. So which claim are you talking about?
Q. This is specifically in your discussion

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of claim 1 of the '745 patent. So if you want to look at Exhibit 1001, you're more than welcome to.
That would be at the very bottom of column 32 on page 43 of Exhibit 1001, is where that claim starts.
A. So I'm just going to read it out of my report on page 75.
Q. Okay.
A. Can you repeat the question, just so I make sure I'm clear on it?
Q. Sure.
You would agree that the claim requires that the running surface be curved, correct?
A. So in claim 1, it states: Wherein the running belt includes a running surface, at least a portion of which is curved.
Q. Right. And you talked about that wherein clause earlier. Just one moment.
You testified earlier, when discussing that wherein clause, that: "I think the running surface is part of the running belt." Is that right?
A. I may have said that. I know that I definitely stated afterwards that the running surface is a portion of the running belt where the

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user places their feet -- or is expected to place their feet.
Q. Right. So just turning back to that wherein clause where it says at least a portion of which is curved, is that referring to the running surface or the running belt as a whole?
A. Well, if it refers to the running belt, then basically every treadmill is a curved treadmill. So I don't think that that would be a reasonable reading.
So I believe that running -- the running surface has a portion which is curved.
Q. All right. And if we looked at paragraph 144 in your declaration on page 86, you only mention the running belt in that paragraph; is that right?
A. Yes. I must have made an error in stating that. But you can see in the paragraph following, at 145, talking about a running surface. So...
Q. A running surface in Socwell, not in Schonenberger, correct?
A. That's right. But if you read sentence 144 and go to the next sentence, you know, we're talking about the running belt is curved; and then

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the next sentence is like, oh, but hey, Socwell does disclose a manual treadmill with a curved running surface.

So paragraph 144 I believe probably should have stated a curved running surface.

Q. So at a minimum, that's an error in your declaration; is that right?

A. I would say that that is a typo.

Q. Do you ever comment on whether the -- using the actual words "running surface," whether the running -- what you identify as the running surface in Schonenberger is or is not curved, in your declaration?

A. Can you repeat that question?

Q. Sure. I stopped myself partway through. I apologize.

Are there any paragraphs in your declaration where you used the actual words "running surface" and state one way or the other whether the running surface in Schonenberger is or is not curved?

A. I don't recall specifically, through all 253 pages, if that's something that I state. I know we've talked about paragraph 144, where I state that Schonenberger doesn't expressly state

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that it's got a curved running surface, to correct that running belt statement there.

So without having read it, I read the -- re-read the whole 253 pages right here, I don't -- I can't point to a spot in the disclosure where I state that.

Q. So even though -- so setting aside the terminology issue in paragraph 144, you'll agree with me that your declaration never says that Schonenberger discloses a curved running surface of any sort, correct?

A. I can't agree that it never says that. I just don't recall where that would have been without re-reading the whole 253 pages. But I don't believe that I relied on that as part of any of the combinations or opinions in the declaration.

Q. All right. So if you go to paragraph 146, you state in that paragraph: "As explained in paragraphs 148 to 159, it would have been obvious to a POSA to modify Schonenberger's brackets 19 and rollers 12, 12' ("bearings") to provide a curved support surface such that the movable surface 1 ("running surface") has a curved portion."

Did I read that correctly?

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A. Yes.

Q. What exactly would those modifications to Schonenberger's brackets and rollers have entailed?

A. So that is basically shown graphically on page 93. And in essence, the idea is that you've got a set of the support rollers that are -- that are set in the shape that we see in Schonenberger, Figure 12. And the modification is basically, instead of having the rollers 12 be above the centerline of 12a, that they would then be below it. And that's a straightforward and simple modification.

Q. So you're referring to paragraph 155; is that correct?

A. Oh, I was just looking at the pictures. But yeah, paragraph 155 basically states that.

Q. Well, I -- yes, I was referring to that figure as being included in paragraph 155. Does that make sense to you?

A. Yes. That's absolutely correct.

Q. All right. So if I'm understanding you correctly, your testimony is that that figure in paragraph 155 depicts the modified version of Schonenberger that you've proposed and relied on in

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your declaration; is that right?

A. Can you re-read that?

Q. The figure -- am I correct in thinking that the figure in paragraph 155 depicts the modified version of Schonenberger that you've proposed and relied on in your declaration?

A. I think that's reasonable.

THE WITNESS: We've been going about an hour. Do you mind if we take a five-minute break?

MS. RIEGER: Let me just ask one more question and then -- if that's okay with you.

THE WITNESS: Yeah, that's fine.

BY MS. RIEGER:

Q. I just wanted to ask about the structure of the device here. The five rollers -- or what you refer to as bearings in that figure in paragraph 155, would you agree with me that those are arranged in parallel, in a straight line?

A. Which rollers are you -- or bearings are you --

Q. The center rollers, the ones that do not contact the pulleys.

A. I would say that all those red ones in -- that are colored in red are not in a straight

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line.
Q. I'm referring specifically only to the five in the middle, so excluding the ones that are touching the pulleys. Are those five rollers in a straight line?
A. Yeah. The five center ones are shown in a -- arranged in a straight line.
MS. RIEGER: All right. We can take a five-minute break now if you'd like.
THE WITNESS: Great. Thank you.
(Recess had.)
BY MS. RIEGER:
Q. Welcome back. Let's shift gears a little bit and go to page 98 of your declaration, the full text right at the top of the page. I won't read out this entire thing.
But at the very beginning of that term, it refers to: "A safety device coupled to the running belt." Did I read that correctly?
A. That's what it states.
Q. Does Schonenberger disclose a safety device, according to this term?
A. I don't recall if it specifically does, but I relied on Magid for that unidirectional safety device.

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Q. Okay. So you'd agree with me that you don't -- at the very least, you don't mention Schonenberger as disclosing a safety device in these -- in this section, correct?
A. Correct.
Q. And you mentioned that you rely on Magid -- Magid, however we want to pronounce it.
A. Correct.
Q. You also rely on Sclater in this section; is that right?
A. That's right.
Q. All right. Let's shift gears again. Can you quickly turn to Exhibit 1011 in your binder? We'll be going back to your declaration shortly, but do you recognize this document?
A. This looks like the Socwell patent.
Q. And that's U.S. Patent No. 5,897,461; is that right?
A. That's what it says.
Q. And if I refer to this as Socwell, you'll understand what I'm referring to, right?
A. Correct.
Q. Did you read Socwell in its entirety before drafting your report?
A. I did.

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Q. All right. So in your declaration, we go to page 179, the paragraph -- starting at paragraph 301.
A. Okay.
Q. The header of this section is referred to as Ground 3, and you appear to be arguing that the claims listed here are obvious over Socwell, in combination with Magid and Sclater; is that correct?
A. That's right.
Q. All right. So if we go to page 187 within the same section, at paragraph 310, that bold header right before paragraph 310 refers to what you call element 1.4, which recites: "A plurality of bearings coupled to the frame." Did I read that, right?
A. You did.
Q. So in this section, specifically at paragraph 312, you state that: Socwell discloses a plurality of belt securing assemblies 94 disclosed along the right and left sides of the frame 12. As I explained in the state-of-the-art section, rollers, such as the rollers 98 are "bearings." Therefore, the rollers 98 disclose a "plurality of bearings."

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Did I read that correctly?
A. That was on page 187?
Q. Oh, apologies. Yeah. This is paragraph 312, which starts on page 188.
A. That looks like what you read, yeah.
Q. Just to clarify, what are the bearings described in this paragraph? Are you referring only to the rollers 98, or are you referring to the full belt securing assemblies 94?
Do you need me to repeat the question?
A. That would be fine.
Q. Okay. I was just asking if by bearings, specifically, as you're using that term in 312, paragraph 312, are you referring only to the rollers 98, or are you referring to the complete belt securing assemblies 94?
A. Can you read that one more time?
Q. As you were using the term bearings in paragraph 312, are you referring only to rollers 98, or are you referring to the complete belt securing assemblies 94?
A. I think in paragraph 312, I'm highlighting rollers 98 as an example of bearings because, for plurality, you need more than one. So I'm establishing that there is more than one here,

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and I'm using those as an example.
Q. But you're referring to the plurality of rollers 98, not necessarily to the complete belt securing assembly 94; is that right?
A. Well, the belt securing assembly isn't a bearing, but it includes bearings.
Q. Okay. That was just a point of clarification I wanted to --
A. Sure. Got it.
Q. So to your understanding, what is a bearing as that term is used in the '745 patent?
A. Well, a bearing is a mechanical element that allows for objects to move across or along one another.
I think I define that in my declaration. Let me see if I can pull that out.
Yeah. So on page 35, I define that a bearing is a general term for a mechanical element that provides a means for low friction movement between two surfaces. And that motion could be rotary or "linear."
Q. And it looks like you cited the PT Handbook, Exhibit 1016, for both of those principles; is that right?
A. That's right. And that's consistent

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with my understanding based on my experience, training, and education.
Q. Did you look at the '745 specification and specifically how it uses the term "bearings" to determine whether a bearing might have a different or narrower meaning for purposes of the '745 patent?
A. Well, I certainly read the '745 when forming my opinions. And I think that this is consistent with the way bearings are used in that patent.
Q. So the '745 patent specification uses the term plurality of bearings, right?
A. Right.
Q. So let's look at the '745 patent. That's going to be Exhibit 1001. I'm going to direct you to column 11.
So starting at line 20 of column 11, the '745 patent states: Referring to Figs 6 and 8 through 9, in particular, the bearing rails 200 are shown including a plurality of bearings 208 and an upper or top profile 210, shown shaped as a complex curve, according to an exemplary embodiment.
Did I read that correctly?
A. I believe so.

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Q. If you go down a little bit further to line 39, the specification goes on to say: "The running belt 16 contacts and is supported in part by the bearings 208 of the bearing rails and bearing 208 are configured to rotate, thereby decreasing the friction experienced by the running belt 16 as belt moves along the top profile 210."
(Reporter clarification.)
Q. The top profile 210, end quote.
Did I also read that correctly?
A. That's right.
Q. Are you aware of any sections of the '745 patent specification that describe a different orientation for the "plurality of bearings" vis-à-vis the running belt?
A. Well, I know that in their embodiments, they have a number of different embodiments where the bearing is -- the rotary bearing is attached to the belt, which then rides inside of a channel.
And then there is one where there is basically a track that is clamped by rotary bearings, and those bearings are attached to the running belt.
So from that perspective, yeah, there are a number of different embodiments in the '745.

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Q. You're referring, I believe, to portions of the specification that discuss a belt retention system; is that right?
A. I don't recall, but you can see it in Figures 18 and 19 and 23 and 22.
Q. Well, let's look at paragraph 22 -- or not -- not paragraph 22, column 22 of the specification.
A. Okay.
Q. At lines -- starting at line 8, it reads: Referring to Figs 18 to 21, an embodiment of a running belt retention system including a track system 700 and configured to help induce and maintain the running belt in a desired nonplanar shape to define the running surface according to an exemplary embodiment.
Did I read that right?
A. You did.
Q. Is that one of the systems that you were referring to with respect to the track structures?
A. Let's see.
So yeah, that calls out Figure 18 through 21. And that's one of the ones that I was indicating.

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But you can also see Figure 22 and 23 has an alternate -- alternate embodiment where the rotary bearing is captured in a channel and, basically, the stud bearing is attached to the running surface -- or running belt, I should say.

Q. So looking at that description of this particular track system 700 belt retention system, does the '745 specifications discussion of that system ever refer to those structures that you were referring to as bearings as bearings?

A. I don't think that it would -- I don't know where those are in -- in this specification, but it wouldn't make sense to call a channel or a -- like a -- like the surface, like a cam surface, it wouldn't make sense to call those bearings. Because they are capturing the bearings, or the bearings are capturing the cam surface there.

Q. Well, let's look at --

A. But they would constitute a bearing rail, I think.

Q. Well, let's look at -- that's not quite what I was asking. But just for some context to hopefully make the conversation a little bit clearer, please look down to line 32 in column 22.

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You'll see there that the '745 specification refers to: "A plurality of roller or wheel assemblies 716 are connected with, preferably mounted to or integral with, each of a plurality of slats 228 of the running belt 16."

That plurality of roller or wheel assembly 716, is that what you are referring to as bearings in this system?

A. Yes. And I think those would be considered bearings by any sort of POSA.

Q. Does the '745 patent ever describe those structures as bearings?

A. Yeah. I mean, without going through the whole specification here, it calls them rollers. And --

Q. But as far as you're aware, based on your review of the patent before today and during this deposition, the specification never refers to those rollers as bearings; is that right?

A. I'm not sure if that is true. But the state of the art, a roller and a bearing are equivalent and can be one and the same, depending on how they're configured.

Q. Does the way a patent specification uses particular terms matter for purposes of

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determining how the claims should be interpreted?

A. It can.

Q. When wouldn't it?

A. I think that if a term was used in a nonstandard way that would be contrary to what the POSA would understand, then you would likely need to narrow your view of what that term might mean or change what it might mean in terms of the patent author's meaning of it.

But here, rollers, wheels, bearings are all used in their ordinary and plain usage. So we could just -- they are just equivalent. And that is what the POSA would understand.

Q. Have you ever heard of the term "lexicographer"?

A. I have.

Q. What does that term mean to you?

A. It means that the patent authors can make up their own meanings for the terms in -- in the patent that they have authored.

Q. If a -- if the patent author, as just to use your terminology, does not include an explicit definition for a particular term, in your view, does that mean that the way they have used that term is no longer relevant to determining how

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that term should be interpreted in a claim?

MR. TURNER: Objection. Form.

A. Can you read that again?

Q. Sure. I'll rephrase.

You defined lexicographer to mean that patent authors can make up their own meanings for the terms in the patent. Does that -- does that sound correct?

A. I think that a patent author can establish their own definitions for words that might differ from what the ordinary meaning is.

Q. Is it your position that the only way a patent author can establish a different meaning for a term, compared to what would otherwise be considered the plain and ordinary meaning in the art, would be by expressly stating a different definition in the specification?

A. I don't believe that that's the case. And in this patent, I believe that those terms, wheels, rollers, and bearings, are used in their plain and ordinary meaning.

Q. But you'll agree with me that at least based on what you've reviewed today and in the lead-up to this deposition, that the '745 specification never describes rollers used as part

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of a belt retention system as bearings; is that right?
A. I don't recall every word of -- of the specification, but a roller and a bearing are one and the same thing or a roller can incorporate bearings in it. And I believe I discuss that in my declaration.
Q. I'm specifically asking about what the '745 specification says and how it uses those terms. To your knowledge, are the rollers that are included in part of any belt retention system ever described as bearings?
MR. TURNER: Objection. Form.
Q. Is the term "bearings" ever used to describe those structures?
MR. TURNER: Objection. Form.
A. Well, I would say that it establishes that they're equivalent whether or not it's explicit. But it definitely establishes it; for example, at the bottom of column 21.
Q. How so?
A. It states: Collectively, the rollers 600 define a top profile 608 similar to the top profile 210 --
(Reporter clarification.)

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A. Sorry.
Collectively, the rollers 600 define a top profile 608 similar to the top profile 210 defined by the bearing rails 200, discussed above, and provide for a running belt to move therealong.
Q. Are the bearing rails bearings?
A. The bearing rails constitute an assembly that includes bearing elements.
Q. The rollers 600, in that paragraph you just mentioned, are never called bearings; is that correct?
A. I'm not sure. But that paragraph certainly establishes that they're equivalent, outside of the plain and ordinary understanding that a POSA would have that they are essentially the same thing.
Q. Are you aware of any instance in which those rollers are referred to as bearings?
A. Not as I sit here.
Q. Let's look at paragraph 338 of your declaration.
A. Okay.
Q. You state, at the beginning of this paragraph: "It has long been recognized that users may be injured by falling off of a treadmill while

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mounting or dismounting it or while using it. This may be due to the treadmill belts moving in an unexpected direction or in such a way that the user cannot regain their equilibrium. It could also be due to the incline of the surface causing the position of user to drift rearwards, and off, over time."
Did I read that right?
A. I think you did.
Q. If you look at the end of this paragraph, you include a couple block quotes from Socwell, Exhibit 1011.
In that second block quote, you quote Socwell as saying: Another meaningful disadvantage of exercise treadmills of the prior art is the inherent danger associated with users tending to fall off the back end of the treadmill and become injured.
Is that -- is that accurate?
A. That's reflective of that caption.
Q. Didn't Socwell conclude that it was sufficient to curve the running surface to address this inherent danger?
A. Yeah. So they state that that is for safety while the user is exercising on the

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treadmill.
Q. Socwell doesn't disclose any other sort of safety device besides the curved shape of the treadmill, does it?
A. Not while for -- not for getting on and off of it, no. But it discloses the curve for safety while actually performing exercise.
Q. Are you aware of any structure in Socwell that you would characterize as a safety device, as that term is used in the '745 patent?
A. Not as I -- not as I sit here. I don't believe so.
Q. Are you aware of any devices -- any structures in Socwell that would constitute a safety device, as that term is used in any of the other patents such as the '580 or the '884?
A. I'm not sure if it does, but definitely I relied on the Magid reference for a safety device.
Q. You didn't identify a safety device in Socwell in any of your declarations, did you?
A. I -- I did not explicitly disclose one, no.
Q. Is it your position that you inherently disclosed one?

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A. No. I did not do that either.
Q. Socwell doesn't specifically mention any concerns about a user mounting or dismounting a treadmill, does it?
A. Well, I didn't identify any of those things in my disclosure that I recall. But my recollection is that Socwell is mainly focused on safety while using the treadmill, not while mounting and dismounting.
Q. So you're not aware of anything in Socwell related to concerns about a user mounting or dismounting a treadmill. Is that accurate?
I'm just asking about your general awareness.
A. My general awareness is -- is no, I don't recall that.
Q. Okay. If you look back to your declaration at paragraphs 341 and 342, which are on pages 204 and 205, in paragraph 341, you say: "Rather than relying on a motor, Socwell discloses to calibrate the rollers and deck to provide optimal frictional resistance of the belt to ensure safety while providing proper resistance for exercising." Then you quote to Socwell at column 11, lines 56 to 61.

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And you go on to say: "Socwell explains that the curved running surface prevents a user from falling off the back." And for that, you quote Socwell -- or cite Socwell column 3, lines 40 to 45.
Is that accurate?
A. That's accurate.
Q. In the very next paragraph, that first sentence, you then state: "Socwell's curved running surface does not fully address the safety issue of the running belt moving in a forward direction when a user steps onto the treadmill."
Did I read that right?
A. I think so.
Q. Okay. If Socwell discloses providing optimal frictional resistance of the belt to ensure safety, as you said in paragraph 341, how can it be the case that it does not address any safety issues related to the running belt moving in a forward direction?
A. Well, the safety thing isn't safety by itself. It's safety while providing the proper resistance for exercising. So it's not simply a high friction, slow-moving surface. It's a surface that's tuned for -- for running or walking or

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exercising in general.
So from that perspective, you can't say that it has plenty of friction to keep someone from experiencing an unexpected movement of the -- of the running surface.
Q. So when you said in paragraph 341 that Socwell's design ensures safety, that was -- withdrawn.
So when you refer to ensuring safety in paragraph 341, there -- at least in your view as you sit here today -- are limits to what safety is being ensured by Socwell's design?
A. Well, Socwell discloses that they are ensuring safety while providing proper resistance for exercising.
So they are not talking about providing safety while mounting or dismounting or for stepping on a place with unexpected motion that could occur. It's specifically talking about safety while exercising.
Q. And am I to understand that your view is that mounting or dismounting a treadmill is not part of exercising?
A. I suppose that you could split the hairs and say that it is, since you have to exert

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effort to mount a treadmill. But I think exercising on a treadmill, people consider using the running surface for simulating walking, jogging, or running and that that would be what the exercise is referring to.
Q. All right. If we go back a bit earlier in your declaration -- oh, apologies.
Before we do that, if you look at paragraph 344, you state: "It would have been obvious to a POSA to combine Socwell's treadmill with Magid's control means to permit only unidirectional movement of the running belt to reduce the risk of a user stepping onto the running belt of the treadmill and losing their balance when the belt moves in the forward direction."
Why would a POSA be motivated to add Magid to Socwell if Socwell, by its own terms, had already solved the falling problem?
A. It's the same answer as before. So the -- falling off the back end is a different scenario because that's during use of the treadmill as exercise. And the other safety concern is that when you step on a curved treadmill, on the back end, you might not expect your foot to move downward unexpectedly, which could cause a fall

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while not using the treadmill for exercise.
And so that is what this is addressing, and that is what I stated in paragraph 342 just before this.
Q. Socwell doesn't describe any sort of concern about a user mounting the treadmill, right?
A. That's correct.
Q. So let's go a bit earlier in your declaration to paragraph 97, which is going to start on page 64.
A. You said paragraph 67?
Q. Paragraph 97 --
A. 97.
Q. -- on page 64.
A. Okay.
Q. So the first sentence of this paragraph says: "The need to limit the motion of the treadmill belt motion for user stability and safety was also well known."
And one of the references you cite for that is Socwell. Do you see that?
A. I see that.
Q. And you specifically cite Socwell at column 1, lines 28 to 41; is that correct?
A. Yes.

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Q. Okay. If you read that section of Socwell, doesn't that section discuss sufficient friction in any direction that the belt moves, not necessarily for unidirectional movement?
A. Yes. But that's not what I stated in paragraph 97. I just made a general statement about limiting the motion, so I didn't specify directionality to that.
Q. Well, if we look at the rest of paragraph 97, you follow that up -- that sentence up immediately with: "Further, using one-way clutches to limit treadmill belt motion to one direction --
(Reporter clarification.)
Q. I'll restart.
"Further, using one-way clutches to limit treadmill belt motion to one direction dates back to at least 1996." And then you go on to discuss sprag-type one-way bearings; is that right?
A. That's right.
Q. Wouldn't that suggest that, in that first sentence of paragraph 97, you were referring to some sort of known desire for unidirectional movement?
A. I think that I was just speaking

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generally about limiting motion, which could mean movement in either a forward or rearward direction.
Q. You'll agree with me that the disclosure that you cited from Socwell doesn't have anything to do with unidirectional movement, right?
A. That's right. It's talking about dangers of just unfettered motion.
Q. Keeping a pin in your declaration but looking briefly at Exhibit 1012 in your binder, do you recognize this document?
A. Yes.
Q. This is U.S. Patent No. 5,538,489, which lists Sidney Magid as an inventor, right?
A. That's what it appears to be.
Q. And if I refer to this document as Magid -- Magid or any of the plethora of pronunciations that we've all used for reference, you will understand what I'm referring to, won't you?
A. I think I will.
Q. Did you read Magid in its entirety before drafting your report?
A. Yes.
Q. And if we look at your declaration in this matter, it appears that you rely on Magid to

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modify the primary references in all of the grounds presented. Does that sound correct?
A. Yeah, I think that's reasonable.
Q. So if you go to page 104 of your declaration, specifically to the second paragraph there, paragraph 176 -- I guess it's on page 105. Apologies.
A. Okay.
Q. In that paragraph, you state that: Schonenberger, Socwell, and Magid are from the same field - exercise equipment, more specifically, treadmills for home exercise use.
Did I read that right?
A. You did.
Q. So in this paragraph, with respect to Magid, you cited to column 1, lines 53 to 56, and column 3, lines 23 to 27, as support for that statement. Do you see that?
A. So you -- I'm sorry. I didn't hear what you said. You said 1012, column 1, 53 to 56? Is that --
Q. Yeah. But I'm just asking what you -- what you cited to in paragraph 176. It's for Exhibit 1012, which is Magid, you cited to column 1, lines 53 to 56, and column 3, lines 23 to

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27; is that right?
A. That's right.
Q. Okay. So let's turn to Magid, specifically to those sections that you cited.
That first one, column 1, lines 53 to 59, which includes the section that you cited plus the remainder of that paragraph, reads: "Another objective of the present invention is to provide a walker apparatus which may be used with the functional supporting frame of an exercise walker, the latter having an adjustable hand bar for use by small children, physically handicapped people, old people, and by those who feel more confident holding onto something while exercising."
Did I read that right?
A. You did.
Q. Does that paragraph mention anything about home exercise use?
A. That paragraph doesn't explicitly state anything about home use. It doesn't say anything about the location.
Q. You would agree that this paragraph actually refers to exercise equipment for people with physical limitations? Does that sound right?
A. I don't know. It does mention

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physically handicapped people, but it doesn't mention anything about limitations of the other populations that it describes.
Q. Would you consider small children, physically handicapped people, and old people to have physical limitations relative to the general population?
A. They are the general population -- they're part of the general population.
Q. Relative to the -- relative to the average able-bodied person, would those people have physical limitations? Or be expected to have certain physical limitations?
A. They could, but this is for exercising. So they could, yeah. Small children would be expected to be shorter than the average person. And an older person might be expected to have a different maximum strength as an average 35-year-old, say.
Q. Would you expect people with those kinds of physical limitations to feel more confident holding onto something while exercising?
A. Well, that's what this paragraph states.
Q. Do you agree with that?

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A. Well, actually, I need to walk that back a little bit because it doesn't say those who feel more confident holding onto something, meaning those people. It defines those who feel more confident holding onto something as a different group of people altogether.
Q. Would you expect people with physical limitations to be more confident holding onto something while exercising?
MR. TURNER: Objection. Asked and answered.
A. Yes. But able-bodied people also do. I do. I hold onto the handlebars when I use a treadmill.
Q. Turning to the next page of Magid, column 3, lines 23 to 31 -- which, again, includes the section that you cited previously in your paragraph 176 -- that section reads: "Any one of the different embodiments of the walker apparatus of the present invention may further comprise the functional supporting frame of an exercise walker, a baby chair, or a baby stroller. When used as an exercise walker, the walker apparatus is an ideal way of losing weight and keeping fit. When used as a baby chair or baby stroller, the walker apparatus

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provides a safe and effective way for exercising a baby and for teaching the baby to stand and walk.
Did I read that correctly?
A. I think you did.
Q. Does anything in that paragraph refer to home exercise use?
A. I don't think it explicitly states that. But I think anybody reading this and saying, oh, this is going to be used on a baby chair or a baby stroller, that that would be something you would do in the home and not necessarily at some sort of commercial location.
Q. Can you look at column 5, lines 56 to 59? Those sentence -- that sentence says: "This form of an exercise walker belongs in hospitals and in retirement homes and is ideal for those who wish to keep fit and lose weight."
Does that suggest that this -- that the device disclosed in Magid was intended for home exercise use?
A. Well, it says retirement homes. So that is a home.
Q. You consider a retirement home a home as you used that term in paragraph 176, which states that Schonenberger, Socwell, and Magid are

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all from the same field?
A. So I think that column 5 is referring -- that portion that you just read is specifically referring to Figure 2 and is an embodiment and not limited to -- not -- does not limit -- this is a selling point. And obviously, you can see from the pictures that this is a small, compact device.
And in terms of for home use versus a commercial setting like a gym or something, the fitness standards basically differentiate by the frequency of the loading on -- on the devices. So I don't see any difference here that would -- that would deter me from believing that this is for a home -- for home use, particularly what we read already about putting it on a baby chair or a baby stroller.
Q. So my question was specifically whether you consider a retirement home a home as you use that term in paragraph 176, which states that Schonenberger, Socwell, and Magid are all from the same field.
Is a retirement home a home such that Magid, Schonenberger, and Socwell disclose comparable exercise equipment, based on that

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disclosure?
A. Yeah. The statement of a retirement home does not -- does not fall outside of that home. I mean, people -- what my idea of a home is, people live there. It's like if they had said, this is perfect for use in an apartment building, like that doesn't mean that it's in a gym in an apartment building. It could be in any of the units within it.
Q. Would the devices disclosed in Schonenberger or Socwell meet that criteria, being ideal for use in a hospital or retirement home?
A. I'm sure that devices just like them are used in hospitals and retirement homes. Whether or not they're ideal for it, I don't know. This is -- this is the inventor tooting his own horn about his invention here -- or her invention, I'm not sure. Their invention, let's say. So they believe that it's ideal for use in those locations.
The other ones, I don't recall if they state anywhere about what the ideal use is, but these can all be used in the home and in a commercial setting.
Q. Would you use devices such as Schonenberger and Socwell for therapeutic purposes?

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A. Yeah.
Q. Are they intended for therapeutic purposes?
A. Treadmills are used all across the world for therapeutic purposes. So whether or not you intentionally put that into your treadmill or not, they're -- physical therapists and trainers across the world use them for therapeutic reasons.
Q. Specifically referring to the treadmills in Schonenberger and Socwell, are those intended for therapeutic uses?
MR. TURNER: Objection. Asked and answered.
A. So whether or not they're intended in their explicit design, they are intended to -- for exercise. I don't recall right now if it says therapy or therapeutic uses, but they -- they will be used for that.
And treadmills across the world are used for those purposes. That's part of what treadmills are for.
Q. Are either Schonenberger or Socwell intended to be used by babies?
A. I'm not sure that they put that explicitly in their specification, but you probably

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could use it that -- for that. I don't know.
Yeah, I'm not sure. And I -- I don't actually have an opinion on that.
Q. You'll agree with me that Magid is specifically focused on a walker apparatus that can be used to teach babies how to stand and walk or, alternatively, to be used for therapeutic purposes; is that right?
A. No, I don't think that that's right. Because it says specifically -- we already talked about it, and it says also for people who want to hold onto something while exercising. So exercise is a part of the purpose of this invention.
Q. You'll agree with me that Magid only discloses a two-belt design, won't you? Outside of what it refers to as the prior art.
A. Yeah. I think that that's the case. In their abstract section, they describe a -- describe a split-belt treadmill.
Q. It's not just the abstract section, right? It's the entire patent specification?
A. Without reading through it, I -- I'm not sure. But certainly, in the abstract, it describes a split-belt treadmill.
Q. You don't recall if the rest of the

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specification refers to a split belt design, as you sit here today?
A. Not -- not as I sit here, no.
Q. Magid repeatedly identifies that its device may be used with a baby chair or a baby stroller, doesn't it?
A. Probably.
Q. You don't recall?
A. Well, it has an embodiment, certainly, in the figures there, where you can see it mounted to the stroller and the baby seat. So -- and you know, Figure 5, Figure 6, Figure 7. So yeah, I mean, that's part of one of the things that they intended this for.
Q. Are you aware that all but one embodiment described in Magid is directed to a baby stroller or a baby chair?
A. I probably am, but this has embodiments that are not for that also.
Q. Are you aware that the only embodiment that is not described as a baby chair or a baby stroller includes that sentence we read earlier stating that this form of an exercise walker belongs in hospitals and in retirement homes?
A. Can you say that again?

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Q. Are you aware that the only embodiment that is not described as a baby chair or a baby stroller is the embodiment that Magid refers to as belonging in hospitals and in retirement homes?
MR. TURNER: Objection. Form.
A. So the non-baby one, you're saying that the non-baby one is the only one that they say is the ideal one to go into retirement homes? Is that what your question is.
Q. No. My question is whether you're aware that the sole embodiment that is not described as a baby chair or a baby stroller is, instead of being for a baby chair or a baby stroller, stated to be -- to belong in hospitals and in retirement homes.
A. I don't agree with that because it doesn't say that it belongs. It says it's ideal for. So they can be used many places, but they think the best one is those places.
Q. Column 5, line 56 states: "This form of an exercise walker belongs in hospitals and in retirement homes"; is that right?
A. That's fair, yes.
I apologize for that last one. I didn't recall that, that word there.

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Q. None of the devices described in Magid have a curved running surface, do they?
A. I don't think so.
Q. Does Magid ever even describe having a user run on its treadmill?
A. Well, it states that it's ideal for those who wish to keep fit. And it calls it a walker or a walking device, so -- and a walker apparatus.
So as something that simulates human gait, I think that even though they say walker, that people would understand that you could also run on this, especially since it's called -- it calls out exercising.
Q. Are you -- is it your testimony today that in order for something to be an exercise device, you have to be able to run on it?
A. No. There are plenty of pieces of fitness equipment that do not incorporate any sort of running.
Q. So you'll agree that the fact that the walker apparatus or walker device described in Magid is described as being used for exercising does not necessarily mean that one could or would run on it?

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A. I think anybody looking at this would understand that even if they call it a walker, that people could run on it.
And when I was referring to a plethora of devices for exercising that don't involve running, I was thinking of weight-lifting where there is no running involved; and I was thinking of, you know, like a lat pull machine or a stair stepper.
So those are exercise devices that do not incorporate running. So that's what I -- I was thinking of. But I think just looking at these pictures, you can see that if you can walk on this, you can also run or jog on it.
Q. Would there be any necessary minimum amount of coordination required to run on a two-belt design like this?
A. The same amount of coordination that you would use on a normal treadmill.
Q. So you don't think there would be any difference whatsoever in the necessary coordination to run on a device with two belts positioned in parallel to each other?
A. No, because they're independent of one another. So I know that this patent wants the

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split belt for people who have issues coordinating their feet. But if you ask a person to run on this, it -- it wouldn't be different than an ordinary treadmill.

Q. Would a person with problems coordinating their feet, such as babies or the physically handicapped, have problems running on this device?

A. They might have trouble running on any device.

Q. Would you agree that the two-belt design is intended to, at a minimum, facilitate exercise for people who have coordination problems?

A. I believe that that's what they listed as their motivation for using a split belt.

Q. Do you agree with that motivation?

A. I think in some circumstances that that might be something that's important. For example, you know, in the embodiment for babies, they might not have enough strength to keep the belt rolling or they might -- especially if you're seated, you could be dragging one foot on the belt and causing it to stop. So having a split-belt treadmill for a seated use would be something that would be useful for someone sitting.

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But for walking, I don't know that there is much advantage. But split-belt treadmills are certainly a thing in research and therapy used across the world.

Q. Would you agree with me that there are additional or different safety concerns for a device that's intended to be used by people with physical limitations compared to your typical exercise treadmill intended to be run on by an able-bodied adult?

A. There could be. I don't recall in here where it discusses those things. For example, if you're doing rehabilitation, usually there is a harness. If you cannot stand up and you want to -- and they want you to get on a treadmill, you get in a harness and you basically hang while trying to walk around.

So those things do exist. I don't believe and I don't recall reading that within the specification here.

Q. In general though, you're aware of the need for safety devices or safety features if you're designing a device for use by people with physical limitations; is that right?

A. Well, it's incumbent on all designers

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to include safety as part of their design for devices that are used by people.

Q. And there are different or additional considerations for people who have different physical limitations, wouldn't you agree?

A. Depending on the devices.

Q. Is it fair to say that, yes, in certain circumstances, there would be additional or different safety considerations if you're designing a device for people with physical limitations?

A. So yes, there are certain circumstances where you would incorporate -- if you have something that's specific for someone, say, who doesn't have use of a leg or doesn't have use of both legs where they can't stand, then you'd definitely need to incorporate a harness. And that is something that is established and something that I've tested out myself in the past.

Or people who have, say, something called ototoxicity where you -- it's basically permanent vertigo, where you can't balance at all and holding onto things doesn't really help you, so you would want to have a harness in that -- in that condition, which is commonplace in therapy.

Q. Harnesses aren't the only safety

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feature that would be intended for people who have difficulty balancing, is it?

A. Sure. Handrails could be used as well.

Q. Other things?

A. You could have a therapist holding you. You could have crutches.

Q. You can't think of any other safety features that might be helpful if someone has difficulty balancing?

A. I mean, if someone has difficulty balancing, you have to have a restraint system for that person. So whatever means you develop, you could -- you would have to implement that.

Because if a person has difficulty balancing and you try to sell them something, you need to make sure that they can stay upright and not hurt themselves. But if you want me to think of safety devices for that on the fly, we're probably going to have to get a new retention together and form a different project.

Q. Would you agree that if someone has difficulty balancing or uncoordinated movement, it's particularly important to ensure that a running belt on a treadmill they are using does not move unexpectedly?

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A. No more than a normal person.
Q. So someone with uncoordinated movement would have no additional need for that kind of feature than your average able-bodied adult?
A. A fall would be just as severe for either of those populations.
Q. Would the risk of a fall be more severe for someone with coordination problems or balance problems?
A. No. Because the technical use of the word "risk" is frequency times severity. And so the risk exposure there is going to be the same.
Q. Setting aside the semantics of the word risk, is a person with coordination problems or balance problems more prone to a fall than someone without those problems?
A. Well, as a technical expert, I'm going to use the technical definitions of -- of the words that I use in my everyday practice.
But a person that has issues balancing is more precarious than a person who is what we would consider able-bodied.
Q. Do you know what a means-plus-function claim term is?
A. I know that I described it in my

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declaration and --
Q. You can turn to page 16 of your declaration. I think that's where you might describe it. And in paragraph 31, you state in that paragraph: I understand that a claim that includes functional language without sufficient structural limitations may be construed as a "means for" or a "means plus" claim. Such a claim may be interpreted as requiring structural limitations disclosed in the specification.
Did I read that right?
A. You did.
Q. If we look at Magid, specifically at column 4, starting around line 46, in this section, Magid states: "A unidirectional control means 6, 6' is installed to permit only unidirectional movement of the left and right foot belts 4, 4'. In this embodiment, the control means 6, 6' includes a pair of ratchet gears 61 attached to outer ends of the front rollers 41 and mounted rotatably on the first shaft 411, and a pair of pawls 62 secured to the base 11 and engaging one of the ratchet gears 61 to permit only unidirectional rotation of the front rollers 41, thereby preventing bidirectional movements of the foot

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belts 4, 4'.
Did I read that correctly?
A. It sounded correct to me.
Q. Is the term "control means," as used in that section, a means-plus-function term?
MR. TURNER: Objection, form. Objection, calls for a legal conclusion.
A. Right. So yeah, I can't be sure, but as for -- legally speaking. But as an engineer, the first line there says a unidirectional control means. So that -- that is just stating what they want to put in.
And then after that, they say but in the embodiment we show -- we've chosen this -- this particular means. So that's -- that's what I read in this paragraph.
Q. So you don't have an opinion sitting here today on whether a unidirectional control means is a means in a means-plus-function term?
MR. TURNER: Same objections.
A. Right, I don't have an opinion on that right now.
Q. If we go back to your declaration, page 101 and paragraph 167, so I'll represent to you that this is part of your discussion of what

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you've termed element 1.7, which refers to a safety device coupled to the running belt.
And you can review that -- that heading on page 98 if you need to.
In paragraph 167, you state: Magid does not explicitly disclose that the ratchet gear or pawl is a race, nor that one substantially surrounds the other.
Did I read that correctly?
A. You did.
Q. Are you referring to that unidirectional control means disclosed in Magid in this section?
A. Yeah. So in paragraph 167, the ratchet gear and the pawl constitute the unidirectional control means.
Q. Magid never implicitly discloses that the ratchet gear or pawl is a race or that one substantially surrounds the other, does it?
A. No, I don't believe so.
Q. So at no point in your declaration do you assert that the ratchet gear or pawl would be a race or that it would substantially surround the other?
A. No, I don't believe I say that.

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Q. So you would agree with respect to this limitation which includes the requirement that, "the safety device includes a first safety race element and a second safety race element, wherein at least one of the first and second safety race elements is adapted for rotation relative to the frame, and wherein one of the first and second safety race elements substantially surrounds the other of the one of the first and second safety race elements" is not disclosed in Magid; is that right?

A. So yeah, in Magid, they say there's a -- you need a unidirectional control means. They picked a ratchet and pawl, but -- and the ratchet and pawl might not necessarily have that, although you might put a normal bearing within one of those components, which would then have an inner and outer race.

But I think, generally speaking, that since it's just a -- Magid says this is an embodiment that a person of ordinary skill in the art would recognize that, like a one-way bearing is a much better solution there.

Q. But Magid never discloses that?

A. No. It just provides its embodiment

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and states a unidirectional control means.

Q. In Magid's discussion of the control means, did it ever mention safety concerns related to a user losing their balance? Let me go back just to make sure I state it correctly.

Did Magid ever mention safety concerns related to a user losing their balance when first stepping onto the device?

Do you need me to repeat the question?

A. Yeah, please.

Q. Does Magid ever mention safety concerns related to a user losing their balance when first stepping onto the device?

A. I don't recall seeing that in the specification for Magid.

MS. RIEGER: All right. It's a little after noon. Do we want to break for lunch?

MR. TURNER: Sure.

(Lunch break.)

BY MS. RIEGER:

Q. Dr. Giachetti, welcome back.

A. Thank you.

Q. So we left off before the break talking about Magid. I wanted to shift gears a little bit

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to talk about Sclater for a moment -- Sclater, however we want to pronounce that -- which is Exhibit 1017. I think that'll actually be in your second binder.

So if you look at page 320 of Sclater, we discussed certain things on this page during yesterday's deposition. Do you remember that?

A. I do.

Q. And this is the -- that page that refers to applications for sprag-type clutches, right?

A. Right.

Q. So that -- I guess I'll call it the introductory paragraph there on that page states: Overrunning sprag clutches transmit torque in one direction and reduce speed, rest, hold, or freewheel in the reverse direction. Applications include overrunning, back-stopping, and indexing. Their selection, similar to other mechanical devices, requires a review of the torque to be transmitted, overrunning speed, type of lubrication, mounting characteristics, environmental conditions, and shock conditions that might be encountered.

Did I read that right?

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A. You did.

Q. In reaching your opinions combining Sclater with the various other references in these IPRs, did you consider the torque to be transmitted, overrunning speed, type of lubrication, mounting characteristics, et cetera, et cetera, before concluding that the specific sprag-type clutch you referenced could be combined with those other references?

A. Yes. So the first thing is that there is the picture of it using -- being used with a conveyor. So that was the first thing.

The second thing is that when it describes the torque to be transmitted, on some of the previous pages, they indicate that the torque transmission has to do with how many interfering elements there are within the one-way bearing.

And so there is another style where there is, you know, only a few spherical interfering elements that are spring-loaded. And in the sprag type, there are tons of them.

So from the torque perspective, yes, for sure. And then the lubrication and things like that, that was taken care of by the Emerson reference, which indicated that that was

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appropriate for exercise equipment. So the environment and things like that were already taken care of by the industry.
Q. You didn't cite the Emerson disclosure as a reference in any of your grounds, did you?
A. Not directly, but I certainly cited it as state of the art.
Q. Where, if at all, in your declaration did you discuss the torque to be transmitted by the sprag that you selected from Sclater?
A. So I cited Sclater on paragraph 168 for saying that the sprag type meets the torque and bearing requirements of most machine applications. That's one place where I mentioned it with the torque.
Q. Sorry. Can you repeat where exactly that was?
A. Paragraph 168.
Q. 168?
A. On page 101.
Q. Where in that paragraph do you mention the torque that is to be transmitted?
A. So it states: Sprags combined with cylindrical rollers in a bearing assembly can provide a simple, low-cost method for meeting the

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torque and bearing requirements of most machine applications.
Q. Let me rephrase.
Where in that paragraph do you mention the torque requirements of the specific sprag that you rely on in your opinions, as opposed to sprags generally?
A. Well, I don't think that I call out a specific sprag. I didn't -- I don't believe I have a -- like a part number from the catalog or anything. But we establish here that the sprags that act as wedges can handle the torque and that they do so in a fashion that is shown in Sclater to work with conveyor-type systems like what a treadmill is expected to do.
And we know that they can transmit high loads, and we know from the state of the art that they are -- applications are known for exercise equipment.
Q. So if we look at that next paragraph, paragraph 169 on page 101, you state: As illustrated in the image below, Sclater discloses that the sprag-type one-way bearing assembly includes an inner race, an outer race, and a plurality of sprags and rolling elements (e.g.,

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balls) disposed between the inner race and the outer race.
And then on the next page, you include an annotated picture of a specific sprag from Sclater.
Are you -- is it your -- is it your position that you are not relying on the specific sprag depicted in this paragraph?
A. I think that calling this a specific sprag is not consistent with the way that I'm highlighting a sprag one-way bearing in general.
And you can see in Sclater that there are a number of depictions of sprag-type one-way bearings. For example, on page 316, there are other depictions of the sprags within a one-way bearing. So...
Q. Do you include any analysis in your declaration indicating that the other sprag-type bearings disclosed in Sclater have all of the features that are described in paragraph 169?
A. Yeah. Well, you can see it in page 316 of Sclater. But there is an inner race and an outer race of that sprag-type bearing that's shown.
Q. Where do you discuss that in your declaration?

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A. Well, I would say maybe not that one necessarily; but you can see in page 52 and 53 where I'm discussing inner races and outer races and sprags and showing graphics from a number of sources that -- that -- oh, and I'm also showing that on page 55 in my report, so that graphic from page 316 as well.
Q. And that's in the background section of your report?
A. The state-of-art section, yeah.
Q. The state-of-the-art section.
So with respect to your actual analysis of how, in your opinion, Sclater discloses the specific elements laid out in the claims, you don't cite to those other depictions; is that correct?
A. I mean, I'm just using that one as an example. And I'm clear in the declaration that Sclater discloses these bearings.
Q. And where do you say that that's only an example or otherwise indicate that the same features are present in other disclosures in Sclater?
A. So I say as illustrated in the image below. I don't say this is the exact thing. I say this is illustrated with this one from Sclater.

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Q. Well, what you say exactly is: As illustrated in the image below, Sclater discloses that the sprag-type one-way bearing assembly includes certain features.

There is no reference there to any other sprag-type one-way bearing assembly, whether in Sclater or otherwise, is there?

A. Well, in the background section, you can see that I've pointed out all the different places where you can see sprags and races. And they're illustrated with graphics as well. And then you can see in the -- in Emerson the same things which I show on page 56 and 57.

Q. But you didn't cite any of that in the actual discussion of the claim limitations; is that correct?

A. In the claim limitation languages, I relied primarily on Sclater.

Q. Did you rely on anything else secondarily to the specific image depicted in paragraph 169 for those specific limitations?

A. Well, I would say that that graphic, which is only part of Figure 1 on page 318 of Sclater, pretty much points you to the direction of the other ones.

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But as far as being explicit in my declaration for those -- those specific components, even though I highlighted it at several places others -- in other areas of the declaration, that it's not explicitly relying on those other embodiments of sprag-type clutches. It's just a general depiction of the sprag-type clutch.

Q. The sprag that you took and annotated from page 318 is in a different section from the sprags depicted on page 316; isn't that right? They have different headers on those two-pages?

A. Sure. So it's in the ten ways to apply overrunning clutches. And the other section that I was just pointing to is details of overriding clutches.

Q. Turning back to that language at the top of page 320, where in your declaration, if at all, did you ever mention the overrunning speed that would -- you would be required to review before selecting a sprag-type clutch?

A. I know I mentioned speed in here somewhere. Let me just find it.

All right. Well, I mention on page 71 that from Sclater, we can see that ratchet and pawl have some deficiencies, whereas the roller and

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friction type clutches like sprags do not have those same limitations.

Q. And where does that mention overrunning speed?

A. It says "including noise and speed limitations."

Q. So speed limitations there, in your opinion, it specifically relates to overrunning speed?

A. I think just speed in general.

Q. Paragraph 116, which you just read from, refers to deficiencies of pawl and ratchet clutches as compared to roller and friction type clutches. There is no specific reference in there to sprags or the specific sprag that is depicted in paragraph --

A. The picture right above it.

(Reporter clarification.)

Q. In paragraph 116.

A. Yeah. So that paragraph 116 is preceded by Figure 1 from Sclater on page 318 showing the roller/friction type sprag clutch.

Q. So the previous paragraph where that picture -- that image is provided essentially just provides a background of Sclater, including a

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statement from you that Sclater describes different types of coupling, clutching, and braking devices in Chapter 9, including ratchet clutches and one-way bearing assemblies that include sprags.

Is it your contention here today that by virtue of the fact that that paragraph mentions sprags amongst the different types of coupling, clutching, and braking devices, the following paragraph that refers generally to roller and friction type clutches is necessarily discussing the sprag application that you applied in these grounds?

A. Well, that was a really long question.

Q. Yeah. I can -- I can rephrase if you need me to.

A. That would be great. Thank you.

Q. I'll break it down a little bit.

A. Okay.

Q. So paragraph 115 states: Sclater describes different types of coupling, clutching, and braking devices in Chapter 9, including --

(Reporter clarification.)

Q. Sclater describes different types of coupling, clutching, and braking devices in Chapter 9, including ratchet clutches and one-way

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bearing assemblies that include sprags.
And then you provide an excerpt from Sclater at page 318 that shows precision sprags, per Sclater, right?
A. Correct.
Q. In the next paragraph, you state: Sclater also discloses some of the deficiencies of pawl and ratchet clutches as compared to roller and friction type clutches, including noise and speed limitations.
A. That's right.
Q. Is it your contention that because sprags happened to be mentioned in that preceding paragraph, that the reference in paragraph 116 to noise and speed limitations is specifically intended to apply to the sprag application that you used in these grounds? Do you think that's apparent from the language in your declaration?
A. Yes. Because that paragraph is saying ratchet and pawls have noise and speed limitations that are not present in the roller and friction type clutches, which roller and friction type clutches are the -- are sprag-type roller bearings.
Q. And considering the language on page 320 of Sclater discussing the different

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features that one would be required to review for selecting a specific sprag-type clutch, how does that one sentence indicate how you have reviewed the overrunning speed of a sprag-type clutch -- or the sprag-type clutch that you used in this section?
A. So again, I'm not -- I'm not selecting a specific type of sprag clutch. You can go in the Emerson catalog and you can see that there are a number of different sizes and strengths of the sprag-type clutches in there. So if you would like to take a reading of Sclater, as in you can't pick the type of bearing because you have to require it to do those other things, I think is a different question than what we're answering in the disclosure, which is between ratchet and pawls and the sprag type.
The sprag types can operate faster, and they can operate quieter. And those two things are very advantageous.
Q. How does the noise of Sclater compare to the noise of a treadmill while in operation?
A. Can you define what you mean by "noise of Sclater"?
Q. Well, you say here that Sclater

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discloses noise and speed limitations that, according to you, refers to the noise and speed limitations of sprag-type devices.
So I guess I'm asking -- I'm asking you what the noise of a sprag-type clutch is relative to the noise of a treadmill while in operation.
A. You wouldn't be able to hear a sprag-type bearing on a treadmill in operation.
Q. So this section that we've been talking about is from Section VIII of your declaration, which is titled "Patentability of the Challenged Claims," but more specifically, Subsection A, "Overview of the prior art." That's on page 69.
Do you see that?
A. Yes.
Q. Where in your actual analysis of the claim limitations do you discuss overrunning speed related to the -- to applying Sclater to the combination of references in the grounds you put forward?
A. So in the ratchet and clutch section of the state of the art, I discuss ratchets as being used in low-speed applications.
And there is another consideration with speed where you basically end up where if -- you're

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dependent on that pawl being able to lock into the teeth on the ratchet. So if you hit the resonant frequency, you might end up jumping teeth, which I believe is in here.
Q. I'm asking specifically about your analysis and the grounds -- your grounds of invalidity. For example, in the sections we were talking about previously, in paragraphs -- I suppose it's 163 through 174 and then the rationale to combine following that, do you discuss any of these situations or any of these considerations as a part of your actual combination analysis?
A. Yeah. So in paragraph 188 and 189, I talk about the limitations, talking about how the spring needs to keep the pawl in contact with the ratchet. And then in 189, I talk about how the pawl may skip past teeth before engaging with the ratchet, which is not the case in sprags. So that would be a speed consideration, and the first sentence there indicates that.
Q. So the first sentence where? Sorry.
A. In 189.
Q. 189. You refer in 189 to roller clutches generally; isn't that right?
A. As in comparison to ratchet and pawl

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clutches.
Q. Right.
Where in this discussion -- again, in your actual argument related to combining Sclater with the other references, do you mention the type of lubrication to be used?
A. I don't discuss -- I don't believe I discussed lubrication issues, except that it's present in Emerson and present in the Power Transmission Handbook.
Q. You don't actually reference any of those disclosures from Emerson or the PT Handbook in this section, do you?
A. I don't believe I do. But I do reference Emerson, that where they say they -- they sell these specific type of one-way bearings for exercise equipment, food processing equipment, and roll conveyors.
Q. What about shock conditions? Do you ever mention shock conditions anywhere in this section?
A. I don't recall mentioning shock conditions.
Q. With respect to Magid's ratchet and pawl structure, would you be able to hear that

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structure when the treadmill is in operation?
A. Yes.
Q. How do you know that?
A. Well, I think anyone that's ridden a bicycle would understand that.
Q. Can you explain the --
A. A bicycle with gears.
Q. Can you explain the relationship to me?
A. Yeah. The thing within your bicycle wheel is essentially a ratchet and pawl. And you could hear that clicking, the click, click, click, click, click, every time you let the bike coast. Not one where you go backward with the pedals to make the braking occur, but like a ten-speed-style bike.
Anyone who has used a ratchet wrench, those clicks are really apparent. And so if you could imagine two of those going at the same time, you would hear a symphony of clicking. And in particular, if you put these in a gym with 10 or 20 of them being used, you would probably be overwhelmed by the sound.
Q. Did you do any actual analysis of the noise that would be caused by Magid's ratchet and pawl relative to other noises caused by the

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treadmill's operation as part of your analysis?
A. Well, having experience with conveyors, I came preloaded with how quiet a belt on rollers is. And I've run on a curved nonmotorized treadmill in the past, so I'm aware of the sound that they generate -- or that is caused by running on them. And I'm aware what ratchets sound like, so that was the analysis that I needed.
Q. So you didn't actually conduct any sort of formal analysis comparing the sound of all the various components in Magid relative to each other, did you?
A. I didn't have to.
Q. How many times have you used a curved manual treadmill?
A. Probably around ten times.
Q. Over what time period?
A. 2015 to 2023.
Q. So over the span of eight years, approximately 1.2 times per year, on average?
A. Yeah.
Q. Do different treadmills make different amounts of noise, depending on their structure?
A. If you count the motor as a structural element, then a motorized one versus a nonmotorized

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one will have different characteristics. Certainly, noise is a consideration with a bunch of patents in the prior art. And so certainly there are aspects of the treadmills that could be noisier than others.
Q. What about limiting it just to manual treadmills? Are those all going to make the exact same amount of noise?
A. I doubt it.
Q. So you haven't conducted any analysis of the relative noise caused by a pawl and ratchet or of -- of a pawl-type device versus a sprag-type device in different kinds of manual treadmills, have you?
A. I got lost in your question.
Q. You haven't -- you testified that you -- you doubt that all manual treadmills are going to make the exact same amount of noise, correct?
A. That's reasonable.
Q. I'm asking if that's what you testified.
A. I -- yeah, I don't remember every word I said. But I know that your question asked me if they all make the exact same amount. And so I

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haven't done a measurement to determine with precision exactness whether or not they make the -- all the same noise.

I know for sure that different treadmills will make different noises, depending on where they're located; for example, what type of room they're in, are they on a carpet, are they on a hardwood floor, are they on tile, is the room padded, has it got hard surfaces in it.

So the treadmill, where it's located, what's next to it, what the tread is made out of, what the side rails are made out of could all influence the amount of sound that the treadmill makes.

But we know from prior art, even back to Schmidt who was interested in making a quiet treadmill, that quietness is a benefit. And I know for sure -- and anyone who has had experience with a ratchet wrench or a bicycle that can freewheel knows how loud ratchets are.

So in relation to just the ratcheting element versus a one-way bearing, the one-way bearing is hands-down much quieter. And that is backed up by the Sclater reference.

Q. So you mentioned a lot of things that

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could contribute to the noise of a treadmill.

Did you do any analysis whatsoever to compare the noise caused by any or all of those elements to either a ratchet and pawl type device or a sprag device?

MR. TURNER: Objection. Form.

A. What do you mean by any and all elements?

Q. Did you analyze any of those elements before determining that a ratchet and pawl device would be too loud to use in one of these devices?

A. I don't know that it's my opinion that it's too loud. It's not going to cause hearing damage. But we know quietness is an important feature. And in a comparison between a sprag-type one-way bearing and a ratchet and pawl, the sprag type is basically silent; whereas with the ratchet and pawl, you get all the clicks. Every time the pawl strikes the ratchet gear, there is going to be a -- a pinging sound or a clicking sound.

Q. But you didn't do any analysis to confirm one way or another that that, what you called a pinging sound, would even be audible to --

(Reporter clarification.)

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Q. -- would even be audible to a user over all of the other noise caused by the various other factors that you mentioned, did you?

A. I just used my experience as a person that's used bicycles and treadmills in the past to make that judgment.

Q. So that's a no, you did not conduct any specific analysis, right?

A. No. I just relied on the art that I cited as my specific analysis.

Q. If Magid's device would, in your opinion, be so loud that someone would immediately -- or by someone, I mean a POSA -- would immediately want to replace it with something quieter, why would the POSA ever consider using Magid's device in a curved manual treadmill in the first place?

A. For safety.

Q. As we discussed earlier today, Magid does not mention a curved running surface, does it?

A. I don't recall it discussing that.

Q. It also doesn't discuss any safety concerns related to stepping onto or off of the running surface, does it?

A. No. I don't recall that it does. It's

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concerned with people using it for exercise.

Q. Well, you say people using it for exercise. As we discussed earlier today, isn't it the case that all but one of Magid's embodiments describes a baby chair or a baby stroller?

A. Magid definitely discusses baby strollers and baby chairs.

Q. And for the one embodiment that we discussed that does not relate to a baby chair or a baby stroller, if you'll recall, in column 5, lines 56 to 59, it states that: This form of an exercise walker belongs in hospitals and in retirement homes. Correct?

A. It does state that.

Q. Okay. Wouldn't the noise of a ratchet and pawl device discourage a POSA from combining Magid with other references, despite its apparent advantages, in your opinion?

A. From a safety perspective, no, I don't believe that that's the case. And it's only an embodiment used there. So it states that -- that -- a unidirectional control means. And so certainly the sprag-type one-way bearing fits that.

But no, I don't believe that that would discourage someone from -- from using it for

safety.
Q. Magid doesn't -- doesn't describe any other structure for its unidirectional control means besides the ratchet and pawl embodiment; isn't that right?
A. That's its only embodiment that it describes.
MS. RIEGER: All right. So I think, at this point, I'm finished with what I wanted to cover related specifically to '745.
MR. TURNER: Okay.
MS. RIEGER: Did you have any redirect?
MR. TURNER: Just a second.
No, I don't have anything for redirect.
MS. RIEGER: All right. And I think we decided we're going to close this one out.
MR. TURNER: Yeah, close this one.
(Deposition concluded at 1:55 p.m.)

ACKNOWLEDGEMENT

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

LIFECORE FITNESS, INC. d/b/a ASSAULT FITNESS,
Petitioner,
v.
WOODWAY USA, INC.
Patent Owner.

IPR023-00849

U.S. Patent No. 10,799,745

I, ROBERT GIACHETTI, Ph.D., P.E., state that I have read the foregoing transcript of the testimony given by me at my deposition on January 10, 2024, and that said transcript constitutes a true and correct record of the testimony given by me at the said deposition except as I have so indicated on the errata sheets provided herein.

_____
ROBERT GIACHETTI, Ph.D., P.E.

SUBSCRIBED AND SWORN to before me this_____day of_____, 2024.

_____
NOTARY PUBLIC
MY COMMISSION EXPIRES:_____

CERTIFICATE OF SHORTHAND REPORTER

I, JENNIFER L. BERNIER, Certified Reporter and within and for the State of Illinois do hereby certify:

That ROBERT GIACHETTI, Ph.D., P.E., the witness whose deposition is hereinbefore set forth, was duly sworn by me before the commencement of such deposition and that such deposition was taken before me and is a true record of the testimony given by such witness.

I further certify that the deposition of ROBERT GIACHETTI, Ph.D., P.E., occurred at the offices of Foley & Larnder LLP on Tuesday, January 10, 2024 commencing at 9:25 to 1:55 p.m.

I further certify that I am not related to any of the parties to this action by blood or marriage, I am not employed by or an attorney to any of the parties to this action, and that I am in no way interested, financially or otherwise, in the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my hand this 15th of January, 2024.

_____
JENNIFER L. BERNIER, CSR, RMR, CRR
CSR No. 084-004190

ERRATA SHEET FOR THE TRANSCRIPT OF:

CASE NAME: LIFECORE FITNESS, INC. d/b/a ASSAULT FITNESS v. WOODWAY USA, INC.
DEP. DATE: JANUARY 10, 2024
DEPONENT: ROBERT GIACHETTI, Ph.D., P.E.
U.S. Patent No. 10,799,745

CORRECTIONS:

Pg.	Ln.	Now Reads	Should Read	Reason
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